RF Test Report

FCC ID: 2AMY3-S272E4

Report No.	:	TBR-C-202410-0214-23
Applicant	:	Acer India Private Limited
Equipment Under Test (EUT)		
EUT Name	:	Acerone Liquid S272E4
Model No.	:	Acerone Liquid S272E4
Series Model No.	:	Acerone Liquid
Brand Name	:	Acer Acerpure
Sample ID	:	HC-C-202410-0214-01-01# & HC-C-202410-0214-01-02#
Receipt Date	:	2024-11-07
Test Date	:	2024-11-07 to 2024-12-11
Issue Date	:	2024-12-11
Standards	:	FCC Part 15 Subpart E 15.407
Test Method	:	ANSI C63.10: 2013 KDB 789033 D02 General UNII Test Procedures New Rules v02r01 KDB 662911 D01 Multiple Transmitter Output v02r01
Conclusions	:	**PASS** In the configuration tested, the EUT complied with the standards specified above.

Test By	:	ZKn Zhou
Reviewed By	:	Camille Li
Approved By	:	Ivan Su

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in the report.

1/F.,Building 6, Rundongsheng Industrial Zone, Longzhu, Xixiang, Bao'an District, Shenzhen, Guangdong, China
Tel: +86 75526509301 Fax: +86 75526509195

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Revision History

Report No.	Version	Description	Issued Date
TBR-C-202410-0214-23	Rev.01	Initial issue of report	2024-12-11

1. General Information about EUT

1.1 Client Information

Applicant	:	Acer India Private Limited
Address	:	Embassy Heights, 6th Floor, No.13, Magrath Road, Bangalore - 560025, India
Manufacturer	:	Bhagwati Products Ltd
Address	:	M/S Bhagwati Products Ltd, SP1-1, Ind Area Karoli, Tapukara Ext. Bhiwadi, Alwar Rajasthan -301707

1.2 General Description of EUT (Equipment Under Test)

EUT Name	:	Acerone Liquid S272E4	
Models No.	:	Acerone Liquid S272E4, Acerone Liquid	
Model Different	:	All these models are identical in the same PCB layout and electrical circuit, the only difference is that appearance.	
Product Description	:	Operation Frequency: U-NII-1: 5180MHz~5240MHz, U-NII-2A: 5260MHz~5320MHz U-NII-3: 5745MHz~5825MHz	
		Antenna Gain:	-1.2dBi FPC antenna
		Modulation Type:	802.11a: OFDM (QPSK, BPSK, 16QAM) 802.11n: OFDM (QPSK, BPSK, 16QAM, 64QAM) 802.11ac: OFDM (QPSK, BPSK, 16QAM, 64QAM, 256QAM)
Power Rating	:	Input: DC 5V	
Li-ion Polymer Battery	:	3.87V by 5000mAh Rechargeable Li-ion battery	
Software Version	:	ANDROID_PO679M_V01_20241029_USERDEBUG	
Hardware Version	:	G2062H-MR-V1.0	

Remark:

(1)The antenna gain and adapter provided by the applicant, the verified for the RF conduction test provided by TOBY test lab.

(2)For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

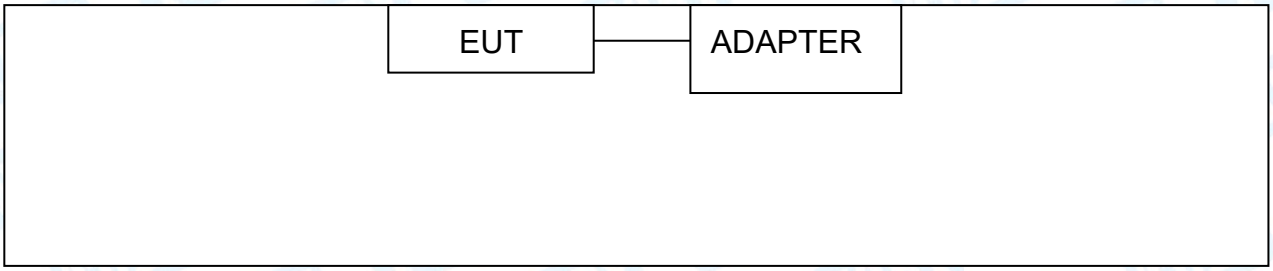
(3)Antenna information provided by the applicant.

(4)Channel List:

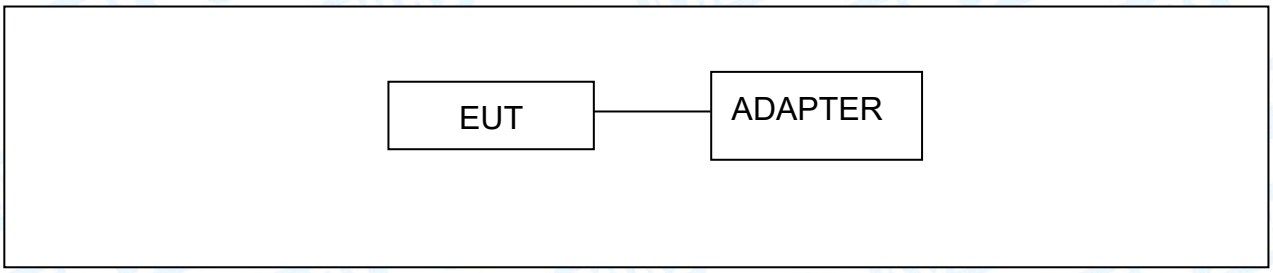
Frequency Band	Channel No.	Frequency	Channel No.	Frequency
5180~5240MHz **(U-NII-1)**	36	5180 MHz	44	5220 MHz
	38	5190 MHz	46	5230 MHz
	40	5200 MHz	48	5240 MHz
	42	5210 MHz		
For 20 MHz Bandwidth, use channel 36, 40, 44, 48. For 40 MHz Bandwidth, use channel 38, 46. For 80 MHz Bandwidth, use channel 42.				
Frequency Band	**Channel No.**	**Frequency**	**Channel No.**	**Frequency**
5260~5320 MHz **(U-NII-2A)**	52	5260 MHz	60	5300 MHz
	54	5270 MHz	62	5310MHz
	56	5280MHz	64	5320 MHz
	58	5290MHz		
For 20 MHz Bandwidth, use channel 52, 56, 60, 64. For 40 MHz Bandwidth, use channel 54, 62. For 80 MHz Bandwidth, use channel 58.				
Frequency Band	**Channel No.**	**Frequency**	**Channel No.**	**Frequency**
5745~5825MHz **(U-NII-3)**	149	5745 MHz	157	5785 MHz
	151	5755 MHz	159	5795 MHz
	153	5765 MHz	161	5805 MHz
	155	5775 MHz	165	5825 MHz
For 20 MHz Bandwidth, use channel 149, 153, 157, 161, 165. For 40 MHz Bandwidth, use channel 151, 159. For 80 MHz Bandwidth, use channel 155.				

1.3 Block Diagram Showing the Configuration of System Tested

Conducted Test



Radiated Test



1.4 Description of Support Units

Equipment Information				
Name	**Model**	**FCC ID/SDOC**	**Manufacturer**	**Used "√"**
Adapter	----	----	HUAWEI	√
Cable Information				
Number	**Shielded Type**	**Ferrite Core**	**Length**	**Note**
Cable 1	----	----	-----	Accessory
Remark: The adapter is provided by the Lab.				

1.5 Description of Test Mode

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned follow was evaluated respectively.

For Conducted Test		
Final Test Mode		**Description**
Mode 1		TX a Mode(5180MHz)
For Radiated Test Below 1GHz		
Final Test Mode		**Description**
Mode 2		TX a Mode(5180MHz)
For Radiated Above 1GHz and RF Conducted Test		
Test Band	**Final Test Mode**	**Description**
U-NII-1	Mode 1	TX Mode 802.11a Mode Channel 36/40/48
	Mode 2	TX Mode 802.11n(HT20) Mode Channel 36/40/48
	Mode 3	TX Mode 802.11ac(VHT20) Mode Channel 36/40/48
	Mode 4	TX Mode 802.11n(HT40) Mode Channel 38/46
	Mode 5	TX Mode 802.11ac(VHT40) Mode Channel 38/46
	Mode 6	TX Mode 802.11ac(VHT80) Mode Channel 42
U-NII-2A	Mode 7	TX Mode 802.11a Mode Channel 52/56/64
	Mode 8	TX Mode 802.11n(HT20) Mode Channel 52/56/64
	Mode 9	TX Mode 802.11ac(VHT20) Mode Channel 52/56/64
	Mode 10	TX Mode 802.11n(HT40) Mode Channel 54/62
	Mode 11	TX Mode 802.11ac(VHT40) Mode Channel 54/62
	Mode 12	TX Mode 802.11ac(VHT80) Mode Channel 58
U-NII-3	Mode 13	TX Mode 802.11a Mode Channel 149/157/165
	Mode 14	TX Mode 802.11n(HT20) Mode Channel 149/157/165
	Mode 15	TX Mode 802.11ac(vHT20) Mode Channel 149/157/165
	Mode 16	TX Mode 802.11n(HT40) Mode Channel 151/159
	Mode 17	TX Mode 802.11ac(VHT40) Mode Channel 151/159
	Mode 18	TX Mode 802.11ac(VHT80) Mode Channel 155

Note:

(1) For all test, we have verified the construction and function in typical operation. And all the test modes were carried out with the EUT in transmitting operation in maximum power with all kinds of data rate.

According to ANSI C63.10 standards, the measurements are performed at the highest, middle, lowest available channels, and the worst case data rate as follows:

802.11a Mode: OFDM (6 Mbps)

802.11n (HT20) Mode: MCS 0

802.11n (HT40) Mode: MCS 0

802.11ac(VHT20) Mode: MCS 0/ Nss1

802.11ac(VHT40) Mode: MCS 0/ Nss1

802.11ac(VHT80) Mode: MCS 0/ Nss1

(2) During the testing procedure, the continuously transmitting with the maximum power mode was programmed by the customer.

(3) The EUT is considered a portable unit; in normal use it was positioned on X-plane. The worst case was found positioned on X-plane. Therefore only the test data of this X-plane was used for radiated emission measurement test.

1.6 Description of Test Software Setting

During testing channel& Power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of RF setting.

Test Software: *#*#3646633#*#*		
U-NII-1		
Mode	Frequency (MHz)	Parameters
		Ant.1
802.11a	5180	20
	5200	20
	5240	20
802.11n(HT20)	5180	20
	5200	20
	5240	20
802.11ac(VHT20)	5180	20
	5200	20
	5240	20
802.11n(HT40)	5190	20
	5230	20
802.11ac(VHT40)	5190	20
	5230	20
802.11ac(VHT80)	5210	20
U-NII-2A		
Mode	Frequency (MHz)	Parameters
		Ant.1
802.11a	5260	20
	5280	20
	5320	20
802.11n(HT20)	5260	20
	5280	20
	5320	20
802.11ac(VHT20)	5260	20
	5280	20
	5320	20
802.11n(HT40)	5270	20
	5310	20

802.11ac(VHT40)	5270	20
	5310	20
802.11ac(VHT80)	5290	20
U-NII-3		
Mode	Frequency (MHz)	Parameters
		Ant.1
802.11a	5745	20
	5785	20
	5825	20
802.11n(HT20)	5745	20
	5785	20
	5825	20
802.11ac(VHT20)	5745	20
	5785	20
	5825	20
802.11n(HT40)	5755	20
	5795	20
802.11ac(VHT40)	5755	20
	5795	20
802.11ac(VHT80)	5775	20

1.7 Measurement Uncertainty

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

Test Item	Parameters	Expanded Uncertainty (U_{Lab})
Conducted Emission	Level Accuracy: 9kHz~150kHz 150kHz to 30MHz	±3.50 dB ±3.10 dB
Radiated Emission	Level Accuracy: 9kHz to 30 MHz	±4.60 dB
Radiated Emission	Level Accuracy: 30MHz to 1000 MHz	±4.50 dB
Radiated Emission	Level Accuracy: Above 1000MHz	±4.20 dB

1.8 Test Facility

The testing report were performed by the Shenzhen Toby Technology Co., Ltd., in their facilities located at 1/F., Building 6, Rundongsheng Industrial Zone, Longzhu, Xixiang, Bao'an District, Shenzhen, Guangdong, China. At the time of testing, the following bodies accredited the Laboratory:

CNAS (L5813)

The Laboratory has been accredited by CNAS to ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories for the competence in the field of testing. And the Registration No.: CNAS L5813.

A2LA Certificate No.: 4750.01

The laboratory has been accredited by American Association for Laboratory Accreditation(A2LA) to ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories for the technical competence in the field of Electrical Testing. And the A2LA Certificate No.: 4750.01.FCC Accredited Test Site Number: 854351. Designation Number: CN1223.

IC Registration No.: (11950A)

The Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing. The site registration: Site# 11950A. CAB identifier: CN0056

2. Test Summary

Standard Section	Test Item	Test Sample(s)	Judgment	Remark
FCC				
FCC 15.207(a)	Conducted Emission	HC-C-202410-0214-01-02#	PASS	N/A
FCC 15.209 & 15.407(b)	Radiated Unwanted Emissions	HC-C-202410-0214-01-02#	PASS	N/A
FCC 15.203	Antenna Requirement	HC-C-202410-0214-01-01#	PASS	N/A
FCC 15.407(a)	-26dB Emission Bandwidth	HC-C-202410-0214-01-01#	PASS	N/A
FCC 15.407(a)	99% Occupied Bandwidth	HC-C-202410-0214-01-01#	PASS	N/A
FCC 15.407(e)	-6dB Min Emission Bandwidth	HC-C-202410-0214-01-01#	PASS	N/A
FCC 15.407(a)	Maximum Conducted Output Power	HC-C-202410-0214-01-01#	PASS	N/A
FCC 15.407(a)	Power Spectral Density	HC-C-202410-0214-01-01#	PASS	N/A
FCC 15.407(b)& 15.205	Emissions in Restricted Bands	HC-C-202410-0214-01-01#	PASS	N/A
FCC 15.407(b)&15.209	Conducted Unwanted Emissions	HC-C-202410-0214-01-01#	PASS	N/A
FCC 15.407(g)	Frequency Stability	HC-C-202410-0214-01-01#	PASS	N/A
/	On Time and Duty Cycle	HC-C-202410-0214-01-01#	/	N/A

Note: N/A is an abbreviation for Not Applicable.

