

TEST REPORT

Applicant: SWTCH Energy Inc

Address: 7 Queen Elizabeth Blvd, Etobicoke, Ontario, Canada

Product Name: Electric Vehicle Charging Station

FCC ID: 2BURV-ACEVH010

IC: 35161-ACEVH010

HVIN: EVH010-40

47 CFR Part 15, Subpart C(15.225)

ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to

Standard(s): C63.10a-2024

RSS-210 Issue 11, June 25, 2024

RSS-Gen, Issue 5, February 2021 Amendment 2

Report Number: 2602P24665E-RF-00A

Report Date: 2026/7/2

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

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	2602P24665E-RF-00A	Original Report	2026/7/2

1. GENERAL INFORMATION

1.1 General Description of Equipment under Test

EUT Name:	Electric Vehicle Charging Station
EUT Model:	EVH010-40
Operation Frequency:	13.56 MHz
Modulation Type:	ASK
Rated Input Voltage:	AC 208-240V
Serial Number:	3GXT-1
EUT Received Date:	2026/1/30
EUT Received Status:	Good

1.2 Accessory Information

Accessory Description	Manufacturer	Model	Parameters
/	/	/	/

1.3 Antenna Information Detail▲

Antenna Type	input impedance (Ohm)	Frequency Range	Antenna Gain
Loop	Unknown	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

Standard(s) Section	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
§1.1310, §2.1091	RF Exposure Evaluation	Compliant
RSS-102 Clause 6.6	Exemption Limits For Routine Evaluation-RF Exposure Evaluation	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. Test performed with the typical card and without Card, the worst was performed with the typical card.

3.2 EUT Exercise Software

No software was used in test.

3.3 Support Equipment List and Details

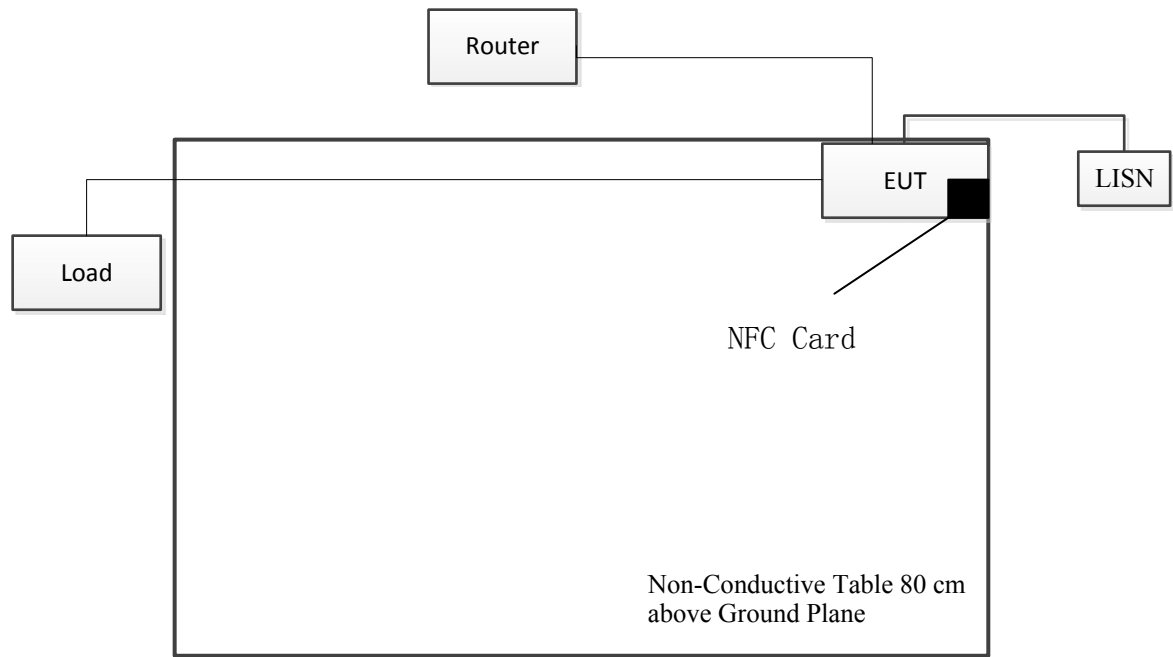
Manufacturer	Description	Model	Serial Number
GuangLuDa	Load	GROADA-AC380V-32A-R	GROADA-FZX24051701
D-Link	Router	DGS-1100-08PD	S01Z1H000012
Unknown	NFC Card	Unknown	Unknown

