RF Test Report

Applicant	:	Getac Technology Corporation
Product Type	:	Wireless module
Trade Name	:	Getac
Model Number	:	AX200NGW
Applicable Standard	:	FCC 47 CFR PART 15 SUBPART C ANSI C63.10:2013
Received Date	:	May 13, 2020
Test Period	:	May 22, 2020
Issued Date	:	Jun. 23, 2020

Issued by

A Test Lab Techno Corp.
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Taoyuan City 33465, Taiwan (R.O.C.)
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Taiwan Accreditation Foundation accreditation number: 1330
Test Firm MRA designation number: TW0010

Note:
1.The test results are valid only for samples provided by customers and under the test conditions described in this report.
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3.The relevant information is provided by customers in this test report. According to the correctness, appropriateness or completeness of the information provided by the customer, if there is any doubt or error in the information which affects the validity of the test results, the laboratory does not take the responsibility.

Revision History

Rev.	Issued Date	Revisions	Revised By
00	May 27, 2020	Initial Issue	Tobey Cheng
01	Jun. 11, 2020	Page 7 Revised Max. RF Output Power. Page 22~25 Added Maximum Conducted Output Power Measurement test data.	Nina Lin
02	Jun. 23, 2020	Update chapter 2 (P.7). Update chapter 5 (P.22~P.25).	Nina Lin

Verification of Compliance

Issued Date: Jun. 23, 2020

Applicant	:	Getac Technology Corporation
Product Type	:	Wireless module
Trade Name	:	Getac
Model Number	:	AX200NGW
FCC ID	:	QYLAX200NG
EUT Rated Voltage	:	DC 3.7 V
Test Voltage	:	120 Vac / 60 Hz
Applicable Standard	:	FCC 47 CFR PART 15 SUBPART C ANSI C63.10:2013
Test Result	:	Complied
Performing Lab.	:	A Test Lab Techno Corp. No. 140-1, Changan Street, Bade District, Taoyuan City 33465, Taiwan (R.O.C.) Tel：+886-3-2710188 / Fax：+886-3-2710190 Taiwan Accreditation Foundation accreditation number: 1330 http://www.atl-lab.com.tw/e-index.htm

A Test Lab Techno Corp. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by A Test Lab Techno Corp. based on interpretations and/or observations of test results. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Approved By : Fly Lu

(Manager) (Fly Lu)

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1 General Information

1.1. Summary of Test Result

Standard	Item	Result	Remark
15.207	AC Power Conducted Emission	PASS	-----
15.247(d)	Transmitter Radiated Emissions	PASS	Note 2
15.247(b)(3)	Max. Output Power	PASS	-----
15.247(a)(2)	6 dB RF Bandwidth	N/A	Note 1
15.247(e)	Maximum Power Spectral Density	N/A	Note 1
15.247(d)	Out of Band Conducted Spurious Emission	N/A	Note 1
15.203	Antenna Requirement	N/A	Note 1

Note 1：Class II permissive change. No need for verification.

Note 2：Transmitter Radiated Emissions in below 1 GHz for Verification.

Standard	Description
CFR47, Part 15, Subpart C	Intentional Radiators
ANSI C63. 10: 2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
KDB 558074 D01 15.247 Meas Guidance v05r02	GUIDANCE FOR COMPLIANCE MEASUREMENTS ON DIGITAL TRANSMISSION SYSTEM, FREQUENCY HOPPING SPREAD SPECTRUM SYSTEM, AND HYBRID SYSTEM DEVICES OPERATING UNDER SECTION 15.247 OF THE FCC RULES
KDB 662911 D01 v02r01	Emissions Testing of Transmitters with Multiple Outputs in the Same Band (e.g., MIMO, Smart Antenna, etc)

1.2. Measurement Uncertainty

Test Item	Frequency Range	Uncertainty (dB)
Conducted Emission	150 kHz ~ 30 MHz	2.68
Radiated Emission	9 kHz ~ 30 MHz	2.14
	30 MHz ~ 1000 MHz	4.99
	1000 MHz ~ 18000 MHz	4.99
	18000 MHz ~ 26500 MHz	4.23
	26500 MHz ~ 40000 MHz	4.39
Conducted Output Power	0.92 dB	

Decision Rule

■ Uncertainty is not included.

□ Uncertainty is included.

2 EUT Description

Applicant	Getac Technology Corporation 5F.,Building A,No.209,Sec.1 Nangang.,Rd., Taipei City, 11568, Taiwan				
Manufacturer	Intel Mobile Communications 100 Center Point Circle, Suite 200, Columbia, South Carolina 29210, USA				
Product Type	Wireless module				
Trade Name	Getac				
Model Number	AX200NGW				
FCC ID	QYLAX200NG				
Class II Permissive Change	(1) This is to request a Class II permissive change for FCC ID:QYLAX200NG , originally granted on 2020/3/18 Modification: The major change filed under this application is: Change #1: Additional the accessory is for finger print (Egistec / ETU-801)				
Host Information	Product Type: Tablet Trade Name: Getac Model Name: UX10				
Operate Freq. Band	Frequency Range (MHz)		Modulation	Channel Bandwidth	Data Rate 400 / 800 GI (ns)
IEEE 802.11b	2412 ~ 2472		DSSS	20 MHz	Up to 11 Mbps
IEEE 802.11g	2412 ~ 2472		OFDM	20 MHz	Up to 54 Mbps
IEEE 802.11n 2.4 GHz 20 MHz	2412 ~ 2472		OFDM	20 MHz	Up to 72.2 Mbps
IEEE 802.11n 2.4 GHz 40 MHz	2412 ~ 2472		OFDM	40 MHz	Up to 150 Mbps
IEEE 802.11ax 2.4 GHz 20 MHz	2412 ~ 2472		OFDMA	20 MHz	Up to MCS 11
IEEE 802.11ax 2.4 GHz 40 MHz	2422 ~ 2462		OFDMA	40 MHz	Up to MCS 11
Antenna information	ANT	Model Number		Type	Max. Gain (dBi)
	Main (ANT-0)	T-0239 UX10 MAIN WIFI ANT		PIFA Antenna	3.70
	AUX (ANT-1)	T-0239 UX10 AUX WIFI ANT		PIFA Antenna	0.36
Antenna Delivery	See section 3.1				
Operate Temp. Range	0 ~ +80 ℃				
Frequency Band	Max. RF Output Power (W)				
	SYSTEM 2 Full				
IEEE 802.11b	0.096				
IEEE 802.11g	0.094				
IEEE 802.11n 2.4 GHz 20 MHz	0.093				
IEEE 802.11n 2.4 GHz 40 MHz	0.047				
IEEE 802.11ax 2.4 GHz 20 MHz	0.081				
IEEE 802.11ax 2.4 GHz 40 MHz	0.047				

