TEST REPORT

Reference No.	:	WTX24X08186589W001
FCC ID	:	2AUTE-QUTIE
Applicant	:	Xiamen Hanin Co.,Ltd.
Address	:	Room 305A, Angye Building, Pioneering Park,Torch High-tech,Zone, Xiamen,China
Manufacturer	:	The same as Applicant
Address	:	The same as Applicant
Product Name	:	Portable Label Printer
Model No.	:	Qutie
Standards	:	FCC Part 15.247
Date of Receipt sample	:	2022-08-31
Date of Test	:	2022-08-31 to 2022-09-22
Date of Issue	:	2024-09-10
Test Report Form No.	:	WTX_Part 15_247W
Test Result	:	**Pass**

Remarks:
The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of approver.

Prepared By:

Waltek Testing Group (Shenzhen) Co., Ltd.

Address: 1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road, Block 70 Bao'an District, Shenzhen, Guangdong, China

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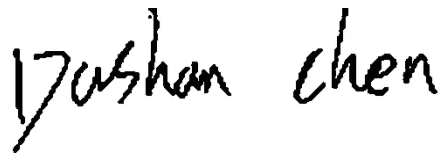
Tested by:



Dashan Chen

Approved by:

Jason Su

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Report version

Version No.	Date of issue	Description
Rev.00	2024-09-10	Original
/	/	/

1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

General Description of EUT	
Product Name:	Portable Label Printer
Trade Name	HPRT, iDPRT, PRT
Model No.:	Qutie
Adding Model(s):	/
Rated Voltage:	Charging port: DC5V Battery: DC3.7V
Battery Capacity 1#:	1500mAh
Battery Capacity 2#:	600mAh
Adapter Model:	/
Note: The test data is gathered from a production sample, provided by the manufacturer.	

Technical Characteristics of EUT	
Bluetooth Version:	V4.2 (BR mode)
Frequency Range:	2402-2480MHz
RF Output Power:	-1.13dBm (Conducted)
Data Rate:	1Mbps
Modulation:	GFSK
Quantity of Channels:	79
Channel Separation:	1MHz
Type of Antenna:	PCB Antenna
Antenna Gain:	2dBi
Note The Antenna Gain is provided by the customer and can affect the validity of results.	

1.2 Test Standards

The tests were performed according to following standards:

FCC Rules Part 15.247: Frequency Hopping, Direct Spread Spectrum and Hybrid Systems that are in operation within the bands of 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz.
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.
ANSI C63.10-2013: American National Standard for Testing Unlicensed Wireless Devices.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, the equipment under test (EUT) was configured to measure its highest possible emission level. The test modes were adapted accordingly in reference to the Operating Instructions.

1.4 Test Facility

Address of the test laboratory
Laboratory: Waltek Testing Group (Shenzhen) Co., Ltd.
Address: 1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road, Block 70 Bao'an District, Shenzhen, Guangdong, China

FCC – Registration No.: 125990
Waltek Testing Group (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is mai ntained in our files. The Designation Number is CN5010, and Test Firm Registration Number is 125990.

Industry Canada (IC) Registration No.: 11464A
The 3m Semi-anechoic chamber of Waltek Testing Group (Shenzhen) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A and the CAB identifier is CN0057.

1.5 EUT Setup and Test Mode

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements. All testing shall be performed under maximum output power condition, and to measure its highest possible emissions level, more detailed description as follows:

Test Mode List		
Test Mode	Description	Remark
TM1	Low Channel	2402MHz
TM2	Middle Channel	2441MHz
TM3	High Channel	2480MHz
TM4	Hopping	2402-2480MHz

Modulation Configure			
Modulation	Packet	Packet Type	Packet Size
GFSK	DH1	4	27
	DH3	11	183
	DH5	15	339

Test Conditions	
Temperature:	22~25 °C
Relative Humidity:	45~75 %
ATM Pressure:	1019 mbar

EUT Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
USB-C Cable	0.58	Shielded	Without Ferrite

Special Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
/	/	/	/

Auxiliary Equipment List and Details			
Description	Manufacturer	Model	Serial Number
Adapter	/	A138A-120150U-CN2	/

1.6 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
RF Output Power	Conducted	±0.42dB
Occupied Bandwidth	Conducted	±1.5%
Conducted Spurious Emission	Conducted	±2.17dB
Conducted Emissions	Conducted	9-150kHz ±3.74dB
		0.15-30MHz ±3.34dB
Transmitter Spurious Emissions	Radiated	30-200MHz ±4.52dB
		0.2-1GHz ±5.56dB
		1-6GHz ±3.84dB
		6-26GHz ±3.92dB

1.7 Test Equipment List and Details

Fixed asset Number	Description	Manufacturer	Model	Serial No.	Cal Date	Due. Date
WTXE1041A1001	Communication Tester	Rohde & Schwarz	CMW500	148650	2024-02-24	2025-02-23
WTXE1005A1005	Spectrum Analyzer	Agilent	N9020A	US47140102	2024-03-19	2025-03-18
WTXE1084A1001	Spectrum Analyzer	Agilent	N9020A	MY54320548	2024-02-24	2025-02-23
WTXE1004A1-001	Spectrum Analyzer	Rohde & Schwarz	FSP40	100612	2024-02-27	2025-02-26
☐ Chamber A: Below 1GHz						
WTXE1005A1003	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2024-02-24	2025-02-23
WTXE1001A1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2024-03-19	2025-03-18
WTXE1007A1001	Amplifier	HP	8447F	2805A03475	2024-02-24	2025-02-23
WTXE1010A1007	Loop Antenna	Schwarz beck	FMZB 1516	9773	2024-02-26	2025-02-25
WTXE1010A1006	Broadband Antenna	Schwarz beck	VULB9163	9163-333	2024-02-24	2025-02-23
☐ Chamber A: Above 1GHz						
WTXE1005A1003	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2024-02-24	2025-02-23
WTXE1001A1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2024-03-19	2025-03-18
WTXE1065A1001	Amplifier	C&D	PAP-1G18	2002	2024-02-27	2025-02-26
WTXE1010A1005	Horn Antenna	ETS	3117	00086197	2024-02-26	2025-02-25
WTXE1010A1010	DRG Horn Antenna	A.H. SYSTEMS	SAS-574	571	2024-03-17	2025-03-16
WTXE1003A1001	Pre-amplifier	Schwarzbeck	BBV 9721	9721-031	2024-02-29	2025-02-28
☐ Chamber B:Below 1GHz						
WTXE1010A1006	Trilog Broadband Antenna	Schwarz beck	VULB9163(B)	9163-635	2024-03-17	2027-03-16
WTXE1038A1001	Amplifier	Agilent	8447D	2944A10457	2024-02-24	2025-02-23