3.4 Support Cable List and Details

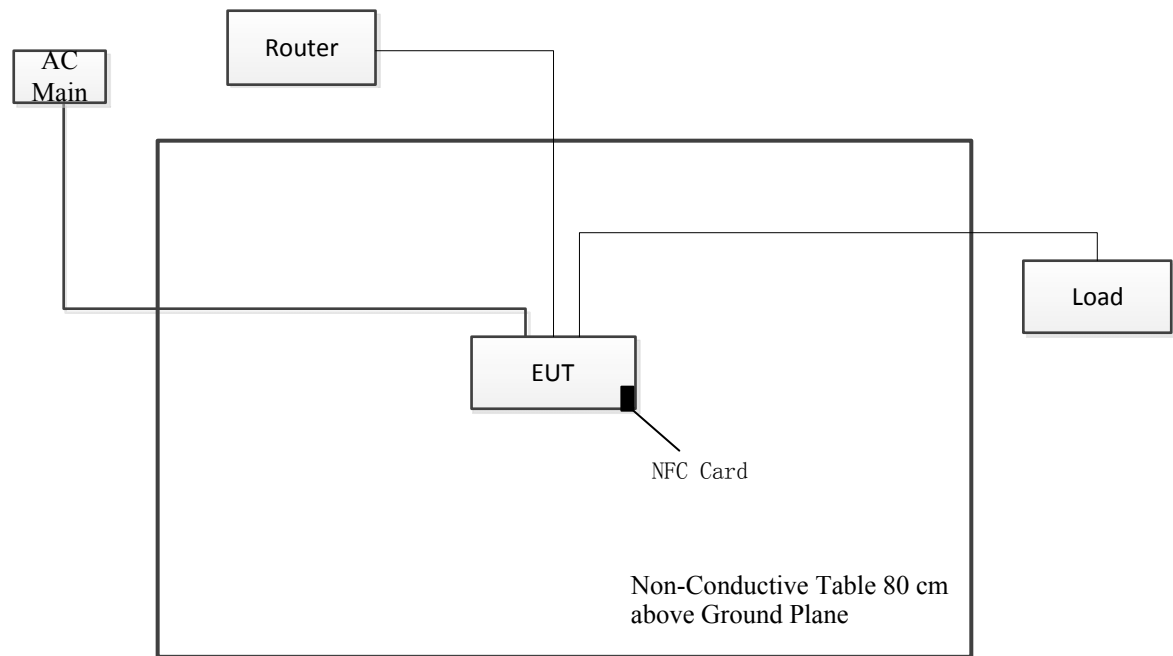
Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
RJ 45 cable	No	No	10	Router	EUT
charging gun cable	Yes	No	5	Load	EUT

3.5 Block Diagram of Test Setup

AC line conducted emissions:



Spurious Emissions:



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	±0.55 dB
Power Spectral Density, conducted	±0.55 dB
Unwanted Emissions, radiated	9kHz~30MHz: 3.06dB, 30MHz~1GHz: 6.13 dB, 1GHz~6GHz: 4.79 dB, 6GHz~18GHz: 4.63 dB, 18GHz~26.5GHz: 4.79 dB, 26.5GHz~40GHz: 4.63 dB
Unwanted Emissions, conducted	±2.47 dB
Temperature	±1 °C
Humidity	±5%
DC and low frequency voltages	±0.4%
Duty Cycle	1%
AC Power Lines Conducted Emission	2.83 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 μ H/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.