3 Test Methodology

3.1. Mode of Operation

Decision of Test ATL has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Pre-Test Mode
Mode 1: Transmit mode
Mode 2: IEEE 802.11b Continuous TX mode
Mode 3: IEEE 802.11g Continuous TX mode
Mode 4: IEEE 802.11n 2.4 GHz 20 MHz Continuous TX mode
Mode 5: IEEE 802.11n 2.4 GHz 40 MHz Continuous TX mode
Mode 6: IEEE 802.11ax 2.4 GHz 20 MHz Continuous TX mode
Mode 7: IEEE 802.11ax 2.4 GHz 40 MHz Continuous TX mode

Final-Test Mode
Mode 1: Transmit mode
Mode 4: IEEE 802.11n 2.4 GHz 20 MHz Continuous TX mode
Mode 6: IEEE 802.11ax 2.4 GHz 20 MHz Continuous TX mode

Software used to control the EUT for staying in continuous transmitting mode was programmed.

After verification, all tests were carried out with the worst case test modes.

By preliminary testing and verifying three axis (X, Y and Z) position of EUT transmitted status, it was found that “X axis” position was the worst, then the final test was executed the worst condition and test data were recorded in this report.

Decision of Test Mode				
Description	Vender	Model Number	Remarks	SYSTEM 2 Full
Main Board	WUS Printed Circuit	R0B	---	V
CPU	Intel	i7-10710U	1.10 GHz, 1528 Pin	V
Menory	Kingston	CBD26D4S9S8ME-8	DDR4, 2400 MHz, 8 GB	
	Kingston	CBD24D4S7D8ME-16	DDR4, 2400 MHz, 16GB	V
HDD	LITEON	CV8-8E256	256 GB, 3D TLC AES	
	LITEON	CV8-8E512	512 GB, 3D TLC AES	V
LCM	K&D Technology	KD101N69-30NP	1920 x 1080 (FHD)	
	Getac	GET-101	Digitizer	V
Upside Option	Getac	UX10 PN7462 NFC Module	NXP RFID	
	Motorola	SE4710	Moto, Zebra, SE4710	V
STD Battery (Optional)	Getac	BP3S2P2100S-01	11.1 VDC, 4200 mAh	
Large Battery (Optional)	Getac	BP3S3P3450P-03	10.8 VDC, 9240 mAh	V
Bridge Battery (Optional)	Getac	BP2S1P2100S	Back Expansion Bay 7.4 VDC, 2100 mAh	V
Fingerprint CrossMatch(1)	Crossmatch	TCETC1	Right Expansion Bay	
Finger print(2)	Egistec	ETU-801(*)	Right Expansion Bay	V
MSR Reader	Magtek	99875494-3	Right Expansion Bay	V
Module	Getac	EM7455	WWAN/GPS	V
	LOCOSYS	MC 1010	GPS/GNS	
	Intel	AX200NGW	WLAN/BT	V
Rear Camera 8M	Foxlink	FN80AF-704H	---	V
Windows Hollow	Foxlink	FN23FF-705H	---	V
Capacitive Pen	Who Care	N/A	---	
AC Adapter (1)	FSP	FSP065-RBBN3	INPUT: 100-240 VAC, 50-60 Hz, 1.5 A OUTPUT: 19 VDC, 3.42 A Non-Shielded,1.5 m, with one core	V
AC Adapter (2)	Getac	MTA190474W4	INPUT: 100-240 VAC, 50-60 Hz, 1.6 A OUTPUT: 19 VDC, 4.74 A Non-Shielded,1.5 m with two cores	V
Power Cord (1)	I-SHENG	SP-305B+IS-034	3 pin, for U.S. power connector Non-Shielded,1.75 m	V
Power Cord (2)	I-SHENG	SP-305B+IS-034	3 pin, for European power connector Non-Shielded,1.75 m	
Digitizer Pen (Optional)	EMRight	GET-101	---	V

Note 1: (*) Add keyparts.

Note 2: The device used two models of adapter, adapter number: MTA190474W4 is worst case to perform testing.

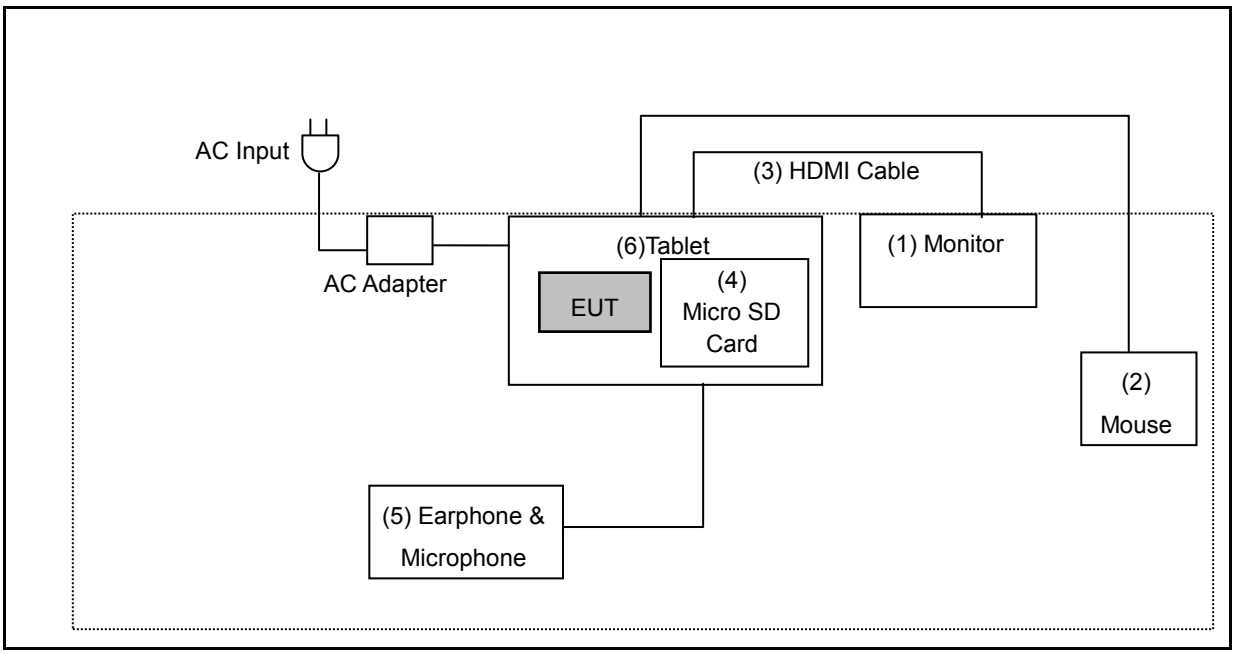
3.2. EUT Test Step

1.	Setup the EUT shown on “Configuration of Test System Details”.
2.	Turn on the power of all equipment.
3.	Turn on TX function.
4.	EUT run test program.