WTXE1001A 1002	EMI Test Receiver	Rohde & Schwarz	ESPI	101391	2024-02-24	2025-02-23
☒ Chamber C:Below 1GHz						
WTXE1093A 1001	EMI Test Receiver	Rohde & Schwarz	ESIB 26	100401	2024-02-27	2025-02-26
WTXE1010A 1013-1	Trilog Broadband Antenna	Schwarz beck	VULB 9168	1194	2024-04-18	2027-04-17
WTXE1010A 1007	Loop Antenna	Schwarz beck	FMZB 1516	9773	2024-02-26	2025-02-25
WTXE1007A 1002	Amplifier	HP	8447F	2944A038 69	2024-02-24	2025-02-23
☒ Chamber C: Above 1GHz						
WTXE1093A 1001	EMI Test Receiver	Rohde & Schwarz	ESIB 26	100401	2024-02-27	2025-02-26
WTXE1103A 1005	Horn Antenna	POAM	RTF-118A	1820	2023-03-10	2026-03-09
WTXE1103A 1006	Amplifier	Tonscend	TAP01018050	AP22E806 235	2024-02-27	2025-02-26
WTXE1010A 1010	DRG Horn Antenna	A.H. SYSTEMS	SAS-574	571	2024-03-17	2025-03-16
WTXE1003A 1001	Pre-amplifier	Schwarzbeck	BBV 9721	9721-031	2024-02-29	2025-02-28
☐ Conducted Room 1#						
WTXE1104A 1029	EMI Test Receiver	Rohde & Schwarz	ESCI	100525	2023-12-12	2024-12-11
WTXE1002A 1001	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2024-02-24	2025-02-23
WTXE1003A 1001	AC LISN	Schwarz beck	NSLK8126	8126-279	2024-02-24	2025-02-23
☒ Conducted Room 2#						
WTXE1001A 1004	EMI Test Receiver	Rohde & Schwarz	ESPI	101259	2024-02-24	2025-02-23
WTXE1003A 1003	LISN	Rohde & Schwarz	ENV 216	100097	2024-02-24	2025-02-23

Software List			
Description	**Manufacturer**	**Model**	**Version**
EMI Test Software (Radiated Emission A)	Farad	EZ-EMC	RA-03A1 (1.1.4.2)
EMI Test Software (Radiated Emission B)	Farad	EZ-EMC	RA-03A1 (1.1.4.2)
EMI Test Software (Radiated Emission C)	Farad	EZ-EMC	RA-03A1-2 (1.1.4.2)
EMI Test Software (Conducted Emission Room 1#)	Farad	EZ-EMC	3A1*CE-RE 1.1.4.3
EMI Test Software (Conducted Emission Room 2#)	Farad	EZ-EMC	3A1*CE-RE 1.1.4.3

*Remark: indicates software version used in the compliance certification testing.

2. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test Item	Result
§15.203; §15.247(b)(4)(i)	Antenna Requirement	Compliant
§15.205	Restricted Band of Operation	N/A
§15.207(a)	Conducted Emission	Compliant
§15.209(a)	Radiated Spurious Emissions	Compliant
§15.247(a)(1)(iii)	Quantity of Hopping Channel	N/A
§15.247(a)(1)	Channel Separation	N/A
§15.247(a)(1)(iii)	Time of Occupancy (Dwell time)	N/A
§15.247(a)	20dB Bandwidth	N/A
§15.247(b)(1)	RF Power Output	N/A
§15.247(d)	Band Edge (Out of Band Emissions)	N/A
§15.247(a)(1)	Frequency Hopping Sequence	N/A
§15.247(g), (h)	Frequency Hopping System	N/A

Class II Permissive Change: Add a new battery, with no changes made to other circuits and wireless components.

Note: Report is for Class II Permissive Change only. Updated test data include Antenna Requirement, Conducted Emission and Radiated Spurious Emissions. The test data refer to Original equipment (FCC ID: 2AUTE-QUTIE), the original FCC ID issue date: 10/11/2022.

3. Antenna Requirement

3.1 Standard Applicable

According to FCC Part 15.203, 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.

3.2 Evaluation Information

This product has a PCB antenna fulfill the requirement of this section.

4. Frequency Hopping System Requirements

4.1 Standard Applicable

According to FCC Part 15.247(a)(1), the system shall hop to channel frequencies that are selected at the system hopping rate from a pseudo randomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

(g) Frequency hopping spread spectrum systems are not required to employ all available hopping channels during each transmission. However, the system, consisting of both the transmitter and the receiver, must be designed to comply with all of the regulations in this section should the transmitter be presented with a continuous data (or information) stream. In addition, a system employing short transmission bursts must comply with the definition of a frequency hopping system and must distribute its transmissions over the minimum number of hopping channels specified in this section.

(h) The incorporation of intelligence within a frequency hopping spread spectrum system that permits the system to recognize other users within the spectrum band so that it individually and independently chooses and adapts its hopsets to avoid hopping on occupied channels is permitted. The coordination of frequency hopping systems in any other manner for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters is not permitted.

4.2 Frequency Hopping System

This transmitter device is frequency hopping device, and complies with FCC part 15.247 rule.

This device uses Bluetooth radio which operates in 2400-2483.5MHz band. Bluetooth uses a radio technology called frequency-hopping spread spectrum, which chops up the data being sent and transmits chunks of it on up to 79 bands (1MHz each; centred from 2402 to 2480MHz) in the range 2,400-2,483.5MHz. The transmitter switches hop frequencies 1,600 times per second to assure a high degree of data security. All Bluetooth devices participating in a given piconet are synchronized to the frequency-hopping channel for the piconet. The frequency hopping sequence is determined by the master's device address and the phase of the hopping sequence (the frequency to hop at a specific time) is determined by the master's internal clock. Therefore, all slaves in a piconet must know the master's device address and must synchronize their clocks with the master's clock.

Adaptive Frequency Hopping (AFH) was introduced in the Bluetooth specification to provide an effective way for a Bluetooth radio to counteract normal interference. AFH identifies "bad" channels, where either other wireless devices are interfering with the Bluetooth signal or the Bluetooth signal is interfering with another device. The AFH-enabled Bluetooth device will then communicate with other devices within its piconet to share details of any identified bad channels. The devices will then switch to alternative available "good"

channels, away from the areas of interference, thus having no impact on the bandwidth used.
This device was tested with a Bluetooth system receiver to check that the device maintained hopping synchronization, and the device complied with these requirements for 558074 D01 15.247 Meas Guidance v05r02 and FCC Part 15.247 rule.

4.3 EUT Pseudorandom Frequency Hopping Sequence

Pseudorandom Frequency Hopping Sequence Table as below:
Channel: 08, 24, 40, 56, 40, 56, 72, 09, 01, 09, 33, 41, 33, 41, 65, 73, 53, 69, 06, 22, 04, 20, 36, 52, 38, 46, 70, 78, 68, 76, 21, 29, 10, 26, 42, 58, 44, 60, 76, 13, 03, 11, 35, 43, 37, 45, 69, 77, 55, 71, 08, 24, 08, 24, 40, 56, 40, 48, 72, 01, 72, 01, 25, 33, 12, 28, 44, 60, 42, 58, 74, 11, 05, 13, 37, 45 etc.

The system receiver have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shift frequencies in synchronization with the transmitted signals.