Frequency of emission (MHz)	Conducted limit (dB μ V)	
	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 μ V within the frequency band 535-1705 kHz, as measured using a 50 μ H/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, obtaining 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 μ H / 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 (dB μ V)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56 ¹	56 to 46 ¹
0.5 – 5	56	46
5 – 30	60	50

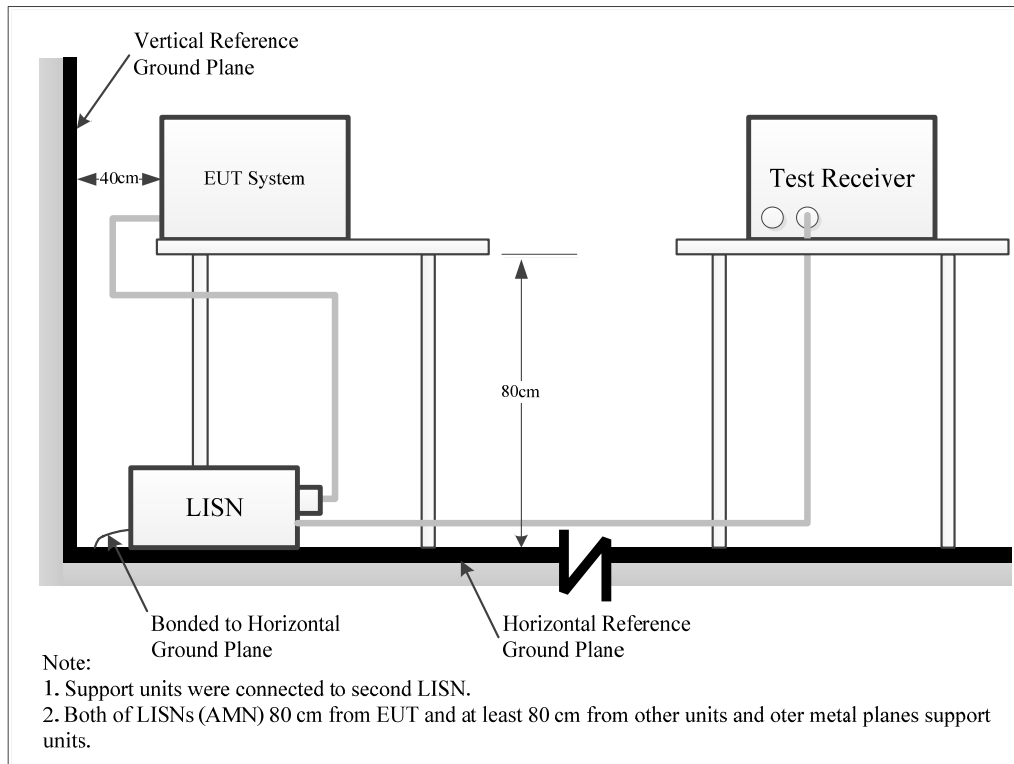
Note 1: The level decreases linearly with the logarithm of the frequency.

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



The setup of EUT is according with per ANSI C63.10-2020 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 a 240 V/60 Hz 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 + 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:	3GXT-1	Test Date:	2026/04/24
Test Site:	CE	Test Mode:	Transmitting
Tester:	Yolo Fan	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25	Relative Humidity: (%)	55	ATM Pressure: (kPa)	100.7
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
SCHWARZBECK	LISN	NNLK 8130	8130-00446	2025/6/25	2026/6/24
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-03	2025/7/7	2026/7/6
Unknown	Coaxial Cable	C-NJNJ-50	C-0075-03	2025/7/7	2026/7/6
JFW	Coaxial Attenuator	50FH-006-100	F-08-EM007	2025/7/7	2026/7/6
R&S	EMI Test Receiver	ESCI	100224	2025/6/25	2026/6/24
GROADA	AC Charging Pile Test Load	GROADA-AC380V-32A-R	GROADA-FZX24051701	N/A	N/A
Audix	Test Software	E3	191218 V9	N/A	N/A

