NVLAP TESTING
NVLAP LAB CODE 600341-0

BACL Bay Area Compliance Labs Corp.

TEST REPORT

Applicant:	**Dongguan MeiYinkeji Co., LTD.**
Address:	**Room 1004, No.3, Lane 6, Minchang Road, Nanzha, Humen Town, Dongguan City, Guangdong Province, China**
Product Name:	**Karaoke machine**
Model:	**M1-MIC**
FCC ID:	**2BKSF-M1MIC**
Standard(s):	**FCC PART 15B** **ICES-003, ISSUE 7, OCTOBER 2020** **ANSI C63.4-2014**
Report Number:	**2402X93944E-RF-00B**
Report Date:	**2024/10/23**

The above device has been tested and found compliant with the requirement of the relative standards by Bay Area Compliance Laboratories Corp. (Dongguan).

Reviewed By: **Pedro Yun**	**Approved By:** **Ivan Cao**
Title: **Project Engineer**	Title: **EMC Manager**

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CONTENTS

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	2402X93944E-RF-00B	Original Report	2024/10/23

1. GENERAL INFORMATION

1.1 General Description Of Equipment under Test

EUT Name:	Karaoke machine
EUT Model:	M1-MIC
Highest Operation Frequency:	2480MHz
Rated Input Voltage:	DC 3.0V from 2*AA battery
Serial Number:	2RD2-1
EUT Received Date:	2024/9/6
EUT Received Status:	Good

1.2 Accessory Information

Accessory Description	Manufacturer	Model	Parameters
/	/	/	/

1.3 Equipment Modifications

No modifications are made to the EUT during all test items.

2. DESCRIPTION OF TEST CONFIGURATION

2.1 Description of Test Configuration

The system was configured for testing in a typical fashion (as normally used by a typical user). The following summary table is showing all test modes to demonstrate in compliance with the standard:

Test Items	Test Modes
Radiated Spurious Emission :	M1: Operating
AC Line Conducted Emission:	M1: Operating

2.2 EUT Exercise Software

No EUT software is used for testing.

2.3 Support Equipment List and Details

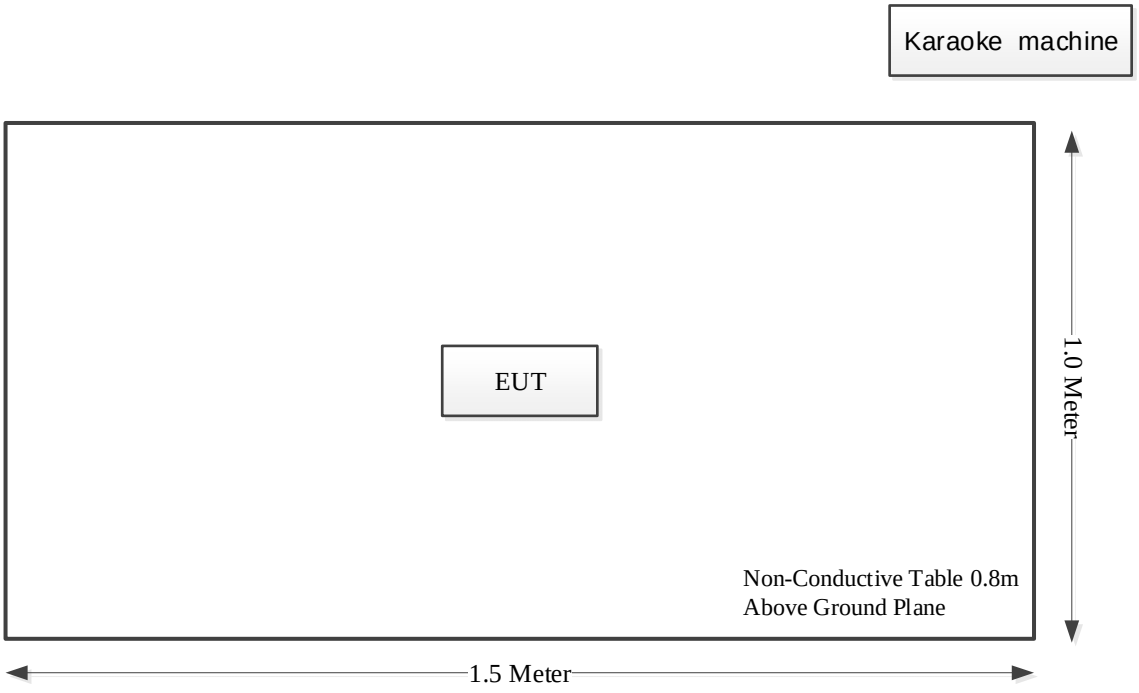
Manufacturer	Description	Model	Serial Number
MeiYin	Karaoke machine	K9-M	2RCX-1