5. Field Strength of Spurious Emissions

5.1 Standard Applicable

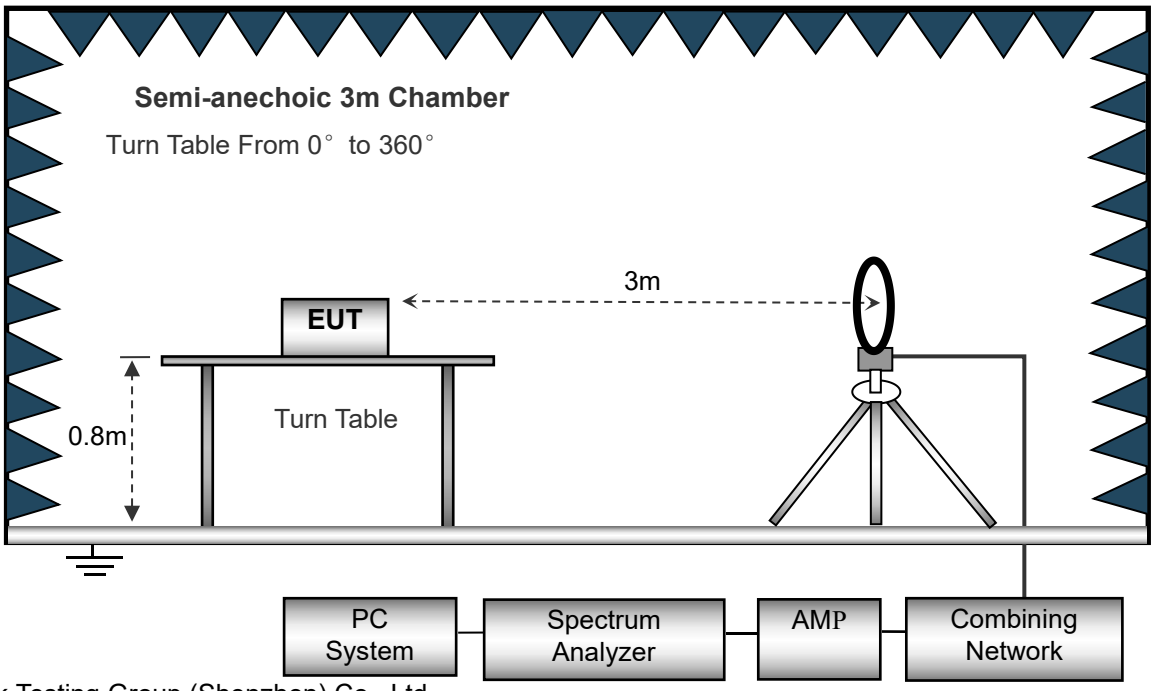
According to §15.247(d), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30dB instead of 20dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in §15.35 for limiting peak emissions apply. Spurious Radiated Emissions measurements starting below or at the lowest crystal frequency.

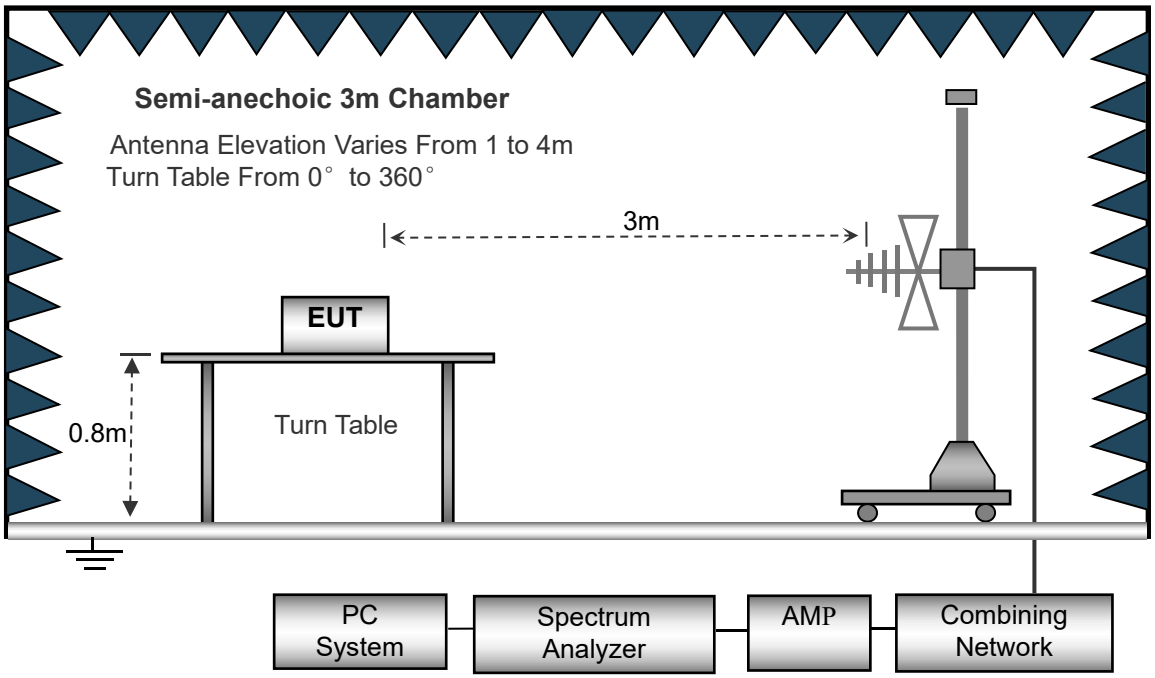
5.2 Test Procedure

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.205 15.247(a) and FCC Part 15.209 Limit.
The external I/O cables were draped along the test table and formed a bundle 30 to 40cm long in the middle. The spacing between the peripherals was 10cm.

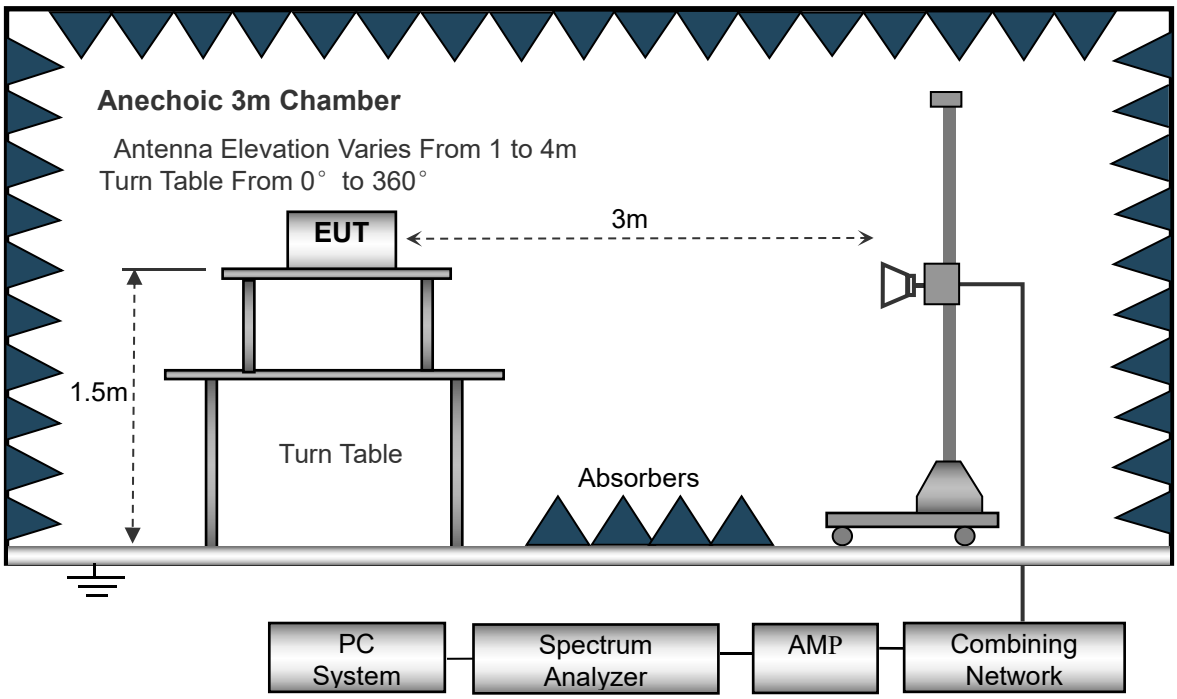
The test setup for emission measurement below 30MHz.



The test setup for emission measurement from 30MHz to 1GHz.



The test setup for emission measurement above 1GHz.



