TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Application No. : LV021649(0)

Applicant : Ocean Star Electronics Limited
Unit 15, 8/F Wah Wai Center,
38-40 Au Pui Wan Street, Fo Tan,
Hong Kong

Sample Description : One(1) item of submitted sample stated to be

Sample Description	Model No.
BUSH Speaker with Amazon Alexa	B100ALF
Amazon Echo Multi-room Hi-Fi Speaker System	istation23AC
Bluetooth/Wi-Fi stereo Smart Speaker Brand name: Jensen	"JSB-550, JSB-550XXXXX (Where XXXXX denote any printable characters in the ASCII Standard Character Table to represent variances in cosmetics or buyers.)"

Sample registration No. : RV026227-001
Radio Frequency : 2412MHz – 2462MHz for Wi-Fi 802.11b/g/n
: 2402MHz – 2480MHz for Bluetooth 2.1+EDR
Supply voltage : AC 100-240V to DC 12V adaptor
No. of submitted sample : Two (2) set(s)

Date Received : 03 Jul 2017.

Test Period : 03 Jul 2017 to 10 Jul 2017.

Test Requested : FCC Part 15 Certification and Verification Procedure

Test Method : 47 CFR Part 15 (10-1-16 Edition), ANSI C63.4 – 2014, ANSI C63.10 – 2013
KDB 558074 D01 DTS Meas Guidance v04

Test Engineer : Mr. Yau Kwok Pun, Stanley

Test Result : See attached sheet(s) from page 2 to 159.

For and on behalf of
CMA Industrial Development Foundation Limited

Authorized Signature : _____ Page 1 of 159
Mr. WONG Lap-pong, Andrew
Manager
Electrical Division

FCC ID: LMZ-31324GC

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Conclusion	:	The submitted sample was found to comply with requirement of FCC Part 15 Subpart B and C.		
Remark	:	All models are the same in circuitry and components; and therefore model B100ALF was chosen to be the representative of the test sample. The difference(s) between the tested model and the declared models are sample description and model no for different brand/buyer.		

For and on behalf of
CMA Industrial Development Foundation Limited

Authorized Signature : _____

Mr. WONG Lap-pong, Andrew
Manager
Electrical Division

FCC ID: LMZ-31324GC

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1 General Information

1.1 General Description

The Wireless speaker support WiFi, Bluetooth and Aux in music steaming, it also include 2 microphone for receive user voice command for voice control function like play song, volume up down..etc.

The system has a MCU AP8064 (32.768kHz) as core, which connect with the Wifi Module A31 (40 MHz) and Bluetooth RF module (26.04MHz). It handles the keyboard comments and control the RGB LED respond, its firmware is build in inside the Flash IC. It also handle all the audio signal from WiFi module, BT module and Aux input and pass to the Amplifier IC TPA3140D2, which is driven by AC 100-240V to DC 12V adaptor. The audio is then pass to the speaker drivers.

The WiFi module and the MCU also connect and communicate with the Voice module ASR-C02 for voice recognize and pass data to WiFI module. There is a switch IC TS3A4751PWR and BL1530 to control the microphone ON and OFF by the MCU.

The DC-DC convertor LY9736 provide 5V input to the system (WiFi module, MCU, LDO and the PCM IC) Whereas the LDE provide the 3.3V input to Bluetooth module.

The brief circuit description is listed as follows:

- LY9736	and its associated circuit act as DC to DC Convertor.
- AP8064	and its associated circuit act as MCU.
- TPA3140D2	and its associated circuit act as audio amplifier.
- ASR-C02	and its associated circuit act as voice control chip set.
- MTK6622	and its associated circuit act as Bluetooth chip set.
- A31	and its associated circuit act as Wi-Fi chip set.
- X1	and its associated circuit act as crystal 32.768KHz for MCU.
- 24MHz crystal	and its associated circuit act as oscillator for voice control chip set.
- 26MHz crystal	and its associated circuit act as oscillator for Bluetooth chip set.
- 40MHz crystal	and its associated circuit act as oscillator for Wi-Fi chip set.

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1.2 Location of the test site

FCC Registered Test Site Number: 416666

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2014 and ANSI C63.10 – 2013. A Semi-Anechoic Chamber Testing Site is set up for investigation and located at:

Ground Floor, Yan Hing Centre,
9 – 13 Wong Chuk Yeung Street,
Fo Tan, Shatin,
New Territories,
Hong Kong.

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 – 2014 and ANSI C63.10 – 2013. A shielded room is located at :

Ground Floor, Yan Hing Centre,
9 – 13 Wong Chuk Yeung Street,
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1.3 List of measuring equipment

Measurement equipment:

Equipment	Manufacturer	Model No.	Serial No.	Calibration Due Date	Calibration Period
EMI Test Receiver	Rohde & Schwarz	ESCS30	100001	01 Feb 2018	1Year
EMI Test Receiver	Rohde & Schwarz	ESCI	100152	16 Nov 2017	1Year
Spectrum Analyzer	R&S	FSV40	100964	08 Feb 2018	1Year
Spectrum Analyzer	Rohde & Schwarz	FSP30	100628	28 Mar 2018	1Year
Broadband Antenna	Schaffner	CBL6112B	2692	29 Mar 2018	2Years
Loop Antenna	EMCO	6502	00056620	25 Jan 2018	2Years
Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-531	21 Dec 2017	2Years
Broadband Pre-Amplifier	Schwarzbeck	BBV 9718	9718-119	21 Dec 2017	2Years
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170442	02 Aug 2017	2Years
Broadband Pre-Amplifier	Schwarzbeck	BBV 9719	9719-010	02 Aug 2017	2Years
Coaxial Cable	Schaffner	RG 213/U	N/A	18 May 2018	1Year
Coaxial Cable	Suhner	RG 214/U	N/A	18 May 2018	1Year
Coaxial Cable	Suhner	Sucoflex_104	N/A	21 Dec 2017	1Year
LISN	Rohde & Schwarz	ENV216	101323	10 Nov 2017	1Year
Coaxial Cable	Tyco Electronics	RG 58C/U	N/A	29 Oct 2017	1Year
Rohde & Schwarz TS8997 Testing System					
Spectrum Analyzer	Rohde & Schwarz	FSV 40	101190	09 Aug 2017	1Year
Vector Generator	Rohde & Schwarz	SMBV100A	262024	09 Aug 2017	1Year
Generator	Rohde & Schwarz	SMB100A	103230	09 Aug 2017	1Year
OSP	Rohde & Schwarz	OSP	OSP120 V02	09 Aug 2017	1Year

Supporting equipment:
AC 100-240V to DC 12V adaptor
Model: JDA0301200200WUS (Supplied by applicant)
Factory: Jiedong Electron Factory

AC 100-240V to DC 12V adaptor
Model: GKYPB0200120US (Supplied by applicant)
Factory: Shenzhen Shi Guangkaiyuan Technology Ltd

1pcs of 700mm (excluding the heads) aux-in cable (Supplied by applicant).

FCC ID: LMZ-31324GC

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1.4 Measurement Uncertainty

The reported uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%.

Radiated emissions

Frequency	Uncertainty (U_{lab})
30MHz ~ 200MHz (Horizontal)	4.59dB
30MHz ~ 200MHz (Vertical)	4.49dB
200MHz ~1000MHz (Horizontal)	4.94dB
200MHz ~1000MHz (Vertical)	4.97dB
1GHz ~6GHz	4.52dB
6GHz ~18GHz	4.58dB

Line-conducted emissions

Frequency	Uncertainty (U_{lab})
150kHz~30MHz	2.80dB

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2 Description of the emission test

2.1 Test Procedure

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.10 – 2013.

The equipment under test (EUT) was placed on a non-conductive turntable with dimensions of 1.5m x 0.4m and 0.8m high above the ground for below 1GHz measurement and 1.5m high above the ground for above 1GHz measurement. 3m from the EUT, a broadband antenna mounting on the mast received the signal strength. The turntable was rotated to maximize the emission level. The antenna was then moving along the mast from 1m up to 4m until no more higher value was found. Both horizontal and vertical polarization of the antenna were placed and investigated.

For below 30MHz, a loop antenna with its vertical plane is placed 3m from the EUT and rotated about its vertical axis for maximum response at each azimuth about the EUT. And the centre of the loop shall be 1 m above the ground.

For 30MHz to 300MHz, biconical antenna with its vertical and horizontal plane is placed 3m from the EUT and rotated about its vertical and horizontal axis for maximum response at each azimuth about the EUT. And the reference point of antenna shall be 1 m above the ground. Same procedure for frequency 300MHz to 1000MHz but Log-periodic antenna is used for final measurements.

For above 1GHz, horn antenna with its vertical and horizontal plane is placed 3m from the EUT and rotated about its vertical and horizontal axis for maximum response at each azimuth about the EUT. Preamplifier and High Pass filter was used for measurements. The reference point of antenna shall be 1 m above the ground.

The device was rotated through three X, Y, Z orthogonal to determine which attitude and configuration produce the highest emission during measurement for Radiated Emission measurement.

The Frequencies from fundamental up to the tenth harmonics were investigated, and emissions more 20dB below limit were not reported. Thus, those highest emissions of operating mode Wi-Fi, Bluetooth and Aux in were presented in next pages.

The EUT will connect to TS 8997 testing system for direct conducted measurement.

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2.2 Test Summary

Environmental conditions:

Parameter	Recorded value	
Ambient temperature:	25.0	° C
Relative humidity:	65.0	%

Summary (Wi-Fi 802.11b)

Test	Frequency (MHz)	Result
RF output power		PASS
Power Spectral Density		PASS
Minimum Emission Bandwidth 6 dB		PASS
Band Edge low		PASS
Tx Spurious Emission		PASS
RF output power		PASS
Power Spectral Density		PASS
Minimum Emission Bandwidth 6 dB		PASS
Tx Spurious Emission		PASS
RF output power		PASS
Power Spectral Density		PASS
Minimum Emission Bandwidth 6 dB		PASS
Band Edge high		PASS
Tx Spurious Emission		PASS

Summary (Wi-Fi 802.11g)

Test	Frequency (MHz)	Result
RF output power		PASS
Power Spectral Density		PASS
Minimum Emission Bandwidth 6 dB		PASS
Band Edge low		PASS
Tx Spurious Emission		PASS
RF output power		PASS
Power Spectral Density		PASS
Minimum Emission Bandwidth 6 dB		PASS
Tx Spurious Emission		PASS
RF output power		PASS
Power Spectral Density		PASS
Minimum Emission Bandwidth 6 dB		PASS
Band Edge high		PASS
Tx Spurious Emission		PASS

Summary (Wi-Fi 802.11n HT20)

Test	Frequency (MHz)	Result
RF output power		PASS
Power Spectral Density		PASS
Minimum Emission Bandwidth 6 dB		PASS
Band Edge low		PASS
Tx Spurious Emission		PASS

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RF output power		PASS
Power Spectral Density		PASS
Minimum Emission Bandwidth 6 dB		PASS
Tx Spurious Emission		PASS
RF output power		PASS
Power Spectral Density		PASS
Minimum Emission Bandwidth 6 dB		PASS
Band Edge high		PASS
Tx Spurious Emission		PASS

Summary (Wi-Fi 802.11n HT40)

Test	Frequency (MHz)	Result
RF output power		PASS
Power Spectral Density		PASS
Minimum Emission Bandwidth 6 dB		PASS
Band Edge low		PASS
Tx Spurious Emission		PASS
RF output power		PASS
Power Spectral Density		PASS
Minimum Emission Bandwidth 6 dB		PASS
Tx Spurious Emission		PASS
RF output power		PASS
Power Spectral Density		PASS
Minimum Emission Bandwidth 6 dB		PASS
Band Edge high		PASS
Tx Spurious Emission		PASS

Summary (Bluetooth 2.1+EDR)

Test	Frequency (MHz)	Nominal Power (dBm)	Nominal Bandwidth (MHz)	Result
Hopping Frequencies	--- (hopping)	0.0	1.000000	PASS
Band Edge low	--- (hopping)	0.0	1.000000	PASS
Band Edge high	--- (hopping)	0.0	1.000000	PASS
Carrier Frequency Separation	2402.000 (hopping)	0.0	1.000000	PASS
Carrier Frequency Separation	2441.000 (hopping)	0.0	1.000000	PASS
Carrier Frequency Separation	2479.000 (hopping)	0.0	1.000000	PASS
Time of Channel Occupancy	2402.000 (hopping)	0.0	1.000000	PASS
Time of Channel Occupancy	2441.000 (hopping)	0.0	1.000000	PASS
Time of Channel Occupancy	2480.000 (hopping)	0.0	1.000000	PASS
RF output power	2402.000 (single)	0.0	1.000000	PASS
Emission Bandwidth 20 dB	2402.000 (single)	0.0	1.000000	PASS
Band Edge low	2402.000 (single)	0.0	1.000000	PASS
Tx Spurious Emission	2402.000 (single)			
RF output power	2441.000 (single)	0.0	1.000000	PASS
Emission Bandwidth 20 dB	2441.000 (single)	0.0	1.000000	PASS
Tx Spurious Emission	2441.000 (single)			
RF output power	2480.000 (single)	0.0	1.000000	PASS
Emission Bandwidth 20 dB	2480.000 (single)	0.0	1.000000	PASS
Band Edge high	2480.000 (single)	0.0	1.000000	PASS
Tx Spurious Emission	2480.000 (single)			

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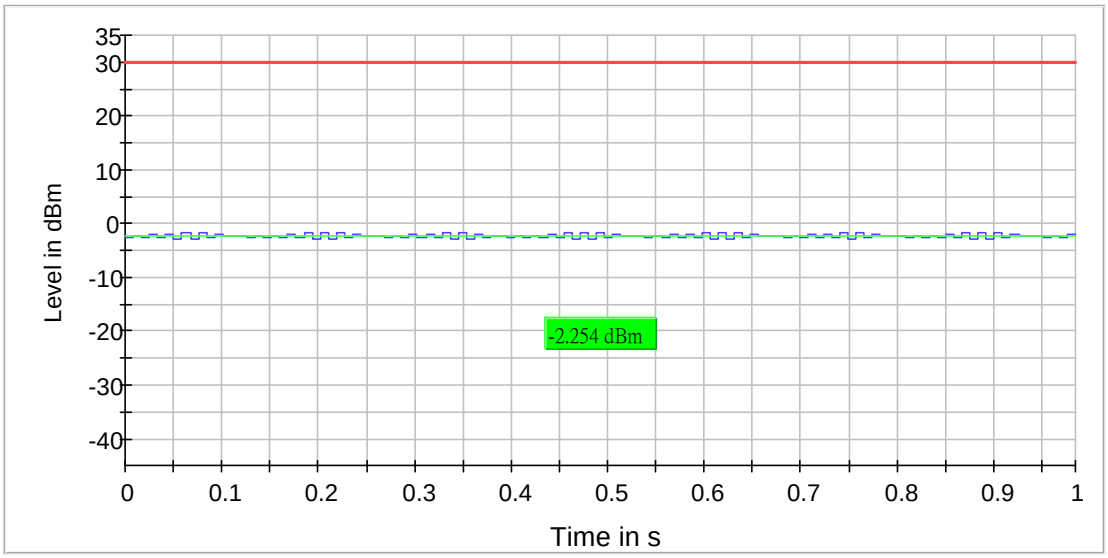
2.3 Conducted RF Measurement Data (Wi-Fi 802.11b)

RF output power (2412 MHz)

Test according to FCC title 47 part 15 §15.247(b) and ANSI C63.10.

Result

DUT Frequency (MHz)	Conduct power (dBm)	Limit Max (dBm)	DutyCycle (%)	Result
2412.000000	-2.3	30.0	99.072	PASS



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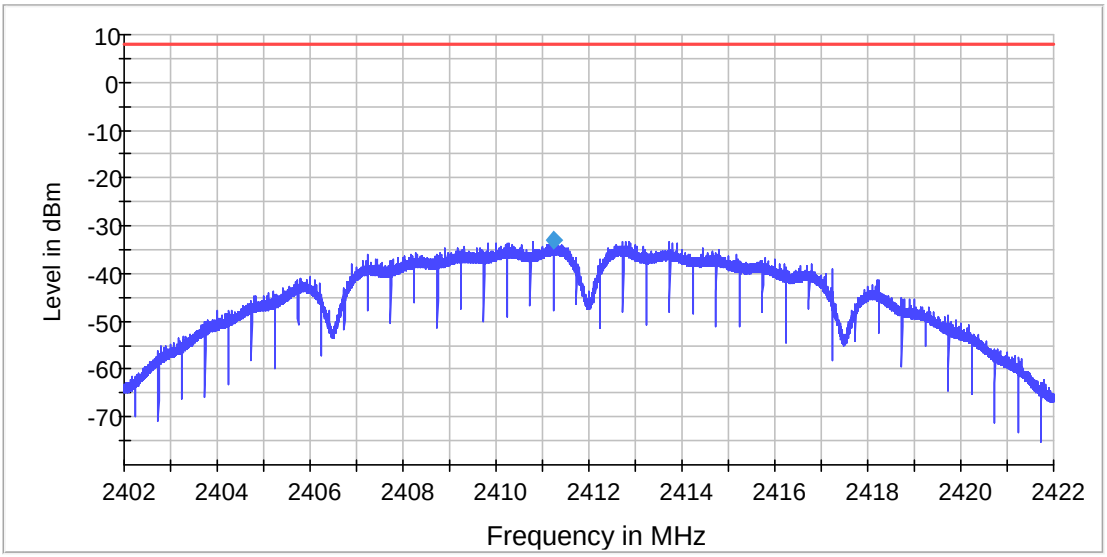
Power Spectral Density (2412 MHz)

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2412.000000	2411.232788	-32.936	8.0	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40200 GHz	2.40200 GHz
Stop Frequency	2.42200 GHz	2.42200 GHz
Span	20.000 MHz	20.000 MHz
RBW	3.000 kHz	<= 3.000 kHz
VBW	10.000 kHz	>= 9.000 kHz
SweepPoints	13333	~ 13333
Sweeptime	13.400 s	13.333 s
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

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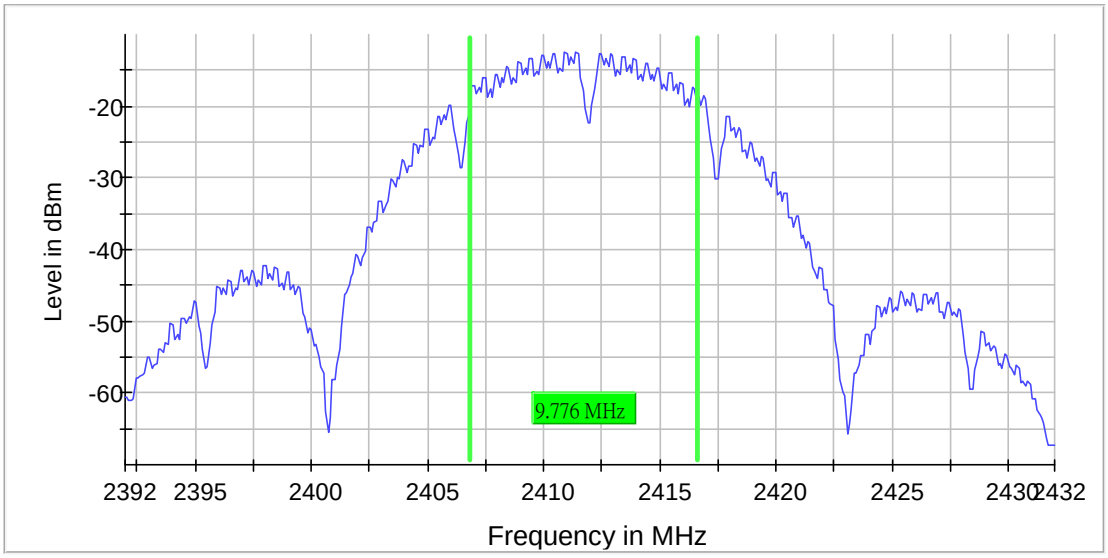
Minimum Emission Bandwidth 6 dB (2412 MHz)

Test according to FCC title 47 part 15 §15.247(a) and ANSI C63.10.

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
2412.000000	9.775561	0.500000	---	2406.812968	2416.588529	-12.4	PASS



FCC ID: LMZ-31324GC

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Band Edge low (2412 MHz)

Test according to FCC title 47 part 15 §15.247(d) and ANSI C63.10.

Result

DUT Frequency (MHz)	Result
2412.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
2407.720377	-18.3

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2398.225986	-50.2	11.9	-38.3	PASS
2398.126041	-50.2	11.9	-38.3	PASS
2398.076069	-50.2	12.0	-38.3	PASS
2398.275958	-50.3	12.0	-38.3	PASS
2398.176013	-50.3	12.0	-38.3	PASS
2398.026097	-50.3	12.1	-38.3	PASS
2397.976124	-50.4	12.1	-38.3	PASS
2398.325930	-50.4	12.1	-38.3	PASS
2398.375902	-50.5	12.3	-38.3	PASS
2397.926152	-50.6	12.3	-38.3	PASS
2397.126596	-50.6	12.3	-38.3	PASS
2398.425875	-50.7	12.4	-38.3	PASS
2397.876180	-50.7	12.4	-38.3	PASS
2397.026652	-50.8	12.5	-38.3	PASS
2397.076624	-50.8	12.5	-38.3	PASS

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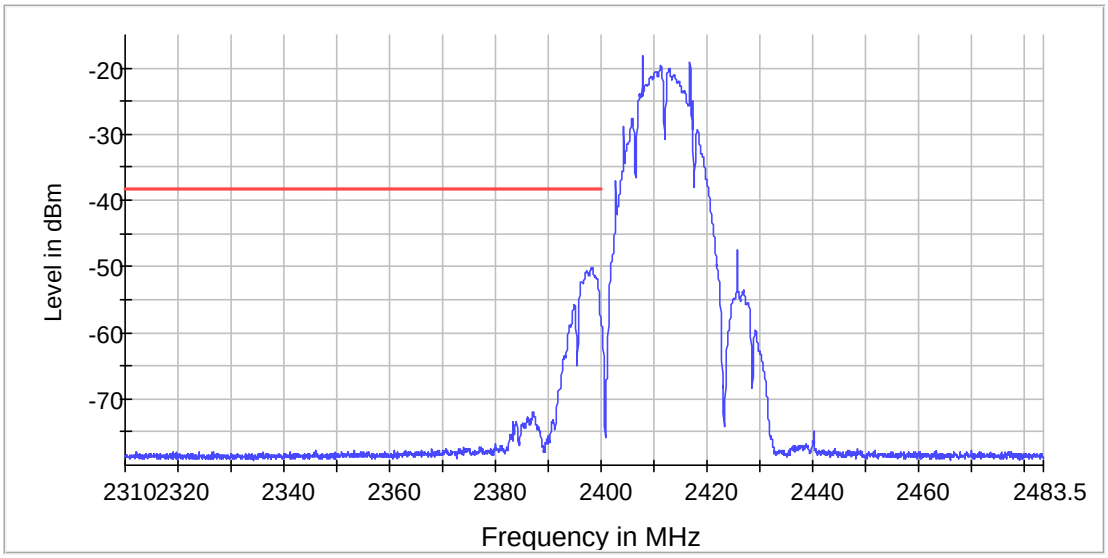

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Tx Spurious Emission (2412 MHz)

Test according to FCC title 47 part 15 §15.247(d) and ANSI C63.10.

Result

DUT Frequency (MHz)	Result
2412.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2398.250625	-39.8	11.5	-28.3
2397.750803	-39.9	11.6	-28.3
2397.250982	-40.0	11.8	-28.3
2398.750446	-40.1	11.8	-28.3
2396.751160	-40.6	12.3	-28.3
2399.250268	-41.4	13.1	-28.3
2396.251339	-41.7	13.4	-28.3
2395.751517	-43.0	14.7	-28.3
2395.251696	-44.5	16.3	-28.3
2394.751874	-46.9	18.6	-28.3
19710.502469	-60.4	19.2	-41.2
2394.252053	-47.5	19.2	-28.3
19711.689894	-60.5	19.3	-41.2
19747.906381	-60.7	19.5	-41.2
19749.687520	-60.8	19.5	-41.2

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	26000.000000	2	2

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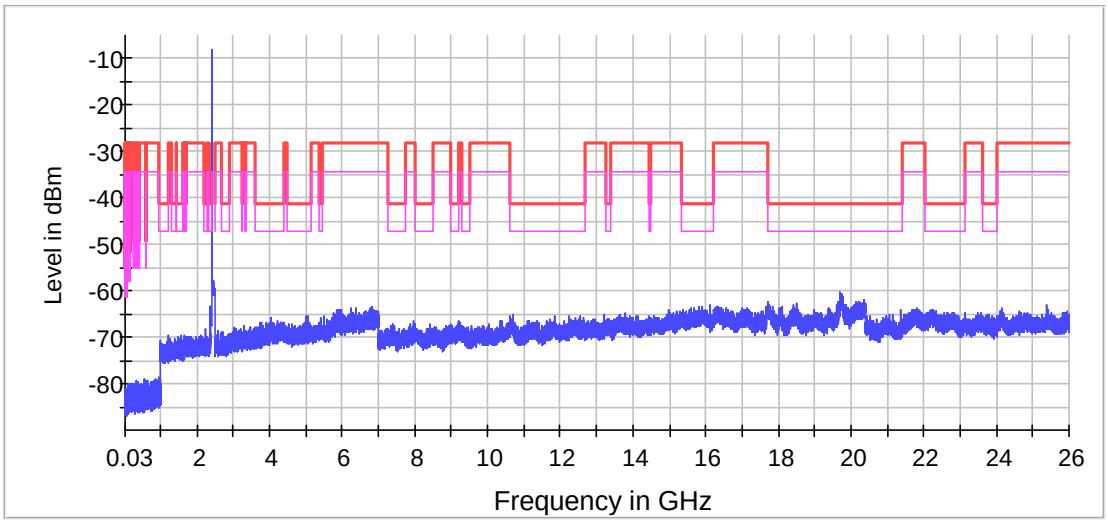

× Limit [limit.Result:1] × Sum Level [trace.Result:1]

Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	19400	~ 19400
Sweeptime	19.400 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	1.000 MHz	<= 1.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	2800	~ 2800
Sweeptime	2.800 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

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TEST REPORT

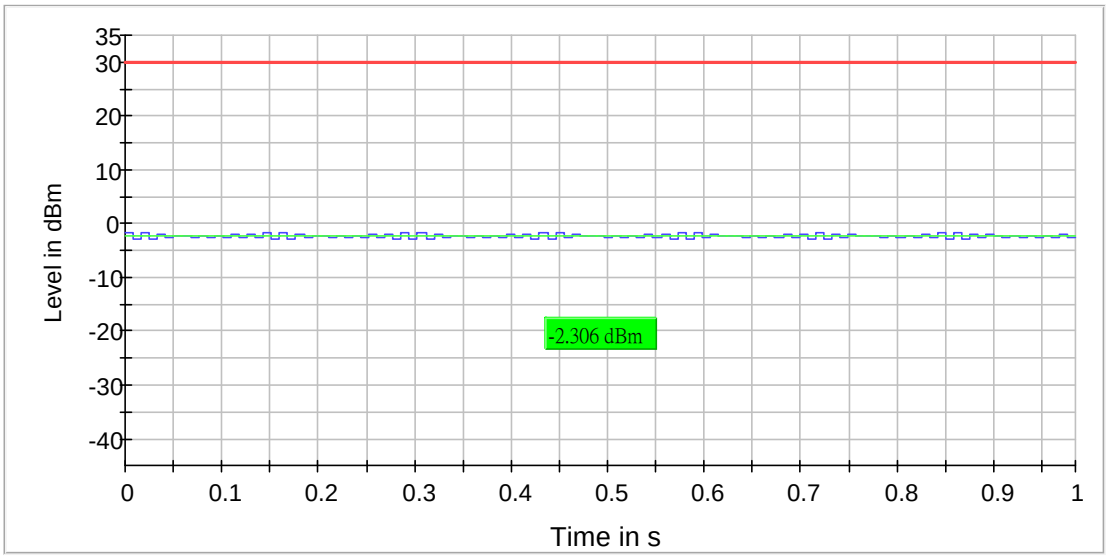
Report No. : AV0041562(7) Date : 11 Jul 2017

RF output power (2437 MHz)

Test according to FCC title 47 part 15 §15.247(b) and ANSI C63.10.

Result

DUT Frequency (MHz)	Conduct power (dBm)	Limit Max (dBm)	DutyCycle (%)	Result
2437.000000	-2.3	30.0	98.953	PASS



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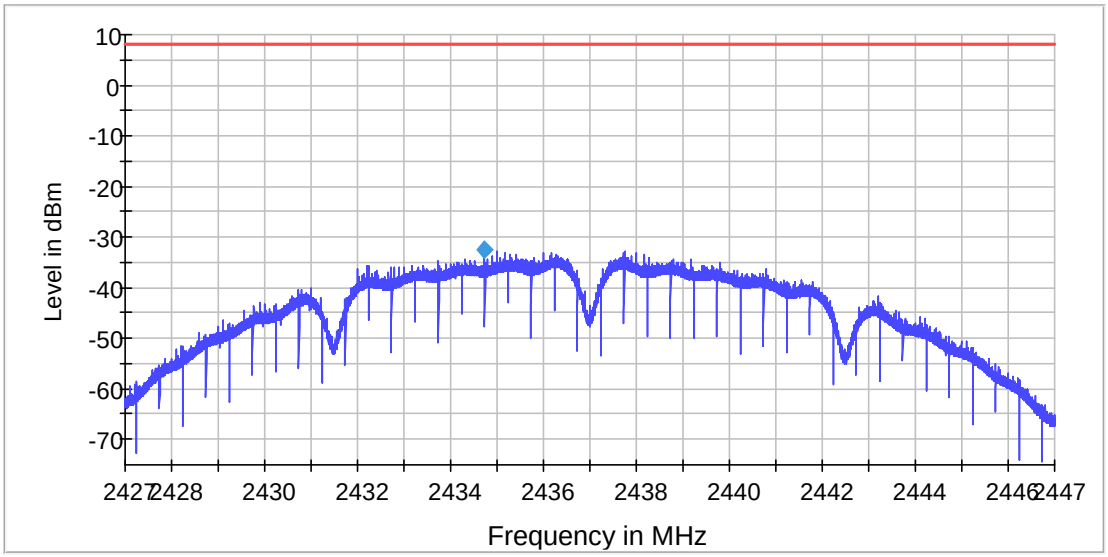
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Power Spectral Density (2437 MHz)

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2437.000000	2434.723864	-32.535	8.0	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.42700 GHz	2.42700 GHz
Stop Frequency	2.44700 GHz	2.44700 GHz
Span	20.000 MHz	20.000 MHz
RBW	3.000 kHz	<= 3.000 kHz
VBW	10.000 kHz	>= 9.000 kHz
SweepPoints	13333	~ 13333
Sweeptime	13.400 s	13.333 s
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

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TEST REPORT

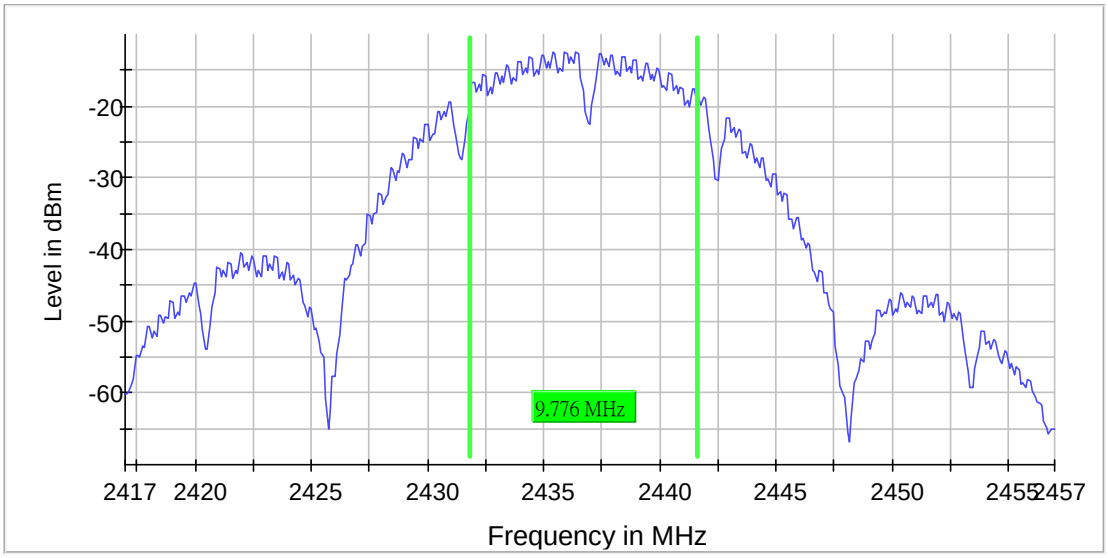
Report No. : AV0041562(7) Date : 11 Jul 2017

Minimum Emission Bandwidth 6 dB (2437 MHz)

Test according to FCC title 47 part 15 §15.247(a) and ANSI C63.10.

