

TEST REPORT

Applicant Name: COPPERTREE PTE. LTD.
Address: 37 JALAN PEMIMPIN, #08-14, MAPEX, SINGAPORE
Report Number: 2501T16703E-RF-00
FCC ID: 2BRRQTVTX120

Test Standard (s)

FCC Part 15C

Sample Description

Product Type: Transmitter
Model No.: VTX120
Multiple Model(s) No.: VTX95, VTX85
Trade Mark: UM
Date Received: 2025/05/28
Report Date: 2025/10/29

Test Result:	Pass▲
--------------	-------

▲ In the configuration tested, the EUT complied with the standards above.

Prepared and Checked By:

Ekko Wu

Ekko Wu
RF Engineer

Approved By:

Nancy Wang

Nancy Wang
RF Supervisor

Note: The information marked # is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report. Customer model name, addresses, names, trademarks etc. are included.

This report cannot be reproduced except in full, without prior written approval of the Company. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

This report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP ▼ or any agency of the Government. This report may contain data that are not covered by the NVLAP accreditation and are marked with an asterisk "▼".

Bay Area Compliance Laboratories Corp. (Shenzhen)

5F(B-West) , 6F, 7F, the 3rd Phase of Wan Li Industrial Building D, Shihua Rd, FuTian Free Trade Zone, Shenzhen, China

Tel: +86-755-33320018 Fax: +86-755-33320008 www.baclcorp.com.cn

TABLE OF CONTENTS

DOCUMENT REVISION HISTORY	3
GENERAL INFORMATION.....	4
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	4
OBJECTIVE	4
TEST METHODOLOGY	4
MEASUREMENT UNCERTAINTY	5
TEST FACILITY	5
SYSTEM TEST CONFIGURATION	6
DESCRIPTION OF TEST CONFIGURATION	6
EUT EXERCISE SOFTWARE	6
LOCAL SUPPORT EQUIPMENT	6
EXTERNAL I/O CABLE.....	6
BLOCK DIAGRAM OF TEST SETUP	6
SUMMARY OF TEST RESULTS	7
TEST EQUIPMENT LIST	8
FCC §2.1091&§1.1310 - MAXIMUM PERMISSIBLE EXPOSURE (MPE).....	9
APPLICABLE STANDARD	9
BLOCK DIAGRAM OF TEST SETUP	10
TEST PROCEDURES.....	10
TEST DATA	10
FCC§15.203 – ANTENNA REQUIREMENT	12
APPLICABLE STANDARD	12
ANTENNA CONNECTED CONSTRUCTION	12
FCC §15.205 & §15.209 - RADIATED EMISSIONS TEST	13
APPLICABLE STANDARD	13
EUT SETUP	13
EMI TEST RECEIVER & SPECTRUM ANALYZER SETUP	14
TEST PROCEDURE	14
CORRECTED AMPLITUDE & OVER LIMIT/MARGIN CALCULATION	15
TEST DATA	15
FCC §2.1049 & §15.215 (C) – 20 DB EMISSION BANDWIDTH & 99% OCCUPIED BANDWIDTH.....	24
EUT PHOTOGRAPHS.....	27
TEST SETUP PHOTOGRAPHS	28

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	2501T16703E-RF-00	Original Report	2025/10/29

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product	Transmitter
Tested Model	VTX120
Multiple Model(s)	VTX95, VTX85
Frequency Range	9.925-41.375kHz
Antenna Type	Coil
Input Voltage	DC15V from Battery
Modulation type	BPSK
Sample serial number	33LY-1 (Assigned by BACL, Shenzhen)
Sample/EUT Status	Good condition
Adapter Information	N/A
Note: The Multiple models are electrically identical with the test model except for model name and sales channel. Please refer to the declaration letter [#] for more detail, which was provided by manufacturer.	

Objective

This test report is in accordance with Part 2, Subpart J, and Part 15, Subparts A and C of the Federal Communications Commission's rules.

The objective is to determine the compliance of EUT with FCC rules, section 15.203, 15.205, 15.209, 15.215.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2020, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

All emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		109.2kHz(k=2, 95% level of confidence)
RF Frequency		56.6Hz(k=2, 95% level of confidence)
AC Power Lines Conducted Emissions	9kHz-150kHz	3.63dB(k=2, 95% level of confidence)
	150kHz-30MHz	3.66dB(k=2, 95% level of confidence)
Radiated Emissions	0.009MHz~30MHz	3.60dB(k=2, 95% level of confidence)
	30MHz~200MHz (Horizontal)	5.32dB(k=2, 95% level of confidence)
	30MHz~200MHz (Vertical)	5.43dB(k=2, 95% level of confidence)
	200MHz~1000MHz (Horizontal)	5.77dB(k=2, 95% level of confidence)
	200MHz~1000MHz (Vertical)	5.73dB(k=2, 95% level of confidence)
Temperature		±1°C
Humidity		±1%
Supply voltages		±0.4%

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

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 5F(B-West) , 6F, 7F, the 3rd Phase of Wan Li Industrial Building D, Shihua Rd, FuTian Free Trade Zone, Shenzhen, China.

Each test item follows test standards and with no deviation.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in a test mode

10 operational frequencies (Hz) were used:

9925, 11725, 15875, 18875, 21575, 24925, 27925, 30875, 35925, 41375

According to FCC part 15.31 required, 24925Hz was selected to test.

EUT Exercise Software

No software used in test.