Frequency :9kHz-30MHz	Frequency :30MHz-1GHz	Frequency :Above 1GHz
RBW=10KHz,	RBW=120KHz,	RBW=1MHz,
VBW =30KHz	VBW=300KHz	VBW=3MHz(Peak), 10Hz(AV)
Sweep time= Auto	Sweep time= Auto	Sweep time= Auto
Trace = max hold	Trace = max hold	Trace = max hold
Detector function = peak	Detector function = peak, QP	Detector function = peak, AV

5.3 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

Corr. Ampl. = Indicated Reading + Correct
Correct = Ant. Factor + Cable Loss – Ampl. Gain

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dBμV means the emission is 6dBμV below the maximum limit. The equation for margin calculation is as follows:

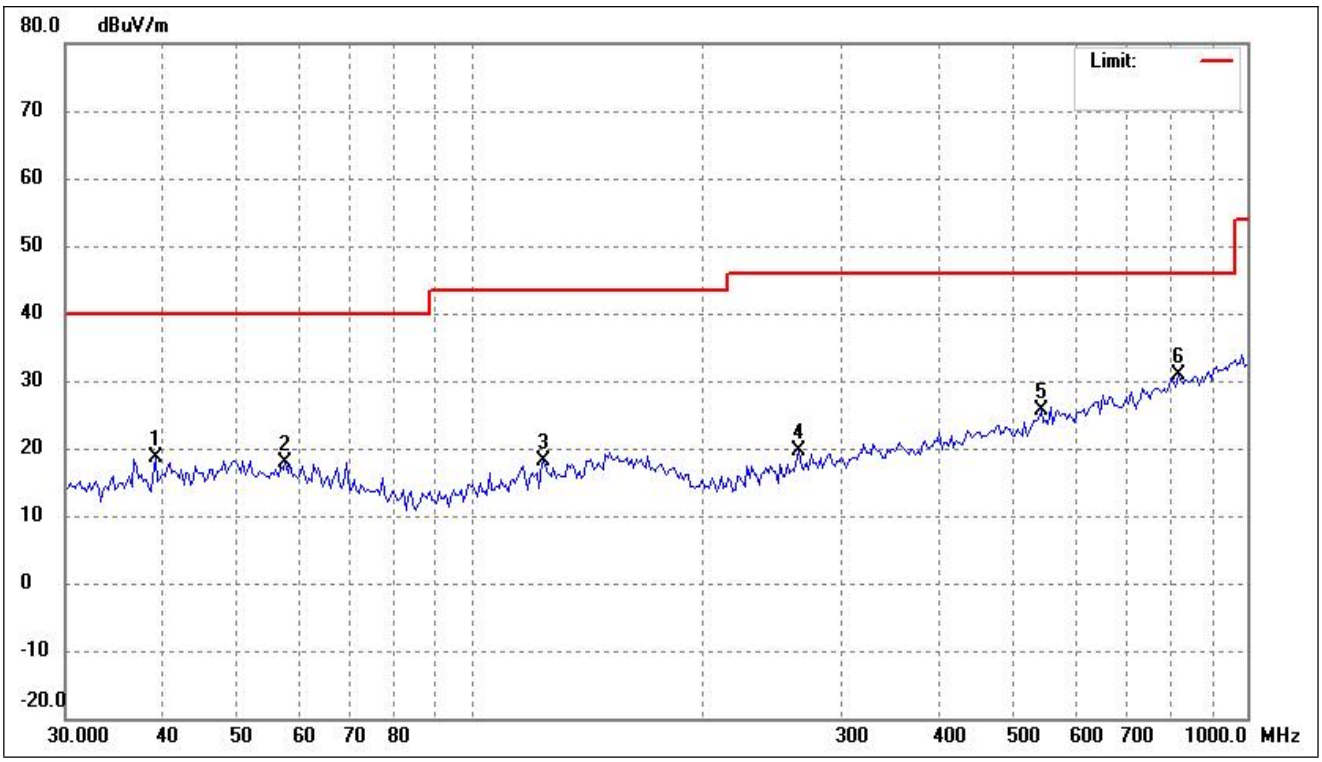
Margin = Corr. Ampl. – FCC Part 15 Limit

5.4 Summary of Test Results/Plots

Note: this EUT was tested in 3 orthogonal positions and the worst case position data was reported.
All test modes (different data rate and different modulation) are performed, but only the worst case (GFSK) is recorded in this report.

