EMC Test Report

Applicant	:	Edimax Technology Co., Ltd.
Product Type	:	11ac Wireless Dual-Band Selectable USB Adapter
Trade Name	:	EDIMAX
Model Number	:	EW-7822ULC
Applicable Standard	:	VCCI-CISPR32: 2016
Received Date	:	Mar. 19, 2021
Test Period	:	Mar. 26 ~ Apr. 01, 2021
Issued Date	:	Apr. 15, 2021

Issued by

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
Certified Scope: 9 kHz ~ 6 GHz

Note:

1. The test results are valid only for samples provided by customers and under the test conditions described in this report.
2. This report shall not be reproduced except in full, without the written approval of A Test Lab Technology Corporation.
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	Apr. 15, 2021	Initial Issue	Yutsen Chou

Verification of Compliance

Applicant	:	Edimax Technology Co., Ltd.
Product Type	:	11ac Wireless Dual-Band Selectable USB Adapter
Trade Name	:	EDIMAX
Model Number	:	EW-7822ULC
EUT Rated Voltage	:	DC 5 V
Test Voltage	:	100 Vac / 50 Hz
Applicable Standard	:	VCCI-CISPR32: 2016
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

The above equipment has been tested by A Test Lab Techno Corp., and found compliance with the requirements set forth in the CISPR32 and technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Approved By : Terry Ljao

(Manager) (Terry Liao)

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1 General Information

1.1. Summary of Test Result

Emission					
Standards	Item		Result	Remark	VCCI Test Site No.
VCCI-CISPR32: 2016	Conducted Emission	Mains power ports	PASS	Meet Class B limit	C-13275
		Telecommunication ports	N/A	This device does not have telecommunication port.	---
VCCI-CISPR32: 2016	Radiated Emission	Below 1 GHz	PASS	Meet Class B limit	R-12965
		Above 1 GHz	PASS	Meet Class B limit	G-10099

Reference: CISPR 32: 2015 / COR1: 2016

Decision Rule

■ Uncertainty is not included.

□ Uncertainty is included.

1.2. Measurement Uncertainty

Test Item		Frequency Range	Uncertainty (dB)
Conducted Emission	AC Power Port	9 kHz ~ 150 kHz	± 2.7
		150 kHz ~ 30 MHz	± 2.7
	Telecommunication Port	150 kHz ~ 30 MHz	± 2.8

Test Item	Test Site	Frequency Range		Uncertainty (dB)
Radiated Emission	TE06	30 MHz ~ 1000 MHz	Horizontal	± 4.4
			Vertical	± 4.5
	TE01	1000 MHz ~ 6000 MHz		± 5.2
	TE09	1000 MHz ~ 6000 MHz		± 5.0
Note: The Vertical and Horizontal measurement uncertainty of 1 GHz to 6 GHz is evaluated and choose which polarity is worst value.				

1.3. Test Site Environment

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

Site Description: Registration No. for TE02 Shielded Room for
(Main Power Conducted interface measurement) C-13275
Registration No. for TE02 Shielded Room for
(Telecommunication Port Conducted interface measurement) T-11683
Registration No. for TE01 3M Chamber G-10099
Registration No. for TE09 3M Chamber G-10484
Registration No. for TE06 10M Chamber R-12965

Site Name: A Test Lab Techno Corp.

Site Address: No. 140-1, Changan Street, Bade District,
Taoyuan City 33465, Taiwan (R.O.C.)
Tel：+886-3-2710188 / Fax：+886-3-2710190
http://www.atl-lab.com.tw/e-index.htm

2 EUT Description

Applicant	Edimax Technology Co., Ltd. No. 278, Xinhu 1st Road, Neihu Dist., Taipei City 11494, Taiwan, R.O.C.
Manufacturer	Edimax Technology Co., Ltd. No. 278, Xinhu 1st Road, Neihu Dist., Taipei City 11494, Taiwan, R.O.C.
Product Type	11ac Wireless Dual-Band Selectable USB Adapter
Trade Name	EDIMAX
Model Number	EW-7822ULC
I/O Ports	Refer to User Manual
The Highest Frequency	5850 MHz
EUT Power Rating	DC 5 V

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: Wi-Fi link mode Mode 2: Idle mode

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	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.

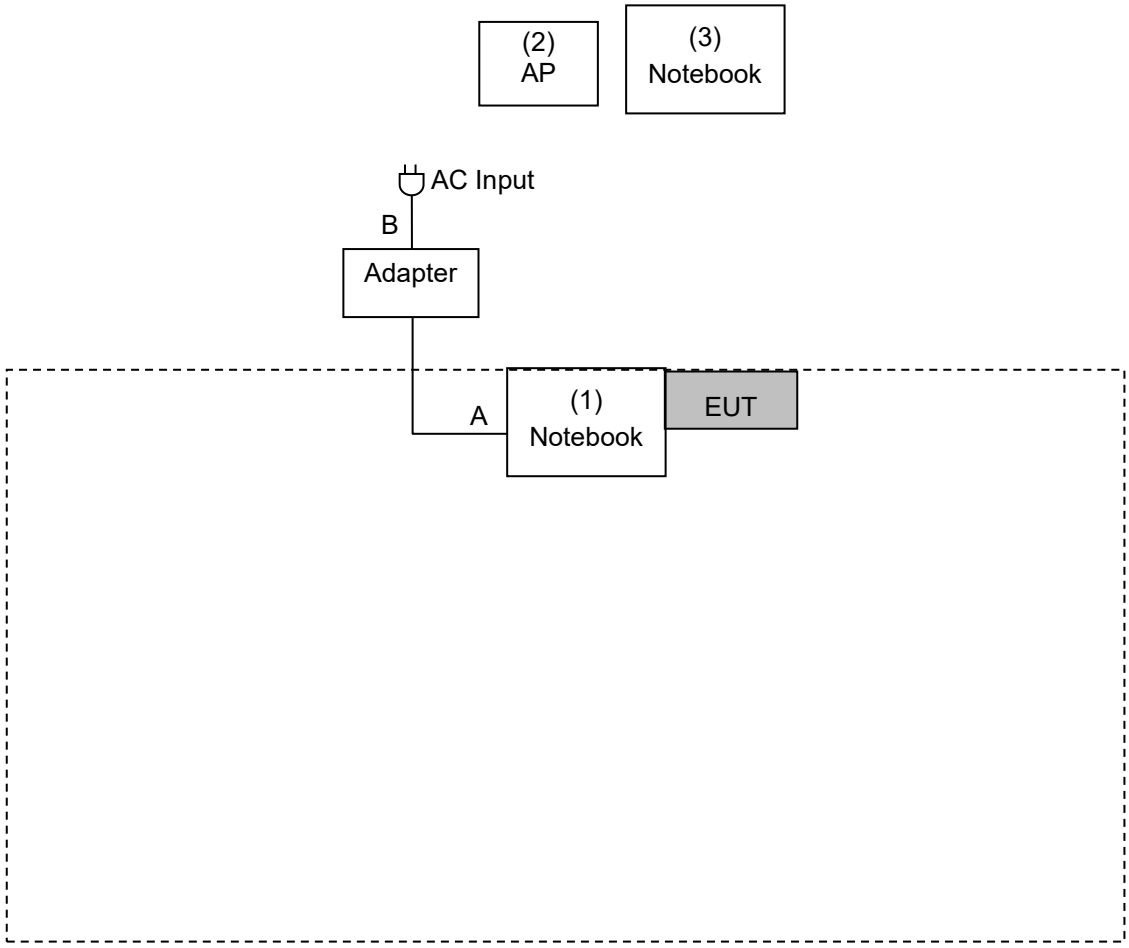
3.2. EUT Test Step

1.Setup the EUT and simulators as shown on 3.3.
2.Turn on the power of all equipment.
3.Notebook link to AP by EUT.
4.Data will be communicated between Notebook and AP through EUT.
5.Start to test and get the worst reading.