3. Test Software

Test Item	Test Software	Manufacturer	Version No.
Conducted Emission	EZ-EMC	EZ	CDI-03A2
Radiation Emission	EZ-EMC	EZ	FA-03A2RE
Radiation Emission	EZ-EMC	EZ	FA-03A2RE+
RF Conducted Measurement	MTS-8310	MWRFtest	V2.0.0.0
RF Test System	JS1120	Tonscend	V3.2.22

4. Test Equipment and Test Site

Test Site				
No.	**Test Site**	**Manufacturer**	**Specification**	**Used**
TB-EMCSR001	Shielding Chamber #1	YIHENG	7.5*4.0*3.0 (m)	√
TB-EMCSR002	Shielding Chamber #2	YIHENG	8.0*4.0*3.0 (m)	√
TB-EMCCA001	3m Anechoic Chamber #A	ETS	9.0*6.0*6.0 (m)	×
TB-EMCCB002	3m Anechoic Chamber #B	YIHENG	9.0*6.0*6.0 (m)	√

Conducted Emission Test					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Cal. Due Date**
EMI Test Receiver	Rohde & Schwarz	ESCI	100321	Jun. 17, 2024	Jun. 16, 2025
RF Switching Unit	Compliance Direction Systems Inc	RSU-A4	34403	Jun. 17, 2024	Jun. 16, 2025
AMN	SCHWARZBECK	NNBL 8226-2	8226-2/164	Jun. 17, 2024	Jun. 16, 2025
LISN	Rohde & Schwarz	ENV216	101131	Jun. 17, 2024	Jun. 16, 2025
ISN	SCHWARZBECK	NTFM 8131	8131-193	Jun. 17, 2024	Jun. 16, 2025
ISN	SCHWARZBECK	CAT3 8158	cat3 5158-0094	Jun. 17, 2024	Jun. 16, 2025
ISN	SCHWARZBECK	NTFM5158	NTFM5158 0145	Jun. 17, 2024	Jun. 16, 2025
ISN	SCHWARZBECK	CAT 8158	cat5 8158-179	Jun. 17, 2024	Jun. 16, 2025
Radiation Emission Test (B Site)					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Cal. Due Date**
Spectrum Analyzer	Agilent	N9020A	MY49100060	Aug. 29, 2024	Aug. 28, 2025
Spectrum Analyzer	Rohde & Schwarz	FSV40-N	102197	Jun. 17, 2024	Jun. 16, 2025
EMI Test Receiver	Rohde & Schwarz	ESU-8	100472/008	Feb. 23, 2024	Feb.22, 2025
Bilog Antenna	SCHWARZBECK	VULB 9168	1225	Nov. 13, 2023	Nov. 12, 2025
Horn Antenna	SCHWARZBECK	BBHA 9120 D	2463	Jun. 14, 2024	Jun. 13, 2026
Horn Antenna	SCHWARZBECK	BBHA 9170	1118	Feb. 27, 2024	Feb.26, 2026
Loop Antenna	SCHWARZBECK	FMZB 1519 B	1519B-059	Jun. 14, 2024	Jun. 13, 2026
HF Amplifier	Tonscend	TAP9E6343	AP21C806117	Aug. 29, 2024	Aug. 28, 2025
HF Amplifier	Tonscend	TAP051845	AP21C806141	Aug. 29, 2024	Aug. 28, 2025
HF Amplifier	Tonscend	TAP0184050	AP21C806129	Aug. 29, 2024	Aug. 28, 2025
Highpass Filter	CD	HPM-6.4/18G	---	N/A	N/A
Highpass Filter	CD	HPM-2.8/18G	---	N/A	N/A
Highpass Filter	XINBO	XBLBQ-HTA67(8-25G)	22052702-1	N/A	N/A

Antenna Conducted Emission					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Last Cal.**	**Cal. Due Date**
Spectrum Analyzer	Rohde & Schwarz	FSV40-N	102197	Jun. 17, 2024	Jun. 16, 2025
MXA Signal Analyzer	KEYSIGHT	N9020B	MY60110172	Aug. 29, 2024	Aug. 28, 2025
MXA Signal Analyzer	Agilent	N9020A	MY47380425	Aug. 29, 2024	Aug. 28, 2025
Vector Signal Generator	Agilent	N5182A	MY50141294	Aug. 29, 2024	Aug. 28, 2025
Analog Signal Generator	Agilent	N5181A	MY48180463	Aug. 29, 2024	Aug. 28, 2025
Vector Signal Generator	KEYSIGHT	N5182B	MY59101429	Aug. 29, 2024	Aug. 28, 2025
Analog Signal Generator	KEYSIGHT	N5173B	MY61252685	Aug. 29, 2024	Aug. 28, 2025
RF Power Sensor	DARE!! Instruments	RadiPowerRPR3006W	17I00015SNO26	Aug. 29, 2024	Aug. 28, 2025
	DARE!! Instruments	RadiPowerRPR3006W	17I00015SNO29	Aug. 29, 2024	Aug. 28, 2025
	DARE!! Instruments	RadiPowerRPR3006W	17I00015SNO31	Aug. 29, 2024	Aug. 28, 2025
	DARE!! Instruments	RadiPowerRPR3006W	17I00015SNO33	Aug. 29, 2024	Aug. 28, 2025
RF Control Unit	Tonsced	JS0806-1	21C8060380	N/A	N/A
RF Control Unit	Tonsced	JS0806-2	21F8060439	Aug. 29, 2024	Aug. 28, 2025
Power Control Box	Tonsced	JS0806-4ADC	21C8060387	N/A	N/A
Wideband Radio Comunication Tester	Rohde & Schwarz	CMW500	144382	Aug. 29, 2024	Aug. 28, 2025
Universal Radio Communication Tester	Rohde&Schwarz	CMW500	168796	Feb. 23, 2024	Feb.22, 2025
Temperature and Humidity Chamber	ZhengHang	ZH-QTH-1500	ZH2107264	Jun. 14, 2024	Jun. 13, 2026

5. Conducted Emission Test

5.1 Test Standard and Limit

5.1.1 Test Standard

FCC Part 15.207

5.1.2 Test Limit

Frequency	Maximum RF Line Voltage (dBμV)	
	Quasi-peak Level	Average Level
150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
500kHz~5MHz	56	46
5MHz~30MHz	60	50

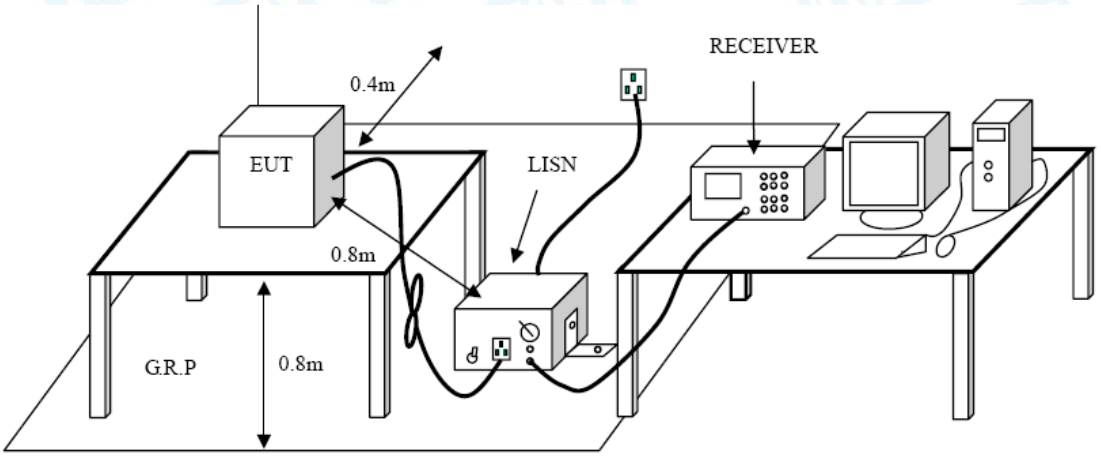
Notes:

(1) *Decreasing linearly with logarithm of the frequency.

(2) The lower limit shall apply at the transition frequencies.

(3) The limit decrease in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

5.2 Test Setup



5.3 Test Procedure

● The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.

● Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

● I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

● LISN at least 80 cm from nearest part of EUT chassis.

●The bandwidth of EMI test receiver is set at 9 kHz, and the test frequency band is from 0.15MHz to 30MHz.

5.4 Deviation From Test Standard

No deviation

5.5 EUT Operating Mode

Please refer to the description of test mode.

5.6 Test Data

Please refer to the Attachment A inside test report.

6. Radiated and Conducted Unwanted Emissions

6.1 Test Standard and Limit

6.1.1 Test Standard

FCC Part 15.209 & FCC Part 15.407(b)

6.1.2 Test Limit

General field strength limits at frequencies Below 30MHz		
Frequency (MHz)	**Field Strength (microvolt/meter)**	**Measurement Distance (meters)**
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
Note: 1, The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.		

General field strength limits at frequencies above 30 MHz		
Frequency (MHz)	**Field strength (μV/m at 3 m)**	**Measurement Distance (meters)**
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

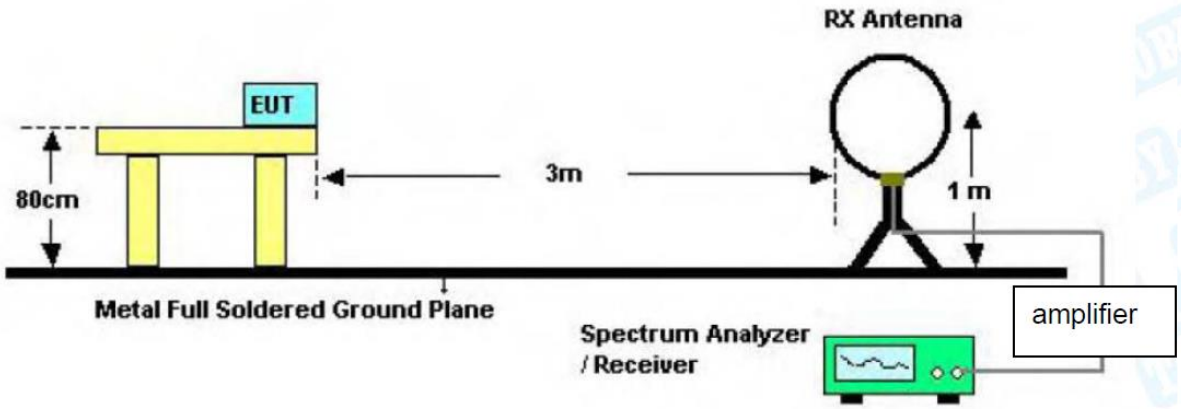
General field strength limits at frequencies Above 1000MHz		
Frequency (MHz)	**Distance of 3m (dBuV/m)**	
	Peak	**Average**
Above 1000	74	54
Note: (1) The tighter limit applies at the band edges. (2) Emission Level(dBuV/m)=20log Emission Level(uV/m)		

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power

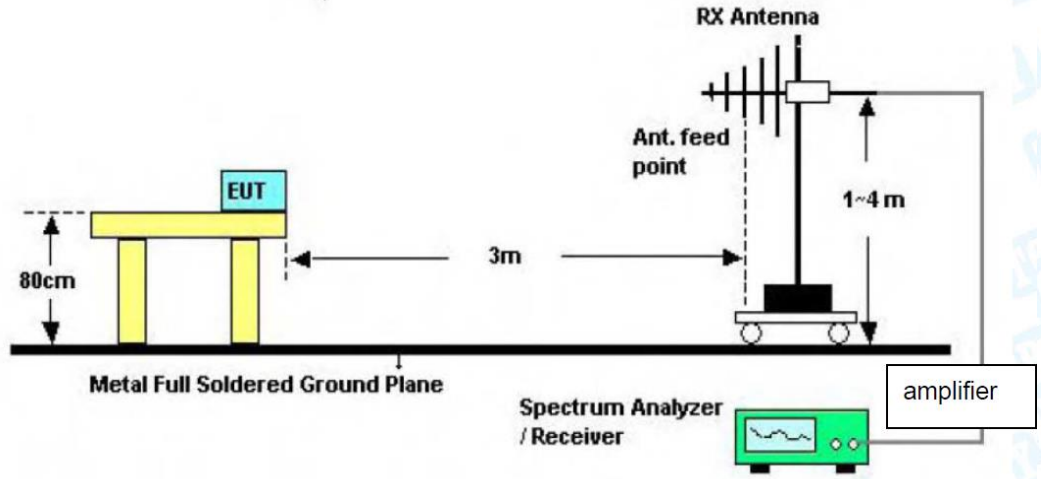
limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under section 5.4(d), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

6.2 Test Setup

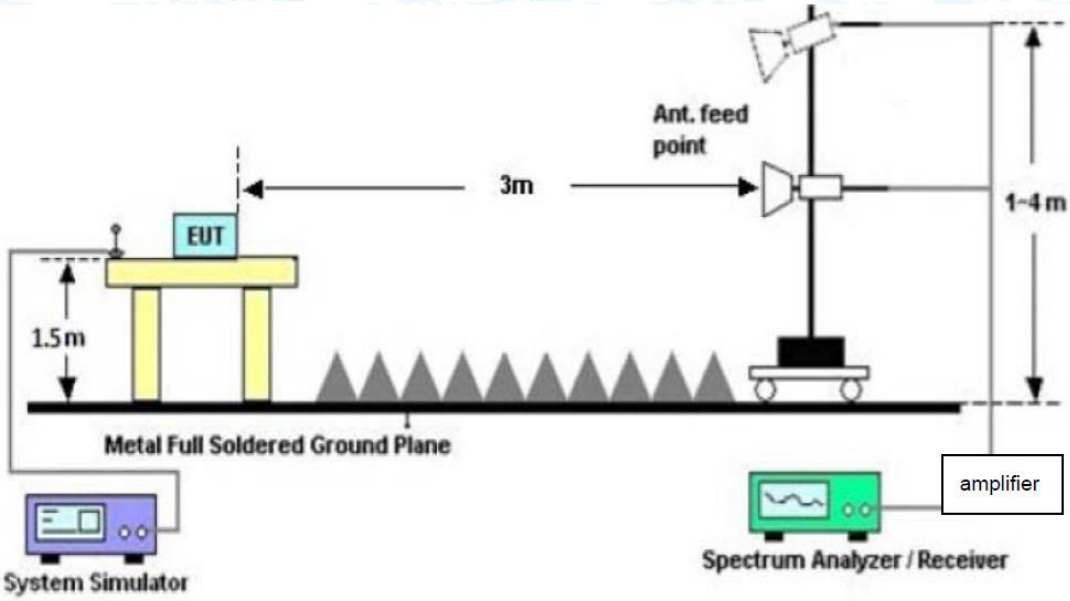
Radiated measurement



Below 30MHz Test Setup

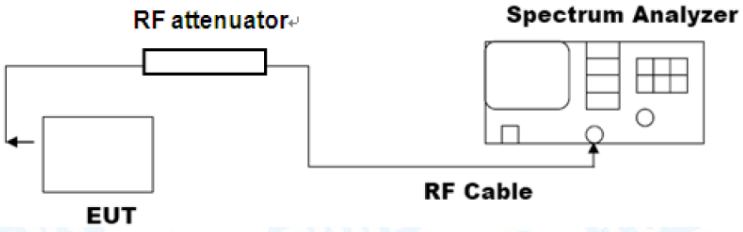


Below 1000MHz Test Setup



Above 1GHz Test Setup

Conducted measurement



6.3 Test Procedure

---Radiated measurement

●The measuring distance of 3m shall be used for measurements at frequency up to 1GHz and above 1 GHz. The EUT was placed on a rotating 0.8m high above ground, the table was rotated 360 degrees to determine the position of the highest radiation.