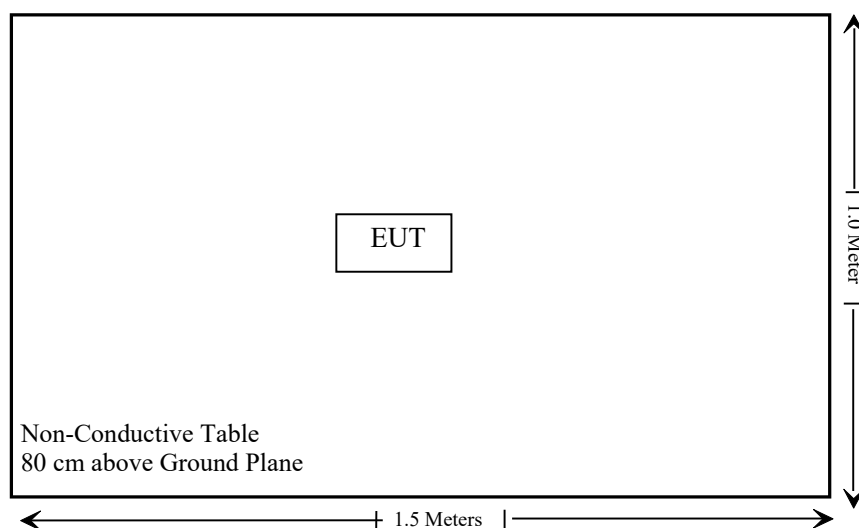
Local Support Equipment

Manufacturer	Description	Model	Serial Number
/	/	/	/

External I/O Cable

Cable Description	Length (m)	From Port	To
/	/	/	/

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
FCC §2.1091 & §1.1310	Maximum Permissible Exposure (MPE)	Compliant
FCC§15.203	Antenna Requirement	Compliant
FCC§15.207	AC Line Conducted Emission	Not Applicable
FCC §15.209 §15.205	Radiated Emission Test	Compliant
FCC §2.1049, §15.215 (c)	20 dB Bandwidth 99% OCCUPIED Bandwidth	Compliant

Not Applicable: The EUT was powered by battery only.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test					
Rohde & Schwarz	EMI Test Receiver	ESR3	102455	2024/12/04	2025/12/03
Sonoma instrument	Pre-amplifier	310 N	186238	2025/04/29	2026/04/28
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2023/07/20	2026/07/19
Unknown	Cable	Chamber A Cable 1	N/A	2025/04/29	2026/04/28
Unknown	Cable	XH500C	J-10M-A	2025/04/29	2026/04/28
BACL	Active Loop Antenna	1313-1A	4031911	2024/05/14	2027/05/13
Unknown	Cable	2Y194	0735	2024/12/04	2025/12/03
Unknown	Cable	PNG214	1354	2024/12/04	2025/12/03
Audix	EMI Test software	E3	19821b(V9)	NCR	NCR
MPE Test					
SPEAG	Probe	MAGPy-8H3D-E3D	3106	2025/04/29	2026/04/28
SPEAG	Data Acquisition System	MAPGPY-DAS	3089	2025/04/29	2026/04/28

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

FCC §2.1091&§1.1310 - MAXIMUM PERMISSIBLE EXPOSURE (MPE)

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)

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm²)	Averaging Time (minutes)
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f ²)	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 for BT/BLE.

Furthermore, consistent with FCC's equipment authorization RF exposure guidance, any device (both portable and mobile) operating at frequencies below 100 kHz is considered compliant for the purpose of equipment authorization when the external (unperturbed) temporal peak field strengths do not exceed the following reference levels:

83 V/m for the electric field strength (E)

and

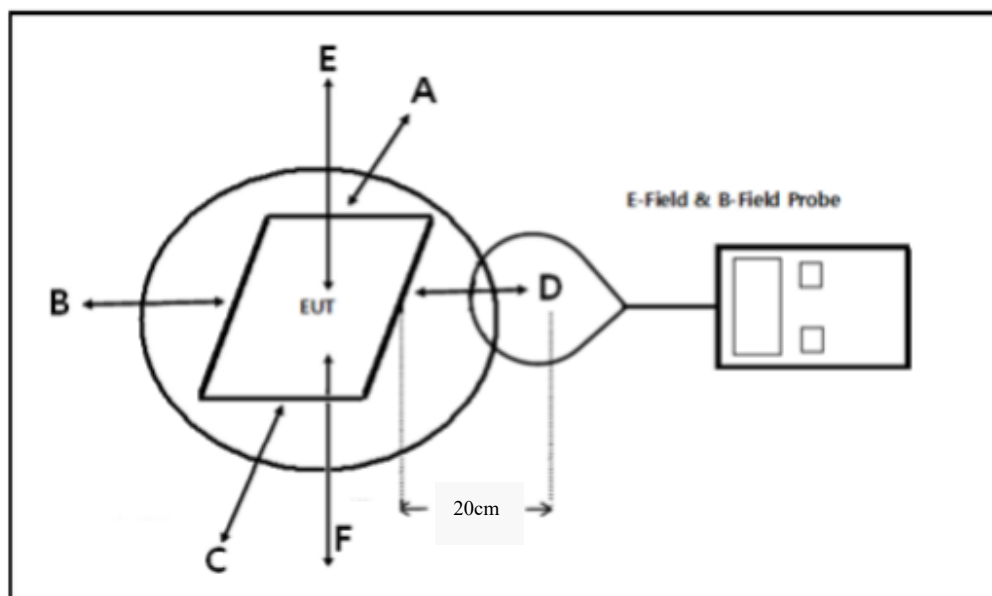
90 A/m for the magnetic field strength (H).

These data may be provided through measurements and/or numerical simulations, and for all the positions in space relevant for any possible body exposure.

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

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

Block Diagram of Test Setup



Test Procedures

- 1) Perform H-field and E-field measurements for each all sides of the EUT at 20cm, along all the principal axes defined with respect to the orientation of the transmitting element (e.g., coil or antenna).
- 2) The highest emission level was recorded and compared with limit.

Test Data

Environmental Conditions

Temperature:	26.7 °C
Relative Humidity:	52 %
ATM Pressure:	99.5 kPa

The testing was performed by Rainbow Zhu on 2025-07-14.