Measurement Software			
No.	Description	Software	Version
1	Conducted Emission	EZ EMC	1.1.4.3
2	Radiated Emission _ Below 1 GHz	EZ EMC	1.1.4.2
3	Radiated Emission _ Above 1 GHz	EZ EMC	1.1.4.4

3.3. Configuration of Test System Details

Mode 1



Signal Cable Type		Signal Cable Description
A	DC Power Cable	Non-Shielded, 1.8 m
B	AC Power Cable	Non-Shielded, 1.0 m

Devices Description					
Product		Manufacturer	Model Number	Serial Number	Power Cord
(1)	Notebook	DELL	LATITUDE E5440	25627158361	Non-Shielded, 0.8 m
(2)	AP	ASUS	MSQ-RTAC66U	D1IAGG000126	Non-Shielded, 1.8 m
(3)	Notebook	DELL	LATITUDE E5440	6699565657	Non-Shielded, 1.8 m

3.4. Test Instruments

Test Period : Mar. 29, 2021

Testing Engineer : Dean Ho

Conducted Emission test site					
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
Test Receiver	R&S	ESCI	100367	05/25/2020	1 year
LISN	R&S	ENV216	101041	04/06/2020	1 year
Cable	Woken	00100D1380194M	TE-02-03 (CB-098)	05/26/2020	1 year
Test Site	ATL	TE02	TE02	N.C.R.	-----

Test Period : Apr. 01, 2021

Testing Engineer : Andy Liu, Chichang Lin

Radiated Emission - 10 Meter Chamber					
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
Amplifier	EMCI	EMC9135	980298	11/02/2020	1 year
Amplifier	EMCI	EMC9135	980299	11/30/2020	1 year
Test Receiver	R&S	ESCI	100722	10/28/2020	1 year
Test Receiver	R&S	ESCI	101000	11/27/2020	1 year
Broadband Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB 9168	670	11/11/2020	1 year
Broadband Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB 9168	671	11/26/2020	1 year
RF Cable	EMC	EMC102-N-N-6000	TE06-H-1	02/15/2021	1 year
RF Cable	EMC	EMC102-N-N-7000	TE06-H-2	02/15/2021	1 year
RF Cable	EMC	EMC102-N-N-3000	TE06-H-3	02/15/2021	1 year
RF Cable	EMC	EMC102-N-N-1000	TE06-H-4	02/15/2021	1 year
RF Cable	EMC	EMC102-N-N-7000	TE06-V-2	02/15/2021	1 year
RF Cable	EMC	EMC102-N-N-3000	TE06-V-3	02/15/2021	1 year
RF Cable	EMC	EMC102-N-N-1000	TE06-V-4	02/15/2021	1 year
RF Cable	EMC	EMC104-N-N-6000	TE06-V-5	02/15/2021	1 year
Test Site	ATL	TE06	TE06	10/18/2020	1 year

Note1: N.C.R. = No Calibration Request.
Note2: Add Notch Filter to filter fundamental signal of 2.4 GHz/5 GHz WLAN communication.

Test Period : Mar. 26, 2021

Testing Engineer : Jason Chen

Radiated Emission - 3 Meter Chamber					
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
Spectrum Analyzer	Keysight	N9010A	MY52221312	01/18/2021	1 year
Amplifier (1-26.5 GHz)	EMCI	EMC012645SE	980289	01/15/2021	1 year
Double Ridged Horn Antenna (1-18 GHz)	ETS	3117	00128055	09/10/2020	1 year
Microwave Cable	SUHNER	suflex104	313229/4	02/19/2021	1 year
Microwave Cable	EMCI	EMC104-SM-SM-13000	170814	02/19/2021	1 year
Test Site(VSWR)	ATL	TE01	TE01	08/08/2020	1 year

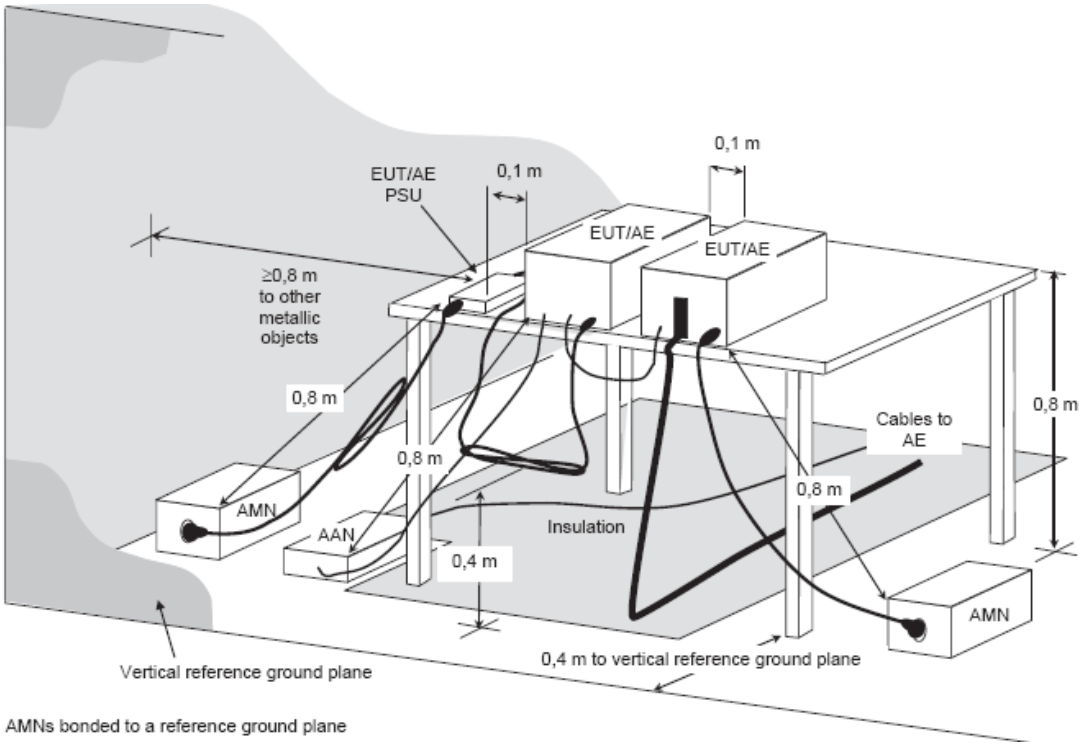
Note1: N.C.R. = No Calibration Request.
Note2: Add Notch Filter to filter fundamental signal of 2.4 GHz/5 GHz WLAN communication.