● Measurements at frequency above 1GHz. The EUT was placed on a rotating 1.5m high above the ground. RF absorbers covered the ground plane with a minimum area of 3.0m by 3.0m between the EUT and measurement receiver antenna. The RF absorber shall not exceed 30cm in high above the conducting floor. The table was rotated 360 degrees to determine the position of the highest radiation.

● The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set to make measurement.

●The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.

●If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit Below 1 GHz, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed. But the Peak Value and average value both need to comply with applicable limit above 1 GHz.

●Testing frequency range 30MHz-1GHz the measuring instrument use VBW=120 kHz with Quasi-peak detection. Testing frequency range 9KHz-150Hz the measuring instrument use VBW=200Hz with Quasi-peak detection. Testing frequency range 9KHz-30MHz the measuring instrument use VBW=9kHz with Quasi-peak detection.

●Testing frequency range above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.

●For the actual test configuration, please see the test setup photo.

--- Conducted measurement

●Reference level measurement

Establish a reference level by using the following procedure:

a) Set instrument center frequency to DTS channel center frequency.

b) Set the span to≥1.5 times the DTS bandwidth.

c) Set the RBW = 100 kHz.

d) Set the VBW≥[3*RBW].

e) Detector = peak.

f) Sweep time = auto couple.

g) Trace mode = max hold.

h) Allow trace to fully stabilize.

i) Use the peak marker function to determine the maximum PSD level.

Note that the channel found to contain the maximum PSD level can be used to establish the reference level.

●Emission level measurement

Establish an emission level by using the following procedure:

a) Set the center frequency and span to encompass frequency range to be measured.

b) Set the RBW = 100 kHz.

c) Set the VBW≥[3*RBW].

d) Detector = peak.

e) Sweep time = auto couple.

f) Trace mode = max hold.

g) Allow trace to fully stabilize.

h) Use the peak marker function to determine the maximum amplitude level.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11. Report the three highest emissions relative to the limit.

6.4 Deviation From Test Standard

No deviation

6.5 EUT Operating Mode

Please refer to the description of test mode.

6.6 Test Data

Radiated measurement please refer to the Attachment B inside test report.

Conducted measurement please refer to the Appendix D.

7. Restricted Bands Requirement

7.1 Test Standard and Limit

7.1.1 Test Standard

FCC Part 15.205 & FCC Part 15.407(b)

7.1.2 Test Limit

Frequency (MHz)	EIRP Limits (dBm)	Equivalent Field Strength at 3m (dBuV/m)
5150~5250	-27	68.3
5250~5350	-27	68.3
5470~5725	-27	68.3
5725~5825	-27(Note 2)	68.3
	10(Note 2)	105.3
	15.6(Note 2)	110.9
	27(Note 2)	122.3

NOTE:

1, The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

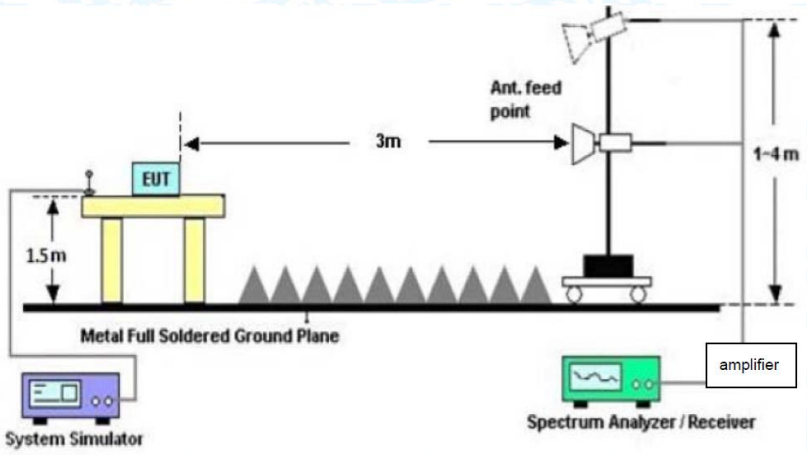
$E=\frac{1000000\sqrt{30P}}{3}$ uV/m, where P is the eirp (Watts)

2, According to FCC 16-24,All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27dBm/MHz at the band edge.

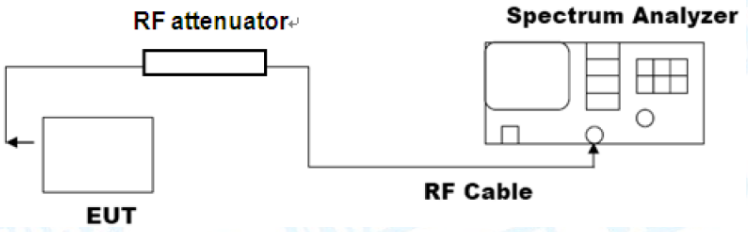
Note: According the ANSI C63.10 11.12.2 antenna-port conducted measurements may also be used as an alternative to radiated measurements for determining compliance in the restricted frequency bands requirements. If conducted measurements are performed, then proper impedance matching must be ensured and an additional radiated test forcabinet/case emissions is required.

7.2 Test Setup

Radiated measurement



Conducted measurement



7.3 Test Procedure

---Radiated measurement

● Measurements at frequency above 1GHz. The EUT was placed on a rotating 1.5m high above the ground. RF absorbers covered the ground plane with a minimum area of 3.0m by 3.0m between the EUT and measurement receiver antenna. The RF absorber shall not exceed 30cm in high above the conducting floor. The table was rotated 360 degrees to determine the position of the highest radiation.

● The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set to make measurement.

●The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.

●The Peak Value and average value both need to comply with applicable limit above 1 GHz.

●Testing frequency range above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.

●For the actual test configuration, please see the test setup photo.

--- Conducted measurement

a) Measure the conducted output power (in dBm) using the detector specified by the appropriate regulatory agency (see 11.12.2.3 through 11.12.2.5 for guidance regarding measurement procedures for determining quasi-peak, peak, and average conducted output power, respectively).

b) Add the maximum transmit antenna gain (in dBi) to the measured output power level to

determine the EIRP (see 11.12.2.6 for guidance on determining the applicable antenna gain).

c) Add the appropriate maximum ground reflection factor to the EIRP (6 dB for frequencies

≤30 MHz; 4.7 dB for frequencies between 30 MHz and 1000 MHz, inclusive; and 0 dB for

frequencies > 1000 MHz).

d) For MIMO devices, measure the power of each chain and sum the EIRP of all chains in linear terms (i.e., watts and mW).

e) Convert the resultant EIRP to an equivalent electric field strength using the following relationship:

$$E = \text{EIRP} - 20 \log d + 104.8$$

where

E is the electric field strength in dBuV/m

EIRP is the equivalent isotropically radiated power in dBm

d is the specified measurement distance in m

f) Compare the resultant electric field strength level with the applicable regulatory limit.

g) Perform the radiated spurious emission test.

7.4 Deviation From Test Standard

No deviation

7.5 EUT Operating Mode

Please refer to the description of test mode.

7.6 Test Data

Remark: The test uses antenna-port conducted measurements as an alternative to radiated measurements for determining compliance in the restricted frequency bands requirements.

Please refer to the Appendix D.

8. Bandwidth Test

8.1 Test Standard and Limit

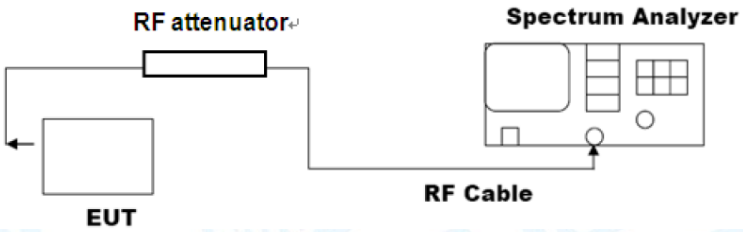
8.1.1 Test Standard

FCC Part 15.407(a) & FCC Part 15.407(e)

8.1.2 Test Limit

Test Item	Limit	Frequency Range (MHz)
26 Bandwidth	N/A	5150~5250
		5250~5350
		5500~5725
6 dB Bandwidth	>500kHz	5725~5850
99% Bandwidth	N/A	5150~5250
		5250~5350
		5500~5725
		5725~5850

8.2 Test Setup



8.3 Test Procedure

---Emission bandwidth

●The procedure for this method is as follows:

a) Set RBW = approximately 1% of the emission bandwidth.

b) Set the VBW > RBW.

c) Detector = peak.

d) Trace mode = max hold.

e) Measure the maximum width of the emission that is 26 dB down from the peak of the emission.

Compare this with the RBW setting of the instrument. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

NOTE—The automatic bandwidth measurement capability of a spectrum analyzer or an EMI receiver may be employed if it implements the functionality described in the preceding items.

---DTS bandwidth

●The steps for the first option are as follows:

a) Set RBW = 100 kHz.

b) Set the VBW≥[3*RBW].

c) Detector = peak.

d) Trace mode = max hold.

e) Sweep = auto couple.

f) Allow the trace to stabilize.

g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

---occupied bandwidth

●The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. The following procedure shall be used for measuring 99% power bandwidth:

a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.

b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.

c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2.

d) Step a) through step c) might require iteration to adjust within the specified range.

e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.

f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.

g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum

until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.

h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

8.4 Deviation From Test Standard

No deviation

8.5 EUT Operating Mode

Please refer to the description of test mode.

8.6 Test Data

Please refer to the Appendix D.

9. Maximum Conducted Output Power

9.1 Test Standard and Limit

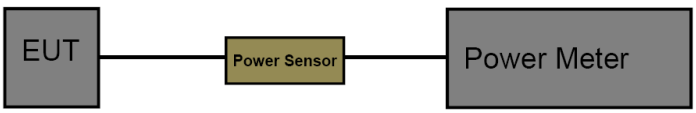
9.1.1 Test Standard

FCC Part 15.407(a)

9.1.2 Test Limit

<table>
<tr><th colspan="5">FCC Part 15 Subpart E(15.407)</th></tr>
<tr><th rowspan="2">Limit</th><th colspan="4">Frequency Range(MHz)</th></tr>
<tr><th>5150~5250</th><th colspan="2">5250~5350</th><th>5725~5850</th></tr>
<tr><td>Max Conducted TX Power</td><td>Master Device: 1 Watt(30dBm) Client Device: 250mW(24dBm)</td><td colspan="2">24dBm (250 mW) or 11 dBm+ 10 log B, whichever is lower (B= 26-dB emission BW)</td><td>1 Watt (30dBm)</td></tr>
<tr><td rowspan="3">Max E.I.R.P</td><td>4 W (36 dBm) with 6 dBi antenna</td><td colspan="2" rowspan="3">1 W (30 dBm) with 6 dBi antenna</td><td rowspan="3">4 W (36 dBm) with 6 dBi antenna</td></tr>
<tr><td>200 W (53 dBm) for fixed P-t-P application with 23 dBiantenna</td></tr>
<tr><td>Additional rule for outdoor operation: Max_EIRP< 125 mW(21 dBm) at any elevation angle > 30°from horizon</td></tr>
<tr><td rowspan="2">TPC</td><td rowspan="2">NO</td><td colspan="2">YES, if Max_EIRP ≥ 500 mW (27 dBm) and able to lower EIRP below 24dBm</td><td rowspan="2">NO</td></tr>
<tr><td colspan="2">NO, if Max_EIRP < 500mW (27dBm)</td></tr>
</table>

9.2 Test Setup



9.3 Test Procedure

●The EUT was connected to RF power meter via a broadband power sensor as show the block above. The power sensor video bandwidth is greater than or equal to the DTS bandwidth of the equipment.

9.4 Deviation From Test Standard

No deviation

9.5 EUT Operating Mode

Please refer to the description of test mode.

9.6 Test Data

Please refer to the Appendix D.

10. Power Spectral Density Test

10.1 Test Standard and Limit

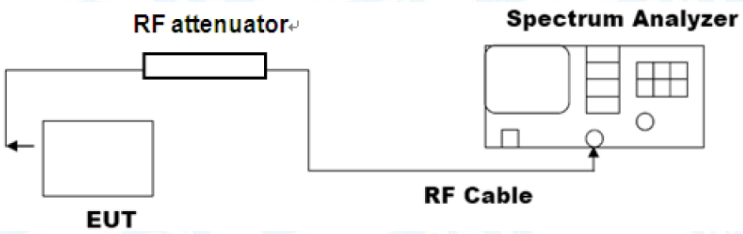
10.1.1 Test Standard

FCC Part 15.407(a)

10.1.2 Test Limit

Test Item	Limit	Frequency Range(MHz)
Power Spectral Density	Master Device: 17dBm/MHz Client Device: 11dBm/MHz	5150~5250
	11dBm/MHz	5250~5350
	11dBm/MHz	5500~5725
	30dBm/500kHz	5725~5850

10.2 Test Setup



10.3 Test Procedure

●Notwithstanding that some regulatory requirements refer to peak power spectral density (PPSD), in some cases the intent is to measure the maximum value of the time average of the power spectral density during a period of continuous transmission. The procedure for this method is as follows:

a) Create an average power spectrum for the EUT operating mode being tested by following the instructions in 12.3.2 for measuring maximum conducted output power using a spectrum analyzer or EMI receiver; that is, select the appropriate test method (SA-1, SA-2, SA-3, or their respective alternatives) and apply it up to, but not including, the step labeled, "Compute power…."(This procedure is required even if the maximum conducted output power measurement was performed using the power meter method PM.)

b) Use the peak search function on the instrument to find the peak of the spectrum.

c) Make the following adjustments to the peak value of the spectrum, if applicable:

1) If method SA-2 or SA-2A was used, then add [10 log (1 / D)], where D is the duty cycle, to the peak of the spectrum.

