NVLAP TESTING
NVLAP LAB CODE 600341-0

BACL Bay Area Compliance Labs Corp.

TEST REPORT

Applicant:	**Xiamen Topstar Co., Ltd**
Address:	**FCC: No.696 Meixi Road, Tongan District Xiamen City, Fujian Province, P.R.China** **IC: No.696 Meixi Road, Tong'an District Xiamen City 361100 China (Peoples Republic Of)**
Product Name:	**AC Charger**
FCC ID:	**2A9FM-TSEC240VT**
IC:	**29702-TSEC240VT**
HVIN:	**TSEC240V/80A2US-RGPC** **TSEC240V/48A2US-RGPC** **TSEC240V/80A2US-RGC** **TSEC240V/48A2US-RGC** **TSEC240V/80A2US-RPC** **TSEC240V/48A2US-RPC** **TSEC240V/80A2US-RC** **TSEC240V/48A2US-RC**
Standard(s):	**47 CFR Part 15, Subpart C(15.225)** **ANSI C63.10-2013** **RSS-210 Issue 11, June 25, 2024** **RSS-Gen, Issue 5, February 2021 Amendment 2**
Report Number:	**2402A34589E-RF-00**
Report Date:	**2025/1/23**

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:** **Gavin Xu**
Title: **Project Engineer**	Title: **RF Supervisor**

Bay Area Compliance Laboratories Corp. (Dongguan)
No.12, Pulong East 1st Road, Tangxia Town, Dongguan, Guangdong, China

Tel: +86-769-86858888
Fax: +86-769-86858891

www.baclcorp.com.cn

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	2402A34589E-RF-00	Original Report	2025/1/23

1. GENERAL INFORMATION

1.1 General Description of Equipment under Test

EUT Name:	AC Charger
EUT Model:	TSEC240V/80A2US-RGPC
Multiple Model:	TSEC240V/48A2US-RGPC, TSEC240V/80A2US-RGC, TSEC240V/48A2US-RGC, TSEC240V/80A2US-RPC, TSEC240V/48A2US-RPC, TSEC240V/80A2US-RC, TSEC240V/48A2US-RC
Operation Frequency:	13.56 MHz
Modulation Type:	ASK
Emission Designator	A1D
Rated Input Voltage:	AC 208-240V/60Hz
Serial Number:	2WFP-1(TSEC240V/80A2US-RGPC) 2WFP-2(TSEC240V/48A2US-RGPC) 2WFP-3(TSEC240V/80A2US-RGC) 2WFP-4(TSEC240V/48A2US-RGC) 2WFP-5(TSEC240V/80A2US-RPC) 2WFP-6(TSEC240V/48A2US-RPC) 2WFP-7(TSEC240V/80A2US-RC) 2WFP-8(TSEC240V/48A2US-RC)
EUT Received Date:	2024/12/24
EUT Received Status:	Good
Note: The multiple models are electrically identical with the test model. Please refer to the declaration letter for more detail, which was provided by manufacturer.	

EUT Configuration:

Configuration	Model	PLC Module	WWAN Module	Rated Current
1#	TSEC240V/80A2US-RGPC	√	√	80A
2#	TSEC240V/48A2US-RGPC	√	√	48A
3#	TSEC240V/80A2US-RGC	×	√	80A
4#	TSEC240V/48A2US-RGC	×	√	48A
5#	TSEC240V/80A2US-RPC	√	×	80A
6#	TSEC240V/48A2US-RPC	√	×	48A
7#	TSEC240V/80A2US-RC	×	×	80A
8#	TSEC240V/48A2US-RC	×	×	48A

Note:
1. All models have NFC and WiFi/BT function.
2. The WiFi/BT module was certified, Model: ESP32-WROOM-32U, FCC ID: 2AC7Z-ESP32WROOM32U, IC:21098-ESPWROOM32U.
3. The WWAN module was certified, model: EC25-AFXD, FCC ID: XMR202008EC25AFXD, IC:10224A-022EC25AFXD
4. PLC Module is without Radio function.
5. 80A/48A Rated Current is difference in power cable.

1.2 Accessory Information

Accessory Description	Manufacturer	Model	Parameters
/	/	/	/

1.3 Antenna Information Detail▲

Antenna Manufacturer	Antenna Type	input impedance (Ohm)	Frequency Range	Antenna Gain
Xiamen Topstar Co., Ltd	Loop	50	13.56MHz	Unknown
The design of compliance with §15.203:				
☒ Unit uses a permanently attached antenna.				
☐ Unit uses a unique coupling to the intentional radiator.				
☐ Unit was professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.				

1.4 Equipment Modifications

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

2. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
FCC§15.207 (a) RSS-Gen Clause 8.8	AC Line Conducted Emissions	Compliant
§15.225 §15.209; §15.205 RSS-Gen Clause 8.9 RSS-210 Annex B.6 (a)	Radiated Spurious Emissions	Compliant
§15.225(e) RSS-210 Annex B.6 (b)	Frequency Stability	Compliant
§15.215(c)	20 dB Bandwidth	Compliant
RSS-Gen Clause 6.7	99% Occupied Bandwidth	Compliant
FCC§15.203 RSS-Gen Clause 6.8	Antenna Requirement	Compliant
FCC§1.1310, §2.1091 RSS-102, Clause 5.3.2	RF Exposure	Compliant

3. DESCRIPTION OF TEST CONFIGURATION

3.1 EUT Operation Condition

The system was configured for testing in Engineering Mode, which was provided by the manufacturer. During the test, the EUT was operation in its maximum Rated Current, which was controlled by the Vehicle Simulator Load.

3.2 EUT Exercise Software

No EUT software is used for testing.

3.3 Support Equipment List and Details

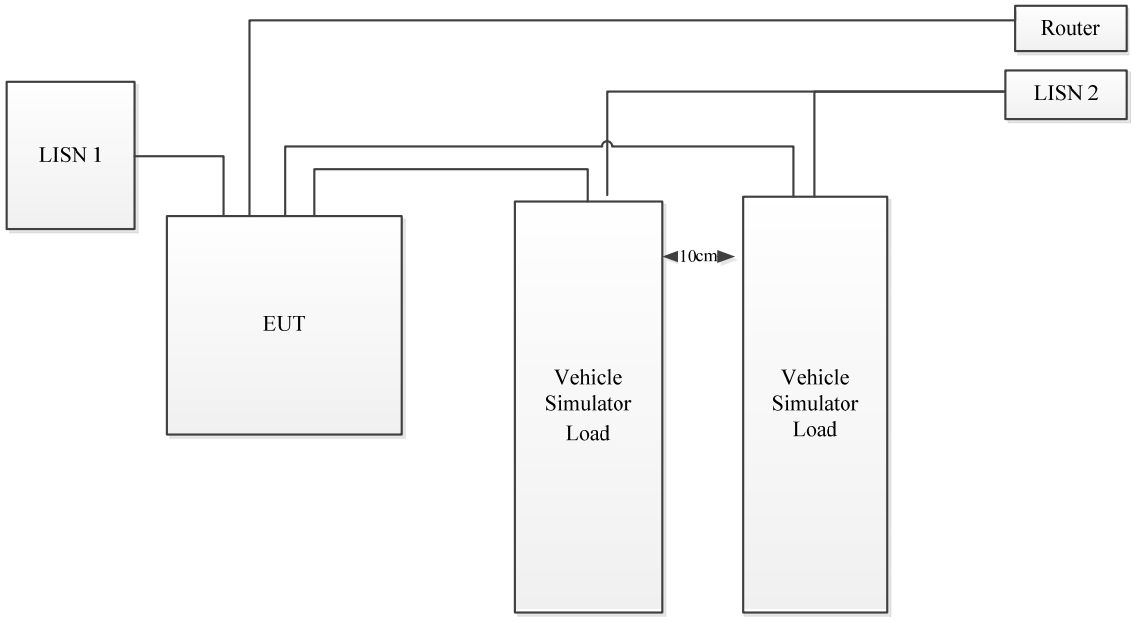
Manufacturer	Description	Model	Serial Number
D-Link	Router	DGS-1100-08PD	S01Z1H000012
GuangLuDa	Vehicle Simulator Load	GROADA-AC380V-32A-R	GROADA-FZX24051701
GuangLuDa	Vehicle Simulator Load	GROADA-AC380V-32A-R	GROADA-FZX24051702

3.4 Support Cable List and Details

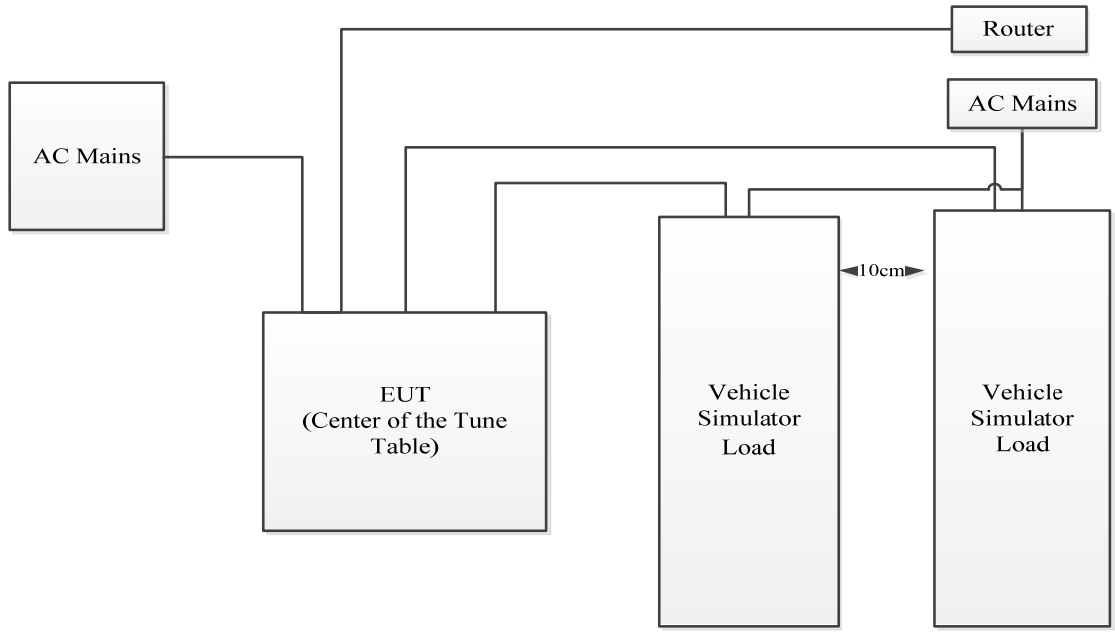
Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
AC Cable	No	No	1.5	EUT	LISN 1/AC Mains
RJ45 Cable	Yes	No	10	EUT	Router

3.5 Block Diagram of Test Setup

AC Line Conducted Emission:



Radiated Emission:



3.6 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.

3.7 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
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±0.61dB
Power Spectral Density, conducted	±0.61 dB
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
Unwanted Emissions, conducted	±2.47 dB
Temperature	±1℃
Humidity	±5%
DC and low frequency voltages	±0.4%
Duty Cycle	1%
AC Power Lines Conducted Emission	3.11 dB (150 kHz to 30 MHz)

4. REQUIREMENTS AND TEST RESULTS

4.1 AC Line Conducted Emissions

4.1.1 Applicable Standard

FCC§15.207(a).

(a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

	Conducted limit (dBμV)	
Frequency of emission (MHz)	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

(b) The limit shown in paragraph (a) of this section shall not apply to carrier current systems operating as intentional radiators on frequencies below 30 MHz. In lieu thereof, these carrier current systems shall be subject to the following standards:

(1) For carrier current system containing their fundamental emission within the frequency band 535-1705 kHz and intended to be received using a standard AM broadcast receiver: no limit on conducted emissions.

(2) For all other carrier current systems: 1000 μV within the frequency band 535-1705 kHz, as measured using a 50 μH/50 ohms LISN.

(3) Carrier current systems operating below 30 MHz are also subject to the radiated emission limits in §15.205, §15.209, §15.221, §15.223, or §15.227, as appropriate.

(c) Measurements to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines. Devices that include, or make provisions for, the use of battery chargers which permit operating while charging, AC adapters or battery eliminators or that connect to the AC power lines indirectly, obtainig their power through another device which is connected to the AC power lines, shall be tested to demonstrate compliance with the conducted limits.

RSS-Gen Clause 8.8

Unless stated otherwise in the applicable RSS, for radio apparatus that are designed to be connected to the public utility AC power network, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the range 150 kHz to 30 MHz shall not exceed the limits in table 4, as measured using a 50 µH / 50 Ω line impedance stabilization network. This requirement applies for the radio frequency voltage measured between each power line and the ground terminal of each AC power-line mains cable of the EUT.
For an EUT that connects to the AC power lines indirectly, through another device, the requirement for compliance with the limits in table 4 shall apply at the terminals of the AC power-line mains cable of a representative support device, while it provides power to the EUT. The lower limit applies at the boundary between the frequency ranges. The device used to power the EUT shall be representative of typical applications.

Table 4 – AC power-line conducted emissions limits

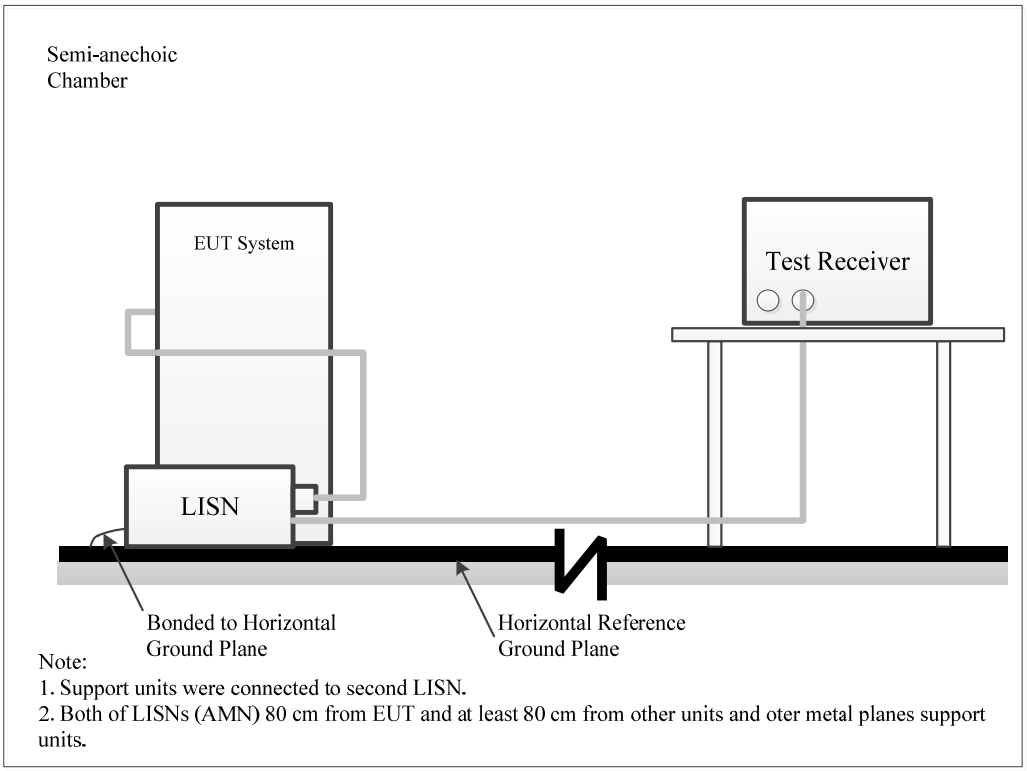
Frequency (MHz)	Conducted limit (dBµV)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56[1]	56 to 46[1]
0.5 – 5	56	46
5 – 30	60	50

Note 1: The level decreases linearly with the logarithm of the frequency.

For an EUT with a permanent or detachable antenna operating between 150 kHz and 30 MHz, the AC power-line conducted emissions must be measured using the following configurations:
(a) Perform the AC power-line conducted emissions test with the antenna connected to determine compliance with the limits of table 4 outside the transmitter's fundamental emission band.

(b) Retest with a dummy load instead of the antenna to determine compliance with the limits of table 4 within the transmitter's fundamental emission band. For a detachable antenna, remove the antenna and connect a suitable dummy load to the antenna connector. For a permanent antenna, remove the antenna and terminate the RF output with a dummy load or network that simulates the antenna in the fundamental frequency band.

4.1.2 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 C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207, RSS-Gen limits.

The spacing between the peripherals was 10 cm.

The adapter or EUT was connected to the main LISN with AC power source.

4.1.3 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

4.1.4 Test Procedure

During the conducted emission test, the adapter was connected to the outlet of the LISN.

The frequency and amplitude of the six highest ac power-line conducted emissions relative to the limit, measured over all the current-carrying conductors of the EUT power cords, and the operating frequency or frequency to which the EUT is tuned (if appropriate), should be reported, unless such emissions are more than 20 dB below the limit. AC power-line conducted emissions measurements are to be separately carried out only on each of the phase ("hot") line(s) and (if used) on the neutral line(s), but not on the ground [protective earth] line(s). If less than six emission frequencies are within 20 dB of the limit, then the noise level of the measuring instrument at representative frequencies should be reported. The specific conductor of the power-line cord for each of the reported emissions should be identified. Measure the six highest emissions with respect to the limit on each current-carrying conductor of each power cord associated with the EUT (but not the power cords of associated or peripheral equipment that are part of the test configuration). Then, report the six highest emissions with respect to the limit from among all the measurements identifying the frequency and specific current-carrying conductor identified with the emission. The six highest emissions should be reported for each of the current-carrying conductors, or the six highest emissions may be reported over all the current-carrying conductors.

According FCC publication number 174176,for a device with a permanent antenna operating at or below 30 MHz, the measurements done with a suitable dummy load, in lieu of the permanent antenna under the following conditions: (1) perform the AC line conducted tests with the permanent antenna to determine compliance with the Section 15.207 limits outside the transmitter's fundamental emission band; (2) retest with a dummy load in lieu of the permanent antenna to determine compliance with the Section 15.207 limits within the transmitter's fundamental emission band.

4.1.5 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Reading + Factor
Factor = attenuation caused by cable loss& Attenuator + voltage division factor of AMN

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

4.1.6 Test Data

Serial Number:	2WFP-1, 2WFP-2, 2WFP-3 2WFP-4, 2WFP-5, 2WFP-6 2WFP-7, 2WFP-8	Test Date:	2025/1/2 ~2025/1/17
Test Site:	Chamber 10m	Test Mode:	Transmitting
Tester:	Yukin Qiu, Lane Sun	Test Result:	Pass

Environmental Conditions:

Temperature: (℃)	21.5~22.8	Relative Humidity: (%)	35~50	ATM Pressure: (kPa)	101.2~101.7

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
MICRO-COAX	Coaxial Cable	C-NJNJ-50	C-0200-01	2024/9/5	2025/9/4
Unknown	Coaxial Cable	C-NJNJ-50	C-0075-03	2024/9/5	2025/9/4
JFW	Coaxial Attenuator	50FH-006-100	F-08-EM007	2024/9/5	2025/9/4
Audix	Test Software	E3	191218 V9	N/A	N/A
SCHWARZBECK	LISN 1	NNLK 8130	8130-00446	2024/9/23	2025/9/23
COM-POWER	LISN 2	LI-3P-132	20200003	2024/9/6	2025/9/5

** 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).*

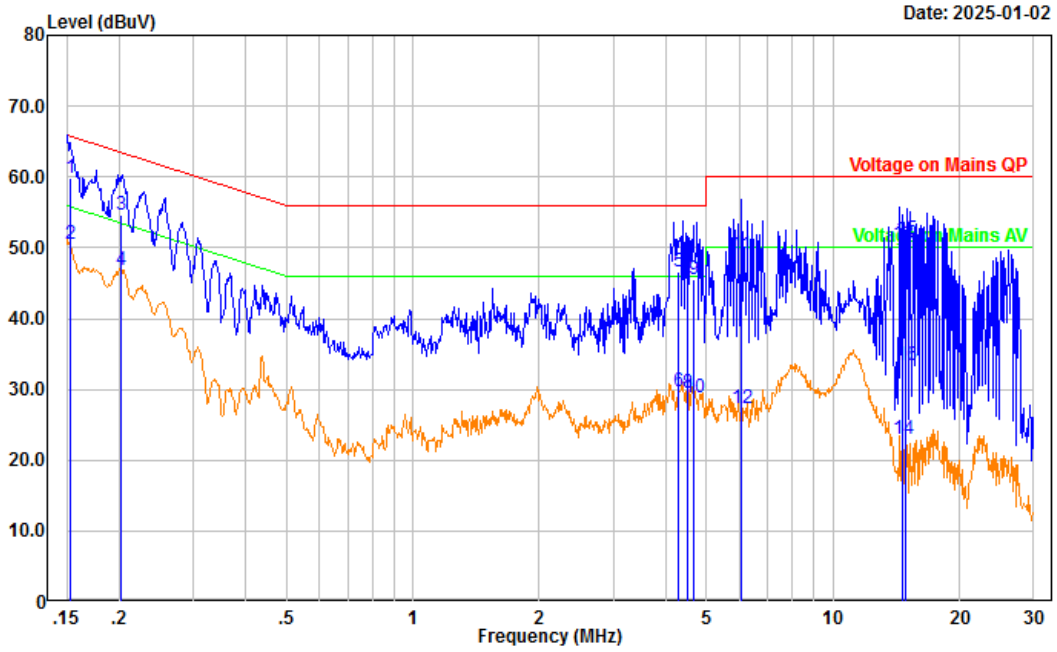
Test Data:

The test used AC 240V/60Hz voltage.

Configuration 1#:

Project No.: 2402A34589E-RF
Port: line1
Test Mode: Transmitting
IF B/W 9kHz PK/AV

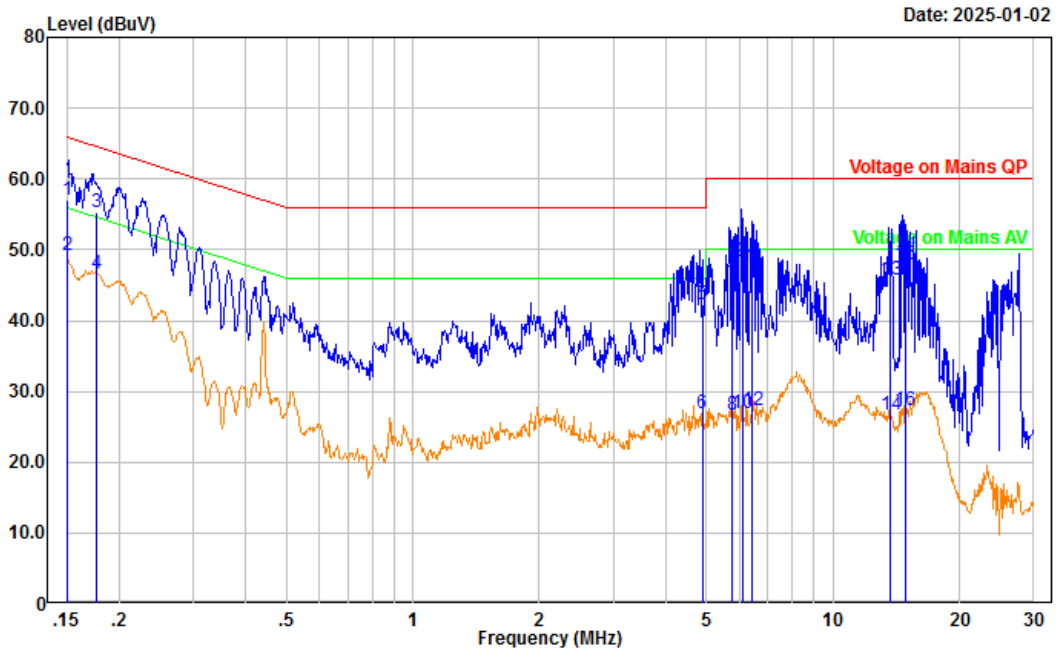
Serial No.: 2WFP-1
Tester: Yukin Qiu
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.152	53.69	6.19	59.88	65.86	5.98	QP
2	0.152	44.25	6.19	50.44	55.86	5.42	Average
3	0.202	48.50	6.14	54.64	63.54	8.90	QP
4	0.202	40.64	6.14	46.78	53.54	6.76	Average
5	4.299	40.30	6.30	46.60	56.00	9.40	QP
6	4.299	23.30	6.30	29.60	46.00	16.40	Average
7	4.496	41.39	6.30	47.69	56.00	8.31	QP
8	4.496	23.16	6.30	29.46	46.00	16.54	Average
9	4.673	39.31	6.31	45.62	56.00	10.38	QP
10	4.673	22.58	6.31	28.89	46.00	17.11	Average
11	6.052	42.74	6.35	49.09	60.00	10.91	QP
12	6.052	20.91	6.35	27.26	50.00	22.74	Average
13	14.649	43.99	6.59	50.58	60.00	9.42	QP
14	14.649	16.45	6.59	23.04	50.00	26.96	Average
15	14.847	44.62	6.60	51.22	60.00	8.78	QP
16	14.847	26.80	6.60	33.40	50.00	16.60	Average

Project No.: 2402A34589E-RF
Port: line2
Test Mode: Transmitting
IF B/W 9kHz PK/AV

Serial No.: 2WFP-1
Tester: Yukin Qiu
Note:

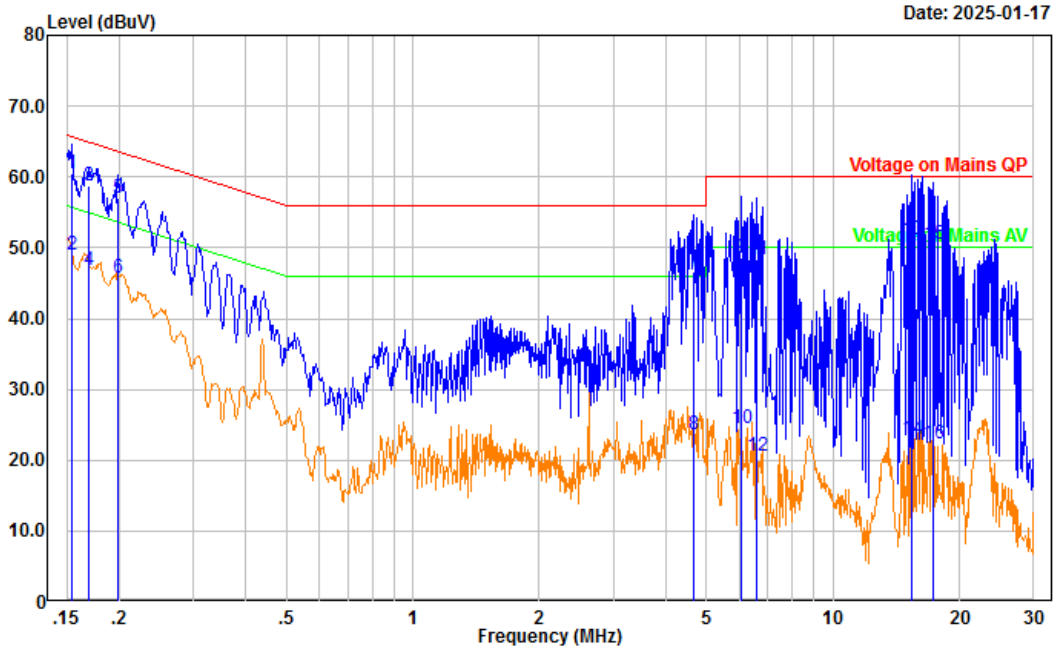


No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.151	50.78	6.18	56.96	65.96	9.00	QP
2	0.151	43.04	6.18	49.22	55.96	6.74	Average
3	0.176	49.07	6.15	55.22	64.67	9.45	QP
4	0.176	40.54	6.15	46.69	54.67	7.98	Average
5	4.880	35.99	6.32	42.31	56.00	13.69	QP
6	4.880	20.64	6.32	26.96	46.00	19.04	Average
7	5.757	38.69	6.34	45.03	60.00	14.97	QP
8	5.757	20.24	6.34	26.58	50.00	23.42	Average
9	6.072	41.92	6.35	48.27	60.00	11.73	QP
10	6.072	20.59	6.35	26.94	50.00	23.06	Average
11	6.428	41.10	6.39	47.49	60.00	12.51	QP
12	6.428	20.93	6.39	27.32	50.00	22.68	Average
13	13.676	39.22	6.60	45.82	60.00	14.18	QP
14	13.676	19.97	6.60	26.57	50.00	23.43	Average
15	14.818	41.25	6.62	47.87	60.00	12.13	QP
16	14.818	20.70	6.62	27.32	50.00	22.68	Average