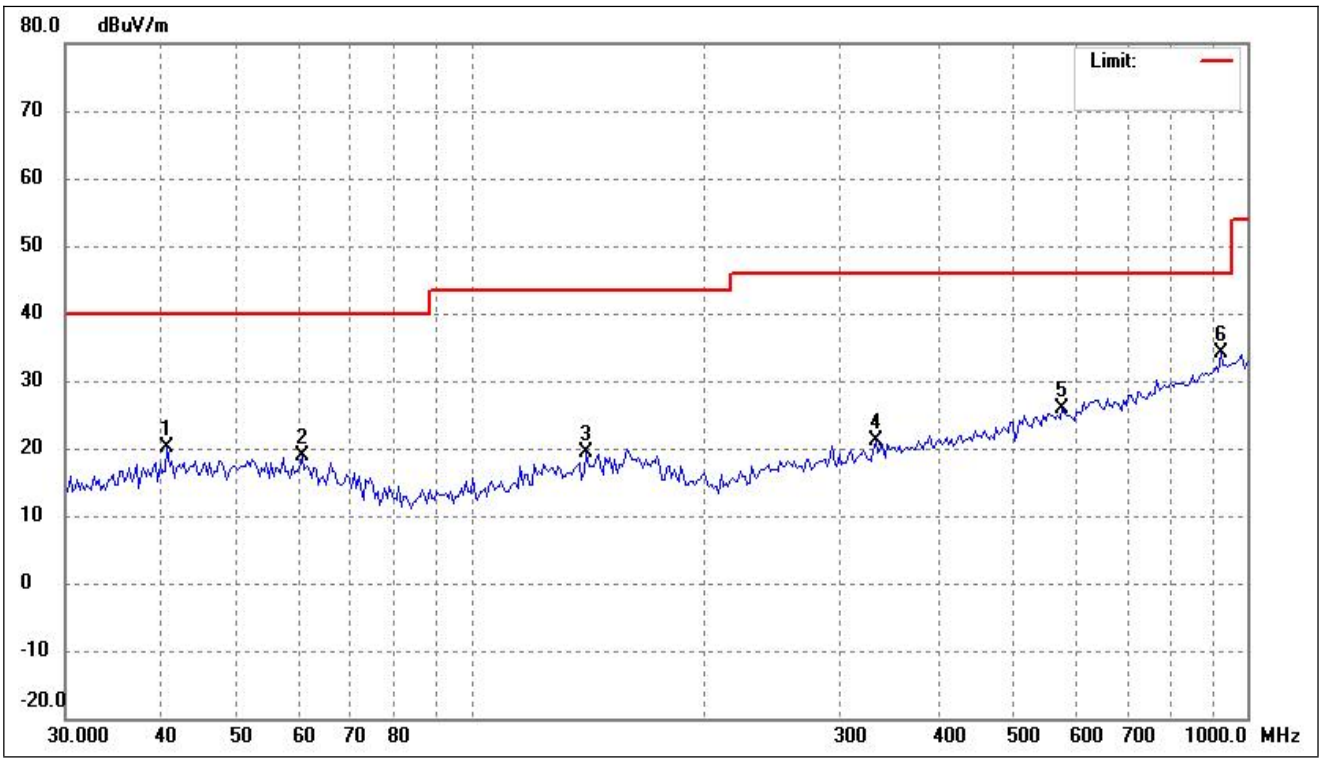
➢ Spurious Emissions Below 1GHz

Test Channel	Low	Polarity:	Horizontal



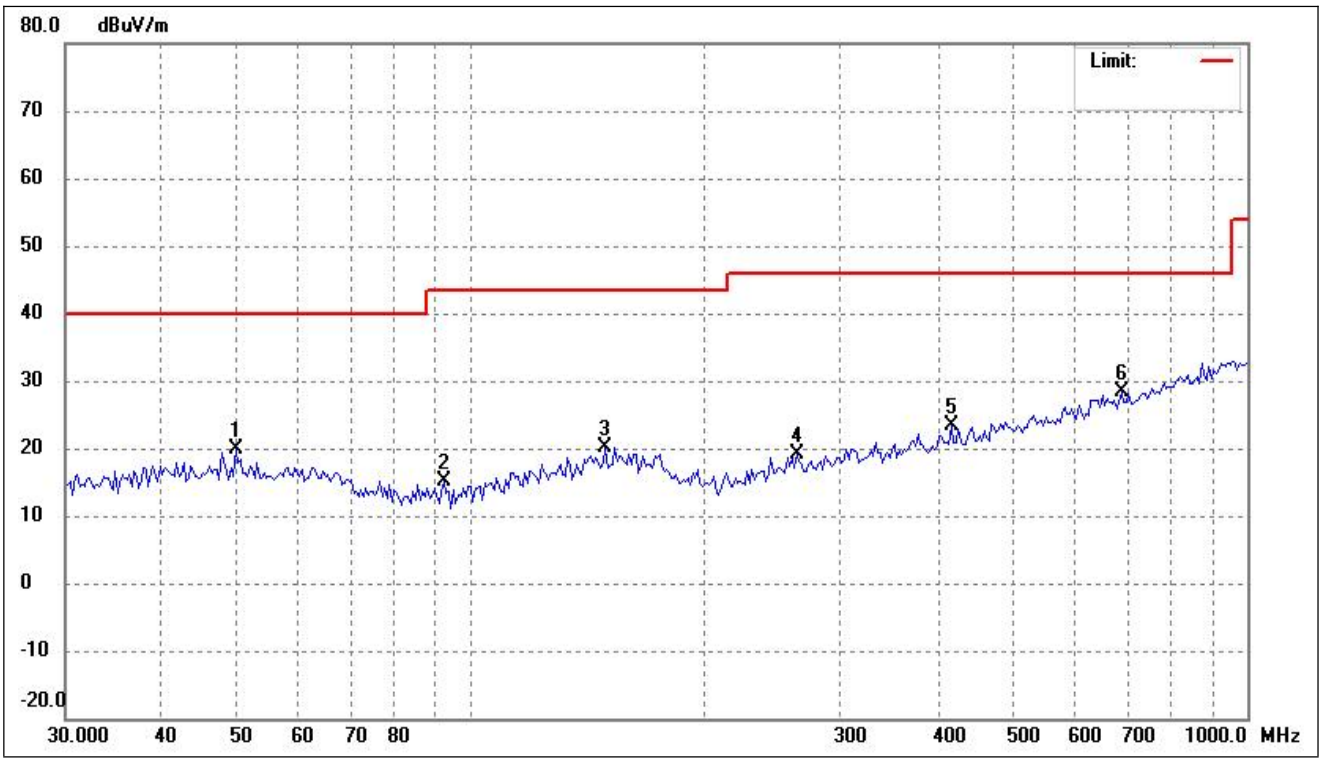
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	39.1824	26.72	-8.12	18.60	40.00	-21.40	-	-	peak
2	57.6692	26.29	-8.29	18.00	40.00	-22.00	-	-	peak
3	124.0501	27.90	-9.73	18.17	43.50	-25.33	-	-	peak
4	264.9709	28.71	-9.08	19.63	46.00	-26.37	-	-	peak
5	542.6103	29.37	-3.78	25.59	46.00	-20.41	-	-	peak
6	815.6353	29.81	1.17	30.98	46.00	-15.02	-	-	peak

Test Channel	Low	Polarity:	Vertical



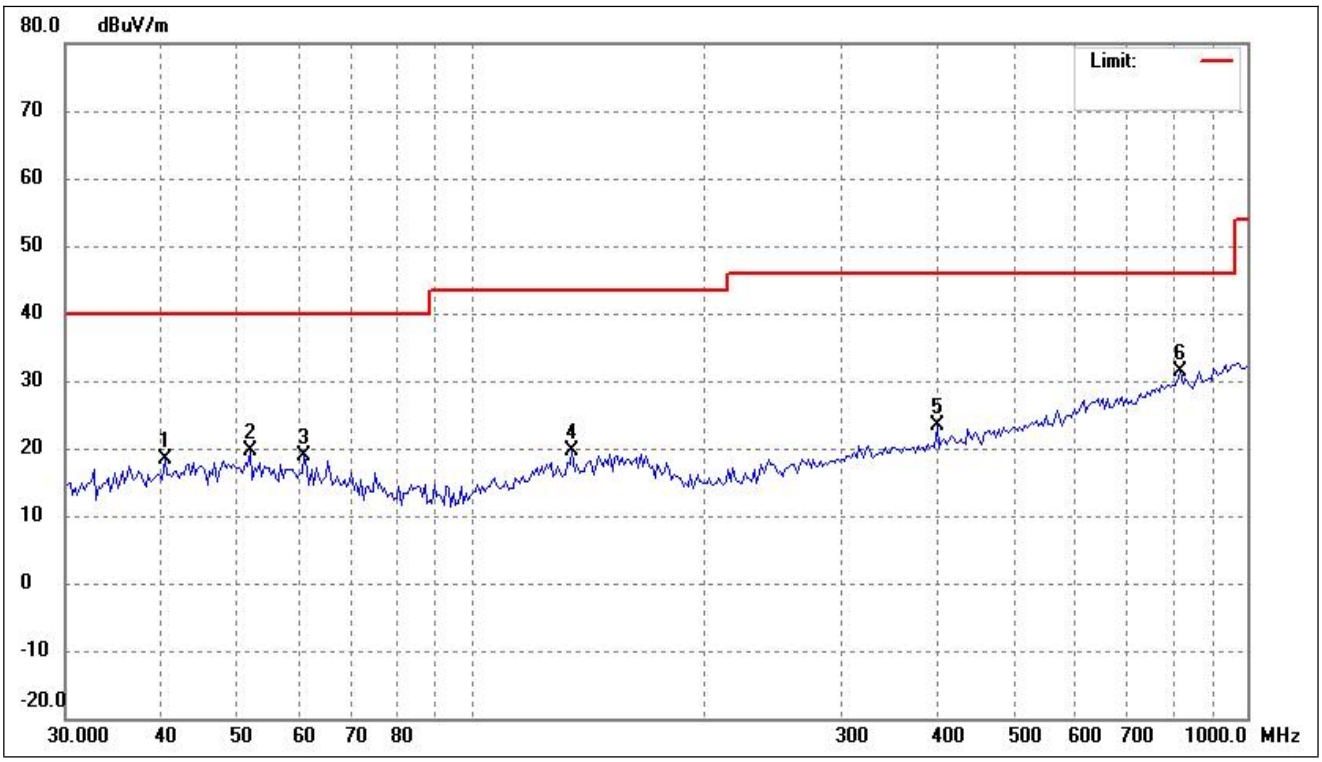
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	40.5837	28.02	-7.96	20.06	40.00	-19.94	-	-	peak
2	60.5769	27.30	-8.54	18.76	40.00	-21.24	-	-	peak
3	140.7767	28.16	-8.83	19.33	43.50	-24.17	-	-	peak
4	331.7858	28.30	-7.25	21.05	46.00	-24.95	-	-	peak
5	578.0359	28.68	-2.78	25.90	46.00	-20.10	-	-	peak
6	925.6132	31.42	2.72	34.14	46.00	-11.86	-	-	peak