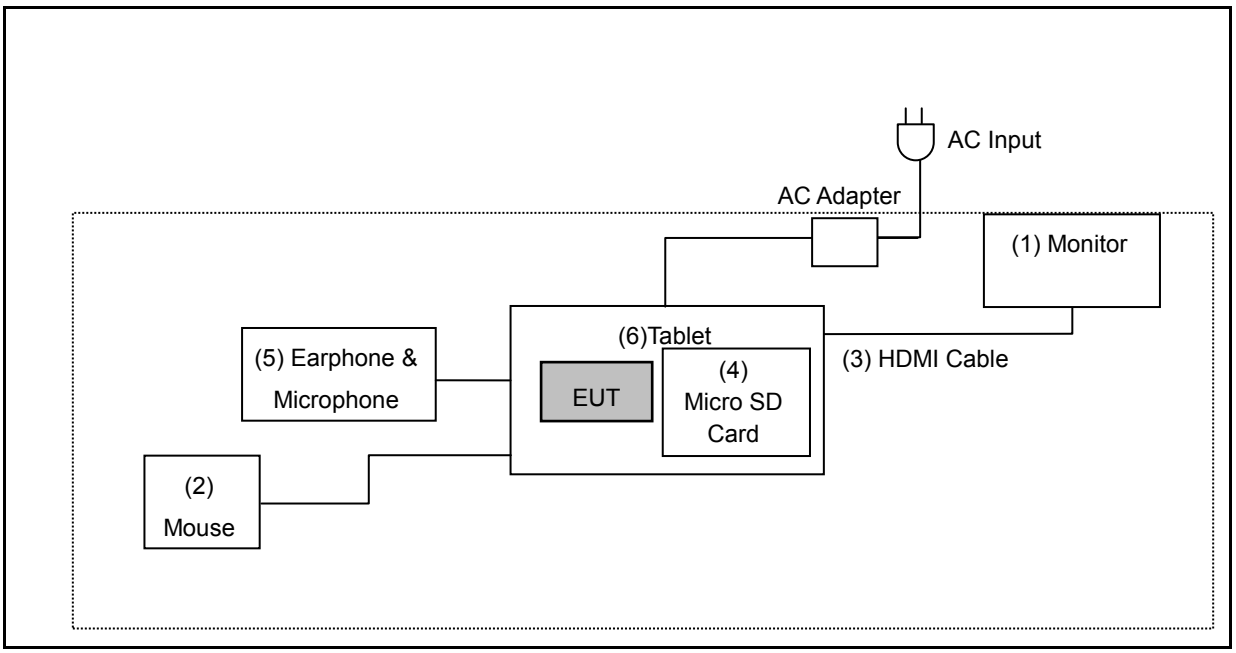
Measurement Software			
No.	Description	Software	Version
1	Conducted Emission	EZ EMC	1.1.4.3
2	Radiated Emission	EZ EMC	1.1.4.4

3.3. Configuration of Test System Details

Conducted Emission



Radiated Emissions



Devices Description					
Product		Manufacturer	Model Number	Serial Number	Power Cord
(1)	Monitor	DELL	U2410f	CN-OJ257M-72872 -09J-01AL	---
(2)	Mouse	DELL	MOCZUL	CN-049TWY-73820 -63N-01SB	---
(3)	HDMI Cable	Avier	K48GHS	---	Shielded, 1.7 m
(4)	Micro SD Card	Transcend	9153BA 8G 07DS1	---	---
(5)	Earphone & Microphone	HUAWEI	LYA-L29	---	---
(6)	Tablet	Getac	UX10	---	---

3.4. Test Instruments

For Conducted Emission
Test Period: May 22, 2020
Testing Engineer: Louis Shen

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
Test Receiver	R&S	ESCI	100367	05/23/2019	1 year
LISN	R&S	ENV216	101040	03/23/2020	1 year
LISN	R&S	ENV216	101041	04/06/2020	1 year
RF Cable	Woken	00100D1380194M	TE-02-03	05/23/2019	1 year

For Radiated Emissions
Test Period: May 22, 2020
Testing Engineer: Ricky Liu

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
Spectrum Analyzer (10 Hz~44 GHz)	Keysight	N9010A	MY52221312	01/13/2020	1 year
Pre Amplifier (100 kHz~1.3 GHz)	Agilent	8447D	2944A11119	01/15/2020	1 year
Broadband Antenna	Schwarzbeck	VULB9168	416	10/23/2019	1 year
Loop Antenna	COM-POWER CORPORATION	AL-130	121014	03/27/2020	1 year
RF Cable	EMCI	EMC104-N-N-6000	TE01-1	02/20/2020	1 year
Microwave Cable	EMCI	EMC104-SM-SM -13000	170814	10/29/2019	1 year
Microwave Cable	EMCI	EMC102-KM-KM -14000	151001	02/20/2020	1 year

Note: N.C.R. = No Calibration Request.

3.5. Test Site Environment

Items	Required (IEC 60068-1)	Actual
Temperature (°C)	15-35	20-30
Humidity (%RH)	25-75	45-75
Barometric pressure (mbar)	860-1060	990-1005