Configuration 2#:

Project No.: 2402A34589E-RF
Port: line1
Test Mode: Transmitting
IF B/W 9kHz PK/AV

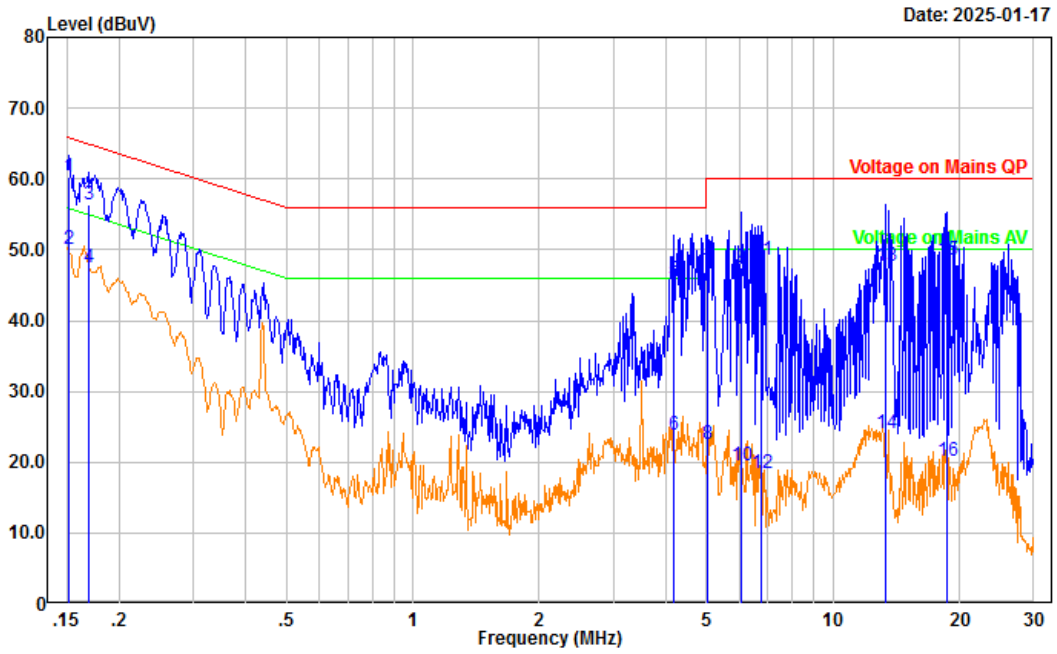
Serial No.: 2WFP-2
Tester: Lane Sun
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.154	54.38	6.19	60.57	65.79	5.22	QP
2	0.154	42.75	6.19	48.94	55.79	6.85	Average
3	0.170	52.50	6.17	58.67	64.96	6.29	QP
4	0.170	40.60	6.17	46.77	54.96	8.19	Average
5	0.198	50.91	6.14	57.05	63.68	6.63	QP
6	0.198	39.54	6.14	45.68	53.68	8.00	Average
7	4.651	40.33	6.31	46.64	56.00	9.36	QP
8	4.651	17.23	6.31	23.54	46.00	22.46	Average
9	6.057	42.30	6.35	48.65	60.00	11.35	QP
10	6.057	18.21	6.35	24.56	50.00	25.44	Average
11	6.593	41.86	6.41	48.27	60.00	11.73	QP
12	6.593	14.13	6.41	20.54	50.00	29.46	Average
13	15.384	44.62	6.61	51.23	60.00	8.77	QP
14	15.384	16.46	6.61	23.07	50.00	26.93	Average
15	17.338	43.82	6.63	50.45	60.00	9.55	QP
16	17.338	15.72	6.63	22.35	50.00	27.65	Average

Project No.: 2402A34589E-RF
Port: line2
Test Mode: Transmitting
IF B/W 9kHz PK/AV

Serial No.: 2WFP-2
Tester: Lane Sun
Note:

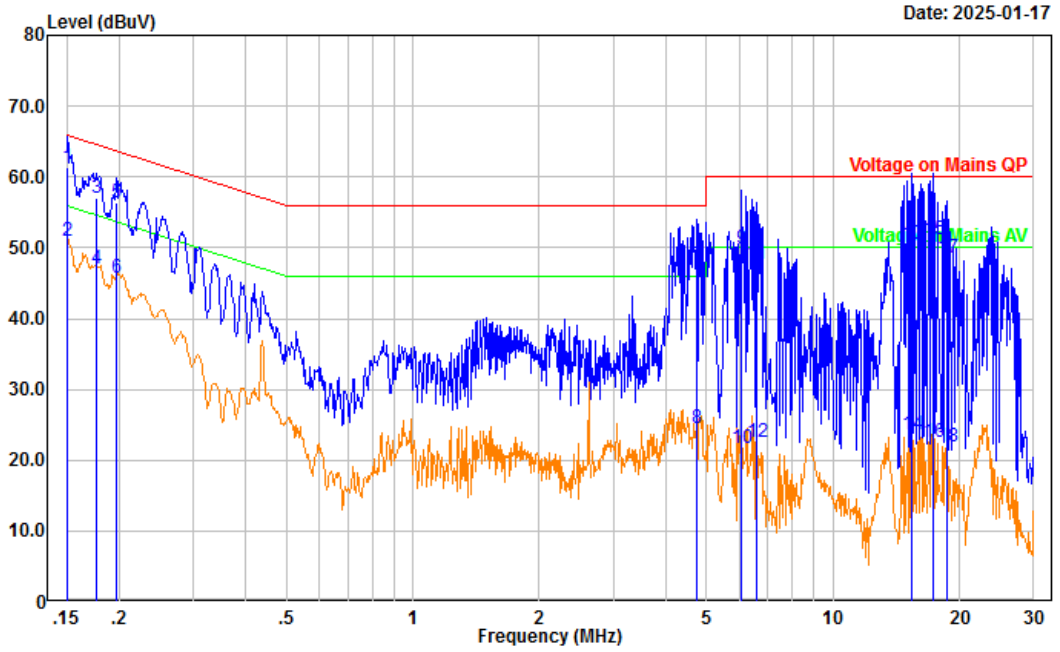


No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.152	54.06	6.18	60.24	65.92	5.68	QP
2	0.152	43.86	6.18	50.04	55.92	5.88	Average
3	0.169	50.31	6.16	56.47	65.01	8.54	QP
4	0.169	41.37	6.16	47.53	55.01	7.48	Average
5	4.189	39.38	6.30	45.68	56.00	10.32	QP
6	4.189	17.54	6.30	23.84	46.00	22.16	Average
7	5.037	40.55	6.32	46.87	60.00	13.13	QP
8	5.037	16.12	6.32	22.44	50.00	27.56	Average
9	6.057	41.23	6.35	47.58	60.00	12.42	QP
10	6.057	13.27	6.35	19.62	50.00	30.38	Average
11	6.759	42.10	6.44	48.54	60.00	11.46	QP
12	6.759	12.00	6.44	18.44	50.00	31.56	Average
13	13.313	41.18	6.59	47.77	60.00	12.23	QP
14	13.313	17.49	6.59	24.08	50.00	25.92	Average
15	18.684	41.87	6.68	48.55	60.00	11.45	QP
16	18.684	13.39	6.68	20.07	50.00	29.93	Average

Configuration 3#:

Project No.: 2402A34589E-RF
Port: line1
Test Mode: Transmitting
IF B/W 9kHz PK/AV

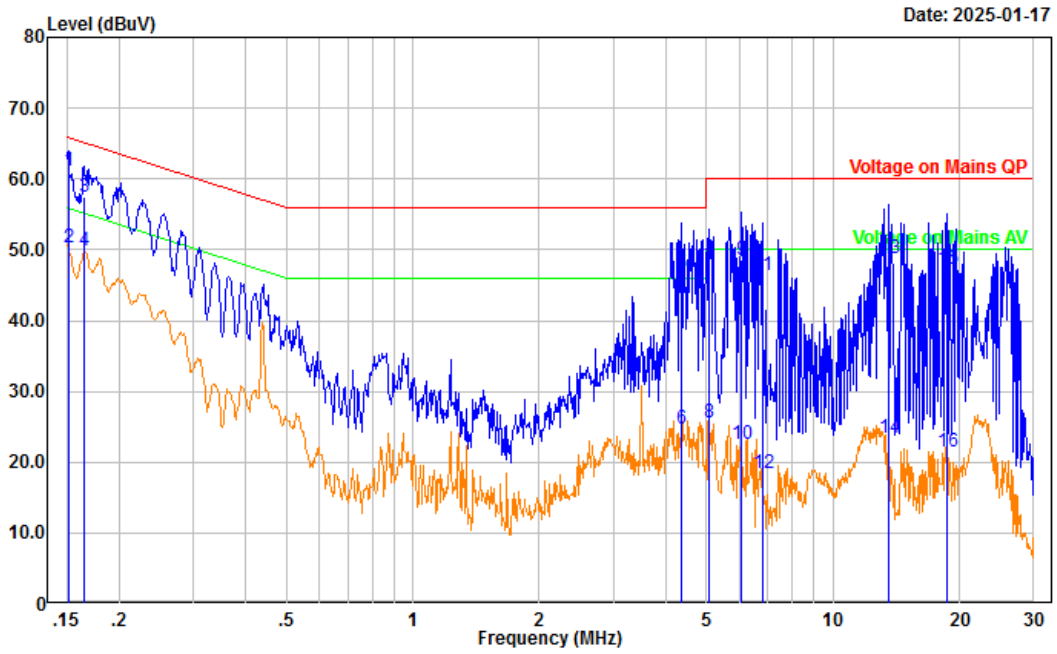
Serial No.: 2WFP-3
Tester: Lane Sun
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.151	55.15	6.19	61.34	65.96	4.62	QP
2	0.151	44.84	6.19	51.03	55.96	4.93	Average
3	0.176	50.96	6.16	57.12	64.68	7.56	QP
4	0.176	40.82	6.16	46.98	54.68	7.70	Average
5	0.197	50.19	6.14	56.33	63.72	7.39	QP
6	0.197	39.68	6.14	45.82	53.72	7.90	Average
7	4.745	41.24	6.31	47.55	56.00	8.45	QP
8	4.745	18.14	6.31	24.45	46.00	21.55	Average
9	6.057	43.43	6.35	49.78	60.00	10.22	QP
10	6.057	15.28	6.35	21.63	50.00	28.37	Average
11	6.560	41.27	6.41	47.68	60.00	12.32	QP
12	6.560	16.24	6.41	22.65	50.00	27.35	Average
13	15.384	43.92	6.61	50.53	60.00	9.47	QP
14	15.384	16.93	6.61	23.54	50.00	26.46	Average
15	17.338	44.60	6.63	51.23	60.00	8.77	QP
16	17.338	15.88	6.63	22.51	50.00	27.49	Average
17	18.684	42.00	6.65	48.65	60.00	11.35	QP
18	18.684	15.17	6.65	21.82	50.00	28.18	Average

Project No.: 2402A34589E-RF
Port: line2
Test Mode: Transmitting
IF B/W 9kHz PK/AV

Serial No.: 2WFP-3
Tester: Lane Sun
Note:

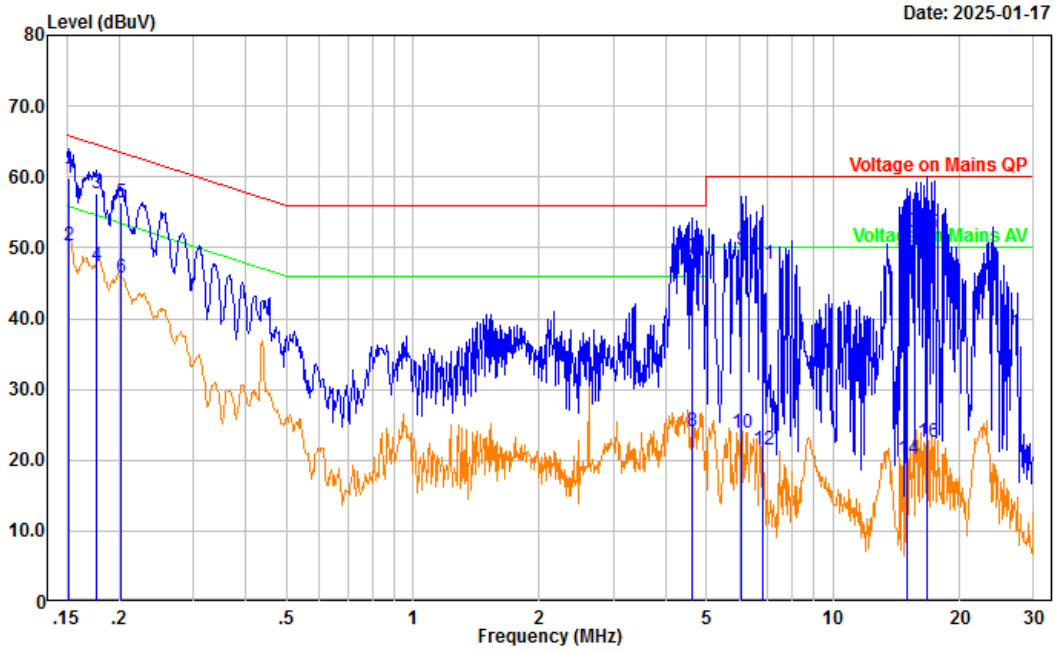


No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.152	55.06	6.18	61.24	65.92	4.68	QP
2	0.152	44.03	6.18	50.21	55.92	5.71	Average
3	0.165	51.28	6.17	57.45	65.21	7.76	QP
4	0.165	43.71	6.17	49.88	55.21	5.33	Average
5	4.359	40.34	6.31	46.65	56.00	9.35	QP
6	4.359	18.46	6.31	24.77	46.00	21.23	Average
7	5.062	41.21	6.32	47.53	60.00	12.47	QP
8	5.062	19.35	6.32	25.67	50.00	24.33	Average
9	6.057	42.32	6.35	48.67	60.00	11.33	QP
10	6.057	16.12	6.35	22.47	50.00	27.53	Average
11	6.793	40.01	6.44	46.45	60.00	13.55	QP
12	6.793	11.88	6.44	18.32	50.00	31.68	Average
13	13.514	42.19	6.59	48.78	60.00	11.22	QP
14	13.514	16.86	6.59	23.45	50.00	26.55	Average
15	18.684	40.56	6.68	47.24	60.00	12.76	QP
16	18.684	14.86	6.68	21.54	50.00	28.46	Average

Configuration 4#:

Project No.: 2402A34589E-RF
Port: line1
Test Mode: Transmitting
IF B/W 9kHz PK/AV

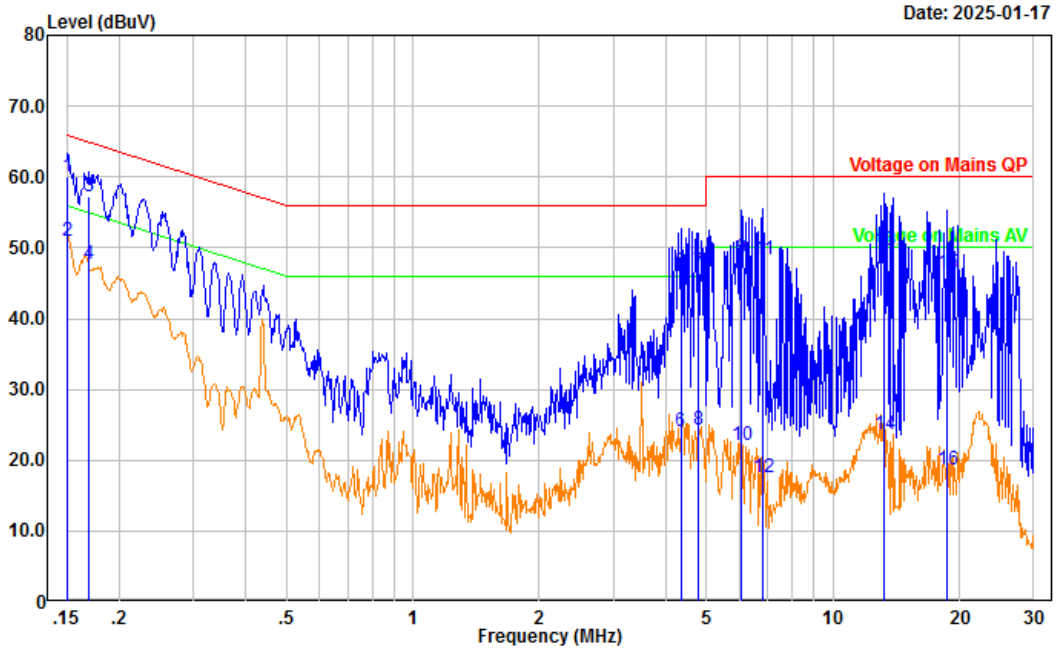
Serial No.: 2WFP-4
Tester: Lane Sun
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.152	53.55	6.19	59.74	65.88	6.14	Peak
2	0.152	44.02	6.19	50.21	65.88	15.67	Peak
3	0.176	51.45	6.16	57.61	64.68	7.07	Peak
4	0.176	41.25	6.16	47.41	64.68	17.27	Peak
5	0.202	50.21	6.14	56.35	63.52	7.17	Peak
6	0.202	39.67	6.14	45.81	63.52	17.71	Peak
7	4.628	42.36	6.31	48.67	56.00	7.33	Peak
8	4.628	17.73	6.31	24.04	56.00	31.96	Peak
9	6.057	43.29	6.35	49.64	60.00	10.36	Peak
10	6.057	17.50	6.35	23.85	60.00	36.15	Peak
11	6.827	41.21	6.44	47.65	60.00	12.35	Peak
12	6.827	15.01	6.44	21.45	60.00	38.55	Peak
13	15.005	45.75	6.60	52.35	60.00	7.65	Peak
14	15.005	13.62	6.60	20.22	60.00	39.78	Peak
15	16.744	45.42	6.62	52.04	60.00	7.96	Peak
16	16.744	15.85	6.62	22.47	60.00	37.53	Peak

Project No.: 2402A34589E-RF
Port: line2
Test Mode: Transmitting
IF B/W 9kHz PK/AV

Serial No.: 2WFP-4
Tester: Lane Sun
Note:

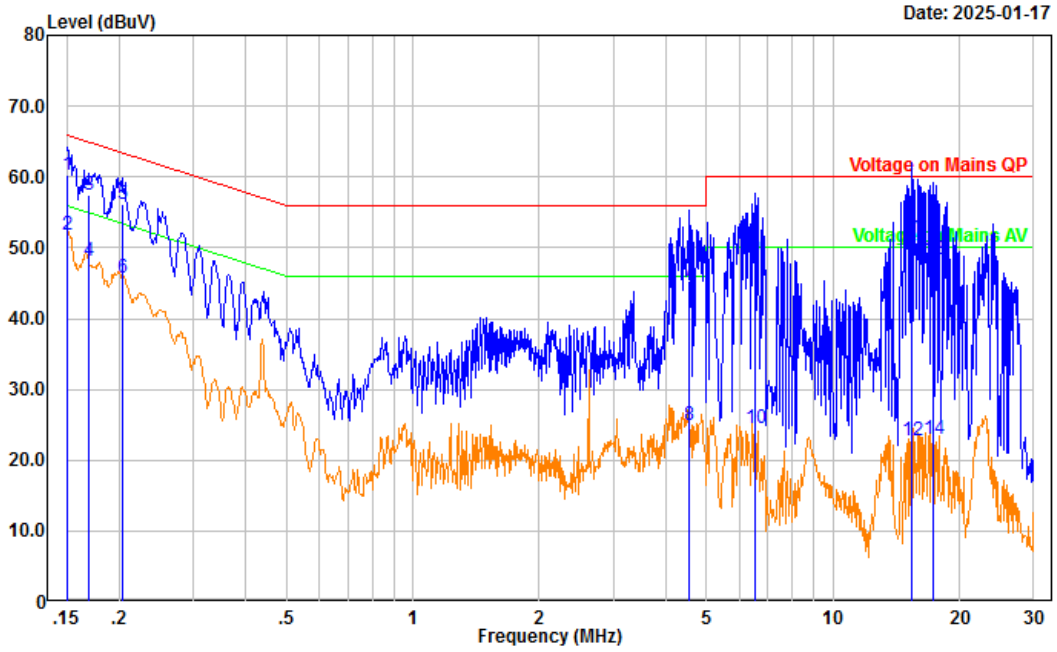


No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.150	53.94	6.18	60.12	66.00	5.88	QP
2	0.150	44.70	6.18	50.88	56.00	5.12	Average
3	0.169	51.05	6.16	57.21	65.01	7.80	QP
4	0.169	41.50	6.16	47.66	55.01	7.35	Average
5	4.337	40.25	6.31	46.56	56.00	9.44	QP
6	4.337	17.81	6.31	24.12	46.00	21.88	Average
7	4.792	40.23	6.32	46.55	56.00	9.45	QP
8	4.792	17.90	6.32	24.22	46.00	21.78	Average
9	6.057	42.18	6.35	48.53	60.00	11.47	QP
10	6.057	15.79	6.35	22.14	50.00	27.86	Average
11	6.827	41.81	6.44	48.25	60.00	11.75	QP
12	6.827	11.12	6.44	17.56	50.00	32.44	Average
13	13.247	43.04	6.59	49.63	60.00	10.37	QP
14	13.247	16.95	6.59	23.54	50.00	26.46	Average
15	18.684	39.79	6.68	46.47	60.00	13.53	QP
16	18.684	11.97	6.68	18.65	50.00	31.35	Average

Configuration 5#:

Project No.: 2402A34589E-RF
Port: line1
Test Mode: Transmitting
IF B/W 9kHz PK/AV

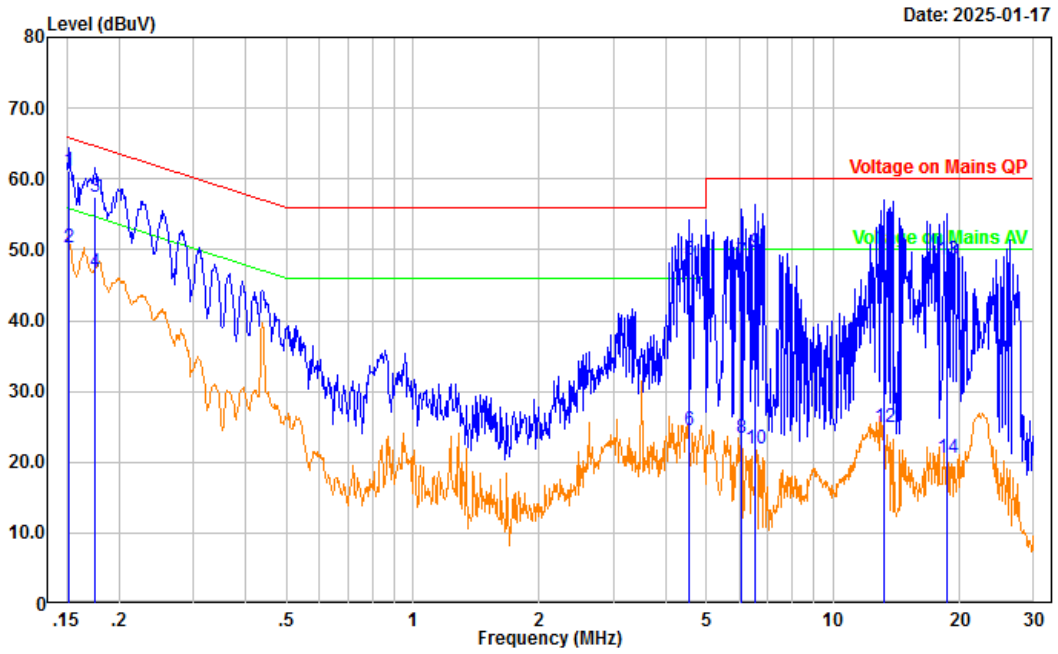
Serial No.: 2WFP-5
Tester: Lane Sun
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.150	54.16	6.19	60.35	66.00	5.65	QP
2	0.150	45.63	6.19	51.82	56.00	4.18	Average
3	0.169	51.20	6.17	57.37	65.01	7.64	QP
4	0.169	41.96	6.17	48.13	55.01	6.88	Average
5	0.203	49.98	6.14	56.12	63.47	7.35	QP
6	0.203	39.69	6.14	45.83	53.47	7.64	Average
7	4.559	38.91	6.31	45.22	56.00	10.78	QP
8	4.559	18.62	6.31	24.93	46.00	21.07	Average
9	6.527	42.25	6.40	48.65	60.00	11.35	QP
10	6.527	18.06	6.40	24.46	50.00	25.54	Average
11	15.384	44.72	6.61	51.33	60.00	8.67	QP
12	15.384	16.20	6.61	22.81	50.00	27.19	Average
13	17.338	41.82	6.63	48.45	60.00	11.55	QP
14	17.338	16.25	6.63	22.88	50.00	27.12	Average

Project No.: 2402A34589E-RF
Port: line2
Test Mode: Transmitting
IF B/W 9kHz PK/AV

Serial No.: 2WFP-5
Tester: Lane Sun
Note:

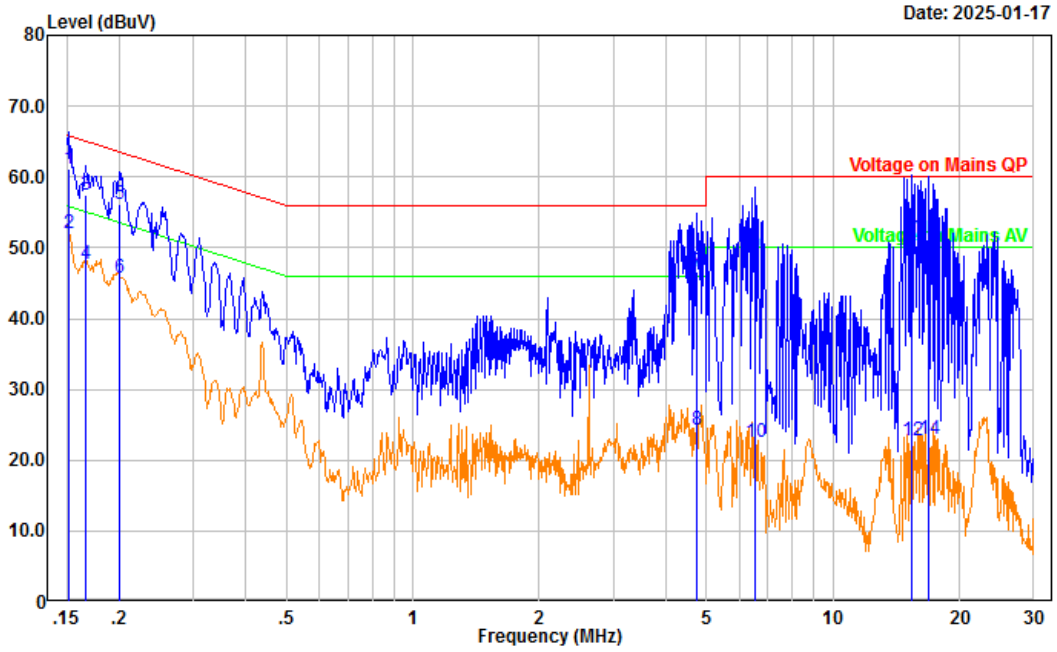


No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.152	55.06	6.18	61.24	65.88	4.64	QP
2	0.152	44.03	6.18	50.21	55.88	5.67	Average
3	0.175	51.30	6.15	57.45	64.72	7.27	QP
4	0.175	40.67	6.15	46.82	54.72	7.90	Average
5	4.559	42.34	6.31	48.65	56.00	7.35	QP
6	4.559	18.24	6.31	24.55	46.00	21.45	Average
7	6.057	42.01	6.35	48.36	60.00	11.64	QP
8	6.057	17.10	6.35	23.45	50.00	26.55	Average
9	6.527	43.23	6.40	49.63	60.00	10.37	QP
10	6.527	15.55	6.40	21.95	50.00	28.05	Average
11	13.247	43.74	6.59	50.33	60.00	9.67	QP
12	13.247	18.35	6.59	24.94	50.00	25.06	Average
13	18.684	41.95	6.68	48.63	60.00	11.37	QP
14	18.684	13.86	6.68	20.54	50.00	29.46	Average

Configuration 6#:

Project No.: 2402A34589E-RF
Port: line1
Test Mode: Transmitting
IF B/W 9kHz PK/AV

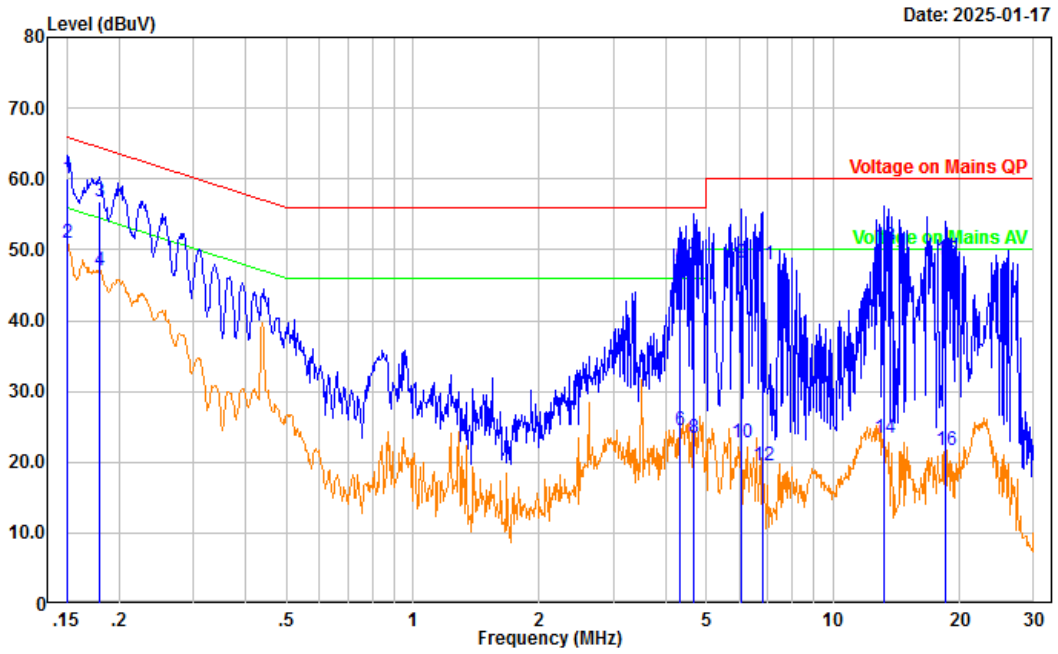
Serial No.: 2WFP-6
Tester: Lane Sun
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.152	54.95	6.19	61.14	65.92	4.78	QP
2	0.152	45.93	6.19	52.12	55.92	3.80	Average
3	0.167	51.27	6.17	57.44	65.13	7.69	QP
4	0.167	41.46	6.17	47.63	55.13	7.50	Average
5	0.200	50.07	6.14	56.21	63.60	7.39	QP
6	0.200	39.50	6.14	45.64	53.60	7.96	Average
7	4.745	40.34	6.31	46.65	56.00	9.35	QP
8	4.745	18.00	6.31	24.31	46.00	21.69	Average
9	6.527	42.56	6.40	48.96	60.00	11.04	QP
10	6.527	16.04	6.40	22.44	50.00	27.56	Average
11	15.384	44.71	6.61	51.32	60.00	8.68	QP
12	15.384	16.13	6.61	22.74	50.00	27.26	Average
13	16.828	44.50	6.63	51.13	60.00	8.87	QP
14	16.828	16.45	6.63	23.08	50.00	26.92	Average

Project No.: 2402A34589E-RF
Port: line2
Test Mode: Transmitting
IF B/W 9kHz PK/AV

Serial No.: 2WFP-6
Tester: Lane Sun
Note:

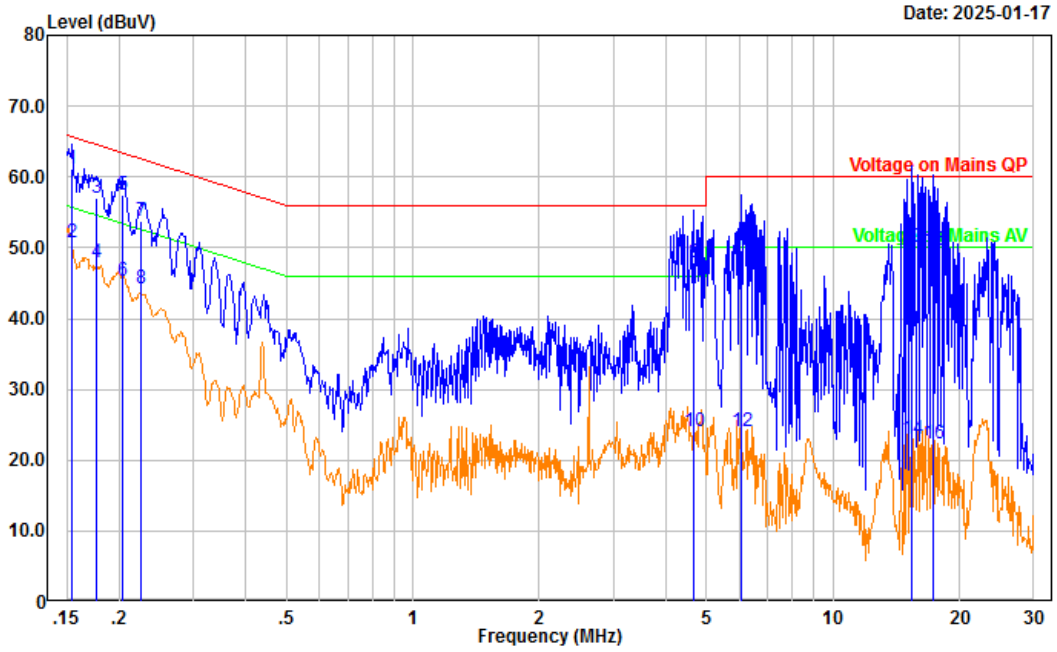


No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.150	53.94	6.18	60.12	66.00	5.88	QP
2	0.150	44.78	6.18	50.96	56.00	5.04	Average
3	0.179	50.68	6.15	56.83	64.51	7.68	QP
4	0.179	40.82	6.15	46.97	54.51	7.54	Average
5	4.316	41.24	6.31	47.55	56.00	8.45	QP
6	4.316	18.23	6.31	24.54	46.00	21.46	Average
7	4.674	41.49	6.31	47.80	56.00	8.20	QP
8	4.674	17.14	6.31	23.45	46.00	22.55	Average
9	6.057	41.86	6.35	48.21	60.00	11.79	QP
10	6.057	16.51	6.35	22.86	50.00	27.14	Average
11	6.827	41.38	6.44	47.82	60.00	12.18	QP
12	6.827	13.01	6.44	19.45	50.00	30.55	Average
13	13.247	43.86	6.59	50.45	60.00	9.55	QP
14	13.247	16.88	6.59	23.47	50.00	26.53	Average
15	18.499	41.96	6.68	48.64	60.00	11.36	QP
16	18.499	15.04	6.68	21.72	50.00	28.28	Average

Configuration 7#:

Project No.: 2402A34589E-RF
Port: line1
Test Mode: Transmitting
IF B/W 9kHz PK/AV

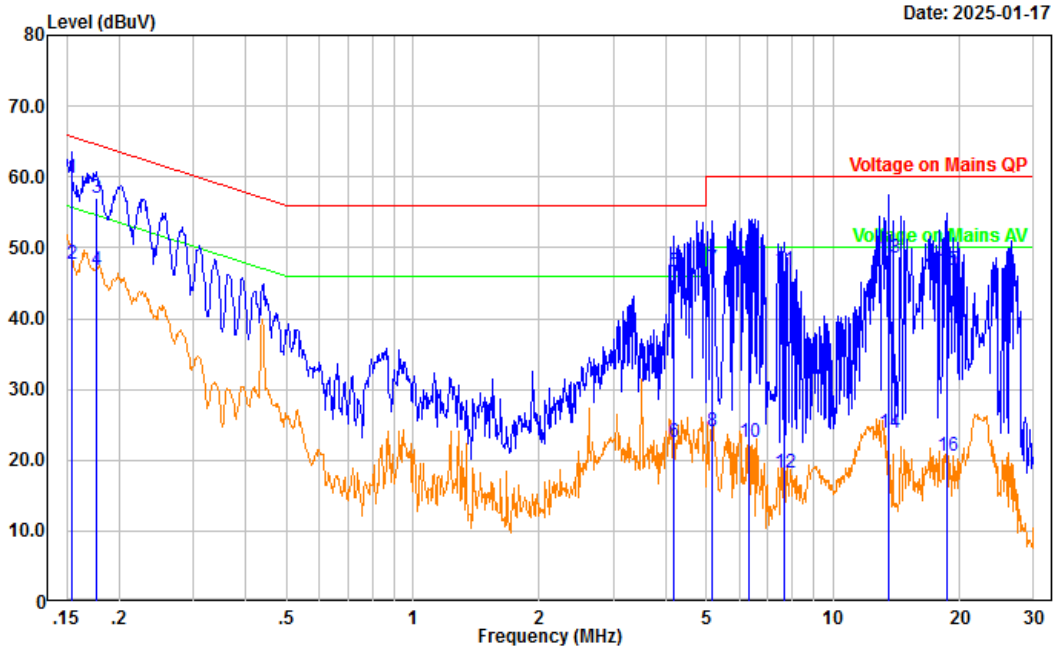
Serial No.: 2WFP-7
Tester: Lane Sun
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.155	55.05	6.19	61.24	65.75	4.51	QP
2	0.155	44.55	6.19	50.74	55.75	5.01	Average
3	0.177	50.96	6.16	57.12	64.63	7.51	QP
4	0.177	41.77	6.16	47.93	54.63	6.70	Average
5	0.203	51.41	6.14	57.55	63.47	5.92	QP
6	0.203	39.22	6.14	45.36	53.47	8.11	Average
7	0.226	47.54	6.14	53.68	62.61	8.93	QP
8	0.226	38.11	6.14	44.25	52.61	8.36	Average
9	4.674	41.54	6.31	47.85	56.00	8.15	QP
10	4.674	17.75	6.31	24.06	46.00	21.94	Average
11	6.057	43.27	6.35	49.62	60.00	10.38	QP
12	6.057	17.78	6.35	24.13	50.00	25.87	Average
13	15.384	43.57	6.61	50.18	60.00	9.82	QP
14	15.384	16.44	6.61	23.05	50.00	26.95	Average
15	17.338	42.91	6.63	49.54	60.00	10.46	QP
16	17.338	15.73	6.63	22.36	50.00	27.64	Average

Project No.: 2402A34589E-RF
Port: line2
Test Mode: Transmitting
IF B/W 9kHz PK/AV

Serial No.: 2WFP-7
Tester: Lane Sun
Note:

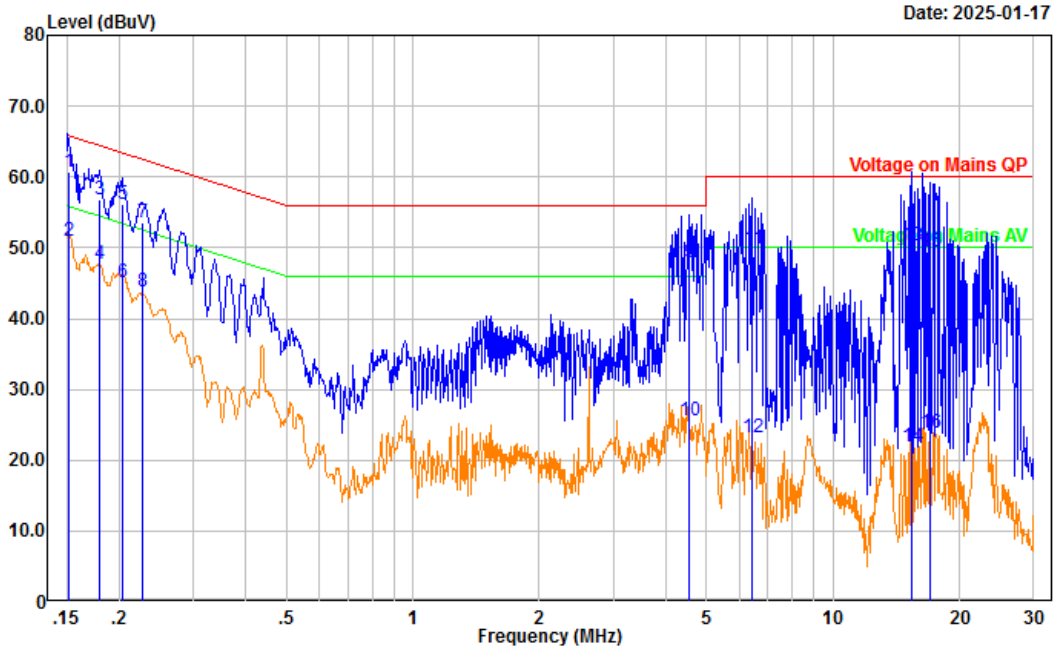


No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.154	53.64	6.18	59.82	65.79	5.97	QP
2	0.154	41.62	6.18	47.80	55.79	7.99	Average
3	0.176	50.97	6.15	57.12	64.68	7.56	QP
4	0.176	40.77	6.15	46.92	54.68	7.76	Average
5	4.189	40.24	6.30	46.54	56.00	9.46	QP
6	4.189	16.15	6.30	22.45	46.00	23.55	Average
7	5.138	40.76	6.32	47.08	60.00	12.92	QP
8	5.138	17.80	6.32	24.12	50.00	25.88	Average
9	6.304	41.27	6.38	47.65	60.00	12.35	QP
10	6.304	16.19	6.38	22.57	50.00	27.43	Average
11	7.656	40.31	6.47	46.78	60.00	13.22	QP
12	7.656	11.65	6.47	18.12	50.00	31.88	Average
13	13.514	42.05	6.59	48.64	60.00	11.36	QP
14	13.514	17.19	6.59	23.78	50.00	26.22	Average
15	18.684	40.06	6.68	46.74	60.00	13.26	QP
16	18.684	13.97	6.68	20.65	50.00	29.35	Average

Configuration 8#:

Project No.: 2402A34589E-RF
Port: line1
Test Mode: Transmitting
IF B/W 9kHz PK/AV

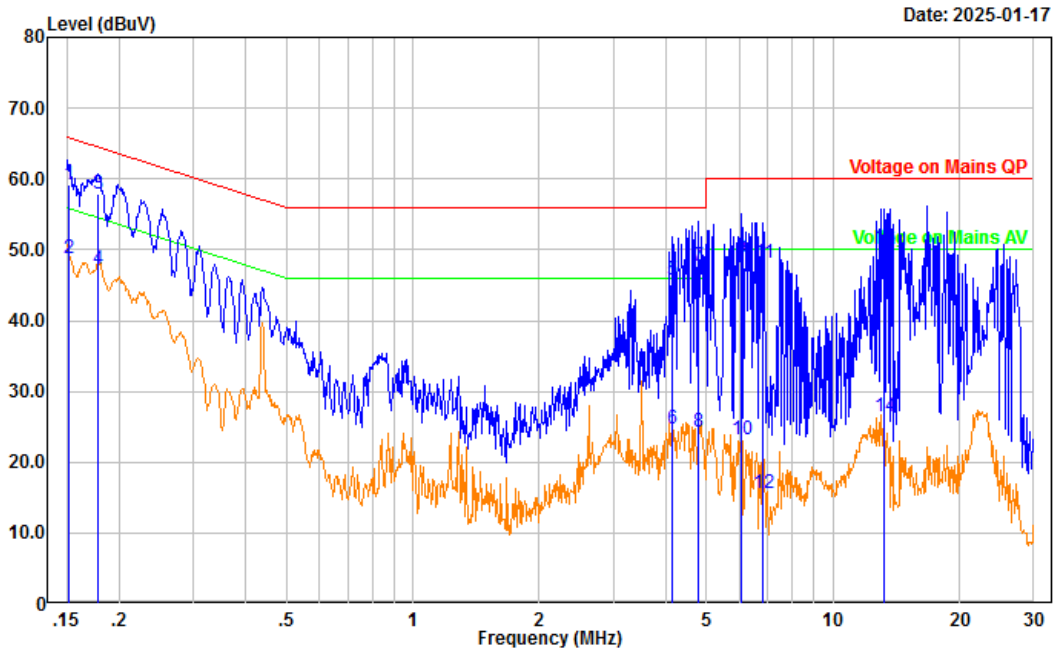
Serial No.: 2WFP-8
Tester: Lane Sun
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.152	54.55	6.19	60.74	65.88	5.14	QP
2	0.152	44.74	6.19	50.93	55.88	4.95	Average
3	0.179	50.70	6.16	56.86	64.51	7.65	QP
4	0.179	41.47	6.16	47.63	54.51	6.88	Average
5	0.203	49.91	6.14	56.05	63.47	7.42	QP
6	0.203	38.99	6.14	45.13	53.47	8.34	Average
7	0.227	47.32	6.14	53.46	62.56	9.10	QP
8	0.227	37.63	6.14	43.77	52.56	8.79	Average
9	4.559	41.55	6.31	47.86	56.00	8.14	QP
10	4.559	19.32	6.31	25.63	46.00	20.37	Average
11	6.430	43.42	6.39	49.81	60.00	10.19	QP
12	6.430	16.71	6.39	23.10	50.00	26.90	Average
13	15.384	43.62	6.61	50.23	60.00	9.77	QP
14	15.384	15.35	6.61	21.96	50.00	28.04	Average
15	17.081	42.78	6.63	49.41	60.00	10.59	QP
16	17.081	17.24	6.63	23.87	50.00	26.13	Average

Project No.: 2402A34589E-RF
Port: line2
Test Mode: Transmitting
IF B/W 9kHz PK/AV

Serial No.: 2WFP-8
Tester: Lane Sun
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.152	52.95	6.18	59.13	65.88	6.75	QP
2	0.152	42.68	6.18	48.86	55.88	7.02	Average
3	0.179	51.67	6.15	57.82	64.55	6.73	QP
4	0.179	41.21	6.15	47.36	54.55	7.19	Average
5	4.127	39.35	6.30	45.65	56.00	10.35	QP
6	4.127	18.35	6.30	24.65	46.00	21.35	Average
7	4.792	41.36	6.32	47.68	56.00	8.32	QP
8	4.792	18.03	6.32	24.35	46.00	21.65	Average
9	6.057	42.33	6.35	48.68	60.00	11.32	QP
10	6.057	16.82	6.35	23.17	50.00	26.83	Average
11	6.827	41.71	6.44	48.15	60.00	11.85	QP
12	6.827	9.20	6.44	15.64	50.00	34.36	Average
13	13.247	43.75	6.59	50.34	60.00	9.66	QP
14	13.247	19.86	6.59	26.45	50.00	23.55	Average

4.2 Radiated Spurious Emissions

4.2.1 Applicable Standard

FCC Part 15.225

(a) The field strength of any emissions within the band 13.553–13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters.

(b) Within the bands 13.410–13.553 MHz and 13.567–13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.

(c) Within the bands 13.110–13.410 MHz and 13.710–14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.

(d) The field strength of any emissions appearing outside of the 13.110–14.010 MHz band shall not exceed the general radiated emission limits in §15.209.

RSS-210 B.6(a)

(a) the field strength of any emission shall not exceed the following limits:

(i) 15.848 mV/m (84 dBµV/m) at 30 m, within the band 13.553-13.567 MHz

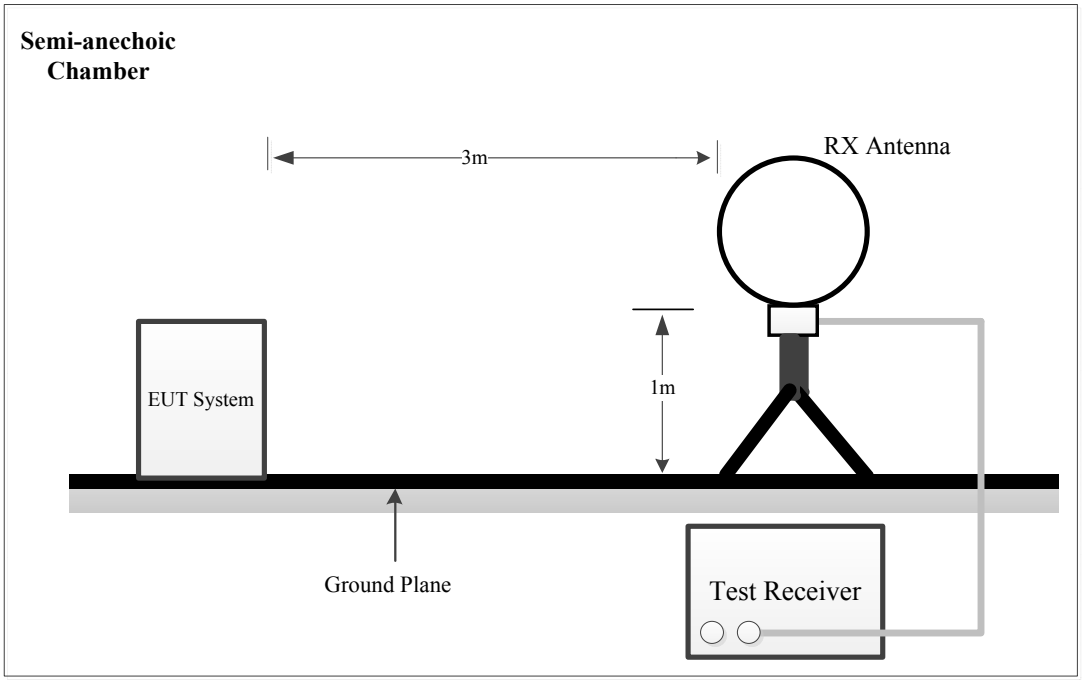
(ii) 334 µV/m (50.5 dBµV/m) at 30 m, within the bands 13.410-13.553 MHz and 13.567-13.710 MHz

(iii) 106 µV/m (40.5 dBµV/m) at 30 m, within the bands 13.110-13.410 MHz and 13.710-14.010 MHz

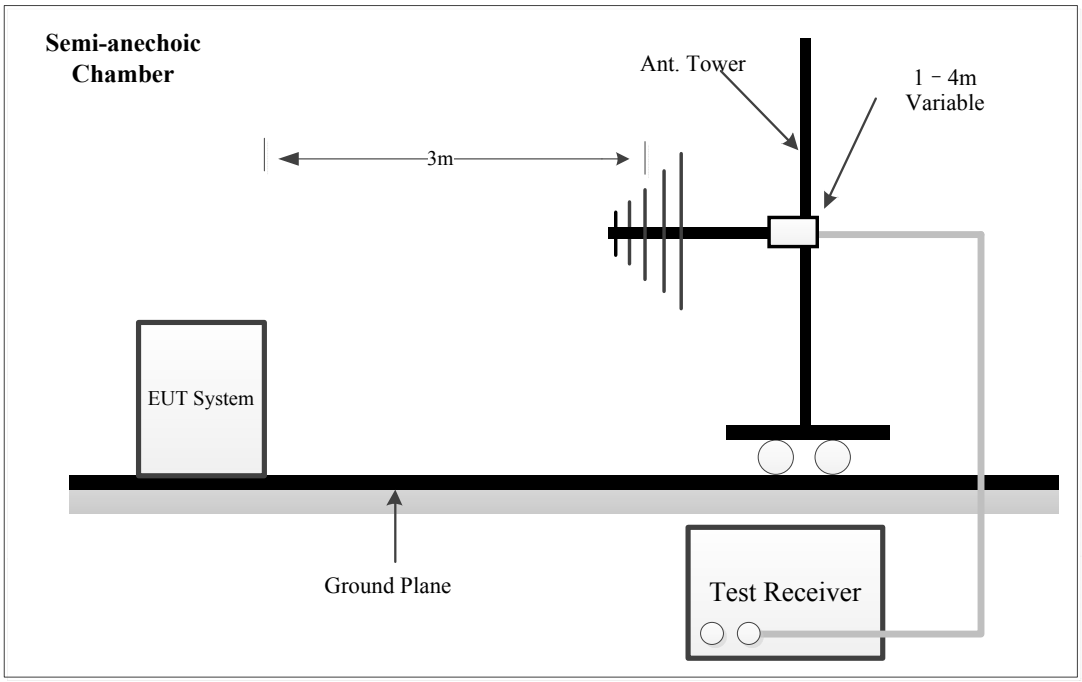
(iv) RSS-Gen general field strength limits for frequencies outside the band 13.110-14.010 MHz

4.2.2 EUT Setup

9kHz~30MHz:



30MHz~1GHz:



The radiated emission tests were performed in the 3-meter chamber test site, using the setup accordance with the ANSI C63.10-2013.

