

EMC Test Report

Applicant : LEXON
Product Type : POWERSOUND
Trade Name : LEXON
Model Number : LA128
EUT Rated Voltage : DC 5 V
Test Voltage : 120 Vac / 60 Hz
Test Specification : FCC 47 CFR PART 18 Subpart C
MP-5 : 1986
Receive Date : Nov. 26, 2020
Test Period : Dec. 01, 2020
Issue Date : Dec. 29, 2020

Issue by

A Test Lab Techno Corp.

101-104, 1F, A building, Safflower ridge industrial area,
Taoyuan street, Nanshan district, Shenzhen

Tel : +86-755-23987770 / Fax : +86-755-26637771

American Association for Laboratory Accreditation number: 3464.02



Note: This report shall not be reproduced except in full, without the written approval of A Test Lab Techno Corp. This document may be altered or revised by A Test Lab Techno Corp. personnel only, and shall be noted in the revision section of the document. The client should not use it to claim product endorsement by TAF, or any government agencies. The test results in the report only apply to the tested sample.

Approved By : Joyce Feng Reviewed By : Baret Wu
(Manager) (Joyce Feng) (Testing Engineer) (Baret Wu)



Revision History

Rev.	Issue Date	Revisions
00	Dec. 29, 2020	Initial Issue

TABLE OF CONTENTS

1	General Information	4
2	EUT Description.....	6
3	Test Methodology	7
3.1.	Decision of Test Mode.....	7
3.2.	EUT Exercise Software	7
3.3.	Configuration of Test System Details	8
3.4.	Test Instruments.....	9
4	Emission Test	10
4.1.	Conducted Emission	10
4.2.	Radiated Emission	11
5	Test Result	13
5.1.	Conducted Emission	13
5.2.	Radiated Emission	16

1 General Information

1.1 Summary of Test Result

Emission			
Standard	Item	Result	Remark
FCC 47 CFR PART 18 §18.307 (b)	Conducted Emission	PASS	Consumer Equipment
FCC 47 CFR PART 18 §18.305 (b)	Radiated Emission	PASS	Consumer Equipment

The test results of this report relate only to the tested sample(s) identified in this report. Manufacturer or whom it may concern should recognize the pass or fail of the test result.

Decision Rule

- ☒ Uncertainty is not included.
- ☐ Uncertainty is included.

1.2 Testing Location

Site Name: A Test Lab Techno Corp.
 Site Address: 101-104, 1F, A building, Safflower ridge industrial area,
 Taoyuan street, Nanshan district, Shenzhen
 Tel : +86-755-23987770
 Fax : +86-755-26637771

1.3 Measurement Uncertainty

Test Item		Frequency Range	Uncertainty (dB)
Conducted Emission	AC Power Port	150 kHz ~ 30 MHz	2.8

Test Item	Test Site	Frequency Range	Uncertainty (dB)
Radiated Emission	RE-026	9 kHz ~ 30 MHz	6.3

The Vertical and Horizontal measurement uncertainty of 30 MHz to 1GHz is evaluated and choose which polarity is worst value.

1.4 Test Site Environment

Test Item	Items	Required (IEC 60068-1)	Actual
Conducted Emission	Temperature (°C)	15-35	26
	Humidity (%RH)	25-75	60
	Barometric pressure (mbar)	860-1060	990



Radiated Emission	Temperature (°C)	15-35	26
	Humidity (%RH)	25-75	60
	Barometric pressure (mbar)	860-1060	990



2 EUT Description

Applicant	LEXON 125 avenue des Champs Elysées 75008 Paris France
Manufacturer	LEXON 125 avenue des Champs Elysées 75008 Paris France
Product Type	POWERSOUND
Trade Name	LEXON
Model Number	LA128
I/O Ports	Refer to User Manual
Highest Operating Frequency	2480 MHz

3 Test Methodology

3.1. Decision of Test Mode

3.1.1. The following test mode(s) were scanned during the preliminary test:

Pre-Test Mode
Mode 1: Bluetooth Link play sound + charging with wireless charger
Mode 2: Bluetooth Link play sound + wireless charging for Mobile Phone

3.1.2. After the preliminary scan, the following test mode was found to produce the highest emission level.

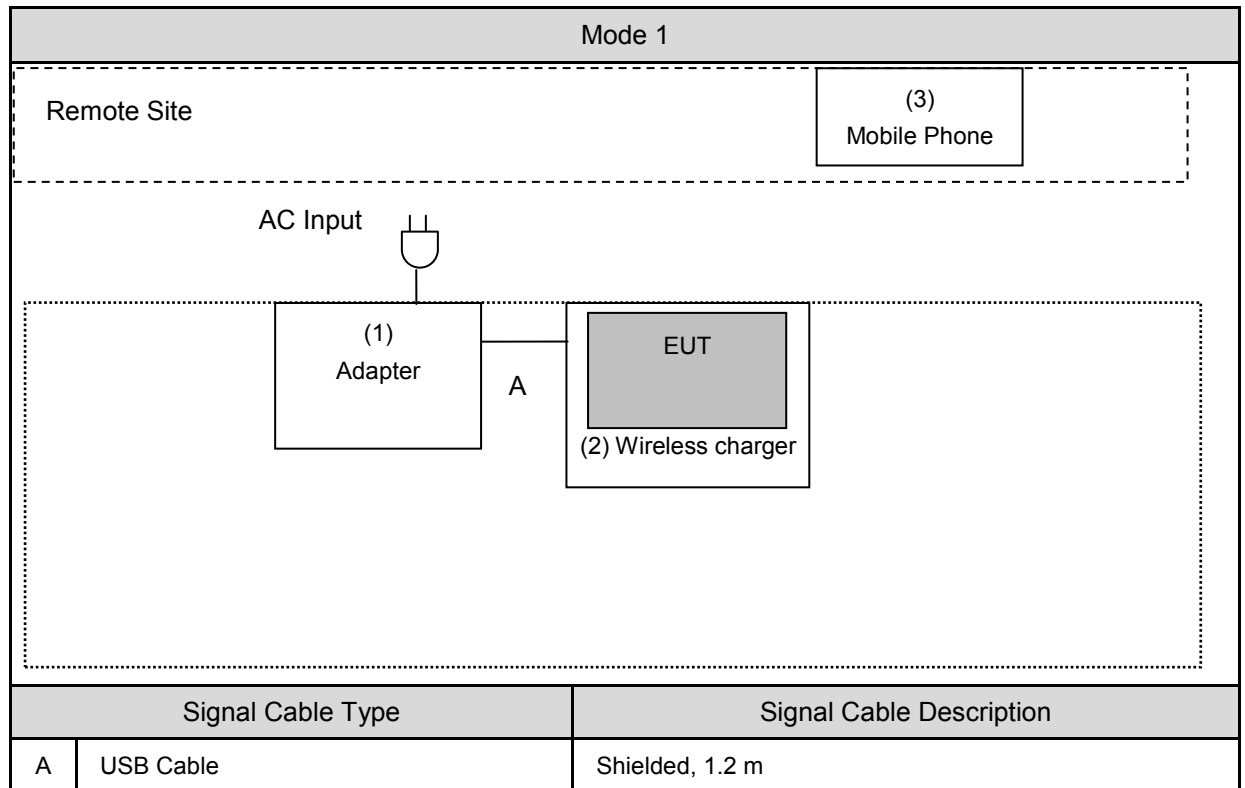
Final Test Mode			
Emission	Conducted Emission		Mode 1
	Radiated Emission	9 KHz-30 MHz	Mode 1
		Below 1 GHz	Mode 1
		Above 1 GHz	Mode 1