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
2437.000000	9.775561	0.500000	---	2431.812968	2441.588529	-12.4	PASS



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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Tx Spurious Emission (2437 MHz)

Test according to FCC title 47 part 15 §15.247(d), KDB 789033 D02 General U-NII Test Procedures New Rules v01r02 and ANSI C63.10

Result

DUT Frequency (MHz)	Result
2437.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
19759.186926	-60.8	19.6	-41.2
19780.560590	-60.9	19.6	-41.2
19715.845885	-60.9	19.7	-41.2
19725.345291	-61.5	20.3	-41.2
19721.783014	-61.7	20.5	-41.2
19718.814449	-61.7	20.5	-41.2
19747.906381	-61.8	20.6	-41.2
20263.842885	-61.9	20.6	-41.2
19714.064746	-61.9	20.7	-41.2
19712.877320	-61.9	20.7	-41.2
20276.310856	-61.9	20.7	-41.2
19728.907568	-61.9	20.7	-41.2
19782.935442	-61.9	20.7	-41.2
19720.001875	-61.9	20.7	-41.2
19744.937816	-61.9	20.7	-41.2

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	26000.000000	2	2

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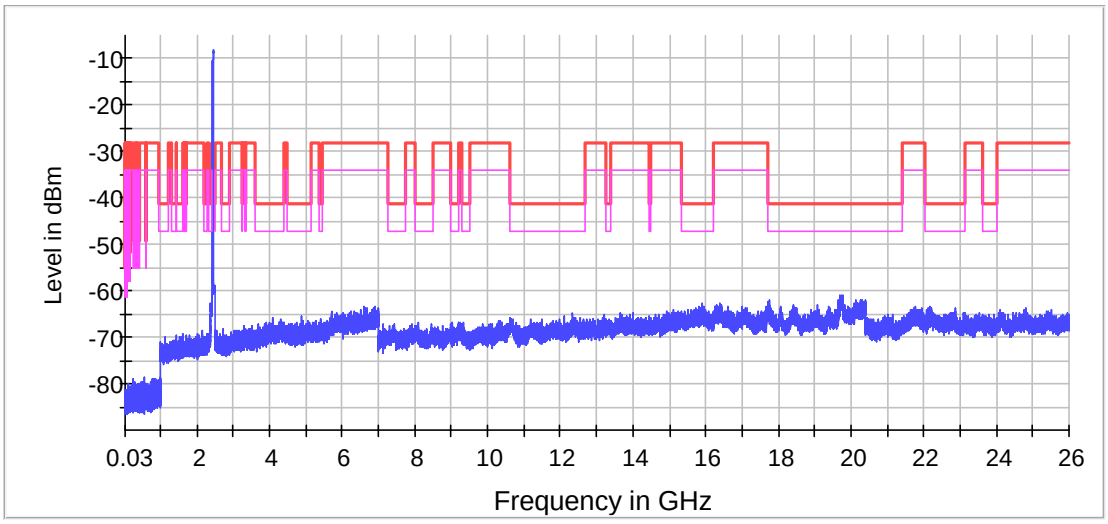

× Limit [limit.Result:1] × Sum Level [trace.Result:1]

Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	19400	~ 19400
Sweeptime	19.400 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	1.000 MHz	<= 1.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	2800	~ 2800
Sweeptime	2.800 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB

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TEST REPORT

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Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

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TEST REPORT

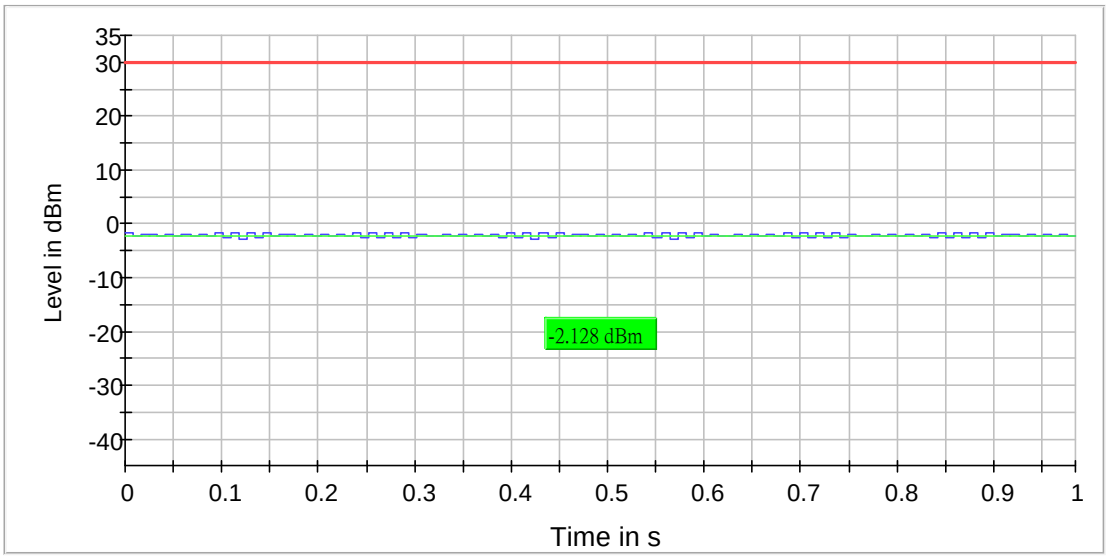
Report No. : AV0041562(7) Date : 11 Jul 2017

RF output power (2462 MHz)

Test according to FCC title 47 part 15 §15.247(b) and ANSI C63.10.

Result

DUT Frequency (MHz)	Conduct power (dBm)	Limit Max (dBm)	DutyCycle (%)	Result
2462.000000	-2.1	30.0	99.132	PASS



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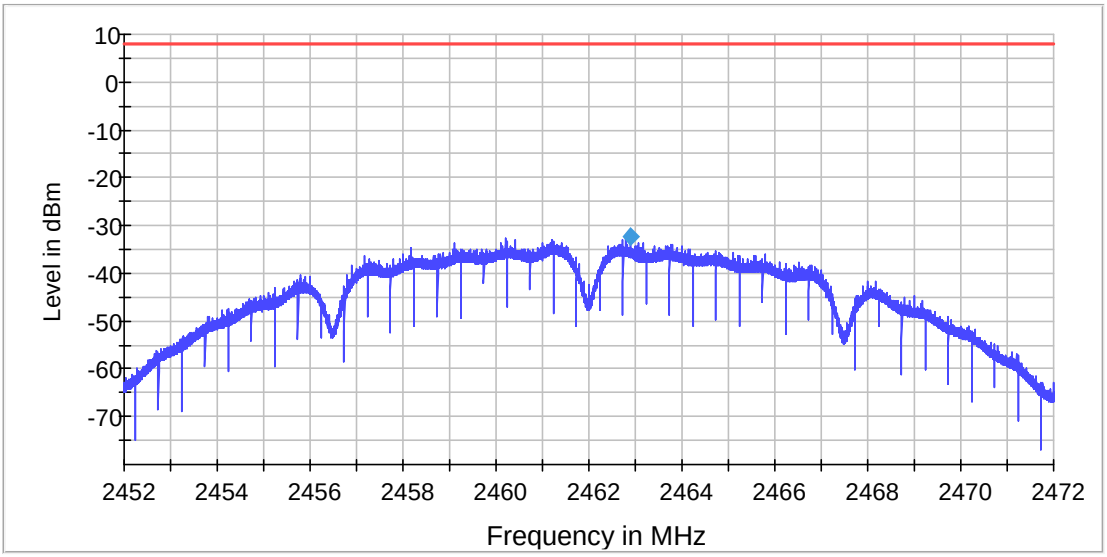
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Power Spectral Density (2462 MHz)

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2462.000000	2462.887206	-32.335	8.0	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.45200 GHz	2.45200 GHz
Stop Frequency	2.47200 GHz	2.47200 GHz
Span	20.000 MHz	20.000 MHz
RBW	3.000 kHz	<= 3.000 kHz
VBW	10.000 kHz	>= 9.000 kHz
SweepPoints	13333	~ 13333
Sweeptime	13.400 s	13.333 s
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

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TEST REPORT

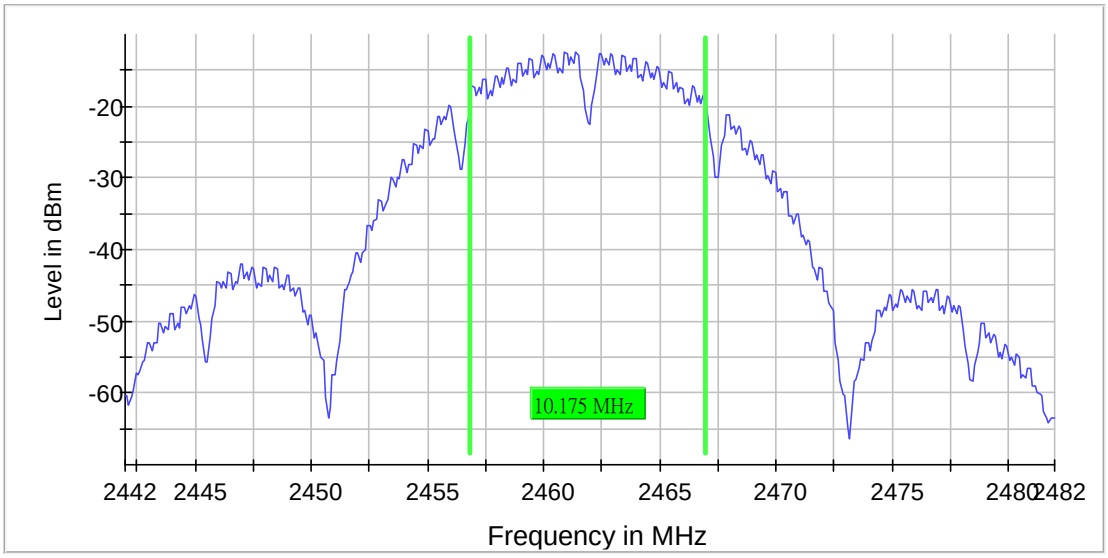
Report No. : AV0041562(7) Date : 11 Jul 2017

Minimum Emission Bandwidth 6 dB (2462 MHz)

Test according to FCC title 47 part 15 §15.247(a) and ANSI C63.10.

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
2462.000000	10.174563	0.500000	---	2456.812968	2466.987531	-12.5	PASS



FCC ID: LMZ-31324GC

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Band Edge high (2462 MHz)

Test according to FCC title 47 part 15 §15.247(d) and ANSI C63.10.

Result

DUT Frequency (MHz)	Result
2462.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
2461.188360	-13.7

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2486.466012	-76.4	42.7	-33.7	PASS
2486.316465	-76.5	42.8	-33.7	PASS
2485.967523	-76.6	42.8	-33.7	PASS
2485.917674	-76.6	42.9	-33.7	PASS
2485.867825	-76.6	42.9	-33.7	PASS
2486.266616	-76.6	42.9	-33.7	PASS
2486.366314	-76.6	42.9	-33.7	PASS
2486.565710	-76.7	43.0	-33.7	PASS
2486.216767	-76.7	43.0	-33.7	PASS
2486.166918	-76.7	43.0	-33.7	PASS
2486.615559	-76.8	43.1	-33.7	PASS
2485.817976	-76.8	43.1	-33.7	PASS
2486.067221	-76.8	43.1	-33.7	PASS
2486.117069	-76.8	43.1	-33.7	PASS
2486.416163	-76.9	43.2	-33.7	PASS

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TEST REPORT

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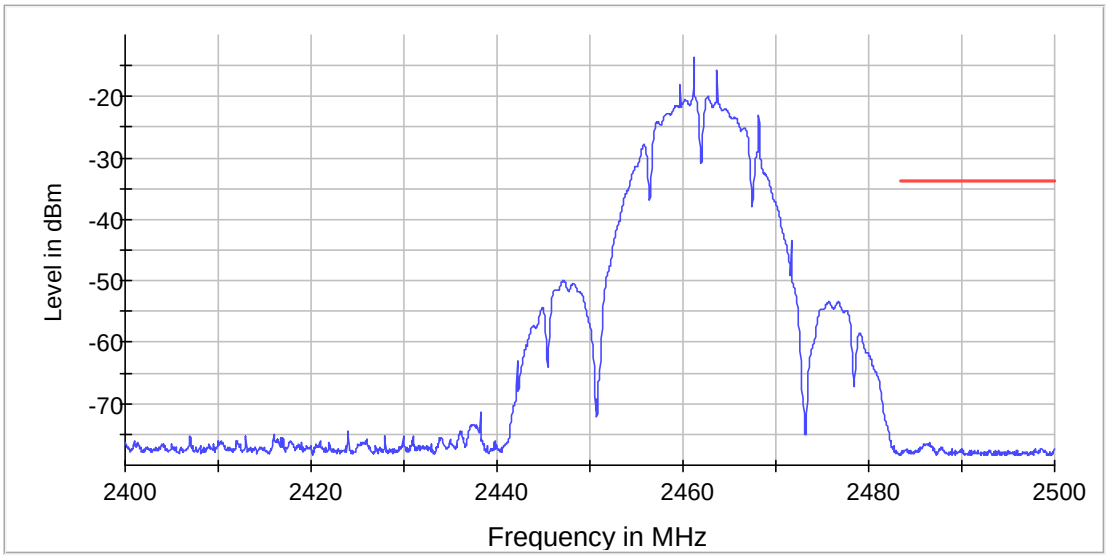

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Tx Spurious Emission (2462 MHz)

Test according to FCC title 47 part 15 §15.247(d) and ANSI C63.10.

Result

DUT Frequency (MHz)	Result
2462.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
19737.813262	-60.7	19.4	-41.2
19720.595588	-60.7	19.4	-41.2
19731.876133	-61.1	19.8	-41.2
19766.311481	-61.1	19.9	-41.2
19740.188113	-61.1	19.9	-41.2
19717.033310	-61.1	19.9	-41.2
19753.249797	-61.2	20.0	-41.2
19729.501281	-61.3	20.0	-41.2
19723.564152	-61.3	20.1	-41.2
19714.064746	-61.3	20.1	-41.2
20395.053434	-61.3	20.1	-41.2
19769.873758	-61.4	20.1	-41.2
19760.374352	-61.4	20.2	-41.2
19696.847072	-61.5	20.2	-41.2
19718.220736	-61.5	20.3	-41.2

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	26000.000000	2	2

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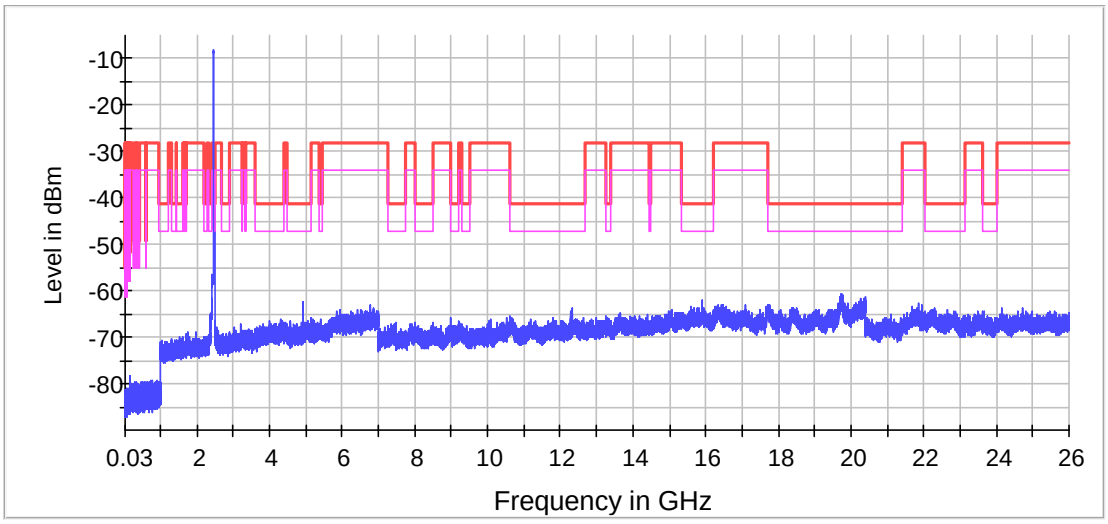
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017



× Limit [limit.Result:1] × Sum Level [trace.Result:1]

Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	19400	~ 19400
Sweeptime	19.400 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	1.000 MHz	<= 1.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	2800	~ 2800
Sweeptime	2.800 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold

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TEST REPORT

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Sweeptype	**Sweep**	**AUTO**
Preamp	**off**	**off**
Stablemode	**Trace**	**Trace**
Stablevalue	**0.30**	**0.30**
Run	**3 / max. 150**	**max. 150**
Stable	**3 / 3**	**3**

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

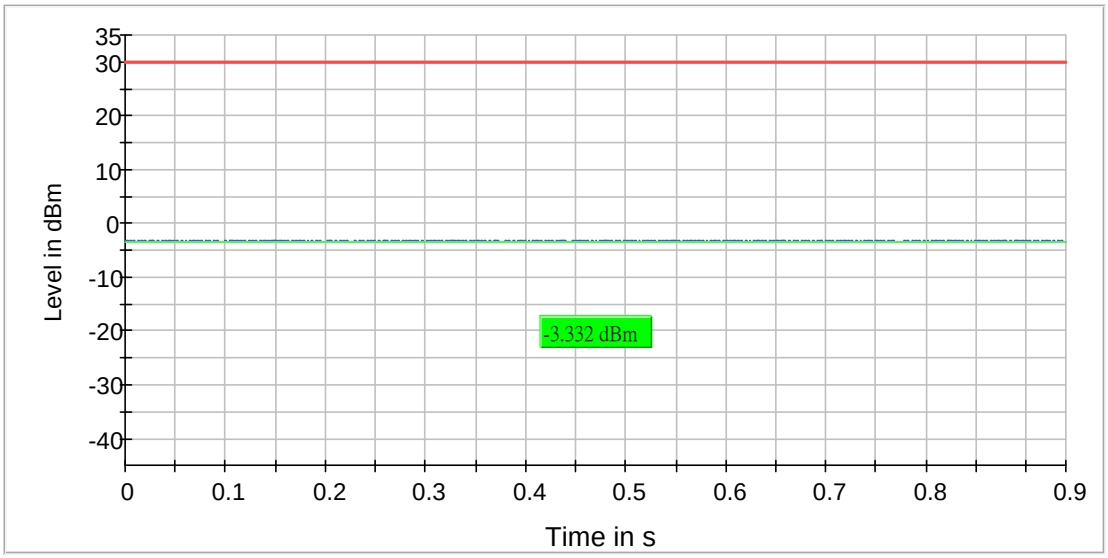
2.4 Conducted RF Measurement Data (Wi-Fi 802.11g)

RF output power (2412 MHz)

Test according to FCC title 47 part 15 §15.247(b) and ANSI C63.10.

Result

DUT Frequency (MHz)	Conduct power (dBm)	Limit Max (dBm)	DutyCycle (%)	Result
2412.000000	-3.3	30.0	94.126	PASS



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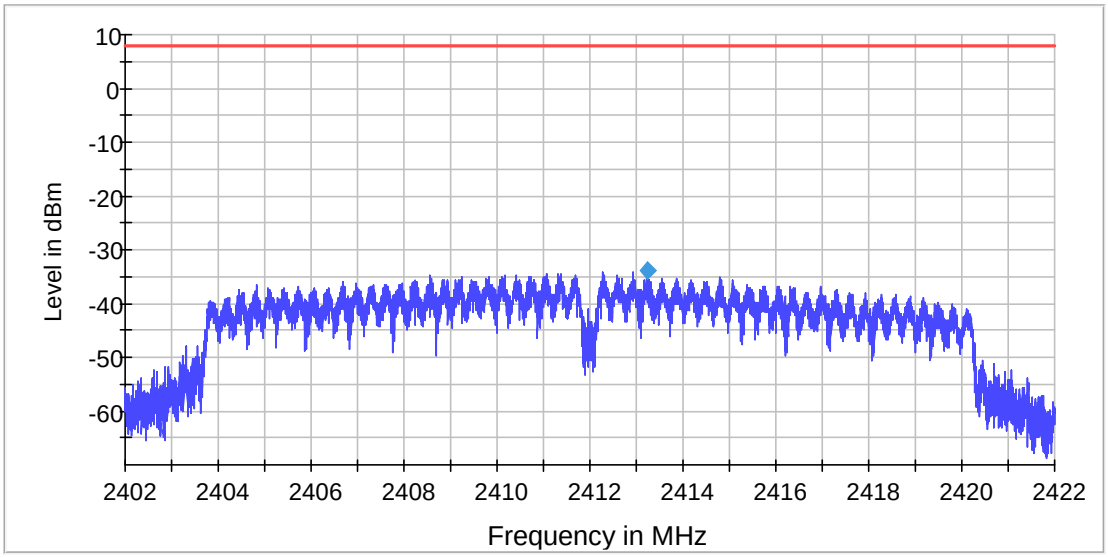
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Power Spectral Density (2412 MHz)

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2412.000000	2413.224689	-33.757	8.0	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40200 GHz	2.40200 GHz
Stop Frequency	2.42200 GHz	2.42200 GHz
Span	20.000 MHz	20.000 MHz
RBW	3.000 kHz	<= 3.000 kHz
VBW	10.000 kHz	>= 9.000 kHz
SweepPoints	13333	~ 13333
Sweeptime	13.400 s	13.333 s
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

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TEST REPORT

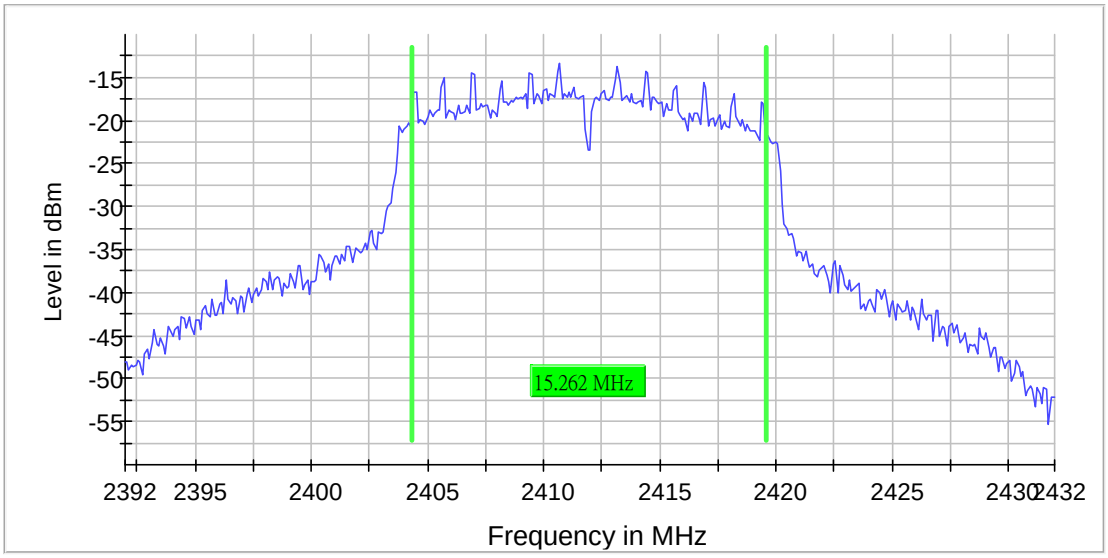
Report No. : AV0041562(7) Date : 11 Jul 2017

Minimum Emission Bandwidth 6 dB (2412 MHz)

Test according to FCC title 47 part 15 §15.247(a) and ANSI C63.10.

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
2412.000000	15.261845	0.500000	---	2404.319202	2419.581047	-13.4	PASS



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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Band Edge low (2412 MHz)

Test according to FCC title 47 part 15 §15.247(d) and ANSI C63.10.

Result

DUT Frequency (MHz)	Result
2412.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
2411.368193	-22.4

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.125486	-46.2	3.8	-42.4	PASS
2399.725153	-46.3	3.9	-42.4	PASS
2399.425319	-46.4	4.0	-42.4	PASS
2399.775125	-46.5	4.1	-42.4	PASS
2399.475292	-46.6	4.2	-42.4	PASS
2399.825097	-46.9	4.5	-42.4	PASS
2399.375347	-47.0	4.6	-42.4	PASS
2398.525819	-47.0	4.6	-42.4	PASS
2399.175458	-47.1	4.7	-42.4	PASS
2399.075514	-47.1	4.7	-42.4	PASS
2398.475847	-47.2	4.8	-42.4	PASS
2398.225986	-47.5	5.1	-42.4	PASS
2399.675180	-47.7	5.3	-42.4	PASS
2398.875625	-47.7	5.3	-42.4	PASS
2399.875069	-47.8	5.4	-42.4	PASS

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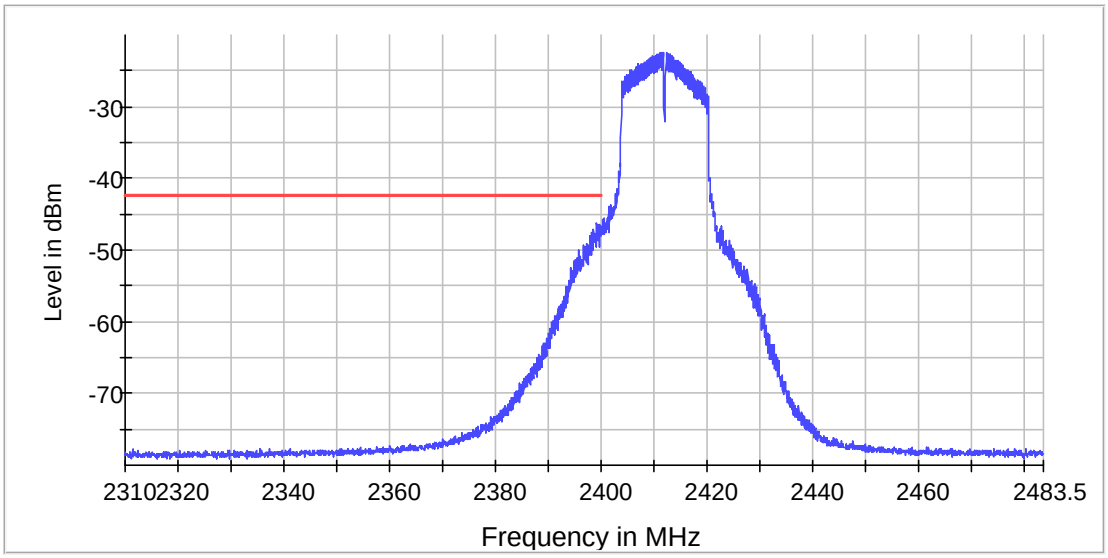
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017



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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Tx Spurious Emission (2412 MHz)

Test according to FCC title 47 part 15 §15.247(d) and ANSI C63.10.

Result

DUT Frequency (MHz)	Result
2412.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
2389.253838	-40.2	-55.9	-41.2	14.7	PASS
2399.250268	-29.9	-39.4	-25.9	13.5	PASS

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2389.253838	-40.2	-1.0	-41.2
2388.754016	-41.0	-0.2	-41.2
2388.254195	-42.8	1.6	-41.2
2399.250268	-29.9	4.0	-25.9
2389.753659	-45.3	4.1	-41.2
2398.250625	-30.1	4.2	-25.9
2397.250982	-30.4	4.5	-25.9
2387.254552	-46.0	4.8	-41.2
2386.254909	-46.1	4.9	-41.2
2397.750803	-30.9	5.0	-25.9
2387.754373	-46.3	5.0	-41.2
2398.750446	-31.0	5.2	-25.9
2396.751160	-31.5	5.6	-25.9
2386.754730	-46.8	5.6	-41.2
2394.751874	-31.7	5.8	-25.9

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	26000.000000	2	2

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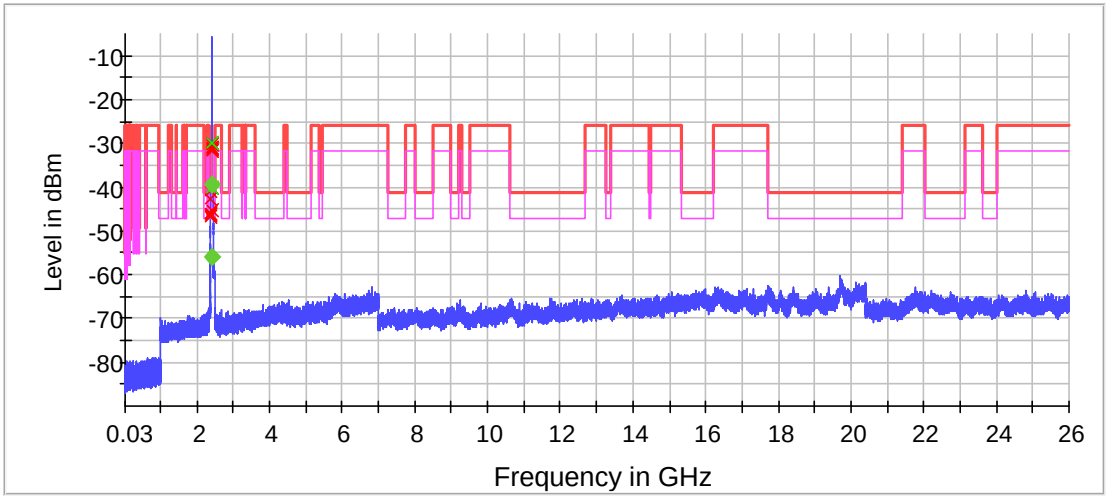
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017



Limit [limit.Result:1] Sum Level [trace.Result:1]
Threshold [limit 2.Result:1] Critical [Over Limit.Result:1]

Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	19400	~ 19400
Sweeptime	19.400 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	1.000 MHz	<= 1.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	2800	~ 2800
Sweeptime	2.800 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

Final Measurement 2

Setting	Instrument Value	Target Value
Span	ZeroSpan	ZeroSpan
RBW	1.000 MHz	~ 1.000 MHz
VBW	3.000 MHz	~ 3.000 MHz
SweepPoints	10001	~ 10001
Sweeptime	1.000 s	1.000 s
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	0.000 dB	0.000 dB
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Clear Write	Clear Write
Sweeptype	Sweep	AUTO
Preamp	off	off

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TEST REPORT

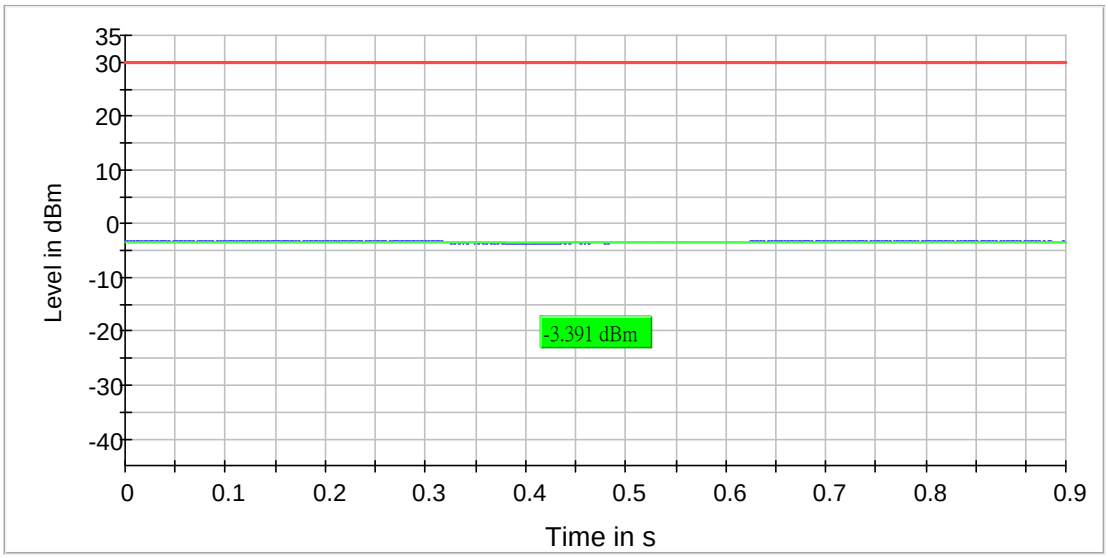
Report No. : AV0041562(7) Date : 11 Jul 2017

RF output power (2437 MHz)

Test according to FCC title 47 part 15 §15.247(b) and ANSI C63.10.