4 Measurement Procedure

4.1. Conducted Emission

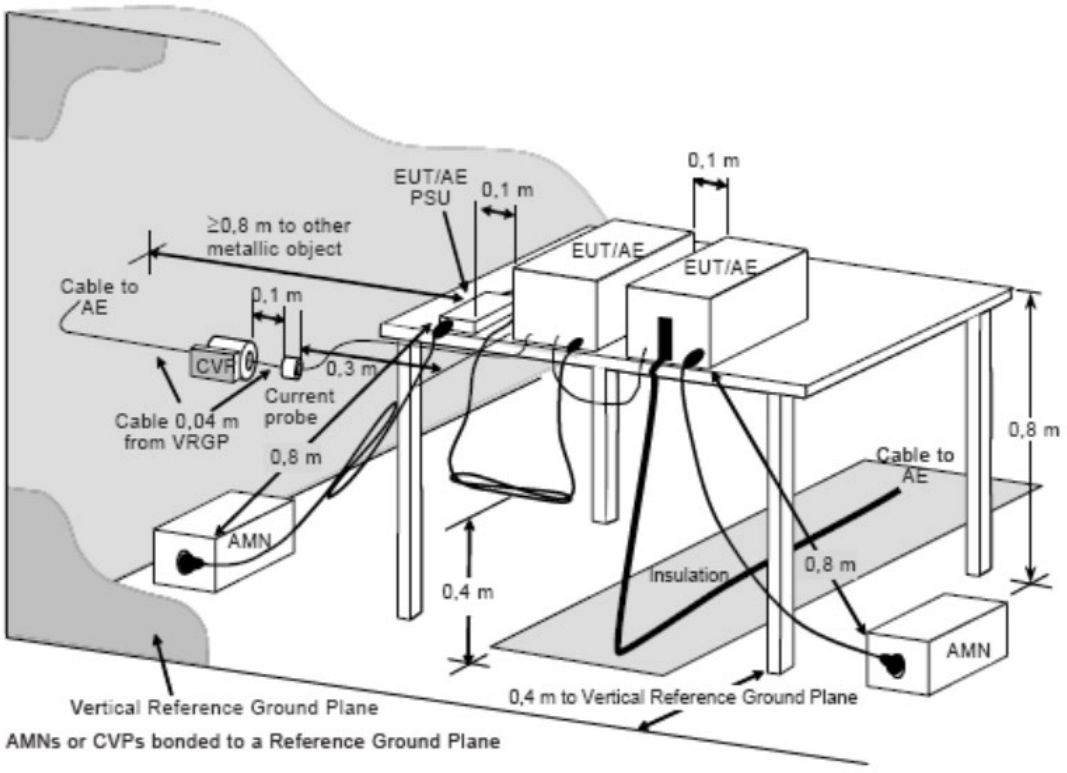
4.1.1. Test Setup

A.C. mains & Telecommunication(ISN) port setup



AMNs bonded to a reference ground plane

A.C. mains & Telecommunication(Current Probe) port setup



AMNs or CVPs bonded to a Reference Ground Plane

4.1.2. Test Procedure

A.C. Mains & Telecommunication port Conducted Interference

Procedure of Preliminary Test

The EUT and support equipment, if needed, were set up as per the test configuration to simulate typical usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per CISPR 32 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane, which has a less than 15 cm non-conductive covering to insulate the EUT from the ground plane.

All I/O cables were positioned to simulate typical actual usage as per CISPR 32 and if cable will drop to the grounded plane then it shall be used insulator which less than 150mm.

The EUT installed by AC main power and telecommunication port, through a Line Impedance Stabilization Network (LISN) ,ISN and current probe if EUT can accessed, which was supplied power source and was grounded to the ground plane. All support equipment power by a second LISN. When choose Current probe to measure shielding cable shall be break the external protective insulation and connect a 150 ohm resistor between the port and ground. The length shall be less than 0.3m.

The test program of the EUT was started. Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.

The Receiver scanned from 150 kHz to 30 MHz for emissions in each of the test modes.

During the above scans, the emissions were maximized by cable manipulation.

The test mode(s) described in Item 3.1 were scanned during the preliminary test.

After the preliminary scan, we found the test mode described in Item 3.1 producing the highest emission level.

The worst configuration of EUT and cable of the above highest emission level were recorded for reference of the final test.

Procedure of Final Test

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test.

A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.

The test data of the worst-case condition(s) was recorded.

Cables connecting to AE located outside the measurement area shall drop directly to, but be insulated from, the RGP shall be used thickness of the insulation and shall not be more than 150 mm. However, cables which would normally be bonded to ground should be bonded to the RGP in accordance with normal practice or the manufacturer's recommendation

Selecting suitable ISN for unscreened and screened cable. If ISN does not applied to the test then used current probe to measure different type screened or unscreened cable's interference

The port of the EUT was connected to the remote side support equipment through the ISN/Current Probe and communication in normal condition.

Making a overall range scan by using the test receiver controlled by controller and record at least six highest emissions for showing in the test report.

Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.

In case of measuring on the screened cable, the current limit shall be applied; otherwise the voltage limit should be applied.

The measure frequency from 150 kHz to 30 MHz using QP and AVG detector with RBW 9 kHz.

If the level of an isolated emission exceeds any relevant limit, it shall be ignored, provided that the following two conditions are met when measured over a two minute interval:

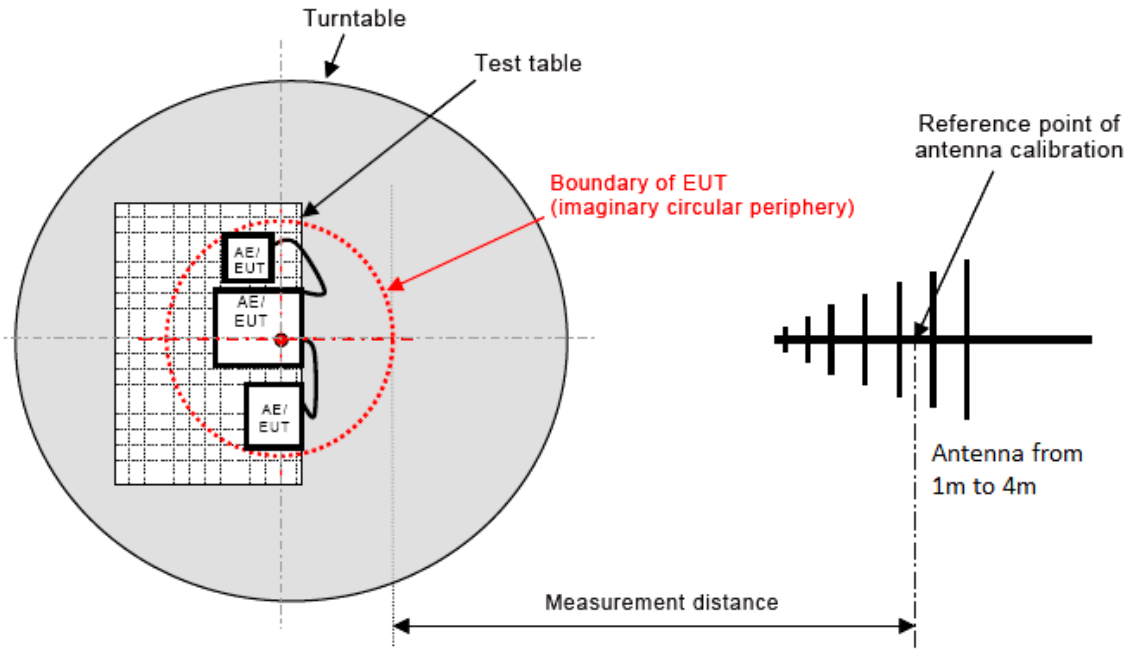
1) the emission does not exceed the limit for more than 1 s;