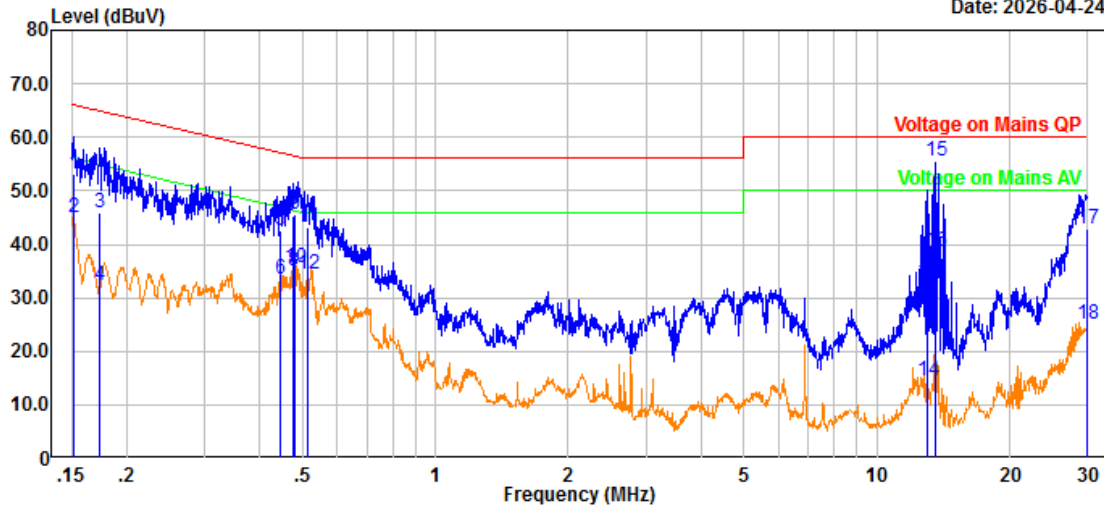
** Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Note: The test used AC 240V/60Hz voltage.

Project No.: 2602P24665E-RF
Port: line1
Test Mode: Transmitting
IF B/W 9kHz PK/AV

Serial No.: 3GXT-1
Tester: Yolo Fan
Note: NFC

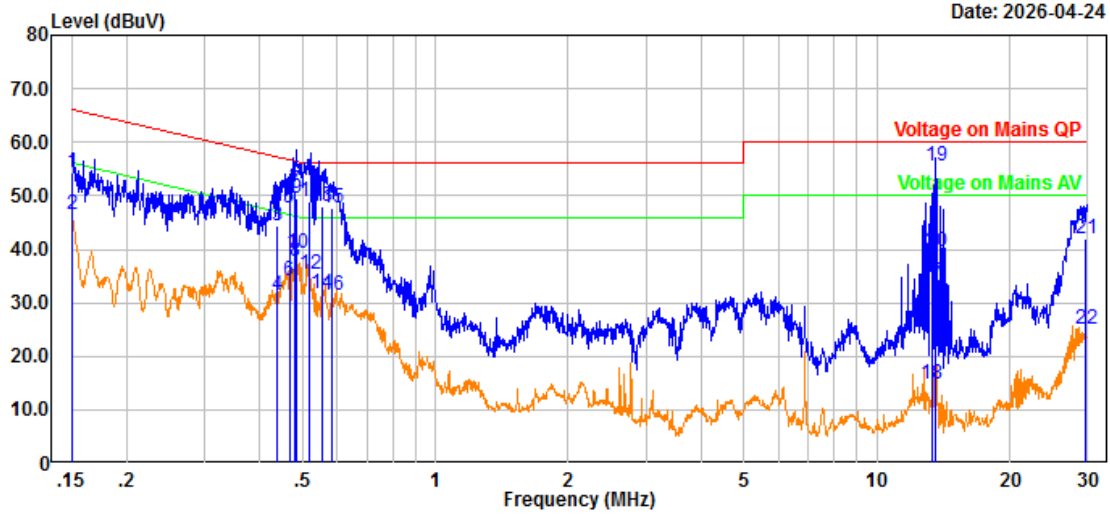
Date: 2026-04-24



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)	Measurement
1	0.152	47.15	6.00	53.15	65.89	12.74	QP
2	0.152	38.94	6.00	44.94	55.89	10.95	Average
3	0.173	39.67	6.08	45.75	64.81	19.06	QP
4	0.173	26.14	6.08	32.22	54.81	22.59	Average
5	0.447	36.52	6.10	42.62	56.93	14.31	QP
6	0.447	27.45	6.10	33.55	46.93	13.38	Average
7	0.477	39.14	6.09	45.23	56.39	11.16	QP
8	0.477	28.91	6.09	35.00	46.39	11.39	Average
9	0.479	39.43	6.09	45.52	56.35	10.83	QP
10	0.479	29.51	6.09	35.60	46.35	10.75	Average
11	0.515	37.04	6.09	43.13	56.00	12.87	QP
12	0.515	28.39	6.09	34.48	46.00	11.52	Average
13	12.996	26.54	6.37	32.91	60.00	27.09	QP
14	12.996	8.06	6.37	14.43	50.00	35.57	Average
15	13.562	49.30	6.38	55.68	60.00	4.32	QP
16	13.562	32.31	6.38	38.69	50.00	11.31	Average
17	29.956	36.18	6.59	42.77	60.00	17.23	QP
18	29.956	18.50	6.59	25.09	50.00	24.91	Average