Then, the above highest emission mode of the configuration of the EUT and cable was chosen for all final test items.

3.2. EUT Exercise Software

1. Setup the EUT and simulators as shown on 3.3.
2. Turn on the power of all the equipment.
3. Turn on Bluetooth and Connect to Mobile Phone.
4. Start to test get the worst reading

3.3. Configuration of Test System Details



Devices Description					
	Product	Manufacturer	Model Number	Serial Number	Power Cord
(1)	Adapter	LENOVO	C-P56	N/A	Shielded, 1.2 m
(2)	Wireless charger	CORNING	LACA088	N/A	Shielded, 1.2 m
(3)	Mobile Phone	HUAWEI	TAS-AN00	N/A	N/A



3.4. Test Instruments

Test Period : Dec. 01, 2020

Conducted Emission test site					
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Test Receiver	R&S	ESR3	101923	09/01/2020	1 year
LISN	R&S	ENV216	101942	09/01/2020	1 year
ISN	TESEQ	ISN T800	39216	09/01/2020	1 year
RF Cable	EMCI	EMCCFD400	433LFC	09/01/2020	1 year
Test Site	ATL	CE	CE	N.C.R.	-----

Test Period : Dec. 01, 2020

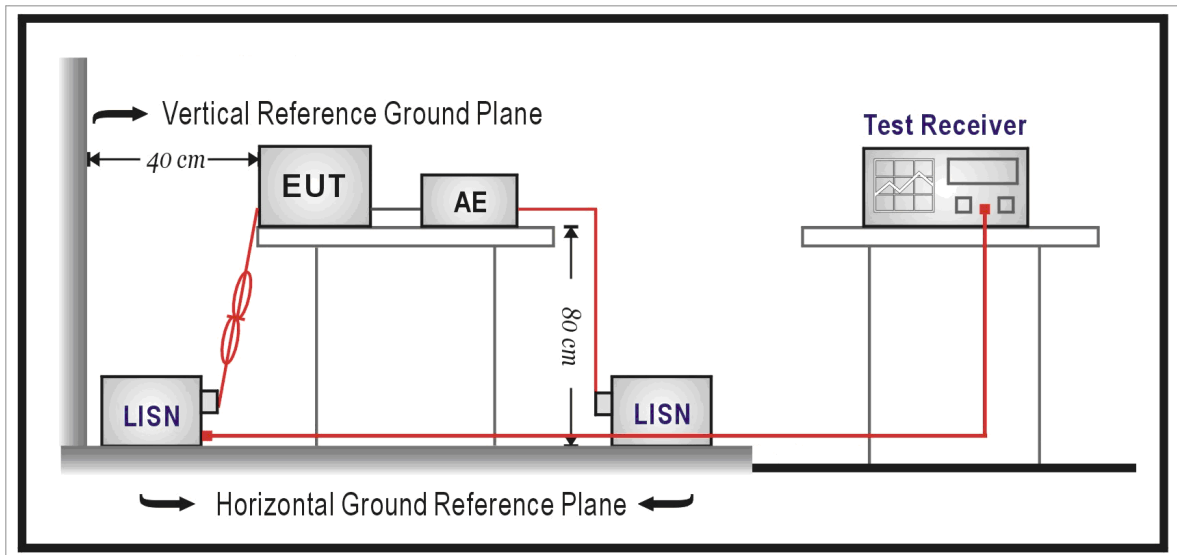
Radiated Emission - 3 Meter Chamber					
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Preamplifier	EMCI	EMC001330	980300	09/01/2020	1 year
Preamplifier	EMCI	EMC012645SE	980318	09/01/2020	1 year
Loop Antenna	EMCI	LAP600	272	10/16/2020	1 year
Bilog Antenna	Schwarzbeck	VULB 9168	672	10/16/2020	1 year
Horn Antenna	ETS	3117	00204949	10/16/2020	1 year
Receiver	Keysight	N9038A	MY51210179	09/01/2020	1 year
Cable	EMCI	N/A	1066LFC	09/01/2020	1 year
Cable	EMCI	N/A	160719	09/01/2020	1 year
Test Site	OuHeng	MFAC3M	RE-026	02/24/2020	1 year