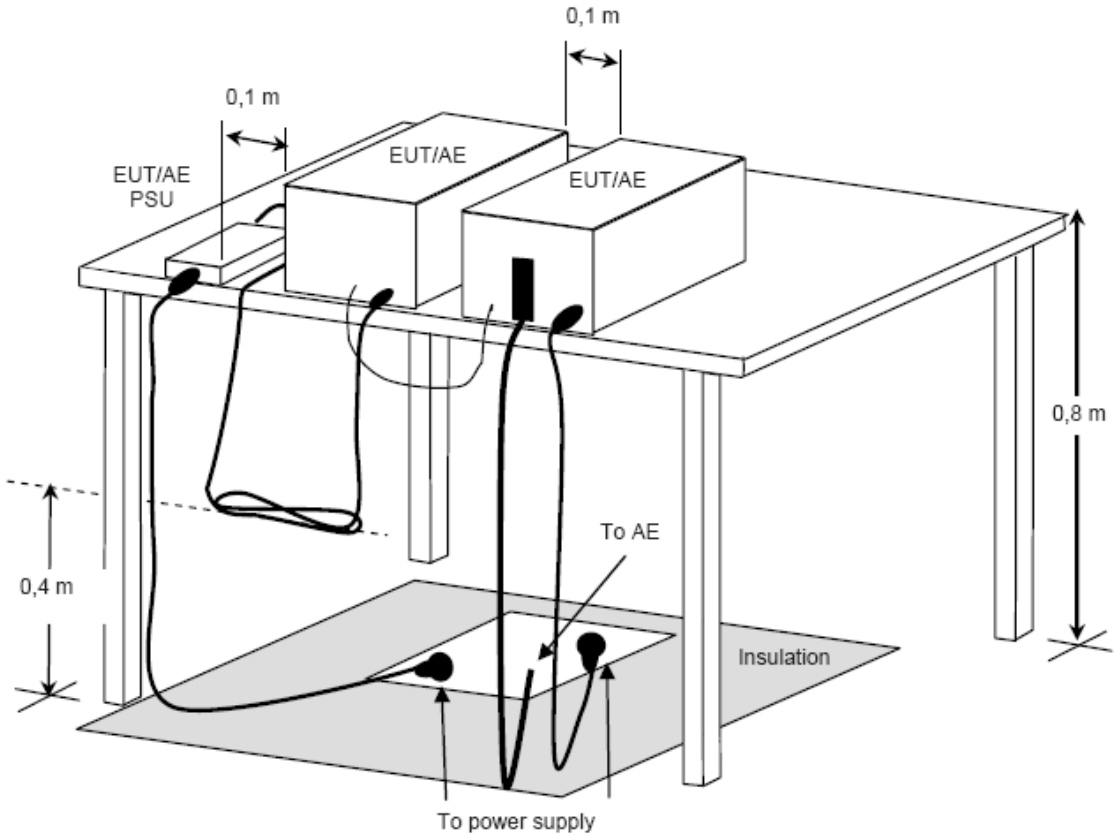
2) the emission does not exceed the limit more than once in any 15 s observation period.