Test mode: Transmitting (Maximum output power mode)

9.925-41.375 kHz (Measured) :**H-Field Strength**

Test Frequency (kHz)	Position A (A/m)	Position B (A/m)	Position C (A/m)	Position D (A/m)	Position E (A/m)	Position F (A/m)	Limit (A/m)
9.925-41.375	2.73	2.86	2.79	2.74	1.74	0.76	90

E-Field Strength

Test Frequency (kHz)	Position A (V/m)	Position B (V/m)	Position C (V/m)	Position D (V/m)	Position E (V/m)	Position F (V/m)	Limit (V/m)
9.925-41.375	1.69	1.47	1.34	1.39	1.51	2.49	83

Note: Test with 20cm distance from the center of the probe(s) to the edge of the device.

BT/BLE (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/cm²);

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 worst case:

Mode	Frequency (MHz)	Antenna Gain [#]		Max Tune-up Power [#]		Evaluation Distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)
		(dBi)	(numeric)	(dBm)	(mW)			
BT	2402-2480	2.00	1.58	0.266	1.06	20	0.00033	1.0
BLE	2402-2480	2.00	1.58	0.296	1.07	20	0.00034	1.0

Note: 1.The tune up power and antenna gain was declared by the applicant.

2. The device contains a certified BT module (model: FSC-BT986, FCC ID: 2AMWOFSC-BT986)

Simultaneous transmitting consideration (worst case):

The ratio= H-Field / H-Field_{Limit} + MPE_{BLE} / MPE_{Limit} = 2.86/90+0.00034/1.0 =0.032<1.0

To maintain compliance with the FCC's RF exposure guidelines, place the equipment at least 20cm from nearby persons.

Result: Compliant.

FCC§15.203 – ANTENNA REQUIREMENT

Applicable Standard

According to 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.

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.

Antenna Connected Construction

The EUT has one integral antenna arrangement which was permanently attached, fulfill the requirement of this section. Please refer to the EUT photos.

Result: Compliant.

FCC §15.205 & §15.209 - RADIATED EMISSIONS TEST

Applicable Standard

As per FCC Part 15.209

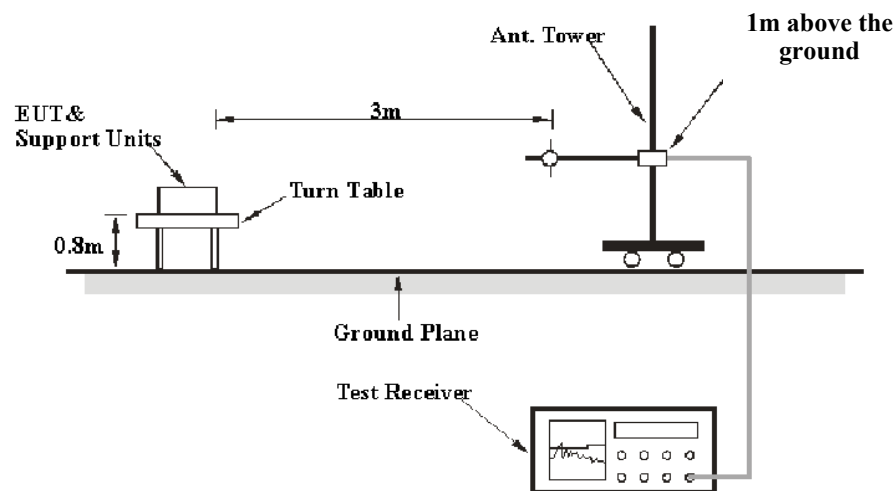
(a) Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	$2400/F(\text{kHz})$	300
0.490-1.705	$24000/F(\text{kHz})$	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

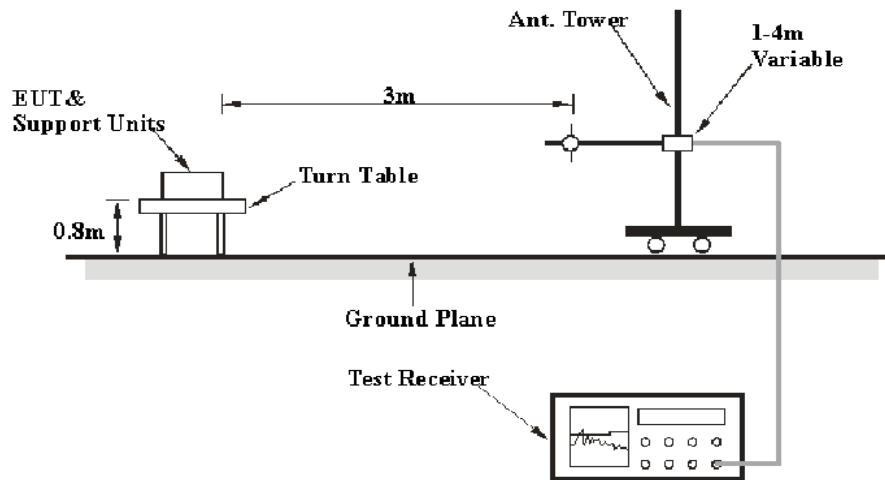
**Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§15.231 and 15.241.

EUT Setup

9 kHz-30MHz:



30MHz-1GHz:



The radiated emission tests were performed in the 3-meter chamber test site, using the setup accordance with the ANSI C63.10-2020. The specification used was the FCC Part Subpart C limits.

The spacing between the peripherals was 10 cm.