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

4 Emission Test

4.1. Conducted Emission

■ Test Setup



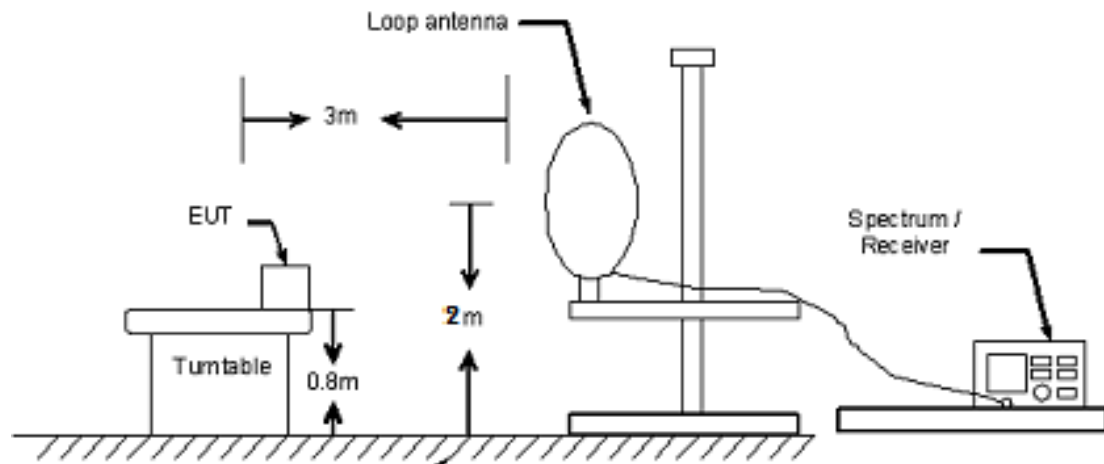
■ Test Procedure

- 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 40cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40cm 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 1m.
- LISN at least 80cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related item "Configuration of Test System Details" (section 3.3).

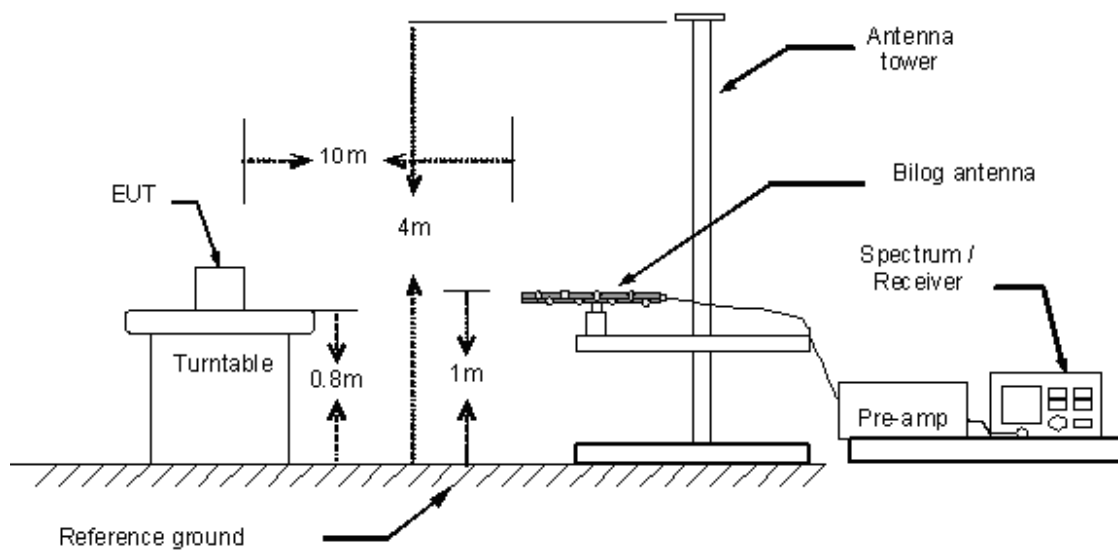
4.2. Radiated Emission

■ Setup

9 kHz ~ 30 MHz



30 MHz ~ 1 GHz



■ Test Procedure

- a) The measuring distance of at 3 m shall be used for measurement at frequency above 30 MHz. For frequencies above 30 MHz, any suitable measuring distance may be used.
- b) The EUT was placed on the top of a rotating table 0.8 m above the ground at 3m open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- c) The height of the equipment or the substitution antenna shall be 0.8m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d) The initial step in collecting radiated emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are marked and then Quasi Peak detector mode re-measured.
- e) If the Peak mode measured value compliance with and lower than Quasi Peak mode limit, the EUT shall be deemed to meet QP limits and then no additional QP mode measurement performed.
- f) In case the emission is lower than 30MHz, loop antenna has be used for measurement and the recorded data should be QP measured by receiver. High – low scan is not required in this case.
- g) In the frequency range of 9kHz – 30MHz, magnetic field measurements may be performed. The method is applicable for radiated radio noise from all units, cables, power coeds and interconnect cabling or wring. A calibrated loop antenna as specified in ANSI C63.4 (4.5.2) shall be positioned with its plane vertical at the specified distance from the EUT and rotated about its vertical axis for maximum response at each azimuth about the EUT. For certain application, the loop antenna may also need to be positioned horizontally at the specified distance from the EUT. The center of the loop shall be 1 m above the round.
- h) For field strength measurements:

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30
1.705 - 30	400
30 - 500	Tenth harmonic or 1000 MHz, whichever is higher.
500 - 1000	Tenth harmonic
Above 1000	Tenth harmonic or highest detectable emission

5 Test Result

5.1. Conducted Emission

■ Limit

Power Line

Frequency (MHz)	Quasi-peak (dBuV)	Average (dBuV)
0.15 - 0.5	66-56 *	56-46 *
0.50 - 5.0	56.00	46.00
5.0 - 30.0	60.00	50.00