4.2. Radiated Emission

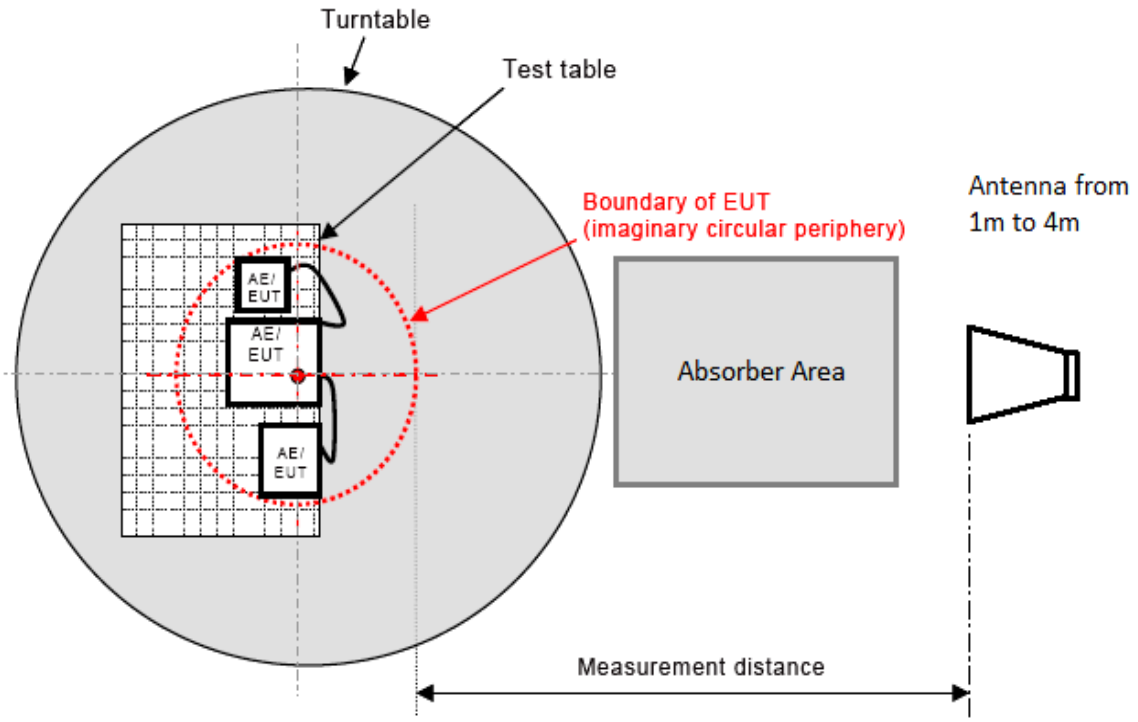
4.2.1. Test Setup

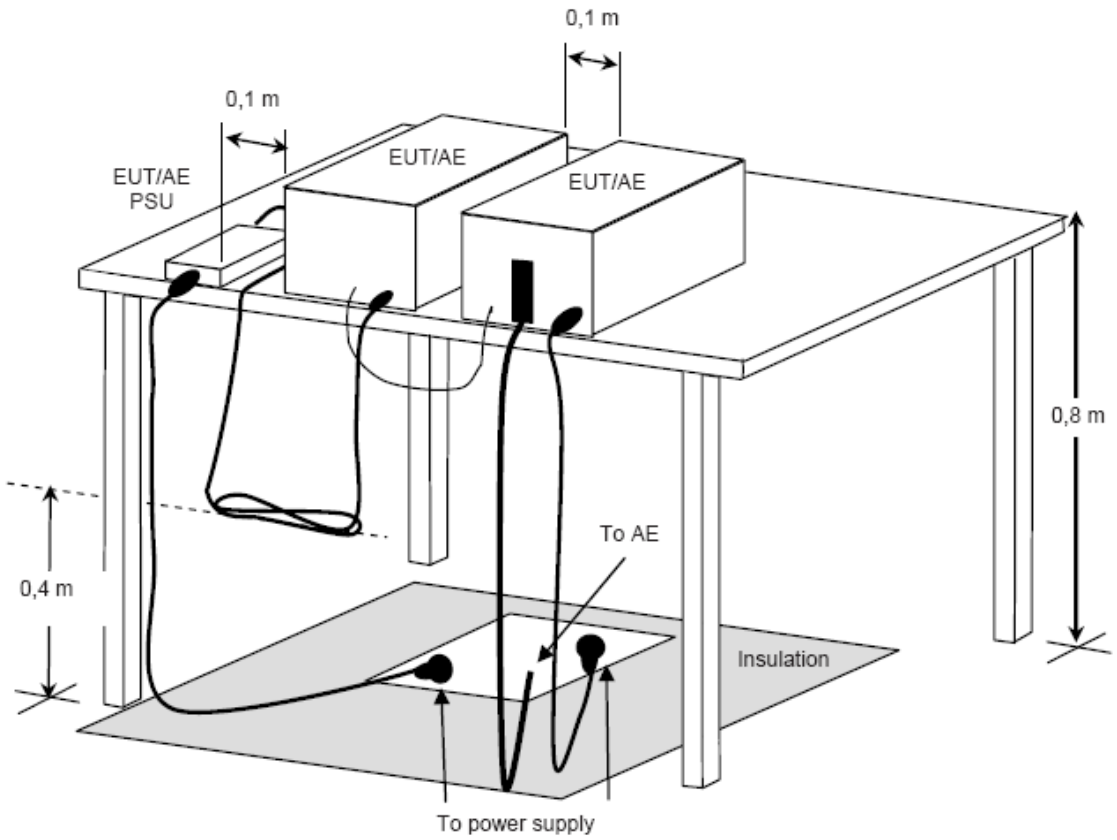
Below 1 GHz





Above 1 GHz


Turntable
Test table
Boundary of EUT
(imaginary circular periphery)
Antenna from
1m to 4m
AE/
EUT
AE/
EUT
AE/
EUT
Absorber Area
Measurement distance


0,1 m
0,1 m
EUT/AE
PSU
EUT/AE
EUT/AE
0,8 m
0,4 m
To AE
Insulation
To power supply

4.2.2. Test Procedure

Procedure of Preliminary Test

The equipment was set up as per the test configuration to simulate typical usage per the user's manual. When the EUT is a tabletop system, a wooden turntable with a height of 0.8 meters is used which is placed on the ground plane. When the EUT is a floor standing equipment, it is placed on the ground plane which has a less than 150 mm non-conductive covering to insulate the EUT from the ground plane.

Support equipment, if needed, was placed as per CISPR32.

All I/O cables were positioned to simulate typical usage as per CISPR32.

The EUT received AC power source from the outlet socket under the turntable. All support equipment power received from another socket under the turntable.

The antenna was placed at 3 or 10 meter away from the EUT as stated in CISPR32 about test and arrangement method (See Annex C and Annex D). The antenna connected to the Spectrum Analyzer via a cable and at times a pre-amplifier would be used.

The Analyzer / Receiver quickly scanned from 30 MHz to 1 GHz and 1 GHz to 6 GHz. The EUT test program was started. Emissions were scanned and measured rotating the EUT to 360 degrees and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level (For Below 1 GHz) and keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response (For Above 1 GHz).

The test mode(s) described in Item 3.1 were scanned during the preliminary test:

After the preliminary scan, we found the test mode described in Item 3.1 producing the highest emission level.

The worst configuration of EUT and cable, antenna position, polarization and turntable position of the above highest emission levels were recorded for the final test.

Procedure of Final Test

EUT and support equipment were set up on the turntable as per the configuration with highest emission level in the preliminary test.

The Analyzer / Receiver scanned from 30 MHz to 6000 MHz. Emissions were scanned and measured rotating the EUT to 360 degrees, varying cable placement and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.

Record at least the six highest emissions. Emission frequency, amplitude, antenna position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit and Q.P. (For Below 1 GHz) or Peak/Average (For Above 1 GHz) reading is presented.

Cables connecting to AE located outside the measurement area shall drop directly to, but be insulated from, the RGP (or turntable where applicable), and then be routed directly to the place where they leave the test site. The thickness of the insulation shall not be more than 150 mm. However, cables which would normally be bonded to ground should be bonded to the RGP in accordance with normal practice or the manufacturer's recommendation

The test data of the worst-case condition(s) was recorded.

5 Test Result

5.1. Conducted Emission

■ **Limit**

A.C. Mains ports limit

Frequency (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.5 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

Note: (1) If the average limit is met in the measurement with quasi-peak detector, the measurement with average detector is unnecessary.

(2) The limits shall decreases linearly with the logarithm of the frequency in the range 150 kHz - 500 kHz.

(3) The lower limit shall apply at the transition frequency.

Telecommunication ports limit

Requirement (MHz)	Class A Equipment				Class B Equipment			
	Voltage Limit (dBμV)		Current Limit (dBμA)		Voltage Limit (dBμV)		Current Limit (dBμA)	
	QP	Avg.	QP	Avg.	QP	Avg.	QP	Avg.
0.15 to 0.50	97 to 87	84 to 74	53 to 43	40 to 30	84 to 74	74 to 64	40 to 30	30 to 20
0.50 to 30	87	74	43	30	74	64	30	20

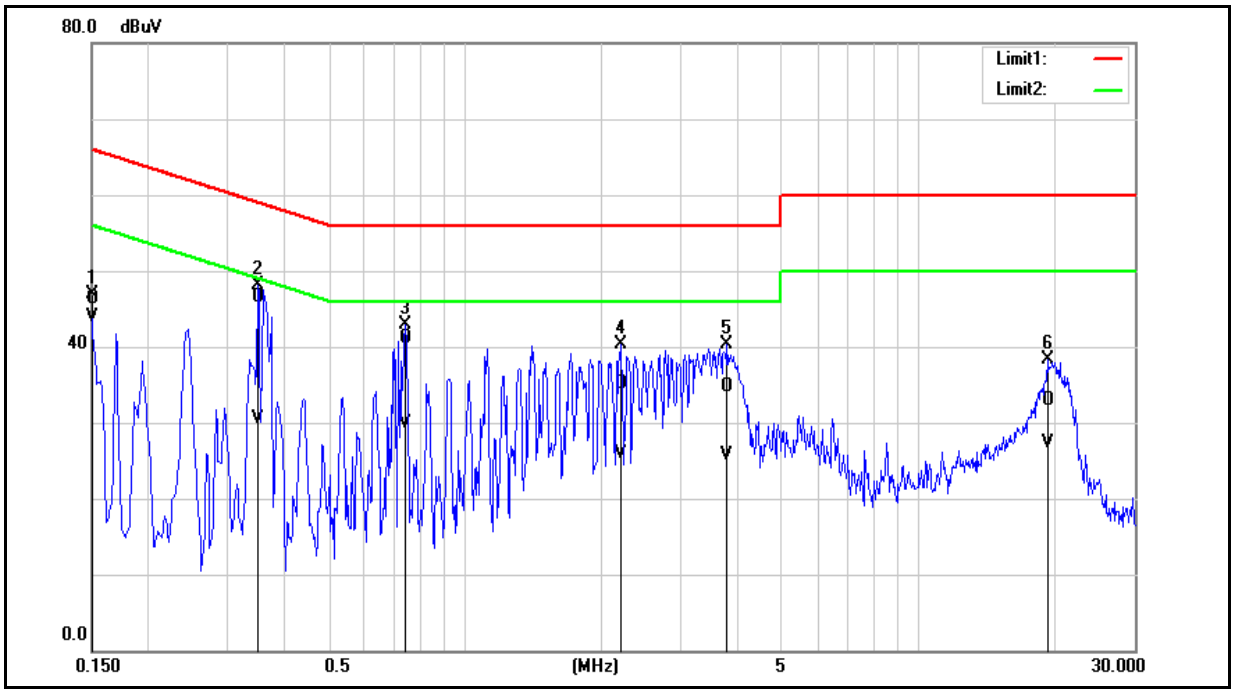
Note: (1) The limits decrease linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

(2) If the average limit is met in a measurement with quasi-peak detector receiver, the measurement with average detector receiver at the same frequency is unnecessary.