EMI Test Receiver & Spectrum Analyzer Setup

The EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Detector	Measurement
9 kHz – 150 kHz	/	/	200 Hz	QP	QP
	300 Hz	1 kHz	/	PK	PK
150 kHz – 30 MHz	/	/	9 kHz	QP	QP
	10 kHz	30 kHz	/	PK	PK
30 MHz – 1000 MHz	/	/	120 kHz	QP	QP
	100 kHz	300 kHz	/	PK	PK

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

Test Procedure

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

All final data was recorded in Quasi-peak detection mode except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz, average detection modes for frequency bands 9–90 kHz and 110–490 kHz.

For 9 kHz-30MHz, the report shall list the six emissions with the smallest margin relative to the limit, for each of the three antenna orientations (parallel, perpendicular, and ground-parallel) unless the margin is greater than 20 dB.

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

Corrected Amplitude & Over Limit/Margin Calculation

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

$$\text{Corr. Ampl.} = \text{Meter Reading} + \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

The “**Over Limit/Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an over limit/margin of -7dB means the emission is 7dB below the limit. The equation for calculation is as follows:

$$\begin{aligned}\text{Over Limit/Margin} &= \text{Level/Result} - \text{Limit.} \\ \text{Level/Result} &= \text{Reading level} + \text{Factor}\end{aligned}$$

Test Data

Environmental Conditions

Temperature:	24.8~25.3 °C
Relative Humidity:	49~50 %
ATM Pressure:	100.1~100.3 kPa

The testing was performed by Alex Yan on 2025-07-04 and 2025-07-22.

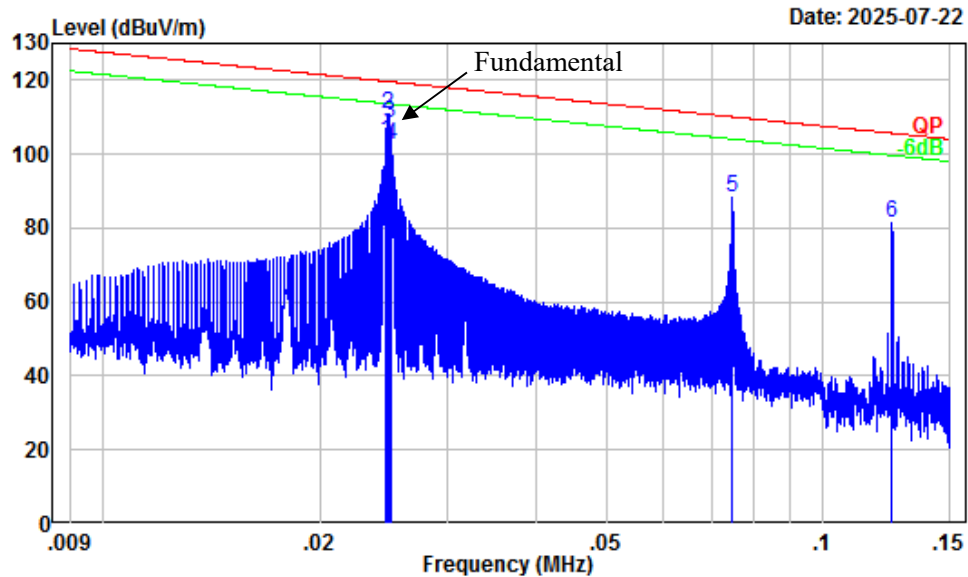
Test Mode: Transmitting (Maximum output power mode)

Note 1: After pre-scan in the X, Y and Z axes of orientation, the worst case x-axis of orientation were recorded.

Note 2: For the radiated spurious emission below 1GHz, When the test result of peak was less than the limit of QP/Average more than 6dB, just peak value were recorded.

Ground-parallel:

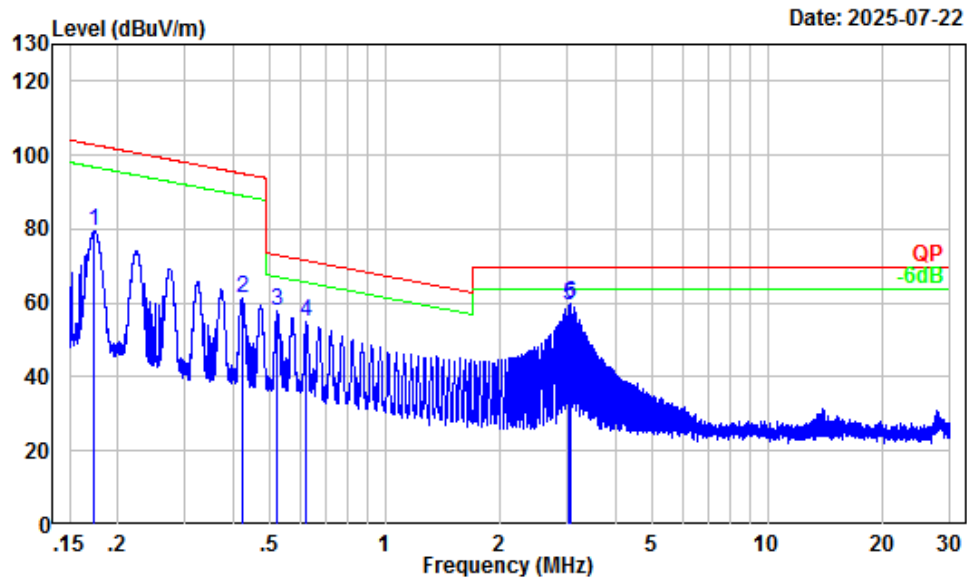
9 kHz~150 kHz



Site : Chamber A
Condition : 3m
Project Number : 2501T16703E-RF
Test Mode : Transmitting
Note : Ground-parallel
Detector: Peak RBW/VBW: 0.3/1kHz
Tester : Alex Yan