Project No.: 2602P24665E-RF
Port: line2
Test Mode: Transmitting
IF B/W 9kHz PK/AV

Serial No.: 3GXT-1
Tester: Yolo Fan
Note: NFC



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)	Measurement
1	0.151	48.28	6.09	54.37	65.97	11.60	QP
2	0.151	40.54	6.09	46.63	55.97	9.34	Average
3	0.439	38.29	6.06	44.35	57.08	12.73	QP
4	0.439	25.29	6.06	31.35	47.08	15.73	Average
5	0.467	41.62	6.02	47.64	56.57	8.93	QP
6	0.467	27.95	6.02	33.97	46.57	12.60	Average
7	0.482	45.05	6.01	51.06	56.30	5.24	QP
8	0.482	31.79	6.01	37.80	46.30	8.50	Average
9	0.484	43.44	6.01	49.45	56.27	6.82	QP
10	0.484	33.32	6.01	39.33	46.27	6.94	Average
11	0.517	43.04	6.01	49.05	56.00	6.95	QP
12	0.517	29.46	6.01	35.47	46.00	10.53	Average
13	0.552	42.07	6.05	48.12	56.00	7.88	QP
14	0.552	25.64	6.05	31.69	46.00	14.31	Average
15	0.583	41.56	6.08	47.64	56.00	8.36	QP
16	0.583	25.32	6.08	31.40	46.00	14.60	Average
17	13.279	27.36	6.38	33.74	60.00	26.26	QP
18	13.279	8.28	6.38	14.66	50.00	35.34	Average
19	13.562	49.11	6.38	55.49	60.00	4.51	QP
20	13.562	33.08	6.38	39.46	50.00	10.54	Average
21	29.601	35.40	6.49	41.89	60.00	18.11	QP
22	29.601	18.66	6.49	25.15	50.00	24.85	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.

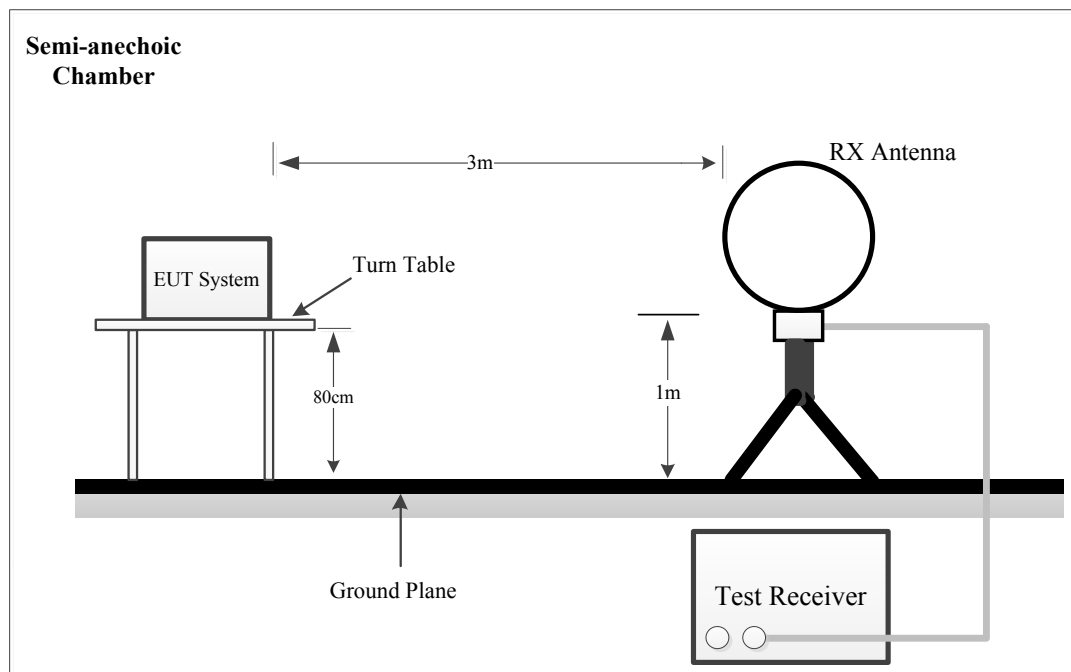
RSS-210 B.6(a)