Result

DUT Frequency (MHz)	Conduct power (dBm)	Limit Max (dBm)	DutyCycle (%)	Result
2437.000000	-3.4	30.0	94.180	PASS



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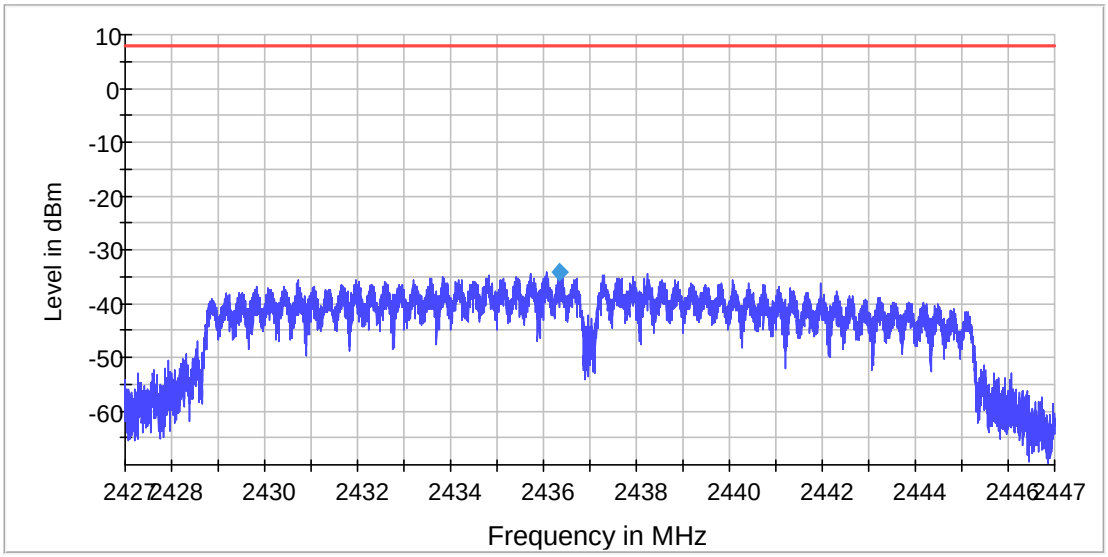
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Power Spectral Density (2437 MHz)

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2437.000000	2436.328784	-34.033	8.0	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.42700 GHz	2.42700 GHz
Stop Frequency	2.44700 GHz	2.44700 GHz
Span	20.000 MHz	20.000 MHz
RBW	3.000 kHz	<= 3.000 kHz
VBW	10.000 kHz	>= 9.000 kHz
SweepPoints	13333	~ 13333
Sweeptime	13.400 s	13.333 s
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

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TEST REPORT

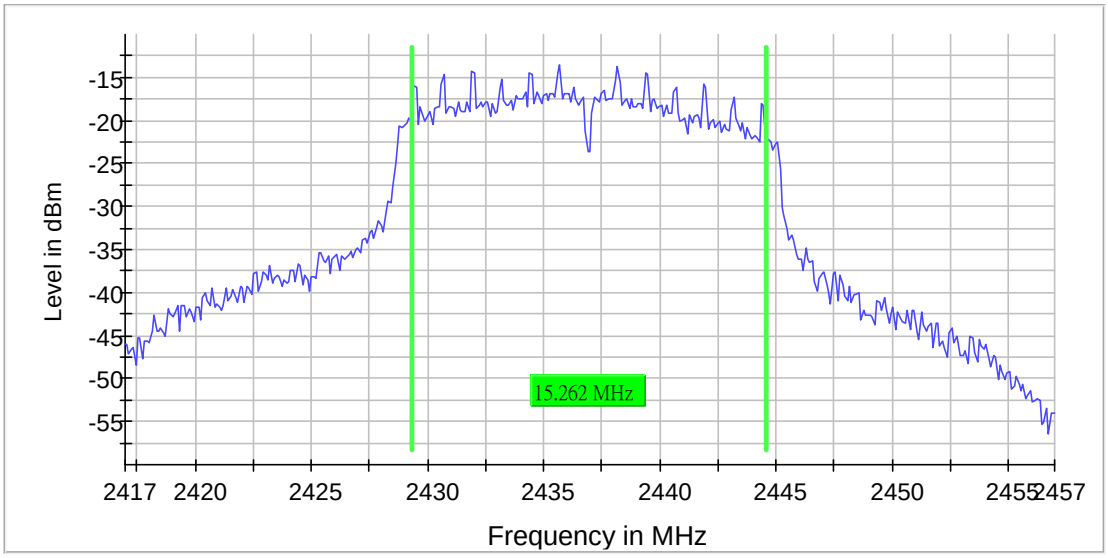
Report No. : AV0041562(7) Date : 11 Jul 2017

Minimum Emission Bandwidth 6 dB (2437 MHz)

Test according to FCC title 47 part 15 §15.247(a) and ANSI C63.10.

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
2437.000000	15.261845	0.500000	---	2429.319202	2444.581047	-13.5	PASS



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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Tx Spurious Emission (2437 MHz)

Test according to FCC title 47 part 15 §15.247(d) and ANSI C63.10.

Result

DUT Frequency (MHz)	Result
2437.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2389.753659	-59.4	18.2	-41.2
19704.565340	-59.7	18.4	-41.2
19734.844697	-60.7	19.5	-41.2
2389.253838	-60.8	19.6	-41.2
2387.754373	-60.9	19.6	-41.2
2388.254195	-60.9	19.6	-41.2
2388.754016	-60.9	19.7	-41.2
2383.255980	-61.0	19.8	-41.2
2386.254909	-61.1	19.9	-41.2
19739.000687	-61.1	19.9	-41.2
19746.125242	-61.2	20.0	-41.2
2386.754730	-61.3	20.0	-41.2
2387.254552	-61.3	20.1	-41.2
19701.596775	-61.3	20.1	-41.2
19737.813262	-61.5	20.2	-41.2

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	26000.000000	2	2

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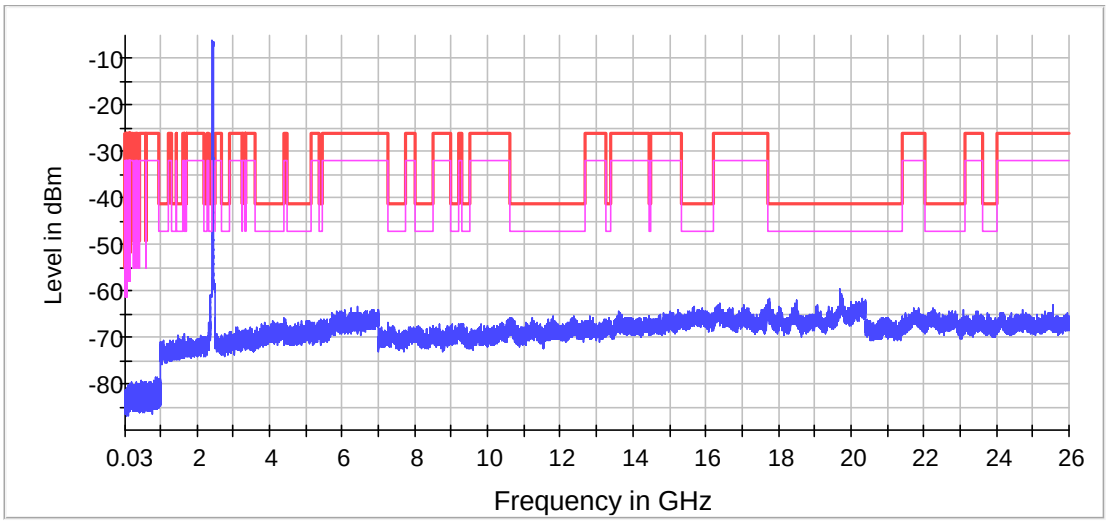

× Limit [limit.Result:1] × Sum Level [trace.Result:1]

Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	19400	~ 19400
Sweeptime	19.400 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	1.000 MHz	<= 1.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	2800	~ 2800
Sweeptime	2.800 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold

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TEST REPORT

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Sweeptype	**Sweep**	**AUTO**
Preamp	**off**	**off**
Stablemode	**Trace**	**Trace**
Stablevalue	**0.30**	**0.30**
Run	**3 / max. 150**	**max. 150**
Stable	**3 / 3**	**3**

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TEST REPORT

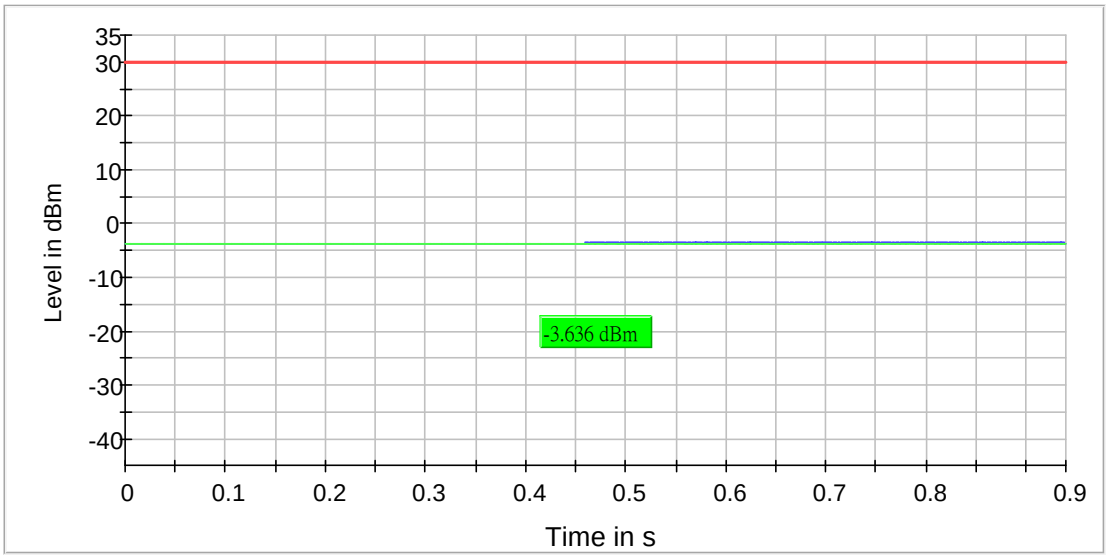
Report No. : AV0041562(7) Date : 11 Jul 2017

RF output power (2462 MHz)

Test according to FCC title 47 part 15 §15.247(b) and ANSI C63.10.

Result

DUT Frequency (MHz)	Conduct power (dBm)	Limit Max (dBm)	DutyCycle (%)	Result
2462.000000	-3.6	30.0	94.158	PASS



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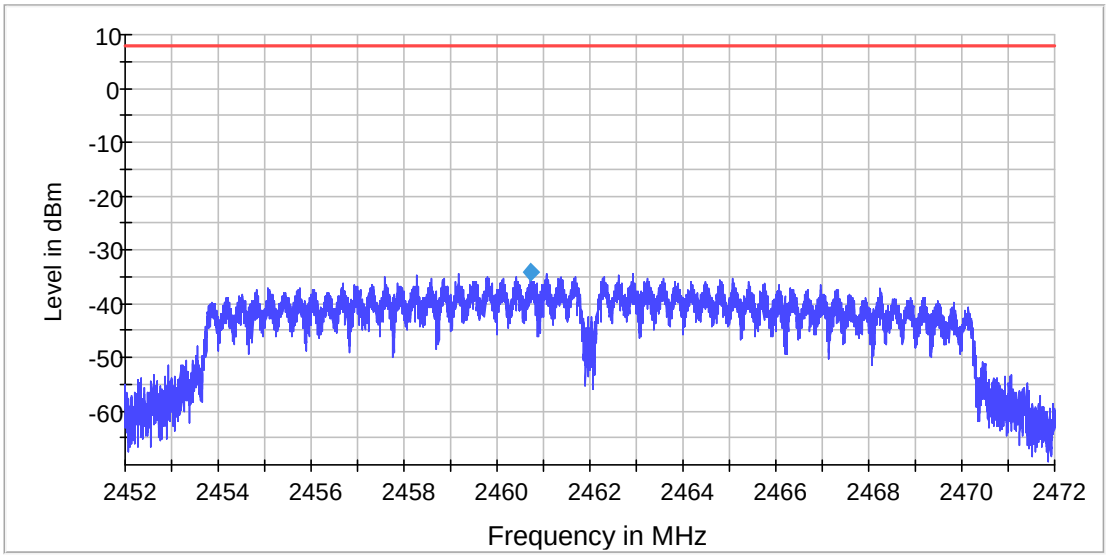
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Power Spectral Density (2462 MH)

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2462.000000	2460.713814	-34.218	8.0	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.45200 GHz	2.45200 GHz
Stop Frequency	2.47200 GHz	2.47200 GHz
Span	20.000 MHz	20.000 MHz
RBW	3.000 kHz	<= 3.000 kHz
VBW	10.000 kHz	>= 9.000 kHz
SweepPoints	13333	~ 13333
Sweeptime	13.400 s	13.333 s
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

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TEST REPORT

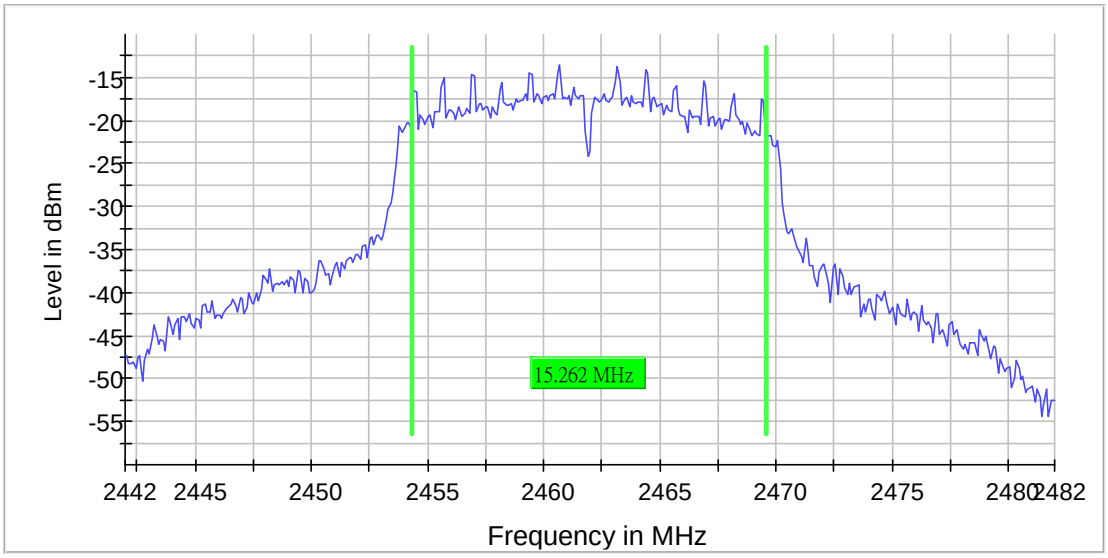
Report No. : AV0041562(7) Date : 11 Jul 2017

Minimum Emission Bandwidth 6 dB (2462 MHz)

Test according to FCC title 47 part 15 §15.247(a) and ANSI C63.10.

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
2462.000000	15.261845	0.500000	---	2454.319202	2469.581047	-13.5	PASS



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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Band Edge high (2462 MHz)

Test according to FCC title 47 part 15 §15.247(d) and ANSI C63.10.

Result

DUT Frequency (MHz)	Result
2462.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
2461.338270	-22.4

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2483.574773	-66.1	23.6	-42.4	PASS
2483.524924	-66.3	23.9	-42.4	PASS
2483.624622	-66.8	24.3	-42.4	PASS
2483.824018	-67.5	25.0	-42.4	PASS
2483.873867	-67.7	25.3	-42.4	PASS
2483.923716	-68.1	25.7	-42.4	PASS
2484.172961	-68.2	25.7	-42.4	PASS
2483.674471	-68.2	25.7	-42.4	PASS
2484.123112	-68.4	26.0	-42.4	PASS
2484.222810	-68.8	26.4	-42.4	PASS
2483.774169	-68.8	26.4	-42.4	PASS
2483.724320	-68.8	26.4	-42.4	PASS
2483.973565	-69.0	26.5	-42.4	PASS
2484.771148	-69.1	26.6	-42.4	PASS
2484.521903	-69.2	26.8	-42.4	PASS

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TEST REPORT

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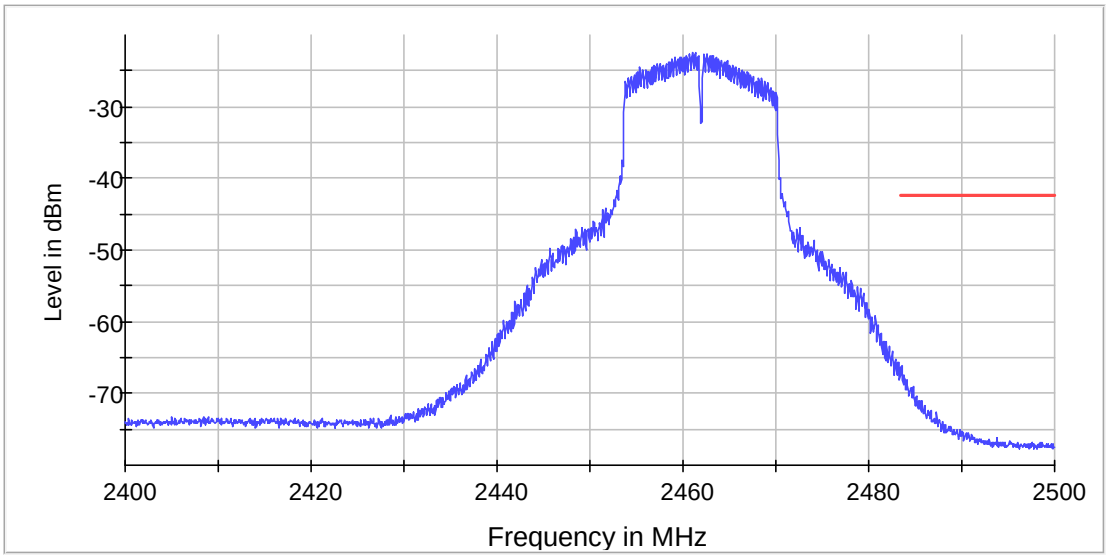

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Tx Spurious Emission (2462 MHz)

Test according to FCC title 47 part 15 §15.247(d) and ANSI C63.10.

Result

DUT Frequency (MHz)	Result
2462.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2483.749972	-47.5	6.2	-41.2
2484.249917	-49.5	8.3	-41.2
2485.749751	-51.0	9.8	-41.2
2486.249696	-51.9	10.7	-41.2
2484.749862	-52.1	10.9	-41.2
2486.749640	-52.6	11.4	-41.2
2485.249806	-53.1	11.9	-41.2
2487.749530	-54.4	13.2	-41.2
2487.249585	-55.8	14.6	-41.2
2488.749419	-57.0	15.8	-41.2
2489.749308	-57.9	16.6	-41.2
2488.249474	-57.9	16.7	-41.2
2490.249253	-58.1	16.9	-41.2
2489.249364	-59.4	18.2	-41.2
2491.249142	-59.6	18.4	-41.2

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	26000.000000	2	2

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TEST REPORT

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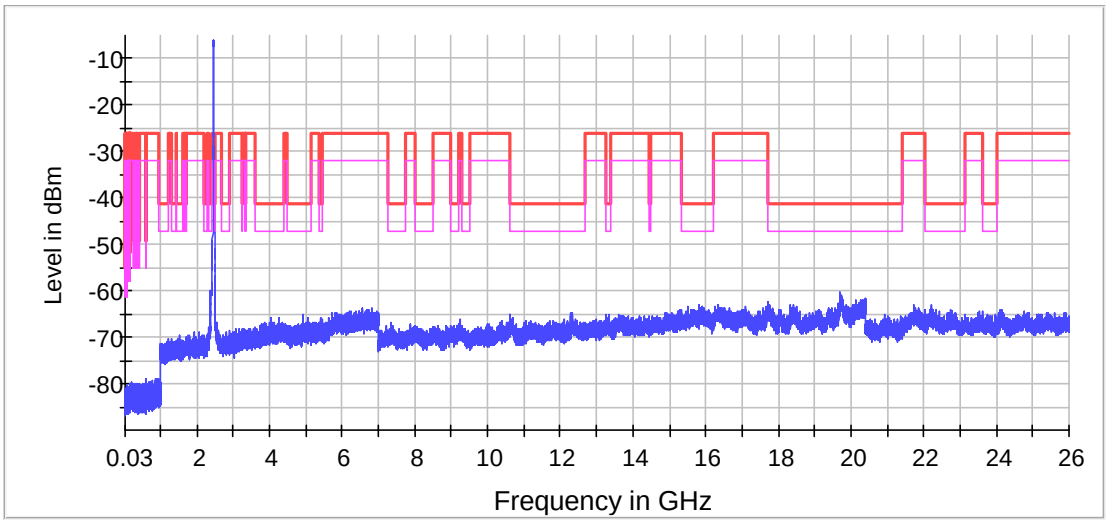

× Limit [limit.Result:1] × Sum Level [trace.Result:1]

Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	19400	~ 19400
Sweeptime	19.400 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	1.000 MHz	<= 1.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	2800	~ 2800
Sweeptime	2.800 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30

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TEST REPORT

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Filter	**3 dB**	**3 dB**
Trace Mode	**Max Hold**	**Max Hold**
Sweeptype	**Sweep**	**AUTO**
Preamp	**off**	**off**
Stablemode	**Trace**	**Trace**
Stablevalue	**0.30**	**0.30**
Run	**3 / max. 150**	**max. 150**
Stable	**3 / 3**	**3**

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

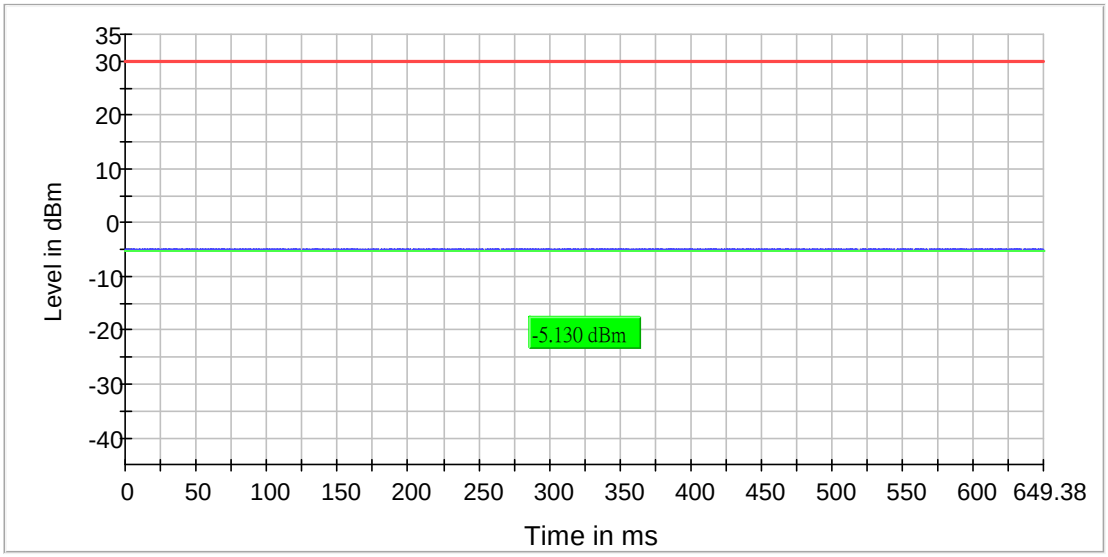
2.5 Conducted RF Measurement Data (Wi-Fi 802.11n HT20)

RF output power (2412 MHz)

Test according to FCC title 47 part 15 §15.247(b) and ANSI C63.10.

Result

DUT Frequency (MHz)	Conduct power (dBm)	Limit Max (dBm)	DutyCycle (%)	Result
2412.000000	-5.1	30.0	64.949	PASS



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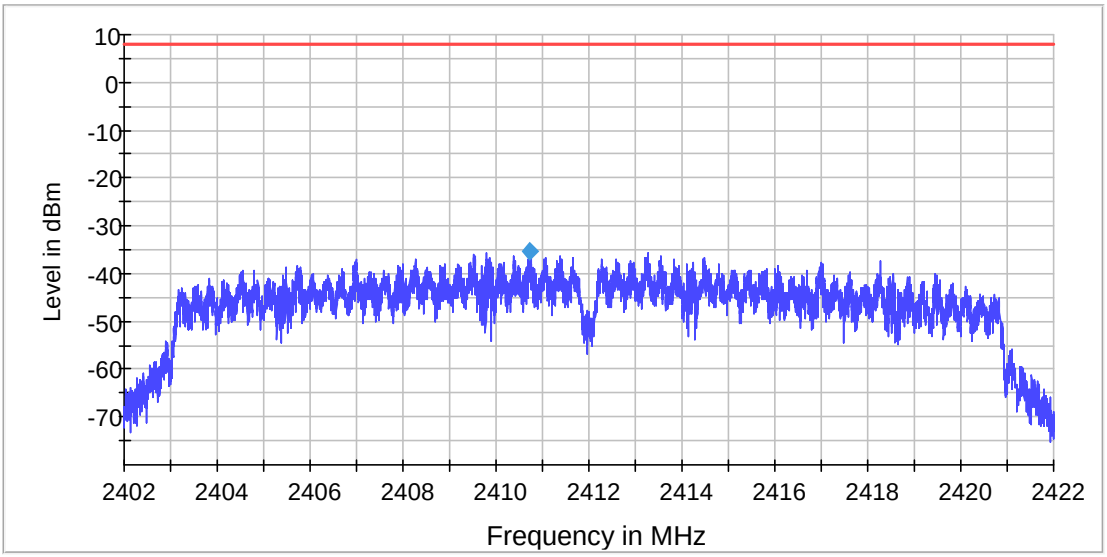
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Power Spectral Density (2412 MHz)

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2412.000000	2410.715314	-35.248	8.0	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40200 GHz	2.40200 GHz
Stop Frequency	2.42200 GHz	2.42200 GHz
Span	20.000 MHz	20.000 MHz
RBW	3.000 kHz	<= 3.000 kHz
VBW	10.000 kHz	>= 9.000 kHz
SweepPoints	13333	~ 13333
Sweeptime	13.400 s	13.333 s
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

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TEST REPORT

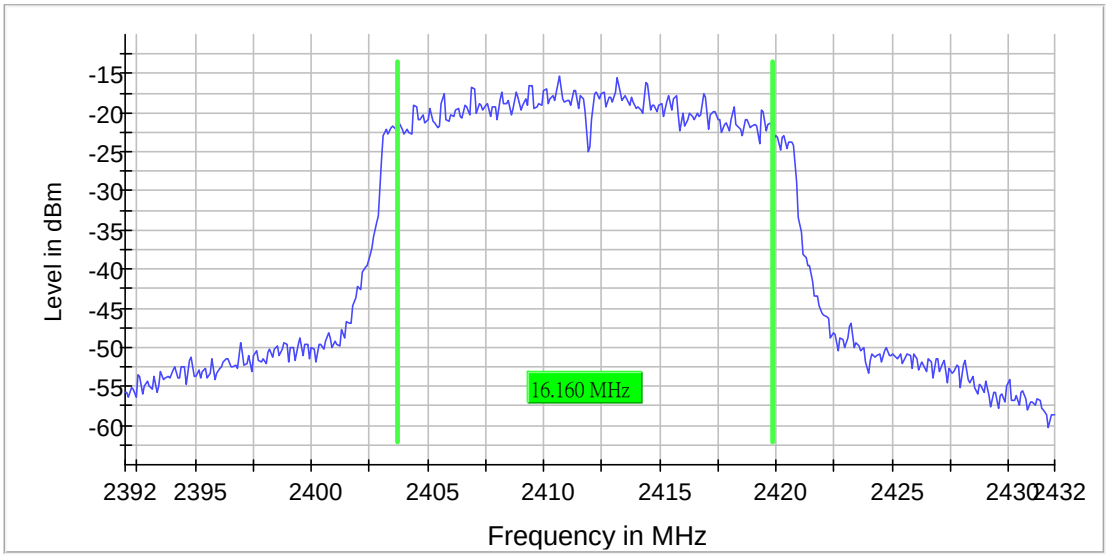
Report No. : AV0041562(7) Date : 11 Jul 2017

Minimum Emission Bandwidth 6 dB (2412 MHz)

Test according to FCC title 47 part 15 §15.247(a) and ANSI C63.10.

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
2412.000000	16.159601	0.500000	---	2403.720698	2419.880299	-15.4	PASS



FCC ID: LMZ-31324GC

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Band Edge low (2412 MHz)

Test according to FCC title 47 part 15 §15.247(d) and ANSI C63.10.