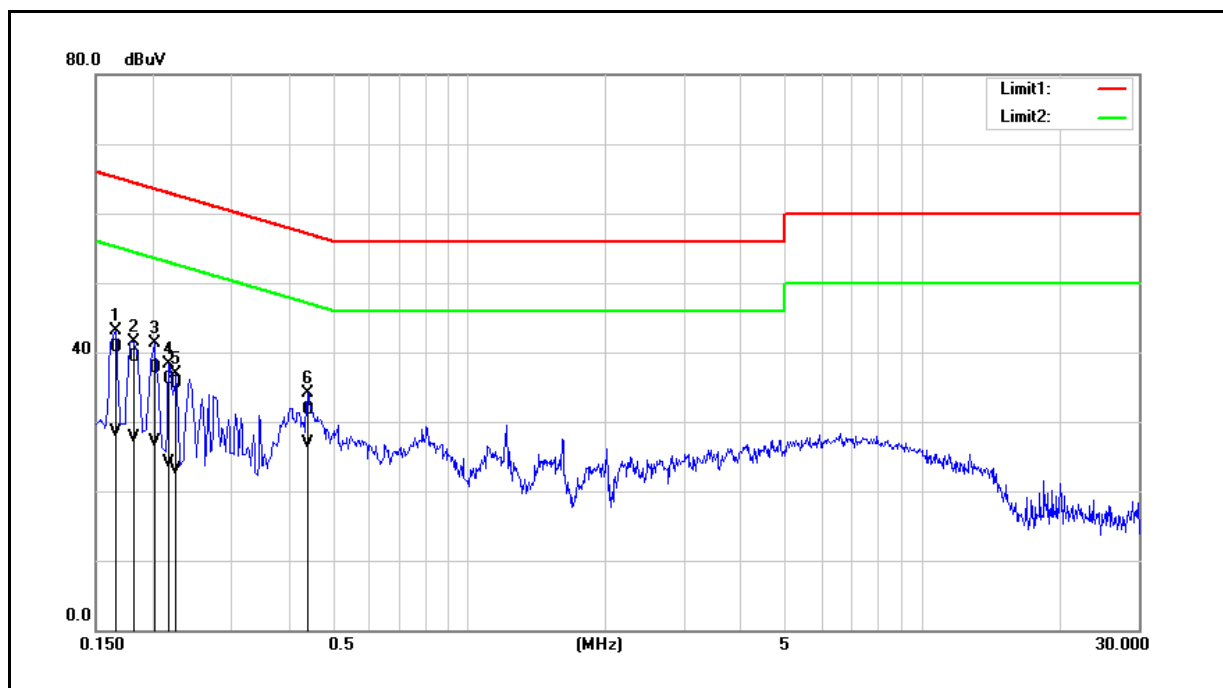
Note: (1) The Equipment is for 18.307(b) other part 18 consumer devices.

(2) The tighter limit applies at the band edges.

(3) The limit of "*" marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

Test Result

Standard:	FCC Part 18 §18.307(b)	Line:	L1
Test item:	Conducted Emission	Power:	AC 120 V/60 Hz
Mode:	Mode 1	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Description:			



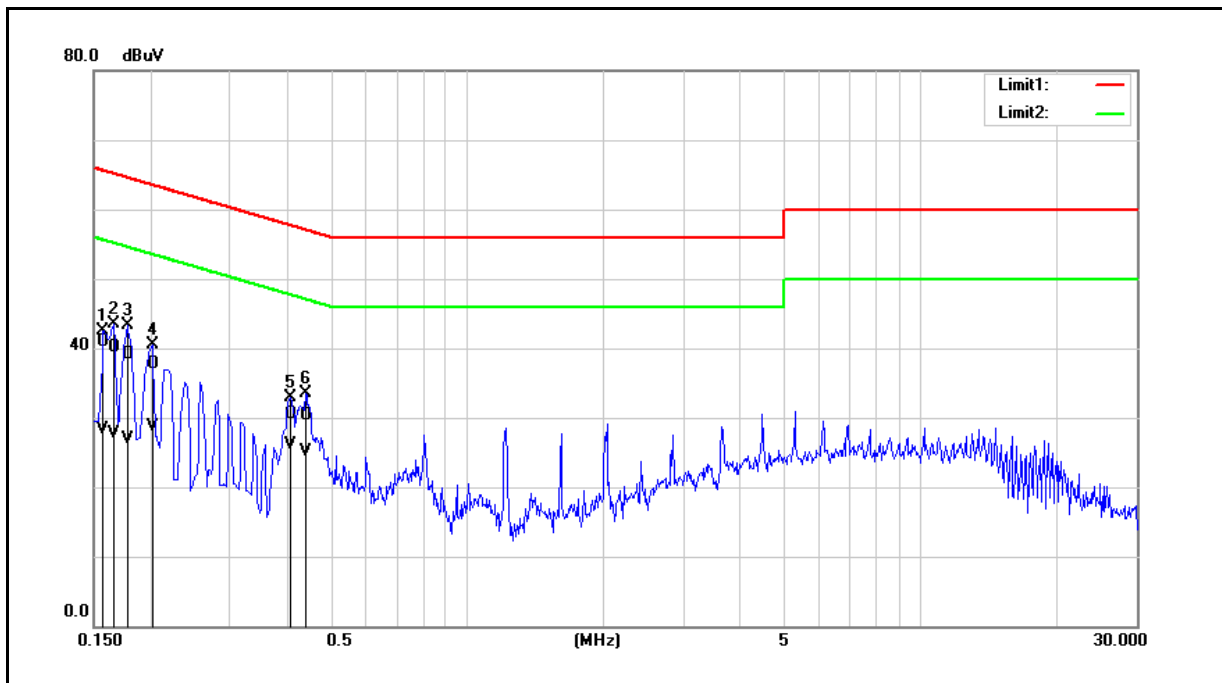
No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1660	30.37	18.19	10.24	40.61	28.43	65.16	55.16	-24.55	-26.73	Pass
2	0.1820	29.02	17.41	10.28	39.30	27.69	64.39	54.39	-25.09	-26.70	Pass
3	0.2020	27.45	16.75	10.29	37.74	27.04	63.53	53.53	-25.79	-26.49	Pass
4	0.2180	25.79	13.76	10.31	36.10	24.07	62.89	52.89	-26.79	-28.82	Pass
5	0.2260	25.27	12.81	10.33	35.60	23.14	62.60	52.60	-27.00	-29.46	Pass
6	0.4420	21.68	16.84	10.07	31.75	26.91	57.02	47.02	-25.27	-20.11	Pass

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

Example: 40.61=10.24+30.37

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

Standard:	FCC Part 18 §18.307(b)	Line:	N
Test item:	Conducted Emission	Power:	AC 120 V/60 Hz
Mode:	Mode 1	Temp.(°C)/Hum.(%RH):	26(°C)/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	0.1580	30.55	17.90	10.31	40.86	28.21	65.57	55.57	-24.71	-27.36	Pass
2	0.1660	29.89	17.50	10.30	40.19	27.80	65.16	55.16	-24.97	-27.36	Pass
3	0.1780	28.71	16.58	10.32	39.03	26.90	64.58	54.58	-25.55	-27.68	Pass
4	0.2020	27.44	18.31	10.32	37.76	28.63	63.53	53.53	-25.77	-24.90	Pass
5	0.4100	20.48	16.24	9.94	30.42	26.18	57.65	47.65	-27.23	-21.47	Pass
6	0.4420	20.34	15.19	9.94	30.28	25.13	57.02	47.02	-26.74	-21.89	Pass

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

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

5.2. Radiated Emission

■ Limit

9 k~30 MHz

Operating Frequency (MHz)	Measurement Distance at 300 meters		Measurement Distance at 3 meters
	(uV/m)	(dBuV/m)	(dBuV/m)
Any ISM	25	27.96	107.96
Any non-ISM	15	23.52	103.52

Note:

- (1) The Equipment is for 18.305(b). Any type unless otherwise specified (miscellaneous) operating frequency in any non-ISM frequency.
- (2) Limitation expressed in dBuV/m is calculated by $20\log$ emission level (uV/m).
- (3) Distance extrapolation factor = $40\log$ (specific distance / test distance) (dB), Limit line = specific limits (dBuV/m) + distance extrapolation factor.