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

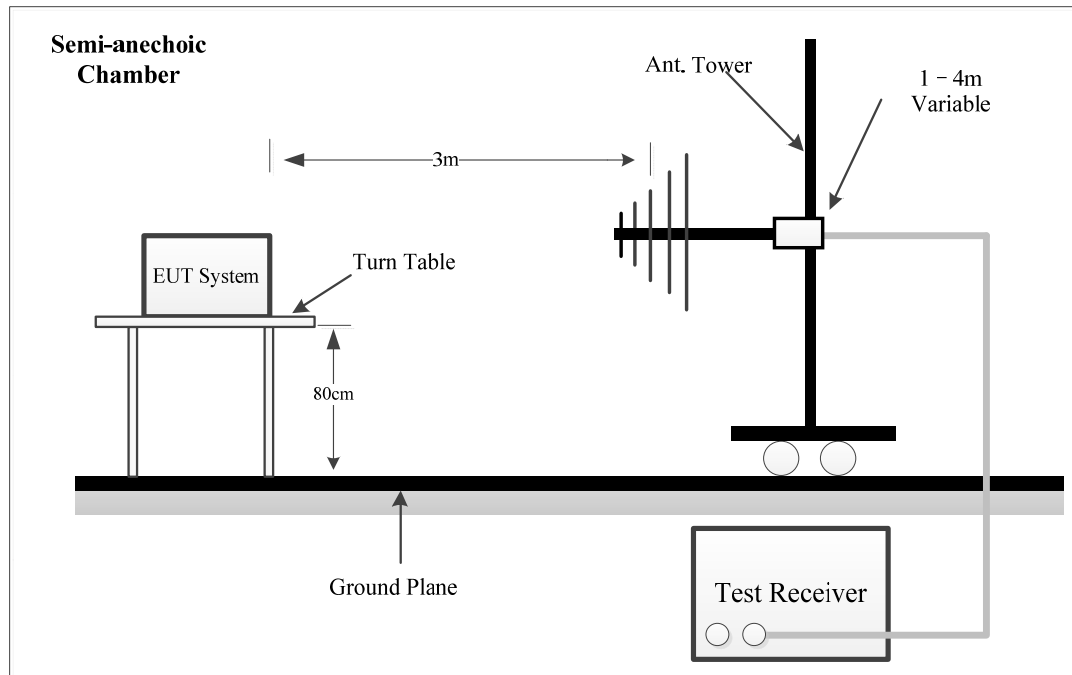
- (i) 15.848 mV/m (84 dB μ V/m) at 30 m, within the band 13.553-13.567 MHz
- (ii) 334 μ V/m (50.5 dB μ V/m) at 30 m, within the bands 13.410-13.553 MHz and 13.567-13.710 MHz
- (iii) 106 μ V/m (40.5 dB μ V/m) at 30 m, within the bands 13.110-13.410 MHz and 13.710-14.010 MHz
- (iv) RSS-Gen general field 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 C63.10-2020.

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	Measurement	RBW	Video B/W	IF B/W	Detector
9 kHz-150 kHz	QP/AV	200 Hz	1 kHz	200 Hz	QP/AV
150 kHz-30 MHz	QP/AV	9 kHz	30 kHz	9 kHz	QP/AV
30 MHz-1000 MHz	Peak	120 kHz	500 kHz	/	PK
	QP	/	/	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.

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.

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

For the spurious emission below 30MHz, the limit was convert from dBμA/m to dBμV/m by adding 51.5 dB.