	Freq	Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.0247	29.51	73.93	103.44	119.75	-16.31	Peak
2	0.0249	29.47	81.49	110.96	119.67	-8.71	Peak
3	0.0250	29.44	79.08	108.52	119.63	-11.11	Peak
4	0.0251	29.42	73.29	102.71	119.60	-16.89	Peak
5	0.0748	23.92	64.21	88.13	110.13	-22.00	Peak
6	0.1246	20.55	60.65	81.20	105.69	-24.49	Peak

150 kHz~30 MHz

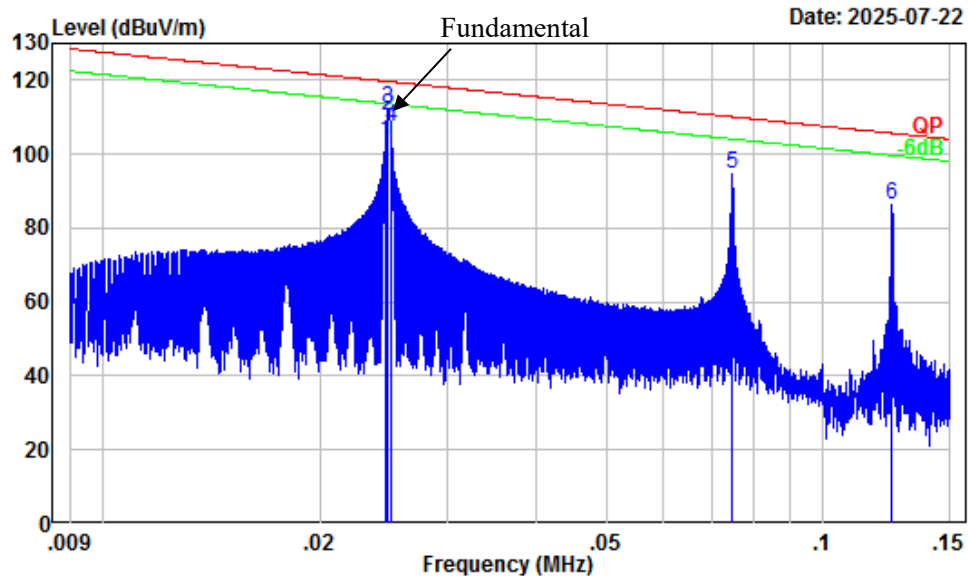


Site : Chamber A
Condition : 3m
Project Number : 2501T16703E-RF
Test Mode : Transmitting
Note : Ground-parallel
Detector: Peak RBW/VBW: 10/30kHz
Tester : Alex Yan

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.174	17.62	61.84	79.46	102.78	-23.32	Peak
2	0.425	7.83	53.67	61.50	95.04	-33.54	Peak
3	0.523	6.12	51.76	57.88	73.22	-15.34	Peak
4	0.623	4.88	49.95	54.83	71.66	-16.83	Peak
5	3.019	-2.16	61.74	59.58	69.54	-9.96	Peak
6	3.068	-2.19	62.10	59.91	69.54	-9.63	Peak

Perpendicular:

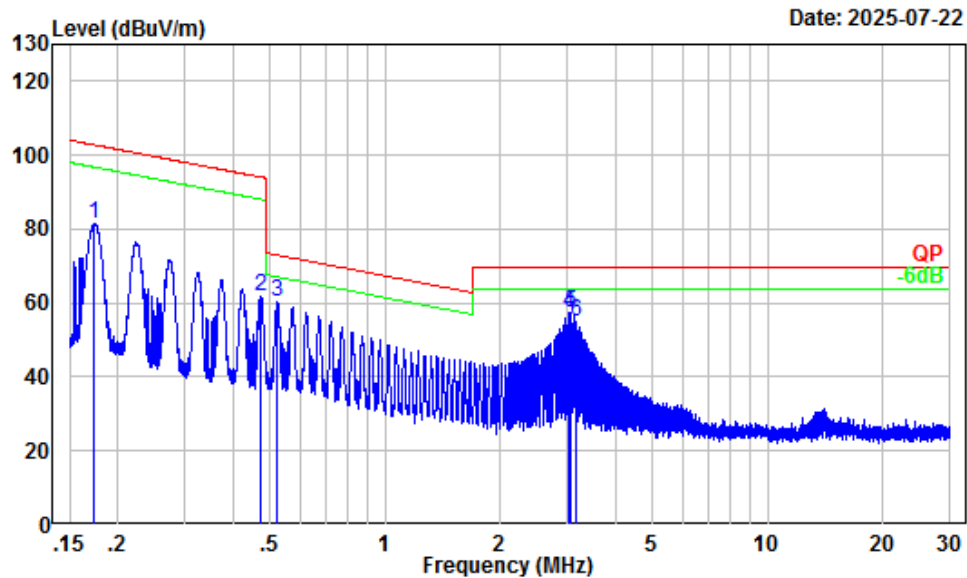
9 kHz~150 kHz



Site : Chamber A
 Condition : 3m
 Project Number : 2501T16703E-RF
 Test Mode : Transmitting
 Note : Perpendicular
 Detector: Peak RBW/VBW: 0.3/1kHz
 Tester : Alex Yan

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.0247	29.51	73.90	103.41	119.77	-16.36	Peak
2	0.0248	29.49	80.78	110.27	119.71	-9.44	Peak
3	0.0249	29.47	83.08	112.55	119.67	-7.12	Peak
4	0.0251	29.43	77.94	107.37	119.61	-12.24	Peak
5	0.0748	23.92	70.86	94.78	110.13	-15.35	Peak
6	0.1246	20.55	65.86	86.41	105.69	-19.28	Peak