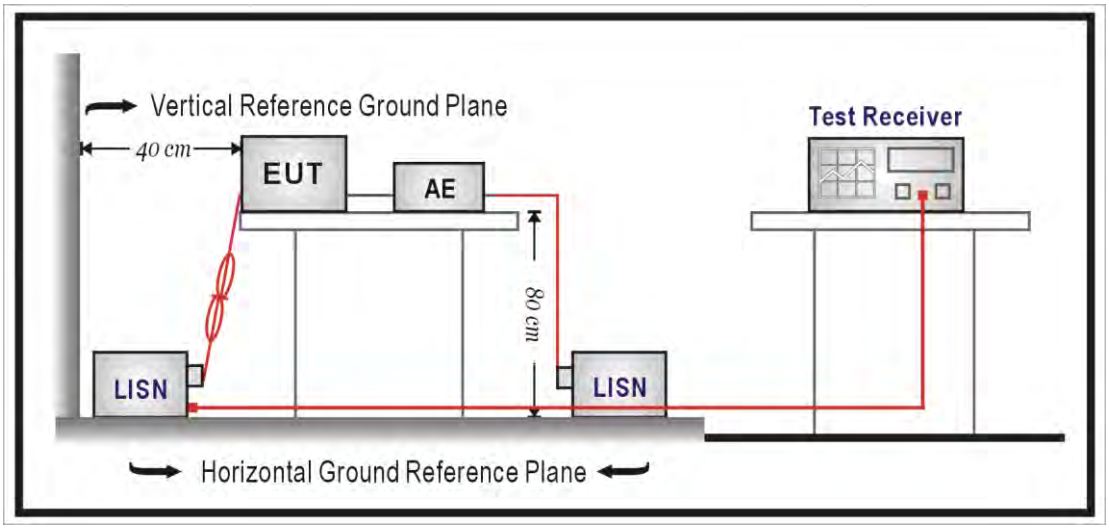
4 Measurement Procedure

4.1. AC Power Line Conducted Emission Measurement

■ **Limit**

Frequency (MHz)	Quasi-peak	Average
0.15 - 0.5	66 to 56	56 to 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

■ **Test Setup**



■ **Test Procedure**

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 Ω// 50 uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50 Ω// 50 uH coupling impedance with 50 ohm termination.

Tabletop device shall be placed on a non-conducting platform, of nominal size 1 m by 1.5 m, raised 80 cm above the reference ground plane. The wall of screened room shall be located 40 cm to the rear of the EUT. Other surfaces of tabletop or floor standing EUT shall be at least 80 cm from any other ground conducting surface including one or more LISNs. For floor-standing device shall be placed under the EUT with a 12 mm insulating material.

Conducted emissions were investigated over the frequency range from 0.15 MHz to 30 MHz using a resolution bandwidth of 9 kHz. The equipment under test (EUT) shall be meet the limits in section 4.1, as applicable, including the average limit and the quasi-peak limit when using respectively, an average detector and quasi-peak detector measured in accordance with the methods described of related standard. When all of peak value were complied with quasi-peak and average limit from 150 kHz to 30 MHz then quasi-peak and average measurement was unnecessary.

The AMN shall be placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for AMNs mounted on top of the ground reference plane. This distance is between the closest points of the AMN and the EUT. All other units of the EUT and associated equipment shall be at least 0.8 m from the AMN. If the mains power cable is longer than 1 m then the cable shall be folded back and forth at the centre of the lead to form a bundle no longer than 0.4 m. All of 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 cm to 40 cm long. All of EUT and AE shall be separate place more than 0.1 m. All 50 Ω ports of the LISN shall be resistively terminated into 50 Ω loads when not connected to the measuring instrument.

If the reading of the measuring receiver shows fluctuations close to the limit, the reading shall be observed for at least 15 s at each measurement frequency; the higher reading shall be recorded with the exception of any brief isolated high reading which shall be ignored.

4.2. Radiated Emission Measurement

■ **Limit**

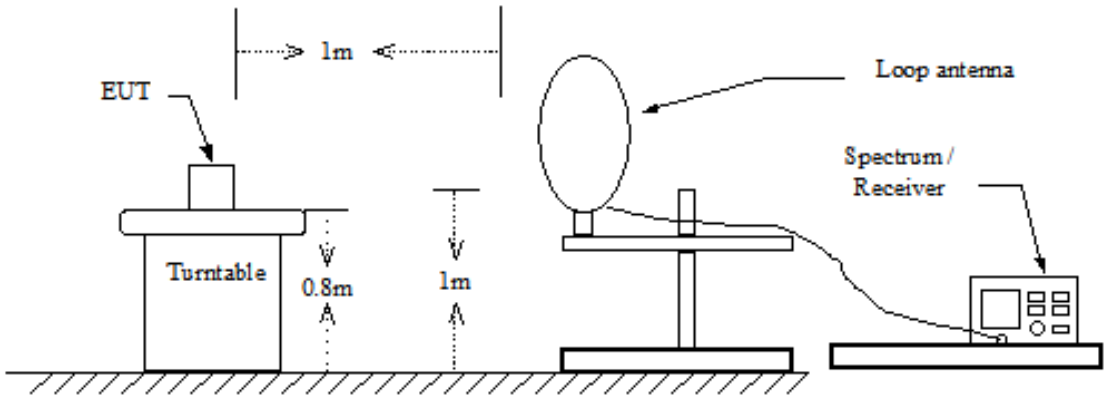
According to §15.209(a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (μV/m at 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
30 - 88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

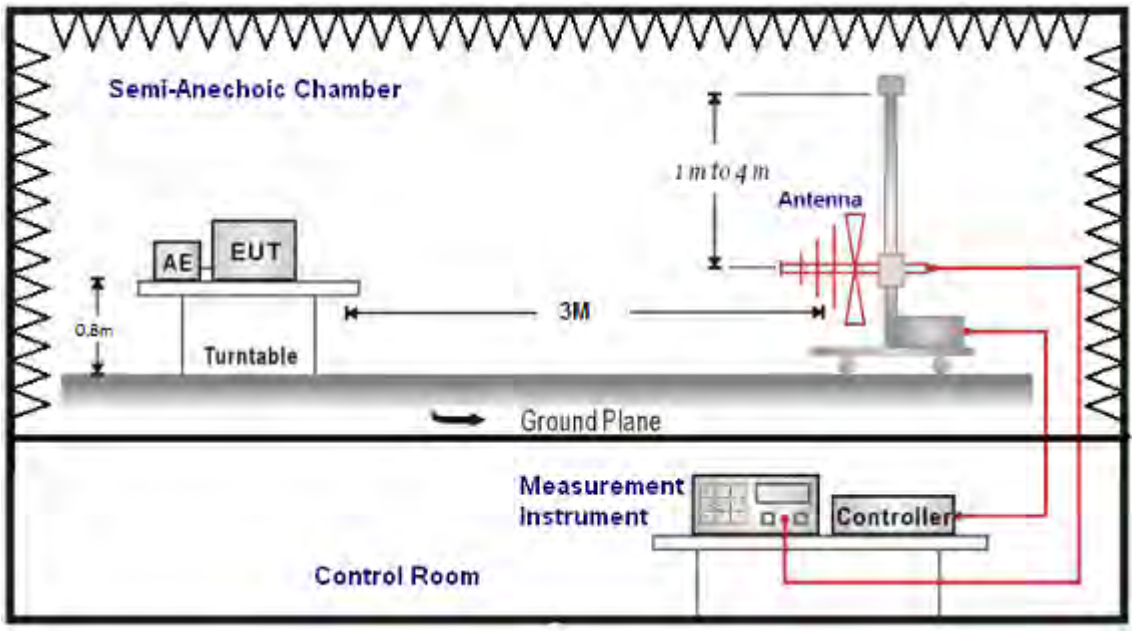
** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