2.4 Support Cable List and Details

Cable Description	Shielding Cable	Ferrite Core	Length (m)	From Port	To
/	/	/	/	/	/

2.5 Block Diagram of Test Setup

Radiated emissions:
M1:



2.6 Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.12, Pulong East 1st Road, Tangxia Town, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 829273, the FCC Designation No. : CN5044.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0022.

2.7 Measurement Uncertainty

Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

Parameter	Measurement Uncertainty
Unwanted Emissions, radiated	9kHz~30MHz: 3.3dB, 30MHz~200MHz: 4.55 dB, 200MHz~1GHz: 5.92 dB, 1GHz~6GHz: 4.98 dB, 6GHz~18GHz: 5.89 dB, 18GHz~26.5GHz:5.47 dB, 26.5GHz~40GHz:5.63 dB
Temperature	±1℃
Humidity	±5%
AC Power Lines Conducted Emission	3.11 dB (150 kHz to 30 MHz)

3. SUMMARY OF TEST RESULTS

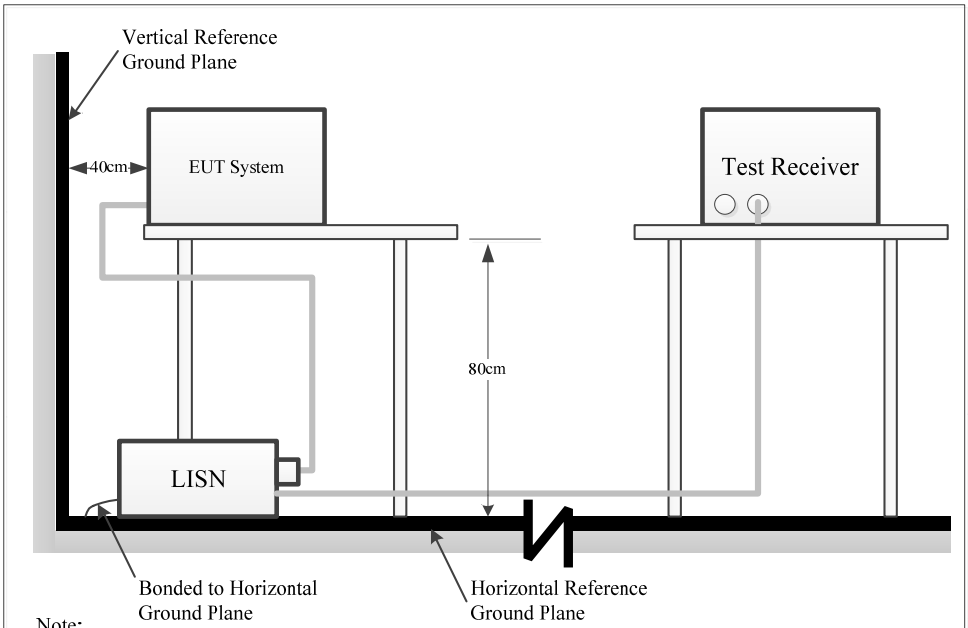
Standard Clause	Description of Test	Test Result
FCC§15.107 ICES-003§3.2.1	Conducted emissions	Not Applicable
FCC§15.109 ICES-003§3.2.2	Radiated emissions	Compliant

Note:
Not Applicable: The device was only powered by battery when operating.