150 kHz~30 MHz

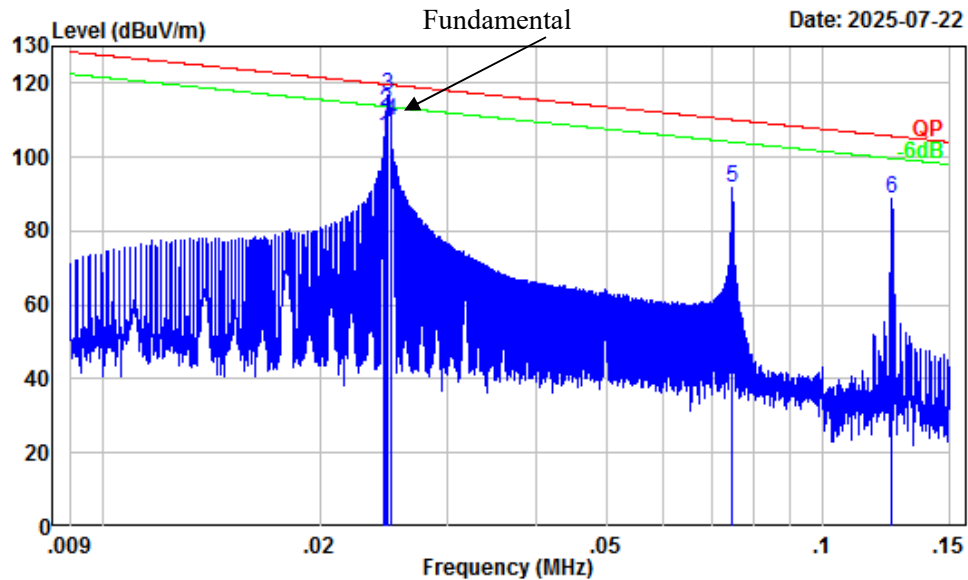


Site : Chamber A
Condition : 3m
Project Number : 2501T16703E-RF
Test Mode : Transmitting
Note : Perpendicular
Detector: Peak RBW/VBW: 10/30kHz
Tester : Alex Yan

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.174	17.61	63.98	81.59	102.78	-21.19	Peak
2	0.472	6.93	54.85	61.78	94.12	-32.34	Peak
3	0.524	6.11	54.15	60.26	73.21	-12.95	Peak
4	3.017	-2.16	59.41	57.25	69.54	-12.29	Peak
5	3.068	-2.19	59.83	57.64	69.54	-11.90	Peak
6	3.167	-2.24	57.29	55.05	69.54	-14.49	Peak

Parallel:

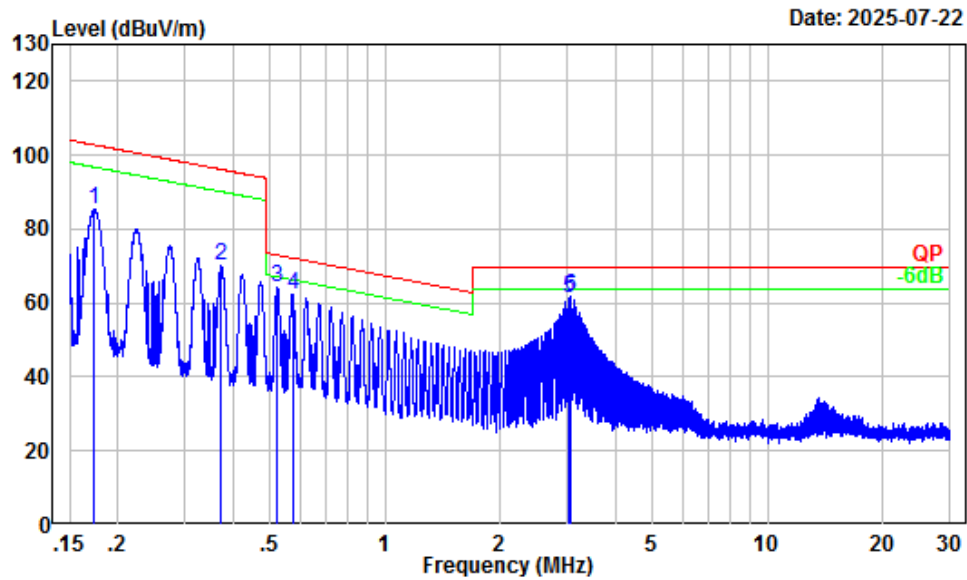
9 kHz~150 kHz



Site : Chamber A
Condition : 3m
Project Number : 2501T16703E-RF
Test Mode : Transmitting
Note : parallel
Detector: Peak RBW/VBW: 0.3/1kHz
Tester : Alex Yan

	Freq Factor		Read Level		Limit	Over	Remark
	MHz	dB/m	dBuV	dBuV/m	Line	Limit	
1	0.0246	29.53	75.71	105.24	119.79	-14.55	Peak
2	0.0248	29.50	83.07	112.57	119.73	-7.16	Peak
3	0.0249	29.47	87.25	116.72	119.67	-2.95	Average
4	0.0251	29.42	80.26	109.68	119.59	-9.91	Peak
5	0.0748	23.92	67.92	91.84	110.13	-18.29	Peak
6	0.1246	20.55	68.06	88.61	105.69	-17.08	Peak