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

The spacing between the peripherals was 10 cm.

For 9kHz-30MHz test, the lowest height of the magnetic antenna shall be 1 m above the ground and three antenna orientations (parallel, perpendicular, and ground-parallel) shall be measured.

4.2.3 EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 9 kHz to 1 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
9 kHz – 150 kHz	200 Hz	1 kHz	200 Hz	QP/AV
150 kHz – 30 MHz	9 kHz	30 kHz	9 kHz	QP/AV
30 MHz – 1000 MHz	100 kHz	300 kHz	/	PK
	/	/	120 kHz	QP

If the maximized peak measured value complies with the limit, then it is unnecessary to perform an QP measurement

4.2.4 Test Procedure

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

Data was recorded in Quasi-peak detection mode for frequency range of 9 kHz-1 GHz except 9-90 kHz, 110-490 kHz, employing an average detector.

All emissions under the average limit and under the noise floor have not recorded in the report.

4.2.5 Corrected Result & Margin Calculation

The basic equation is as follows:

Result = Reading + Factor
Factor = Antenna Factor + Cable Loss- Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

The limit of Magnetic field strength for 9 kHz-30MHz in RSS-Gen requirement was converted to E-Filed by add 51,5dB, which was identical with FCC Limits.

4.2.6 Test Data

Serial Number:	2WFP-1, 2WFP-2, 2WFP-3 2WFP-4, 2WFP-5, 2WFP-6 2WFP-7, 2WFP-8	Test Date:	2025/1/16
Test Site:	Chamber10m	Test Mode:	Transmitting
Tester:	Leesin Xiang	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	21.5	Relative Humidity: (%)	37	ATM Pressure: (kPa)	102

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
EMCO	Passive Loop Antenna	6512	9706-1206	2023/10/25	2026/10/24
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

** 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).*

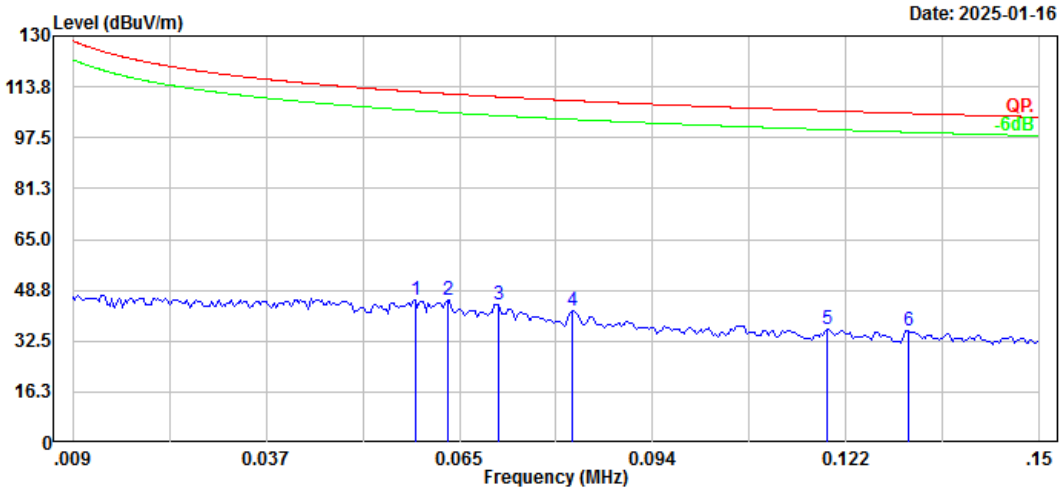
Test Data:

Please refer to the below table and plots.
The test used AC 240V/60Hz voltage.

1) 9kHz~30MHz
Configuration 1#:
Parallel

Project No.: 2402A34589E-EM
Polarization: Parallel
Test Mode: Transmitting
RBW:300Hz VBW:1kHz

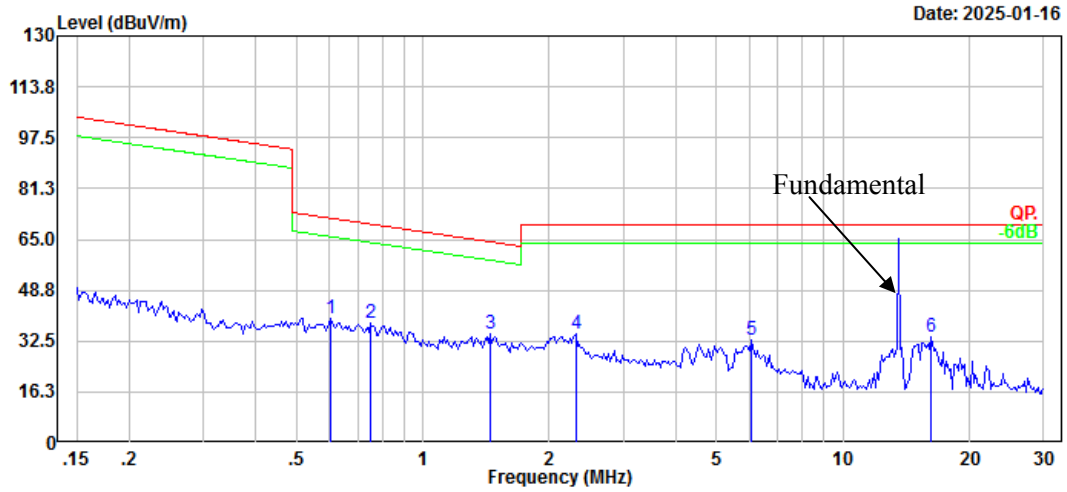
Serial No.: 2WFP-1
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.059	2.90	42.52	45.42	112.20	66.78	Peak
2	0.064	3.90	41.69	45.59	111.52	65.93	Peak
3	0.071	3.95	40.41	44.36	110.57	66.21	Peak
4	0.082	3.47	38.61	42.08	109.35	67.27	Peak
5	0.119	2.17	34.36	36.53	106.09	69.56	Peak
6	0.131	2.18	33.69	35.87	105.27	69.40	Peak

Project No.: 2402A34589E-EM
Polarization: Parallel
Test Mode: Transmitting
RBW:10kHz VBW:30kHz

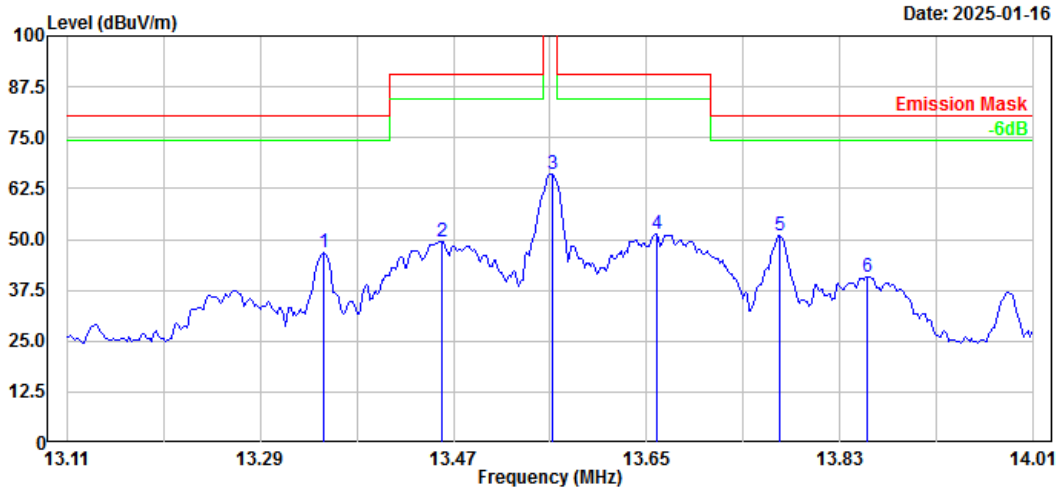
Serial No.: 2WFP-1
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.601	17.24	22.45	39.69	71.99	32.30	Peak
2	0.751	17.46	21.00	38.46	70.01	31.55	Peak
3	1.449	20.06	14.57	34.63	64.19	29.56	Peak
4	2.309	23.28	11.42	34.70	69.54	34.84	Peak
5	6.056	27.16	5.86	33.02	69.54	36.52	Peak
6	16.226	29.36	4.45	33.81	69.54	35.73	Peak

Project No.: 2402A34589E-EM
Polarization: Parallel
Test Mode: Transmitting
RBW:10kHz VBW:30kHz

Serial No.: 2WFP-1
Tester: Leesin Xiang

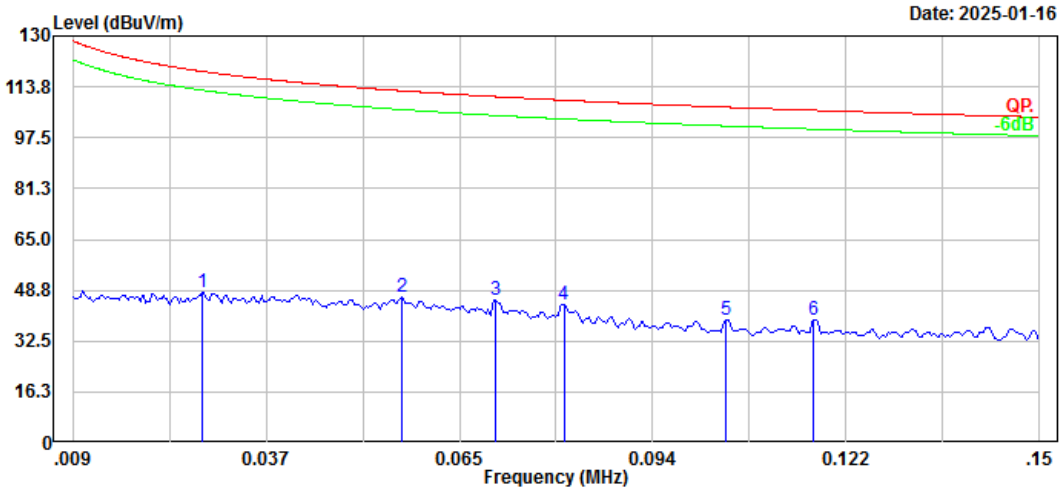


No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	13.349	42.15	4.57	46.72	80.51	33.79	Peak
2	13.459	44.99	4.55	49.54	90.47	40.93	Peak
3	13.562	61.65	4.53	66.18	124.00	57.82	Peak
4	13.659	46.77	4.51	51.28	90.47	39.19	Peak
5	13.774	46.39	4.51	50.90	80.51	29.61	Peak
6	13.855	36.37	4.49	40.86	80.51	39.65	Peak

Perpendicular

Project No.: 2402A34589E-EM
Polarization: Perpendicular
Test Mode: Transmitting
RBW:300Hz VBW:1kHz

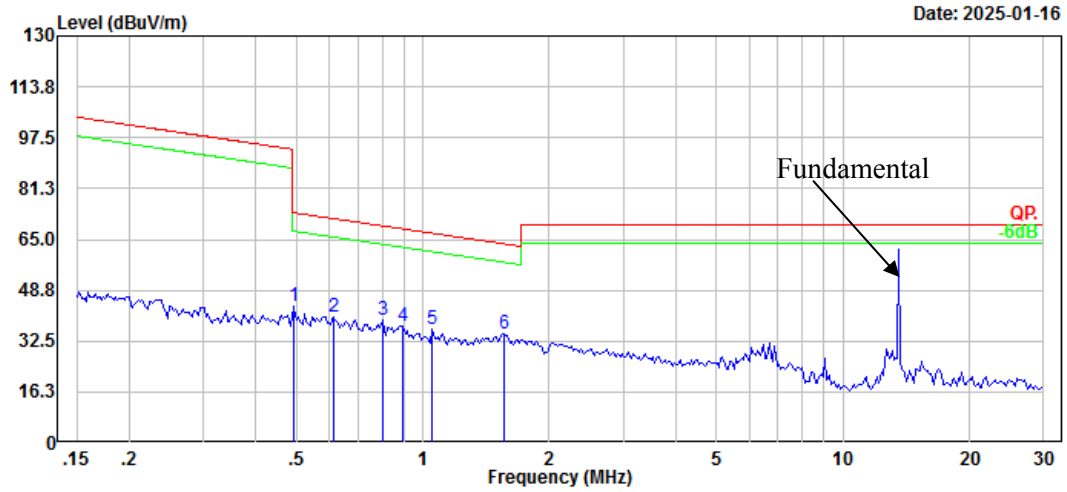
Serial No.: 2WFP-1
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.028	-0.04	48.07	48.03	118.69	70.66	Peak
2	0.057	3.75	42.86	46.61	112.50	65.89	Peak
3	0.071	5.04	40.46	45.50	110.61	65.11	Peak
4	0.081	5.31	38.81	44.12	109.47	65.35	Peak
5	0.104	4.28	35.16	39.44	107.24	67.80	Peak
6	0.117	4.61	34.46	39.07	106.24	67.17	Peak

Project No.: 2402A34589E-EM
Polarization: Perpendicular
Test Mode: Transmitting
RBW:10kHz VBW:30kHz

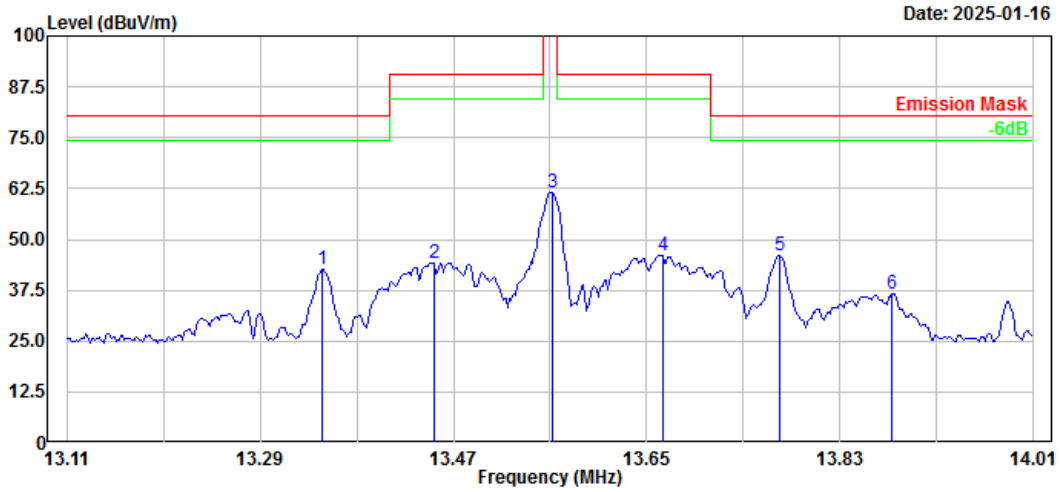
Serial No.: 2WFP-1
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.491	19.99	23.55	43.54	73.77	30.23	Peak
2	0.614	17.88	22.32	40.20	71.80	31.60	Peak
3	0.800	18.58	20.56	39.14	69.45	30.31	Peak
4	0.899	18.78	18.58	37.36	68.42	31.06	Peak
5	1.054	19.87	16.32	36.19	67.01	30.82	Peak
6	1.560	21.00	14.07	35.07	63.53	28.46	Peak

Project No.: 2402A34589E-EM
Polarization: Perpendicular
Test Mode: Transmitting
RBW:10kHz VBW:30kHz

Serial No.: 2WFP-1
Tester: Leesin Xiang

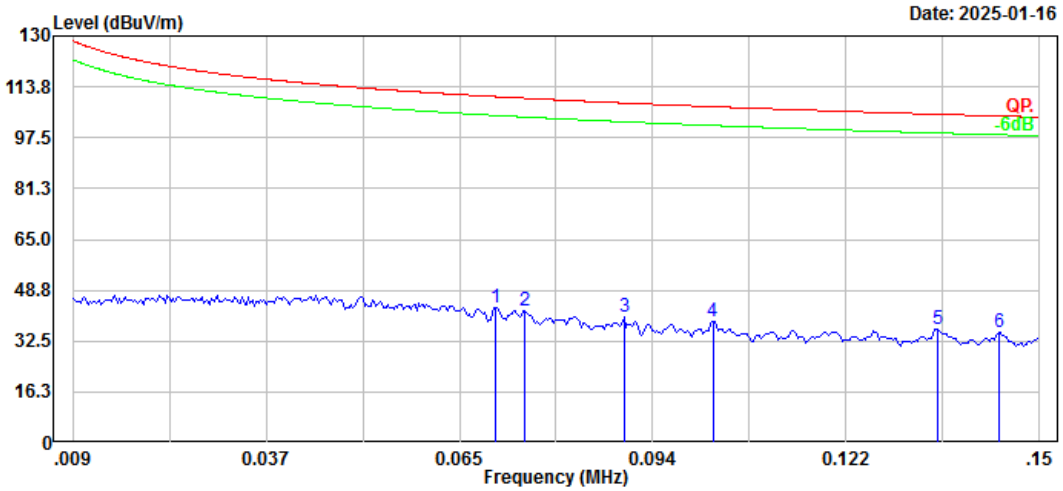


No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	13.348	37.96	4.57	42.53	80.51	37.98	Peak
2	13.452	39.71	4.55	44.26	90.47	46.21	Peak
3	13.562	56.83	4.53	61.36	124.00	62.64	Peak
4	13.664	41.55	4.51	46.06	90.47	44.41	Peak
5	13.774	41.42	4.51	45.93	80.51	34.58	Peak
6	13.879	32.23	4.48	36.71	80.51	43.80	Peak

Ground Parallel

Project No.: 2402A34589E-EM
Polarization: Ground-parallel
Test Mode: Transmitting
RBW:300Hz VBW:1kHz

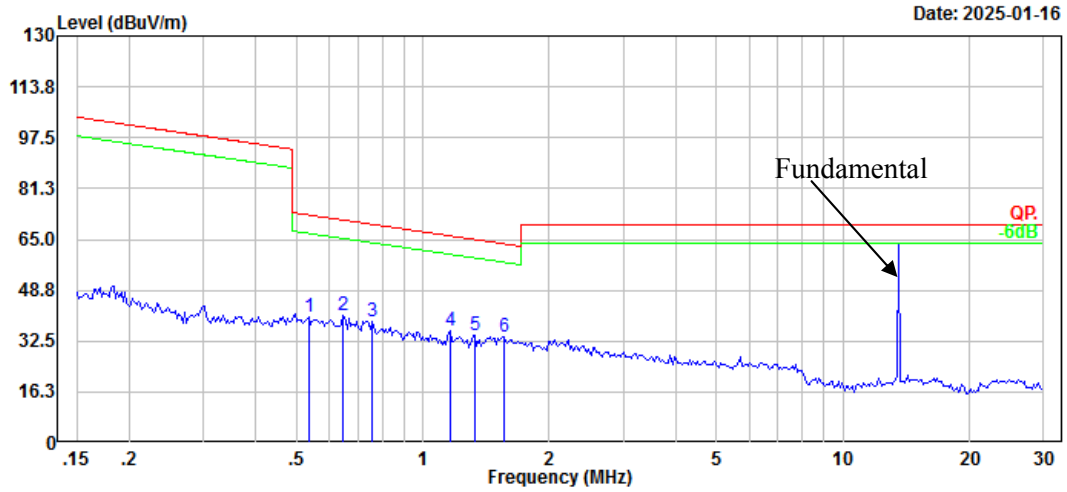
Serial No.: 2WFP-1
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.071	2.95	40.46	43.41	110.61	67.20	Peak
2	0.075	2.58	39.75	42.33	110.10	67.77	Peak
3	0.089	3.18	37.25	40.43	108.58	68.15	Peak
4	0.102	3.40	35.27	38.67	107.40	68.73	Peak
5	0.135	2.81	33.46	36.27	104.99	68.72	Peak
6	0.144	2.51	32.97	35.48	104.43	68.95	Peak

Project No.: 2402A34589E-EM
Polarization: Ground-parallel
Test Mode: Transmitting
RBW:10kHz VBW:30kHz

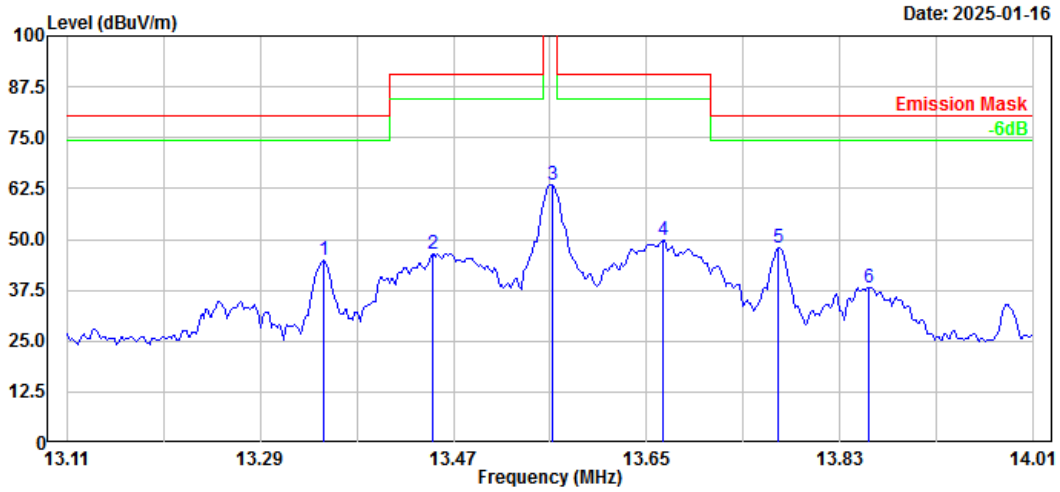
Serial No.: 2WFP-1
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.535	17.07	23.16	40.23	73.02	32.79	Peak
2	0.647	18.64	22.00	40.64	71.33	30.69	Peak
3	0.759	17.66	20.93	38.59	69.92	31.33	Peak
4	1.160	19.97	15.85	35.82	66.16	30.34	Peak
5	1.331	19.16	15.09	34.25	64.94	30.69	Peak
6	1.560	19.96	14.07	34.03	63.53	29.50	Peak

Project No.: 2402A34589E-EM
Polarization: Ground-parallel
Test Mode: Transmitting
RBW:10kHz VBW:30kHz

Serial No.: 2WFP-1
Tester: Leesin Xiang

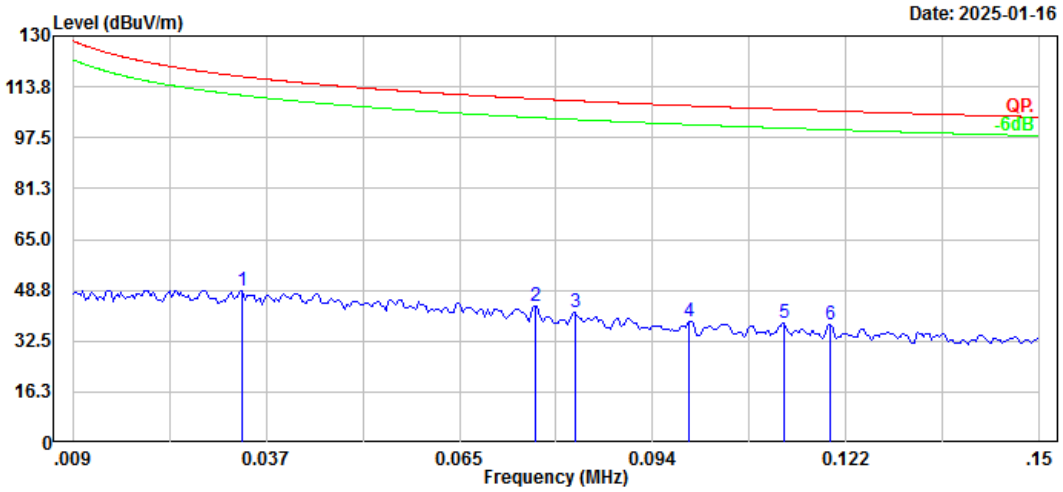


No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	13.349	40.32	4.57	44.89	80.51	35.62	Peak
2	13.450	42.02	4.55	46.57	90.47	43.90	Peak
3	13.562	58.94	4.53	63.47	124.00	60.53	Peak
4	13.664	45.17	4.51	49.68	90.47	40.79	Peak
5	13.772	43.40	4.51	47.91	80.51	32.60	Peak
6	13.857	33.77	4.49	38.26	80.51	42.25	Peak

Configuration 2#(Worst Polarization was reported):
Parallel

Project No.: 2402A34589E-EM
Polarization: Parallel
Test Mode: Transmitting
RBW:300Hz VBW:1kHz

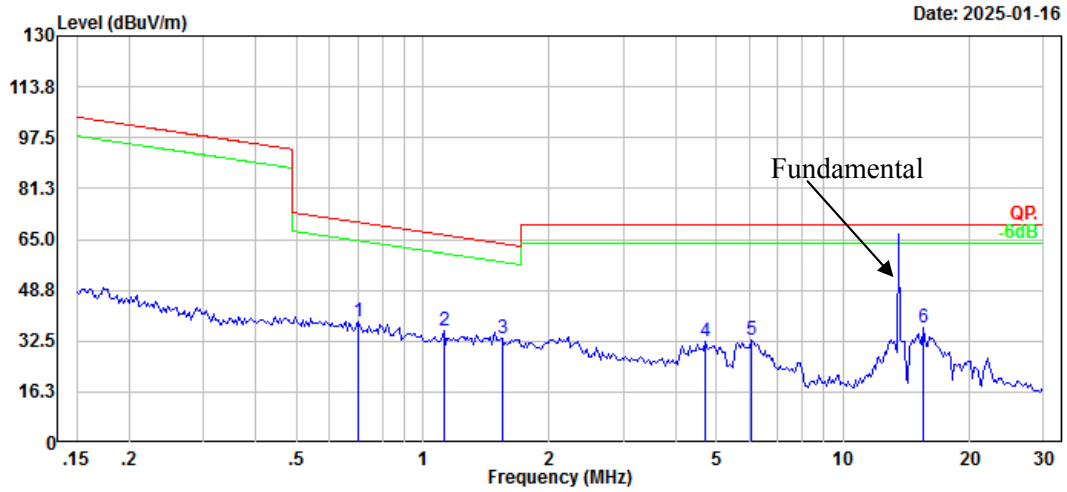
Serial No.: 2WFP-2
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.034	1.76	46.87	48.63	117.02	68.39	Peak
2	0.076	4.35	39.52	43.87	109.94	66.07	Peak
3	0.082	3.39	38.51	41.90	109.29	67.39	Peak
4	0.099	3.26	35.58	38.84	107.70	68.86	Peak
5	0.113	3.39	34.70	38.09	106.56	68.47	Peak
6	0.120	3.68	34.33	38.01	106.05	68.04	Peak