2) If method SA-3A was used and the linear mode was used in step h) of 12.3.2.7, add 1 dB to the final result to compensate for the difference between linear averaging and power averaging.

d) The result is the PPSD.

e) The procedure in item a) through item c) requires the use of 1 MHz resolution bandwidth to satisfy the 1 MHz measurement bandwidth specified by some regulatory authorities.95 This requirement also permits use of resolution bandwidths less than 1 MHz"provided that the measured power is integrated to show the total power over the measurement bandwidth"(i.e., 1 MHz). If measurements are performed using a reduced resolution bandwidth and integrated over 1 MHz bandwidth, the following adjustments to the procedures apply:

1) Set RBW≥1 / T, where T is defined in 12.2 a).

2) Set VBW ≥ [3*RBW].

3) Care shall be taken such that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

10.4 Deviation From Test Standard

No deviation

10.5 Antenna Connected Construction

Please refer to the description of test mode.

10.6 Test Data

Please refer to the Appendix D.

11. Frequency Stability

11.1 Test Standard and Limit

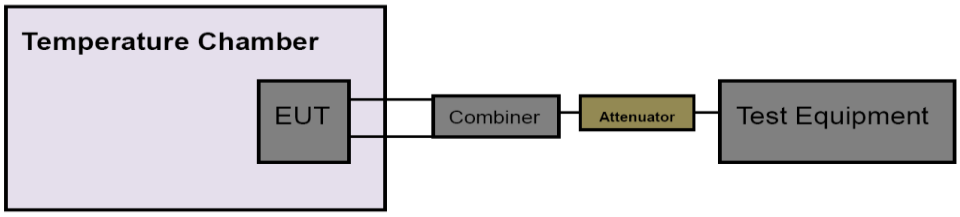
11.1.1 Test Standard

FCC Part 15.407(g)

11.1.2 Test Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

11.2 Test Setup



11.3 Test Procedure

●Determining compliance with the peak excursion requirement shall be done by confirming that the ratio of the maximum of the peak-max-hold spectrum to the maximum of the average spectrum for continuous transmission does not exceed the regulatory requirement.[96] The procedure for this method is as follows:

a) The following guidance for limiting the number of tests applies only to peak excursion measurements:

1) Testing each modulation mode on a single channel in a single operating band is sufficient to determine compliance with the peak excursion requirement. (If all modulation modes are not available on a single channel in a single band, then testing must be extended to other channels and bands as needed to ensure that all modulation modes are tested.)

2) Tests must include all variations in signal structure, such as:

i) All signal types [e.g., direct sequence spread spectrum (DSSS) and OFDM].

ii) All modulation types [e.g., binary phase-shift keying (BPSK), quadrature phase-shift keying (QPSK), 16-QAM, 64-QAM, and 256-QAM].

iii) All bandwidth modes.

iv) All variations in signal parameters (e.g., changes in subcarrier spacing or number of subcarriers).

3) For a given signal structure, testing of multiple error-correction coding rates is not required (e.g., 1/2, 2/3, and 3/4).

4) For MIMO devices, testing of a single output port is sufficient to determine compliance with the peak excursion requirement. If a given signal structure can be exercised with various combinations of spatial multiplexing (such as different numbers of spatial streams), beamforming, and cyclic delay diversity, peak excursion tests are not required to include those variations.

b) The procedure is as follows:

1) Set the span of the spectrum analyzer or EMI receiver to view the entire emission bandwidth or occupied bandwidth.

2) Find the maximum of the peak-max-hold spectrum:

i) Set RBW = 1 MHz.

ii) VBW □ 3 MHz.

iii) Detector = peak.

iv) Trace mode = max-hold.

v) Allow the sweeps to continue until the trace stabilizes.

vi) Use the peak search function to find the peak of the spectrum.

3) Use the procedure found in 12.5 to measure the PPSD.

4) Compute the ratio of the maximum of the peak-max-hold spectrum to the PPSD.

11.4 Deviation From Test Standard

No deviation

11.5 Antenna Connected Construction

Please refer to the description of test mode.

11.6 Test Data

Please refer to the Appendix D.

12. Antenna Requirement

12.1 Test Standard and Limit

12.1.1 Test Standard

FCC Part 15.203

12.1.2 Requirement

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

12.2 Deviation From Test Standard

No deviation

12.3 Antenna Connected Construction

The gains of the antenna used for transmitting is Please refer to page 6, and the antenna de-signed with permanent attachment and no consideration of replacement. Please see the EUT photo for details.

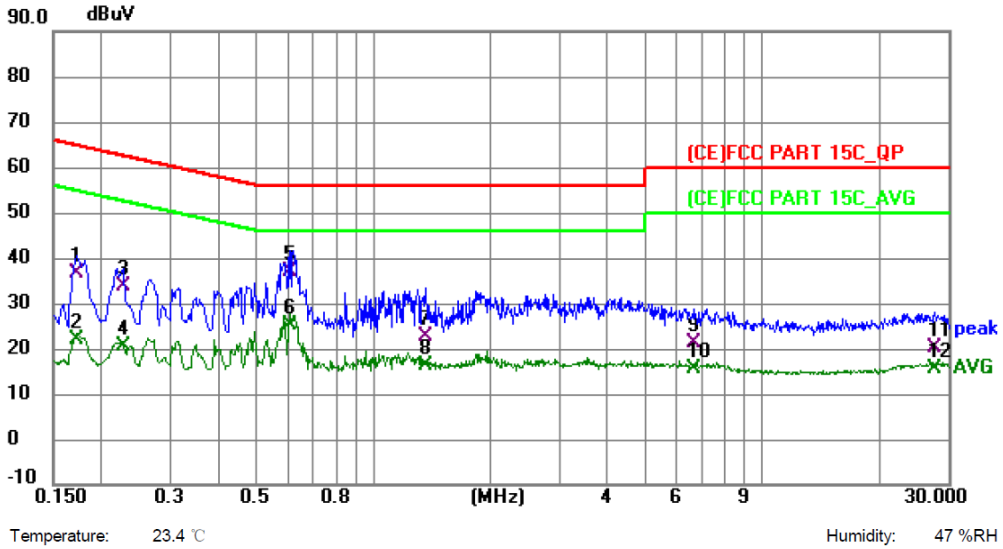
12.4 Test Data

The EUT antenna is a FPC Antenna. It complies with the standard requirement.

Antenna Type
☒Permanent attached antenna
☐Unique connector antenna
☐Professional installation antenna

Attachment A-- Conducted Emission Test Data

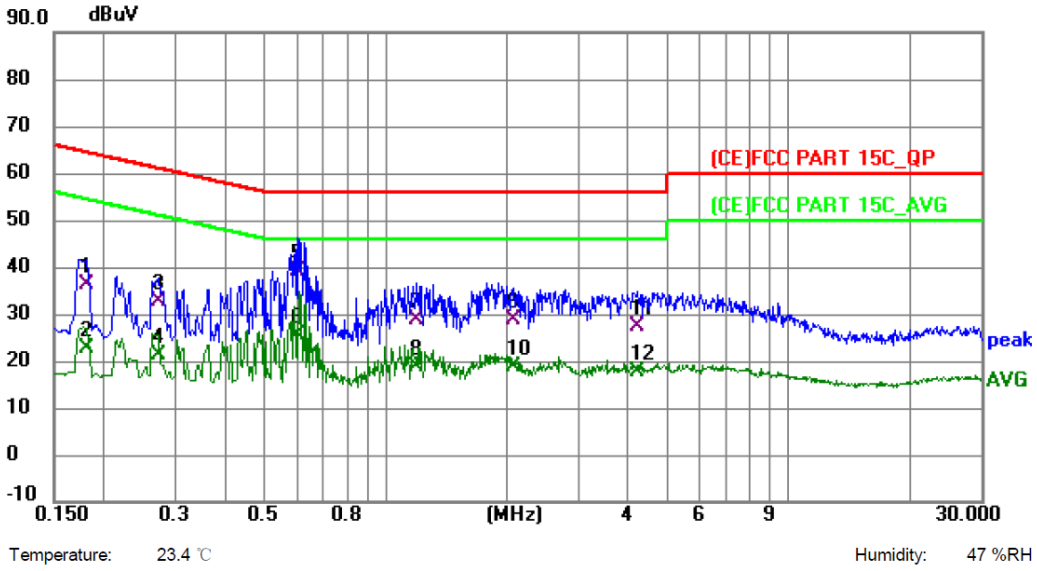
Test Voltage:	AC 120V/60Hz
Terminal:	Line
Test Mode:	Mode 1
Remark:	Only worse case is reported.



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.172	27.09	9.55	36.64	64.86	-28.22	QP
2		0.172	12.33	9.55	21.88	54.86	-32.98	AVG
3		0.227	24.23	9.51	33.74	62.56	-28.82	QP
4		0.227	11.19	9.51	20.70	52.56	-31.86	AVG
5	*	0.609	27.59	9.47	37.06	56.00	-18.94	QP
6		0.609	15.69	9.47	25.16	46.00	-20.84	AVG
7		1.361	13.12	9.63	22.75	56.00	-33.25	QP
8		1.361	6.72	9.63	16.35	46.00	-29.65	AVG
9		6.630	11.52	9.65	21.17	60.00	-38.83	QP
10		6.630	5.91	9.65	15.56	50.00	-34.44	AVG
11		27.820	9.84	10.35	20.19	60.00	-39.81	QP
12		27.820	5.02	10.35	15.37	50.00	-34.63	AVG

Remark:
1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) =QuasiPeak/Average (dBuV)-Limit (dBuV)

Test Voltage:	AC 120V/60Hz
Terminal:	Neutral
Test Mode:	Mode 1
Remark:	Only worse case is reported.



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.181	26.87	9.52	36.39	64.44	-28.05	QP
2		0.181	13.01	9.52	22.53	54.44	-31.91	AVG
3		0.272	23.39	9.46	32.85	61.06	-28.21	QP
4		0.272	11.80	9.46	21.26	51.06	-29.80	AVG
5	*	0.600	29.66	9.48	39.14	56.00	-16.86	QP
6		0.600	15.89	9.48	25.37	46.00	-20.63	AVG
7		1.194	19.34	9.48	28.82	56.00	-27.18	QP
8		1.194	9.21	9.48	18.69	46.00	-27.31	AVG
9		2.085	19.23	9.51	28.74	56.00	-27.26	QP
10		2.085	9.09	9.51	18.60	46.00	-27.40	AVG
11		4.223	17.87	9.51	27.38	56.00	-28.62	QP
12		4.223	8.22	9.51	17.73	46.00	-28.27	AVG

Remark:
1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) =QuasiPeak/Average (dBuV)-Limit (dBuV)

Attachment B-- Unwanted Emissions Data

---Radiated Unwanted Emissions

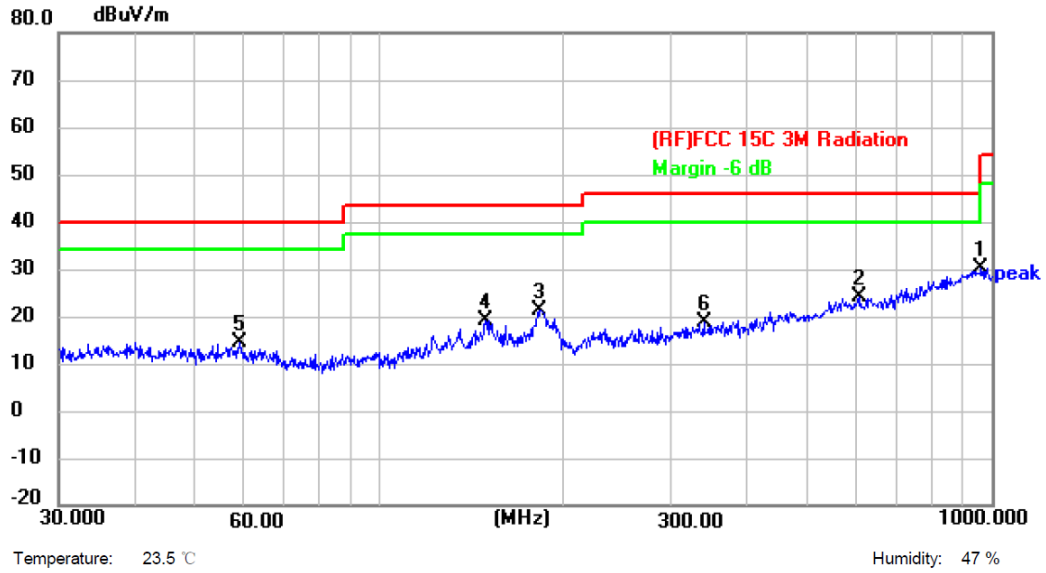
9 KHz~30 MHz

From 9 KHz to 30 MHz: Conclusion: PASS

Note: The amplitude of spurious emissions which are attenuated by more than 20dB Below the permissible value has no need to be reported.