150 kHz~30 MHz

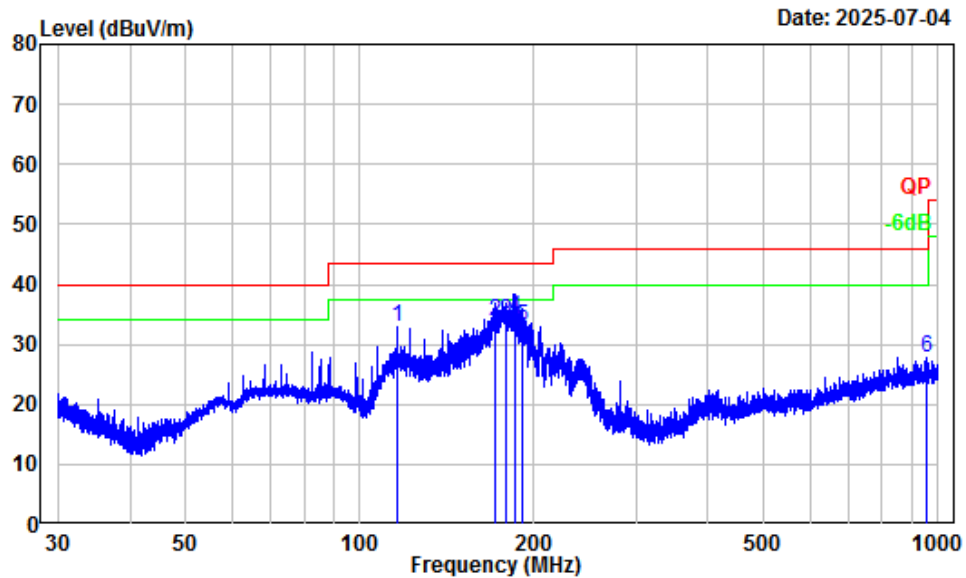


Site : Chamber A
 Condition : 3m
 Project Number : 2501T16703E-RF
 Test Mode : Transmitting
 Note : parallel
 Detector: Peak RBW/VBW: 10/30kHz
 Tester : Alex Yan

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.173	17.68	67.60	85.28	102.83	-17.55	Peak
2	0.374	8.80	61.16	69.96	96.16	-26.20	Peak
3	0.523	6.11	57.93	64.04	73.21	-9.17	Peak
4	0.574	5.49	56.85	62.34	72.40	-10.06	Peak
5	3.017	-2.16	63.37	61.21	69.54	-8.33	Peak
6	3.068	-2.19	63.76	61.57	69.54	-7.97	Peak

30MHz~1GHz:

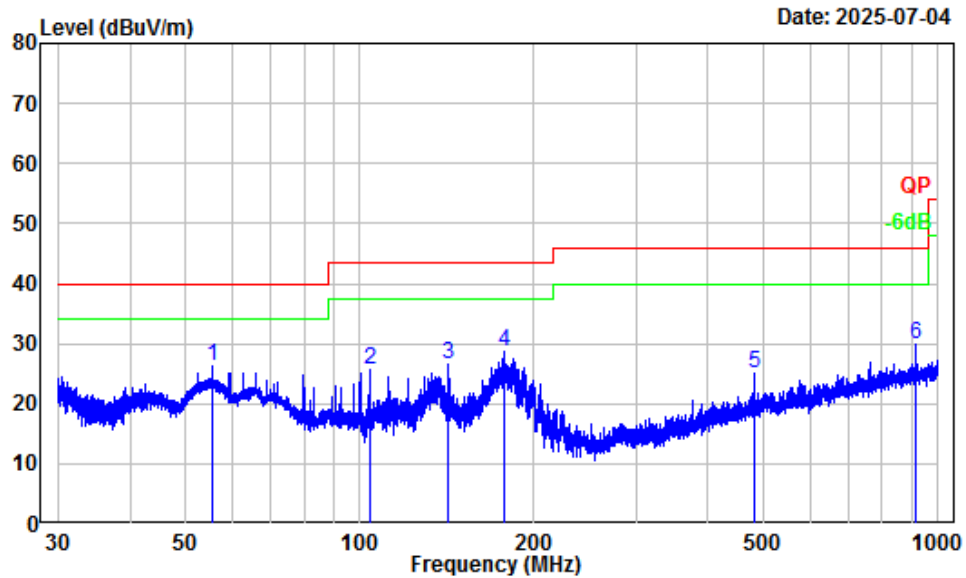
Horizontal



Site : Chamber A
Condition : 3m Horizontal
Project Number : 2501T16703E-RF
Test Mode : Transmittting
Detector: Peak RBW/VBW: 100/300kHz
Tester : Alex Yan

	Freq Factor		Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	115.88	-12.02	44.83	32.81	43.50	-10.69	Peak
2	170.87	-13.18	46.90	33.72	43.50	-9.78	QP
3	179.54	-13.65	47.41	33.76	43.50	-9.74	QP
4	184.89	-13.98	48.50	34.52	43.50	-8.98	QP
5	190.91	-14.09	46.92	32.83	43.50	-10.67	QP
6	954.18	-0.96	28.85	27.89	46.00	-18.11	Peak

Vertical



Site : Chamber A
Condition : 3m Vertical
Project Number : 2501T16703E-RF
Test Mode : Transmitting
Detector: Peak RBW/VBW: 100/300kHz
Tester : Alex Yan

	Freq	Factor	Read Level	Limit Level	Over Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	55.68	-18.32	44.70	26.38	40.00	-13.62	Peak
2	103.76	-14.76	40.43	25.67	43.50	-17.83	Peak
3	141.89	-11.97	38.68	26.71	43.50	-16.79	Peak
4	177.28	-13.49	42.02	28.53	43.50	-14.97	Peak
5	479.90	-6.34	31.26	24.92	46.00	-21.08	Peak
6	916.47	-1.13	30.97	29.84	46.00	-16.16	Peak

FCC §2.1049 & §15.215 (c) – 20 dB EMISSION BANDWIDTH & 99% OCCUPIED BANDWIDTH

Applicable Standard

According to § 2.1049, § 15.215 (c)

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission.