■ **Setup**

9 kHz ~ 30 MHz



Below 1 GHz


Semi-Anechoic Chamber
1 m to 4 m
Antenna
AE
EUT
0.8m
Turntable
3M
Ground Plane
Measurement
Instrument
Controller
Control Room

■ **Test Procedure**

Final radiation measurements were made on a three-meter, Semi Anechoic Chamber. The EUT system was placed on a nonconductive turntable which is 0.8 or 1.5 meters height, top surface 1.0 x 1.5 meter. The spectrum was examined from 250 MHz to 2.5 GHz in order to cover the whole spectrum below 10th harmonic which could generate from the EUT. During the test, EUT was set to transmit continuously & Measurements spectrum range from 9 kHz to 26.5 GHz is investigated.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, and then the video bandwidth is set to 3 MHz for peak measurements and 10 Hz for average measurements when Duty cycle >0.98 / 1/T for average measurements when Duty cycle <0.98. A nonconductive material surrounded the EUT to supporting the EUT for standing on tree orthogonal planes. At each condition, the EUT was rotated 360 degrees, and the antenna was raised and lowered from one to four meters to find the maximum emission levels. Measurements were taken using both horizontal and vertical antenna polarization.

SCHWARZBECK MESS-ELEKTRONIK Biconilog Antenna at 3 Meter and the SCHWARZBECK Double Ridged Guide Antenna was used in frequencies 1 –26.5 GHz at a distance of 3 meter. The antenna at an angle toward the source of the emission. All test results were extrapolated to equivalent signal at 3 meters utilizing an inverse linear distance extrapolation Factor (20 dB/decade).

For testing above 1 GHz, the emission level of the EUT in peak mode was 20 dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

Appropriate preamplifiers were used for improving sensitivity and precautions were taken to avoid overloading or desensitizing the spectrum analyzer. No post – detector video filters were used in the test.

The spectrum analyzer's 6 dB bandwidth was set to 1 MHz, and the analyzer was operated in the peak detection mode, for frequencies both below and up 1 GHz. The average levels were obtained by subtracting the duty cycle correction factor from the peak readings.

The following procedures were used to convert the emission levels measured in decibels referenced to 1 microvolt (dBuV) into field intensity in micro volts pre meter (uV/m).

The actual field intensity in decibels referenced to 1 microvolt in to field intensity in micro colts per meter (dBuV/m).

The actual field is intensity in referenced to 1 microvolt per meter (dBuV/m) is determined by algebraically adding the measured reading in dBuV, the antenna factor (dB), and cable loss (dB) and Subtracting the gain of preamplifier (dB) is auto calculate in spectrum analyzer.

(1) Amplitude (dBuV/m) = FI (dBuV) +AF (dBuV) +CL (dBuV)-Gain (dB)
FI= Reading of the field intensity.
AF= Antenna factor.
CL= Cable loss.
P.S Amplitude is auto calculate in spectrum analyzer.

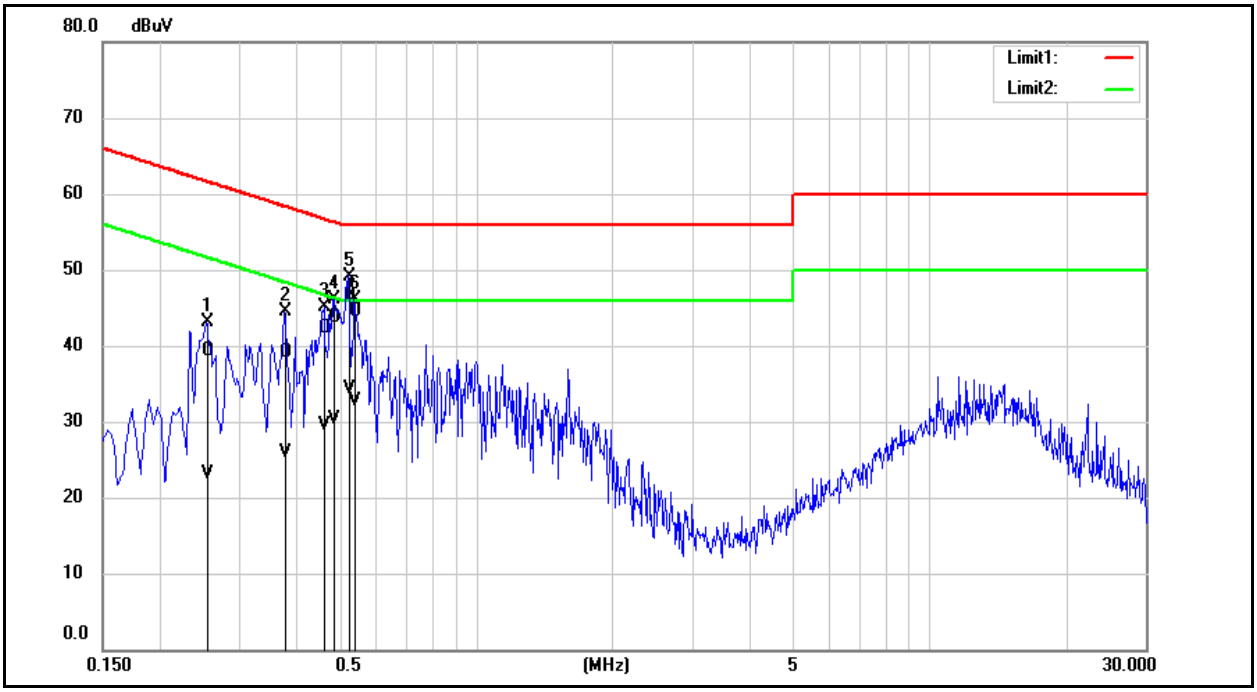
(2) Actual Amplitude (dBuV/m) = Amplitude (dBuV)-Dis(dB)
The FCC specified emission limits were calculated according the EUT operating frequency and by following linear interpolation equations:
(a) For fundamental frequency : Transmitter Output < +30 dBm
(b) For spurious frequency : Spurious emission limits = fundamental emission limit /10

Data of measurement within this frequency range without mark in the table above means the reading of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.