30MHz~1GHz

Temperature:	23.5℃	**Relative Humidity:**	47%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	Mode 2 TX a Mode(5180MHz)		
Remark:	Only worse case is reported.		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	962.1622	37.69	-7.39	30.30	54.00	-23.70	peak
2 *	607.7867	37.63	-13.67	23.96	46.00	-22.04	peak
3	183.2005	44.99	-23.65	21.34	43.50	-22.16	peak
4	149.4857	40.16	-21.05	19.11	43.50	-24.39	peak
5	59.2324	38.54	-24.08	14.46	40.00	-25.54	peak
6	339.5887	39.22	-20.44	18.78	46.00	-27.22	peak

*:Maximum data x:Over limit !:over margin

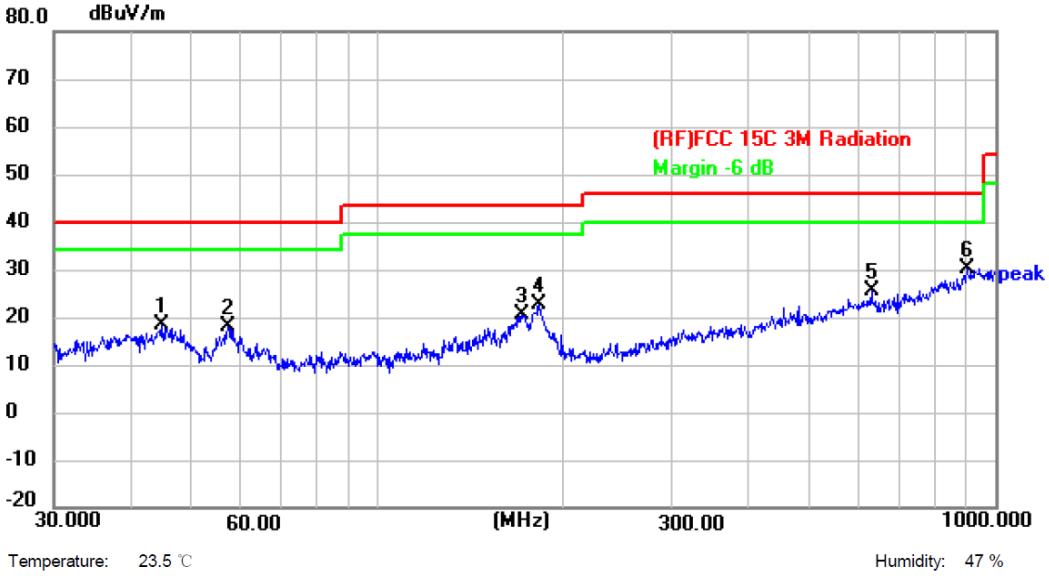
Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. QuasiPeak (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = QuasiPeak (dBμV/m)-Limit QPK(dBμV/m)

Temperature:	23.5℃	Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	Mode 2 TX a Mode(5180MHz)		
Remark:	Only worse case is reported.		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	44.9006	42.11	-23.75	18.36	40.00	-21.64	peak
2	57.3923	42.14	-24.16	17.98	40.00	-22.02	peak
3	171.3925	43.31	-22.63	20.68	43.50	-22.82	peak
4	182.5592	46.48	-23.73	22.75	43.50	-20.75	peak
5	631.6883	38.91	-13.30	25.61	46.00	-20.39	peak
6 *	900.1474	37.55	-7.46	30.09	46.00	-15.91	peak

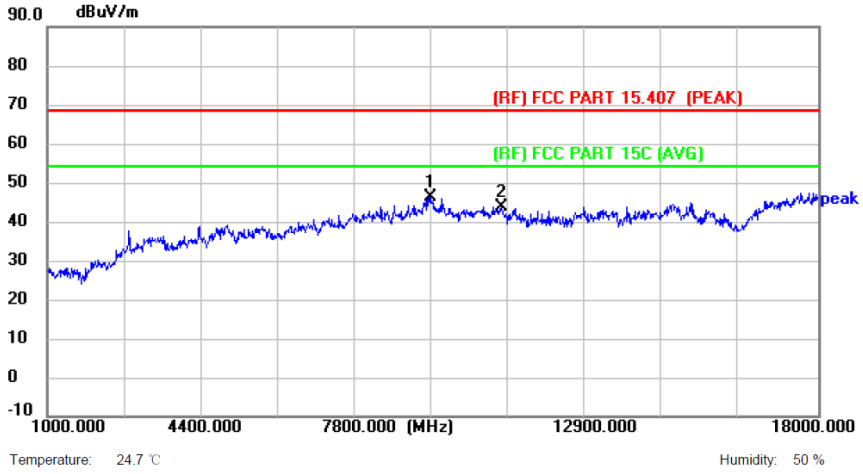
*:Maximum data x:Over limit !:over margin

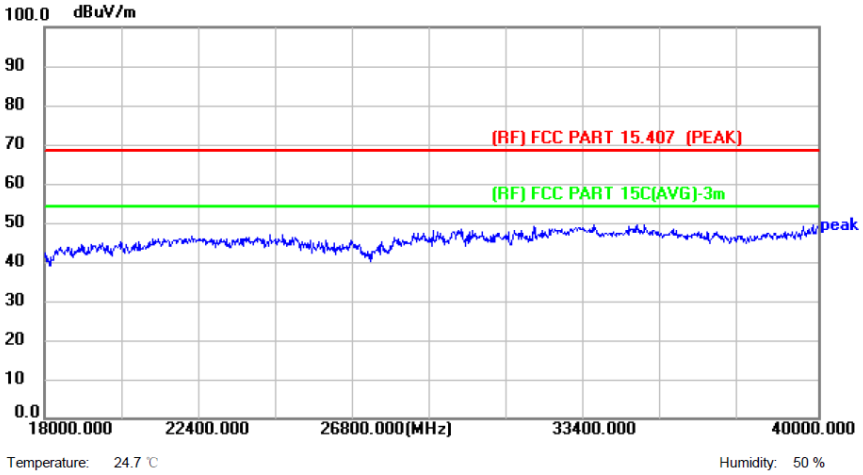
Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. QuasiPeak (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = QuasiPeak (dBμV/m)-Limit QPK(dBμV/m)

Above 1GHz

5180MHz-5240MHz(U-NII-1)

Test Voltage:	DC 3.87V
Ant. Pol.	Horizontal
Test Mode:	TX 802.11a Mode 5180MHz (U-NII-1)





No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	9466.000	45.88	0.35	46.23	68.30	-22.07	peak
2	11030.000	44.06	-0.30	43.76	68.30	-24.54	peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

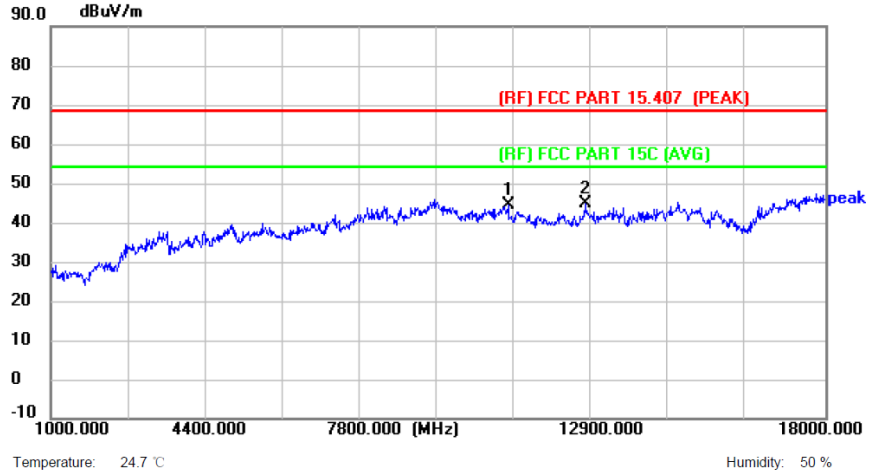
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

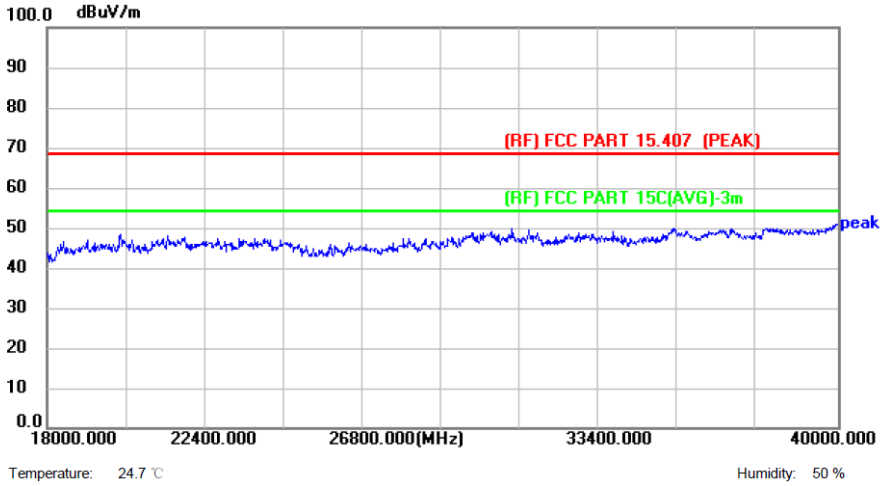
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.

5. No report for the emission which below the prescribed limit.

6. The peak value＜average limit, So only show the peak value.

Test Voltage:	DC 3.87V
Ant. Pol.	Vertical
Test Mode:	TX 802.11a Mode 5180MHz (U-NII-1)

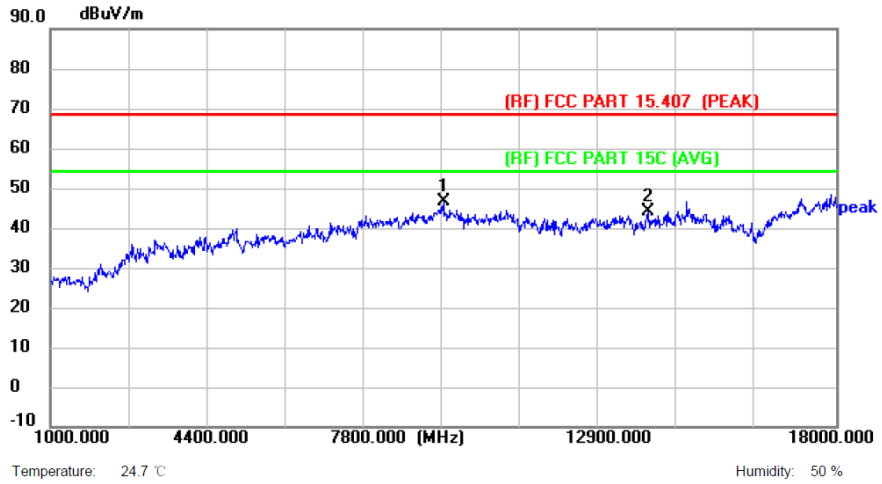


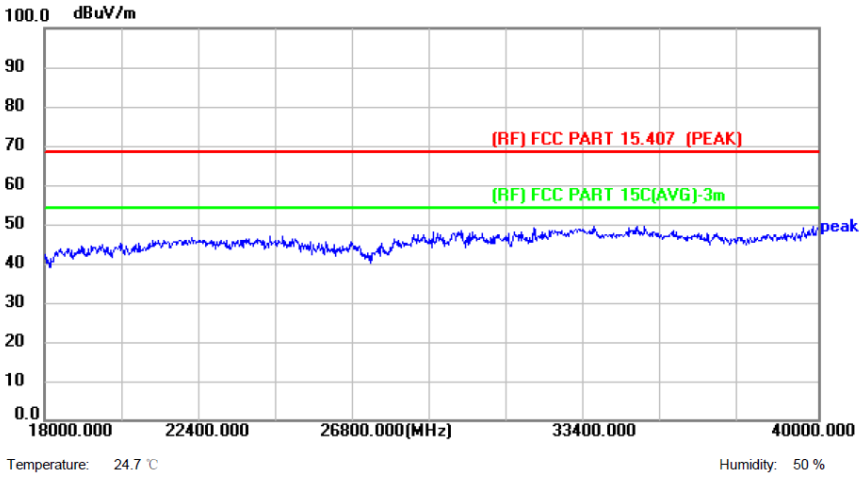


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	11047.000	44.97	-0.33	44.64	68.30	-23.66	peak
2 *	12730.000	43.83	0.97	44.80	68.30	-23.50	peak

Remark:
1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)
2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.
5. No report for the emission which below the prescribed limit.
6. The peak value＜average limit, So only show the peak value.

Test Voltage:	DC 3.87V
Ant. Pol.	Horizontal
Test Mode:	TX 802.11a Mode 5200MHz (U-NII-1)





No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	9500.000	46.20	0.47	46.67	68.30	-21.63	peak
2	13920.000	42.35	1.66	44.01	68.30	-24.29	peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

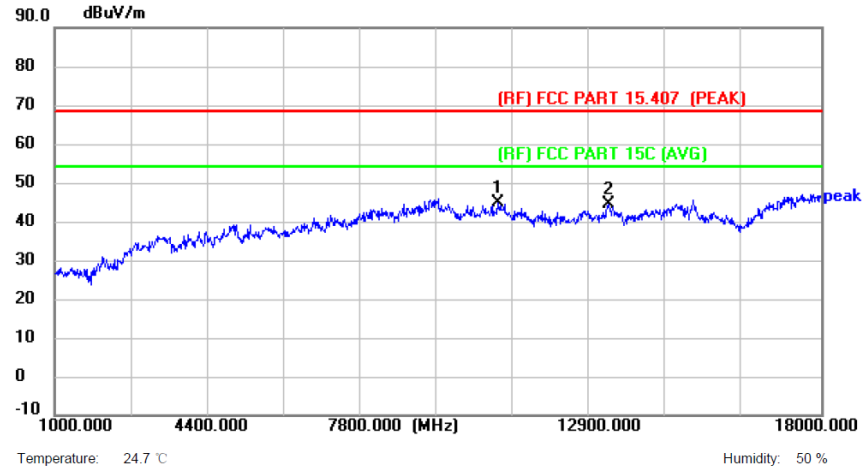
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

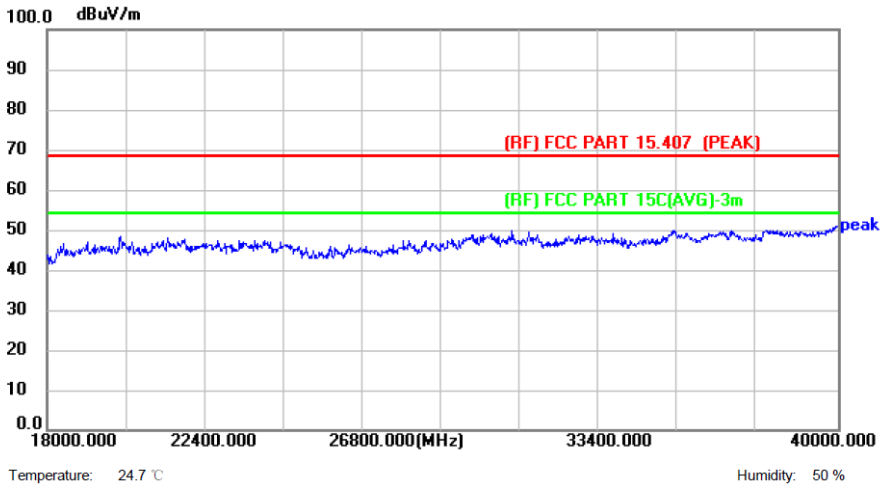
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.