4. REQUIREMENTS AND TEST PROCEDURES

4.1 AC Line Conducted Emissions

4.1.1 EUT Setup



Note:
1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at least 80 cm from other units and oter metal planes support units.

The setup of EUT is according with per ANSI C63.4-2014 measurement procedure. The specification used was with the FCC Part 15 B and Innovation, Science and Economic Development Canada ICES-003 Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

4.1.2 EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

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

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

4.1.3 Test Procedure

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

The report shall list the six emissions with the smallest margin relative to the limit, unless the margin is greater than 20 dB.

All data was recorded in the Quasi-peak and average detection mode.

4.1.4 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result (QuasiPeak or Average) = Meter Reading + Corr.

Note:
Corr. = Cable loss + Factor of coupling device

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. For example, a margin of 7dB means the emission is 7dB below the maximum limit. The equation for margin calculation is as follows:

Margin = Limit –Result

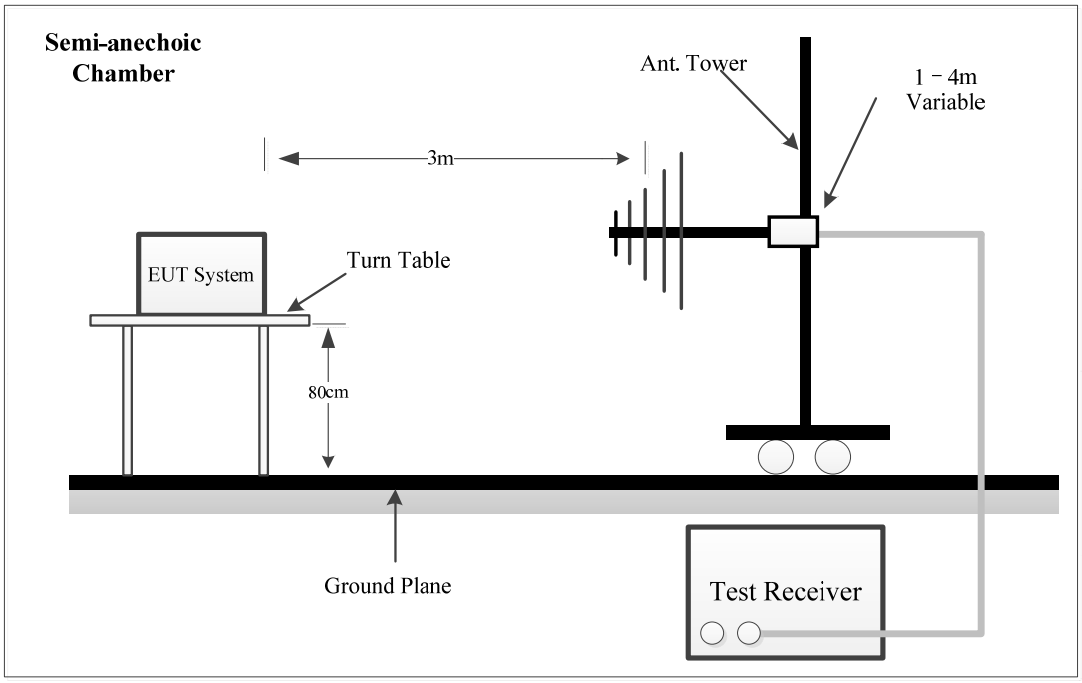
4.1.5 Test Result

Please refer to section 5.1.