Project No.: 2402A34589E-EM
Polarization: Parallel
Test Mode: Transmitting
RBW:10kHz VBW:30kHz

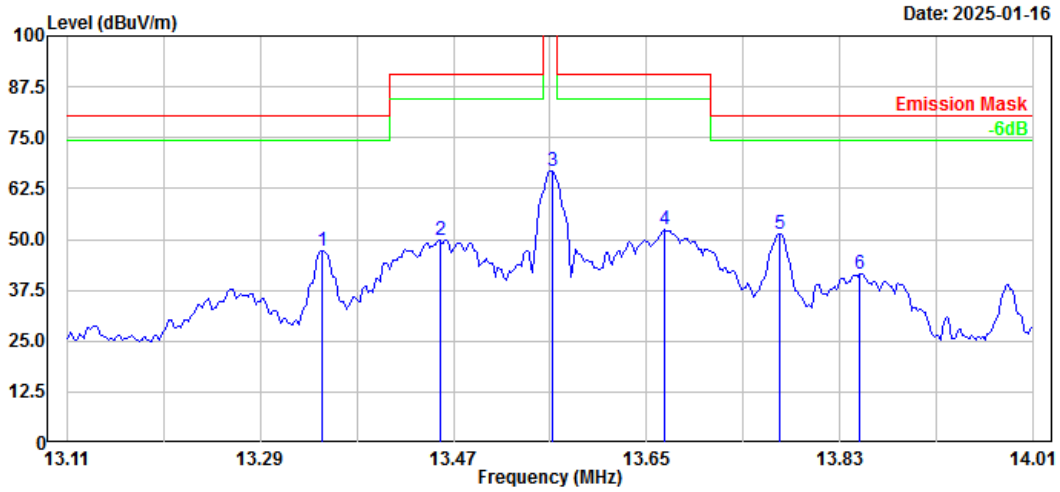
Serial No.: 2WFP-2
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.705	17.35	21.42	38.77	70.58	31.81	Peak
2	1.123	19.79	16.02	35.81	66.44	30.63	Peak
3	1.544	19.26	14.14	33.40	63.62	30.22	Peak
4	4.696	25.36	6.93	32.29	69.54	37.25	Peak
5	6.056	26.93	5.86	32.79	69.54	36.75	Peak
6	15.552	32.21	4.46	36.67	69.54	32.87	Peak

Project No.: 2402A34589E-EM
Polarization: Parallel
Test Mode: Transmitting
RBW:10kHz VBW:30kHz

Serial No.: 2WFP-2
Tester: Leesin Xiang

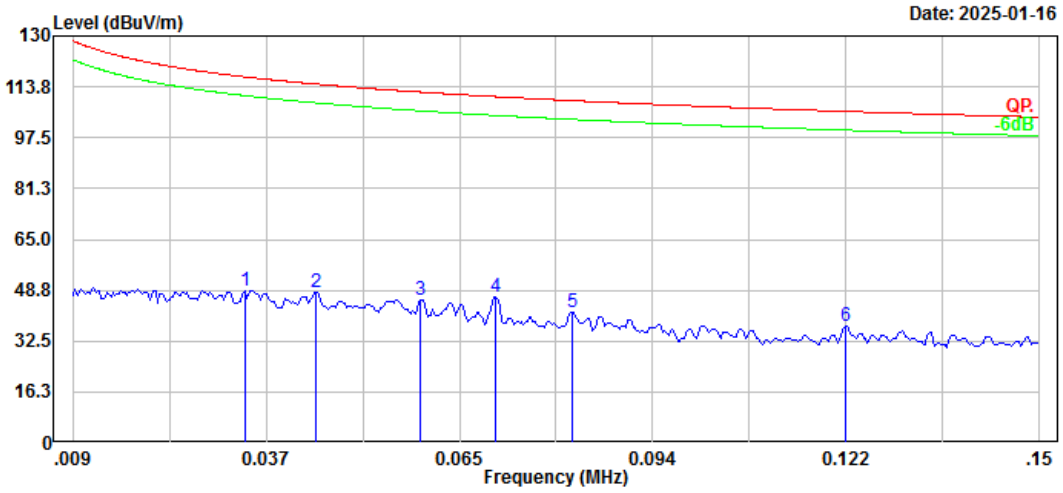


No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	13.348	42.76	4.57	47.33	80.51	33.18	Peak
2	13.457	45.17	4.55	49.72	90.47	40.75	Peak
3	13.562	62.15	4.53	66.68	124.00	57.32	Peak
4	13.666	47.82	4.51	52.33	90.47	38.14	Peak
5	13.774	46.94	4.51	51.45	80.51	29.06	Peak
6	13.848	37.05	4.49	41.54	80.51	38.97	Peak

Configuration 3#(Worst Polarization was reported):
Parallel

Project No.: 2402A34589E-EM
Polarization: Parallel
Test Mode: Transmitting
RBW:300Hz VBW:1kHz

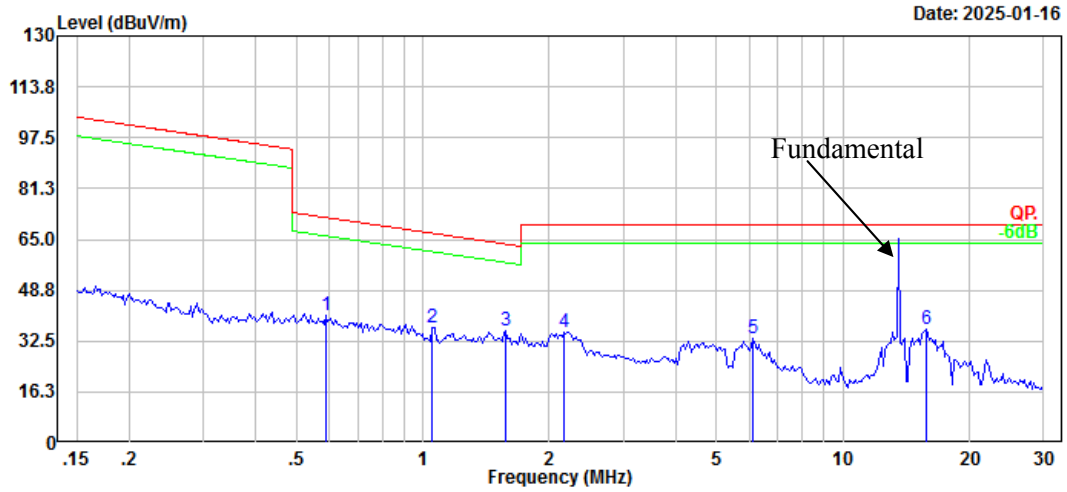
Serial No.: 2WFP-3
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.034	1.54	46.82	48.36	116.95	68.59	Peak
2	0.045	3.22	44.99	48.21	114.63	66.42	Peak
3	0.060	3.14	42.38	45.52	112.08	66.56	Peak
4	0.071	5.96	40.46	46.42	110.61	64.19	Peak
5	0.082	3.03	38.61	41.64	109.35	67.71	Peak
6	0.122	2.89	34.20	37.09	105.89	68.80	Peak

Project No.: 2402A34589E-EM
Polarization: Parallel
Test Mode: Transmitting
RBW:10kHz VBW:30kHz

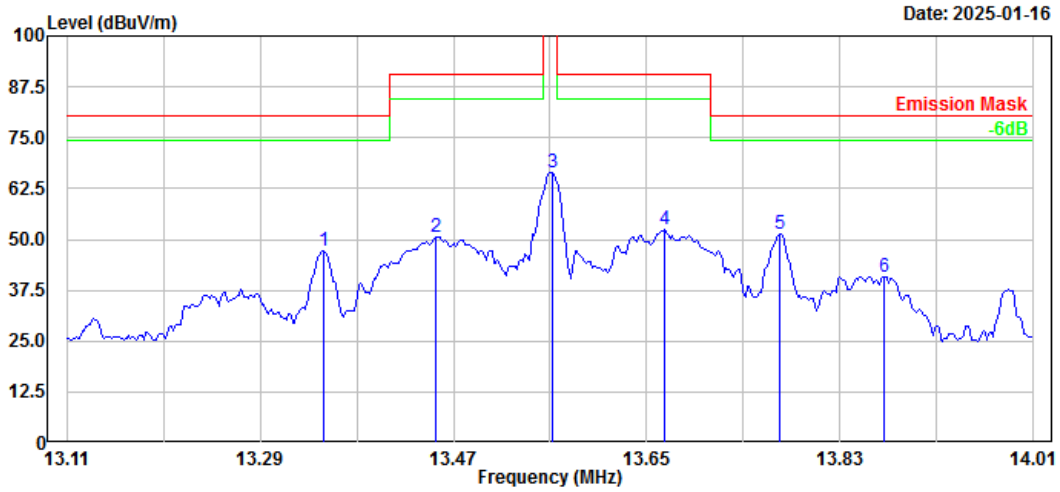
Serial No.: 2WFP-3
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.589	17.93	22.58	40.51	72.18	31.67	Peak
2	1.054	20.71	16.32	37.03	67.01	29.98	Peak
3	1.577	21.81	13.99	35.80	63.43	27.63	Peak
4	2.167	23.54	11.74	35.28	69.54	34.26	Peak
5	6.121	27.31	5.83	33.14	69.54	36.40	Peak
6	15.718	31.89	4.47	36.36	69.54	33.18	Peak

Project No.: 2402A34589E-EM
Polarization: Parallel
Test Mode: Transmitting
RBW:10kHz VBW:30kHz

Serial No.: 2WFP-3
Tester: Leesin Xiang

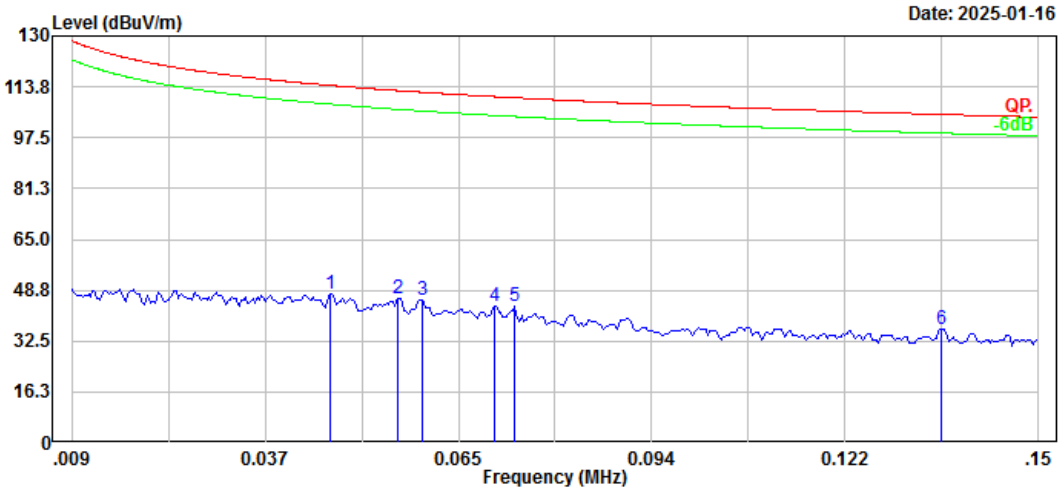


No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	13.349	42.74	4.57	47.31	80.51	33.20	Peak
2	13.454	46.20	4.55	50.75	90.47	39.72	Peak
3	13.562	61.96	4.53	66.49	124.00	57.51	Peak
4	13.666	47.80	4.51	52.31	90.47	38.16	Peak
5	13.774	46.63	4.51	51.14	80.51	29.37	Peak
6	13.871	36.45	4.49	40.94	80.51	39.57	Peak

Configuration 4#:
Parallel

Project No.: 2402A34589E-EM
Polarization: Parallel
Test Mode: Transmitting
RBW:300Hz VBW:1kHz

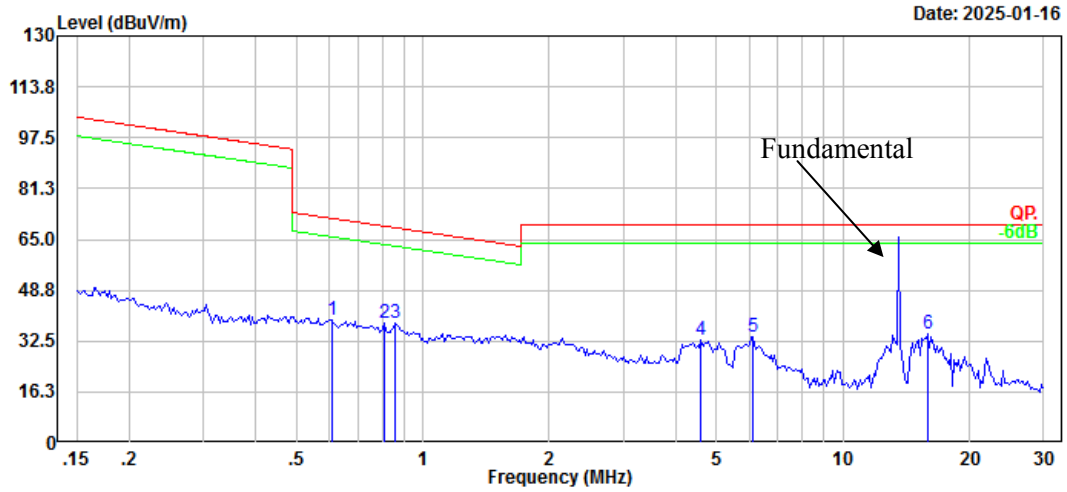
Serial No.: 2WFP-4
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.047	2.75	44.60	47.35	114.20	66.85	Peak
2	0.057	3.04	42.91	45.95	112.54	66.59	Peak
3	0.060	3.34	42.33	45.67	112.04	66.37	Peak
4	0.071	3.03	40.46	43.49	110.61	67.12	Peak
5	0.074	3.49	39.99	43.48	110.27	66.79	Peak
6	0.136	3.13	33.41	36.54	104.94	68.40	Peak

Project No.: 2402A34589E-EM
Polarization: Parallel
Test Mode: Transmitting
RBW:10kHz VBW:30kHz

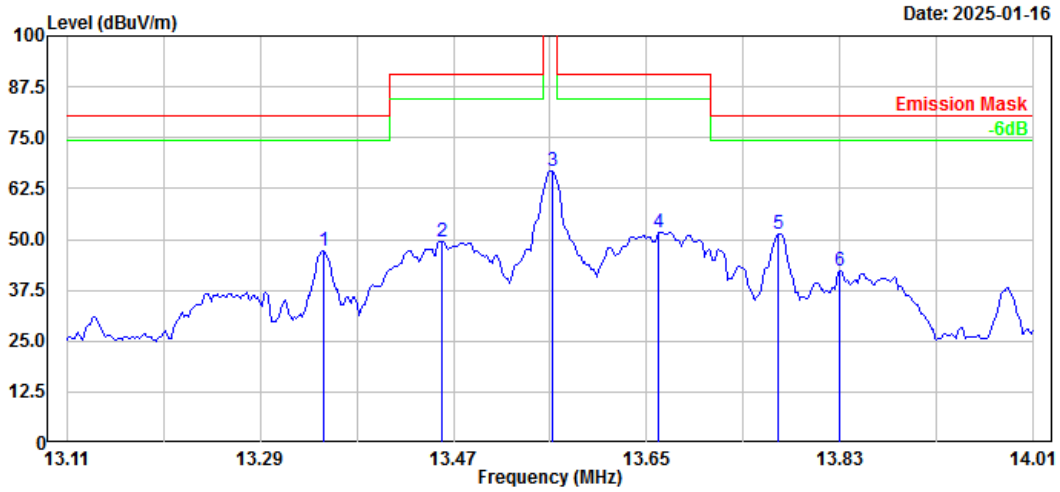
Serial No.: 2WFP-4
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.608	17.04	22.39	39.43	71.89	32.46	Peak
2	0.809	17.96	20.38	38.34	69.36	31.02	Peak
3	0.862	19.07	19.32	38.39	68.79	30.40	Peak
4	4.598	25.97	7.03	33.00	69.54	36.54	Peak
5	6.121	28.09	5.83	33.92	69.54	35.62	Peak
6	15.885	30.22	4.48	34.70	69.54	34.84	Peak

Project No.: 2402A34589E-EM
Polarization: Parallel
Test Mode: Transmitting
RBW:10kHz VBW:30kHz

Serial No.: 2WFP-4
Tester: Leesin Xiang

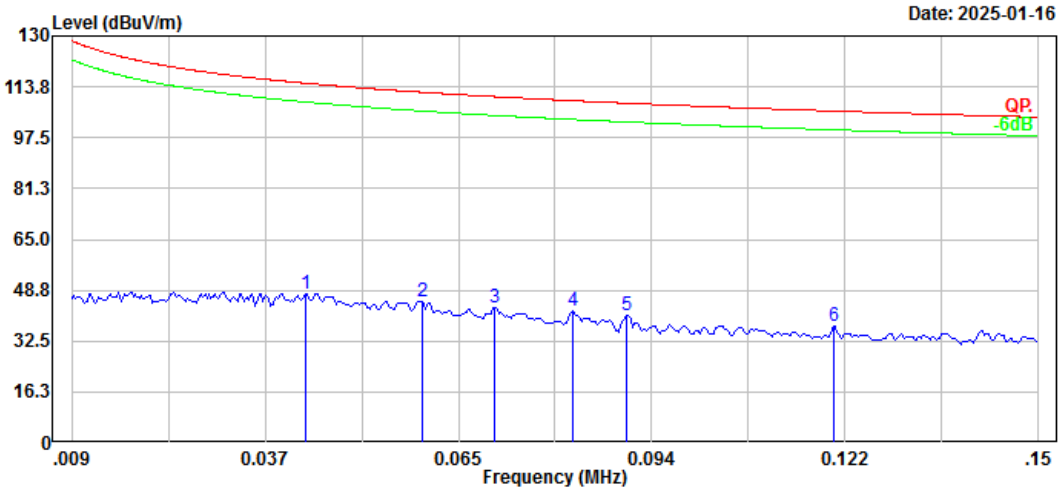


No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	13.349	42.77	4.57	47.34	80.51	33.17	Peak
2	13.459	44.93	4.55	49.48	90.47	40.99	Peak
3	13.562	62.13	4.53	66.66	124.00	57.34	Peak
4	13.661	47.36	4.51	51.87	90.47	38.60	Peak
5	13.772	46.96	4.51	51.47	80.51	29.04	Peak
6	13.830	37.70	4.50	42.20	80.51	38.31	Peak

Configuration 5#(Worst Polarization was reported):
Parallel

Project No.: 2402A34589E-EM
Polarization: Parallel
Test Mode: Transmitting
RBW:300Hz VBW:1kHz

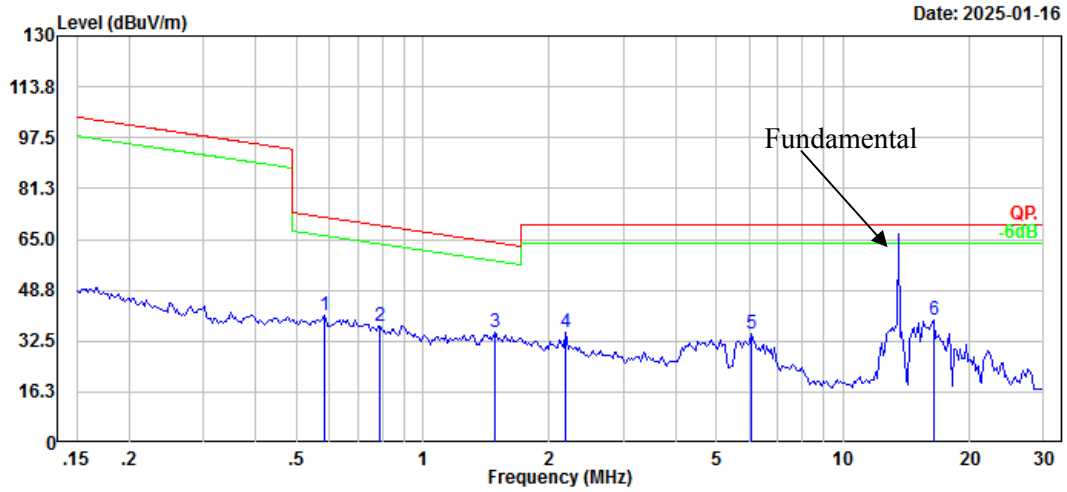
Serial No.: 2WFP-5
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.043	2.27	45.24	47.51	114.91	67.40	Peak
2	0.060	2.99	42.33	45.32	112.04	66.72	Peak
3	0.071	2.94	40.46	43.40	110.61	67.21	Peak
4	0.082	3.47	38.56	42.03	109.32	67.29	Peak
5	0.090	3.61	37.15	40.76	108.53	67.77	Peak
6	0.120	2.95	34.29	37.24	106.01	68.77	Peak

Project No.: 2402A34589E-EM
Polarization: Parallel
Test Mode: Transmitting
RBW:10kHz VBW:30kHz

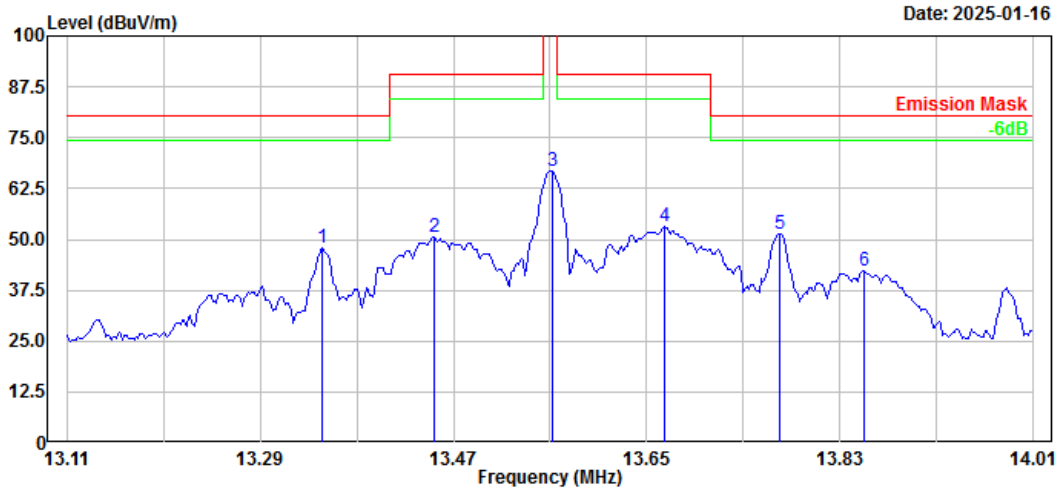
Serial No.: 2WFP-5
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.582	17.98	22.65	40.63	72.27	31.64	Peak
2	0.792	16.86	20.63	37.49	69.54	32.05	Peak
3	1.480	21.12	14.43	35.55	64.00	28.45	Peak
4	2.190	23.51	11.68	35.19	69.54	34.35	Peak
5	6.056	29.18	5.86	35.04	69.54	34.50	Peak
6	16.398	34.57	4.43	39.00	69.54	30.54	Peak

Project No.: 2402A34589E-EM
Polarization: Parallel
Test Mode: Transmitting
RBW:10kHz VBW:30kHz

Serial No.: 2WFP-5
Tester: Leesin Xiang

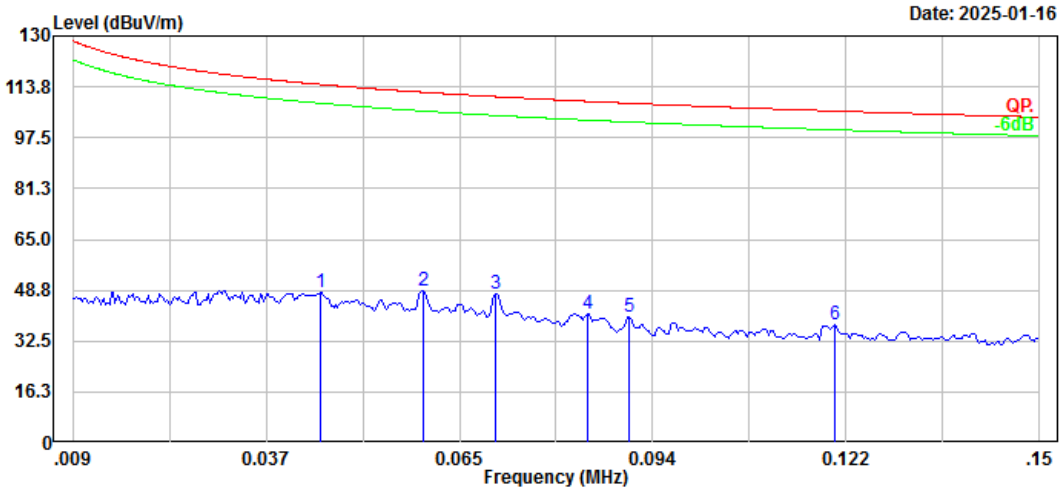


No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	13.348	43.26	4.57	47.83	80.51	32.68	Peak
2	13.452	45.99	4.55	50.54	90.47	39.93	Peak
3	13.562	62.33	4.53	66.86	124.00	57.14	Peak
4	13.666	48.56	4.51	53.07	90.47	37.40	Peak
5	13.774	46.93	4.51	51.44	80.51	29.07	Peak
6	13.852	37.62	4.49	42.11	80.51	38.40	Peak

Configuration 6#(Worst Polarization was reported):
Parallel

Project No.: 2402A34589E-EM
Polarization: Parallel
Test Mode: Transmitting
RBW:300Hz VBW:1kHz

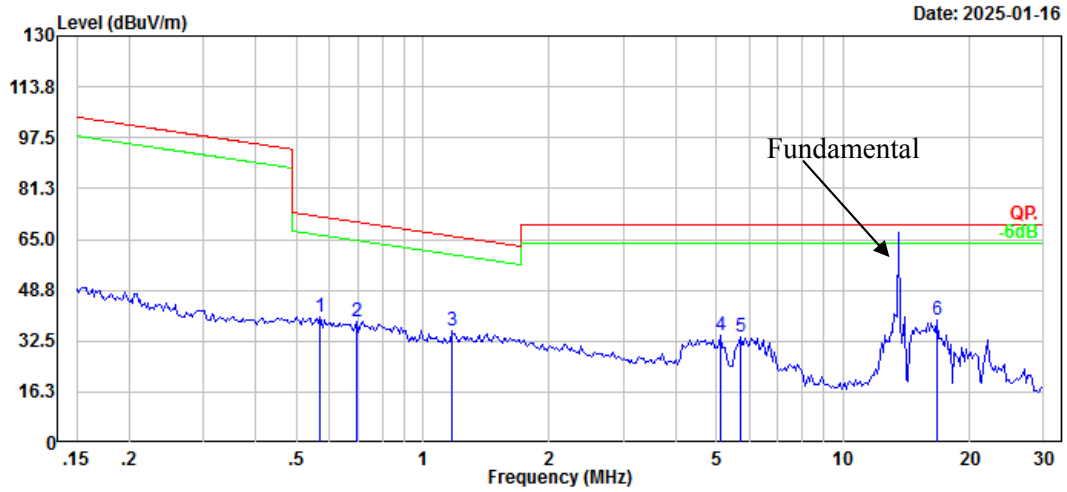
Serial No.: 2WFP-6
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.045	3.28	44.89	48.17	114.52	66.35	Peak
2	0.060	6.15	42.33	48.48	112.04	63.56	Peak
3	0.071	6.94	40.46	47.40	110.61	63.21	Peak
4	0.084	3.12	38.21	41.33	109.12	67.79	Peak
5	0.090	3.18	37.10	40.28	108.50	68.22	Peak
6	0.120	3.26	34.29	37.55	106.01	68.46	Peak