(3) The conversion factor between voltage limits and current limits is 20 $\log_{10}$ 150 = 44 dB.

■ Test Result

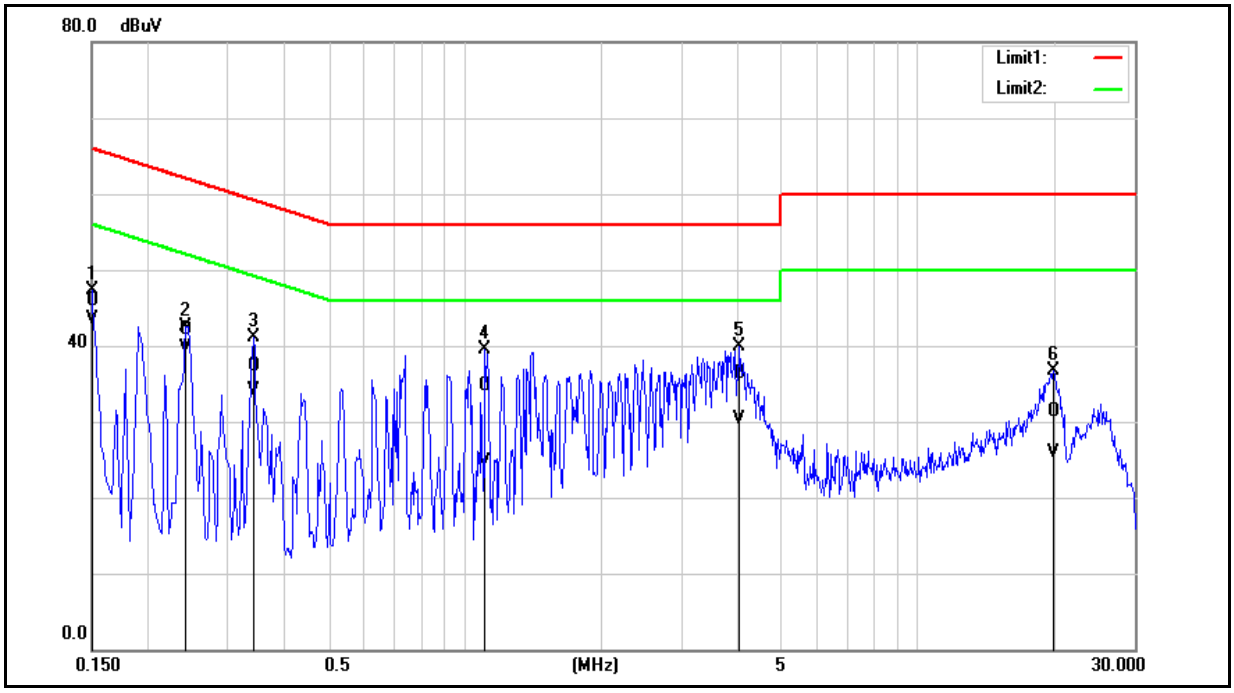
Test Standard:	CISPR32	Line:	L1
Test Mode:	Mode 1	Power:	AC 100 V / 50 Hz
Description:			



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	0.1500	36.52	34.14	9.70	46.22	43.84	66.00	56.00	-19.78	-12.16	Pass
2	0.3500	36.84	20.76	9.70	46.54	30.46	58.96	48.96	-12.42	-18.50	Pass
3	0.7380	31.34	20.14	9.70	41.04	29.84	56.00	46.00	-14.96	-16.16	Pass
4	2.2020	25.36	16.10	9.76	35.12	25.86	56.00	46.00	-20.88	-20.14	Pass
5	3.7940	24.82	16.00	9.79	34.61	25.79	56.00	46.00	-21.39	-20.21	Pass
6	19.3020	22.82	17.30	10.03	32.85	27.33	60.00	50.00	-27.15	-22.67	Pass

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).
2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

Test Standard:	CISPR32	Line:	N
Test Mode:	Mode 1	Power:	AC 100 V / 50 Hz
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	0.1500	36.15	33.90	9.70	45.85	43.60	66.00	56.00	-20.15	-12.40	Pass
2	0.2420	32.37	30.08	9.70	42.07	39.78	62.03	52.03	-19.96	-12.25	Pass
3	0.3420	27.54	24.45	9.70	37.24	34.15	59.15	49.15	-21.91	-15.00	Pass
4	1.1060	25.00	15.06	9.71	34.71	24.77	56.00	46.00	-21.29	-21.23	Pass
5	4.0340	26.43	20.60	9.79	36.22	30.39	56.00	46.00	-19.78	-15.61	Pass
6	19.8700	21.29	15.78	10.03	31.32	25.81	60.00	50.00	-28.68	-24.19	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**

Below 1 GHz

Frequency (MHz)	dBuV/m (Distance 10m)		dBuV/m (Distance 3m)	
	Class A	Class B	Class A	Class B
30 ~ 230	40	30	50	40
230 ~ 1000	47	37	57	47

Note: (1) The lower limit shall apply at the transition frequency.

(2) A measuring distance of 10 m is a primary requirement. However, distance of 3 m may also be allowed for the measurement with facilities registered as such in accordance with the regulations for voluntary measures. If the measuring distance is 3 m, add 10 dB to the quasi-peak limit above.

Above 1 GHz

Frequency (MHz)	dBuV/m (Distance 3m)			
	Class A		Class B	
	Average	Peak	Average	Peak
1000 ~ 3000	56	76	50	70
3000 ~ 6000	60	80	54	74

Note: (1) The lower limit applies at the transition frequency.

(2) If the average limit is met in the measurement with peak detector, the measurement with average detector at the same frequency is unnecessary.