5 Test Results

Annex A. Conducted Emission

Standard:	FCC Part 15.247	Line:	L1
Test item:	Conducted Emission	Power:	AC 120 V/60 Hz
Mode:	Mode 1	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Description:			

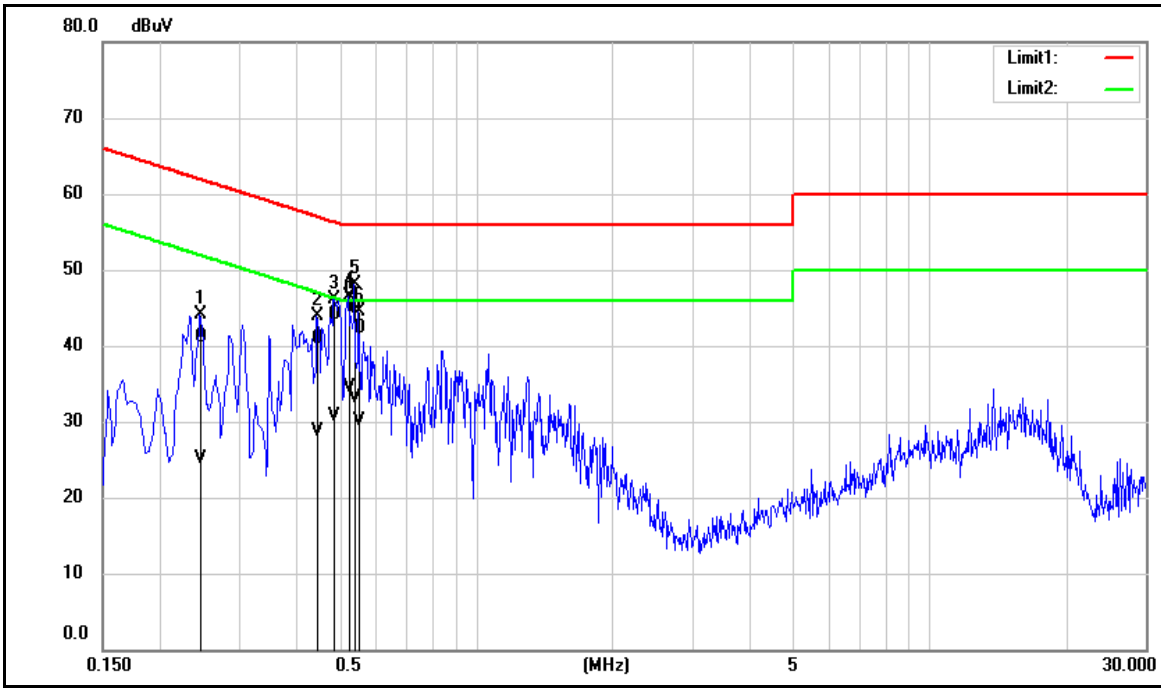


No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.2540	29.72	13.41	9.64	39.36	23.05	61.63	51.63	-22.27	-28.58	Pass
2	0.3780	29.39	16.16	9.65	39.04	25.81	58.32	48.32	-19.28	-22.51	Pass
3	0.4620	32.73	19.94	9.66	42.39	29.60	56.66	46.66	-14.27	-17.06	Pass
4	0.4860	34.01	20.73	9.66	43.67	30.39	56.24	46.24	-12.57	-15.85	Pass
5	0.5220	37.08	24.64	9.66	46.74	34.30	56.00	46.00	-9.26	-11.70	Pass
6	0.5380	34.94	23.05	9.66	44.60	32.71	56.00	46.00	-11.40	-13.29	Pass

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

Standard:	FCC Part 15.247	Line:	N
Test item:	Conducted Emission	Power:	AC 120 V/60 Hz
Mode:	Mode 1	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Description:			



No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.2460	31.40	15.50	9.67	41.07	25.17	61.89	51.89	-20.82	-26.72	Pass
2	0.4460	31.26	18.96	9.69	40.95	28.65	56.95	46.95	-16.00	-18.30	Pass
3	0.4860	34.36	21.07	9.69	44.05	30.76	56.24	46.24	-12.19	-15.48	Pass
4	0.5220	37.59	24.81	9.69	47.28	34.50	56.00	46.00	-8.72	-11.50	Pass
5	0.5380	35.24	23.48	9.69	44.93	33.17	56.00	46.00	-11.07	-12.83	Pass
6	0.5500	32.54	20.39	9.69	42.23	30.08	56.00	46.00	-13.77	-15.92	Pass

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

Annex B. Conducted Test Results

Maximum Conducted Output Power Measurement

ANT-0					
Test Mode	Frequency (MHz)	Data Rate	Average Output Power Measurement Results		Limit
			dBm	W	dBm
Mode 2	2412	1 M	19.38	0.087	≤ 30
	2437		**19.81**	**0.096**	≤ 30
	2462		18.92	0.078	≤ 30
	2467		17.88	0.061	≤ 30
	2472		14.78	0.030	≤ 30
Mode 3	2412	6 M	16.87	0.049	≤ 30
	2437		**19.71**	**0.094**	≤ 30
	2462		14.82	0.030	≤ 30
	2467		13.81	0.024	≤ 30
	2472		11.81	0.015	≤ 30
Mode 4	2412	6.5 M	16.81	0.048	≤ 30
	2437		**19.69**	**0.093**	≤ 30
	2462		16.77	0.048	≤ 30
	2467		14.16	0.026	≤ 30
	2472		12.41	0.017	≤ 30
Mode 5	2422	13.5 M	16.11	0.041	≤ 30
	2437		**16.71**	**0.047**	≤ 30
	2452		15.31	0.034	≤ 30
	2457		12.98	0.020	≤ 30
	2462		12.41	0.017	≤ 30

Note: The relevant measured result has the offset with cable loss already.

ANT-0							
Test Mode	Frequency (MHz)	Data Rate	RU Tone	RU Number	Average Output Power Measurement Results		Limit
					dBm	W	dBm
Mode 6	2412	MCS 0	242	1	16.73	0.047	≤ 30
	2437		242	1	**19.11**	**0.081**	≤ 30
	2462		242	1	16.36	0.043	≤ 30
	2467		242	1	14.82	0.030	≤ 30
	2472		242	1	11.82	0.015	≤ 30
Mode 7	2422	MCS 0	484	1	**16.71**	**0.047**	≤ 30
	2437		484	1	16.17	0.041	≤ 30
	2452		484	1	14.83	0.030	≤ 30
	2457		484	1	12.46	0.018	≤ 30
	2462		484	1	11.88	0.015	≤ 30

Note: The relevant measured result has the offset with cable loss already.