Result

DUT Frequency (MHz)	Result
2412.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
2410.718582	-24.9

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.725153	-59.4	14.5	-44.9	PASS
2399.775125	-59.8	14.9	-44.9	PASS
2398.176013	-60.4	15.5	-44.9	PASS
2399.825097	-60.5	15.7	-44.9	PASS
2398.126041	-60.9	16.1	-44.9	PASS
2396.926707	-61.0	16.1	-44.9	PASS
2398.225986	-61.0	16.2	-44.9	PASS
2399.425319	-61.0	16.2	-44.9	PASS
2397.576346	-61.1	16.2	-44.9	PASS
2399.125486	-61.1	16.2	-44.9	PASS
2399.175458	-61.1	16.2	-44.9	PASS
2396.976680	-61.1	16.2	-44.9	PASS
2398.825652	-61.1	16.3	-44.9	PASS
2399.675180	-61.2	16.3	-44.9	PASS
2398.875625	-61.2	16.4	-44.9	PASS

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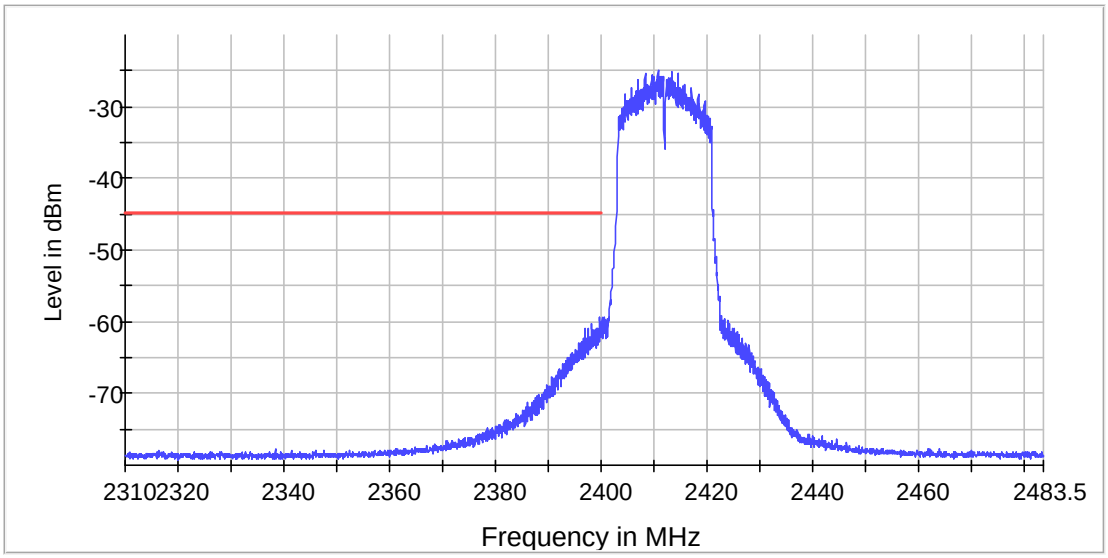

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Tx Spurious Emission (2412 MHz)

Test according to FCC title 47 part 15 §15.247(d) and ANSI C63.10.

Result

DUT Frequency (MHz)	Result
2412.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
2389.753659	-41.9	-53.3	-41.2	12.1	PASS
2399.250268	-27.8	-39.9	-26.4	13.4	PASS

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2389.753659	-41.9	0.7	-41.2
2399.250268	-27.8	1.4	-26.4
2398.250625	-28.9	2.4	-26.4
2388.754016	-43.7	2.5	-41.2
2386.754730	-43.8	2.6	-41.2
2389.253838	-43.9	2.7	-41.2
2387.754373	-44.1	2.8	-41.2
2398.750446	-29.3	2.9	-26.4
2395.751517	-29.4	3.0	-26.4
2387.254552	-44.5	3.3	-41.2
2384.755444	-45.9	4.7	-41.2
2396.251339	-31.2	4.7	-26.4
2384.255623	-46.1	4.9	-41.2
2386.254909	-46.2	4.9	-41.2
2388.254195	-46.2	4.9	-41.2

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	26000.000000	2	2

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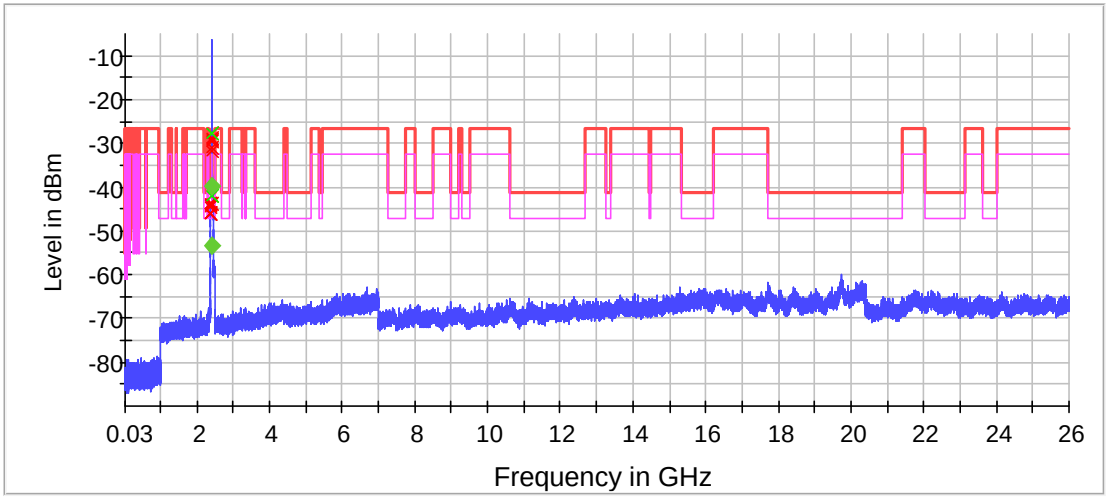

Limit [limit.Result:1] Sum Level [trace.Result:1]
Threshold [limit 2.Result:1] Critical [Over Limit.Result:1]

Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	19400	~ 19400
Sweeptime	19.400 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	1.000 MHz	<= 1.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	2800	~ 2800
Sweeptime	2.800 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold

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Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

Final Measurement 2

Setting	Instrument Value	Target Value
Span	ZeroSpan	ZeroSpan
RBW	1.000 MHz	~ 1.000 MHz
VBW	3.000 MHz	~ 3.000 MHz
SweepPoints	10001	~ 10001
Sweeptime	1.000 s	1.000 s
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	0.000 dB	0.000 dB
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Clear Write	Clear Write
Sweeptype	Sweep	AUTO
Preamp	off	off

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TEST REPORT

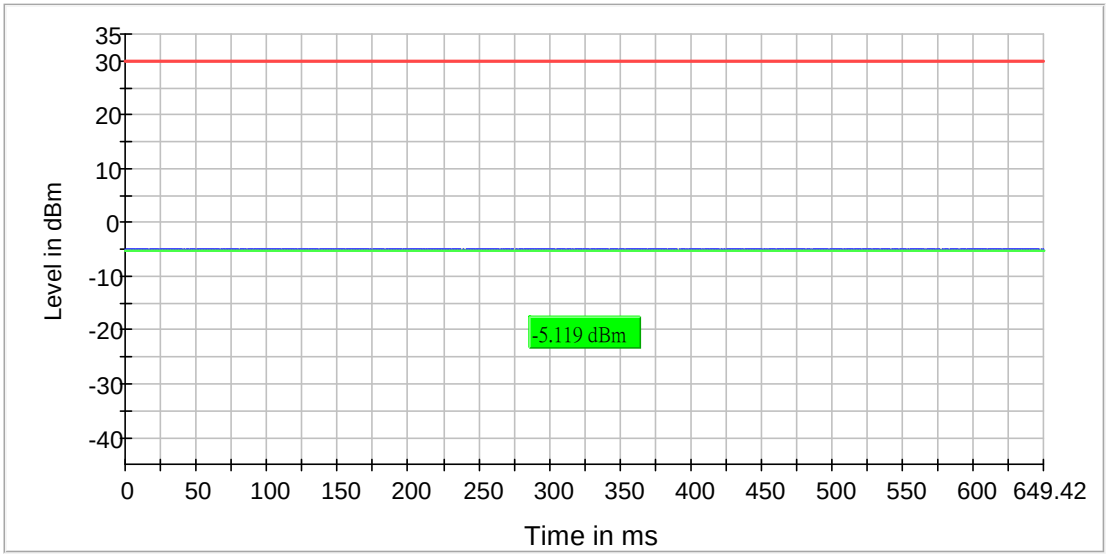
Report No. : AV0041562(7) Date : 11 Jul 2017

RF output power (2437 MHz)

Test according to FCC title 47 part 15 §15.247(b) and ANSI C63.10.

Result

DUT Frequency (MHz)	Conduct power (dBm)	Limit Max (dBm)	DutyCycle (%)	Result
2437.000000	-5.1	30.0	64.969	PASS



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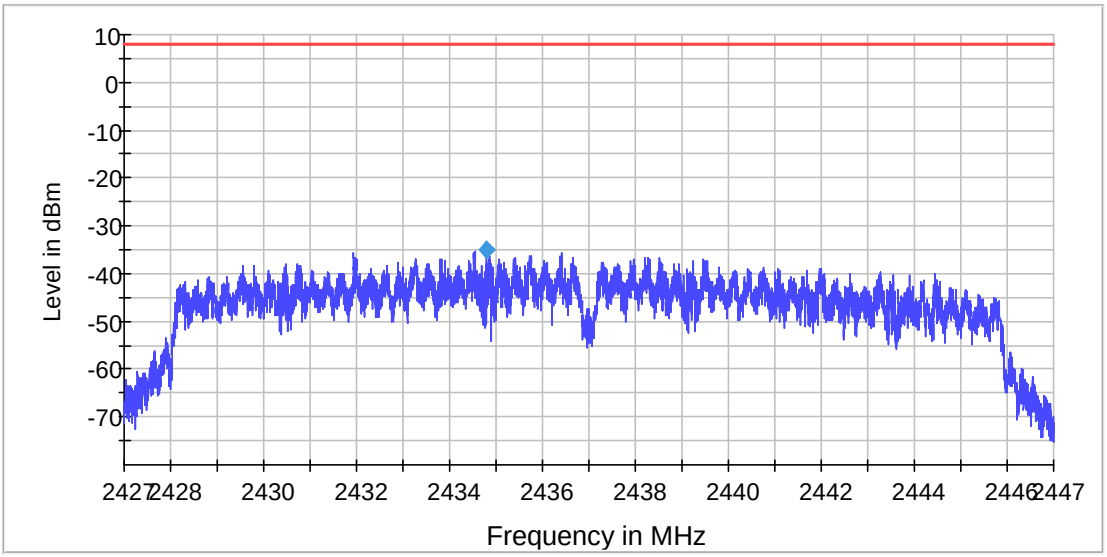
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Power Spectral Density (2437 MHz)

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2437.000000	2434.795860	-35.139	8.0	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.42700 GHz	2.42700 GHz
Stop Frequency	2.44700 GHz	2.44700 GHz
Span	20.000 MHz	20.000 MHz
RBW	3.000 kHz	<= 3.000 kHz
VBW	10.000 kHz	>= 9.000 kHz
SweepPoints	13333	~ 13333
Sweeptime	13.400 s	13.333 s
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

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TEST REPORT

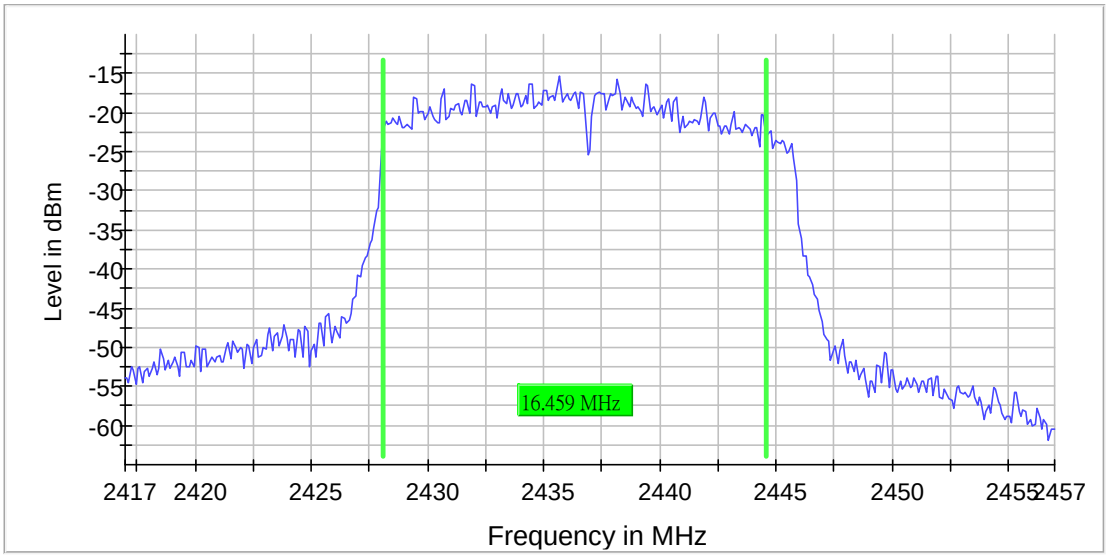
Report No. : AV0041562(7) Date : 11 Jul 2017

Minimum Emission Bandwidth 6 dB (2437 MHz)

Test according to FCC title 47 part 15 §15.247(a) and ANSI C63.10.

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
2437.000000	16.458852	0.500000	---	2428.122195	2444.581047	-15.4	PASS



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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Tx Spurious Emission (2437 MHz)

Test according to FCC title 47 part 15 §15.247(d) and ANSI C63.10.

Result

DUT Frequency (MHz)	Result
2437.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
20380.804325	-60.0	18.8	-41.2
2387.254552	-60.2	19.0	-41.2
2388.254195	-60.3	19.1	-41.2
19730.688707	-60.3	19.1	-41.2
2382.256337	-60.3	19.1	-41.2
2388.754016	-60.5	19.3	-41.2
2387.754373	-60.5	19.3	-41.2
2389.253838	-60.7	19.5	-41.2
2386.254909	-60.8	19.6	-41.2
2389.753659	-61.0	19.8	-41.2
19714.064746	-61.0	19.8	-41.2
2384.255623	-61.1	19.9	-41.2
19732.469846	-61.1	19.9	-41.2
20360.024373	-61.2	20.0	-41.2
19753.843510	-61.3	20.0	-41.2

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	26000.000000	2	2

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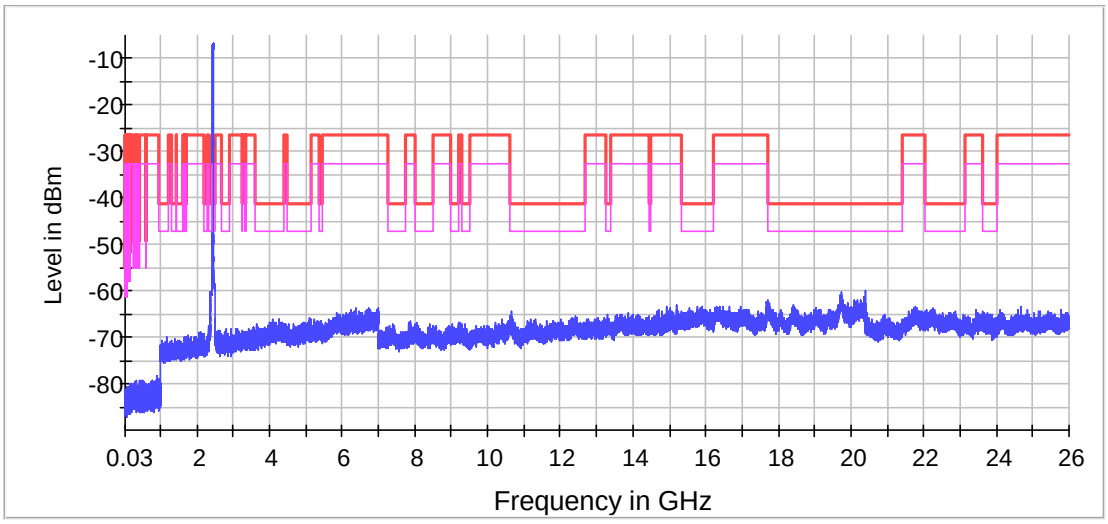

× Limit [limit.Result:1] × Sum Level [trace.Result:1]

Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	19400	~ 19400
Sweeptime	19.400 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	1.000 MHz	<= 1.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	2800	~ 2800
Sweeptime	2.800 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold

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Sweeptype	**Sweep**	**AUTO**
Preamp	**off**	**off**
Stablemode	**Trace**	**Trace**
Stablevalue	**0.30**	**0.30**
Run	**3 / max. 150**	**max. 150**
Stable	**3 / 3**	**3**

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TEST REPORT

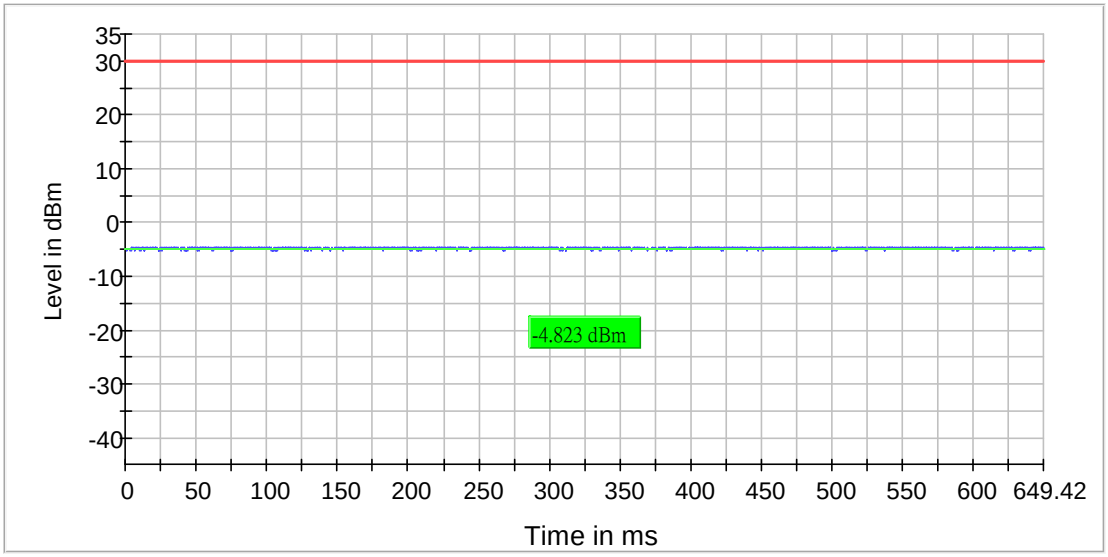
Report No. : AV0041562(7) Date : 11 Jul 2017

RF output power (2462 MHz)

Test according to FCC title 47 part 15 §15.247(b) and ANSI C63.10.

Result

DUT Frequency (MHz)	Conduct power (dBm)	Limit Max (dBm)	DutyCycle (%)	Result
2462.000000	-4.8	30.0	64.960	PASS



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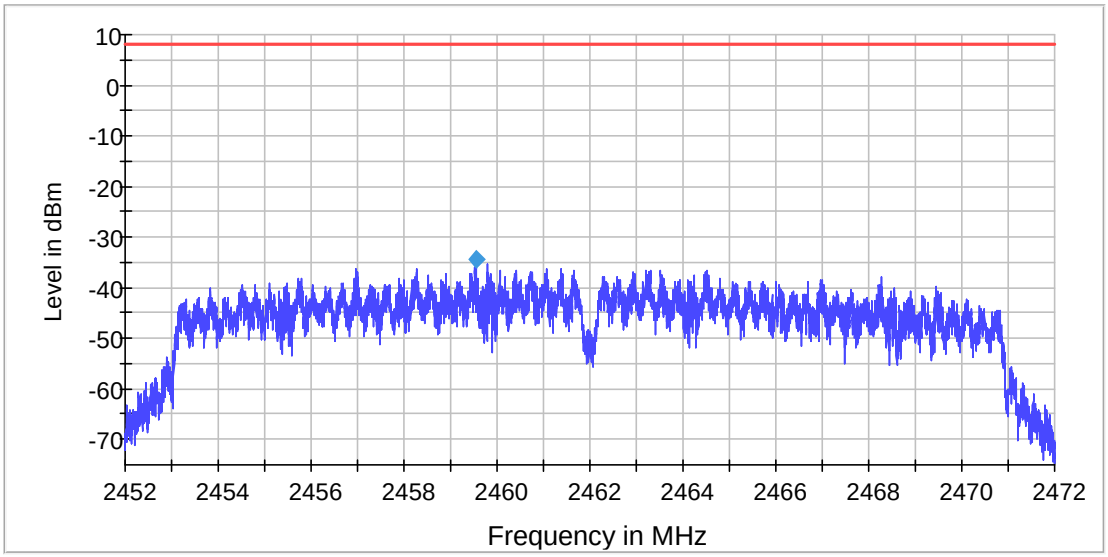
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Power Spectral Density (2462 MHz)

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2462.000000	2459.540873	-34.526	8.0	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.45200 GHz	2.45200 GHz
Stop Frequency	2.47200 GHz	2.47200 GHz
Span	20.000 MHz	20.000 MHz
RBW	3.000 kHz	<= 3.000 kHz
VBW	10.000 kHz	>= 9.000 kHz
SweepPoints	13333	~ 13333
Sweeptime	13.400 s	13.333 s
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

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TEST REPORT

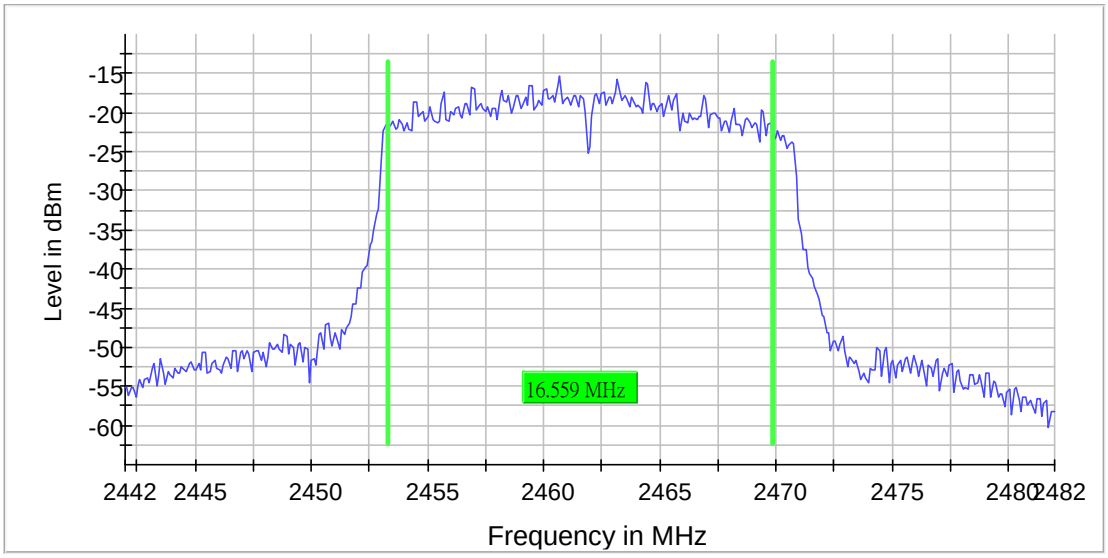
Report No. : AV0041562(7) Date : 11 Jul 2017

Minimum Emission Bandwidth 6 dB (2462 MHz)

Test according to FCC title 47 part 15 §15.247(a) and ANSI C63.10.

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
2462.000000	16.558603	0.500000	---	2453.321696	2469.880299	-15.4	PASS



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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Band Edge high (2462 MHz)

Test according to FCC title 47 part 15 §15.247(d) and ANSI C63.10.

Result

DUT Frequency (MHz)	Result
2462.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
2460.688659	-24.4

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2483.524924	-70.0	25.6	-44.4	PASS
2483.574773	-70.9	26.5	-44.4	PASS
2483.873867	-71.1	26.7	-44.4	PASS
2483.624622	-71.2	26.8	-44.4	PASS
2484.472054	-71.3	26.9	-44.4	PASS
2485.120091	-71.3	26.9	-44.4	PASS
2484.521903	-71.4	27.0	-44.4	PASS
2485.070242	-71.4	27.0	-44.4	PASS
2483.774169	-71.4	27.0	-44.4	PASS
2485.169940	-71.4	27.0	-44.4	PASS
2484.222810	-71.4	27.0	-44.4	PASS
2484.172961	-71.5	27.0	-44.4	PASS
2483.824018	-71.5	27.1	-44.4	PASS
2484.422205	-71.6	27.2	-44.4	PASS
2484.721299	-71.7	27.2	-44.4	PASS

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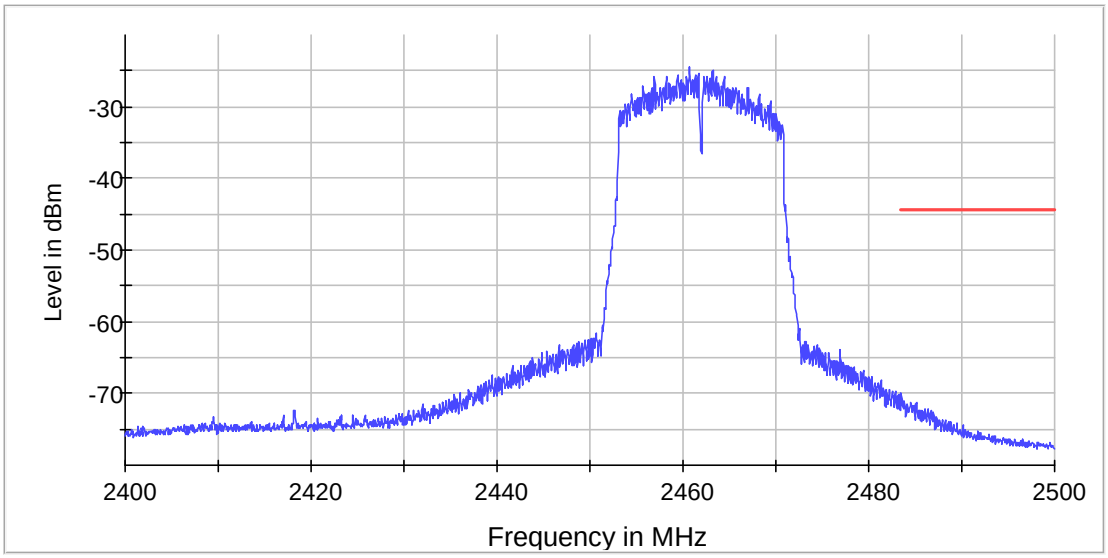
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017



FCC ID: LMZ-31324GC

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Tx Spurious Emission (2462 MHz)

Test according to FCC title 47 part 15 §15.247(d) and ANSI C63.10.

Result

DUT Frequency (MHz)	Result
2462.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
2483.749972	-43.0	-55.9	-41.2	14.7	PASS
2486.749640	-43.7	-63.0	-41.2	21.7	PASS

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2483.749972	-43.0	1.8	-41.2
2486.749640	-43.7	2.5	-41.2
2484.249917	-46.1	4.9	-41.2
2485.249806	-47.6	6.4	-41.2
2487.249585	-48.4	7.2	-41.2
2484.749862	-48.8	7.6	-41.2
2485.749751	-49.1	7.9	-41.2
2486.249696	-50.8	9.6	-41.2
2491.249142	-51.6	10.4	-41.2
2491.749087	-51.7	10.5	-41.2
2487.749530	-51.8	10.6	-41.2
2490.749197	-52.7	11.5	-41.2
2489.249364	-53.3	12.1	-41.2
2492.249031	-54.1	12.8	-41.2
2488.749419	-54.5	13.3	-41.2

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	26000.000000	2	2

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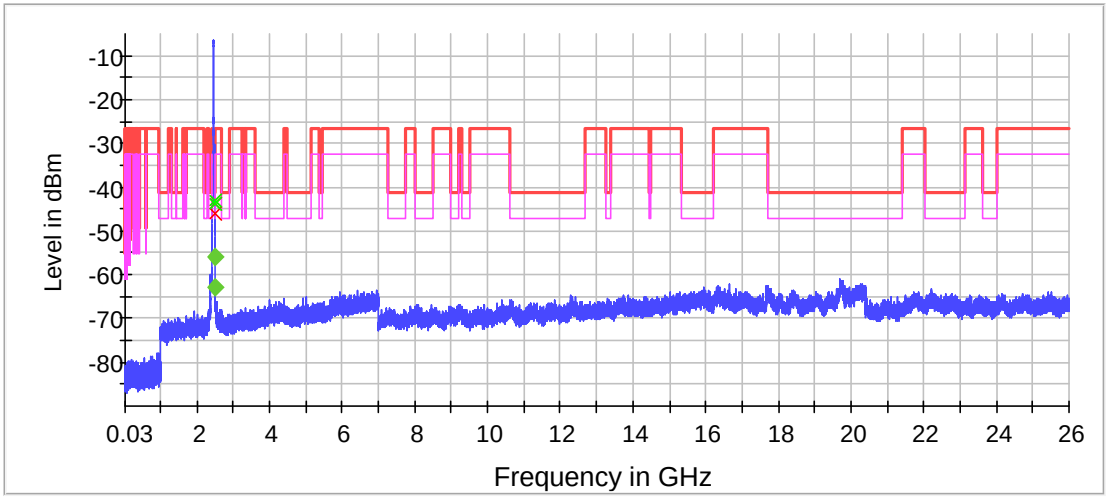
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017



Limit [limit.Result:1]
Threshold [limit 2.Result:1]
Sum Level [trace.Result:1]
Critical [Over Limit.Result:1]

Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	19400	~ 19400
Sweeptime	19.400 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	1.000 MHz	<= 1.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	2800	~ 2800
Sweeptime	2.800 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

Final Measurement 2

Setting	Instrument Value	Target Value
Span	ZeroSpan	ZeroSpan
RBW	1.000 MHz	~ 1.000 MHz
VBW	3.000 MHz	~ 3.000 MHz
SweepPoints	10001	~ 10001
Sweeptime	1.000 s	1.000 s
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	0.000 dB	0.000 dB
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Clear Write	Clear Write
Sweeptype	Sweep	AUTO
Preamp	off	off

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

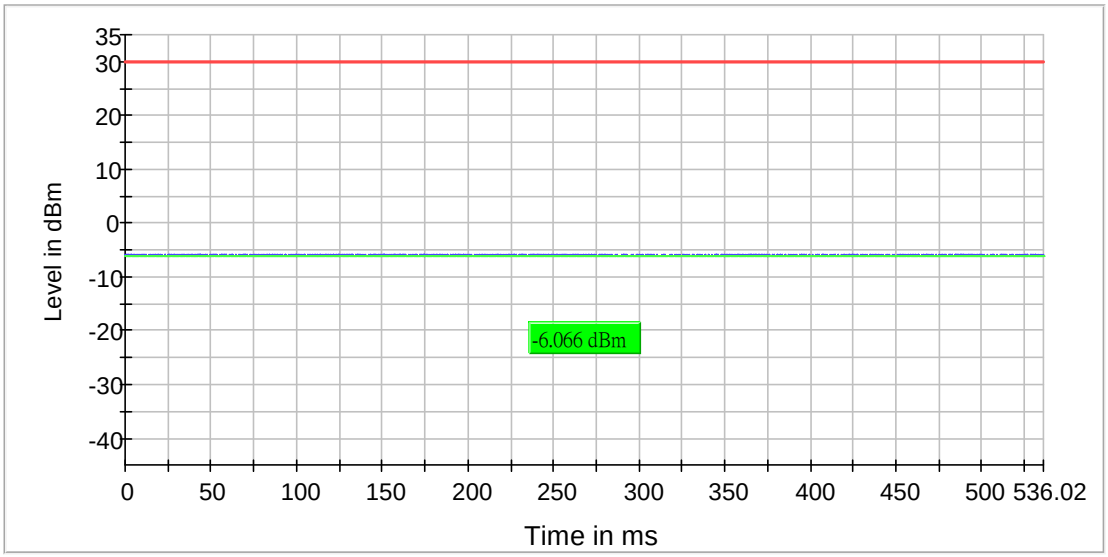
2.6 Conducted RF Measurement Data (Wi-Fi 802.11n HT40)

RF output power (2422 MHz)

Test according to FCC title 47 part 15 §15.247(b) and ANSI C63.10.