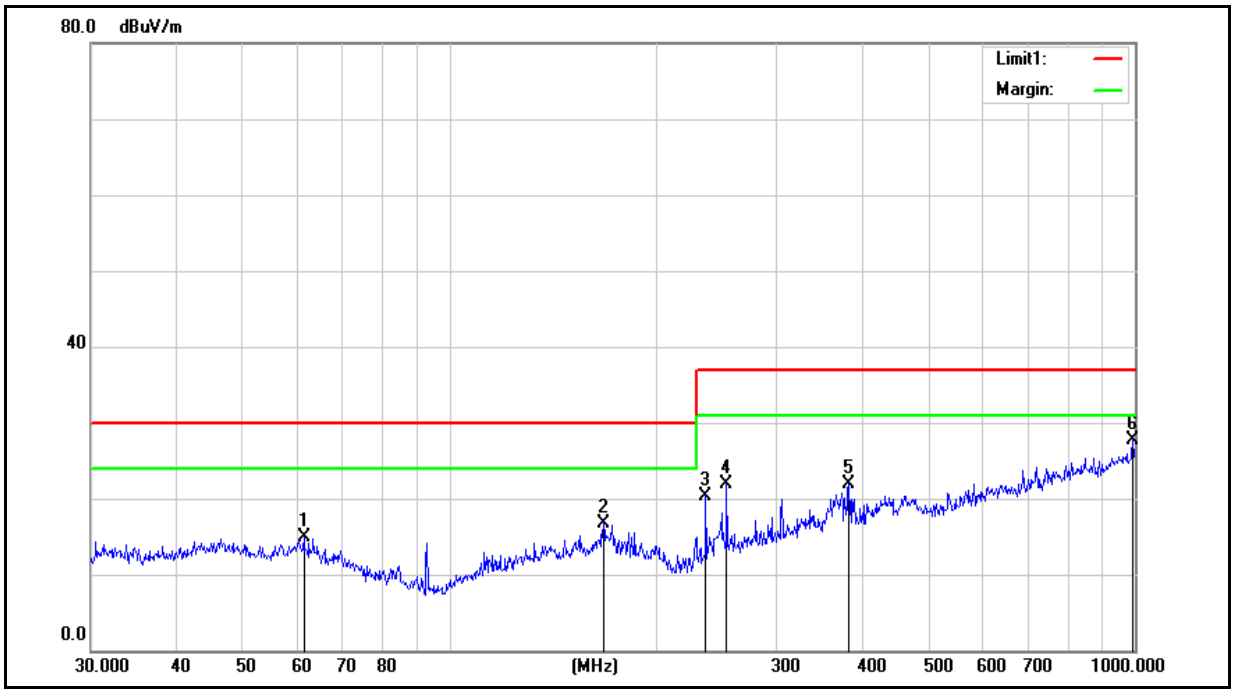
(3) For radiated measurement conversion(dm), use the equation followings,

$E_{3m}=E_{xm}+20\log(d/3)$ dBμV/md: measurement distance(m)

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 108	1000
108 - 500	2000
500 - 1000	5000
Above 1000	5th harmonic of the highest frequency or 6 GHz, whichever is lower

■ **Test Result**

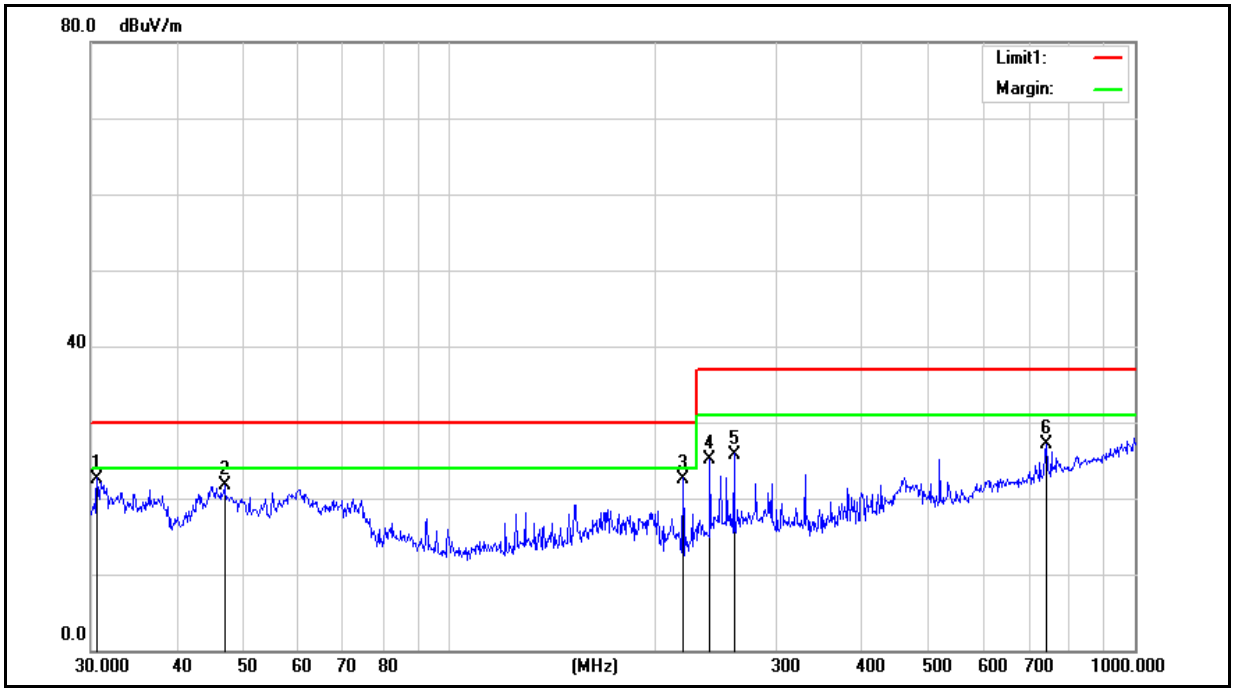
Test Standard:	CISPR32	Test Distance:	10 m
Test Mode:	Mode 1	Power:	AC 100 V / 50 Hz
Measurement Range:	30 MHz~1 GHz	Ant.Polar.:	Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	61.3463	33.12	-18.22	14.90	30.00	-15.10	200	15	QP
2	167.8243	33.66	-16.86	16.80	30.00	-13.20	400	360	QP
3	236.6447	38.83	-18.43	20.40	37.00	-16.60	300	359	QP
4	253.8367	39.65	-17.75	21.90	37.00	-15.10	300	359	QP
5	382.5880	35.96	-14.06	21.90	37.00	-15.10	200	15	QP
6	993.0114	32.93	-5.13	27.80	37.00	-9.20	300	359	QP

Note: 1. Result (dBuV/m) = Correction factor (dB/m) + Reading(dBuV).
Example: 14.90 = -18.22 + 33.12
2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

Test Standard:	CISPR32	Test Distance:	10 m
Test Mode:	Mode 1	Power:	AC 100 V / 50 Hz
Measurement Range:	30 MHz~1 GHz	Ant.Polar.:	Vertical