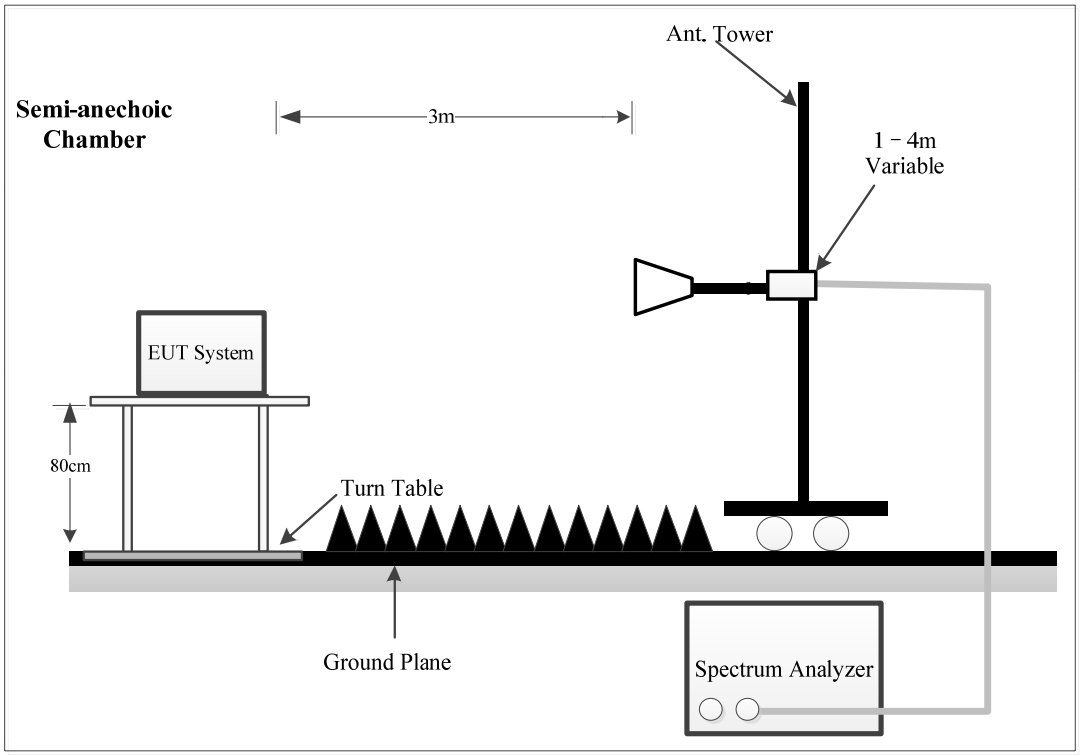
4.2 Radiation Emissions

4.2.1 EUT Setup

Below 1GHz:



Above 1GHz:



The radiated emission tests below 1GHz were performed at the 3 meters distance, above 1GHz were performed at the 3 meters Chamber B, using the setup accordance with the ANSI C63.4-2014. The specification used was the FCC Part 15B and ICES-003 Class B limits.

4.2.2 EMI Test Receiver Setup

The system was investigated from 30 MHz to 13 GHz.

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

Frequency Range	RBW	Video B/W	IF B/W	Measurement
30MHz – 1000 MHz	100 kHz	300 kHz	/	Peak
	/	/	120kHz	QP
Above 1 GHz	1 MHz	3 MHz	/	Peak
	1 MHz	3 MHz	/	AVG

4.2.3 Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

The data was recorded in the Quasi-peak detection mode for below 1 GHz, peak and average detection mode above 1 GHz.

If the maximized peak measured value complies with under the QP limit more than 6dB, then it is unnecessary to perform an QP measurement.

4.2.4 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Meter Reading+ Corrected

Note:
Corrected = Antenna Factor + Cable Loss - Amplifier Gain
or
Corrected = Antenna Factor + Cable Loss + Insertion loss of attenuator - Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7 dB means the emission is 7 dB below the limit. The equation for margin calculation is as follows:

Margin = Limit –Result

5. TEST DATA AND RESULTS

5.1 AC Line Conducted Emissions

Not Applicable, the device was only powered by battery when operating.