Test Channel	Middle	Polarity:	Horizontal



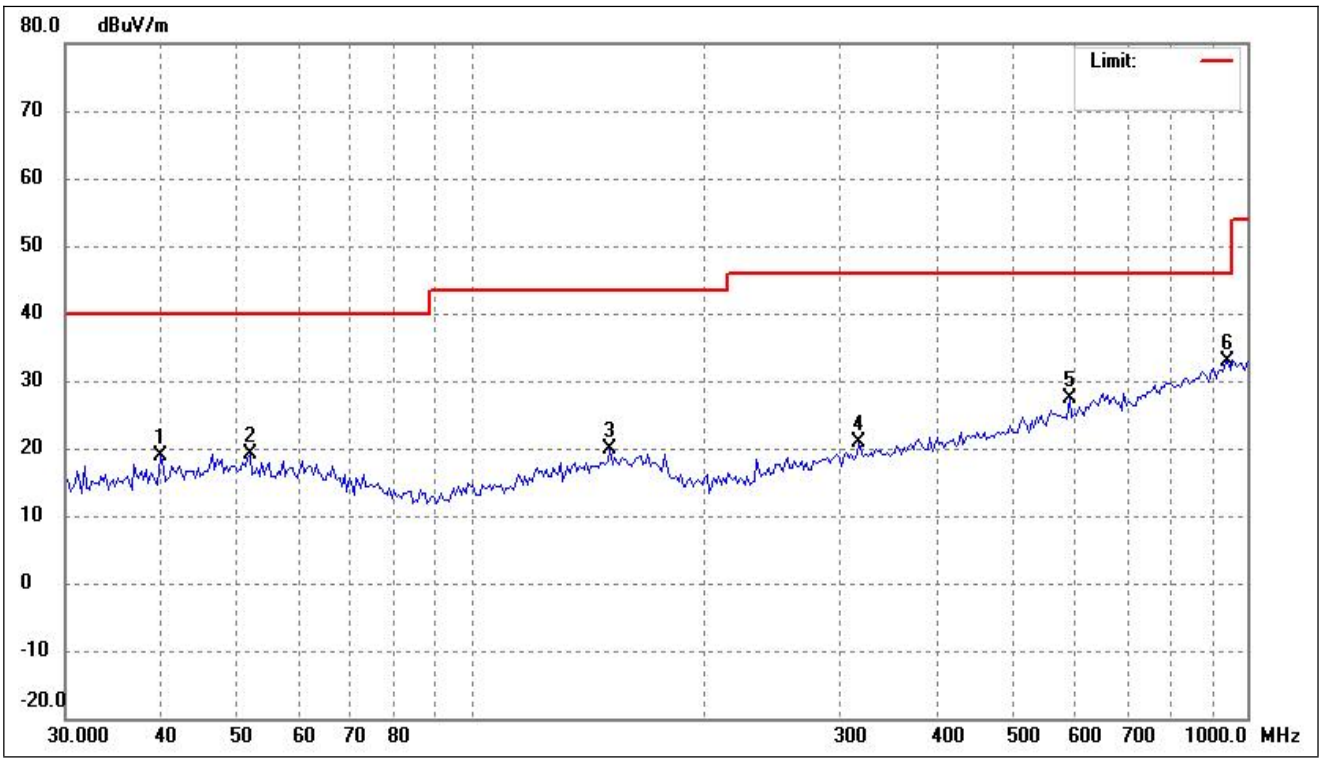
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	49.7571	27.41	-7.59	19.82	40.00	-20.18	-	-	peak
2	92.3462	27.47	-12.45	15.02	43.50	-28.48	-	-	peak
3	148.9174	28.25	-8.14	20.11	43.50	-23.39	-	-	peak
4	263.1154	28.26	-9.16	19.10	46.00	-26.90	-	-	peak
5	415.4486	29.28	-5.93	23.35	46.00	-22.65	-	-	peak
6	689.0509	29.54	-1.22	28.32	46.00	-17.68	-	-	peak

Test Channel	Middle	Polarity:	Vertical



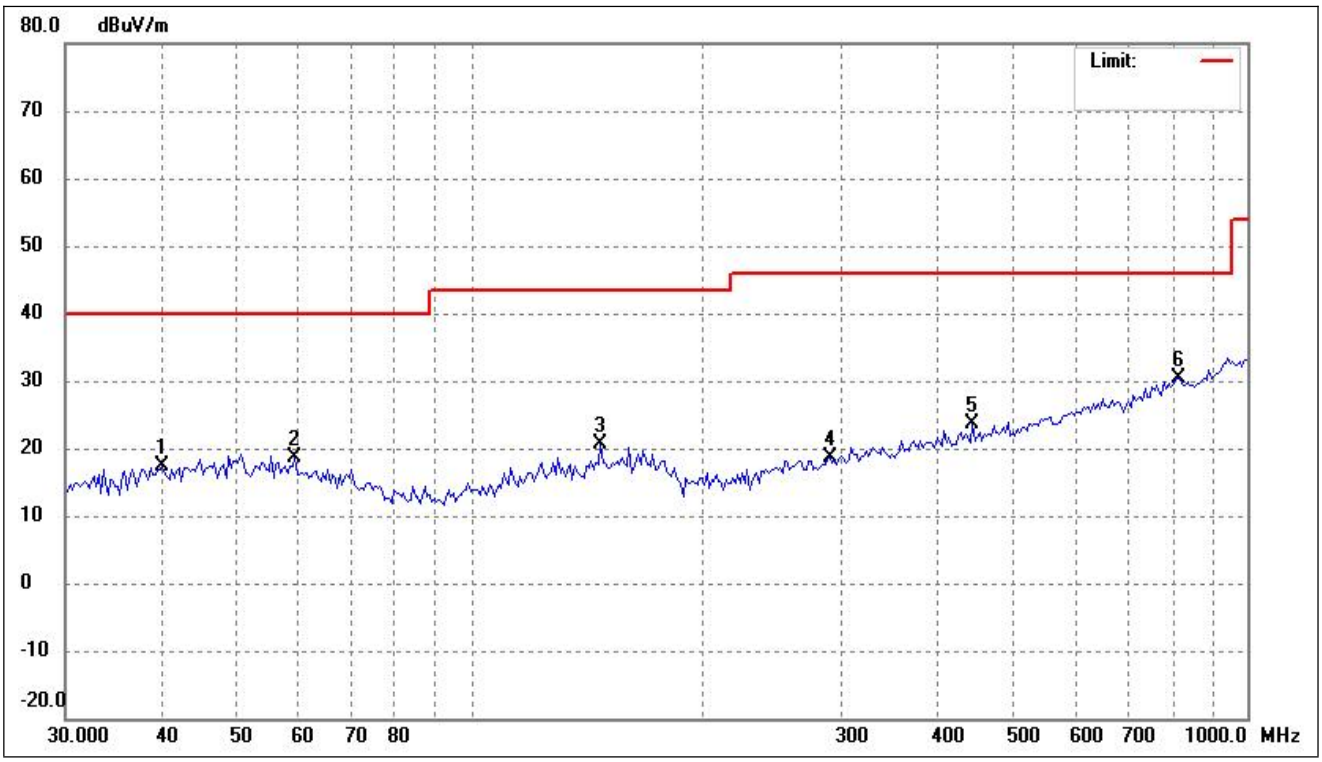
No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	40.2995	26.40	-7.96	18.44	40.00	-21.56	-	-	peak
2	51.8999	27.40	-7.79	19.61	40.00	-20.39	-	-	peak
3	61.0041	27.61	-8.61	19.00	40.00	-21.00	-	-	peak
4	134.9645	28.70	-9.11	19.59	43.50	-23.91	-	-	peak
5	398.2962	29.63	-6.28	23.35	46.00	-22.65	-	-	peak
6	821.3871	30.07	1.23	31.30	46.00	-14.70	-	-	peak