Result

DUT Frequency (MHz)	Conduct power (dBm)	Limit Max (dBm)	DutyCycle (%)	Result
2422.000000	-6.1	30.0	53.615	PASS



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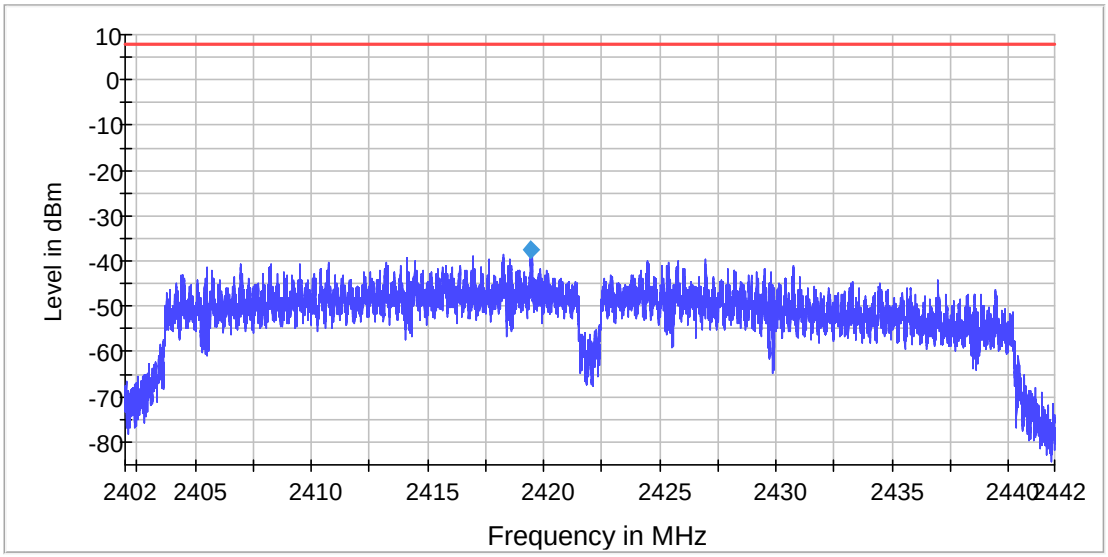
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Power Spectral Density (2422 MHz)

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2422.000000	2419.453877	-37.563	8.0	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40200 GHz	2.40200 GHz
Stop Frequency	2.44200 GHz	2.44200 GHz
Span	40.000 MHz	40.000 MHz
RBW	3.000 kHz	<= 3.000 kHz
VBW	10.000 kHz	>= 9.000 kHz
SweepPoints	26667	~ 26667
Sweeptime	26.700 s	26.667 s
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

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TEST REPORT

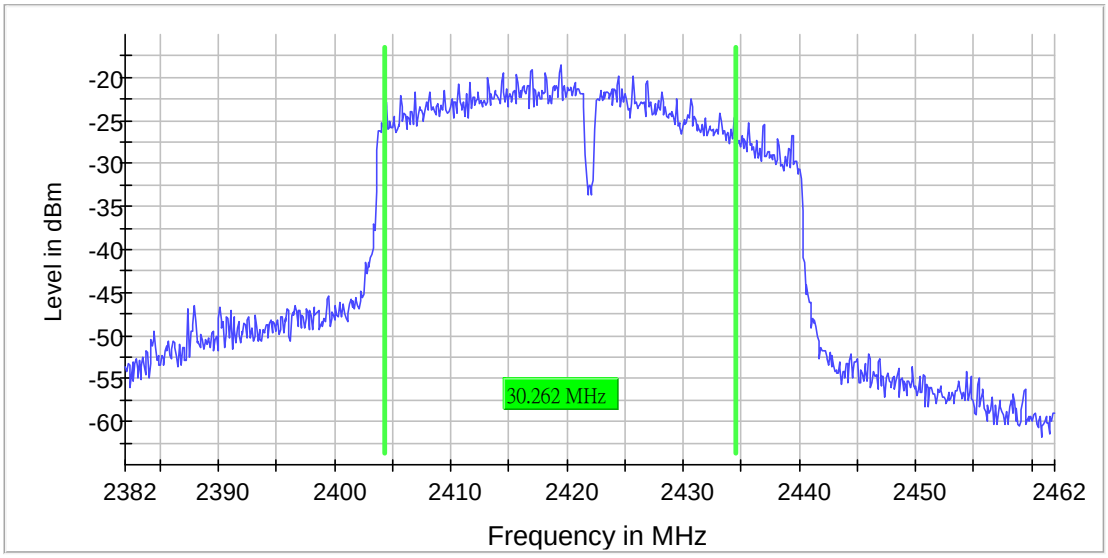
Report No. : AV0041562(7) Date : 11 Jul 2017

Minimum Emission Bandwidth 6 dB (2422 MHz)

Test according to FCC title 47 part 15 §15.247(a) and ANSI C63.10.

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
2422.000000	30.262173	0.500000	---	2404.322097	2434.584270	-18.6	PASS



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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Band Edge low (2422 MHz)

Test according to FCC title 47 part 15 §15.247(d) and ANSI C63.10.

Result

DUT Frequency (MHz)	Result
2422.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
2419.463345	-27.9

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.425319	-55.1	7.2	-47.9	PASS
2399.475292	-55.6	7.7	-47.9	PASS
2399.375347	-56.5	8.6	-47.9	PASS
2398.176013	-56.5	8.6	-47.9	PASS
2398.225986	-56.8	8.9	-47.9	PASS
2396.926707	-57.1	9.2	-47.9	PASS
2396.976680	-57.2	9.3	-47.9	PASS
2395.727374	-57.3	9.4	-47.9	PASS
2396.576902	-57.6	9.7	-47.9	PASS
2397.576346	-57.6	9.7	-47.9	PASS
2399.525264	-57.9	10.0	-47.9	PASS
2395.677401	-58.0	10.1	-47.9	PASS
2398.126041	-58.0	10.1	-47.9	PASS
2399.325375	-58.0	10.1	-47.9	PASS
2390.680178	-58.1	10.1	-47.9	PASS

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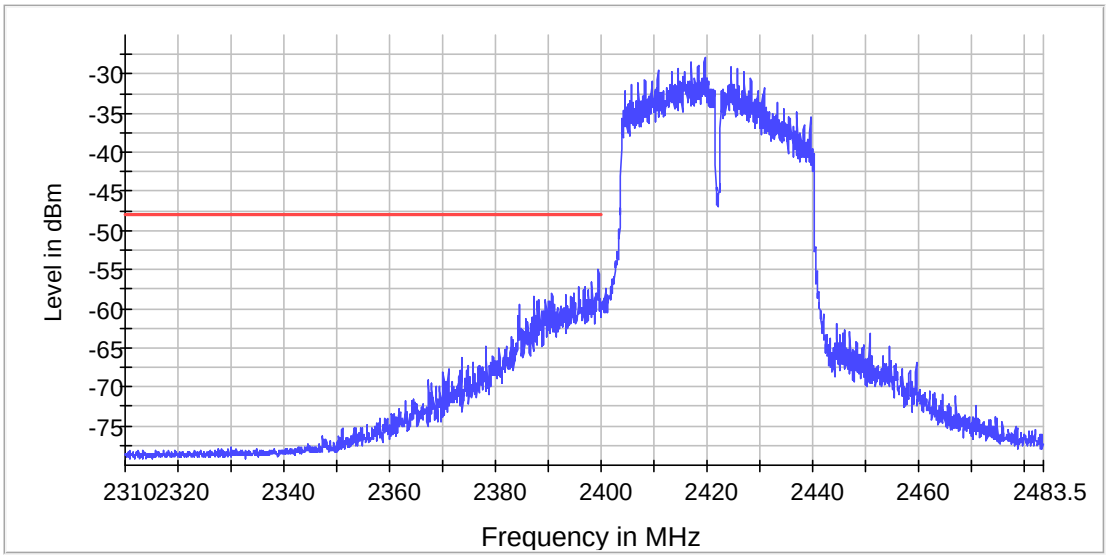

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Tx Spurious Emission (2422 MHz)

Test according to FCC title 47 part 15 §15.247(d) and ANSI C63.10.

Result

DUT Frequency (MHz)	Result
2422.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
2389.753659	-39.0	-51.9	-41.2	10.7	PASS

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2389.753659	-39.0	-2.2	-41.2
2389.253838	-39.3	-1.9	-41.2
2386.254909	-40.2	-1.0	-41.2
2384.755444	-40.4	-0.9	-41.2
2385.255266	-40.4	-0.8	-41.2
2387.754373	-40.8	-0.5	-41.2
2386.754730	-40.8	-0.5	-41.2
2385.755087	-41.4	0.1	-41.2
2384.255623	-41.4	0.2	-41.2
2388.254195	-42.3	1.1	-41.2
2387.254552	-42.7	1.5	-41.2
2376.758301	-43.6	2.4	-41.2
2388.754016	-43.7	2.5	-41.2
2381.256694	-43.9	2.7	-41.2
2382.256337	-43.9	2.7	-41.2

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	26000.000000	2	2

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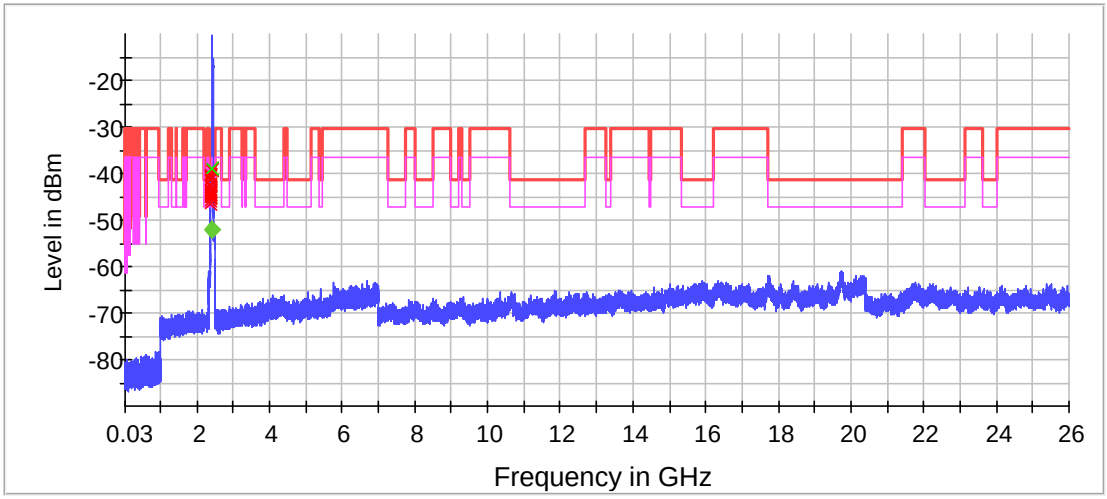

Limit [limit.Result:1] Sum Level [trace.Result:1]
Threshold [limit 2.Result:1] Critical [Over Limit.Result:1]

Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	19400	~ 19400
Sweeptime	19.400 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	1.000 MHz	<= 1.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	2800	~ 2800
Sweeptime	2.800 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold

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TEST REPORT

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Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

Final Measurement 2

Setting	Instrument Value	Target Value
Span	ZeroSpan	ZeroSpan
RBW	1.000 MHz	~ 1.000 MHz
VBW	3.000 MHz	~ 3.000 MHz
SweepPoints	10001	~ 10001
Sweeptime	1.000 s	1.000 s
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	0.000 dB	0.000 dB
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Clear Write	Clear Write
Sweeptype	Sweep	AUTO
Preamp	off	off

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TEST REPORT

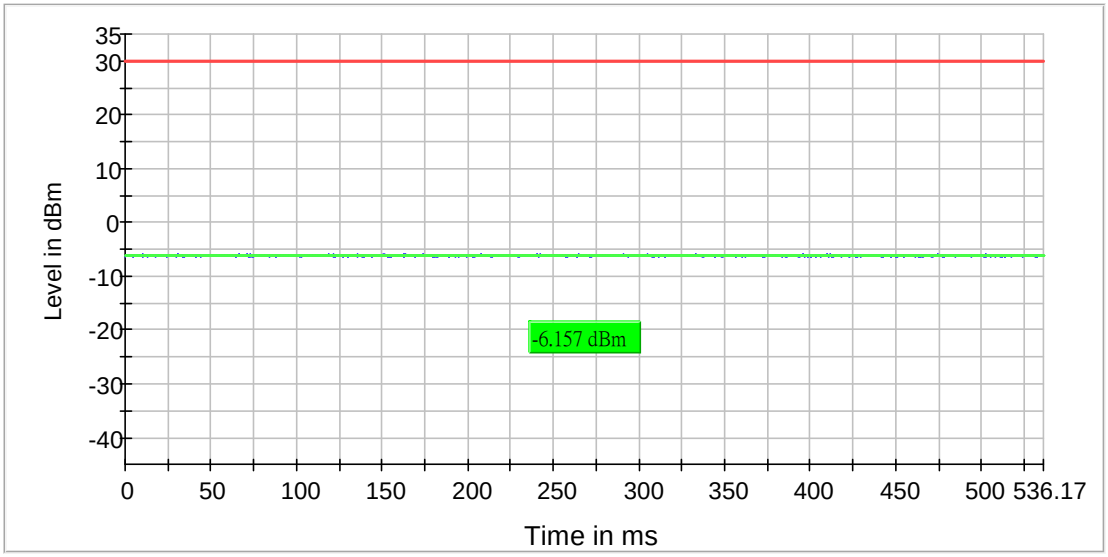
Report No. : AV0041562(7) Date : 11 Jul 2017

RF output power (2437 MHz)

Test according to FCC title 47 part 15 §15.247(b) and ANSI C63.10.

Result

DUT Frequency (MHz)	Conduct power (dBm)	Limit Max (dBm)	DutyCycle (%)	Result
2437.000000	-6.2	30.0	53.622	PASS



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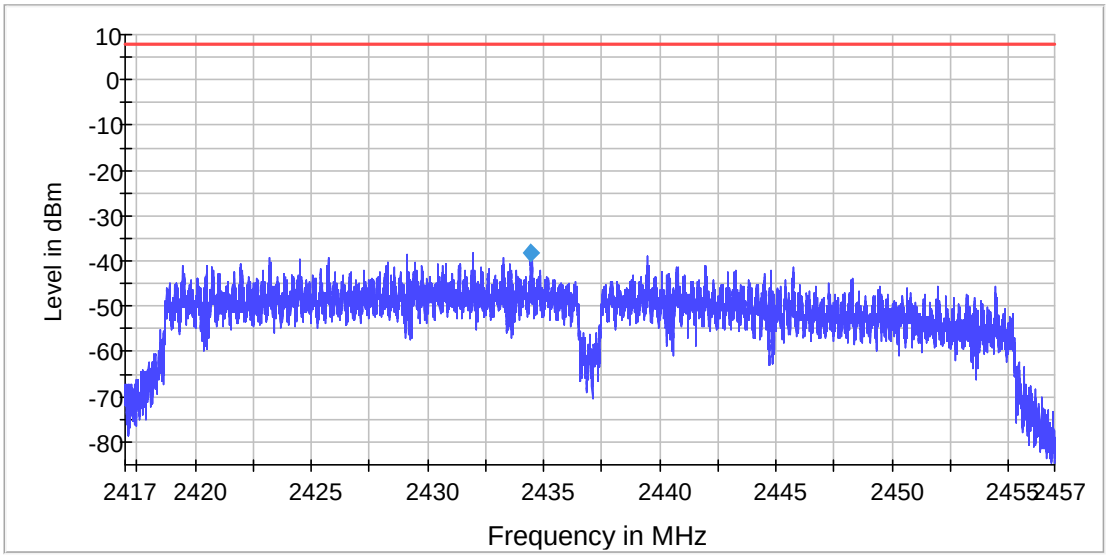
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Power Spectral Density (2437 MHz)

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2437.000000	2434.450877	-38.307	8.0	PASS



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TEST REPORT

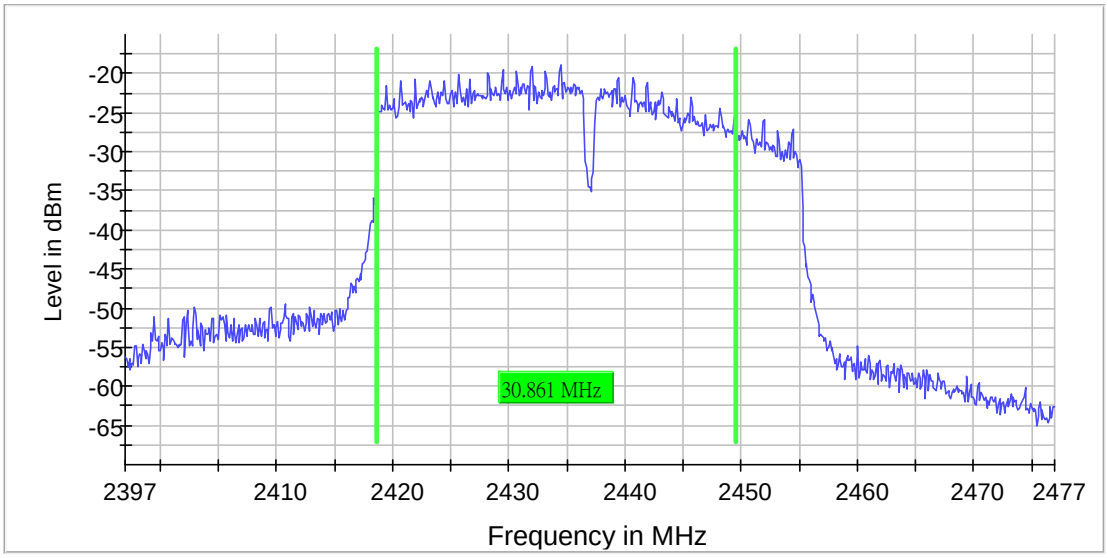
Report No. : AV0041562(7) Date : 11 Jul 2017

Minimum Emission Bandwidth 6 dB (2437 MHz)

Test according to FCC title 47 part 15 §15.247(a) and ANSI C63.10.

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
2437.000000	30.861424	0.500000	---	2418.722846	2449.584270	-18.9	PASS



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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Tx Spurious Emission (2437 MHz)

Test according to FCC title 47 part 15 §15.247(d) and ANSI C63.10.

Result

DUT Frequency (MHz)	Result
2437.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2385.755087	-48.8	7.6	-41.2
2384.755444	-49.1	7.9	-41.2
2384.255623	-50.1	8.8	-41.2
2385.255266	-50.1	8.9	-41.2
2387.754373	-50.3	9.0	-41.2
2383.255980	-50.3	9.1	-41.2
2388.254195	-50.4	9.2	-41.2
2386.754730	-50.4	9.2	-41.2
2382.756159	-50.6	9.3	-41.2
2381.256694	-50.8	9.6	-41.2
2381.756516	-51.1	9.9	-41.2
2389.253838	-51.2	9.9	-41.2
2380.257051	-51.3	10.0	-41.2
2380.756873	-51.5	10.2	-41.2
2386.254909	-51.8	10.5	-41.2

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	26000.000000	2	2

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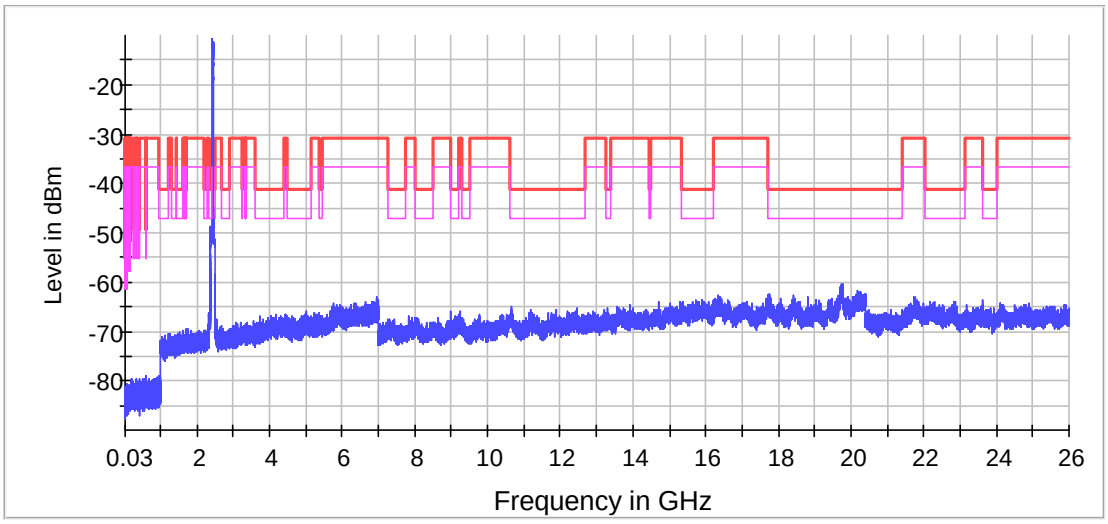

× Limit [limit.Result:1] × Sum Level [trace.Result:1]

Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	19400	~ 19400
Sweeptime	19.400 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	1.000 MHz	<= 1.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	2800	~ 2800
Sweeptime	2.800 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold

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Sweeptype	**Sweep**	**AUTO**
Preamp	**off**	**off**
Stablemode	**Trace**	**Trace**
Stablevalue	**0.30**	**0.30**
Run	**3 / max. 150**	**max. 150**
Stable	**3 / 3**	**3**

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TEST REPORT

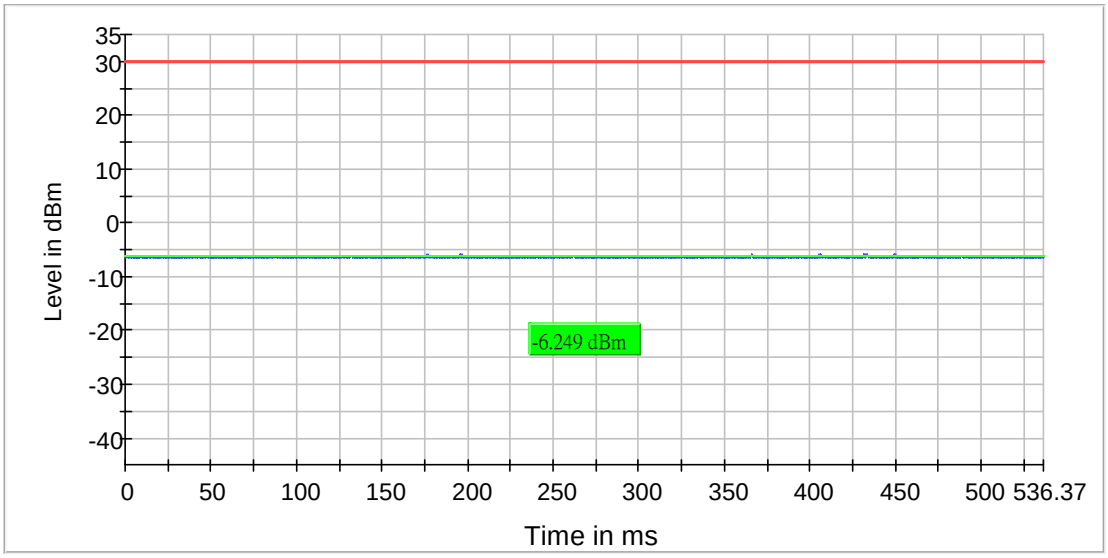
Report No. : AV0041562(7) Date : 11 Jul 2017

RF output power (2452 MHz)

Test according to FCC title 47 part 15 §15.247(b) and ANSI C63.10.

Result

DUT Frequency (MHz)	Conduct power (dBm)	Limit Max (dBm)	DutyCycle (%)	Result
2452.000000	-6.2	30.0	53.646	PASS



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TEST REPORT

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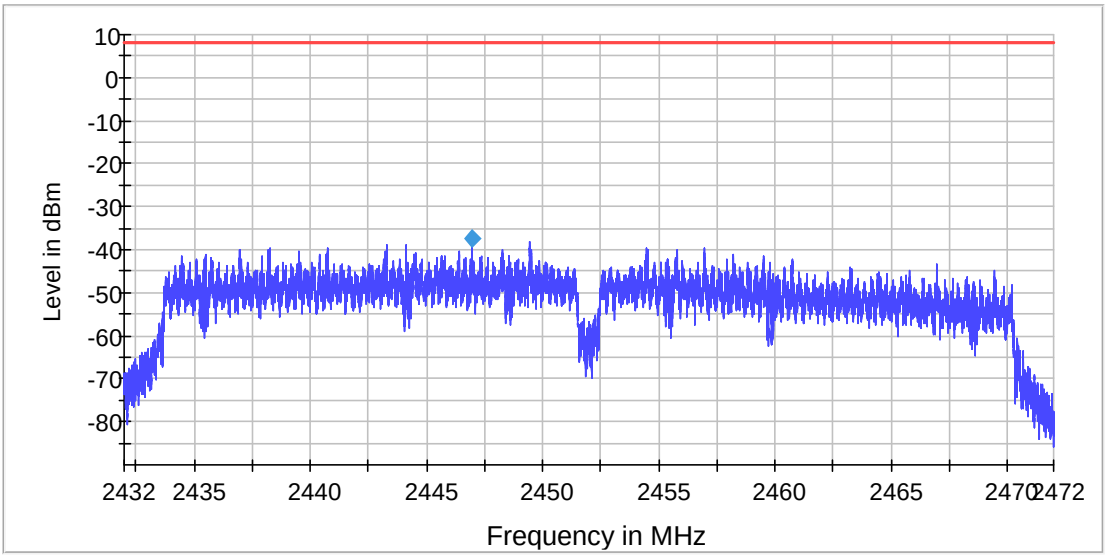
Power Spectral Density (2452 MHz)

Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2452.000000	2446.988001	-37.399	8.0	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.43200 GHz	2.43200 GHz
Stop Frequency	2.47200 GHz	2.47200 GHz
Span	40.000 MHz	40.000 MHz
RBW	3.000 kHz	<= 3.000 kHz
VBW	10.000 kHz	>= 9.000 kHz
SweepPoints	26667	~ 26667
Sweeptime	26.700 s	26.667 s
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

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TEST REPORT

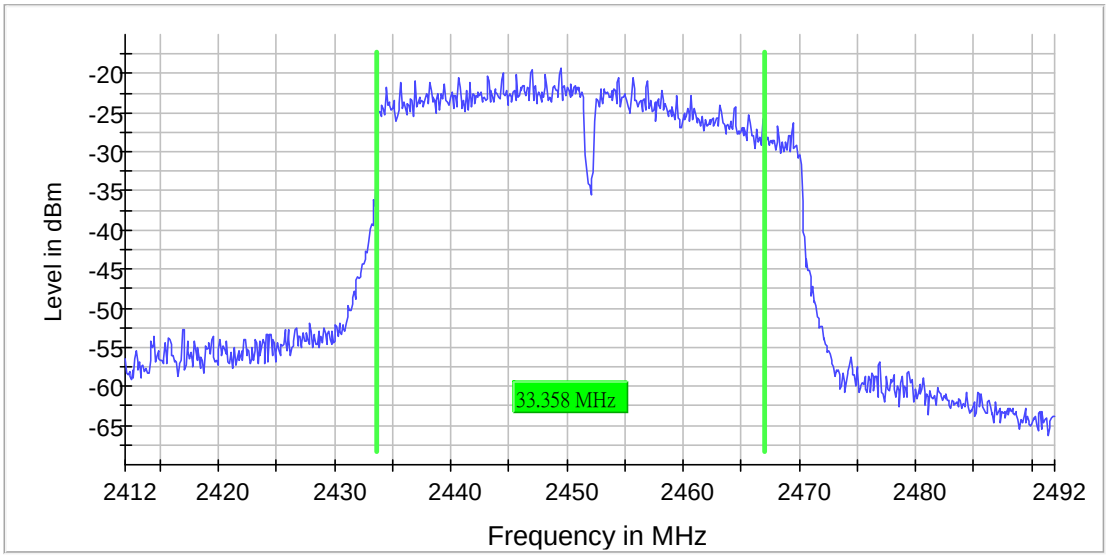
Report No. : AV0041562(7) Date : 11 Jul 2017

Minimum Emission Bandwidth 6 dB (2452 MHz)

Test according to FCC title 47 part 15 §15.247(a) and ANSI C63.10.

6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
2452.000000	33.358303	0.500000	---	2433.722846	2467.081149	-19.3	PASS



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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Band Edge high (2452 MHz)

Test according to FCC title 47 part 15 §15.247(d) and ANSI C63.10

Result

DUT Frequency (MHz)	Result
2452.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
2449.445392	-28.2

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2484.472054	-71.5	23.3	-48.2	PASS
2485.768127	-72.2	24.0	-48.2	PASS
2484.521903	-72.4	24.3	-48.2	PASS
2485.469033	-72.5	24.3	-48.2	PASS
2485.718278	-72.5	24.4	-48.2	PASS
2485.419184	-72.6	24.4	-48.2	PASS
2485.518882	-72.6	24.5	-48.2	PASS
2484.422205	-72.7	24.6	-48.2	PASS
2483.524924	-72.7	24.6	-48.2	PASS
2485.817976	-72.8	24.6	-48.2	PASS
2484.222810	-72.8	24.7	-48.2	PASS
2483.574773	-73.0	24.8	-48.2	PASS
2483.824018	-73.0	24.8	-48.2	PASS
2486.366314	-73.0	24.9	-48.2	PASS
2484.820997	-73.1	24.9	-48.2	PASS

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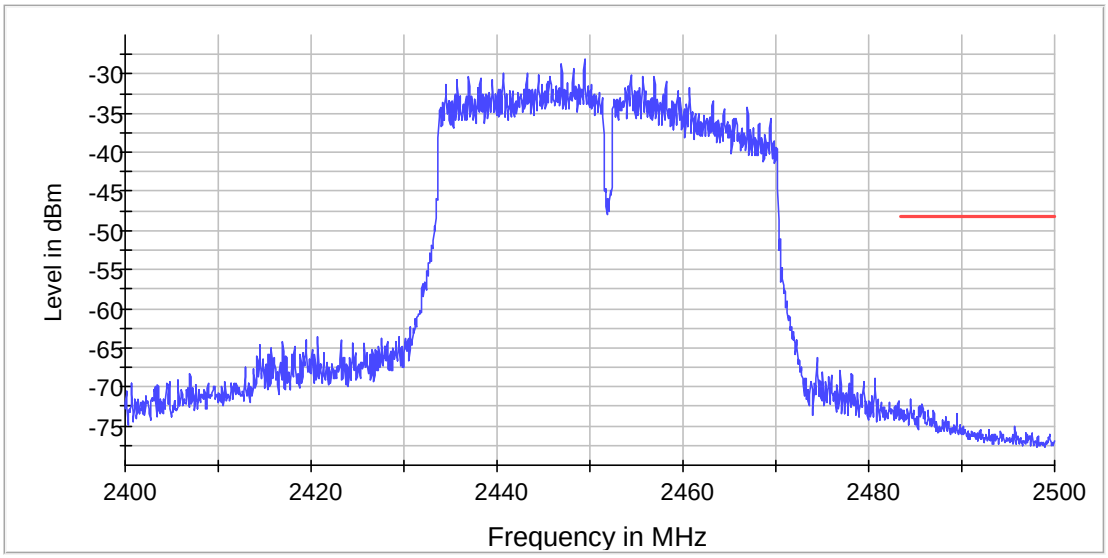

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Report No. : AV0041562(7) Date : 11 Jul 2017

Tx Spurious Emission (2452 MHz)

Test according to FCC title 47 part 15 §15.247(d) and ANSI C63.10.