5.2 Radiation Emissions

Serial Number:	2RD2-1	Test Date:	2024/9/29~ 2024/10/17
Test Site:	Chamber10m, Chamber B	Test Mode:	operating
Tester:	Zoo Zou, Nat Zhou	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	25.9~30.4	Relative Humidity: (%)	44~68	ATM Pressure: (kPa)	100.4~101.4

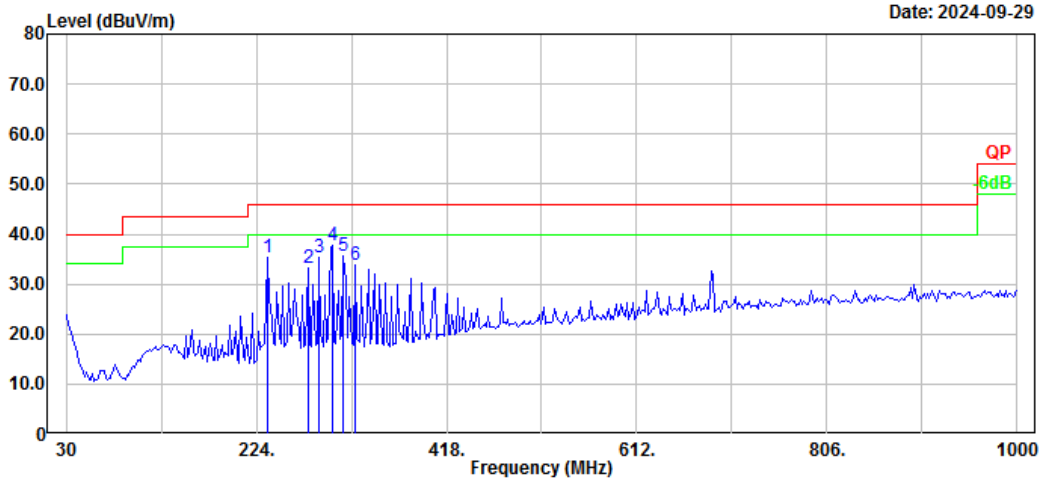
Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Sunol Sciences	Hybrid Antenna	JB3	A060611-1	2023/9/6	2026/9/5
Narda	Coaxial Attenuator	779-6dB	04269	2023/9/6	2026/9/5
Unknown	Coaxial Cable	C-NJNJ-50	C-1000-01	2024/7/1	2025/6/30
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-04	2024/7/1	2025/6/30
Unknown	Coaxial Cable	C-NJNJ-50	C-0530-01	2024/7/1	2025/6/30
Sonoma	Amplifier	310N	185914	2024/8/26	2025/8/25
R&S	EMI Test Receiver	ESCI	100224	2024/8/26	2025/8/25
Audix	Test Software	E3	191218 V9	N/A	N/A
ETS-Lindgren	Horn Antenna	3115	000 527 35	2023/9/7	2026/9/6
Xinhang Macrowave	Coaxial Cable	XH750A-N/J-SMA/J-10M	20231117004 #0001	2023/11/17	2024/11/16
AH	Preamplifier	PAM-0118P	469	2024/4/15	2025/4/14
R&S	Spectrum Analyzer	FSV40	101944	2024/9/6	2025/9/5
Decentest	Multiplex Switch Test Control Set & Filter Switch Unit	DT7220SCU & DT7220FCU	DC79902 & DC79905	2024/8/27	2025/8/26

** Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

1) 30MHz-1GHz:

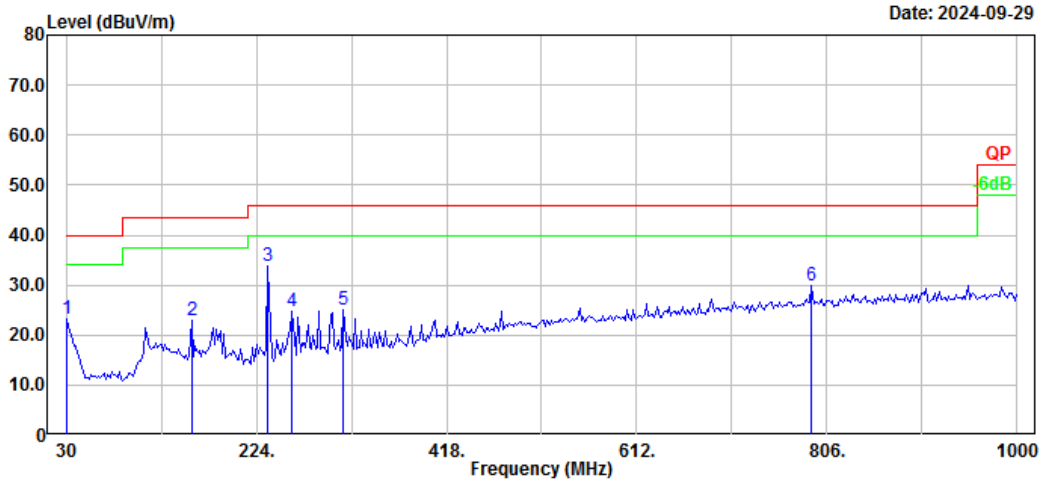
Project No.: 2402X93944E-RF Serial No.: 2RD2-1
Polarization: Horizontal Tester: Zoo Zou
Test Mode: M1
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	235.64	47.31	-11.96	35.35	46.00	10.65	Peak
2	276.38	43.07	-9.85	33.22	46.00	12.78	Peak
3	288.02	44.99	-9.60	35.39	46.00	10.61	Peak
4	301.60	47.09	-9.48	37.61	46.00	8.39	Peak
5	313.24	44.86	-9.23	35.63	46.00	10.37	Peak
6	324.88	42.78	-8.97	33.81	46.00	12.19	Peak

Project No.: 2402X93944E-RF
Polarization: Vertical
Test Mode: M1
Note:

Serial No.: 2RD2-1
Tester: Zoo Zou

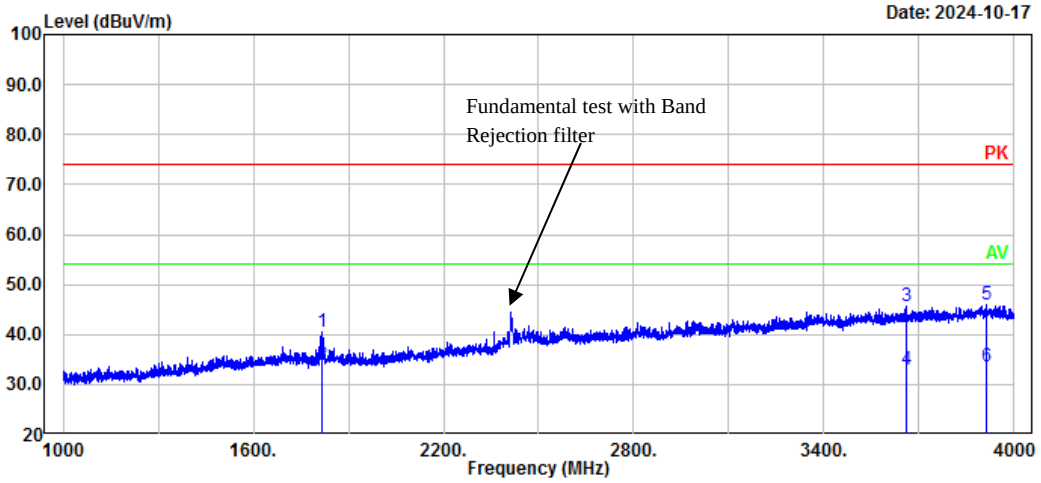


No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	30.00	27.17	-3.80	23.37	40.00	16.63	Peak
2	158.04	34.19	-11.13	23.06	43.50	20.44	Peak
3	235.64	45.81	-11.96	33.85	46.00	12.15	Peak
4	260.86	35.77	-11.04	24.73	46.00	21.27	Peak
5	313.24	34.33	-9.23	25.10	46.00	20.90	Peak
6	790.48	29.60	0.30	29.90	46.00	16.10	Peak

2) 1GHz-13GHz:

Project No.: 2402X93944E-RF
Polarization: Horizontal
Test Mode: M1
Note:

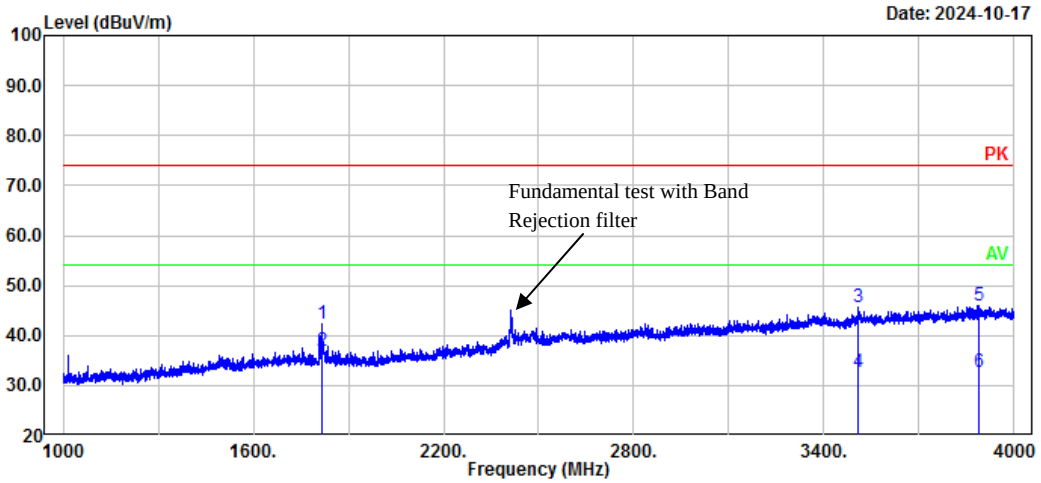
Serial No.: 2RD2-1
Tester: Nat Zhou



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	1814.80	52.20	-11.77	40.43	74.00	33.57	Peak
2	1814.80	45.76	-11.77	33.99	54.00	20.01	Average
3	3662.20	49.97	-4.33	45.64	74.00	28.36	Peak
4	3662.20	37.27	-4.33	32.94	54.00	21.06	Average
5	3910.60	49.67	-3.70	45.97	74.00	28.03	Peak
6	3910.60	37.14	-3.70	33.44	54.00	20.56	Average

Project No.: 2402X93944E-RF
Polarization: Vertical
Test Mode: M1
Note:

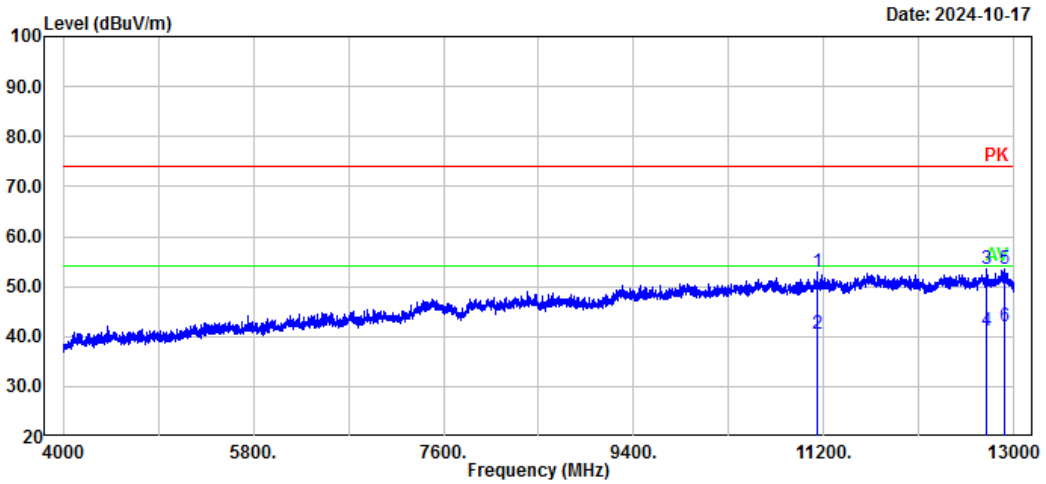
Serial No.: 2RD2-1
Tester: Nat Zhou



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	1815.40	54.07	-11.77	42.30	74.00	31.70	Peak
2	1815.40	48.74	-11.77	36.97	54.00	17.03	Average
3	3509.80	50.52	-5.01	45.51	74.00	28.49	Peak
4	3509.80	37.82	-5.01	32.81	54.00	21.19	Average
5	3890.80	49.69	-3.73	45.96	74.00	28.04	Peak
6	3890.80	36.42	-3.73	32.69	54.00	21.31	Average

Project No.: 2402X93944E-RF
Polarization: Horizontal
Test Mode: M1
Note:

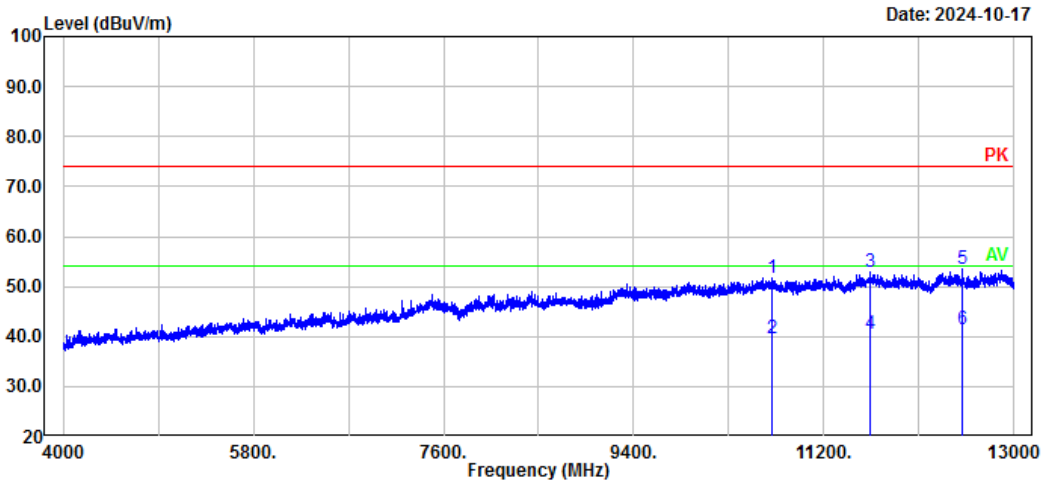
Serial No.: 2RD2-1
Tester: Nat Zhou



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	11137.00	49.54	3.34	52.88	74.00	21.12	Peak
2	11137.00	37.04	3.34	40.38	54.00	13.62	Average
3	12733.60	49.35	4.28	53.63	74.00	20.37	Peak
4	12733.60	36.90	4.28	41.18	54.00	12.82	Average
5	12902.80	49.21	4.32	53.53	74.00	20.47	Peak
6	12902.80	37.74	4.32	42.06	54.00	11.94	Average

Project No.: 2402X93944E-RF
Polarization: Vertical
Test Mode: M1
Note:

Serial No.: 2RD2-1
Tester: Nat Zhou



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	10701.40	48.88	2.83	51.71	74.00	22.29	Peak
2	10701.40	36.68	2.83	39.51	54.00	14.49	Average
3	11641.00	48.80	4.07	52.87	74.00	21.13	Peak
4	11641.00	36.52	4.07	40.59	54.00	13.41	Average
5	12505.00	49.31	4.15	53.46	74.00	20.54	Peak
6	12505.00	37.42	4.15	41.57	54.00	12.43	Average

EXHIBIT A - EUT PHOTOGRAPHS

Please refer to the attachment 2402X93944E-RF-EXP EUT EXTERNAL PHOTOGRAPHS and 2402X93944E-RF-INP EUT INTERNAL PHOTOGRAPHS.

EXHIBIT B - TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2402X93944E-RF-00B-TSP TEST SETUP PHOTOGRAPHS.

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