ANT-1					
Test Mode	Frequency (MHz)	Data Rate	Average Output Power Measurement Results		Limit
			dBm	W	dBm
Mode 2	2412	1 M	18.33	0.068	≤ 30
	2437		18.38	0.069	≤ 30
	2462		18.35	0.068	≤ 30
	2467		16.79	0.048	≤ 30
	2472		14.32	0.027	≤ 30
Mode 3	2412	6 M	16.91	0.049	≤ 30
	2437		18.08	0.064	≤ 30
	2462		14.72	0.030	≤ 30
	2467		13.85	0.024	≤ 30
	2472		11.88	0.015	≤ 30
Mode 4	2412	6.5 M	16.91	0.049	≤ 30
	2437		18.07	0.064	≤ 30
	2462		16.77	0.048	≤ 30
	2467		14.81	0.030	≤ 30
	2472		11.74	0.015	≤ 30
Mode 5	2422	13.5 M	16.43	0.044	≤ 30
	2437		16.81	0.048	≤ 30
	2452		15.14	0.033	≤ 30
	2457		12.22	0.017	≤ 30
	2462		11.87	0.015	≤ 30

Note: The relevant measured result has the offset with cable loss already.

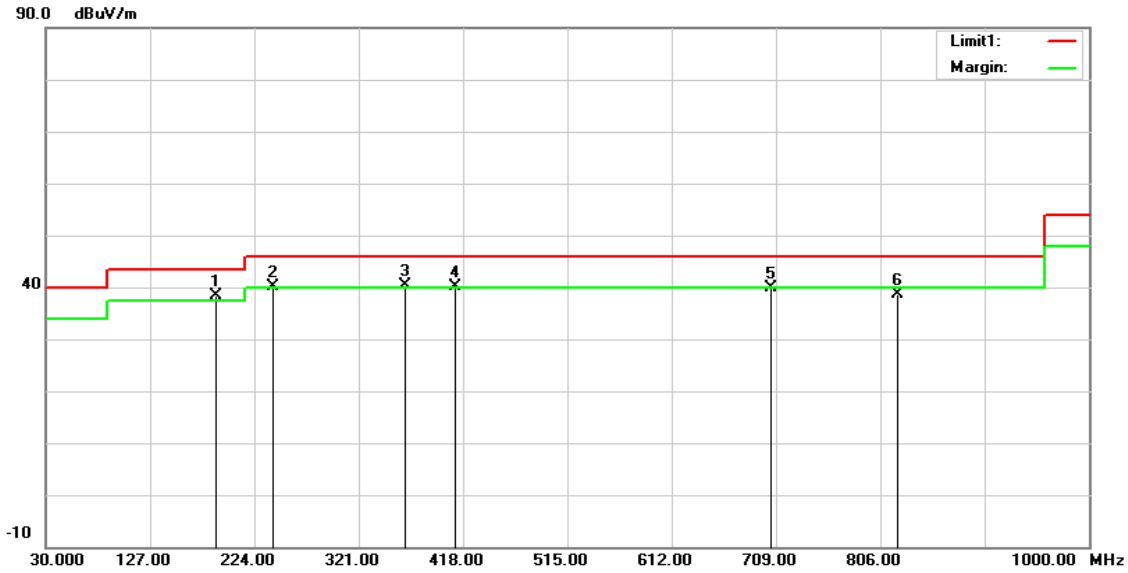
ANT-1							
Test Mode	Frequency (MHz)	Data Rate	RU Tone	RU Number	Average Output Power Measurement Results		Limit
					dBm	W	dBm
Mode 6	2412	MCS 0	242	1	16.82	0.048	≤ 30
	2437		242	1	17.54	0.057	≤ 30
	2462		242	1	16.23	0.042	≤ 30
	2467		242	1	11.24	0.013	≤ 30
	2472		242	1	11.29	0.013	≤ 30
Mode 7	2422	MCS 0	484	1	16.76	0.047	≤ 30
	2437		484	1	16.37	0.043	≤ 30
	2452		484	1	14.61	0.029	≤ 30
	2457		484	1	12.22	0.017	≤ 30
	2462		484	1	11.91	0.016	≤ 30

Note: The relevant measured result has the offset with cable loss already.

Annex C. Radiated Emission Measurement

Below 1 GHz

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Radiated Emission	Power:	AC 120 V/60 Hz
Frequency:	2462 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	Mode 4		
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	188.1100	45.66	-7.24	38.42	43.50	-5.08	QP
2	241.4600	46.34	-6.14	40.20	46.00	-5.80	QP
3	364.6500	43.38	-3.02	40.36	46.00	-5.64	QP
4	410.2400	41.94	-1.81	40.13	46.00	-5.87	QP
5	704.1500	35.87	4.04	39.91	46.00	-6.09	QP
6	821.5200	32.33	6.18	38.51	46.00	-7.49	QP

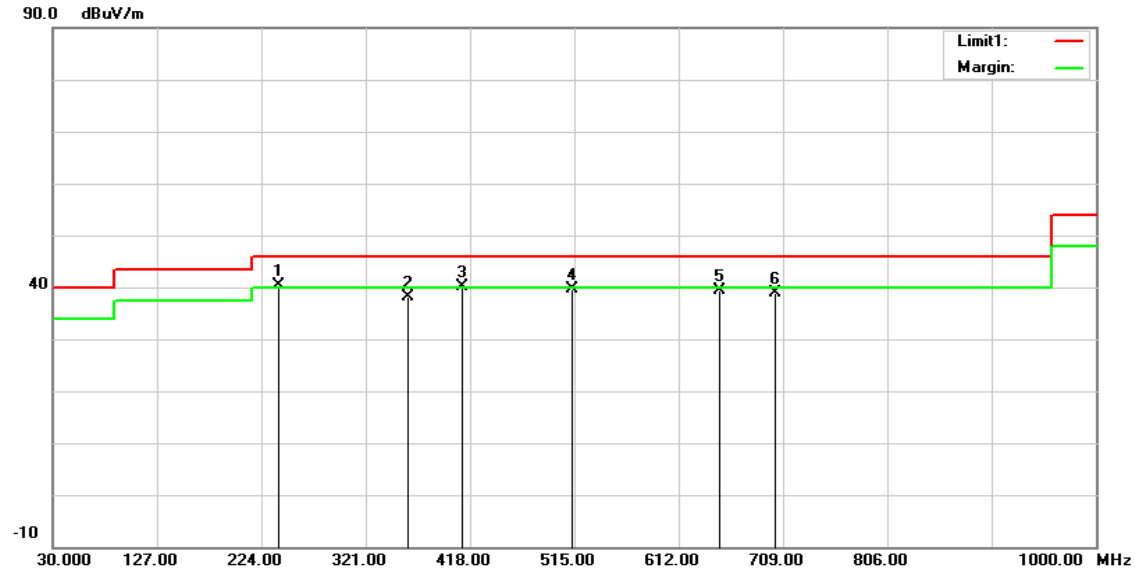
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