Result

DUT Frequency (MHz)	Result
2452.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2484.749862	-48.9	7.6	-41.2
2483.749972	-49.7	8.5	-41.2
2484.249917	-51.0	9.8	-41.2
2485.249806	-53.2	12.0	-41.2
2487.249585	-53.4	12.2	-41.2
2386.754730	-53.4	12.2	-41.2
2485.749751	-53.5	12.3	-41.2
2495.748644	-53.6	12.3	-41.2
2495.248699	-53.6	12.4	-41.2
2491.249142	-54.2	12.9	-41.2
2491.749087	-54.3	13.1	-41.2
2494.748755	-54.5	13.2	-41.2
2486.749640	-54.6	13.3	-41.2
2490.749197	-54.7	13.5	-41.2
2492.249031	-54.8	13.6	-41.2

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	26000.000000	2	2

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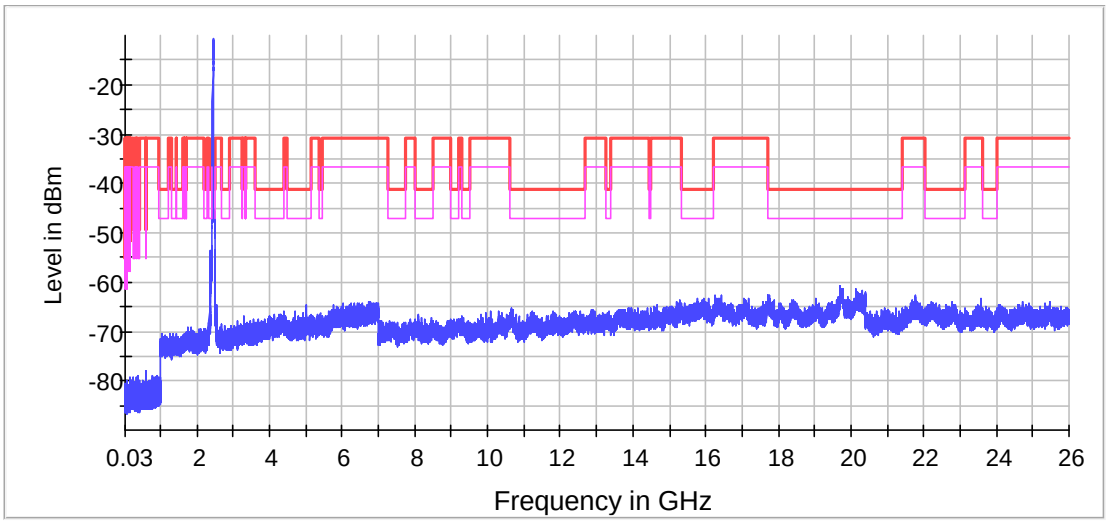

Limit [limit.Result:1] Sum Level [trace.Result:1]

Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	19400	~ 19400
Sweeptime	19.400 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	1.000 MHz	<= 1.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	2800	~ 2800
Sweeptime	2.800 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak

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SweepCount	**30**	**30**
Filter	**3 dB**	**3 dB**
Trace Mode	**Max Hold**	**Max Hold**
Sweeptype	**Sweep**	**AUTO**
Preamp	**off**	**off**
Stablemode	**Trace**	**Trace**
Stablevalue	**0.30**	**0.30**
Run	**3 / max. 150**	**max. 150**
Stable	**3 / 3**	**3**

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TEST REPORT

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2.7 Conducted RF Measurement Data (BT)

Frequencies

BT CH 1 (2402 MHz)	BT CH 2 (2403 MHz)	BT CH 3 (2404 MHz)
BT CH 4 (2405 MHz)	BT CH 5 (2406 MHz)	BT CH 6 (2407 MHz)
BT CH 7 (2408 MHz)	BT CH 8 (2409 MHz)	BT CH 9 (2410 MHz)
BT CH 10 (2411 MHz)	BT CH 11 (2412 MHz)	BT CH 12 (2413 MHz)
BT CH 13 (2414 MHz)	BT CH 14 (2415 MHz)	BT CH 15 (2416 MHz)
BT CH 16 (2417 MHz)	BT CH 17 (2418 MHz)	BT CH 18 (2419 MHz)
BT CH 19 (2420 MHz)	BT CH 20 (2421 MHz)	BT CH 21 (2422 MHz)
BT CH 22 (2423 MHz)	BT CH 23 (2424 MHz)	BT CH 24 (2425 MHz)
BT CH 25 (2426 MHz)	BT CH 26 (2427 MHz)	BT CH 27 (2428 MHz)
BT CH 28 (2429 MHz)	BT CH 29 (2430 MHz)	BT CH 30 (2431 MHz)
BT CH 31 (2432 MHz)	BT CH 32 (2433 MHz)	BT CH 33 (2434 MHz)
BT CH 34 (2435 MHz)	BT CH 35 (2436 MHz)	BT CH 36 (2437 MHz)
BT CH 37 (2438 MHz)	BT CH 38 (2439 MHz)	BT CH 39 (2440 MHz)
BT CH 40 (2441 MHz)	BT CH 41 (2442 MHz)	BT CH 42 (2443 MHz)
BT CH 43 (2444 MHz)	BT CH 44 (2445 MHz)	BT CH 45 (2446 MHz)
BT CH 46 (2447 MHz)	BT CH 47 (2448 MHz)	BT CH 48 (2449 MHz)
BT CH 49 (2450 MHz)	BT CH 50 (2451 MHz)	BT CH 51 (2452 MHz)
BT CH 52 (2453 MHz)	BT CH 53 (2454 MHz)	BT CH 54 (2455 MHz)
BT CH 55 (2456 MHz)	BT CH 56 (2457 MHz)	BT CH 57 (2458 MHz)
BT CH 58 (2459 MHz)	BT CH 59 (2460 MHz)	BT CH 60 (2461 MHz)
BT CH 61 (2462 MHz)	BT CH 62 (2463 MHz)	BT CH 63 (2464 MHz)
BT CH 64 (2465 MHz)	BT CH 65 (2466 MHz)	BT CH 66 (2467 MHz)
BT CH 67 (2468 MHz)	BT CH 68 (2469 MHz)	BT CH 69 (2470 MHz)
BT CH 70 (2471 MHz)	BT CH 71 (2472 MHz)	BT CH 72 (2473 MHz)
BT CH 73 (2474 MHz)	BT CH 74 (2475 MHz)	BT CH 75 (2476 MHz)
BT CH 76 (2477 MHz)	BT CH 77 (2478 MHz)	BT CH 78 (2479 MHz)
BT CH 79 (2480 MHz)		

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TEST REPORT

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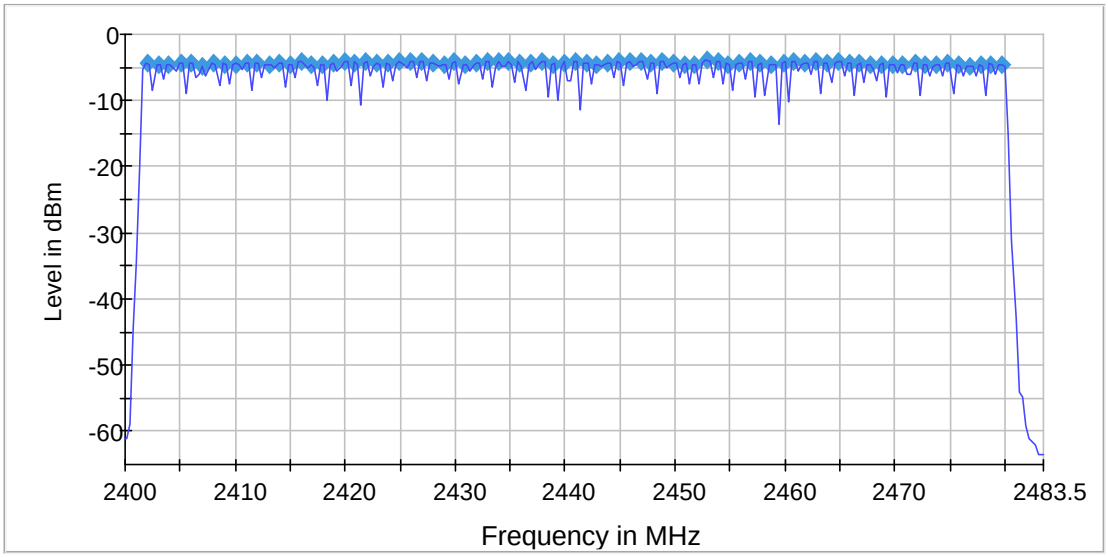
Hopping Frequencies (frequency independent)

Channels

Channels	Limit Min	Limit Max	Result
79	15	---	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40000 GHz	2.40000 GHz
Stop Frequency	2.48350 GHz	2.48350 GHz
Span	83.500 MHz	83.500 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	278	~ 278
Sweeptime	1.000 ms	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50	0.50
Run	74 / max. 150	max. 150
Stable	3 / 3	3

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Band Edge low (frequency independent)

Result

DUT Frequency (MHz)	Result
hopping	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
2422.811341	-19.0

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.625208	-76.7	37.8	-39.0	PASS
2398.026097	-77.9	39.0	-39.0	PASS
2310.324820	-77.9	39.0	-39.0	PASS
2326.016102	-78.0	39.0	-39.0	PASS
2399.575236	-78.0	39.0	-39.0	PASS
2398.925597	-78.0	39.0	-39.0	PASS
2380.535813	-78.0	39.0	-39.0	PASS
2317.320933	-78.1	39.1	-39.0	PASS
2339.208773	-78.1	39.1	-39.0	PASS
2313.722932	-78.1	39.2	-39.0	PASS
2399.175458	-78.1	39.2	-39.0	PASS
2353.650750	-78.2	39.2	-39.0	PASS
2314.372571	-78.2	39.2	-39.0	PASS
2399.825097	-78.2	39.2	-39.0	PASS
2334.111605	-78.2	39.2	-39.0	PASS

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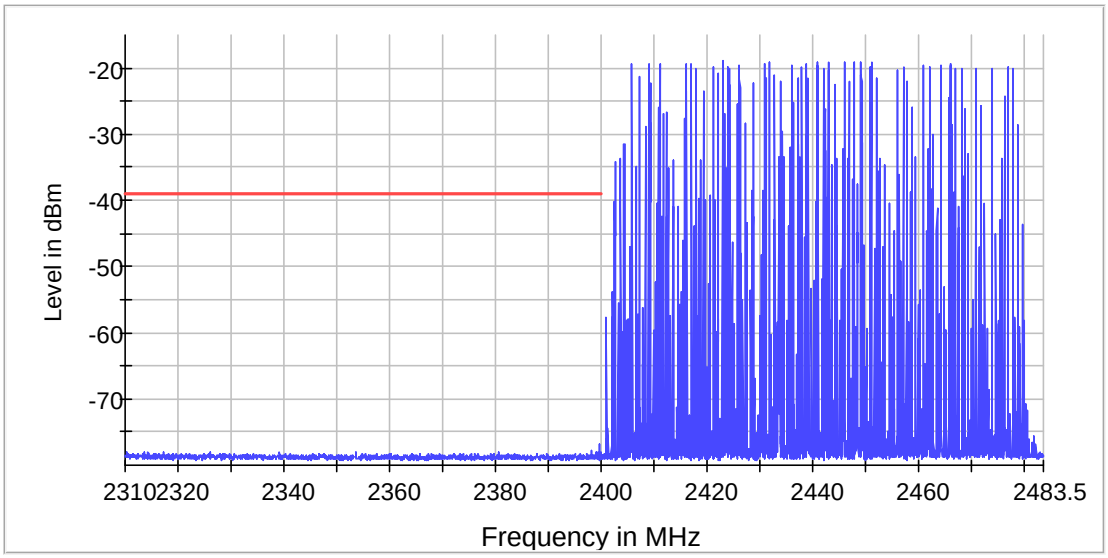

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Band Edge high (frequency independent)

Result

DUT Frequency (MHz)	Result
hopping	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
2450.794584	-18.9

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2499.626133	-77.7	38.8	-38.9	PASS
2484.820997	-77.7	38.8	-38.9	PASS
2495.538520	-77.8	38.9	-38.9	PASS
2490.055136	-77.8	38.9	-38.9	PASS
2493.395015	-77.9	39.0	-38.9	PASS
2493.943353	-77.9	39.0	-38.9	PASS
2497.532477	-77.9	39.0	-38.9	PASS
2486.665408	-77.9	39.0	-38.9	PASS
2494.092900	-78.0	39.1	-38.9	PASS
2489.407100	-78.0	39.1	-38.9	PASS
2487.811934	-78.0	39.1	-38.9	PASS
2498.080816	-78.0	39.1	-38.9	PASS
2484.771148	-78.0	39.1	-38.9	PASS
2493.993202	-78.0	39.2	-38.9	PASS
2497.133686	-78.0	39.2	-38.9	PASS

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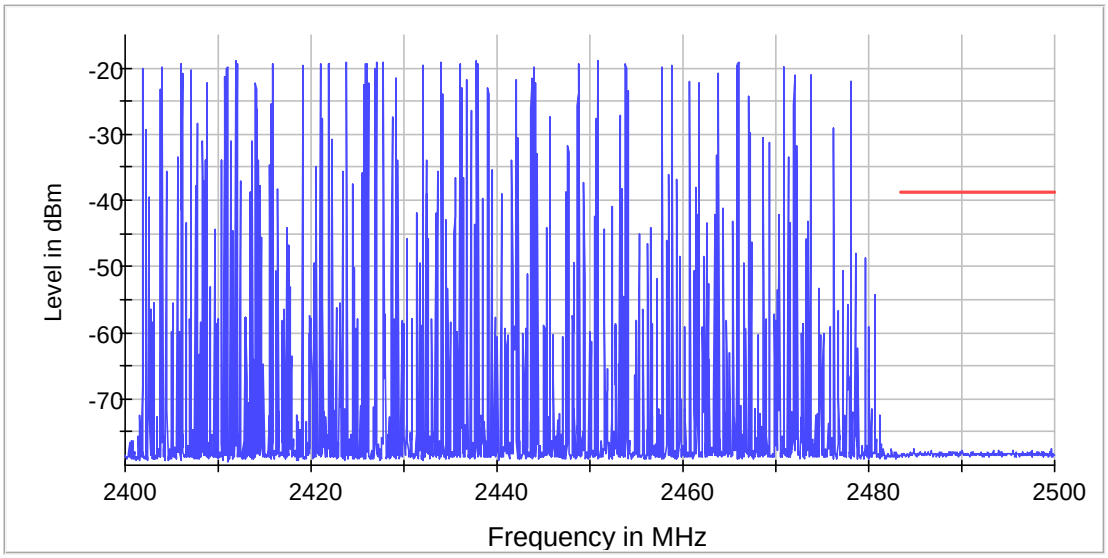

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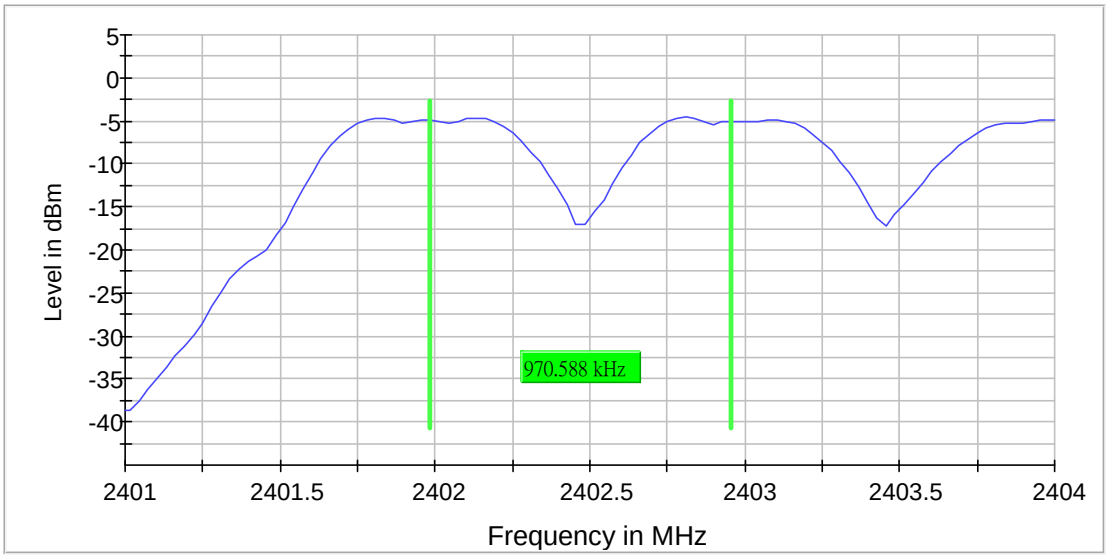
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Carrier Frequency Separation (2402 MHz)

Result

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)	Center Frequency low Channel (MHz)	Center Frequency high Channel (MHz)	Result
2402.000000	0.970588	0.666667	---	2401.985294	2402.955882	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40400 GHz	2.40400 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
Sweeptime	6.313 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	47 / max. 150	max. 150
Stable	10 / 10	10

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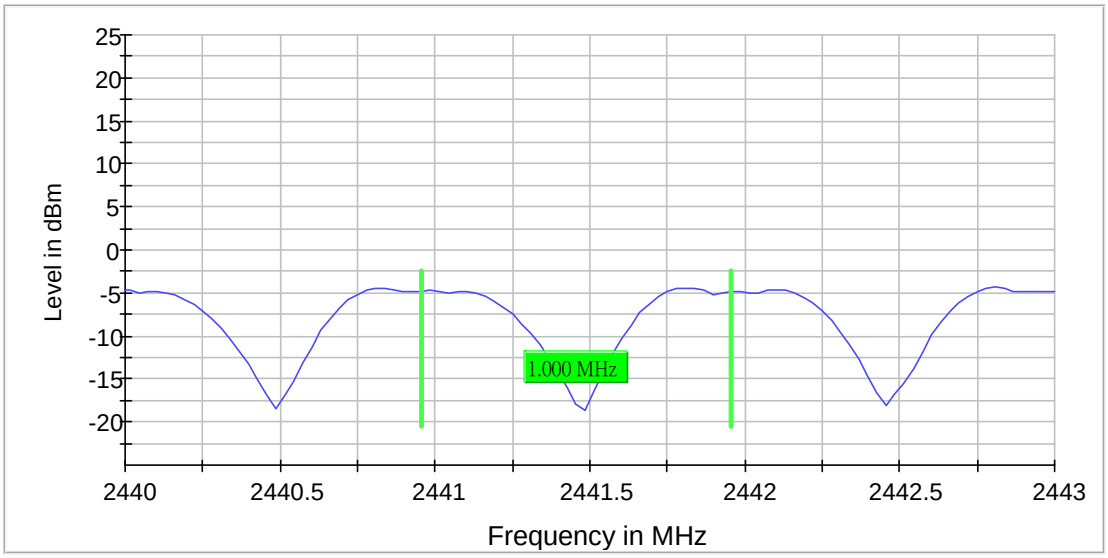
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Carrier Frequency Separation (2441 MHz)

Result

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)	Center Frequency low Channel (MHz)	Center Frequency high Channel (MHz)	Result
2441.000000	1.000000	0.666667	---	2440.955882	2441.955882	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44300 GHz	2.44300 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
Sweeptime	6.313 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	28 / max. 150	max. 150
Stable	10 / 10	10

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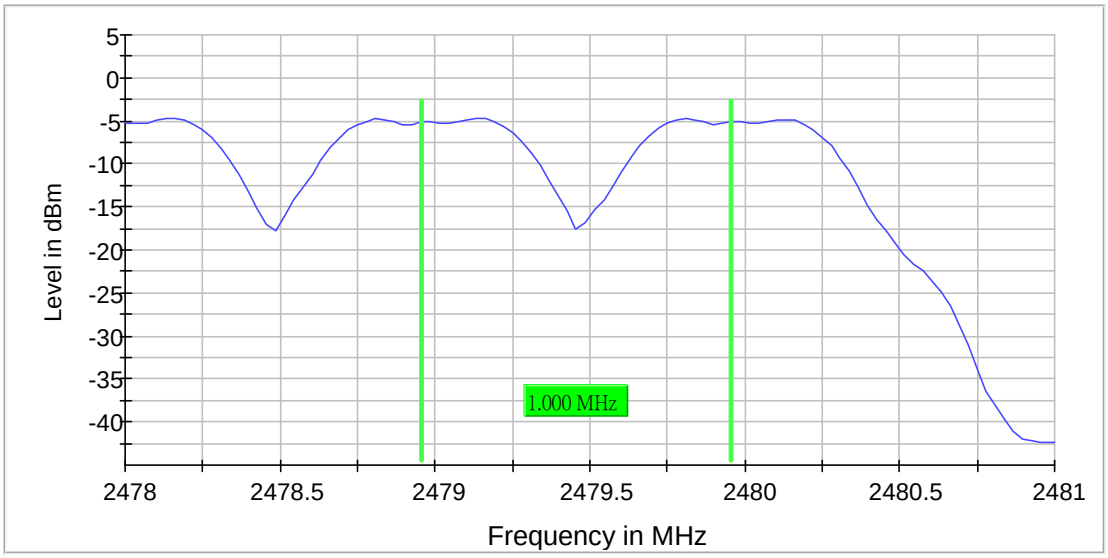
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Carrier Frequency Separation (2479 MHz)

Result

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)	Center Frequency low Channel (MHz)	Center Frequency high Channel (MHz)	Result
2479.000000	1.000000	0.666667	---	2478.955882	2479.955882	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47800 GHz	2.47800 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
Sweeptime	6.313 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	44 / max. 150	max. 150
Stable	10 / 10	10

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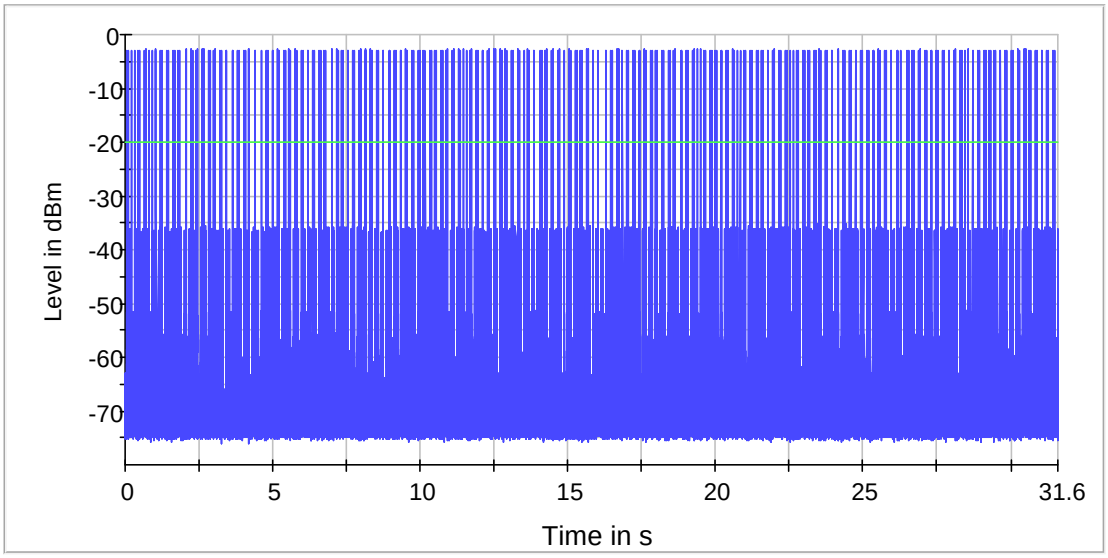
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Time of Channel Occupancy (2402 MHz)

Result

DUT Frequency (MHz)	Time (ms)	Limit Max (ms)	Limit Min (ms)	Threshold (dBm)	Result
2402.000000	41.900	---	0.000	-20.0	PASS



Measurement

Setting	Instrument Value	Target Value
Center Frequency	2.40200 GHz	2.40200 GHz
Span	ZeroSpan	ZeroSpan
RBW	500.000 kHz	~ 500.000 kHz
VBW	1.000 MHz	~ 1.500 MHz
SweepPoints	30001	~ 30001
Sweeptime	31.600 s	31.600 s
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	0.000 dB	0.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	1	1
Filter	Channel	Channel
Trace Mode	Clear Write	Clear Write
Sweeptype	Sweep	AUTO
Preamp	off	off
Trigger	Extern	Extern
Trigger Offset	0.000 ms	0.000 ms

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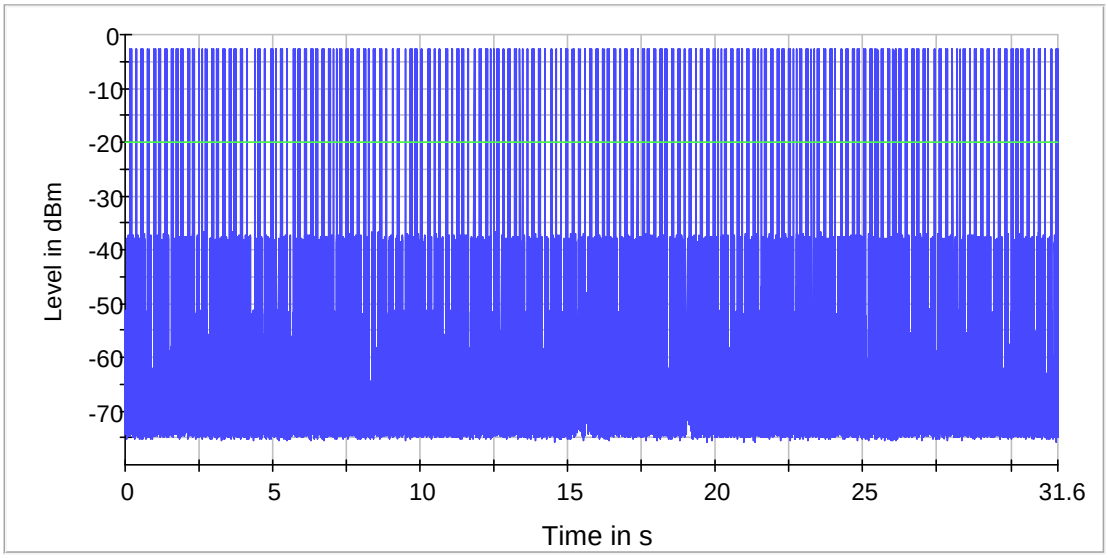
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Time of Channel Occupancy (2441 MHz)

Result

DUT Frequency (MHz)	Time (ms)	Limit Max (ms)	Limit Min (ms)	Threshold (dBm)	Result
2441.000000	42.290	---	0.000	-20.0	PASS



Measurement

Setting	Instrument Value	Target Value
Center Frequency	2.44100 GHz	2.44100 GHz
Span	ZeroSpan	ZeroSpan
RBW	500.000 kHz	~ 500.000 kHz
VBW	1.000 MHz	~ 1.500 MHz
SweepPoints	30001	~ 30001
Sweeptime	31.600 s	31.600 s
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	0.000 dB	0.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	1	1
Filter	Channel	Channel
Trace Mode	Clear Write	Clear Write
Sweeptype	Sweep	AUTO
Preamp	off	off
Trigger	Extern	Extern
Trigger Offset	0.000 ms	0.000 ms

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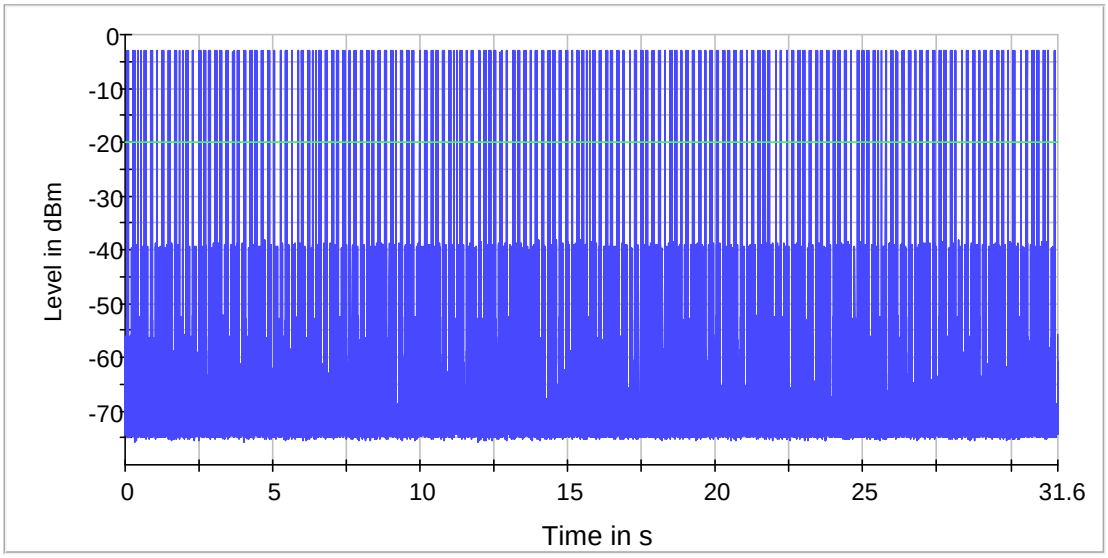
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Time of Channel Occupancy (2480 MHz)

Result

DUT Frequency (MHz)	Time (ms)	Limit Max (ms)	Limit Min (ms)	Threshold (dBm)	Result
2480.000000	42.390	---	0.000	-20.0	PASS



Measurement

Setting	Instrument Value	Target Value
Center Frequency	2.48000 GHz	2.48000 GHz
Span	ZeroSpan	ZeroSpan
RBW	500.000 kHz	~ 500.000 kHz
VBW	1.000 MHz	~ 1.500 MHz
SweepPoints	30001	~ 30001
Sweeptime	31.600 s	31.600 s
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	0.000 dB	0.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	1	1
Filter	Channel	Channel
Trace Mode	Clear Write	Clear Write
Sweeptype	Sweep	AUTO
Preamp	off	off
Trigger	Extern	Extern
Trigger Offset	0.000 ms	0.000 ms

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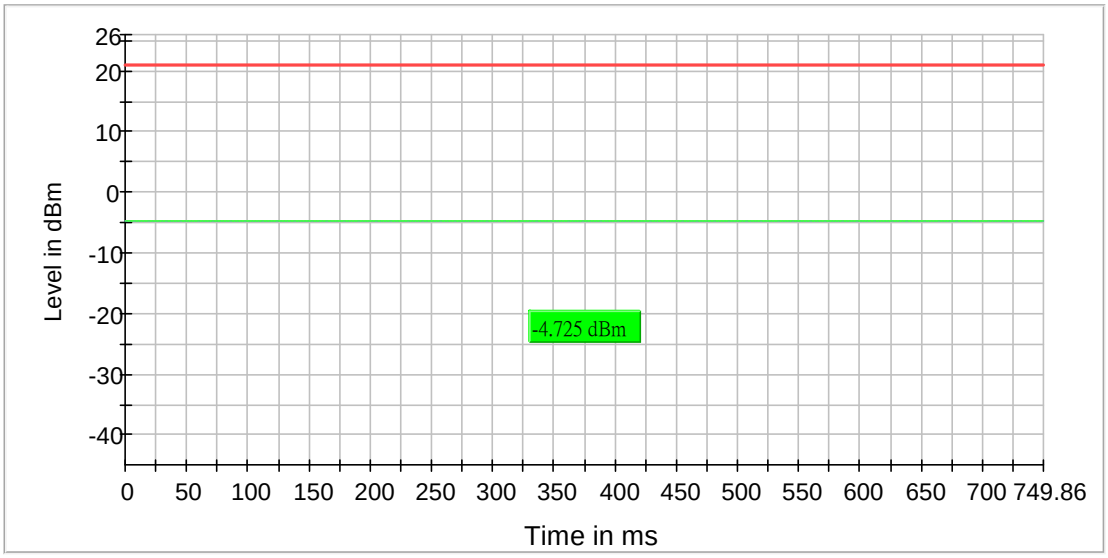
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