5. No report for the emission which below the prescribed limit.

6. The peak value＜average limit, So only show the peak value.

Test Voltage:	DC 3.87V
Ant. Pol.	Vertical
Test Mode:	TX 802.11a Mode 5200MHz (U-NII-1)





No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	10843.000	45.65	-0.85	44.80	68.30	-23.50	peak
2	13291.000	43.42	0.91	44.33	68.30	-23.97	peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

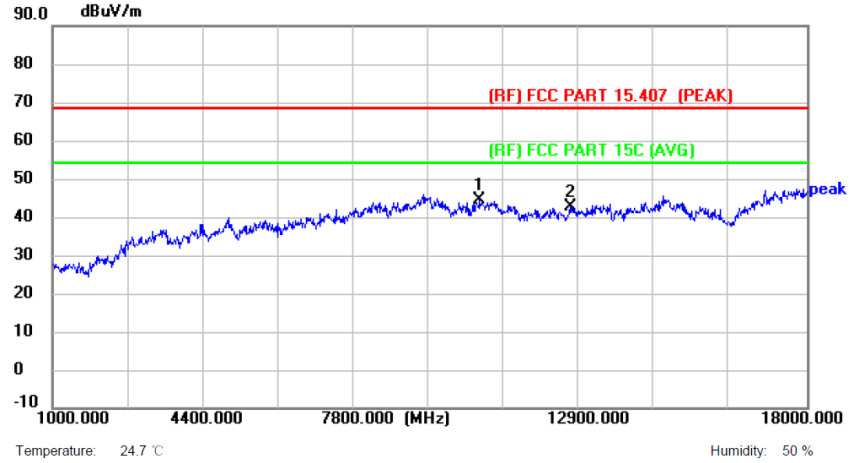
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

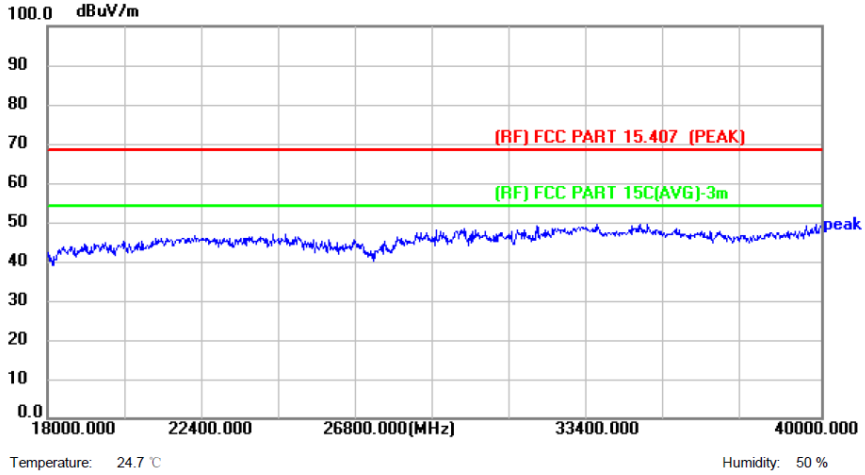
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.

5. No report for the emission which below the prescribed limit.

6. The peak value＜average limit, So only show the peak value.

Test Voltage:	DC 3.87V
Ant. Pol.	Horizontal
Test Mode:	TX 802.11a Mode 5240MHz (U-NII-1)





No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	10622.000	45.59	-1.30	44.29	68.30	-24.01	peak
2	12662.000	42.01	0.74	42.75	68.30	-25.55	peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

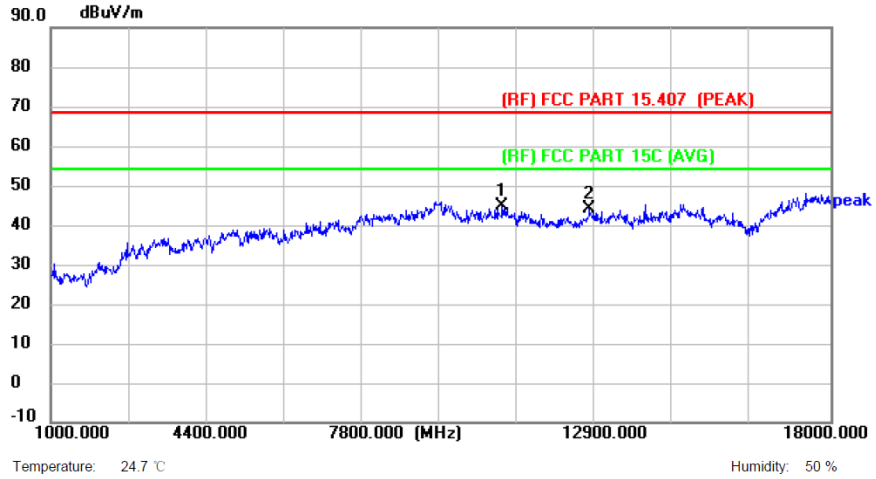
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

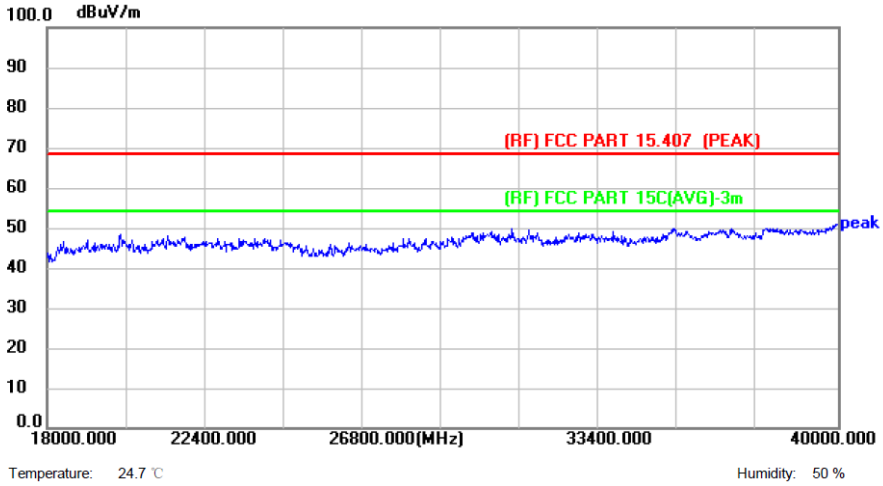
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.

5. No report for the emission which below the prescribed limit.

6. The peak value＜average limit, So only show the peak value.

Test Voltage:	DC 3.87V
Ant. Pol.	Vertical
Test Mode:	TX 802.11a Mode 5240MHz (U-NII-1)





No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	10843.000	45.56	-0.85	44.71	68.30	-23.59	peak
2	12747.000	42.98	1.05	44.03	68.30	-24.27	peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

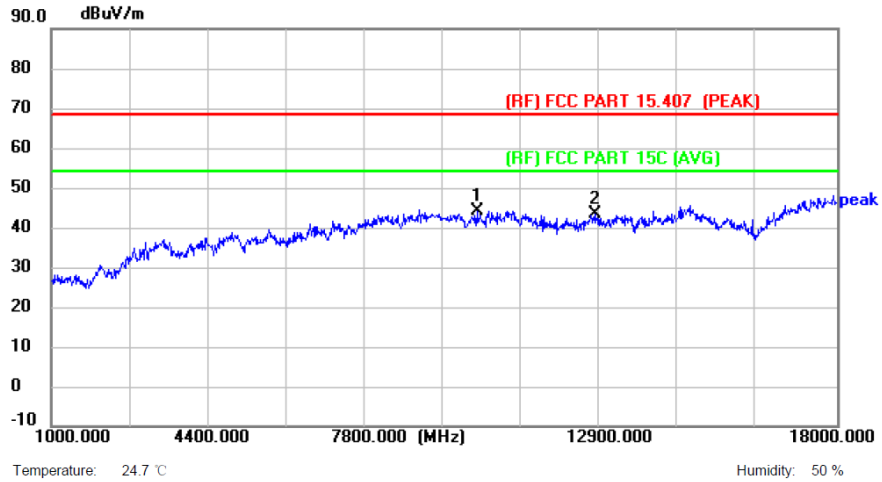
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.

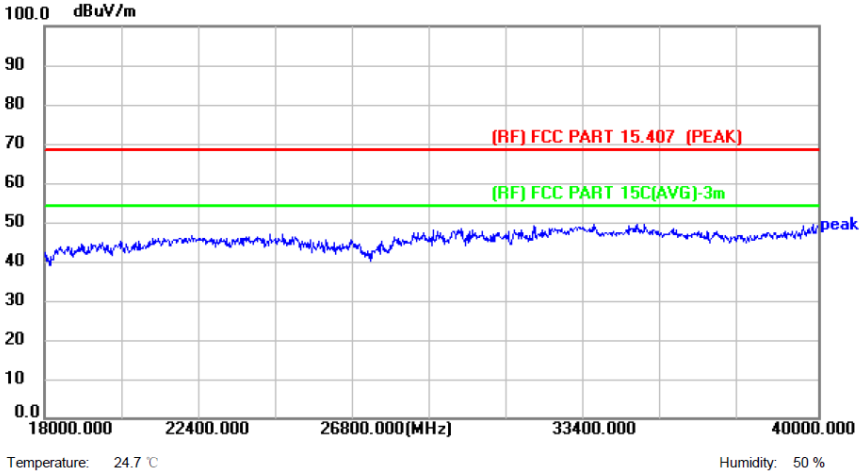
5. No report for the emission which below the prescribed limit.

6. The peak value＜average limit, So only show the peak value.

5260MHz~5320MHz (U-NII-2A)

Test Voltage:	DC 3.87V
Ant. Pol.	Horizontal
Test Mode:	TX 802.11a Mode 5260MHz (U-NII-2A)





No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	10214.000	45.35	-1.17	44.18	68.30	-24.12	peak
2	12764.000	42.45	1.12	43.57	68.30	-24.73	peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

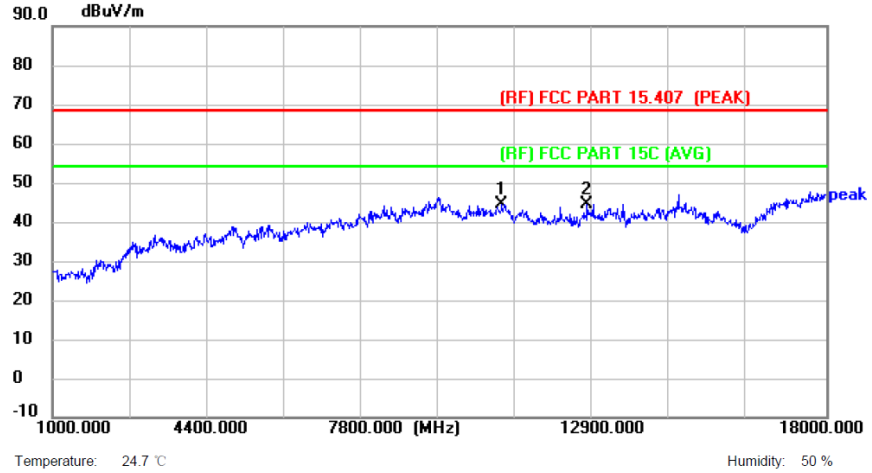
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

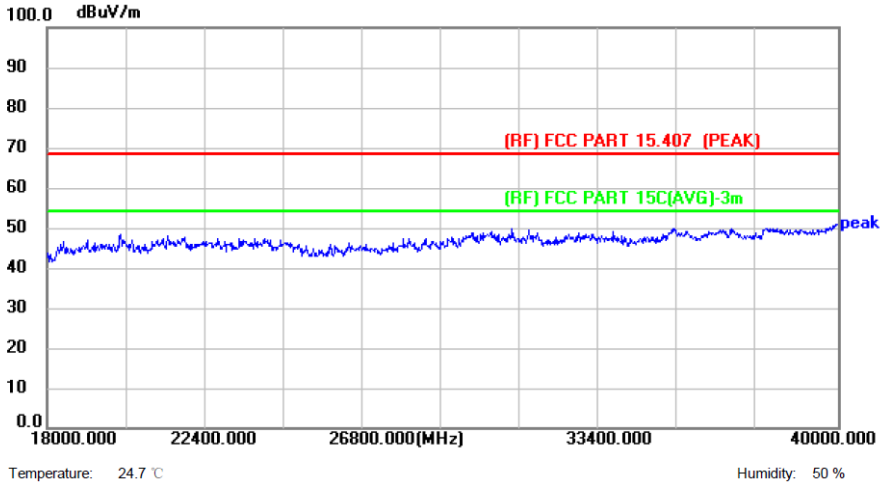
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.

5. No report for the emission which below the prescribed limit.

6. The peak value＜average limit, So only show the peak value.

Test Voltage:	DC 3.87V
Ant. Pol.	Vertical
Test Mode:	TX 802.11a Mode 5260MHz (U-NII-2A)





No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	10877.000	45.25	-0.68	44.57	68.30	-23.73	peak
2	12747.000	43.50	1.05	44.55	68.30	-23.75	peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

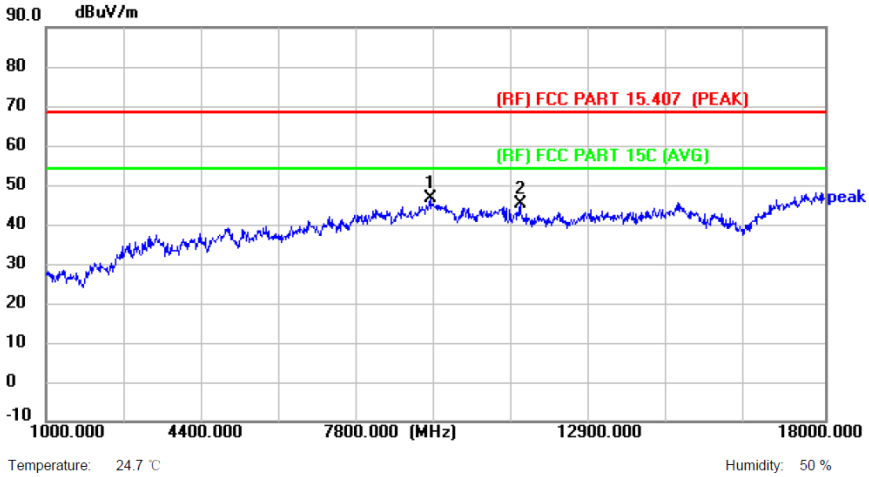
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

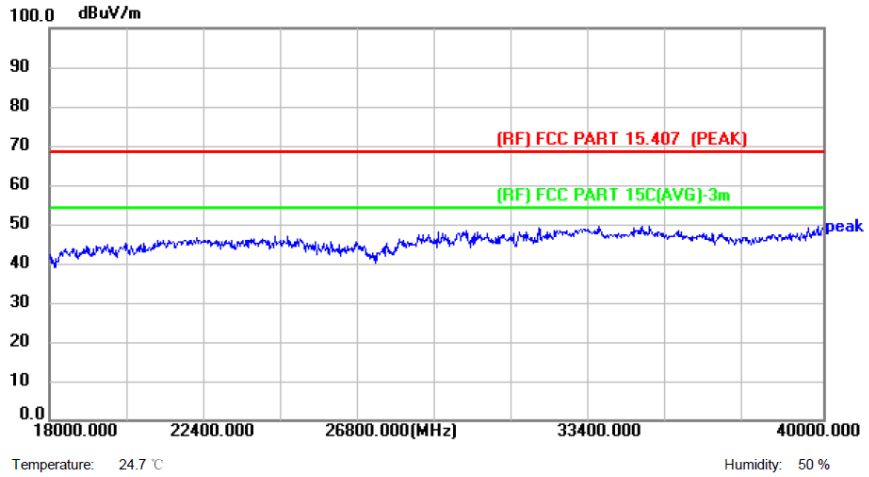
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.