Test Channel	High	Polarity:	Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	39.7370	26.85	-8.01	18.84	40.00	-21.16	-	-	peak
2	51.8998	26.83	-7.79	19.04	40.00	-20.96	-	-	peak
3	151.0251	28.02	-8.05	19.97	43.50	-23.53	-	-	peak
4	315.8600	28.35	-7.52	20.83	46.00	-25.17	-	-	peak
5	590.3511	29.81	-2.48	27.33	46.00	-18.67	-	-	peak
6	945.3336	29.62	3.19	32.81	46.00	-13.19	-	-	peak

Test Channel	High	Polarity:	Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Degree	Height	Remark
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	( )	(cm)	
1	40.0173	25.36	-7.95	17.41	40.00	-22.59	-	-	peak
2	59.3133	26.91	-8.39	18.52	40.00	-21.48	-	-	peak
3	146.8392	28.88	-8.31	20.57	43.50	-22.93	-	-	peak
4	290.3170	26.71	-8.16	18.55	46.00	-27.45	-	-	peak
5	442.5722	28.91	-5.35	23.56	46.00	-22.44	-	-	peak
6	815.6353	29.30	1.17	30.47	46.00	-15.53	-	-	peak

Remark: '-'Means' the test Degree and Height are not recorded by the test software and only show the worst case in the test report.

- Spurious Emissions Above 1GHz

Frequency (MHz)	Reading (dBuV/m)	Correct dB	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polar H/V	Detector
Low Channel-2402MHz							
4804	58.13	-6.13	52	74	-22	H	PK
4804	42.15	-6.13	36.02	54	-17.98	H	AV
7206	53.08	-1.64	51.44	74	-22.56	H	PK
7206	40.36	-1.64	38.72	54	-15.28	H	AV
4804	59.39	-6.13	53.26	74	-20.74	V	PK
4804	43.82	-6.13	37.69	54	-16.31	V	AV
7206	53.11	-1.64	51.47	74	-22.53	V	PK
7206	39.72	-1.64	38.08	54	-15.92	V	AV
Middle Channel-2441MHz							
4882	58.60	-5.93	52.67	74	-21.33	H	PK
4882	41.89	-5.93	35.96	54	-18.04	H	AV
7323	54.10	-1.58	52.52	74	-21.48	H	PK
7323	40.22	-1.58	38.64	54	-15.36	H	AV
4882	59.68	-5.93	53.75	74	-20.25	V	PK
4882	43.30	-5.93	37.37	54	-16.63	V	AV
7323	53.83	-1.58	52.25	74	-21.75	V	PK
7323	38.19	-1.58	36.61	54	-17.39	V	AV
High Channel-2480MHz							
4960	59.62	-5.71	53.91	74	-20.09	H	PK
4960	41.26	-5.71	35.55	54	-18.45	H	AV
7440	53.66	-1.52	52.14	74	-21.86	H	PK
7440	40.7	-1.52	39.18	54	-14.82	H	AV
4960	60.64	-5.71	54.93	74	-19.07	V	PK
4960	42.34	-5.71	36.63	54	-17.37	V	AV
7440	54.02	-1.52	52.5	74	-21.50	V	PK
7440	39.97	-1.52	38.45	54	-15.55	V	AV

Note: 1.Testing is carried out with frequency rang 9kHz to the tenth harmonics, other than listed in the table above are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
2.Average measurement was not performed if peak level is lower than average limit(54 dBuV/m) for above 1GHz.

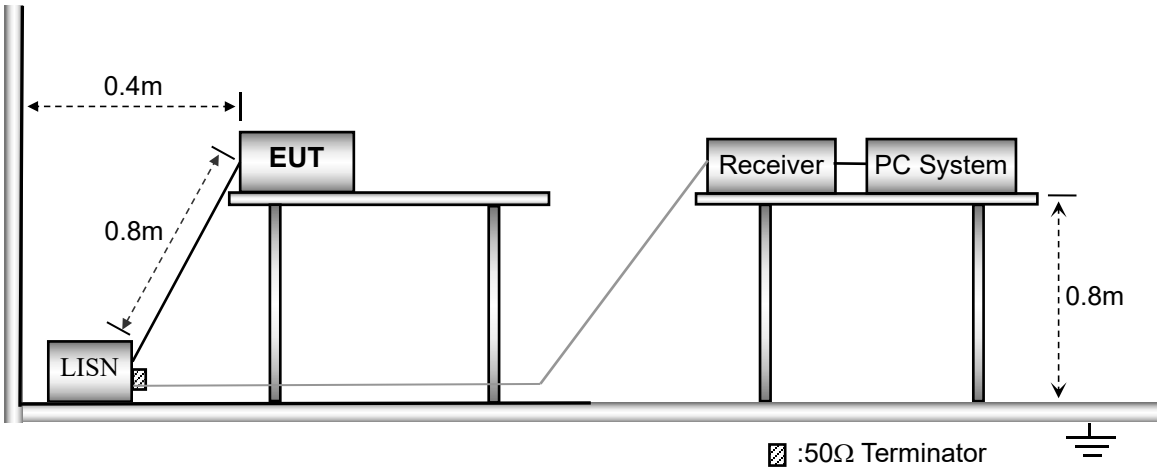
6. Conducted Emissions

6.1 Test Procedure

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 Limit.
The external I/O cables were draped along the test table and formed a bundle 30 to 40cm long in the middle. The spacing between the peripherals was 10cm.

6.2 Basic Test Setup Block Diagram

The conducted emission tests were performed using the setup accordance with the ANSI C63.10:2013.