Project No.: 2402A34589E-EM
Polarization: Parallel
Test Mode: Transmitting
RBW:10kHz VBW:30kHz

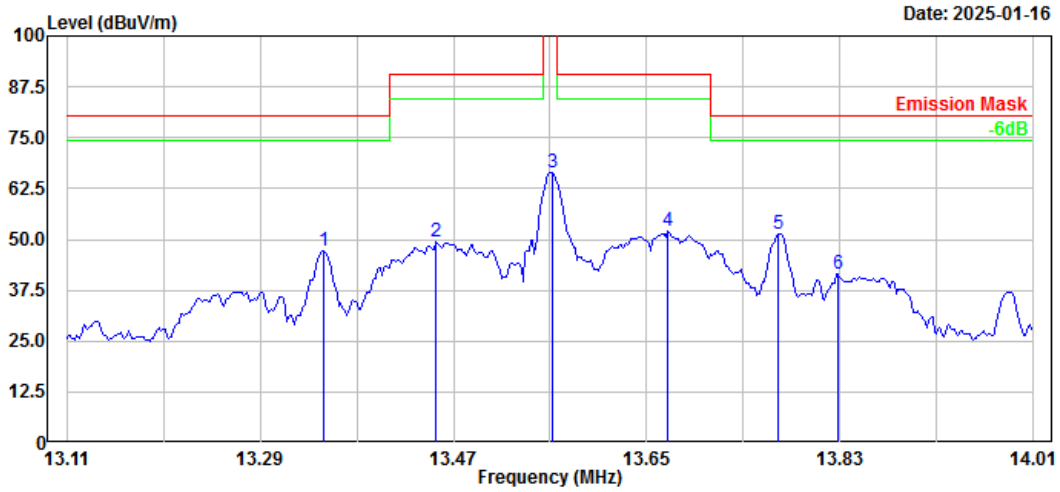
Serial No.: 2WFP-6
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.570	17.51	22.78	40.29	72.46	32.17	Peak
2	0.697	17.33	21.49	38.82	70.67	31.85	Peak
3	1.172	20.20	15.80	36.00	66.07	30.07	Peak
4	5.112	27.89	6.51	34.40	69.54	35.14	Peak
5	5.683	27.98	6.11	34.09	69.54	35.45	Peak
6	16.750	34.66	4.38	39.04	69.54	30.50	Peak

Project No.: 2402A34589E-EM
Polarization: Parallel
Test Mode: Transmitting
RBW:10kHz VBW:30kHz

Serial No.: 2WFP-6
Tester: Leesin Xiang

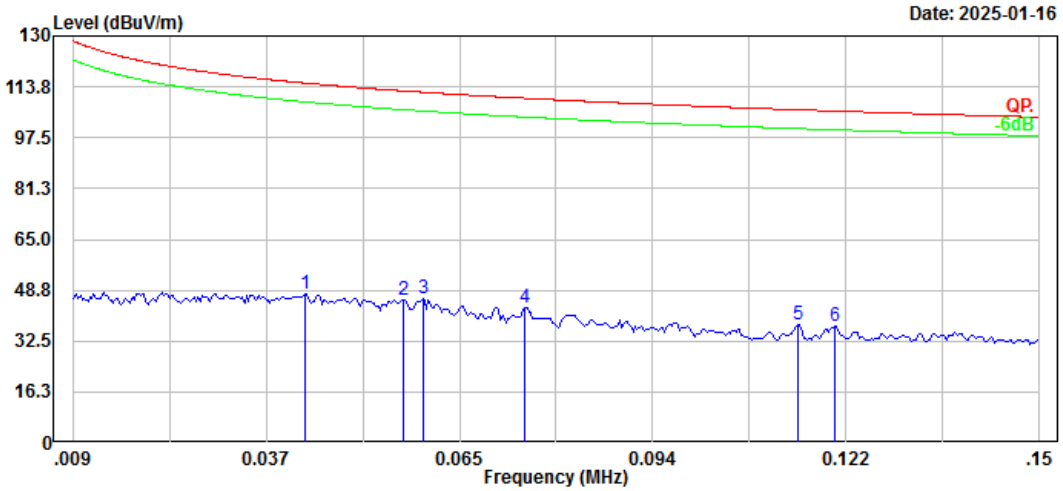


No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	13.349	42.63	4.57	47.20	80.51	33.31	Peak
2	13.454	44.73	4.55	49.28	90.47	41.19	Peak
3	13.562	61.94	4.53	66.47	124.00	57.53	Peak
4	13.670	47.47	4.51	51.98	90.47	38.49	Peak
5	13.772	46.71	4.51	51.22	80.51	29.29	Peak
6	13.828	36.99	4.50	41.49	80.51	39.02	Peak

Configuration 7#(Worst Polarization was reported):
Parallel

Project No.: 2402A34589E-EM
Polarization: Parallel
Test Mode: Transmitting
RBW:300Hz VBW:1kHz

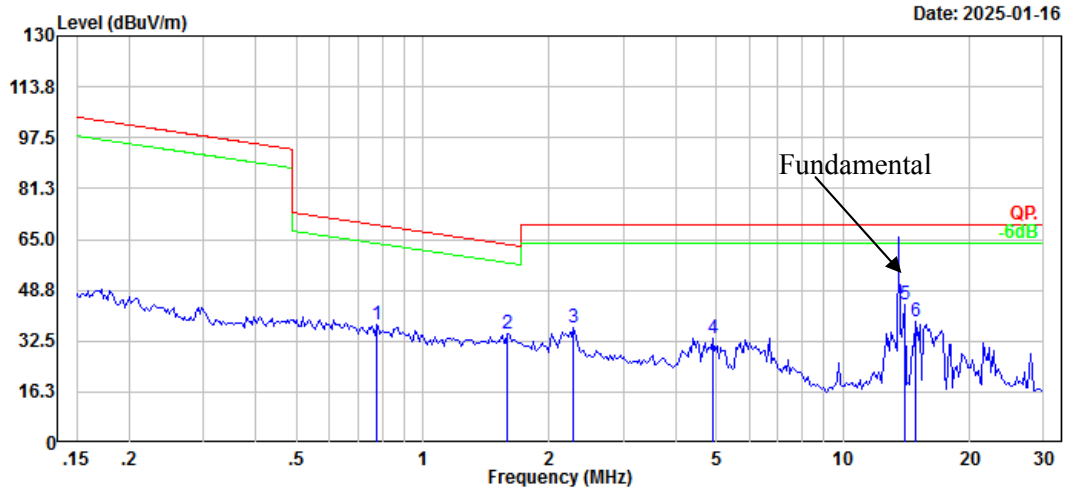
Serial No.: 2WFP-7
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.043	2.41	45.29	47.70	114.97	67.27	Peak
2	0.057	2.96	42.81	45.77	112.45	66.68	Peak
3	0.060	3.67	42.33	46.00	112.04	66.04	Peak
4	0.075	3.35	39.75	43.10	110.10	67.00	Peak
5	0.115	3.34	34.59	37.93	106.41	68.48	Peak
6	0.120	3.04	34.29	37.33	106.01	68.68	Peak

Project No.: 2402A34589E-EM
Polarization: Parallel
Test Mode: Transmitting
RBW:10kHz VBW:30kHz

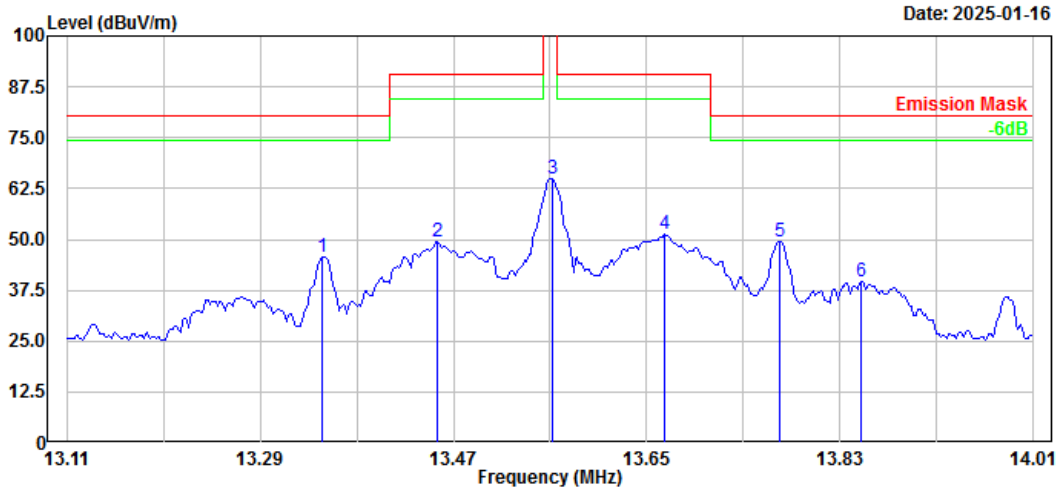
Serial No.: 2WFP-7
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.775	17.20	20.78	37.98	69.73	31.75	Peak
2	1.593	21.07	13.93	35.00	63.34	28.34	Peak
3	2.285	25.14	11.47	36.61	69.54	32.93	Peak
4	4.900	26.80	6.71	33.51	69.54	36.03	Peak
5	13.989	39.49	4.47	43.96	69.54	25.58	Peak
6	14.907	34.50	4.45	38.95	69.54	30.59	Peak

Project No.: 2402A34589E-EM
Polarization: Parallel
Test Mode: Transmitting
RBW:10kHz VBW:30kHz

Serial No.: 2WFP-7
Tester: Leesin Xiang

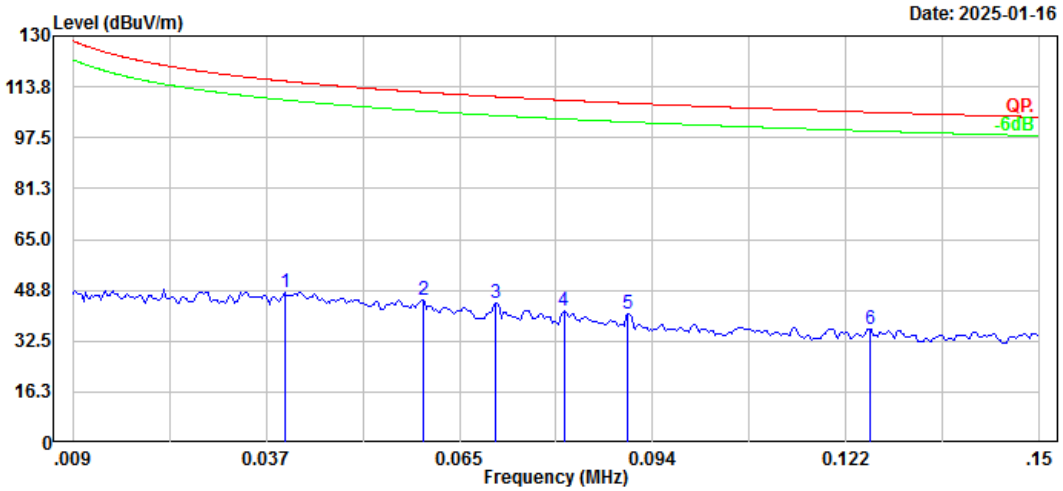


No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	13.348	41.23	4.57	45.80	80.51	34.71	Peak
2	13.456	44.88	4.55	49.43	90.47	41.04	Peak
3	13.562	60.37	4.53	64.90	124.00	59.10	Peak
4	13.666	46.71	4.51	51.22	90.47	39.25	Peak
5	13.774	44.93	4.51	49.44	80.51	31.07	Peak
6	13.850	35.12	4.49	39.61	80.51	40.90	Peak

Configuration 8#(Worst Polarization was reported):
Parallel

Project No.: 2402A34589E-EM
Polarization: Parallel
Test Mode: Transmitting
RBW:300Hz VBW:1kHz

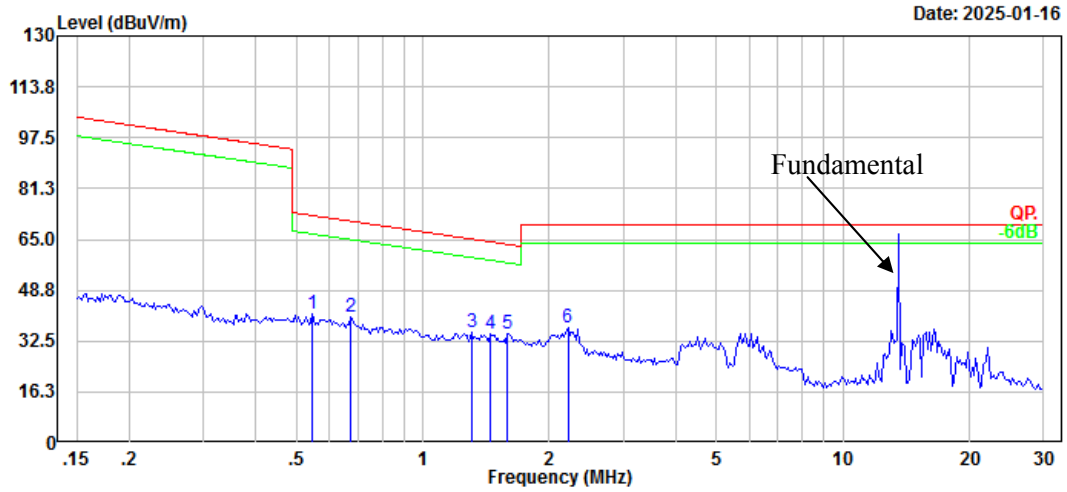
Serial No.: 2WFP-8
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.040	2.26	45.77	48.03	115.56	67.53	Peak
2	0.060	3.32	42.33	45.65	112.04	66.39	Peak
3	0.071	4.07	40.46	44.53	110.61	66.08	Peak
4	0.081	3.17	38.81	41.98	109.47	67.49	Peak
5	0.090	4.10	37.15	41.25	108.53	67.28	Peak
6	0.125	2.51	34.01	36.52	105.65	69.13	Peak

Project No.: 2402A34589E-EM
Polarization: Parallel
Test Mode: Transmitting
RBW:10kHz VBW:30kHz

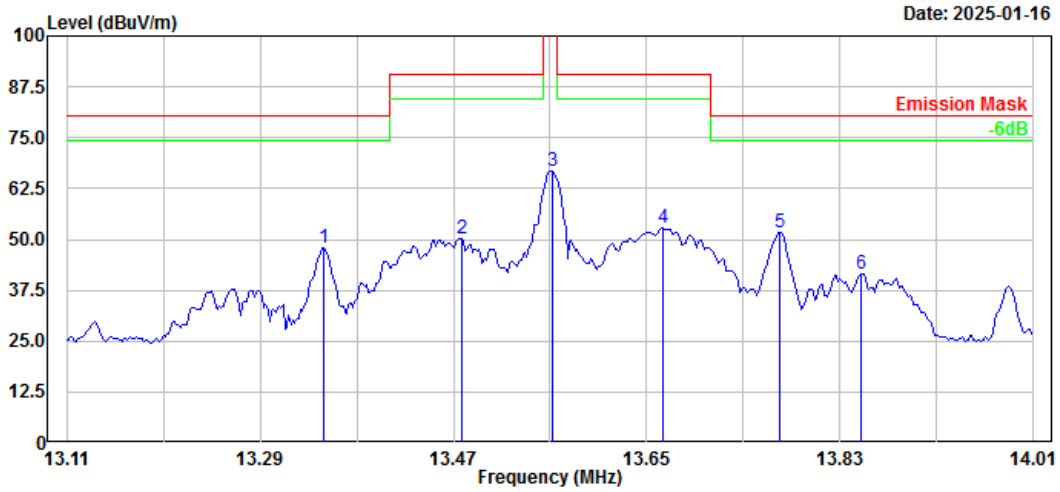
Serial No.: 2WFP-8
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	0.546	18.10	23.03	41.13	72.83	31.70	Peak
2	0.675	18.72	21.71	40.43	70.95	30.52	Peak
3	1.303	20.29	15.22	35.51	65.13	29.62	Peak
4	1.449	20.19	14.57	34.76	64.18	29.42	Peak
5	1.593	20.93	13.93	34.86	63.34	28.48	Peak
6	2.213	25.20	11.63	36.83	69.54	32.71	Peak

Project No.: 2402A34589E-EM
Polarization: Parallel
Test Mode: Transmitting
RBW:10kHz VBW:30kHz

Serial No.: 2WFP-8
Tester: Leesin Xiang



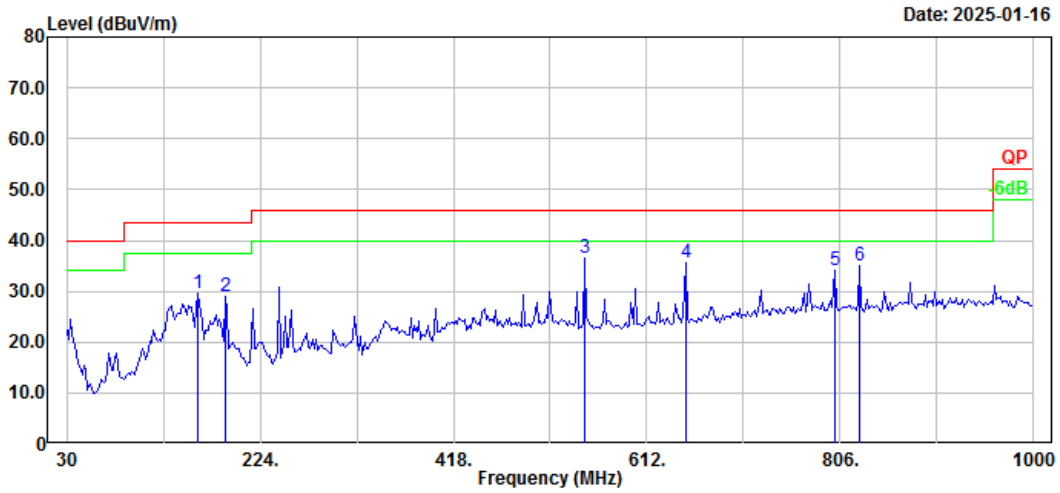
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	13.349	43.32	4.57	47.89	80.51	32.62	Peak
2	13.477	45.66	4.55	50.21	90.47	40.26	Peak
3	13.562	62.36	4.53	66.89	124.00	57.11	Peak
4	13.664	48.16	4.51	52.67	90.47	37.80	Peak
5	13.774	47.12	4.51	51.63	80.51	28.88	Peak
6	13.850	37.13	4.49	41.62	80.51	38.89	Peak

2) 30MHz-1GHz

Configuration 1#:

Project No.: 2402A34589E-EM
Polarization: Horizontal
Test Mode: Transmitting
RBW:100kHz VBW:300kHz

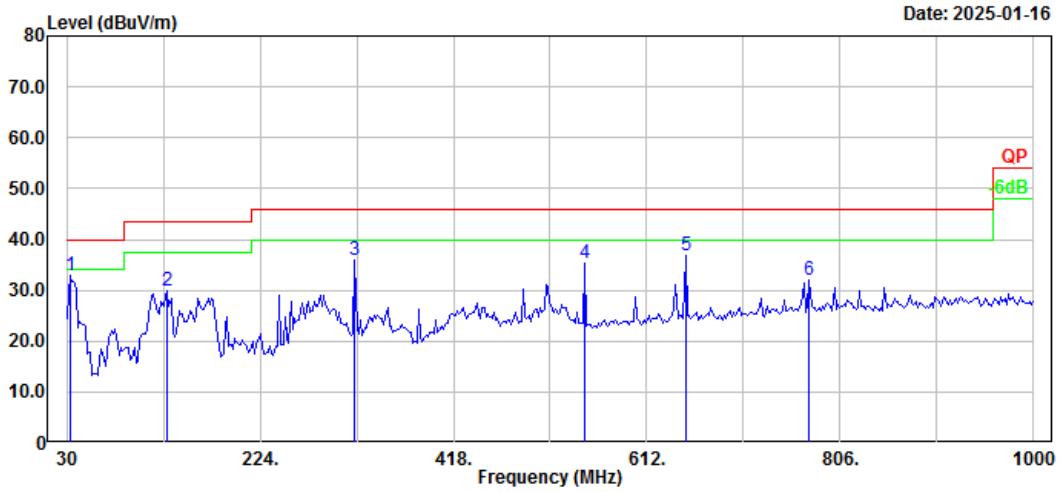
Serial No.: 2WFP-1
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	161.92	40.85	-11.27	29.58	43.50	13.92	Peak
2	189.08	41.17	-12.15	29.02	43.50	14.48	Peak
3	549.92	39.97	-3.43	36.54	46.00	9.46	Peak
4	650.80	37.48	-1.86	35.62	46.00	10.38	Peak
5	800.18	33.70	0.46	34.16	46.00	11.84	Peak
6	825.40	34.32	0.68	35.00	46.00	11.00	Peak

Project No.: 2402A34589E-EM
Polarization: Vertical
Test Mode: Transmitting
RBW:100kHz VBW:300kHz

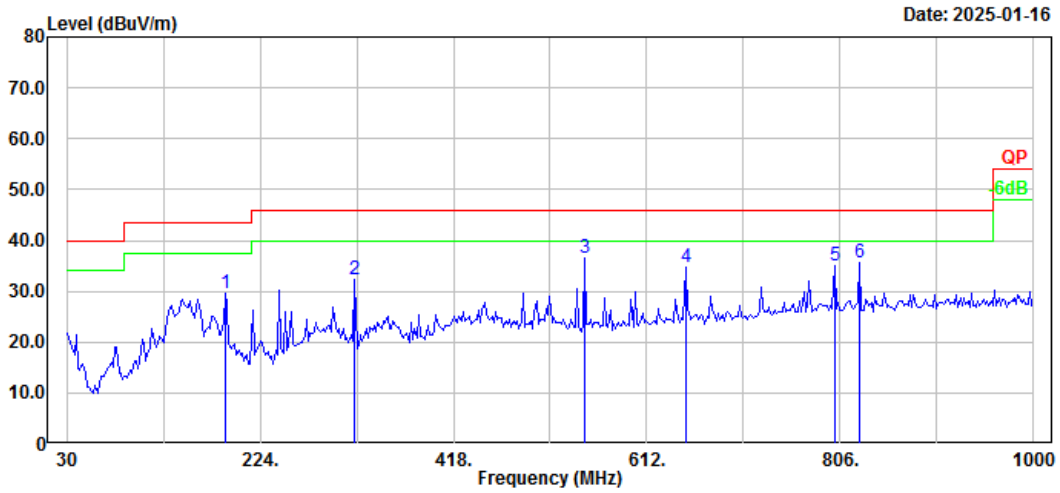
Serial No.: 2WFP-1
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	33.88	39.50	-6.62	32.88	40.00	7.12	Peak
2	130.88	39.86	-9.91	29.95	43.50	13.55	Peak
3	319.06	45.15	-9.10	36.05	46.00	9.95	Peak
4	549.92	38.61	-3.43	35.18	46.00	10.82	Peak
5	650.80	38.57	-1.86	36.71	46.00	9.29	Peak
6	774.96	31.95	0.07	32.02	46.00	13.98	Peak

Configuration 2#:

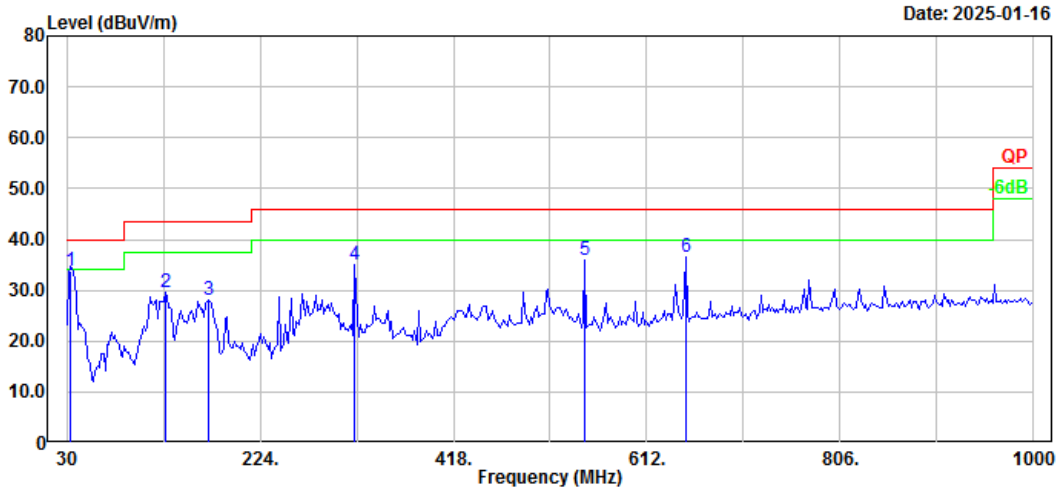
Project No.: 2402A34589E-EM Serial No.: 2WFP-2
Polarization: Horizontal Tester: Leesin Xiang
Test Mode: Transmitting
RBW:100kHz VBW:300kHz



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	189.08	41.78	-12.15	29.63	43.50	13.87	Peak
2	319.06	41.31	-9.10	32.21	46.00	13.79	Peak
3	549.92	40.01	-3.43	36.58	46.00	9.42	Peak
4	650.80	36.67	-1.86	34.81	46.00	11.19	Peak
5	800.18	34.44	0.46	34.90	46.00	11.10	Peak
6	825.40	34.84	0.68	35.52	46.00	10.48	Peak

Project No.: 2402A34589E-EM
Polarization: Vertical
Test Mode: Transmitting
RBW:100kHz VBW:300kHz