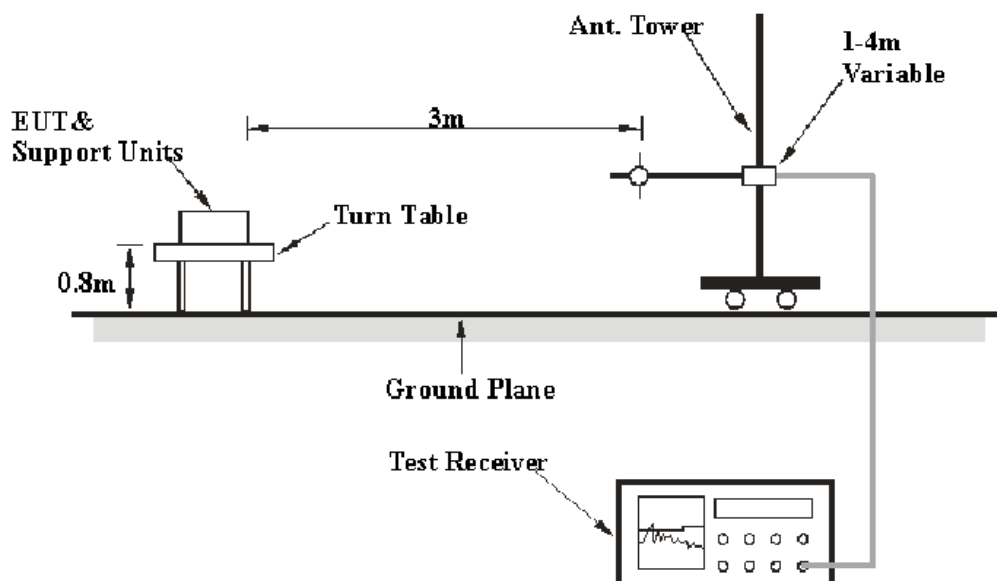
Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated. In the case of intentional radiators operating under the provisions of subpart E, the emission bandwidth may span across multiple contiguous frequency bands identified in that subpart. 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.

Test Procedure

Per ANSI C63.10-2020 §6.4 & §6.9.

Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.



Test Data**Environmental Conditions**

Temperature:	25.3 °C
Relative Humidity:	53 %
ATM Pressure:	101.2 kPa

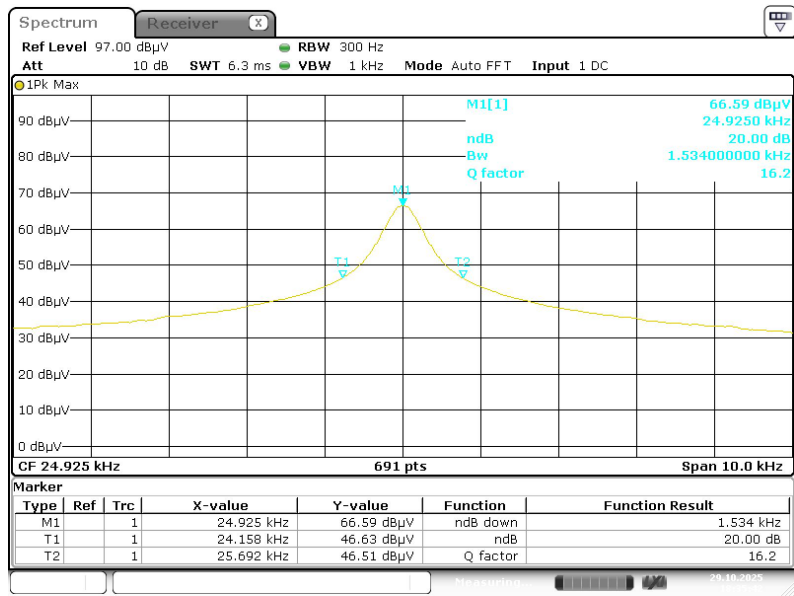
The testing was performed by Anson Su on 2025-10-29.

EUT operation mode: Transmitting

Test Result: Compliant. Please refer to following table and plot.

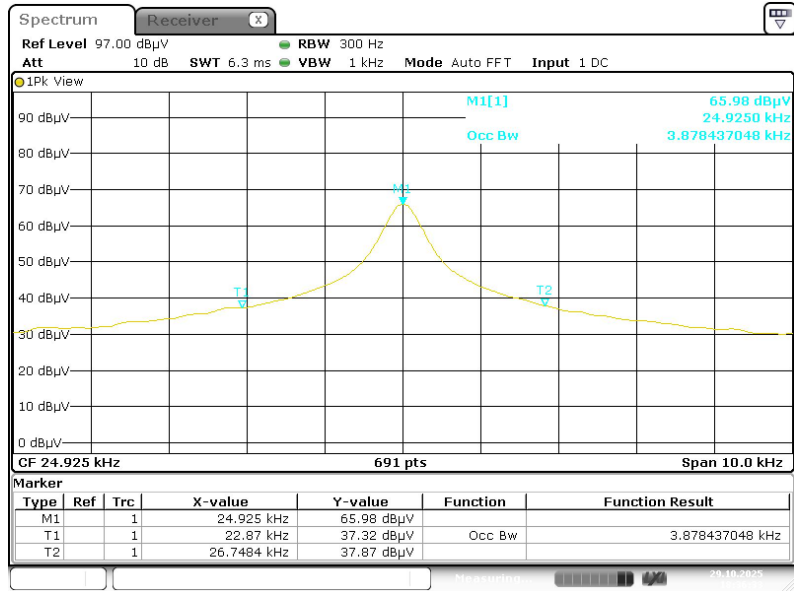
Channel Frequency (kHz)	20 dB Emission Bandwidth (kHz)	99%Emission Bandwidth (kHz)
24.925	1.534	3.878

20 dB Emission Bandwidth



ProjectNo.:2501T16703E-RF Tester:Anson Su
Date: 29.OCT.2025 18:35:43

99% Emission Bandwidth



ProjectNo.:2501T16703E-RF Tester:Anson Su
Date: 29.OCT.2025 18:36:33

EUT PHOTOGRAPHS

Please refer to the attachment 2501T16703E-RF External photo and 2501T16703E-RF Internal photo.

TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2501T16703E-RF Test Setup photo.

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