5. No report for the emission which below the prescribed limit.

6. The peak value＜average limit, So only show the peak value.

Test Voltage:	DC 3.87V
Ant. Pol.	Horizontal
Test Mode:	TX 802.11a Mode 5280MHz (U-NII-2A)





No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	9381.000	47.26	-0.54	46.72	68.30	-21.58	peak
2	11353.000	45.13	-0.08	45.05	68.30	-23.25	peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

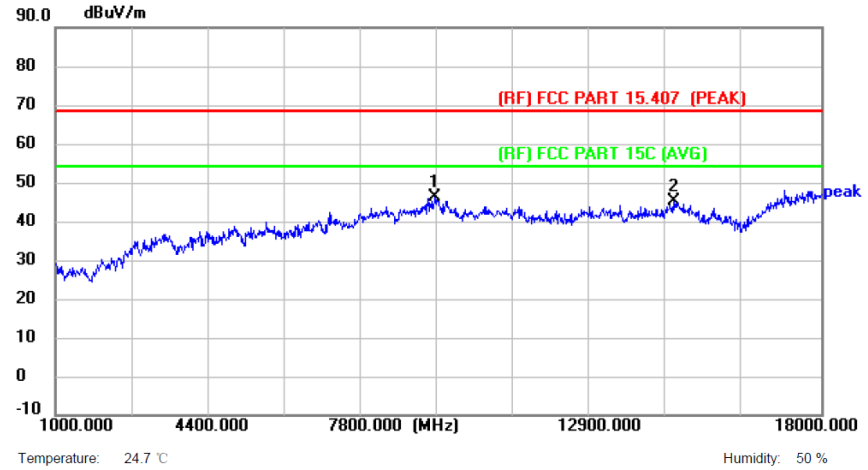
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

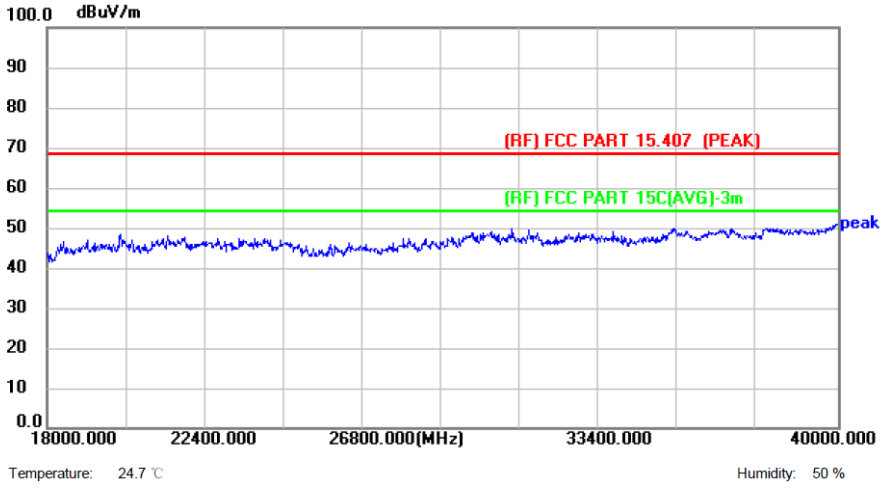
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.

5. No report for the emission which below the prescribed limit.

6. The peak value＜average limit, So only show the peak value.

Test Voltage:	DC 3.87V
Ant. Pol.	Vertical
Test Mode:	TX 802.11a Mode 5280MHz (U-NII-2A)





No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	9432.000	46.10	0.02	46.12	68.30	-22.18	peak
2	14719.000	42.01	3.32	45.33	68.30	-22.97	peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

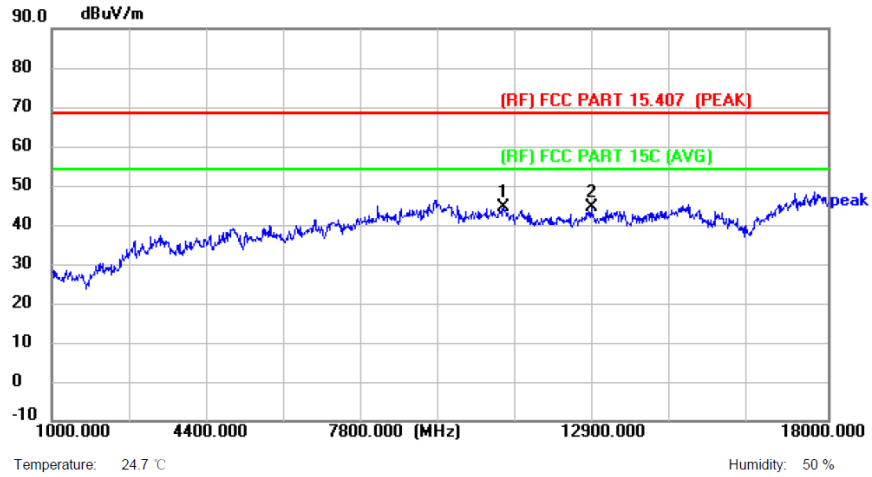
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

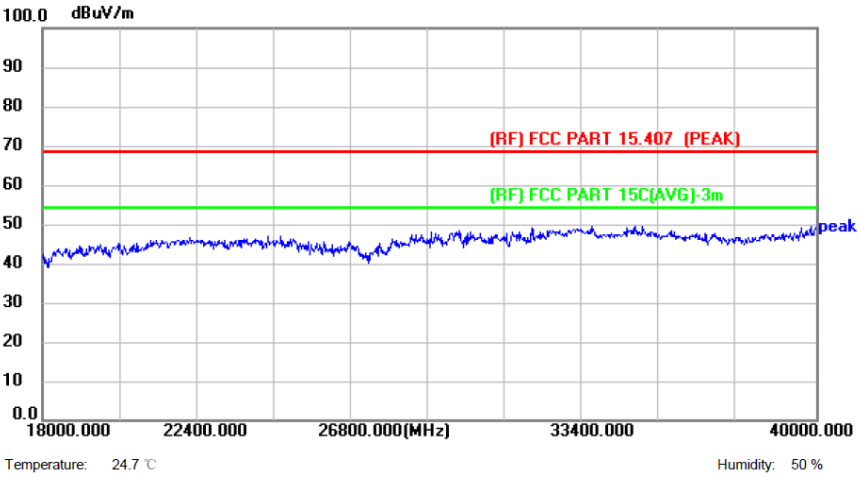
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.

5. No report for the emission which below the prescribed limit.

6. The peak value＜average limit, So only show the peak value.

Test Voltage:	DC 3.87V
Ant. Pol.	Horizontal
Test Mode:	TX 802.11a Mode 5320MHz (U-NII-2A)





No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	10894.000	45.22	-0.58	44.64	68.30	-23.66	peak
2	12815.000	43.19	1.16	44.35	68.30	-23.95	peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

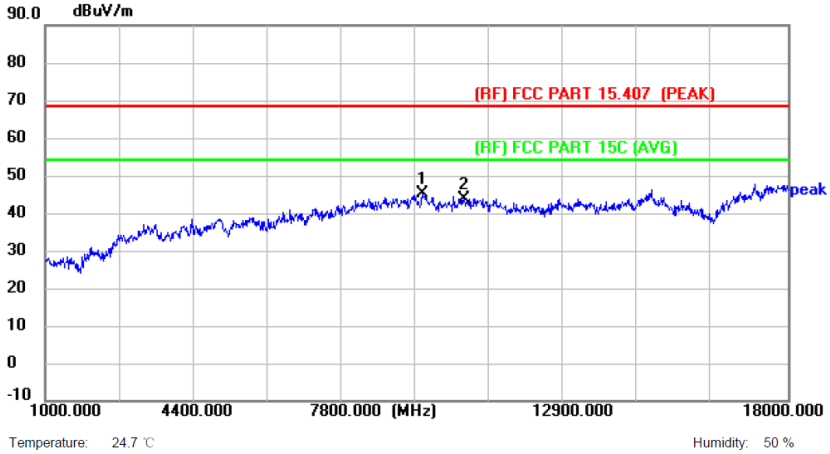
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

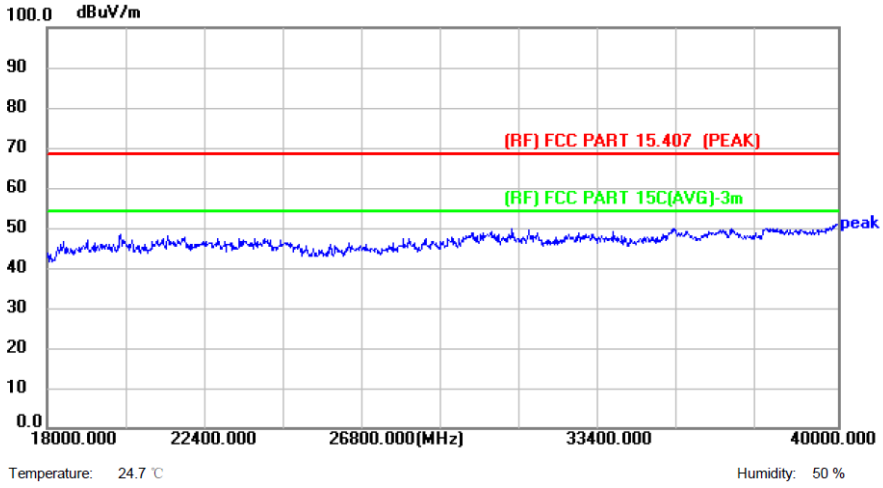
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.

5. No report for the emission which below the prescribed limit.

6. The peak value＜average limit, So only show the peak value.

Test Voltage:	DC 3.87V
Ant. Pol.	Vertical
Test Mode:	TX 802.11a Mode 5320MHz (U-NII-2A)





No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	9636.000	45.71	-0.58	45.13	68.30	-23.17	peak
2	10588.000	45.20	-1.32	43.88	68.30	-24.42	peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

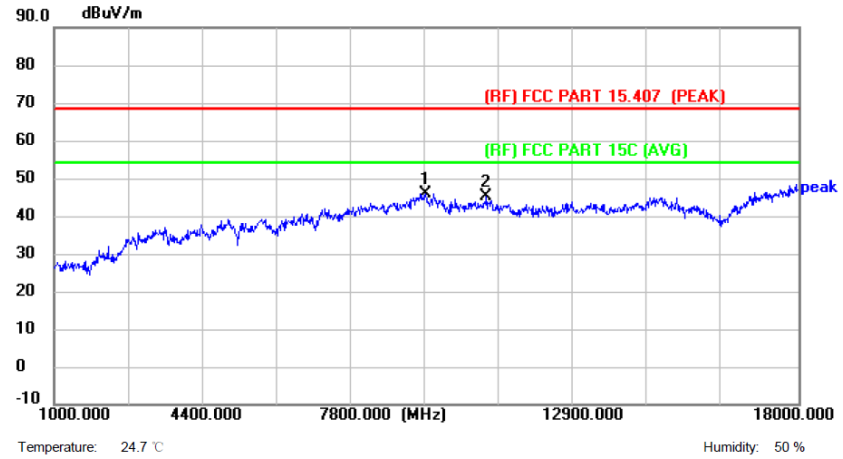
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.

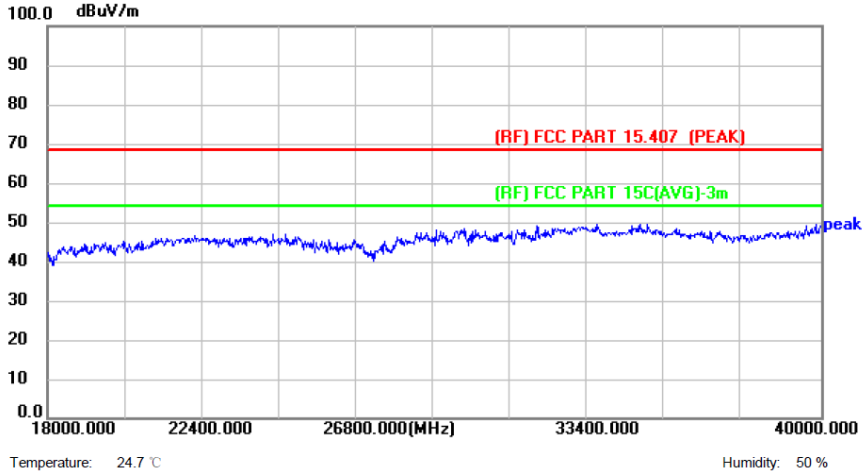
5. No report for the emission which below the prescribed limit.

6. The peak value＜average limit, So only show the peak value.

5745MHz-5825MHz(U-NII-3)

Test Voltage:	DC 3.87V
Ant. Pol.	Horizontal
Test Mode:	TX 802.11a Mode 5745MHz (U-NII-3)





No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	9483.000	45.65	0.42	46.07	68.30	-22.23	peak
2	10877.000	45.99	-0.68	45.31	68.30	-22.99	peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

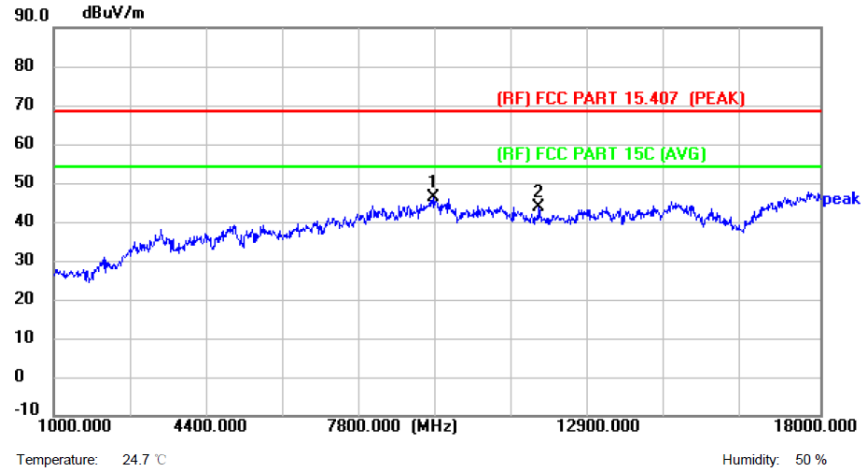
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

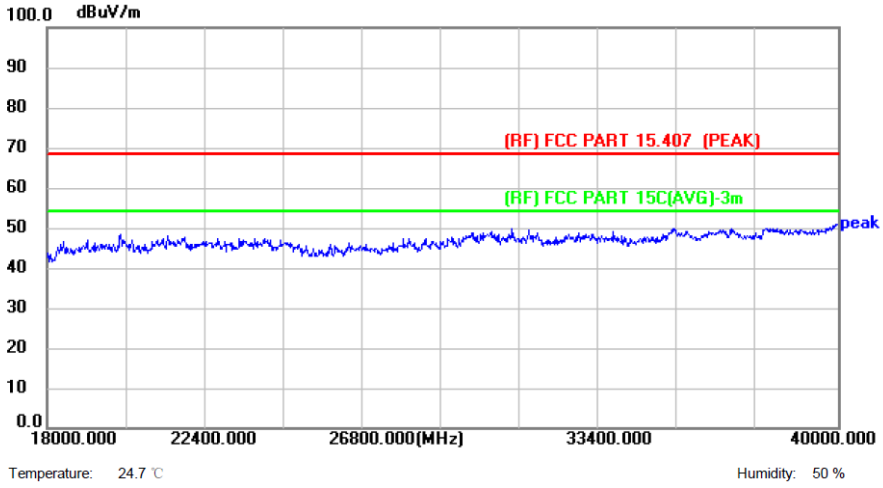
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.