Above 30 MHz

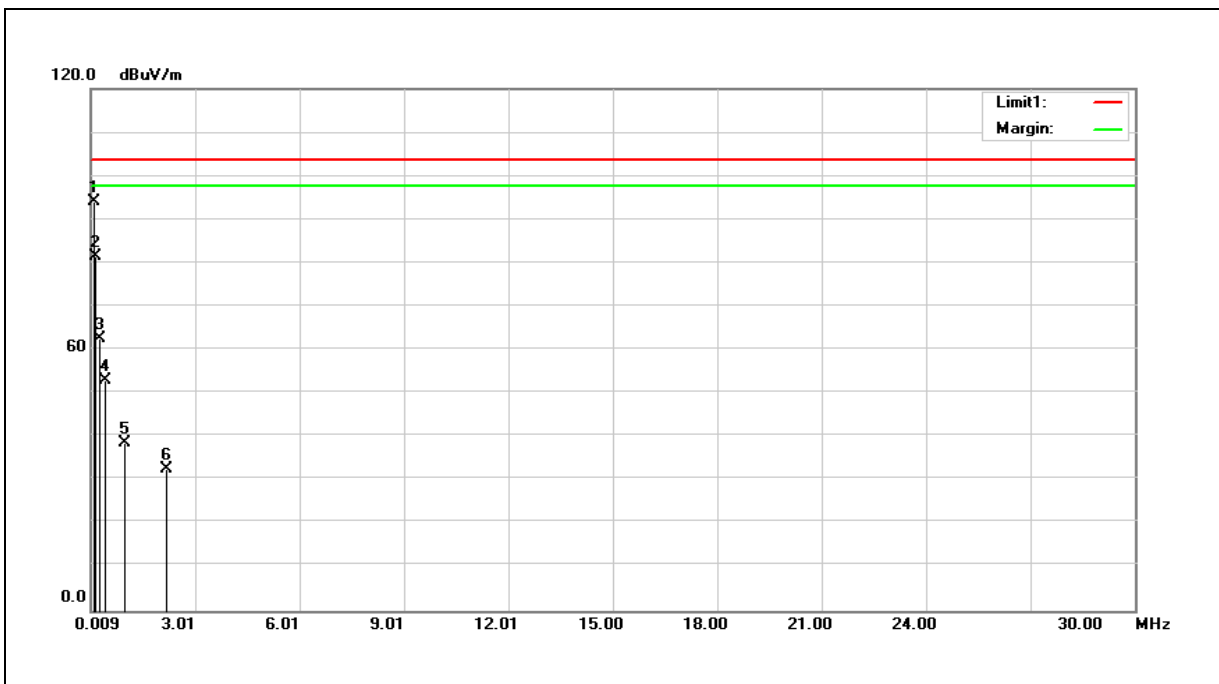
Operating Frequency (MHz)	Measurement Distance at 300 meters		Measurement Distance at 3 meters
	(uV/m)	(dBuV/m)	(dBuV/m)
Any ISM	25	27.96	67.96
Any non-ISM	15	23.52	63.52

Note:

- (1) The Equipment is for 18.305(b). Any type unless otherwise specified (miscellaneous) operating frequency in any non-ISM frequency.
- (2) Limitation expressed in dBuV/m is calculated by $20\log$ emission level (uV/m).
- (3) Distance extrapolation factor = $20\log$ (specific distance / test distance) (dB), Limit line = specific limits (dBuV/m) + distance extrapolation factor.

■ Test Result

Standard:	FCC Part 18 §18.305(b)	Test Distance:	3 m
Test item:	Radiated Emission	Power:	AC 120 V/60 Hz
Mode:	Mode 1 (9 kHz~30 MHz)	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	0.0894	58.65	35.46	94.11	103.50	-9.39	200	214	peak
2	0.1454	51.20	30.35	81.55	103.50	-21.95	100	187	peak
3	0.2650	37.57	25.12	62.69	103.50	-40.81	200	238	peak
4	0.4290	31.32	21.73	53.05	103.50	-50.45	200	119	peak
5	0.9987	22.35	16.20	38.55	103.50	-64.95	200	347	peak
6	2.1983	18.26	14.20	32.46	103.50	-71.04	200	347	peak

Note1:(1) Result (dBuV/m) = Correction factor (dB/m) + Reading(dBuV).