RF output power (2402 MHz)

Result

DUT Frequency (MHz)	Conducted Power (dBm)	Limit Max (dBm)	DutyCycle (%)	Result
2402.000000	-4.7	21.0	75.458	PASS



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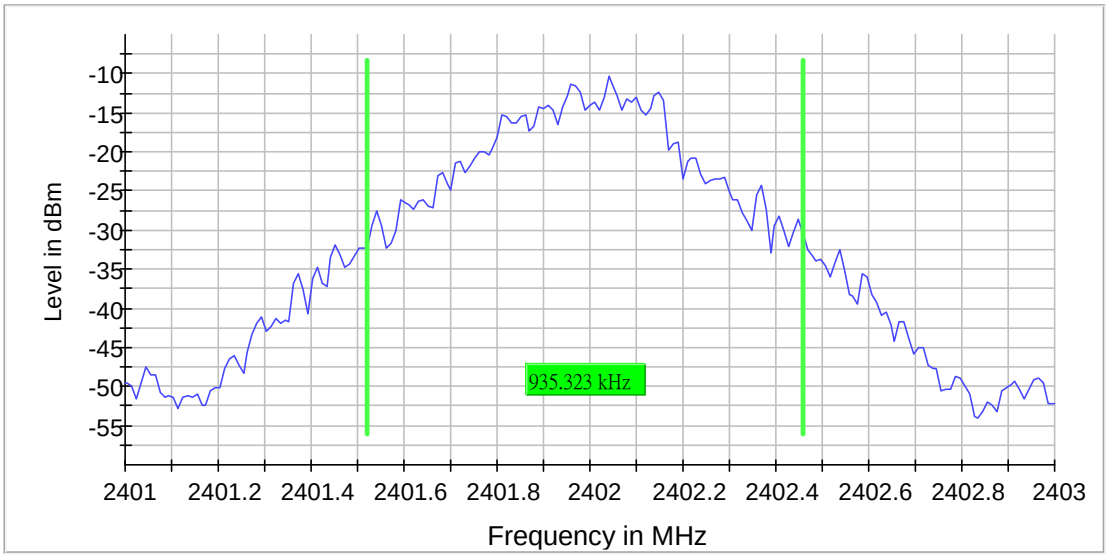
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Emission Bandwidth 20 dB (2402 MHz)

20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
2402.000000	0.935323	---	---	2401.522388	2402.457711	-10.2	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40300 GHz	2.40300 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	~ 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	200	~ 200
Sweeptime	189.620 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	9 / max. 150	max. 150
Stable	5 / 5	5

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Band Edge low (2402 MHz)

Result

DUT Frequency (MHz)	Result
2402.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
2401.973818	-8.9

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.875069	-64.2	35.3	-28.9	PASS
2399.825097	-64.9	36.0	-28.9	PASS
2399.925042	-65.0	36.1	-28.9	PASS
2399.625208	-65.7	36.9	-28.9	PASS
2399.675180	-65.7	36.9	-28.9	PASS
2399.725153	-65.7	36.9	-28.9	PASS
2399.525264	-66.5	37.6	-28.9	PASS
2399.475292	-66.5	37.7	-28.9	PASS
2399.275403	-67.1	38.2	-28.9	PASS
2399.575236	-67.1	38.3	-28.9	PASS
2399.325375	-67.1	38.3	-28.9	PASS
2399.375347	-67.5	38.7	-28.9	PASS
2399.175458	-67.6	38.8	-28.9	PASS
2399.125486	-67.7	38.9	-28.9	PASS
2398.975569	-68.1	39.2	-28.9	PASS

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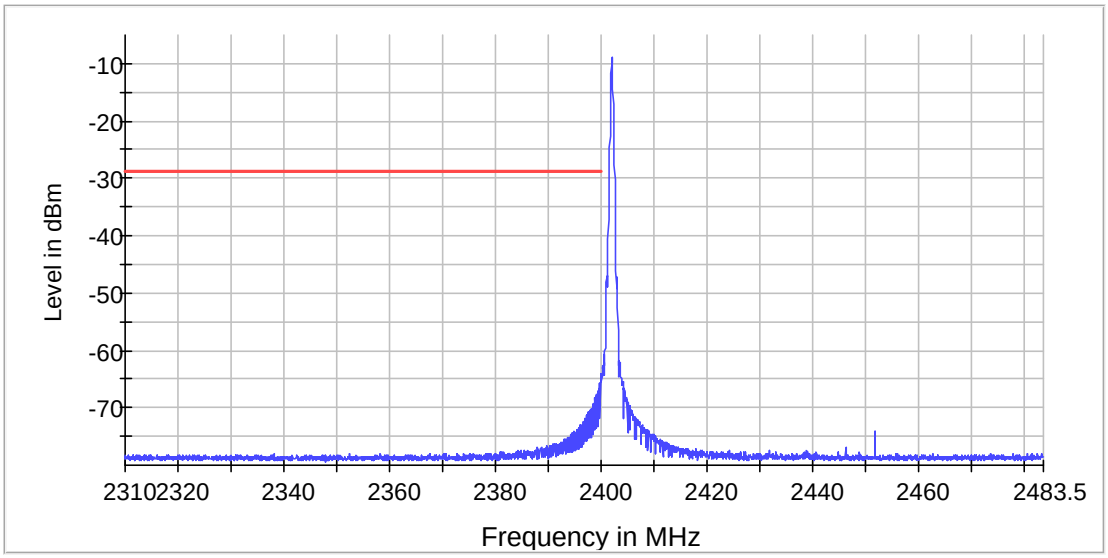

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Tx Spurious Emission (2402 MHz)

Test according to FCC title 47 part 15 §15.247(d) and ANSI C63.10.

Result

DUT Frequency (MHz)	Result
2402.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
2398.250625	-28.5	-64.7	-24.5	40.2	PASS

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2398.250625	-28.5	4.0	-24.5
2397.750803	-30.7	6.2	-24.5
2358.264905	-51.5	10.2	-41.2
2357.765084	-56.6	15.4	-41.2
2499.748201	-58.5	17.3	-41.2
4803.993109	-58.7	17.5	-41.2
4804.493054	-59.0	17.8	-41.2
4803.493165	-59.3	18.1	-41.2
2260.299893	-59.9	18.7	-41.2
19734.250984	-60.0	18.8	-41.2
2499.248257	-60.3	19.1	-41.2
20399.803137	-60.4	19.2	-41.2
19722.376726	-60.8	19.6	-41.2
19696.847072	-60.8	19.6	-41.2
19737.219549	-61.0	19.8	-41.2

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	26000.000000	2	2

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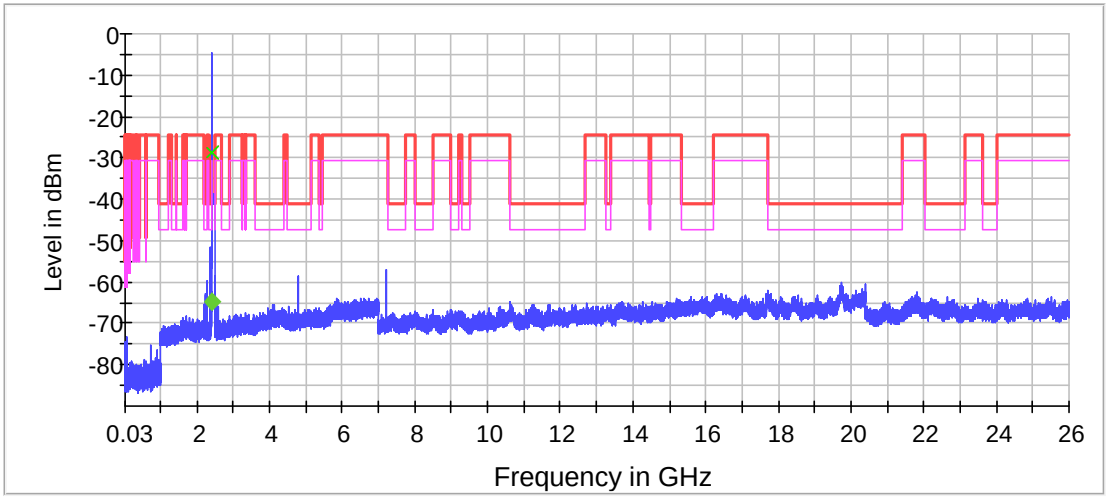

Limit [limit.Result:1] Sum Level [trace.Result:1]
Threshold [limit 2.Result:1] Critical [Over Limit.Result:1]

Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	19400	~ 19400
Sweeptime	19.400 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

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TEST REPORT

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Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	1.000 MHz	<= 1.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	2800	~ 2800
Sweeptime	2.800 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

Final Measurement 2

Setting	Instrument Value	Target Value
Span	ZeroSpan	ZeroSpan
RBW	1.000 MHz	~ 1.000 MHz
VBW	3.000 MHz	~ 3.000 MHz
SweepPoints	10001	~ 10001
Sweeptime	1.000 s	1.000 s
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	0.000 dB	0.000 dB
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Clear Write	Clear Write
Sweeptype	Sweep	AUTO
Preamp	off	off

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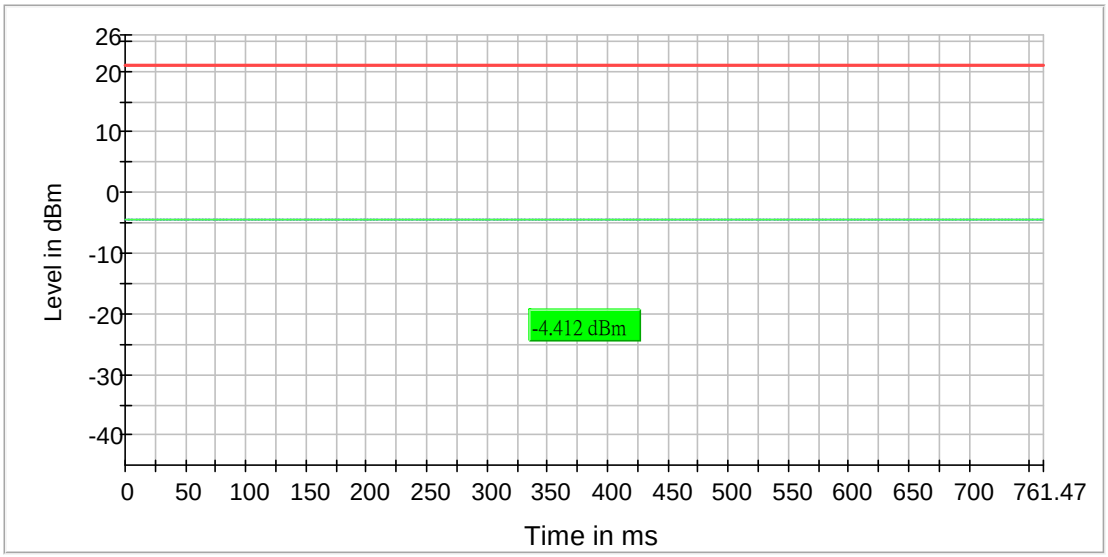
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

RF output power (2441 MHz)

Result

DUT Frequency (MHz)	Conducted Power (dBm)	Limit Max (dBm)	DutyCycle (%)	Result
2441.000000	-4.4	21.0	76.338	PASS



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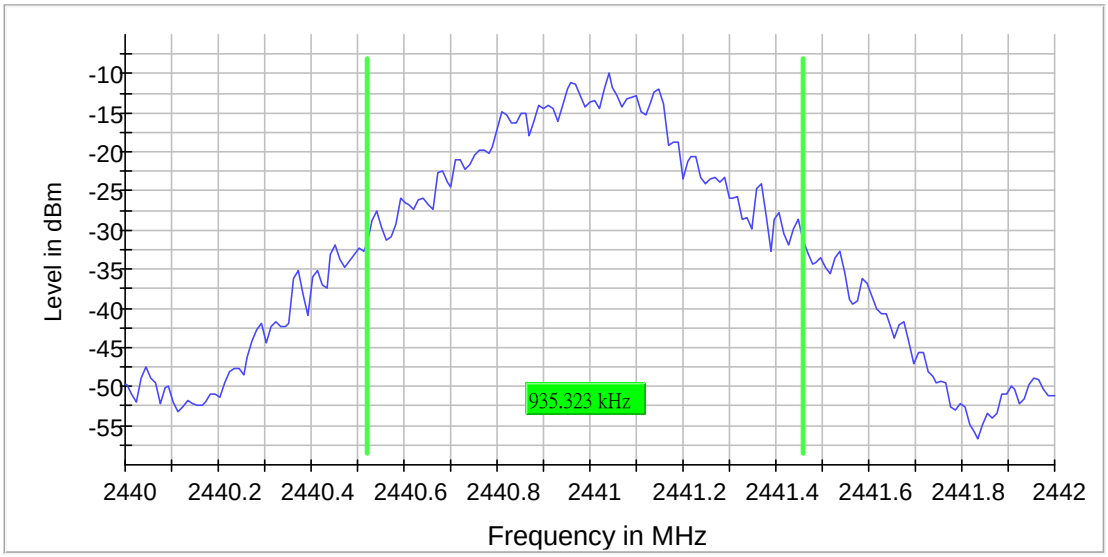
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Emission Bandwidth 20 dB (2441 MHz)

20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
2441.000000	0.935323	---	---	2440.522388	2441.457711	-10.0	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44200 GHz	2.44200 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	~ 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	200	~ 200
Sweeptime	189.620 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	7 / max. 150	max. 150
Stable	5 / 5	5

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Tx Spurious Emission (2441 MHz)

Test according to FCC title 47 part 15 §15.247(d) and ANSI C63.10.

Result

DUT Frequency (MHz)	Result
2441.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2495.748644	-53.4	12.2	-41.2
2373.259550	-53.5	12.3	-41.2
2368.761157	-54.0	12.8	-41.2
2496.748533	-54.1	12.9	-41.2
2375.758658	-55.1	13.8	-41.2
7323.276670	-55.5	14.2	-41.2
2496.248589	-55.5	14.3	-41.2
7322.682957	-55.7	14.4	-41.2
7323.870383	-55.8	14.5	-41.2
7322.089244	-56.1	14.9	-41.2
2375.258836	-56.6	15.4	-41.2
2369.260978	-57.8	16.6	-41.2
2340.771153	-59.2	18.0	-41.2
7324.464096	-59.8	18.5	-41.2
2334.273474	-60.1	18.9	-41.2

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	26000.000000	2	2

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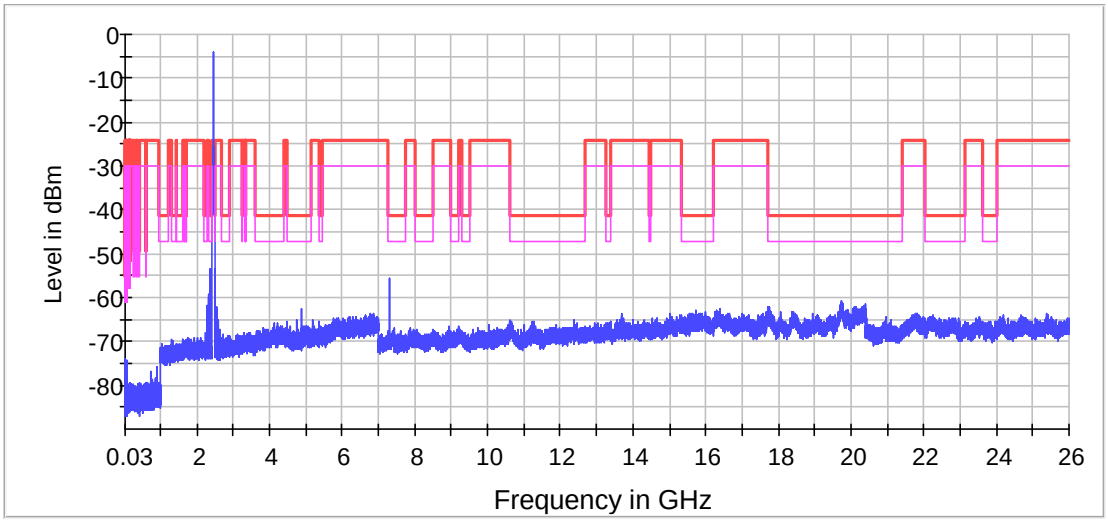

× Limit [limit.Result:1] × Sum Level [trace.Result:1]

Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	19400	~ 19400
Sweeptime	19.400 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	1.000 MHz	<= 1.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	2800	~ 2800
Sweeptime	2.800 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

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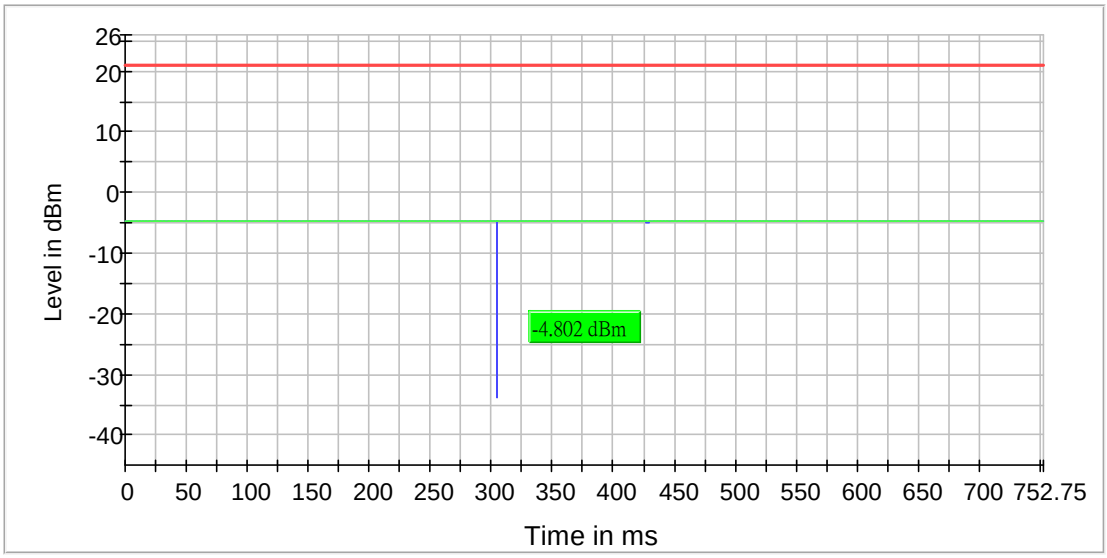
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

RF output power (2480 MHz)

Result

DUT Frequency (MHz)	Conducted Power (dBm)	Limit Max (dBm)	DutyCycle (%)	Result
2480.000000	-4.8	21.0	75.464	PASS



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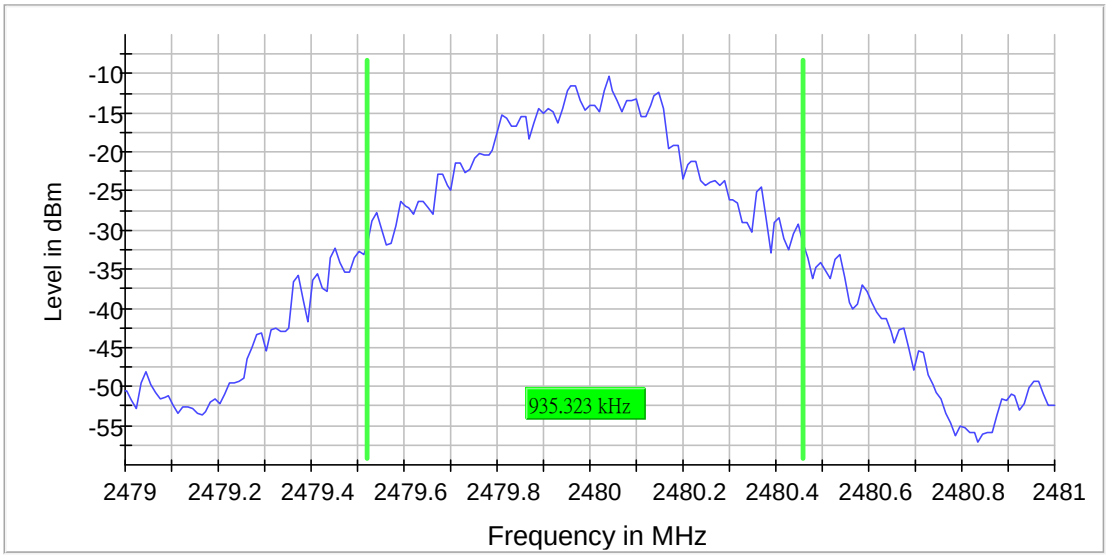
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Emission Bandwidth 20 dB (2480 MHz)

20 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Max Level (dBm)	Result
2480.000000	0.935323	---	---	2479.522388	2480.457711	-10.4	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47900 GHz	2.47900 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	~ 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	200	~ 200
Sweeptime	189.620 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	8 / max. 150	max. 150
Stable	5 / 5	5

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Band Edge high (2480 MHz)

Result

DUT Frequency (MHz)	Result
2480.000000	PASS

Inband Peak

Frequency (MHz)	Level (dBm)
2479.927139	-9.0

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2483.524924	-70.0	41.0	-29.0	PASS
2483.774169	-70.7	41.7	-29.0	PASS
2483.624622	-71.0	42.0	-29.0	PASS
2483.923716	-71.0	42.0	-29.0	PASS
2483.674471	-71.0	42.0	-29.0	PASS
2483.574773	-71.0	42.1	-29.0	PASS
2483.724320	-71.1	42.1	-29.0	PASS
2484.023414	-71.1	42.1	-29.0	PASS
2483.824018	-71.3	42.3	-29.0	PASS
2483.973565	-71.5	42.5	-29.0	PASS
2484.123112	-71.5	42.5	-29.0	PASS
2484.172961	-71.6	42.6	-29.0	PASS
2484.521903	-72.0	43.0	-29.0	PASS
2484.472054	-72.0	43.1	-29.0	PASS
2484.073263	-72.1	43.1	-29.0	PASS

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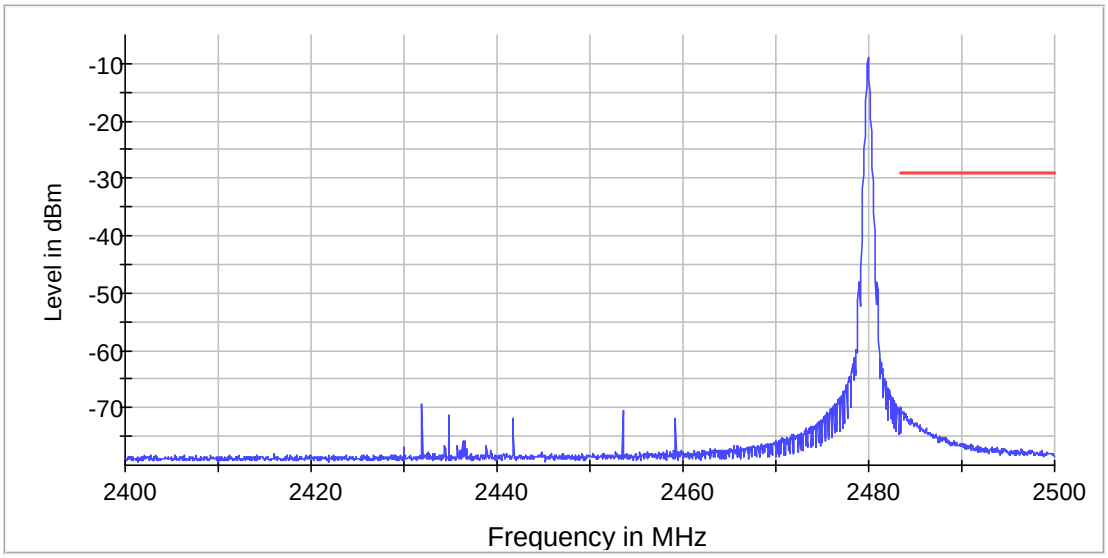
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017



FCC ID: LMZ-31324GC

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Tx Spurious Emission (2480 MHz)

Test according to FCC title 47 part 15 §15.247(d) and ANSI C63.10.

Result

DUT Frequency (MHz)	Result
2480.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
2485.749751	-32.2	-68.8	-41.2	27.6	PASS

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2485.749751	-32.2	-9.0	-41.2
2485.249806	-33.9	-7.3	-41.2
2483.749972	-58.8	17.6	-41.2
7440.238110	-59.1	17.9	-41.2
7439.644397	-59.2	18.0	-41.2
19735.438410	-59.8	18.6	-41.2
2347.768654	-60.0	18.8	-41.2
2351.767226	-60.3	19.1	-41.2
7440.831823	-60.3	19.1	-41.2
19736.032123	-60.4	19.1	-41.2
2484.249917	-60.5	19.3	-41.2
2352.267047	-60.5	19.3	-41.2
2484.749862	-60.7	19.5	-41.2
19733.063559	-60.7	19.5	-41.2
2329.275259	-60.8	19.6	-41.2

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	1000.000000	1	1
1000.000000	2400.000000	2	2
2400.000000	2483.500000	2	2
2483.500000	7000.000000	2	2
7000.000000	26000.000000	2	2

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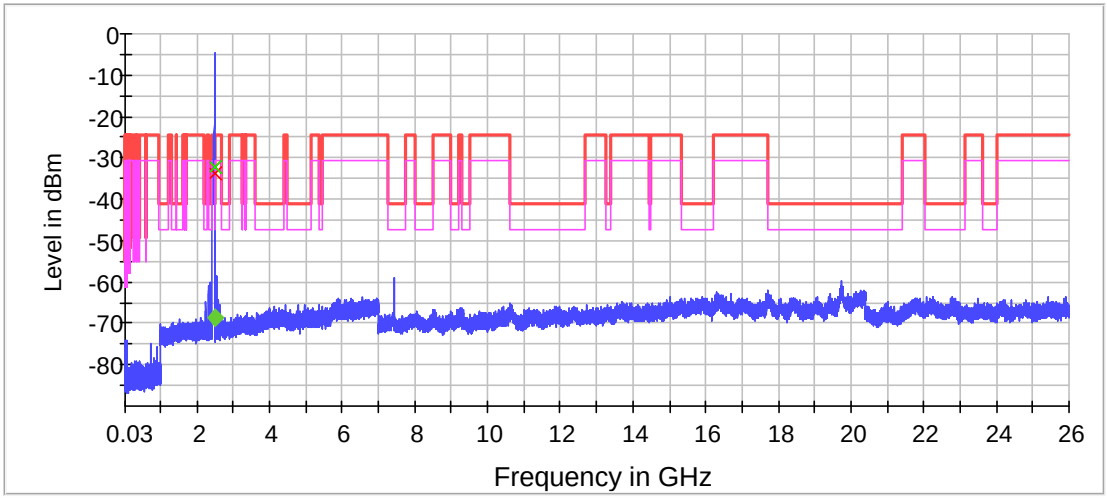

Limit [limit.Result:1] Sum Level [trace.Result:1]
Threshold [limit 2.Result:1] Critical [Over Limit.Result:1]

Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	19400	~ 19400
Sweeptime	19.400 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	1.000 MHz	<= 1.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	2800	~ 2800
Sweeptime	2.800 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30	0.30
Run	3 / max. 150	max. 150
Stable	3 / 3	3

Final Measurement 2

Setting	Instrument Value	Target Value
Span	ZeroSpan	ZeroSpan
RBW	1.000 MHz	~ 1.000 MHz
VBW	3.000 MHz	~ 3.000 MHz
SweepPoints	10001	~ 10001
Sweeptime	1.000 s	1.000 s
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	0.000 dB	0.000 dB
Detector	RMS	RMS
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Clear Write	Clear Write
Sweeptype	Sweep	AUTO
Preamp	off	off

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

2.8 Radiated Emission Measurement Data

Environmental conditions:

Parameter	Recorded value	
Ambient temperature:	24	° C
Relative humidity:	63	%

Mode: 802.11b/g/n, BT, AUX-IN
Testing frequency range: 9kHz to 26GHz
Measurement: Quasi-peak (9kHz – 1GHz), Peak and Average(above 1GHz)
RBW: 9kHz (below 30MHz), 120KHz (30MHz – 1GHz), 1MHz (above 1GHz)
VBW: 30kHz (below 30MHz), 300kHz (30MHz – 1GHz,), 3MHz (above 1GHz, Peak measurement), 10Hz (above 1GHz, Average measurement)

Result:

It was found that the EUT met the FCC requirement.

Remark:

Other emissions more than 20dB below the limit are not reported.
If Peak measurement values are lower than average limit, average measurement is not necessary.

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Operation Mode: Wi-Fi

Channel	Frequency (MHz)	Polarity (H/V)	Reading at 3m (dBµV)	Transducer Factor (dB/m)	Field Strength at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)	Detector (PK/ QP/AV)
802.11 b								
Lower	4823.870	H	40.6	3.1	43.7	74.0	-30.3	PK
Lower	4823.870	V	41.1	3.1	44.2	74.0	-29.8	PK
Middle	4874.024	H	38.1	3.1	41.2	74.0	-32.8	PK
Middle	4874.024	V	38.4	3.1	41.5	74.0	-32.5	PK
Higher	4924.524	H	41.1	3.2	44.3	74.0	-29.7	PK
Higher	4924.524	V	40.8	3.2	44.0	74.0	-30.0	PK
802.11 g								
Lower	4824.052	H	38.8	3.1	41.9	74.0	-32.1	PK
Lower	4827.450	V	39.1	3.1	42.2	74.0	-31.8	PK
Middle	4874.526	H	37.8	3.1	40.9	74.0	-33.1	PK
Middle	4874.526	V	38.1	3.1	41.2	74.0	-32.8	PK
Higher	4924.542	H	38.8	3.2	42.0	74.0	-32.0	PK
Higher	4924.542	V	38.3	3.2	41.5	74.0	-32.5	PK
802.11 n HT20								
Lower	4824.607	H	37.4	3.1	40.5	74.0	-33.5	PK
Lower	4824.607	V	37.9	3.1	41.0	74.0	-33.0	PK
Middle	4873.100	H	36.9	3.1	40.0	74.0	-34.0	PK
Middle	4873.100	V	38.4	3.1	41.5	74.0	-32.5	PK
Higher	4924.431	H	36.8	3.2	40.0	74.0	-34.0	PK
Higher	4924.431	V	37.0	3.2	40.2	74.0	-33.8	PK

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Operation Mode: Bluetooth

Channel	Frequency (MHz)	Polarity (H/V)	Reading at 3m (dBµV)	Transducer Factor (dB/m)	Field Strength at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)	Detector (PK/ QP/AV)
Bluetooth								
Lower	4844.542	H	36.5	3.1	39.6	74.0	-34.4	PK
Lower	4844.542	V	36.4	3.1	39.5	74.0	-34.5	PK
Middle	4874.641	H	35.8	3.1	38.9	74.0	-35.1	PK
Middle	4874.641	V	35.5	3.1	38.6	74.0	-35.4	PK
Higher	4904.413	H	35.3	3.2	38.5	74.0	-35.5	PK
Higher	4904.447	V	35.5	3.2	38.7	74.0	-35.3	PK
Bluetooth								
Lower	7206.428	H	41.7	10.8	52.5	74.0	-21.5	PK
Lower	7206.428	V	42.0	10.8	52.8	74.0	-21.2	PK
Middle	7323.417	H	41.6	10.8	52.4	74.0	-21.6	PK
Middle	7323.417	V	41.1	10.8	51.9	74.0	-22.1	PK
Higher	7440.326	H	39.2	10.8	50.0	74.0	-24.0	PK
Higher	7440.326	V	37.8	10.8	48.6	74.0	-25.4	PK

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Operation Mode: Aux in

Frequency (MHz)	Polarity (H/V)	Reading at 3m (dBµV)	Transducer Factor (dB/m)	Field Strength at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)	Detector (PK/ QP/AV)
45.548	V	21.5	10.7	32.2	40.0	-7.8	QP
69.303	V	19.3	9.6	28.9	40.0	-11.1	QP
161.989	H	12.3	14.0	26.3	43.5	-17.2	QP
162.000	V	25.2	14.0	39.2	43.5	-4.3	QP
186.012	V	20.6	15.2	35.8	43.5	-7.7	QP
331.793	H	16.1	16.4	32.5	46.0	-13.5	QP
356.370	H	17.0	16.4	33.4	46.0	-12.6	QP

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

3 Description of the Line-conducted Test

3.1 Test Procedure

Conducted emissions measurements are investigated and also taken pursuant to the procedures of ANSI C63.4 – 2014 and ANSI C63.10 – 2013. The EUT was setup as described in the procedures, and both lines were measured.