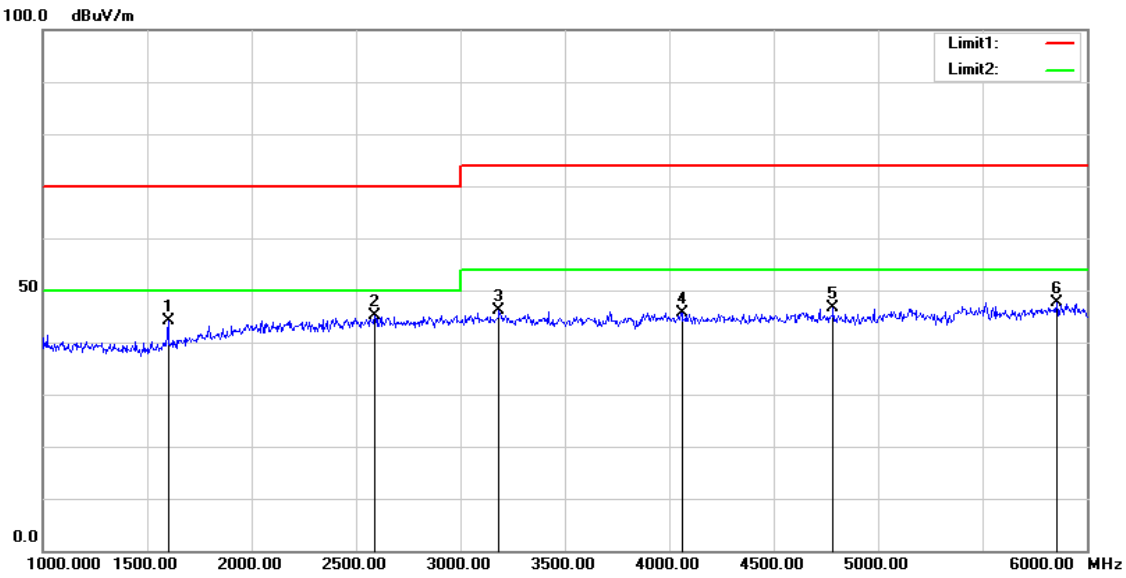
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	30.6380	40.90	-18.30	22.60	30.00	-7.40	100	127	QP
2	46.9948	38.14	-16.44	21.70	30.00	-8.30	244	0	QP
3	219.0753	40.94	-18.34	22.60	30.00	-7.40	100	73	QP
4	239.9874	41.86	-16.76	25.10	37.00	-11.90	200	0	QP
5	260.1444	41.85	-16.05	25.80	37.00	-11.20	100	271	QP
6	742.2587	31.82	-4.72	27.10	37.00	-9.90	100	28	QP

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

Example: 22.60 = -18.30 + 40.90

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

Test Standard:	CISPR32	Test Distance:	3 m
Test Mode:	Mode 1	Power:	AC 100 V / 50 Hz
Measurement Range:	1 GHz~6 GHz	Ant.Polar.:	Horizontal



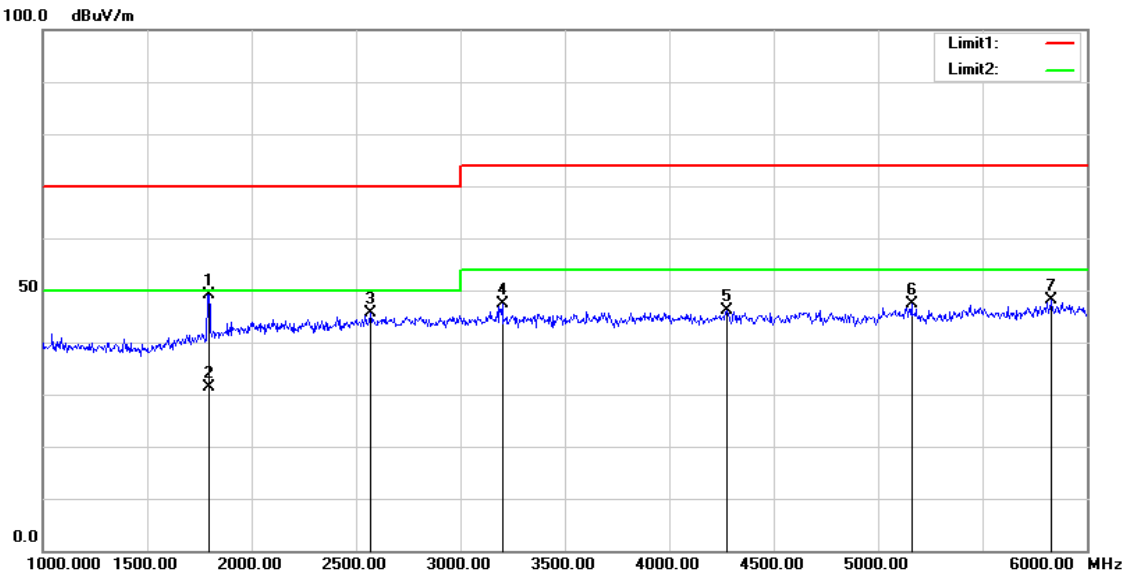
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	1600.000	57.95	-13.83	44.12	70.00	-25.88	100	158	peak
2	2590.000	53.59	-8.38	45.21	70.00	-24.79	200	228	peak
3	3185.000	53.78	-7.71	46.07	74.00	-27.93	200	79	peak
4	4060.000	52.52	-6.85	45.67	74.00	-28.33	200	217	peak
5	4785.000	52.50	-5.86	46.64	74.00	-27.36	100	215	peak
6	5855.000	51.21	-3.48	47.73	74.00	-26.27	200	85	peak

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

Example: 44.12 = -13.83 + 57.95

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

Test Standard:	CISPR32	Test Distance:	3 m
Test Mode:	Mode 1	Power:	AC 100 V / 50 Hz
Measurement Range:	1 GHz~6 GHz	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	1795.000	61.04	-11.98	49.06	70.00	-20.94	100	315	peak
2	1795.000	43.30	-11.98	31.32	50.00	-18.68	100	315	AVG
3	2570.000	53.99	-8.40	45.59	70.00	-24.41	100	263	peak
4	3200.000	55.15	-7.70	47.45	74.00	-26.55	100	137	peak
5	4275.000	52.61	-6.56	46.05	74.00	-27.95	123	360	peak
6	5160.000	52.68	-5.20	47.48	74.00	-26.52	200	222	peak
7	5830.000	51.75	-3.56	48.19	74.00	-25.81	100	252	peak

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

Example: 49.06 = -11.98 + 61.04

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

Appendix A - Accreditation Certificate

CERTIFICATE

< Member No. 3034 >
Company: A Test Lab Techno Corp.
Location of Facility:
No.140-1, Changan Street, Bade District, Taoyuan City, 33465, Taiwan (R.O.C.)
Registration No.: C-13275
Facility: TE02
(Facility for measuring conducted emissions at AC mains power ports)
Vertical Reference Plane

This is to certify that the above measuring facility is registered in accordance with VCCI Council Rules.

Date of Registration: January 19, 2021
This Certificate is valid until January 18, 2024

VCCI Council
Akira Oda
Akira Oda

CERTIFICATE

< Member No. 3034 >
Company: A Test Lab Techno Corp.
Location of Facility:
No. 140-1, Changan Street, Bade District, Taoyuan City, 33465, Taiwan (R.O.C.)
Registration No.: R-12965
Facility: TE06 (Radiation 10 meter Site)
(Facility for measuring radiated emissions below 1 GHz)
Measurement Distance: 10 m
Type of the facility: Semi Anechoic Chamber

This is to certify that the above measuring facility is registered in accordance with VCCI Council Rules.

Date of Registration: January 19, 2021
This Certificate is valid until January 18, 2024

VCCI Council
Akira Oda
Akira Oda

VCCI Council

CERTIFICATE

< Member No. 3034 >
Company: A Test Lab Techno Corp.
Location of Facility:
No.140-1, Changan Street, Bade District, Taoyuan City 334, Taiwan
Registration No.: G-10099
Facility: 966 Semi-Anechoic Chamber(TE01)
(Facility for measuring radiated emissions above 1 GHz: 3 m method)
Test Volume: Diameter 2.0 m
Frequency Range: 1 GHz - 6 GHz

This is to certify that the above measuring facility is registered in accordance with VCCI Council Rules.

Date of Registration: November 30, 2018
This Certificate is valid until November 29, 2021

VCCI Council
Akira Oda
Akira Oda

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