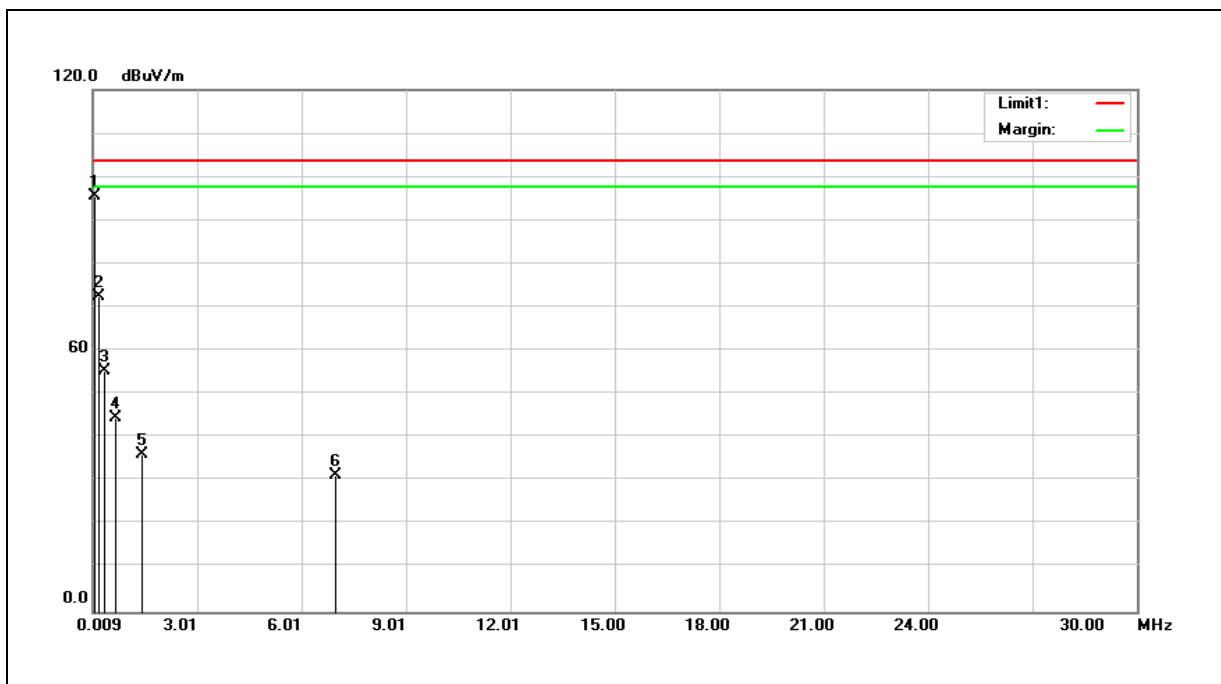
Example: 94.11 = 35.46+ 58.65

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

Note2: The level is measured at 3 meter and is converted into result at 300 meter.

300 m Limit (dBuV/m) change 3 m Limit (dBuV/m) = 300 m Limit (dBuV/m) + 40 log(300/3)

Standard:	FCC Part 18 §18.305(b)	Test Distance:	3 m
Test item:	Radiated Emission	Power:	AC 120 V/60 Hz
Mode:	Mode 1 (9 kHz~30 MHz)	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	0.0803	58.92	36.57	95.49	103.50	-8.01	200	214	peak
2	0.1931	44.45	28.01	72.46	103.50	-31.04	100	187	peak
3	0.3492	31.84	23.38	55.22	103.50	-48.28	200	238	peak
4	0.6687	26.08	18.52	44.60	103.50	-58.90	200	119	peak
5	1.4485	20.75	15.34	36.09	103.50	-67.41	200	347	peak
6	6.9970	18.66	12.58	31.24	103.50	-72.26	200	347	peak

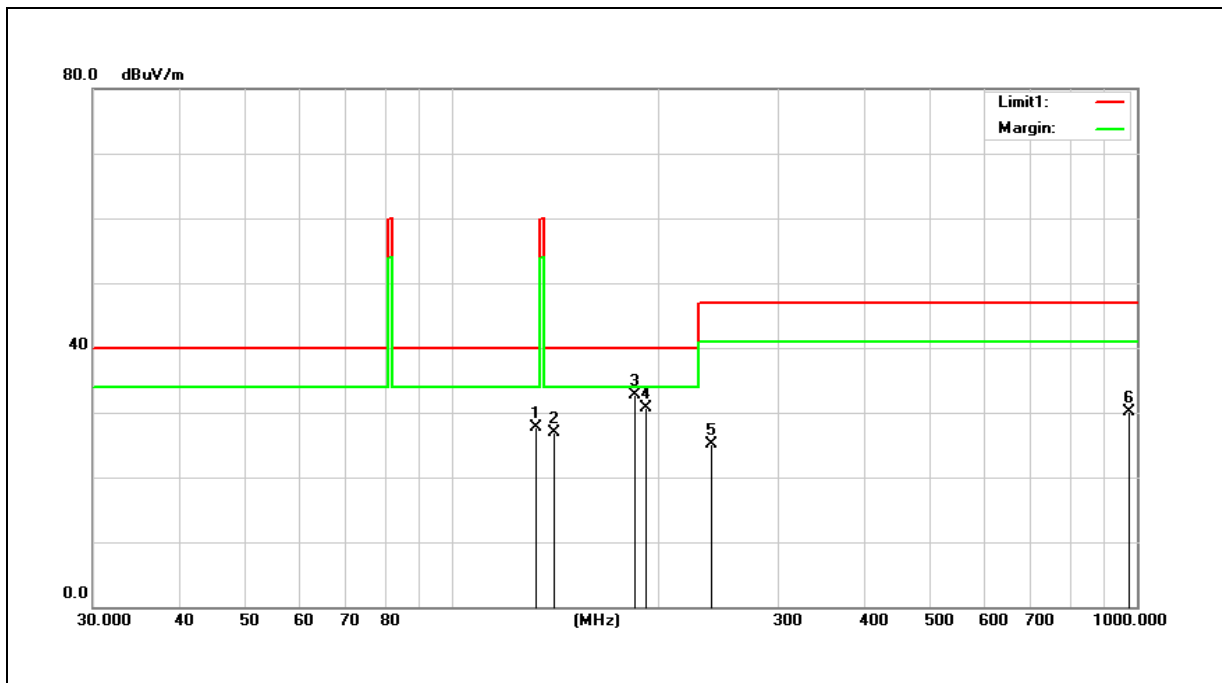
Note1:(1) Result (dBuV/m) = Correction factor (dB/m) + Reading(dBuV).

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

Note2: The level is measured at 3 meter and is converted into result at 300 meter.

300 m Limit (dBuV/m) change 3 m Limit (dBuV/m) = 300 m Limit (dBuV/m) + 40 log(300/3)

Standard:	FCC Part 18 §18.305(b)	Test Distance:	3 m
Test item:	Radiated Emission	Power:	AC 120 V/60 Hz
Mode:	Mode 1 (30 MHz ~ 1GHz)	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	132.8200	41.16	-13.54	27.62	40.00	-12.38	100	356	QP
2	141.5500	40.09	-13.14	26.95	40.00	-13.05	100	319	QP
3	185.2000	47.03	-14.31	32.72	40.00	-7.28	100	108	QP
4	192.9600	45.56	-14.91	30.65	40.00	-9.35	200	111	QP
5	240.4900	38.43	-13.25	25.18	47.00	-21.82	200	84	QP
6	974.7800	30.72	-0.62	30.10	47.00	-16.90	100	265	QP