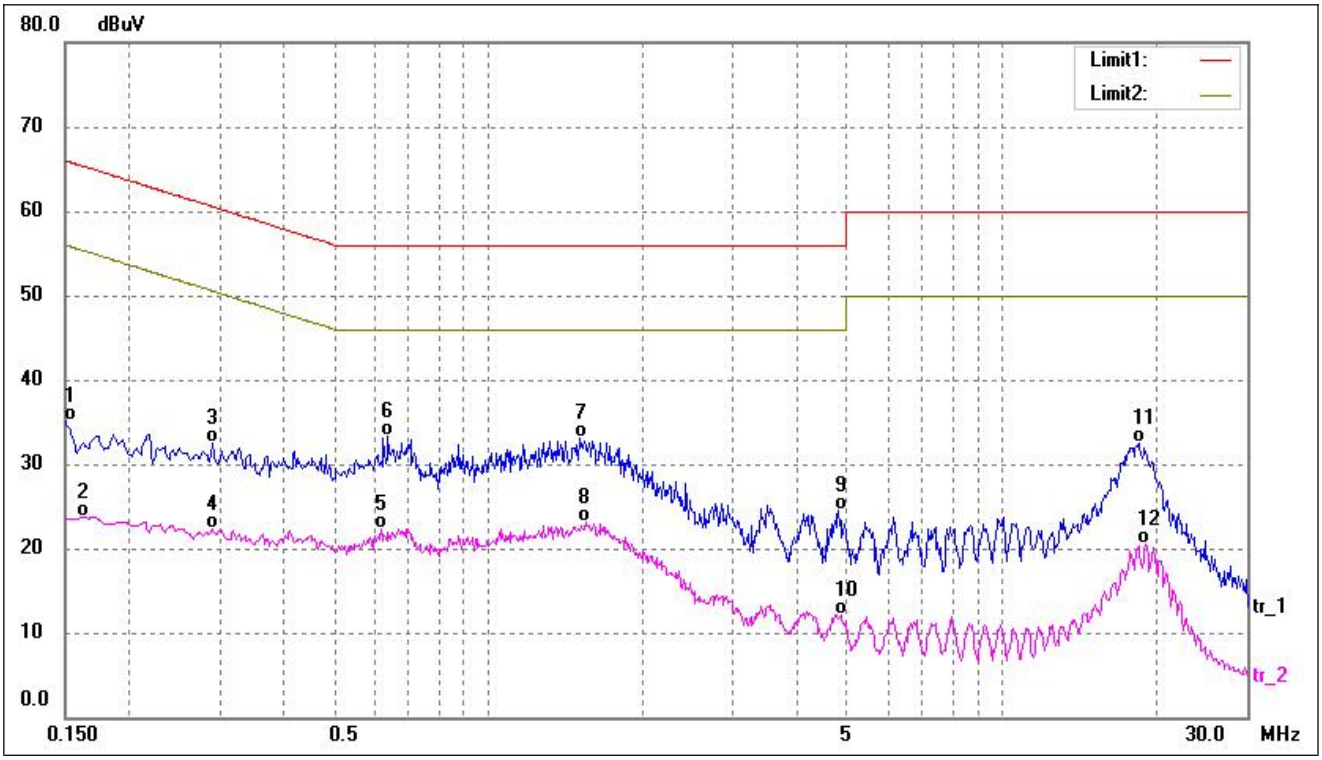
6.3 Test Receiver Setup

During the conducted emission test, the test receiver was set with the following configurations:

Start Frequency..... 150kHz
Stop Frequency..... 30MHz
Sweep Speed.....Auto
IF Bandwidth..... 10kHz
Quasi-Peak Adapter Bandwidth..... 9kHz
Quasi-Peak Adapter Mode.....Normal

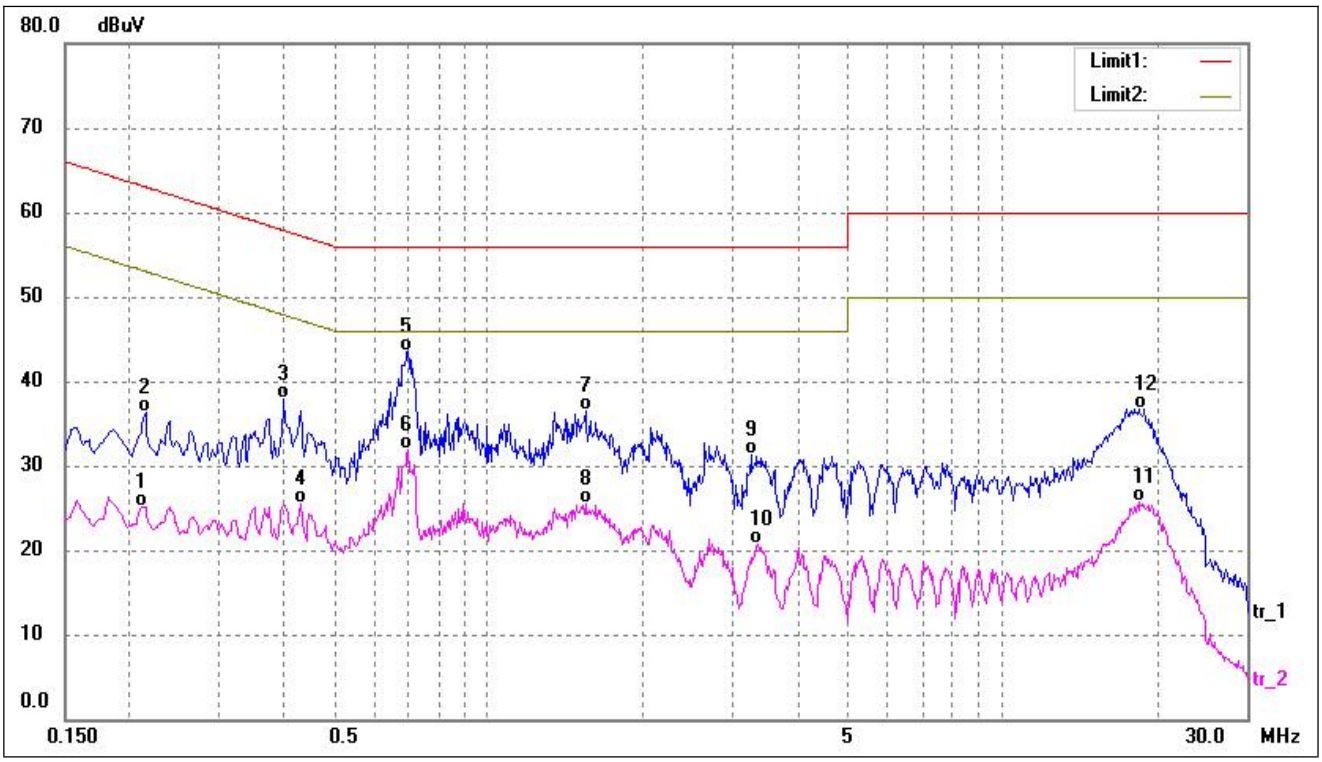
6.4 Summary of Test Results/Plots

Test Mode	Communication	AC120V 60Hz	Polarity:	Neutral



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dB)	
1	0.1500	25.36	9.76	35.12	65.99	-30.87	QP
2	0.1620	14.03	9.72	23.75	55.36	-31.61	AVG
3	0.2900	22.90	9.63	32.53	60.52	-27.99	QP
4	0.2900	12.70	9.63	22.33	50.52	-28.19	AVG
5	0.6180	12.50	9.71	22.21	46.00	-23.79	AVG
6*	0.6380	23.59	9.70	33.29	56.00	-22.71	QP
7	1.5060	23.47	9.64	33.11	56.00	-22.89	QP
8	1.5500	13.50	9.64	23.14	46.00	-22.86	AVG
9	4.8060	14.82	9.70	24.52	56.00	-31.48	QP
10	4.8700	2.45	9.71	12.16	46.00	-33.84	AVG
11	18.4820	22.39	10.15	32.54	60.00	-27.46	QP
12	19.1060	10.37	10.18	20.55	50.00	-29.45	AVG

Test Mode	Communication	AC120V 60Hz	Polarity:	Line



No.	Frequency	Reading	Correct	Result	Limit	Margin	Detector
	(MHz)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dB)	
1	0.2100	15.52	9.58	25.10	53.20	-28.10	AVG
2	0.2140	26.68	9.58	36.26	63.04	-26.78	QP
3	0.3980	28.29	9.69	37.98	57.89	-19.91	QP
4	0.4300	15.76	9.70	25.46	47.25	-21.79	AVG
5*	0.6940	33.88	9.69	43.57	56.00	-12.43	QP
6	0.6980	22.24	9.69	31.93	46.00	-14.07	AVG
7	1.5500	26.83	9.64	36.47	56.00	-19.53	QP
8	1.5500	15.95	9.64	25.59	46.00	-20.41	AVG
9	3.2580	21.68	9.63	31.31	56.00	-24.69	QP
10	3.3540	11.17	9.63	20.80	46.00	-25.20	AVG
11	18.5940	15.52	10.16	25.68	50.00	-24.32	AVG
12	19.0060	26.60	10.18	36.78	60.00	-23.22	QP

APPENDIX PHOTOGRAPHS

Please refer to “ANNEX”

******* END OF REPORT *******