5. No report for the emission which below the prescribed limit.

6. The peak value＜average limit, So only show the peak value.

Test Voltage:	DC 3.87V
Ant. Pol.	Vertical
Test Mode:	TX 802.11a Mode 5745MHz (U-NII-3)





No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	9415.000	46.60	-0.24	46.36	68.30	-21.94	peak
2	11761.000	43.80	0.01	43.81	68.30	-24.49	peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

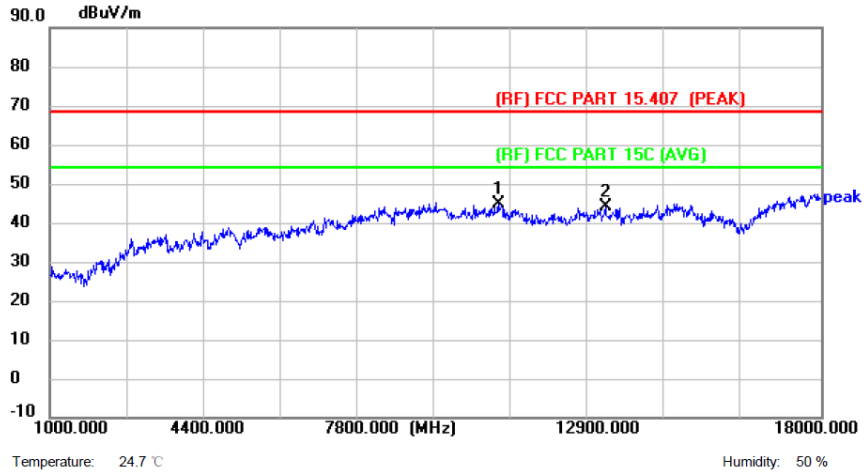
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

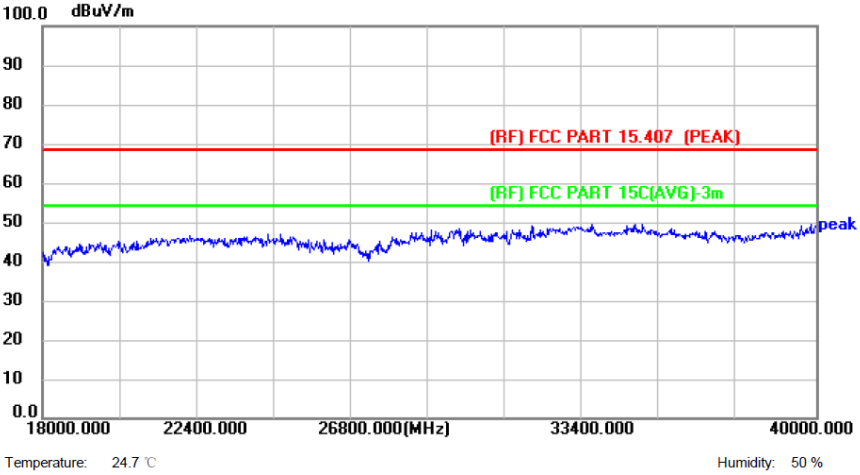
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.

5. No report for the emission which below the prescribed limit.

6. The peak value＜average limit, So only show the peak value.

Test Voltage:	DC 3.87V
Ant. Pol.	Horizontal
Test Mode:	TX 802.11a Mode 5785MHz (U-NII-3)





No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	10894.000	45.23	-0.58	44.65	68.30	-23.65	peak
2	13257.000	43.25	0.68	43.93	68.30	-24.37	peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

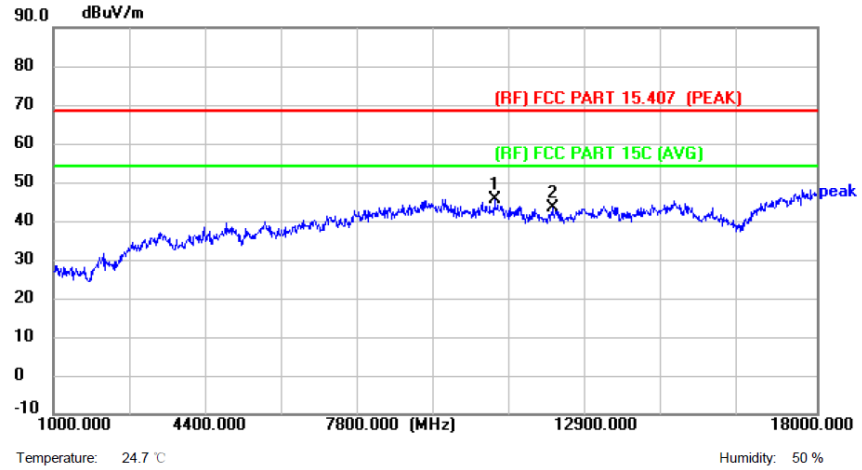
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

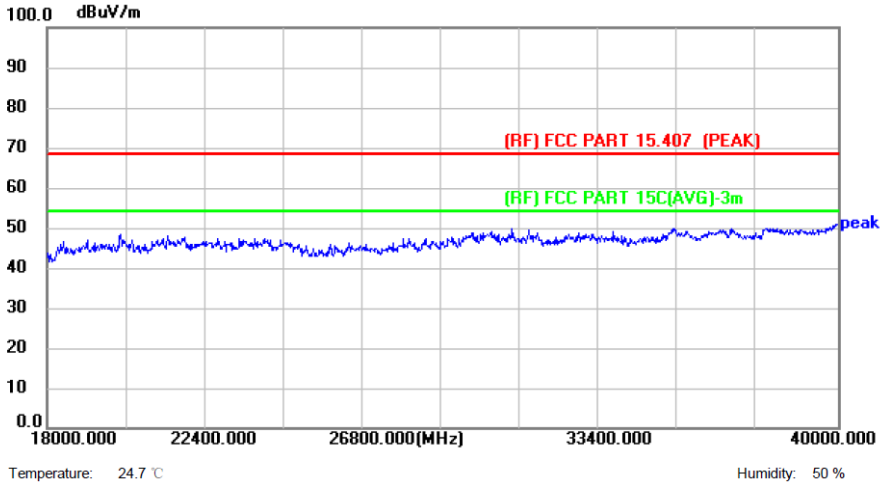
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.

5. No report for the emission which below the prescribed limit.

6. The peak value＜average limit, So only show the peak value.

Test Voltage:	DC 3.87V
Ant. Pol.	Vertical
Test Mode:	TX 802.11a Mode 5785MHz (U-NII-3)





No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	10826.000	46.51	-0.94	45.57	68.30	-22.73	peak
2	12118.000	42.58	0.68	43.26	68.30	-25.04	peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

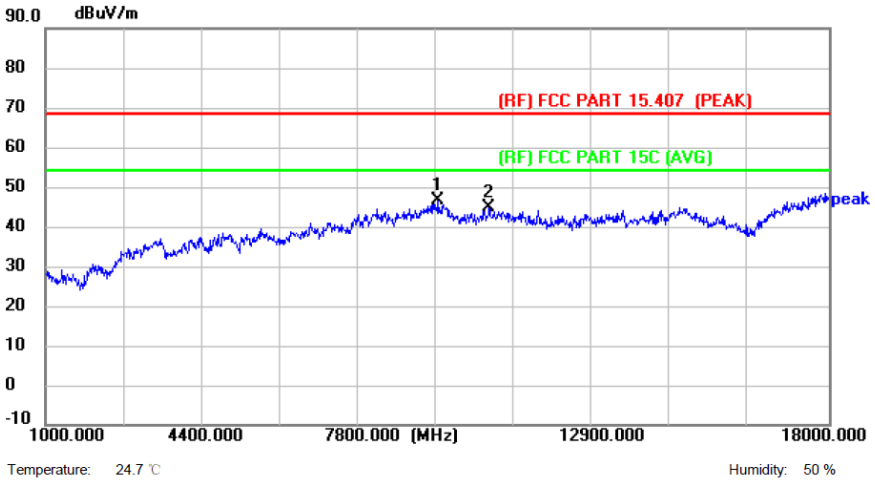
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

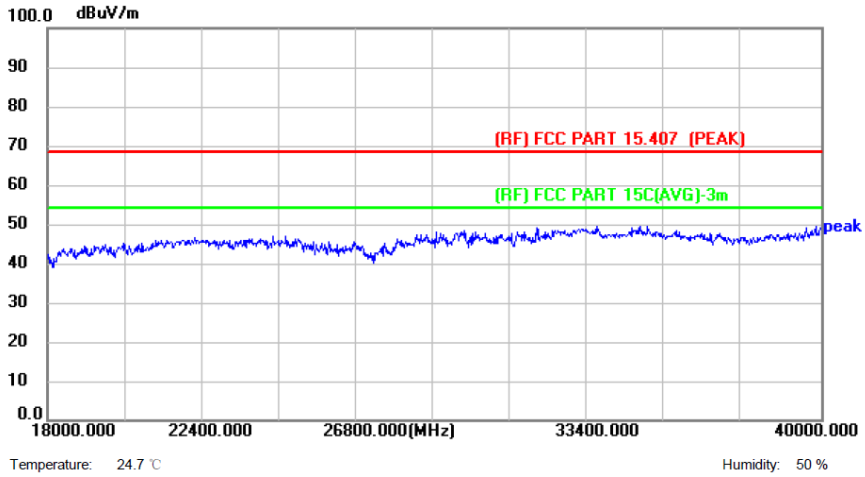
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.

5. No report for the emission which below the prescribed limit.

6. The peak value＜average limit, So only show the peak value.

Test Voltage:	DC 3.87V
Ant. Pol.	Horizontal
Test Mode:	TX 802.11a Mode 5825MHz (U-NII-3)





No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	9517.000	46.19	0.35	46.54	68.30	-21.76	peak
2	10622.000	46.24	-1.30	44.94	68.30	-23.36	peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

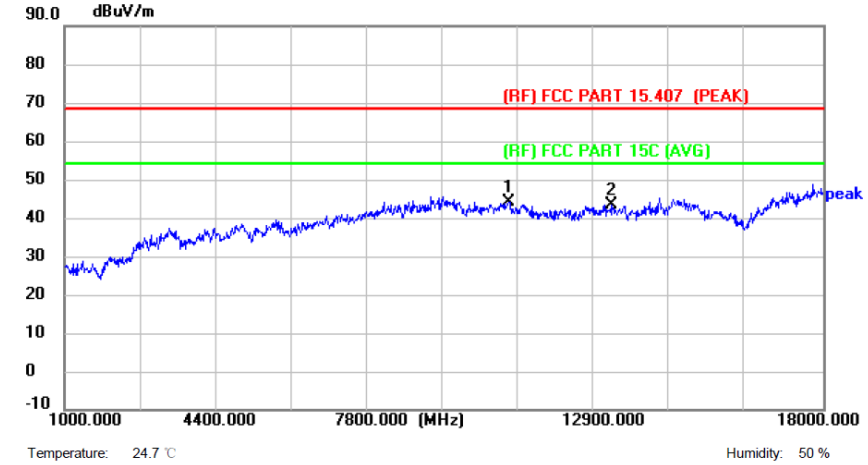
3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

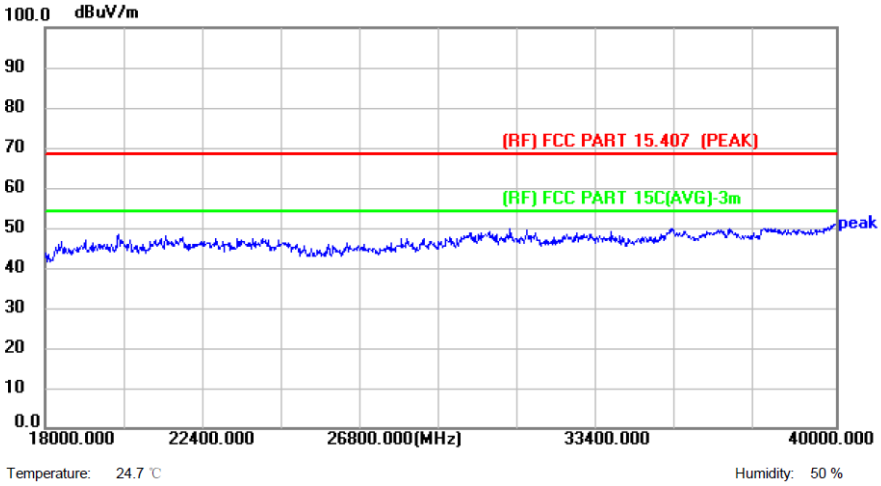
4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.

5. No report for the emission which below the prescribed limit.

6. The peak value＜average limit, So only show the peak value.

Test Voltage:	DC 3.87V
Ant. Pol.	Vertical
Test Mode:	TX 802.11a Mode 5825MHz (U-NII-3)





No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	10962.000	44.54	-0.37	44.17	68.30	-24.13	peak
2	13274.000	42.78	0.79	43.57	68.30	-24.73	peak

Remark:

1. Corr. = Antenna Factor (dB/m) + Cable Loss (dB)

2. Peak/AVG (dBμV/m)= Corr. (dB/m)+ Read Level (dBμV)

3. Margin (dB) = Peak/AVG (dBμV/m)-Limit PK/AVG(dBμV/m)

4. The tests evaluated 1-26.5GHz, The testing has been conformed to the 10th harmonic of the highest fundamental frequency. Test with highpass filter (Pass Frequency: 2.8-18G and 8-25G), and 18GHz-26.5GHz is the noise, No other signals were detected.

5. No report for the emission which below the prescribed limit.

6. The peak value＜average limit, So only show the peak value.

-----END OF REPORT------