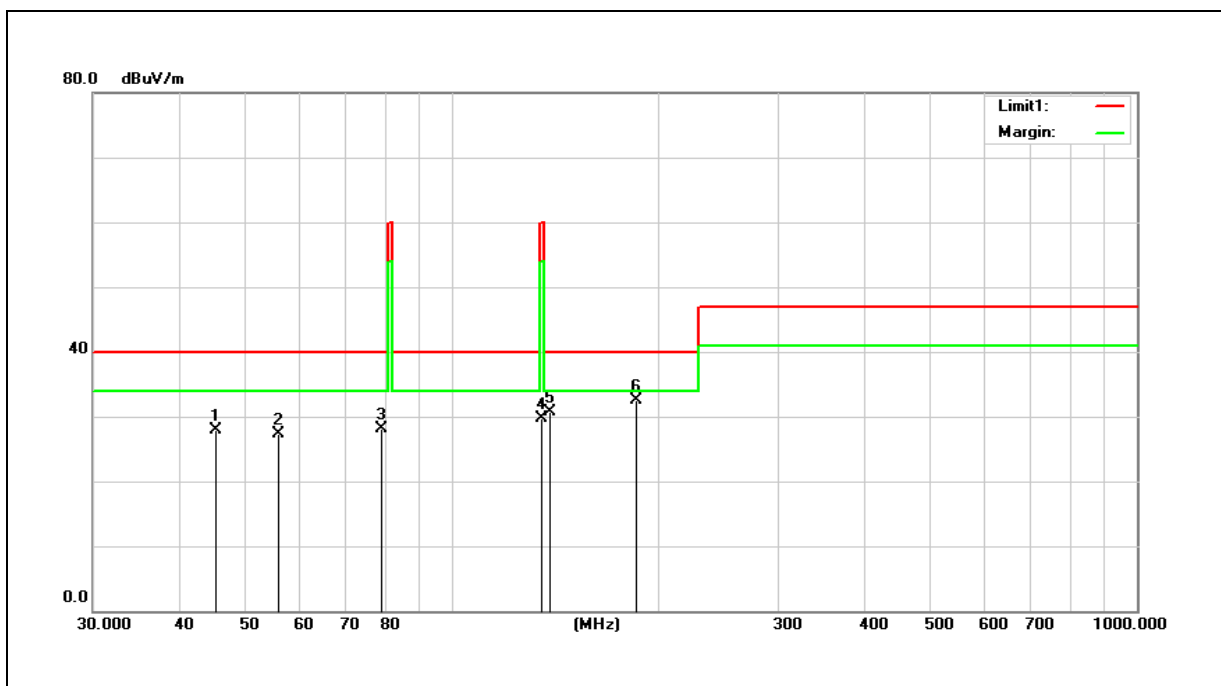
Note1:(1) Result (dBuV/m) = Correction factor (dB/m) + Reading(dBuV).

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

Note2: The level is measured at 3 meter and is converted into result at 300 meter.

300 m Limit (dBuV/m) change 3 m Limit (dBuV/m) = 300 m Limit (dBuV/m) + 40 log(300/3)

Standard:	FCC Part 18 §18.305(b)	Test Distance:	3 m
Test item:	Radiated Emission	Power:	AC 120 V/60 Hz
Mode:	Mode 1 (30 MHz ~ 1GHz)	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	45.5200	40.42	-12.48	27.94	40.00	-12.06	100	351	QP
2	56.1900	40.51	-13.22	27.29	40.00	-12.71	100	345	QP
3	79.4700	44.90	-16.76	28.14	40.00	-11.86	200	325	QP
4	135.7300	43.18	-13.40	29.78	60.00	-30.22	100	0	QP
5	139.6100	43.94	-13.22	30.72	40.00	-9.28	100	9	QP
6	186.1700	46.83	-14.37	32.46	40.00	-7.54	200	255	QP

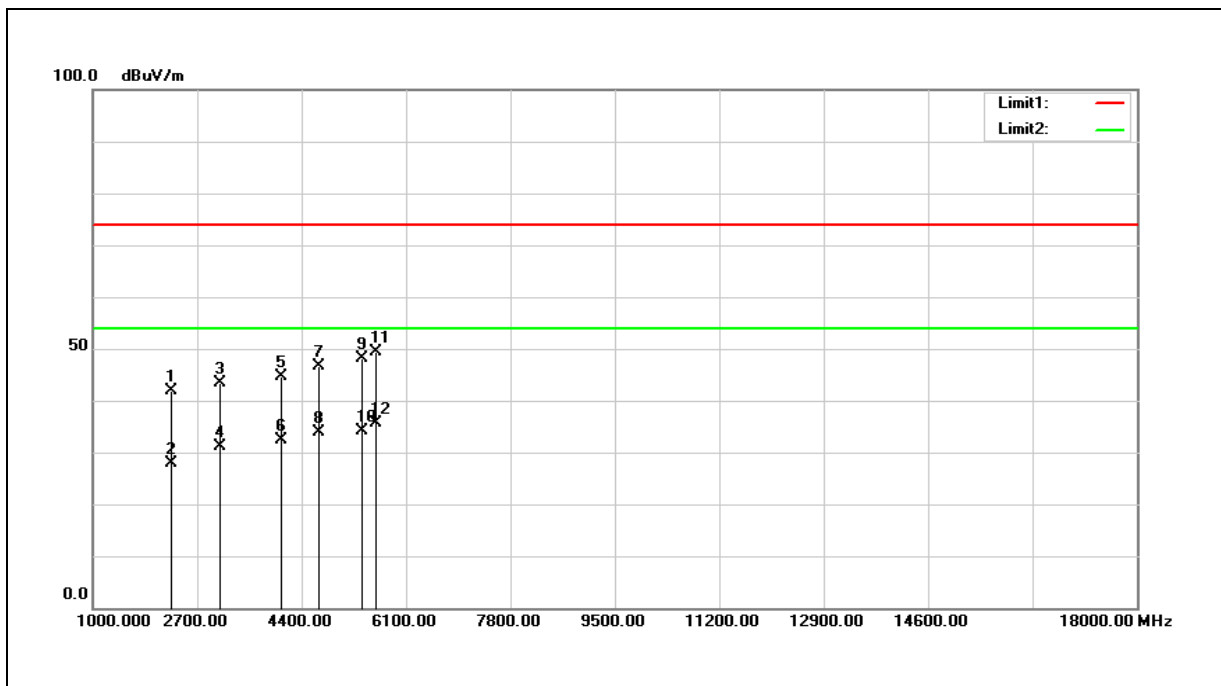
Note1:(1) Result (dBuV/m) = Correction factor (dB/m) + Reading(dBuV).