Serial No.: 2WFP-2
Tester: Leesin Xiang

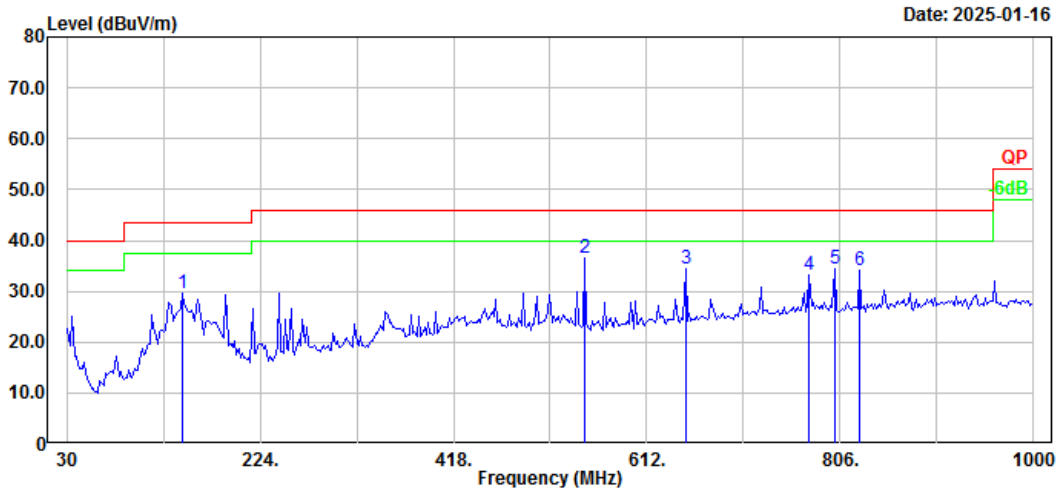


No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	33.88	40.30	-6.62	33.68	40.00	6.32	QP
2	128.94	39.57	-9.86	29.71	43.50	13.79	Peak
3	171.62	40.09	-11.87	28.22	43.50	15.28	Peak
4	319.06	44.24	-9.10	35.14	46.00	10.86	Peak
5	549.92	39.23	-3.43	35.80	46.00	10.20	Peak
6	650.80	38.25	-1.86	36.39	46.00	9.61	Peak

Configuration 3#:

Project No.: 2402A34589E-EM
Polarization: Horizontal
Test Mode: Transmitting
RBW:100kHz VBW:300kHz

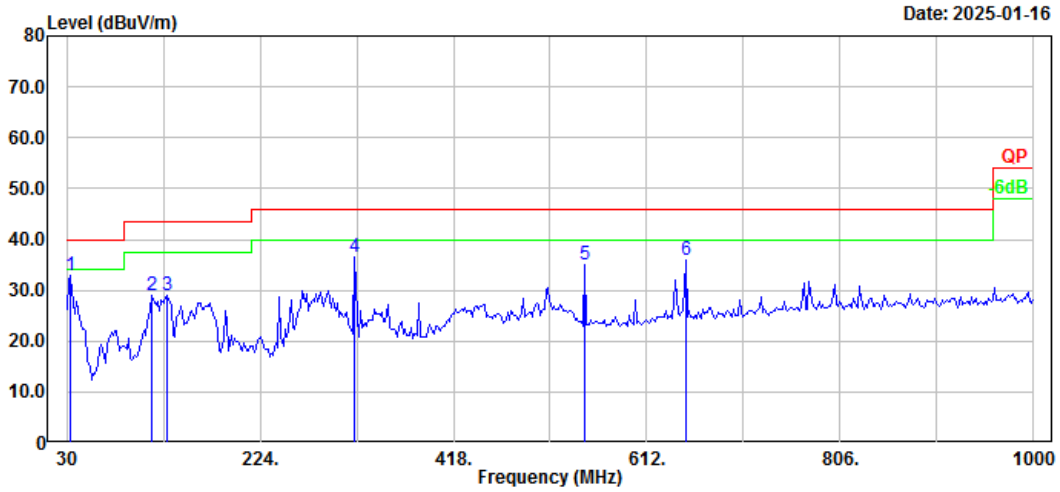
Serial No.: 2WFP-3
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	146.40	40.53	-10.84	29.69	43.50	13.81	Peak
2	549.92	39.88	-3.43	36.45	46.00	9.55	Peak
3	650.80	36.34	-1.86	34.48	46.00	11.52	Peak
4	774.96	33.24	0.07	33.31	46.00	12.69	Peak
5	800.18	33.82	0.46	34.28	46.00	11.72	Peak
6	825.40	33.56	0.68	34.24	46.00	11.76	Peak

Project No.: 2402A34589E-EM
Polarization: Vertical
Test Mode: Transmitting
RBW:100kHz VBW:300kHz

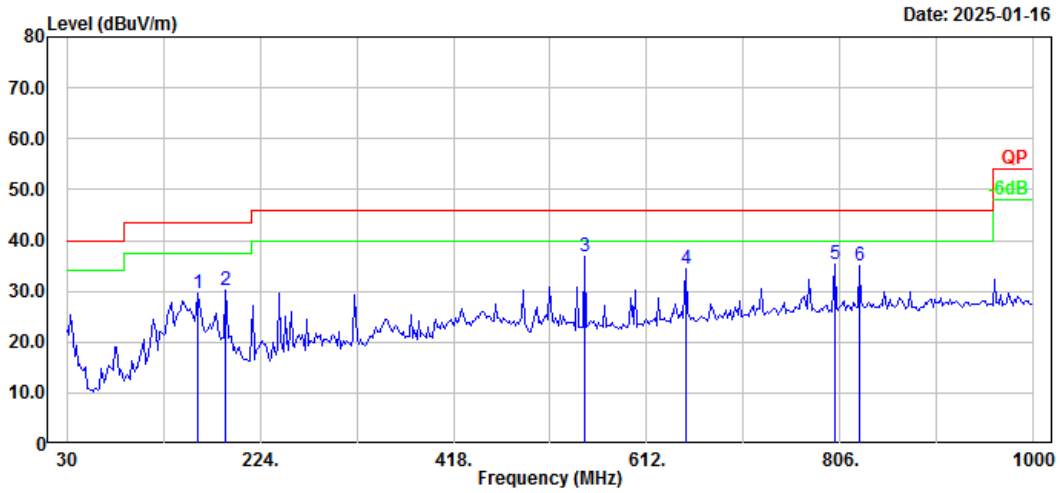
Serial No.: 2WFP-3
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	33.88	39.50	-6.62	32.88	40.00	7.12	Peak
2	115.36	39.58	-10.60	28.98	43.50	14.52	Peak
3	130.88	39.01	-9.91	29.10	43.50	14.40	Peak
4	319.06	45.74	-9.10	36.64	46.00	9.36	Peak
5	549.92	38.38	-3.43	34.95	46.00	11.05	Peak
6	650.80	37.66	-1.86	35.80	46.00	10.20	Peak

Configuration 4#:

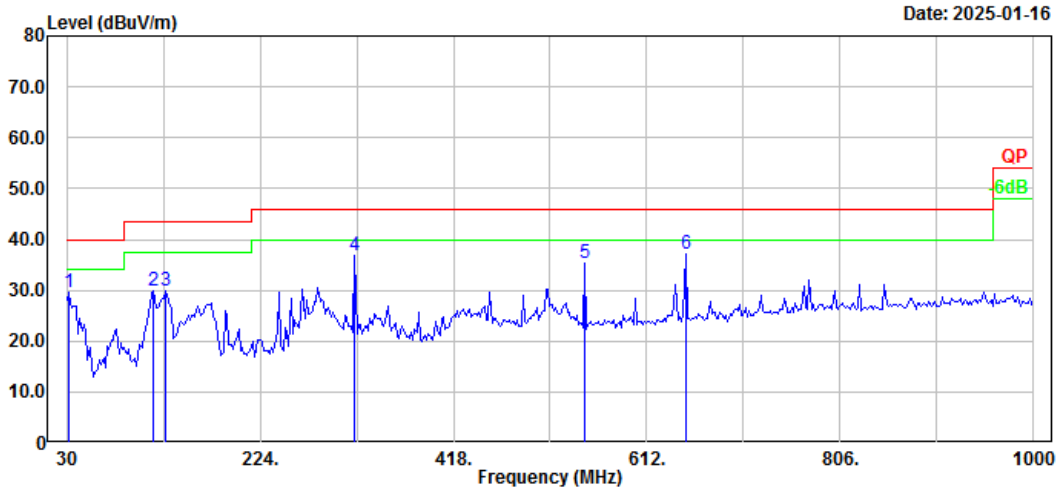
Project No.: 2402A34589E-EM Serial No.: 2WFP-4
Polarization: Horizontal Tester: Leesin Xiang
Test Mode: Transmitting
RBW:100kHz VBW:300kHz



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	161.92	40.73	-11.27	29.46	43.50	14.04	Peak
2	189.08	42.19	-12.15	30.04	43.50	13.46	Peak
3	549.92	40.29	-3.43	36.86	46.00	9.14	Peak
4	650.80	36.35	-1.86	34.49	46.00	11.51	Peak
5	800.18	34.99	0.46	35.45	46.00	10.55	Peak
6	825.40	34.28	0.68	34.96	46.00	11.04	Peak

Project No.: 2402A34589E-EM
Polarization: Vertical
Test Mode: Transmitting
RBW:100kHz VBW:300kHz

Serial No.: 2WFP-4
Tester: Leesin Xiang

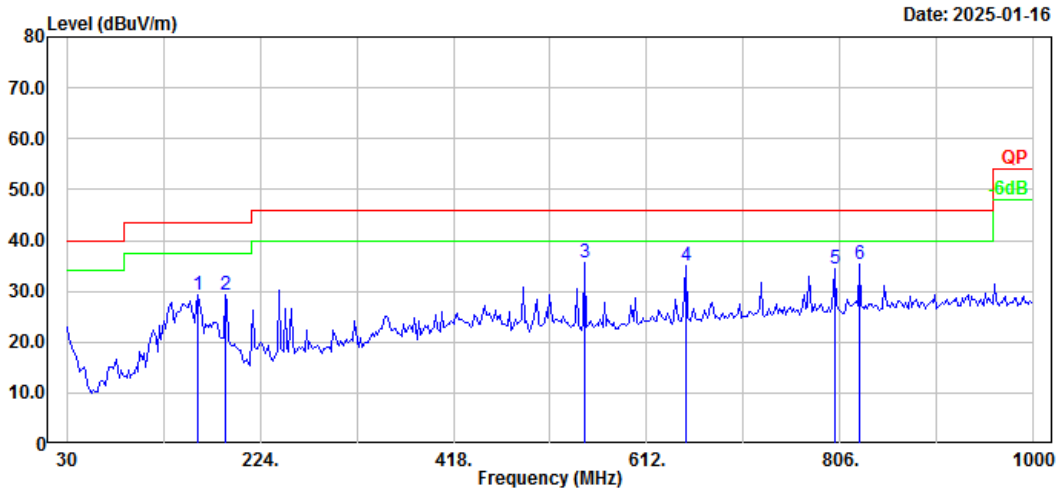


No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	31.94	34.65	-5.21	29.44	40.00	10.56	Peak
2	117.30	40.20	-10.33	29.87	43.50	13.63	Peak
3	128.94	39.77	-9.86	29.91	43.50	13.59	Peak
4	319.06	45.85	-9.10	36.75	46.00	9.25	Peak
5	549.92	38.76	-3.43	35.33	46.00	10.67	Peak
6	650.80	39.03	-1.86	37.17	46.00	8.83	Peak

Configuration 5#:

Project No.: 2402A34589E-EM
Polarization: Horizontal
Test Mode: Transmitting
RBW:100kHz VBW:300kHz

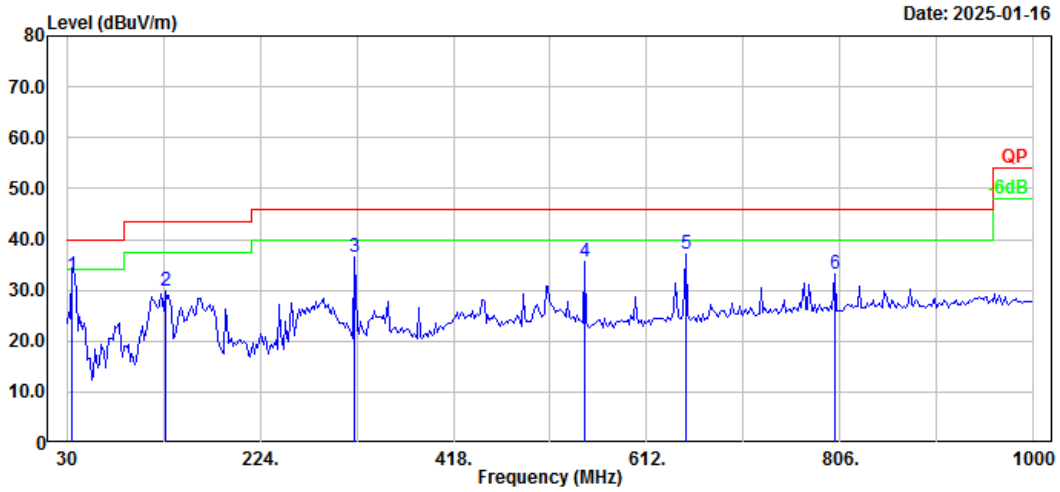
Serial No.: 2WFP-5
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	161.92	40.66	-11.27	29.39	43.50	14.11	Peak
2	189.08	41.35	-12.15	29.20	43.50	14.30	Peak
3	549.92	39.00	-3.43	35.57	46.00	10.43	Peak
4	650.80	36.78	-1.86	34.92	46.00	11.08	Peak
5	800.18	33.92	0.46	34.38	46.00	11.62	Peak
6	825.40	34.59	0.68	35.27	46.00	10.73	Peak

Project No.: 2402A34589E-EM
Polarization: Vertical
Test Mode: Transmitting
RBW:100kHz VBW:300kHz

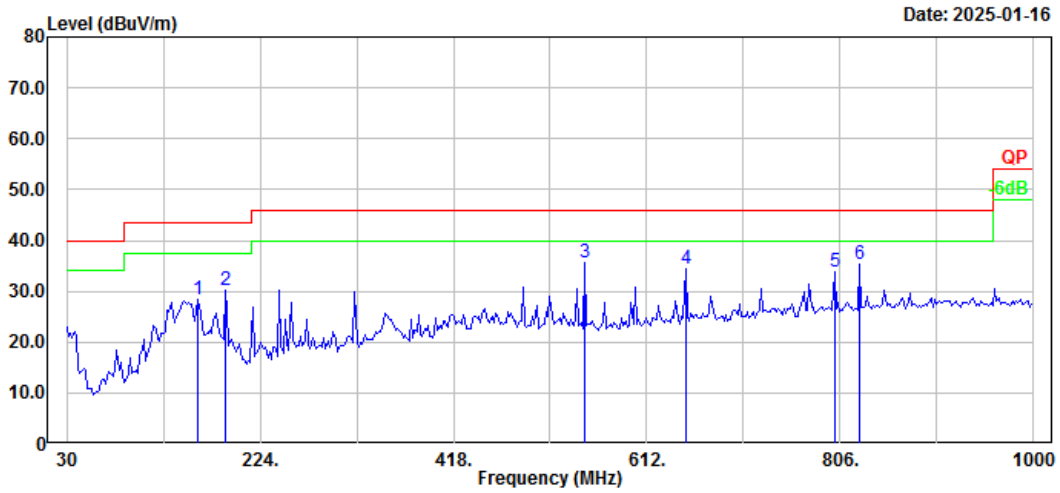
Serial No.: 2WFP-5
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	35.82	40.80	-8.01	32.79	40.00	7.21	QP
2	128.94	39.85	-9.86	29.99	43.50	13.51	Peak
3	319.06	45.54	-9.10	36.44	46.00	9.56	Peak
4	549.92	39.08	-3.43	35.65	46.00	10.35	Peak
5	650.80	38.87	-1.86	37.01	46.00	8.99	Peak
6	800.18	32.70	0.46	33.16	46.00	12.84	Peak

Configuration 6#:

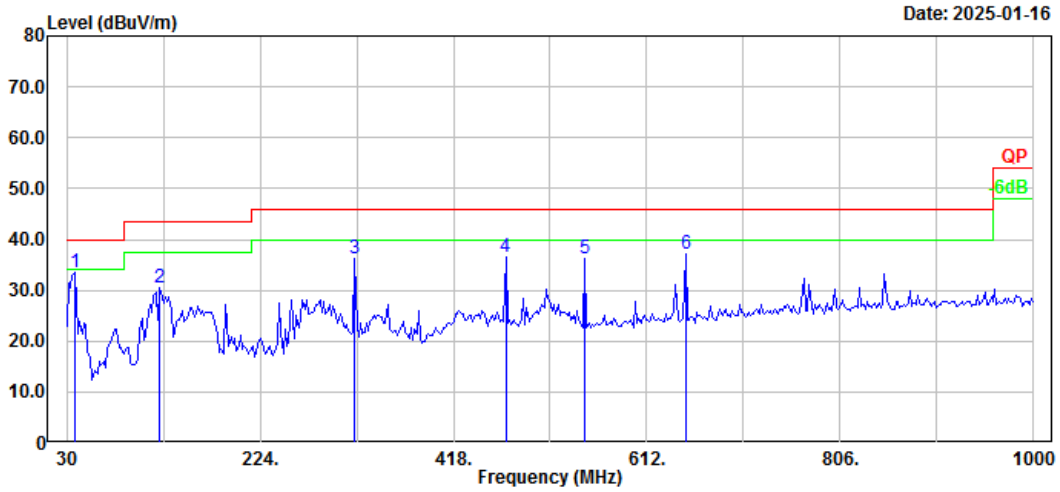
Project No.: 2402A34589E-EM Serial No.: 2WFP-6
Polarization: Horizontal Tester: Leesin Xiang
Test Mode: Transmitting
RBW:100kHz VBW:300kHz



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	161.92	39.73	-11.27	28.46	43.50	15.04	Peak
2	189.08	42.24	-12.15	30.09	43.50	13.41	Peak
3	549.92	39.19	-3.43	35.76	46.00	10.24	Peak
4	650.80	36.33	-1.86	34.47	46.00	11.53	Peak
5	800.18	33.25	0.46	33.71	46.00	12.29	Peak
6	825.40	34.64	0.68	35.32	46.00	10.68	Peak

Project No.: 2402A34589E-EM
Polarization: Vertical
Test Mode: Transmitting
RBW:100kHz VBW:300kHz

Serial No.: 2WFP-6
Tester: Leesin Xiang

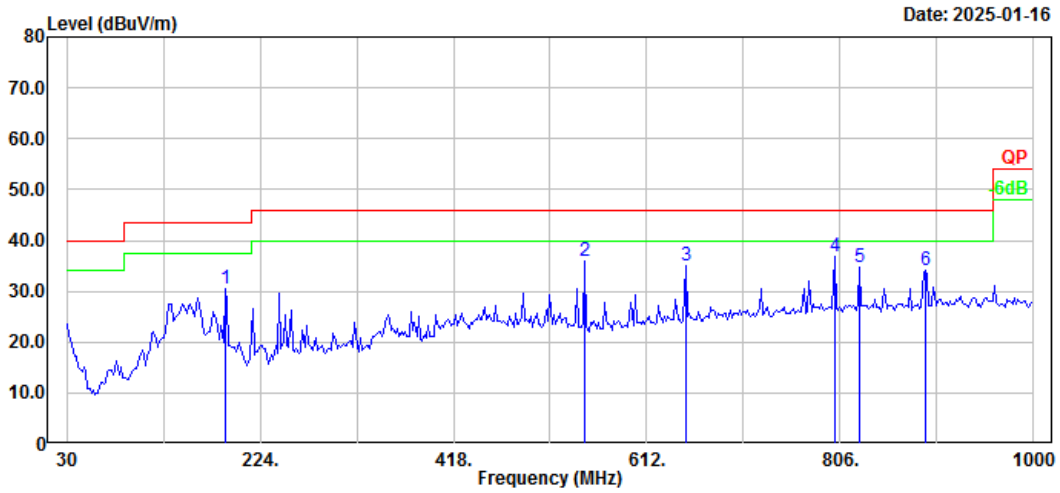


No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	37.76	42.79	-9.36	33.43	40.00	6.57	Peak
2	123.12	40.34	-9.92	30.42	43.50	13.08	Peak
3	319.06	45.32	-9.10	36.22	46.00	9.78	Peak
4	470.38	41.46	-4.92	36.54	46.00	9.46	Peak
5	549.92	39.67	-3.43	36.24	46.00	9.76	Peak
6	650.80	39.02	-1.86	37.16	46.00	8.84	Peak

Configuration 7#:

Project No.: 2402A34589E-EM
Polarization: Horizontal
Test Mode: Transmitting
RBW:100kHz VBW:300kHz

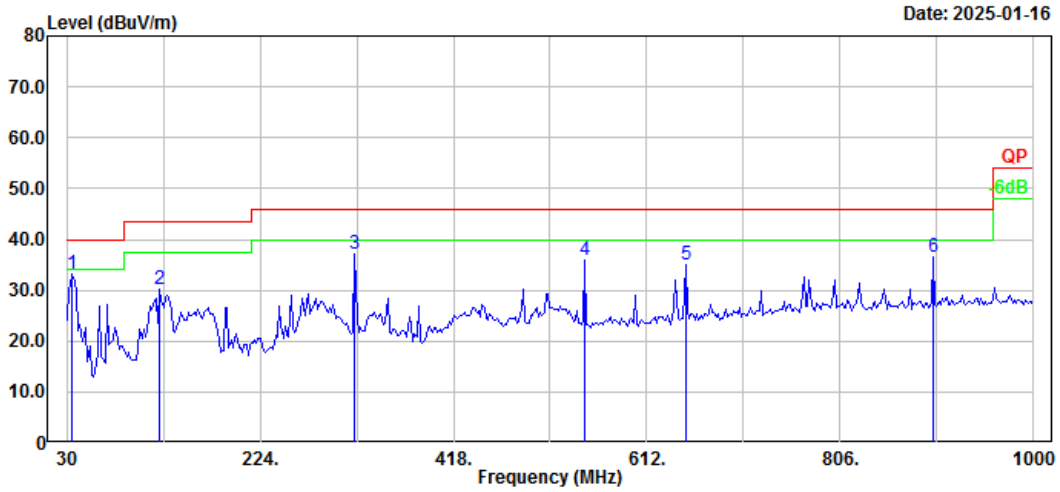
Serial No.: 2WFP-7
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	189.08	42.58	-12.15	30.43	43.50	13.07	Peak
2	549.92	39.49	-3.43	36.06	46.00	9.94	Peak
3	650.80	36.73	-1.86	34.87	46.00	11.13	Peak
4	800.18	36.35	0.46	36.81	46.00	9.19	Peak
5	825.40	33.89	0.68	34.57	46.00	11.43	Peak
6	891.36	32.73	1.32	34.05	46.00	11.95	Peak

Project No.: 2402A34589E-EM
Polarization: Vertical
Test Mode: Transmitting
RBW:100kHz VBW:300kHz

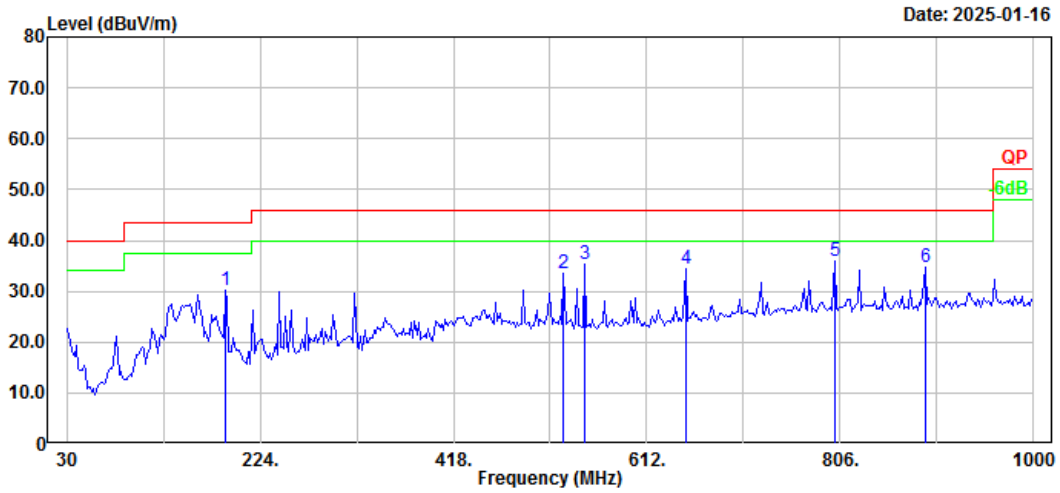
Serial No.: 2WFP-7
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	35.82	41.20	-8.01	33.19	40.00	6.81	Peak
2	123.12	40.14	-9.92	30.22	43.50	13.28	Peak
3	319.06	46.29	-9.10	37.19	46.00	8.81	Peak
4	549.92	39.30	-3.43	35.87	46.00	10.13	Peak
5	650.80	36.85	-1.86	34.99	46.00	11.01	Peak
6	899.12	35.00	1.40	36.40	46.00	9.60	Peak

Configuration 8#:

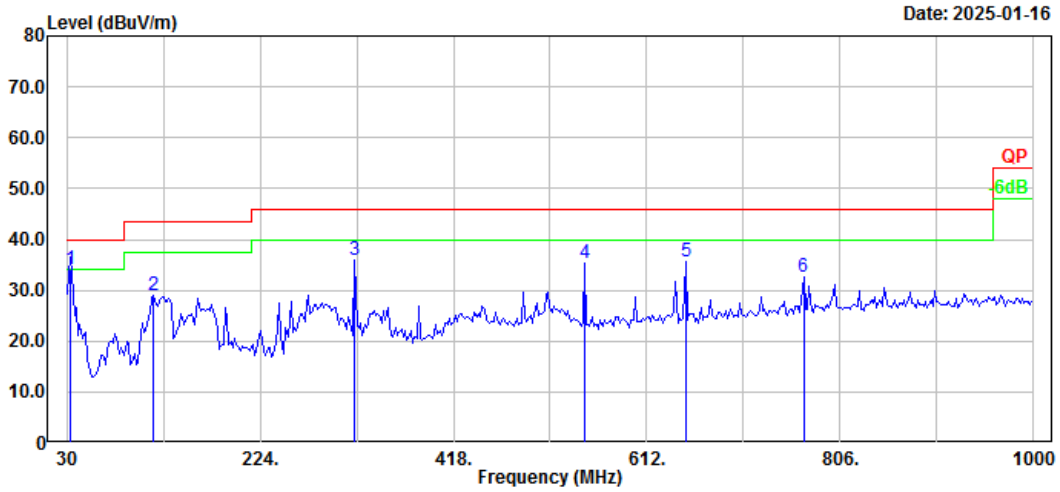
Project No.: 2402A34589E-EM Serial No.: 2WFP-8
Polarization: Horizontal Tester: Leesin Xiang
Test Mode: Transmitting
RBW:100kHz VBW:300kHz



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	189.08	42.23	-12.15	30.08	43.50	13.42	Peak
2	528.58	37.32	-3.79	33.53	46.00	12.47	Peak
3	549.92	38.87	-3.43	35.44	46.00	10.56	Peak
4	650.80	36.23	-1.86	34.37	46.00	11.63	Peak
5	800.18	35.58	0.46	36.04	46.00	9.96	Peak
6	891.36	33.30	1.32	34.62	46.00	11.38	Peak

Project No.: 2402A34589E-EM
Polarization: Vertical
Test Mode: Transmitting
RBW:100kHz VBW:300kHz

Serial No.: 2WFP-8
Tester: Leesin Xiang



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	33.88	40.80	-6.62	34.18	40.00	5.82	QP
2	117.30	39.26	-10.33	28.93	43.50	14.57	Peak
3	319.06	44.96	-9.10	35.86	46.00	10.14	Peak
4	549.92	38.84	-3.43	35.41	46.00	10.59	Peak
5	650.80	37.41	-1.86	35.55	46.00	10.45	Peak
6	769.14	32.74	-0.02	32.72	46.00	13.28	Peak

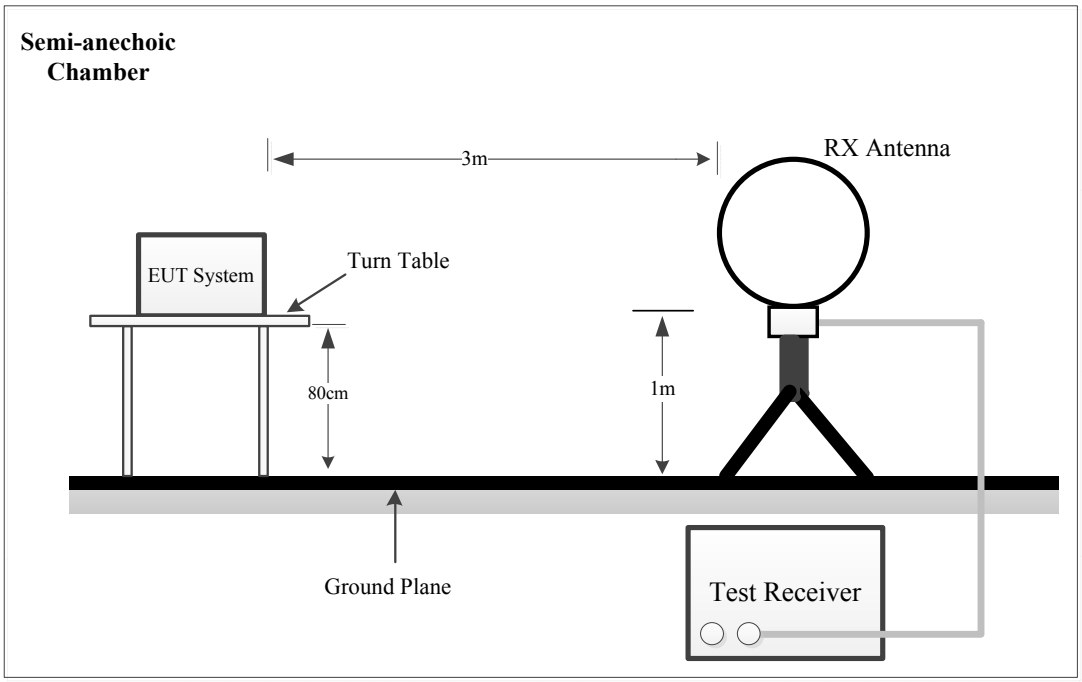
4.3 20 dB Emission Bandwidth

4.3.1 Applicable Standard

FCC §15.215

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §15.217 through § 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated. The requirement to contain the designated bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of band operation.