Supporting adapter AC 100-240V to DC 12V adaptor (Model: JDA0301200200WUS) was connected to EUT for Wi-Fi, Bluetooth and Aux in operation.

3.2 Test Result

All there operations mode Wi-Fi, Bluetooth and Aux in were tested and the highest emissions generated from Aux in mode were presented in next pages.

It was found that the EUT met the FCC requirement.

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TEST REPORT

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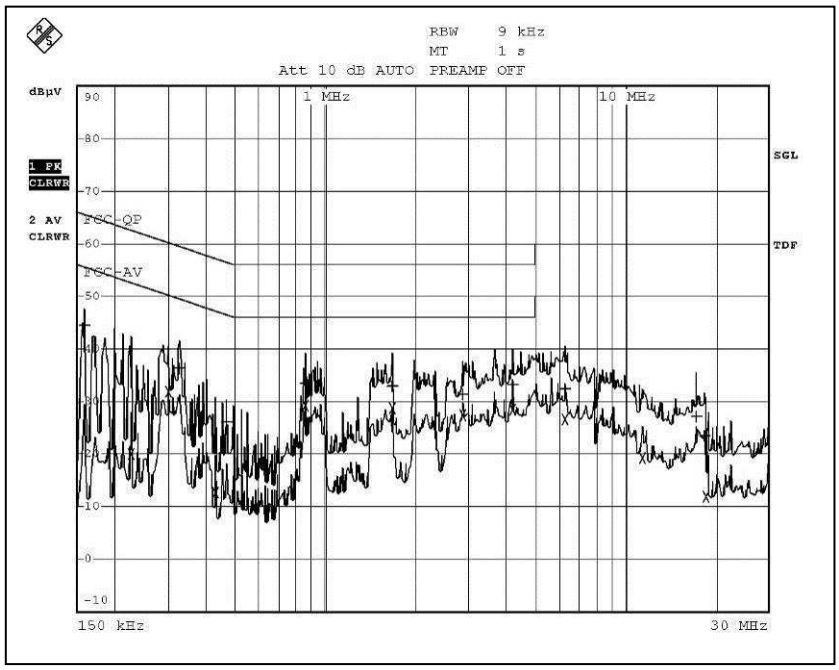
3.3 Graph and Table of Conducted Emission Measurement Data



EDIT PEAK LIST (Final Measurement Results)

Trace1:	FCC-QP
Trace2:	FCC-AV
Trace3:	---

TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Quasi Peak	159 kHz	44.53 L1 gnd	-20.97
2 Average	226.5 kHz	20.11 L1 gnd	-32.46
2 Average	303 kHz	31.91 N gnd	-18.24
1 Quasi Peak	330 kHz	36.37 N gnd	-23.08
2 Average	433.5 kHz	12.62 L1 gnd	-34.56
1 Quasi Peak	469.5 kHz	26.17 L1 gnd	-30.34
1 Quasi Peak	860 kHz	33.46 L1 gnd	-22.54
2 Average	860 kHz	29.12 N gnd	-16.87
1 Quasi Peak	1.67 MHz	32.98 L1 gnd	-23.01
2 Average	1.67 MHz	28.61 N gnd	-17.38
1 Quasi Peak	2.885 MHz	31.28 L1 gnd	-24.71
2 Average	2.885 MHz	27.52 N gnd	-18.47
1 Quasi Peak	4.199 MHz	33.13 L1 gnd	-22.86
2 Average	4.199 MHz	28.46 N gnd	-17.53
1 Quasi Peak	6.314 MHz	32.28 N gnd	-27.71
2 Average	6.314 MHz	26.65 N gnd	-23.35
2 Average	11.4575 MHz	19.35 N gnd	-30.64
1 Quasi Peak	17.3165 MHz	27.18 N gnd	-32.81
1 Quasi Peak	18.4415 MHz	23.33 N gnd	-36.66
2 Average	18.6035 MHz	11.97 N gnd	-38.02

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4 Photograph

4.1 Photographs of the Test Setup for Radiated Emission and Conducted Emission

For electronic filing, the photos are saved with filename LMZ-31324GC TSup.pdf.

4.2 Photographs of the External and Internal Configurations of the EUT

For electronic filing, the photos are saved with filename LMZ-31324GC ExPho.pdf and LMZ-31324GC InPho.pdf.

4.3 Antenna requirement

Appendices A5 shows the antenna is permanently attached and cannot be changed. Therefore it fulfils the section 15.203 requirement.

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TEST REPORT

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5 Appendices

A1	Photos of the set-up of Radiated Emissions	3	pages
A2	Photos of the set-up of Conducted Emissions	1	page
A3	Photos of the set-up of Line-conducted Emissions	1	page
A4	Photos of External Configurations	3	pages
A5	Photos of Internal Configurations	6	page
A6	ID Label/Location	1	page

Tested by: Stanley Mr. Yau Kwok Pun, Stanley

Reviewed by: Mr. WONG Lap-pong, Andrew

TEST REPORT

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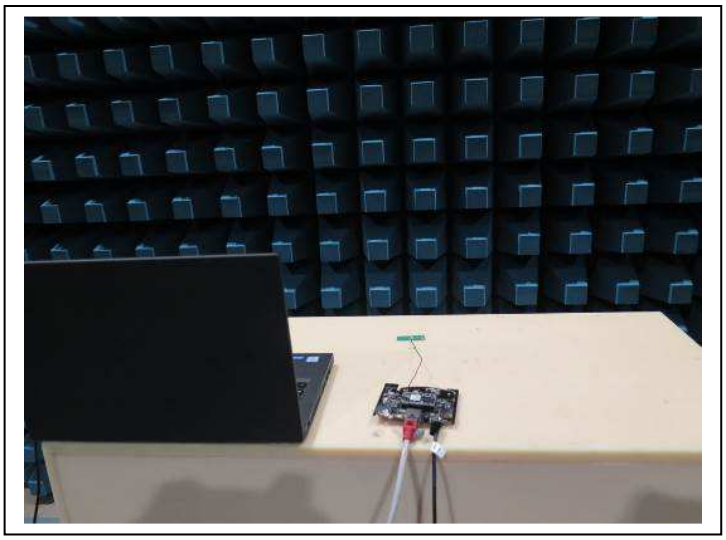
A1. Photos of the set-up of Radiated Emissions

Test setup1 for Wi-Fi



Test setup2 for Wi-Fi

Tested by: Stanley
Mr. Yau Kwok Pun, Stanley

Reviewed by:
Mr. WONG Lap-pong, Andrew

FCC ID: LMZ-31324GC

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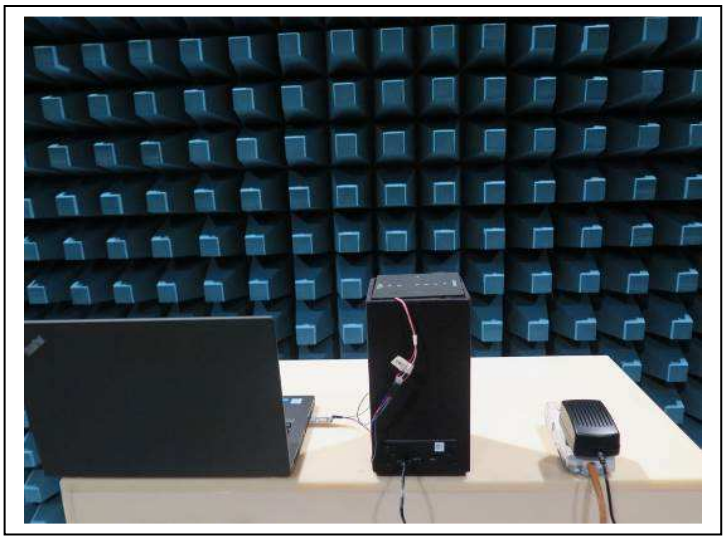
Test setup3 for Bluetooth and Wi-Fi



Test setup4 for Bluetooth and Wi-Fi

Tested by: Stanley
Mr. Yau Kwok Pun, Stanley

Reviewed by:
Mr. WONG Lap-pong, Andrew

FCC ID: LMZ-31324GC

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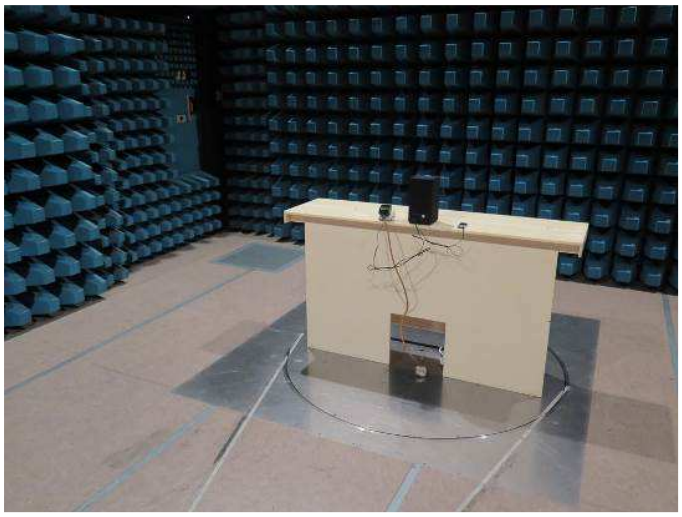
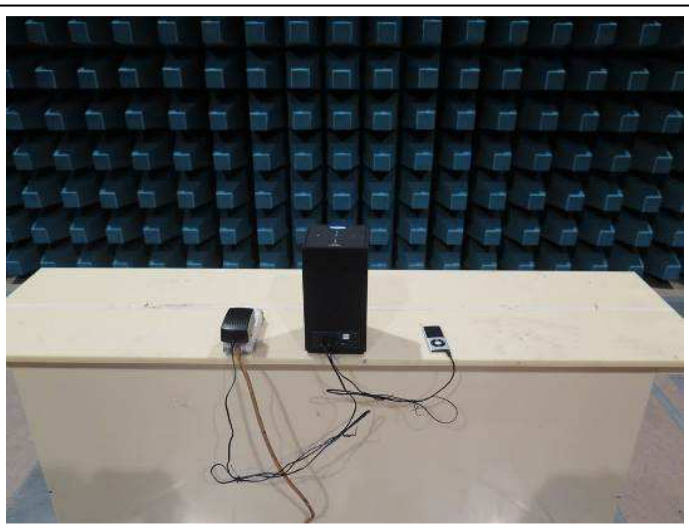
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017



Test setup 5 for Aux in



Test setup 6 for Aux in

A2. Photos of the set-up of Conducted Emissions

Tested by: Stanley
Mr. Yau Kwok Pun, Stanley

Reviewed by:
Mr. WONG Lap-pong, Andrew

FCC ID: LMZ-31324GC

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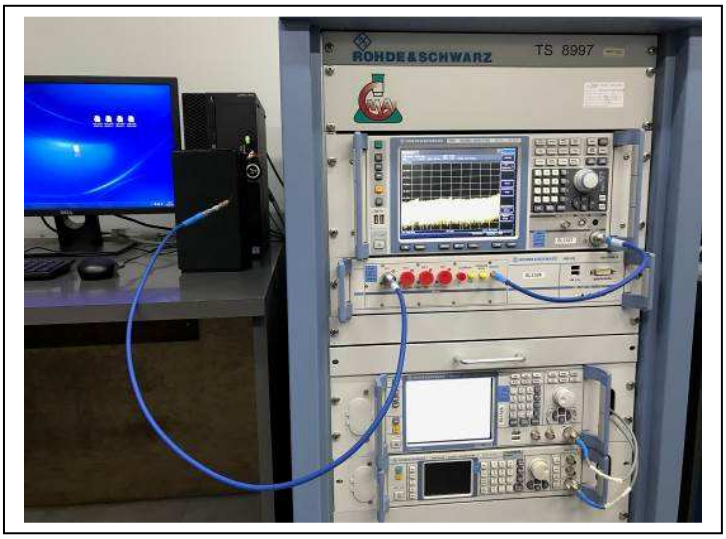
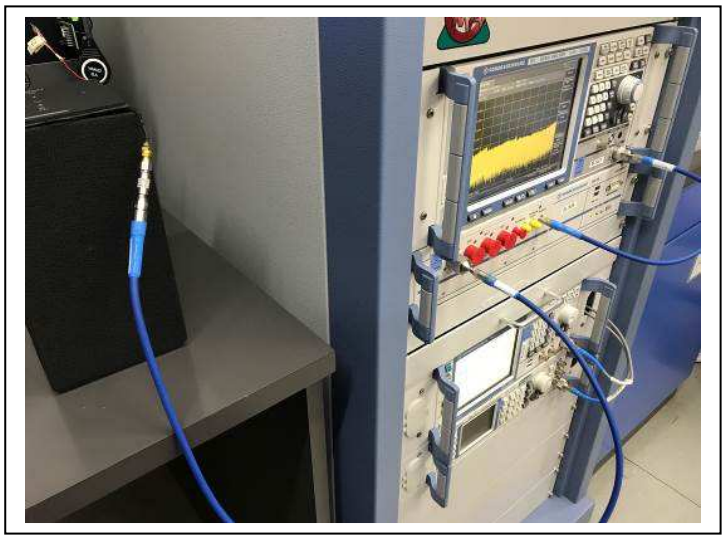


Test setup 1



Test setup 2

Tested by: Stanley
Mr. Yau Kwok Pun, Stanley

Reviewed by:
Mr. WONG Lap-pong, Andrew

FCC ID: LMZ-31324GC

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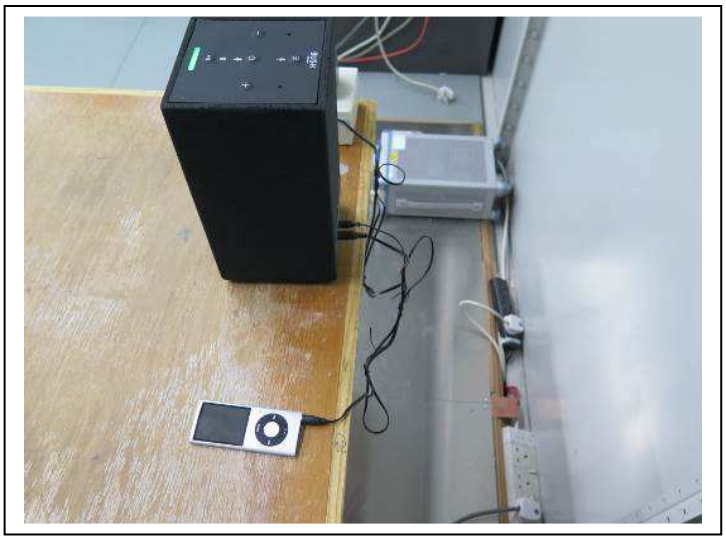
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

A3. Photos of the set-up of Line-conducted Emissions

Front view



Side view

Tested by: Stanley
Mr. Yau Kwok Pun, Stanley

Reviewed by:
Mr. WONG Lap-pong, Andrew

FCC ID: LMZ-31324GC

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

A4 Photos of External Configurations

External Configuration 1

External Configuration 2

Tested by: Stanley
Mr. Yau Kwok Pun, Stanley

Reviewed by:
Mr. WONG Lap-pong, Andrew

FCC ID: LMZ-31324GC

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

External Configuration 3

External Configuration 4

Tested by: Stanley
Mr. Yau Kwok Pun, Stanley

Reviewed by:
Mr. WONG Lap-pong, Andrew

FCC ID: LMZ-31324GC

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

External Configuration 5
(Model: JDA0301200200WUS)

External Configuration 6
(Model: JDA0301200200WUS)

Tested by: Stanley
Mr. Yau Kwok Pun, Stanley

Reviewed by:
Mr. WONG Lap-pong, Andrew

FCC ID: LMZ-31324GC

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

External Configuration 7 (Model: GKYPB0200120US)

External Configuration 8 (Model: GKYPB0200120US)

Tested by: Stanley
Mr. Yau Kwok Pun, Stanley

Reviewed by:
Mr. WONG Lap-pong, Andrew

FCC ID: LMZ-31324GC

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Aux-in cable700mm (excluding the heads)

Tested by: Stanley
Mr. Yau Kwok Pun, Stanley

Reviewed by:
Mr. WONG Lap-pong, Andrew

FCC ID: LMZ-31324GC

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TEST REPORT

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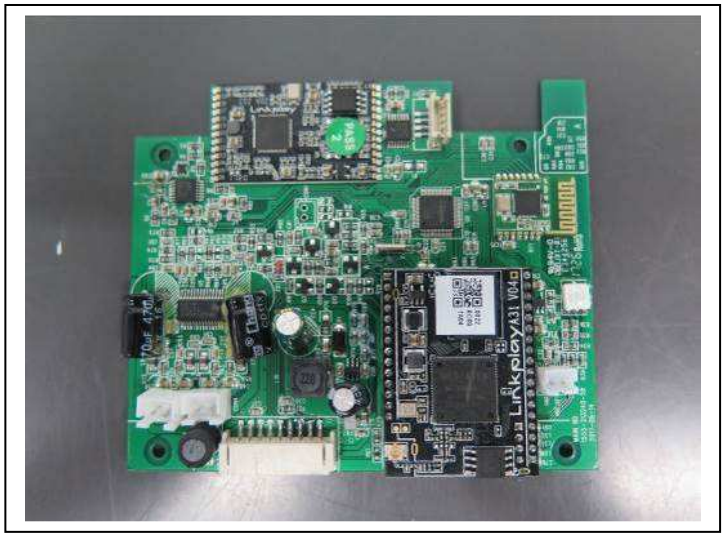
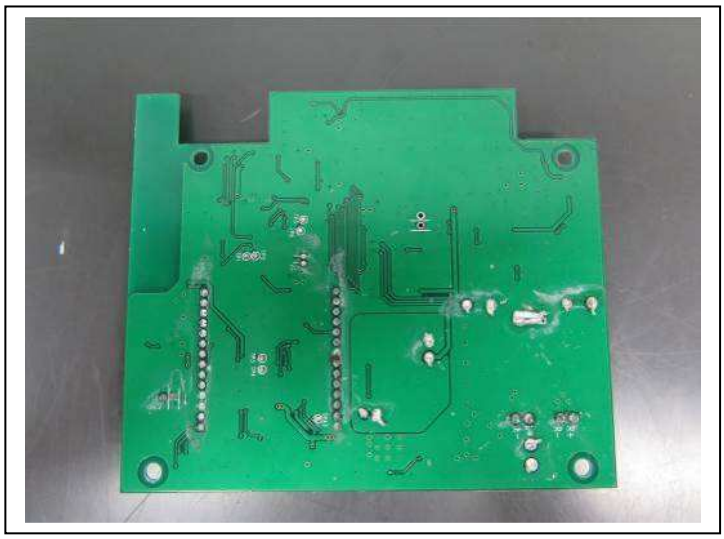
A5 Photos of Internal Configurations



Internal Configuration 1 (Main PCB)



Internal Configuration 2 (Main PCB)

Tested by: Stanley
Mr. Yau Kwok Pun, Stanley

Reviewed by:
Mr. WONG Lap-pong, Andrew

FCC ID: LMZ-31324GC

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Internal Configuration 3 (Wi-Fi)

Internal Configuration 4(Wi-Fi)

Tested by: Stanley
Mr. Yau Kwok Pun, Stanley

Reviewed by:
Mr. WONG Lap-pong, Andrew

FCC ID: LMZ-31324GC

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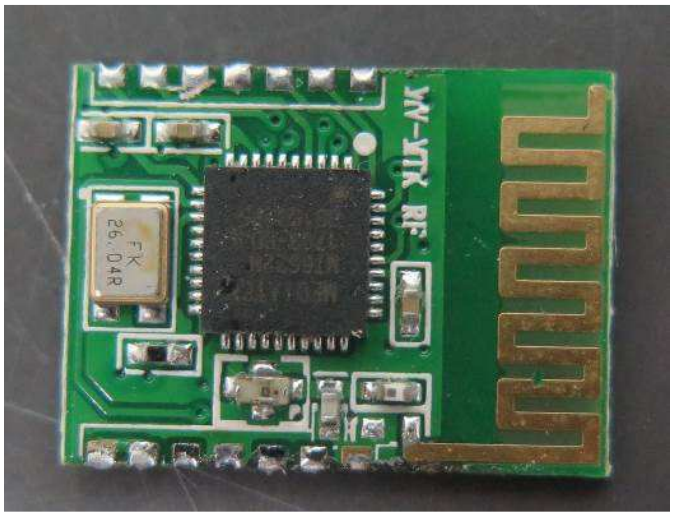
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017



Internal Configuration 5 (Bluetooth)

Internal Configuration 6 (Bluetooth)

Tested by: Stanley
Mr. Yau Kwok Pun, Stanley

Reviewed by:
Mr. WONG Lap-pong, Andrew

FCC ID: LMZ-31324GC

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TEST REPORT

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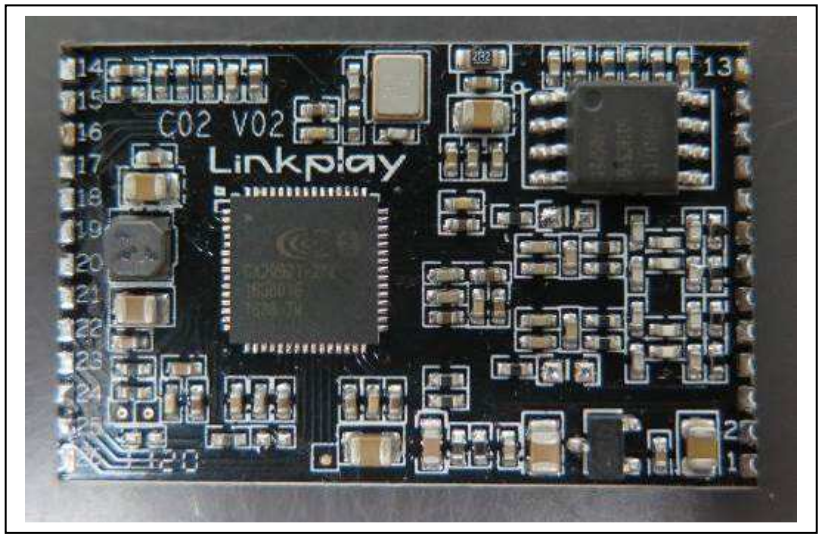
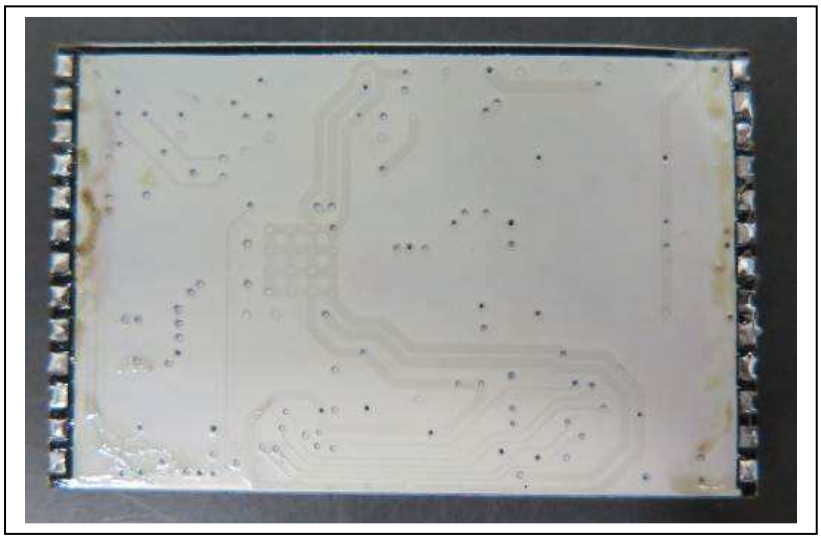


Internal Configuration 7(Voice control)



Internal Configuration 8 (Voice control)

Tested by: Stanley
Mr. Yau Kwok Pun, Stanley

Reviewed by:
Mr. WONG Lap-pong, Andrew

FCC ID: LMZ-31324GC

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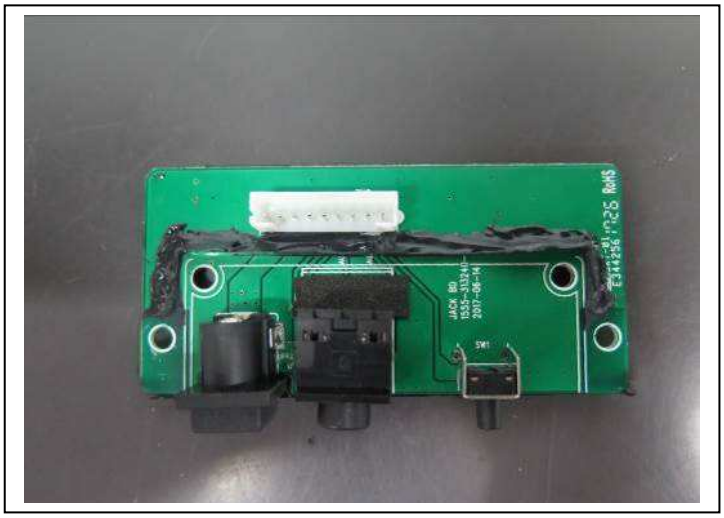

Internal Configuration 9 (I/O connection)

Internal Configuration 10 (I/O connection)

Tested by: Stanley
Mr. Yau Kwok Pun, Stanley

Reviewed by:
Mr. WONG Lap-pong, Andrew

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Report No. : AV0041562(7) Date : 11 Jul 2017

Internal Configuration 11 (Button Key PCB)

Internal Configuration 12 (Button Key PCB)

Tested by: Stanley
Mr. Yau Kwok Pun, Stanley

Reviewed by:
Mr. WONG Lap-pong, Andrew

FCC ID: LMZ-31324GC

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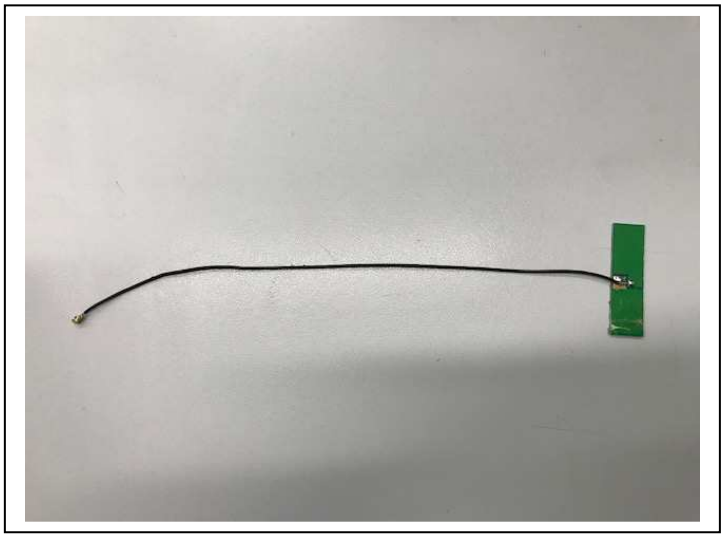
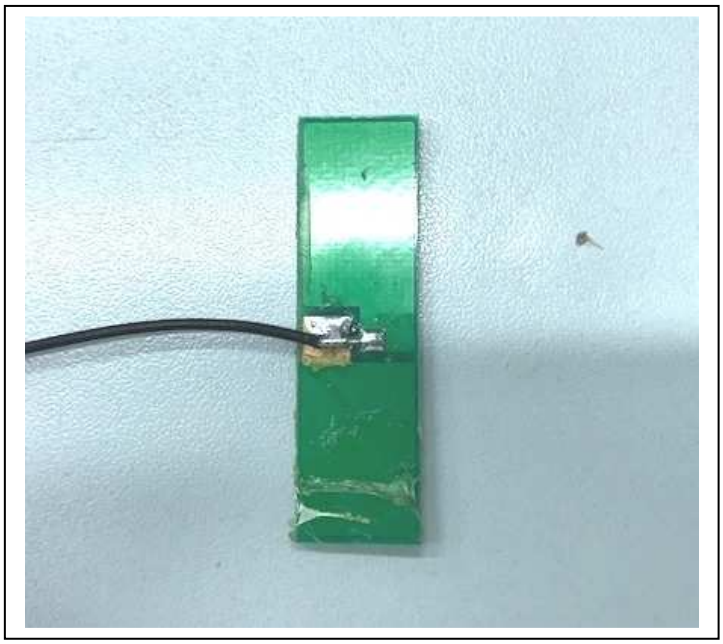


Internal Configuration 13 (Wi-Fi Antenna)



Internal Configuration 14 (Wi-Fi Antenna)

Tested by: Stanley
Mr. Yau Kwok Pun, Stanley

Reviewed by:
Mr. WONG Lap-pong, Andrew

FCC ID: LMZ-31324GC

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Internal Configuration 15 (Location of Wi-Fi Antenna)

Internal Configuration 16

Tested by: Stanley
Mr. Yau Kwok Pun, Stanley

Reviewed by:
Mr. WONG Lap-pong, Andrew

FCC ID: LMZ-31324GC

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TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

Internal Configuration 17

Tested by: Stanley
Mr. Yau Kwok Pun, Stanley

Reviewed by:
Mr. WONG Lap-pong, Andrew

FCC ID: LMZ-31324GC

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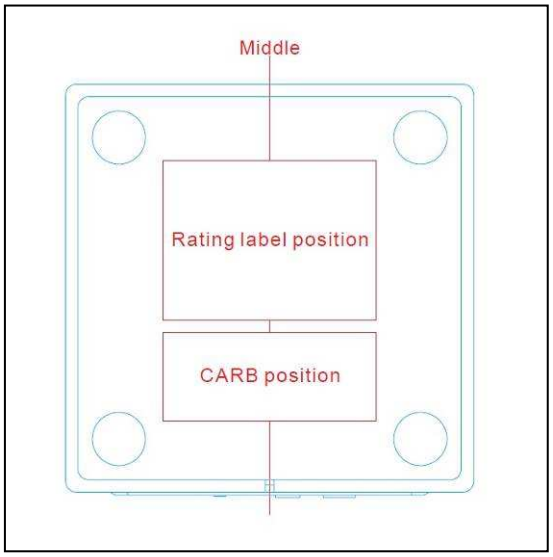
TEST REPORT

Report No. : AV0041562(7) Date : 11 Jul 2017

A6 ID label / Location

ID Label / Location1



ID Label / Location2

***** End of Report *****

Tested by: Stanley
Mr. Yau Kwok Pun, Stanley

Reviewed by:
Mr. WONG Lap-pong, Andrew

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