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

Note2: The level is measured at 3 meter and is converted into result at 300 meter.

300 m Limit (dBuV/m) change 3 m Limit (dBuV/m) = 300 m Limit (dBuV/m) + 40 log(300/3)

Standard:	FCC Part 18 §18.305(b)	Test Distance:	3 m
Test item:	Radiated Emission	Power:	AC 120 V/60 Hz
Mode:	Mode 1 (Above 1GHz)	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	2275.000	52.92	-11.08	41.84	74.00	-32.16	101	360	peak
2	2275.000	38.99	-11.08	27.91	54.00	-26.09	101	360	AVG
3	3074.000	51.96	-8.62	43.34	74.00	-30.66	200	0	peak
4	3074.000	39.75	-8.62	31.13	54.00	-22.87	200	0	AVG
5	4060.000	51.77	-7.21	44.56	74.00	-29.44	200	55	peak
6	4060.000	39.57	-7.21	32.36	54.00	-21.64	200	55	AVG
7	4689.000	52.28	-5.75	46.53	74.00	-27.47	100	131	peak
8	4689.000	39.68	-5.75	33.93	54.00	-20.07	100	131	AVG
9	5386.000	52.42	-4.36	48.06	74.00	-25.94	194	360	peak
10	5386.000	38.42	-4.36	34.06	54.00	-19.94	194	360	AVG
11	5607.000	53.22	-3.77	49.45	74.00	-24.55	200	278	peak
12	5607.000	39.33	-3.77	35.56	54.00	-18.44	200	278	AVG

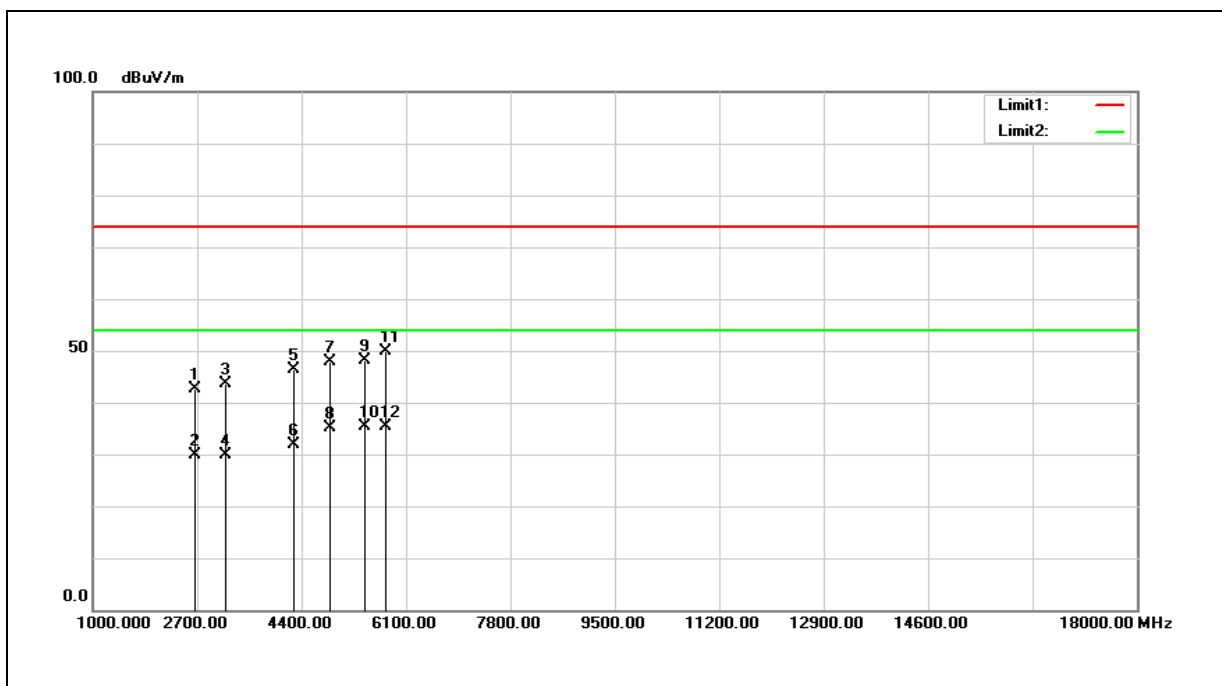
Note1:(1) Result (dBuV/m) = Correction factor (dB/m) + Reading(dBuV).

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

Note2: The level is measured at 3 meter and is converted into result at 300 meter.

300 m Limit (dBuV/m) change 3 m Limit (dBuV/m) = 300 m Limit (dBuV/m) + 40 log(300/3)

Standard:	FCC Part 18 §18.305(b)	Test Distance:	3 m
Test item:	Radiated Emission	Power:	AC 120 V/60 Hz
Mode:	Mode 1 (Above 1GHz)	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	2666.000	52.55	-9.96	42.59	74.00	-31.41	100	214	peak
2	2666.000	39.86	-9.96	29.90	54.00	-24.10	100	214	AVG
3	3159.000	52.21	-8.61	43.60	74.00	-30.40	200	132	peak
4	3159.000	38.49	-8.61	29.88	54.00	-24.12	200	132	AVG
5	4264.000	53.14	-6.66	46.48	74.00	-27.52	100	331	peak
6	4264.000	38.56	-6.66	31.90	54.00	-22.10	100	331	AVG
7	4859.000	53.44	-5.49	47.95	74.00	-26.05	100	220	peak
8	4859.000	40.52	-5.49	35.03	54.00	-18.97	100	220	AVG
9	5437.000	52.29	-4.24	48.05	74.00	-25.95	194	360	peak
10	5437.000	39.74	-4.24	35.50	54.00	-18.50	194	360	AVG
11	5777.000	53.04	-3.25	49.79	74.00	-24.21	200	256	peak
12	5777.000	38.67	-3.25	35.42	54.00	-18.58	200	256	AVG

Note1:(1) Result (dBuV/m) = Correction factor (dB/m) + Reading(dBuV).

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

Note2: The level is measured at 3 meter and is converted into result at 300 meter.

300 m Limit (dBuV/m) change 3 m Limit (dBuV/m) = 300 m Limit (dBuV/m) + 40 log(300/3)