Example: 38.42 = -7.24 + 45.66

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Radiated Emission	Power:	AC 120 V/60 Hz
Frequency:	2462 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	Mode 4		
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	240.4900	46.42	-6.15	40.27	46.00	-5.73	QP
2	359.8000	41.32	-3.14	38.18	46.00	-7.82	QP
3	410.2400	41.82	-1.81	40.01	46.00	-5.99	QP
4	513.0600	39.46	0.17	39.63	46.00	-6.37	QP
5	649.8300	36.44	2.91	39.35	46.00	-6.65	QP
6	702.2100	34.96	4.00	38.96	46.00	-7.04	QP

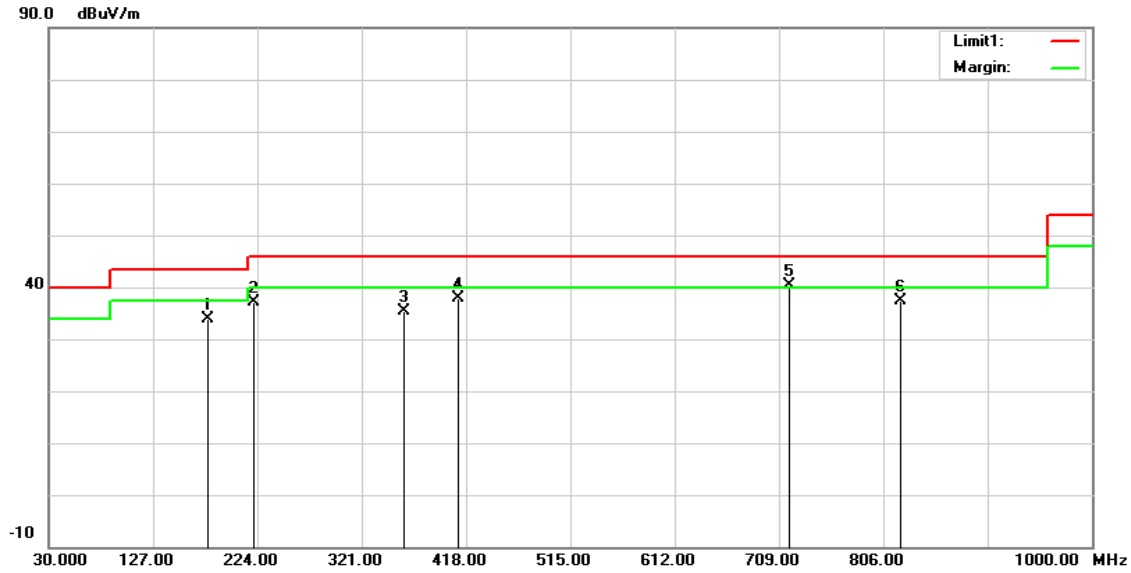
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

Example: 40.27 = -6.15 + 46.42

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Radiated Emission	Power:	AC 120 V/60 Hz
Frequency:	2462 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	Mode 6		
Ant.Polar.:	Horizontal		



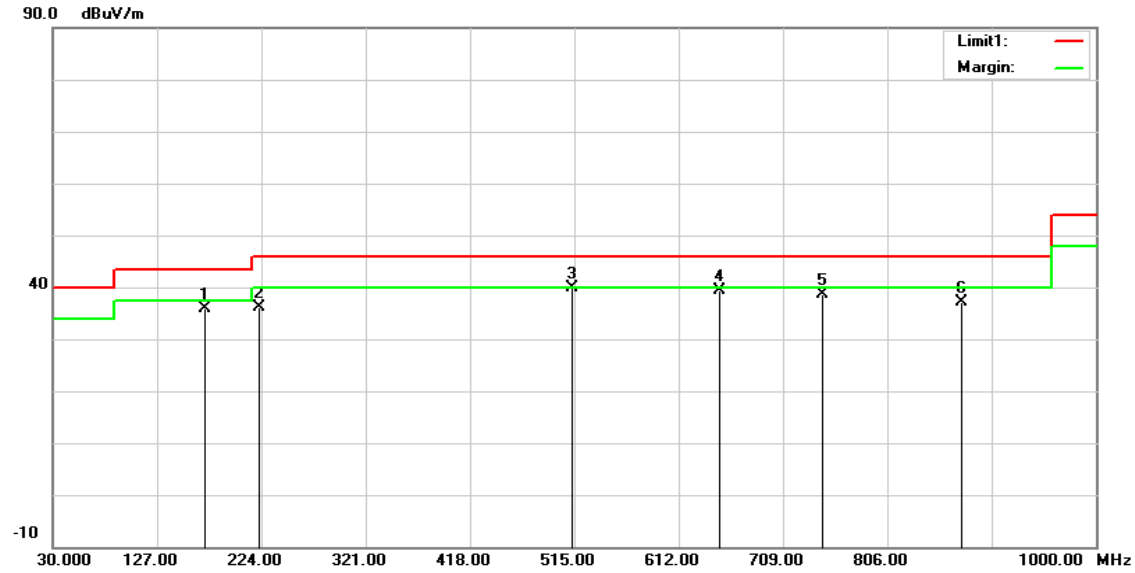
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	177.4400	40.32	-6.40	33.92	43.50	-9.58	QP
2	221.0900	44.28	-7.12	37.16	46.00	-8.84	QP
3	359.8000	38.50	-3.14	35.36	46.00	-10.64	QP
4	410.2400	39.73	-1.81	37.92	46.00	-8.08	QP
5	718.7000	36.08	4.41	40.49	46.00	-5.51	QP
6	821.5200	31.26	6.18	37.44	46.00	-8.56	QP

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15.247	Test Distance:	3 m
Test item:	Radiated Emission	Power:	AC 120 V/60 Hz
Frequency:	2462 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	Mode 6		
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	171.6200	41.90	-5.92	35.98	43.50	-7.52	QP
2	222.0600	43.26	-7.10	36.16	46.00	-9.84	QP
3	513.0600	39.80	0.17	39.97	46.00	-6.03	QP
4	649.8300	36.37	2.91	39.28	46.00	-6.72	QP
5	745.8600	33.59	5.10	38.69	46.00	-7.31	QP
6	874.8700	29.93	7.11	37.04	46.00	-8.96	QP

Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

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