4.3.2 EUT Setup



4.3.3 Test Procedure

According to ANSI C63.10-2013 Section 6.9.2

a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the EMI receiver or spectrum analyzer shall be between two times and five times the OBW.
b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be approximately three times RBW, unless otherwise specified by the applicable requirement.
c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2
d) Steps a) through c) might require iteration to adjust within the specified tolerances.
e) The dynamic range of the instrument at the selected RBW shall be more than 10 dB below the target

"−xx dB down" requirement; that is, if the requirement calls for measuring the −20 dB OBW, the instrument noise floor at the selected RBW shall be at least 30 dB below the reference value.
f) Set detection mode to peak and trace mode to max hold.
g) Determine the reference value: Set the EUT to transmit an unmodulated carrier or modulated signal, as applicable. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).

h) Determine the "−xx dB down amplitude" using [(reference value) − xx]. Alternatively, this calculation may be made by using the marker-delta function of the instrument.
i) If the reference value is determined by an unmodulated carrier, then turn the EUT modulation ON, and either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise, the trace from step g) shall be used for step j).

j) Place two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the "−xx dB down amplitude" determined in step h). If a marker is below this "−xx dB down amplitude" value, then it shall be as close as possible to this value. The occupied bandwidth is the frequency difference between the two markers. Alternatively, set a marker at the lowest frequency of the envelope of the spectral display, such that the marker is at or slightly below the "−xx dB down amplitude" determined in step h). Reset the marker-delta function and move the marker to the other side of the emission until the delta marker amplitude is at the same level as the reference marker amplitude. The marker-delta frequency reading at this point is the specified emission bandwidth.

k) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

4.3.4 Test Data

Serial Number:	2WFP-1	Test Date:	2025/1/16
Test Site:	Chamber 10m	Test Mode:	Transmitting
Tester:	Leesin Xiang	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	21.5	Relative Humidity: (%)	37	ATM Pressure: (kPa)	102

Test Equipment List and Details:

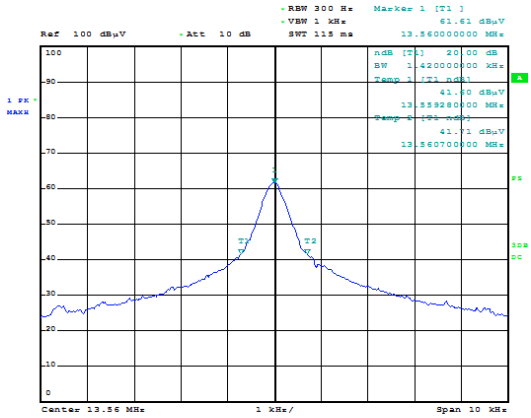
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
EMCO	Passive Loop Antenna	6512	9706-1206	2023/10/25	2026/10/24
Narda	Coaxial Attenuator	779-6dB	04269	2023/9/6	2026/9/5
Unknown	Coaxial Cable	C-NJNJ-50	C-1000-01	2024/7/1	2025/6/30
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-04	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

** 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).*

Test Data:

Test Frequency (MHz)	20 dB Emission Bandwidth (kHz)
13.56	1.42

20dB Emission Bandwidth



ProjectNo.:2402A34589E-RF Tester:Leesin Xiang
Date: 16.JAN.2025 01:24:43

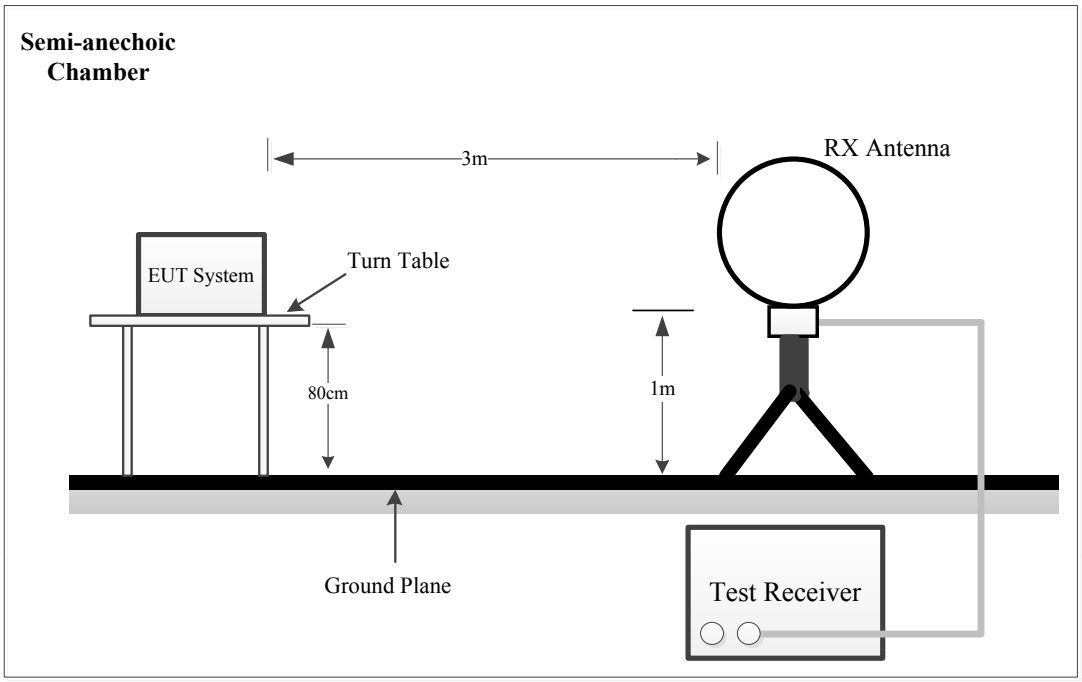
4.4 99% Occupied Bandwidth:

4.4.1 Applicable Standard

RSS-Gen Clause 6.7

The occupied bandwidth or the “99% emission bandwidth” is defined as the frequency range between two points, one above and the other below the carrier frequency, within which 99% of the total transmitted power of the fundamental transmitted emission is contained. The occupied bandwidth shall be reported for all equipment in addition to the specified bandwidth required in the applicable RSSs.
In some cases, the “x dB bandwidth” is required, which is defined as the frequency range between two points, one at the lowest frequency below and one at the highest frequency above the carrier frequency, at which the maximum power level of the transmitted emission is attenuated x dB below the maximum in-band power level of the modulated signal, where the two points are on the outskirts of the in-band emission.
The following conditions shall be observed for measuring the occupied bandwidth and x dB bandwidth:
The transmitter shall be operated at its maximum carrier power measured under normal test conditions.
The span of the spectrum analyzer shall be set large enough to capture all products of the modulation process, including the emission skirts, around the carrier frequency, but small enough to avoid having other emissions (e.g. on adjacent channels) within the span.
The detector of the spectrum analyzer shall be set to “Sample”. However, a peak, or peak hold, may be used in place of the sampling detector since this usually produces a wider bandwidth than the actual bandwidth (worst-case measurement). Use of a peak hold (or “Max Hold”) may be necessary to determine the occupied / x dB bandwidth if the device is not transmitting continuously.
The resolution bandwidth (RBW) shall be in the range of 1% to 5% of the actual occupied / x dB bandwidth and the video bandwidth (VBW) shall not be smaller than three times the RBW value.
Video averaging is not permitted.
Note: It may be necessary to repeat the measurement a few times until the RBW and VBW are in compliance with the above requirement.
For the 99% emission bandwidth, the trace data points are recovered and directly summed in linear power level terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached, and that frequency recorded. The process is repeated for the highest frequency data points (starting at the highest frequency, at the right side of the span, and going down in frequency). This frequency is then recorded. The difference between the two recorded frequencies is the occupied bandwidth (or the 99% emission bandwidth).

4.4.2 EUT Setup



4.4.3 Test Procedure

According to ANSI C63.10-2013 Section 6.9.3

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. The following procedure shall be used for measuring 99% power bandwidth:
a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.
b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.
c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2.
d) Step a) through step c) might require iteration to adjust within the specified range.
e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.
g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.
h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

4.4.4 Test Data And Result

Serial Number:	2WFP-1	Test Date:	2025/1/16
Test Site:	Chamber 10m	Test Mode:	Transmitting
Tester:	Leesin Xiang	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	21.5	Relative Humidity: (%)	37	ATM Pressure: (kPa)	102

Test Equipment List and Details:

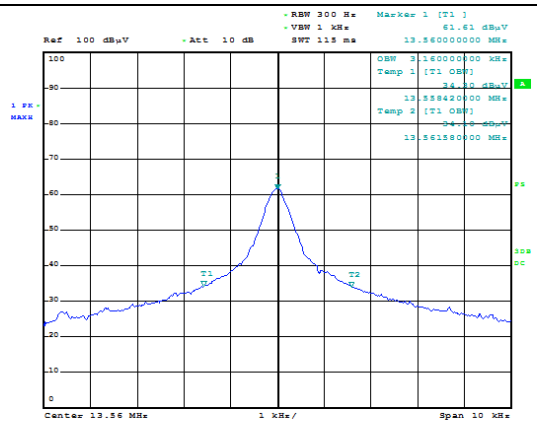
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
EMCO	Passive Loop Antenna	6512	9706-1206	2023/10/25	2026/10/24
Narda	Coaxial Attenuator	779-6dB	04269	2023/9/6	2026/9/5
Unknown	Coaxial Cable	C-NJNJ-50	C-1000-01	2024/7/1	2025/6/30
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-04	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

** 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).*

Test Data:

Test Frequency (MHz)	99% Occupied Bandwidth (kHz)
13.56	3.16

99% Occupied Bandwidth



4.5 Frequency Stability

4.5.1 Applicable Standard

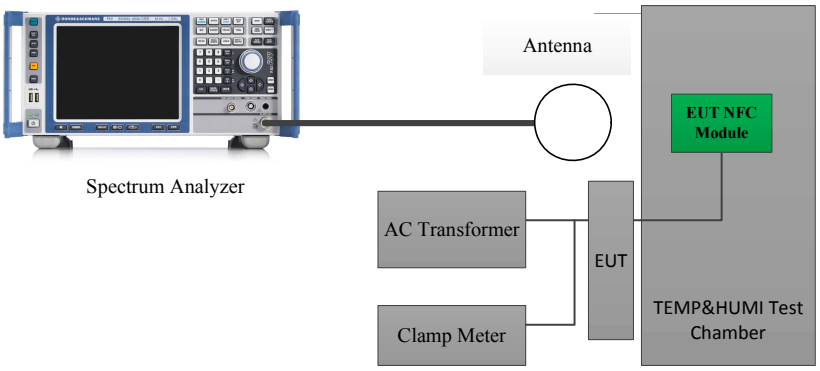
FCC Part 15.225:

The frequency tolerance of the carrier signal shall be maintained within ±0.01% of the operating frequency over a temperature variation of −20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

RSS-210 B.6:

(b) the carrier frequency stability shall not exceed ±100 ppm

4.5.2 EUT Setup



4.5.3 Test Procedure

According to ANSI C63.10-2013 Section 6.8

Frequency stability with respect to ambient temperature

a) Supply the EUT with a nominal ac voltage or install a new or fully charged battery in the EUT. If possible, a dummy load shall be connected to the EUT because an antenna near the metallic walls of an environmental test chamber could affect the output frequency of the EUT. If the EUT is equipped with a permanently attached, adjustable-length antenna, then the EUT shall be placed in the center of the chamber with the antenna adjusted to the shortest length possible. Turn ON the EUT and tune it to one of the number of frequencies shown in 5.6.

b) Couple the unlicensed wireless device output to the measuring instrument by connecting an antenna to the measuring instrument with a suitable length of coaxial cable and placing the measuring antenna near the EUT (e.g., 15 cm away), or by connecting a dummy load to the measuring instrument, through an attenuator if necessary.

NOTE—An instrument that has an adequate level of accuracy as specified by the procuring or regulatory agency is the recommended measuring instrument.

c) Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).

d) Turn the EUT OFF and place it inside the environmental temperature chamber. For devices that have oscillator heaters, energize only the heater circuit.

e) Set the temperature control on the chamber to the highest specified in the regulatory requirements for the type of device and allow the oscillator heater and the chamber temperature to stabilize.

f) While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made.

g) Measure the frequency at each of frequencies specified in 5.6.

h) Switch OFF the EUT but do not switch OFF the oscillator heater.

i) Lower the chamber temperature by not more that 10 °C, and allow the temperature inside the chamber to stabilize.

j) Repeat step f) through step i) down to the lowest specified temperature.

Frequency stability when varying supply voltage

Unless otherwise specified, these tests shall be made at ambient room temperature (+15 °C to +25 °C). An antenna shall be connected to the antenna output terminals of the EUT if possible. If the EUT is equipped with or uses an adjustable-length antenna, then it shall be fully extended.

a) Supply the EUT with nominal voltage or install a new or fully charged battery in the EUT. Turn ON the EUT and couple its output to a frequency counter or other frequency-measuring instrument.

NOTE—An instrument that has an adequate level of accuracy as specified by the procuring or regulatory agency is the recommended measuring instrument.

b) Tune the EUT to one of the number of frequencies required in 5.6. Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument but is strong enough to allow measurement of the operating or fundamental frequency of the EUT).

c) Measure the frequency at each of the frequencies specified in 5.6.

d) Repeat the above procedure at 85% and 115% of the nominal supply voltage as described in 5.13.

4.5.4 Test Result

Serial Number:	2WFP-1	Test Date:	2025/1/16
Test Site:	RF	Test Mode:	Transmitting
Tester:	Leesin Xiang	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	21.5	Relative Humidity: (%)	37	ATM Pressure: (kPa)	102

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Unknown	Coaxial Cable	C-NJNJ-50	C-1000-01	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
BACL	TEMP&HUMI Test Chamber	BTH-150-40	30173	2024/9/6	2025/9/5
All-sun	Clamp Meter	EM305A	8348897	2024/8/16	2025/8/15
Daoxiang	AC Transformer	TDGC2-5KVA	F-08-EM011	N/A	N/A

** 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).*

Test Data:

f_o = 13.56 MHz				
Temperature	**Voltage**	**Measured frequency**	**Frequency Error**	**Limit**
℃	**V_{AC}**	**MHz**	**Hz**	**Hz**
-20	240	13.55993	-70	±1356
-10		13.55989	-110	±1356
0		13.55987	-130	±1356
10		13.55994	-60	±1356
20		13.55991	-90	±1356
30		13.55994	-60	±1356
40		13.55930	-700	±1356
50		13.55992	-80	±1356
20	208	13.55997	-30	±1356

Note: the voltage range was declared by manufacturer▲.

4.6 Antenna Requirement

4.6.1 Applicable Standard

FCC §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. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §§15.211, 15.213, 15.217, 15.219, 15.221, or §15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

RSS-Gen §6.8

The applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list.
For expediting the testing, measurements may be performed using only the antenna with highest gain of each combination of transmitter and antenna type, with the transmitter output power set at the maximum level. However, the transmitter shall comply with the applicable requirements under all operational conditions and when in combination with any type of antenna from the list provided in the test report (and in the notice to be included in the user manual, provided below).
When measurements at the antenna port are used to determine the RF output power, the effective gain of the device's antenna shall be stated, based on a measurement or on data from the antenna's manufacturer.
The test report shall state the RF power, output power setting and spurious emission measurements with each antenna type that is used with the transmitter being tested.
For licence-exempt equipment with detachable antennas, the user manual shall also contain the following notice in a conspicuous location:

This radio transmitter [enter the device's ISED certification number] has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Immediately following the above notice, the manufacturer shall provide a list of all antenna types which can be used with the transmitter, indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna type.

4.6.2 Judgment

Please refer to the Antenna Information detail in Section 1.3.

EXHIBIT A - EUT PHOTOGRAPHS

Please refer to the attachment 2402A34589E-RF-EXP EUT external photographs and 2402A34589E-RF-INP EUT internal photographs.

EXHIBIT B - TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2402A34589E-RF-00-TSP test setup photographs.

EXHIBIT C - RF EXPOSURE EVALUATION

RF Exposure Evaluation

Applicable Standard

According to subpart §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	**Electric Field Strength (V/m)**	**Magnetic Field Strength (A/m)**	**Power Density (mW/cm^2)**	**Averaging Time (minutes)**
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f²)	30
30–300	27.5	0.073	0.2	30
300–1500	/	/	f/1500	30
1500–100,000	/	/	1.0	30

f = frequency in MHz; * = Plane-wave equivalent power density;

According to §1.1310 and §2.1091 RF exposure is calculated.

Calculation formula

Prediction of power density at the distance of the applicable MPE limit
$S = PG/4\pi R^2$ = power density (in appropriate units, e.g. mW/cm^2);
P = power input to the antenna (in appropriate units, e.g., mW);
G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

For simultaneously transmit system, the calculated power density should comply with:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

Calculated Data:

Radio	Operation Modes	Frequency (MHz)	Antenna Gain		Conducted output power including Tune-up Tolerance▲		Evaluation Distance (cm)	Power Density (mW/cm^2)	MPE Limit (mW/cm^2)
			(dBi)	(numeric)	(dBm)	(mW)			
WiFi/BT Module	WiFi	2412-2462	2.33	1.71	15.9	38.90	20.00	0.0132	1.0
	BT	2402-2480	2.33	1.71	2.79	1.90	20.00	0.0006	1.0
	BLE	2402-2480	2.33	1.71	1.08	1.28	20.00	0.0004	1.0
WWAN Module	WCDMA Band II	1850-1910	2.00	1.58	25	316.23	20.00	0.0998	1.0
	WCDMA Band IV	1710-1755	2.00	1.58	25	316.23	20.00	0.0998	1.0
	WCDMA Band V	824-849	2.00	1.58	25	316.23	20.00	0.0998	0.55
	LTE Band 2	1850-1910	2.00	1.58	25	316.23	20.00	0.0998	1.0
	LTE Band 4	1710-1755	2.00	1.58	25	316.23	20.00	0.0998	1.0
	LTE Band 5	824-849	2.00	1.58	25	316.23	20.00	0.0998	0.55
	LTE Band 12	699-716	2.00	1.58	25	316.23	20.00	0.0998	0.47
	LTE Band 13	777-787	2.00	1.58	25	316.23	20.00	0.0998	0.52
	LTE Band 14	788-798	2.00	1.58	25	316.23	20.00	0.0998	0.53
	LTE Band 66	1710-1780	2.00	1.58	25	316.23	20.00	0.0998	1.0
	LTE Band 71	663-698	2.00	1.58	25	316.23	20.00	0.0998	0.45
NFC	NFC	13.56	/	/	-28.31	0.0015	20.00	<<0.001	0.98
Note: The device built in a certified BT/WiFi module, FCC ID: 2AC7Z-ESP32WROOM32U. The device built in a certified WWAN module, FCC ID: XMR202008EC25AFXD.									

Note:
1. The Conducted output power including Tune-up Tolerance provided by manufacturer
2. EIRP(dBm)=E(dBuV/m)-95.2 for 3 meters distance
   NFC E Field =66.89dBuV/m@3m
   ==> EIRP= -28.31dBm

Simultaneous transmission:

BT and 2.4G WiFi can`t transmit simultaneously, WiFi/BT, WWAN Module and NFC can transmit simultaneously:

$$\sum_i \frac{S_i}{S_{Limit,i}} \le 1$$

$S_{WiFi}/S_{limit\text{-}WiFi} + S_{WWAN}/S_{limit\text{-}WWAN} + S_{NFC}/S_{limit\text{-}NFC}$

=0.0132/1.0+0.0998/0.45

=0.23

< 1.0

Result: Compliant. The device compliant RF Exposure at 20cm distances.

Electric field strength levels, magnetic field strength levels and power density levels (10 MHz to 300 GHz)

Applicable Standard

RSS-102, Issue 6, Clause 5.3.2:

The electric and magnetic field strength reference levels, power density reference levels, and associated reference period for devices employed by the general public (uncontrolled environment) and controlled-use devices (controlled environment) are specified in table 7 and table 8. Note that the power density limits specified in these tables apply to whole body exposure conditions.

Table 7: RF field strength and power density limits for devices used by the general public (uncontrolled environment)

Frequency range (MHz)	Electric field (V_{RMS}/m)	Magnetic field (A_{RMS}/m)	Power density (W/m^2)	Reference period (minutes)
10-20	27.46	0.0728	2	6
20-48	$58.07 / f^{0.25}$	$0.1540 / f^{0.25}$	$8.944 / f^{0.5}$	6
48-300	22.06	0.05852	1.291	6
300-6000	$3.142\ f^{0.3417}$	$0.008335\ f^{0.3417}$	$0.02619\ f^{0.6834}$	6
6000-15000	61.4	0.163	10	6
15000-150000	61.4	0.163	10	$616000/f^{1.2}$
150000-300000	$0.158\ f^{0.5}$	$4.21 \times 10^{-4}\ f^{0.5}$	$6.67 \times 10^{-5}\ f$	$616000/f^{1.2}$

Note: f is frequency in MHz.

MPE Calculation

Predication of MPE limit at a given distance
$S = PG/4\pi R^2$ = power density (in appropriate units, e.g. mW/cm^2);
P = power input to the antenna (in appropriate units, e.g., mW);
G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

For simultaneously transmit system, the calculated power density should comply with:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

Calculated Data:

Radio	Operation Modes	Frequency (MHz)	Antenna Gain		Conducted output power including Tune-up Tolerance▲		Evaluation Distance (cm)	Power Density (W/m^2)	MPE Limit (W/m^2)
			(dBi)	(numeric)	(dBm)	(mW)			
WiFi/BT Module	WiFi	2412-2462	2.33	1.71	15.9	38.90	20.00	0.132	5.37
	BT	2402-2480	2.33	1.71	2.79	1.90	20.00	0.006	5.35
	BLE	2402-2480	2.33	1.71	1.08	1.28	20.00	0.004	5.35
WWAN Module	WCDMA Band II	1850-1910	2.00	1.58	25	316.23	20.00	0.998	4.48
	WCDMA Band IV	1710-1755	2.00	1.58	25	316.23	20.00	0.998	4.24
	WCDMA Band V	824-849	2.00	1.58	25	316.23	20.00	0.998	2.58
	LTE Band 2	1850-1910	2.00	1.58	25	316.23	20.00	0.998	4.48
	LTE Band 4	1710-1755	2.00	1.58	25	316.23	20.00	0.998	4.24
	LTE Band 5	824-849	2.00	1.58	25	316.23	20.00	0.998	2.58
	LTE Band 12	699-716	2.00	1.58	25	316.23	20.00	0.998	2.30
	LTE Band 13	777-787	2.00	1.58	25	316.23	20.00	0.998	2.47
	LTE Band 66	1710-1780	2.00	1.58	25	316.23	20.00	0.998	4.24
	LTE Band 71	663-698	2.00	1.58	25	316.23	20.00	0.998	2.22
NFC	NFC	13.56	/	/	-28.31	0.0015	20.00	<<0.01	2.0
Note: The device built in a certified BT/WiFi module, IC: 21098-ESPWROOM32U. The device built in a certified WWAN module, IC: 10224A-022EC25AFXD.									

Note:
1. The Conducted output power including Tune-up Tolerance provided by manufacturer
2. EIRP(dBm)=E(dBuV/m)-95.2 for 3 meters distance
   NFC E Field =66.89dBuV/m@3m
   ==> EIRP= -28.31dBm

Simultaneous transmission:

BT and 2.4G WiFi can`t transmit simultaneously, WiFi/BT, WWAN Module and NFC can transmit simultaneously:

$$\sum_i \frac{S_i}{S_{Limit,i}} \le 1$$

$S_{WiFi}/S_{limit\text{-}WiFi} + S_{WWAN}/S_{limit\text{-}WWAN} + S_{NFC}/S_{limit\text{-}NFC}$

=0.132/5.37+0.998/2.22

=0.47

< 1.0

Result: Compliant. The device compliant RF Exposure at 20cm distances.

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