4.2.6 Test Data

Serial Number:	3GXT-1	Test Date:	2026/4/24
Test Site:	Chamber 10m	Test Mode:	Transmitting
Tester:	Mikey Lin	Test Result:	Pass

Environmental Conditions:					
Temperature: (°C)	23.8	Relative Humidity: (%)	40	ATM Pressure: (kPa)	100.7

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	4269	2023/9/6	2026/9/5
Unknown	Coaxial Cable	C-NJNJ-50	C-1000-01	2025/7/1	2026/6/30
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-04	2025/7/1	2026/6/30
Unknown	Coaxial Cable	C-NJNJ-50	C-0530-01	2025/7/1	2026/6/30
Sonoma	Amplifier	310N	185914	2025/8/25	2026/8/24
R&S	EMI Test Receiver	ESR3	102453	2025/6/25	2026/6/24
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).

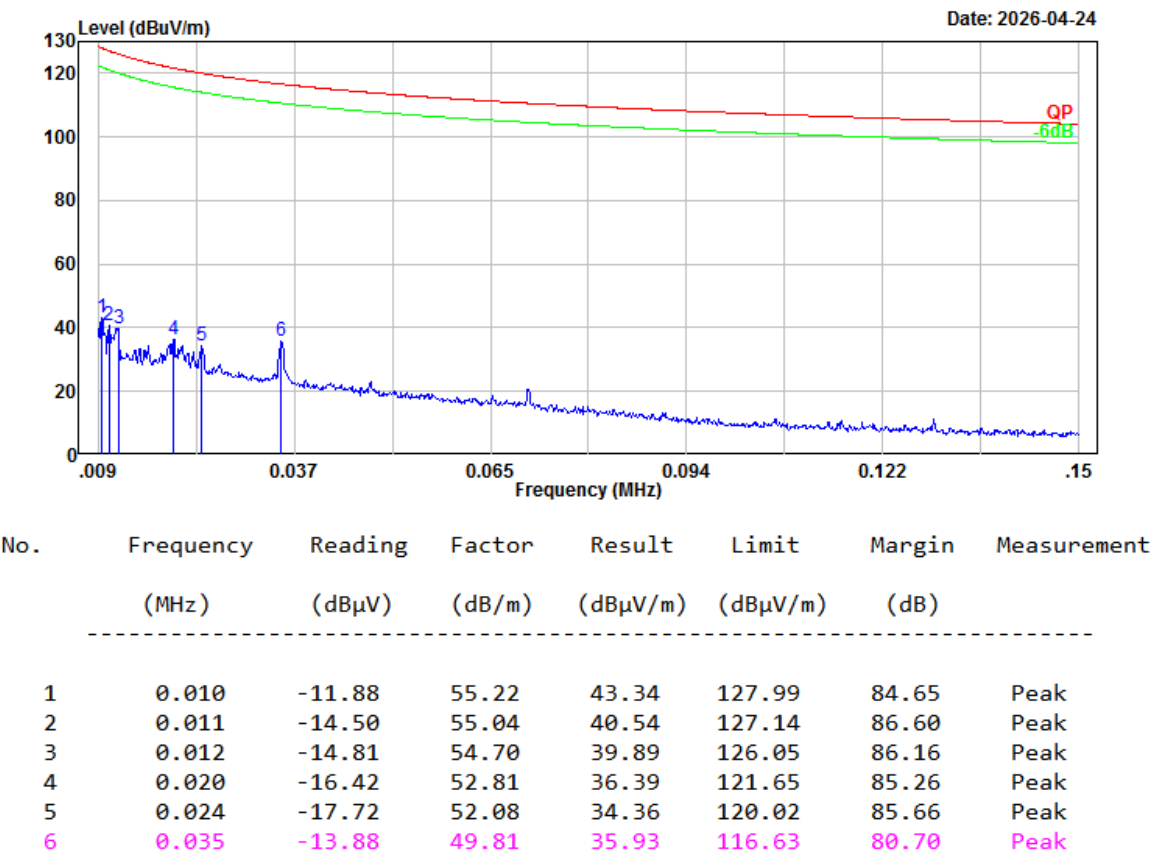
Test Data:

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

1) 9kHz~30MHz
Parallel

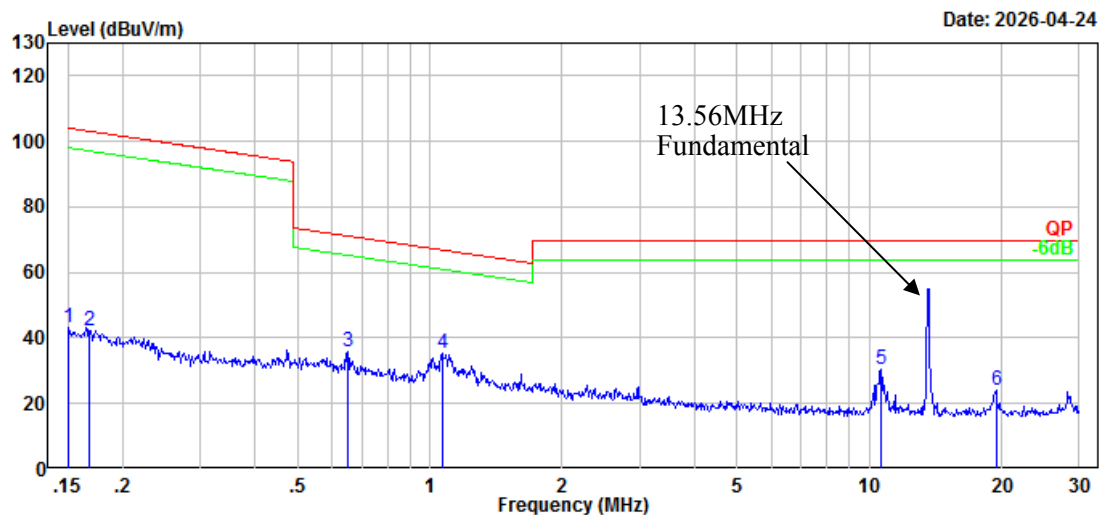
Project No.: 2602P24665E-RF
Polarization: Parallel
Test Mode: NFC Transmitting
Note:
: RBW:200Hz VBW:1kHz

Serial No.: 3GXT-1
Tester: Mikey Lin



Project No.: 2602P24665E-RF
Polarization: Parallel
Test Mode: NFC Transmitting
Note:
: RBW:9kHz VBW:30kHz

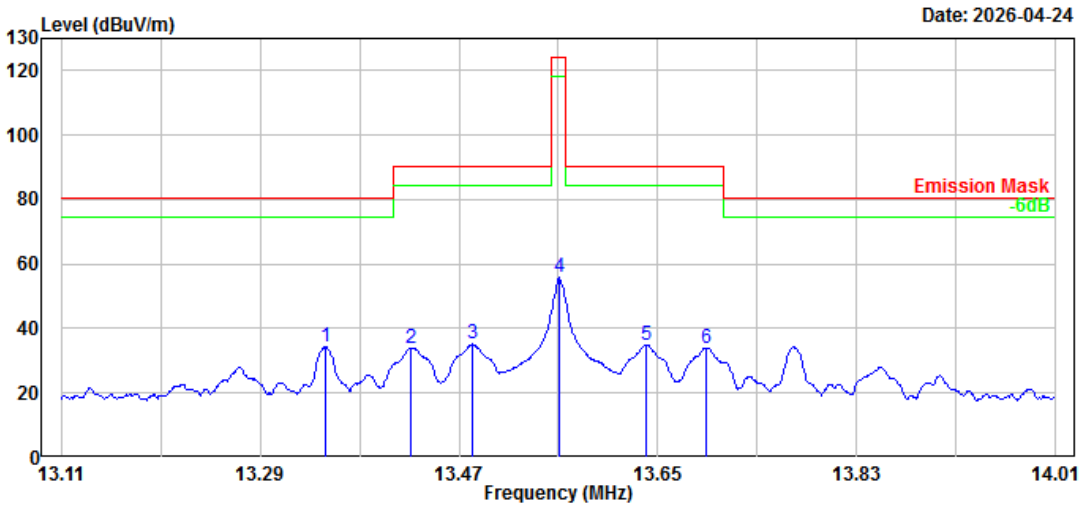
Serial No.: 3GXT-1
Tester: Mikey Lin



No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Result (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Measurement
1	0.151	7.96	35.45	43.41	104.04	60.63	Peak
2	0.169	7.94	34.42	42.36	103.07	60.71	Peak
3	0.651	11.57	24.03	35.60	71.28	35.68	Peak
4	1.065	16.89	18.20	35.09	66.91	31.82	Peak
5	10.620	23.70	6.90	30.60	69.54	38.94	Peak
6	19.428	17.54	6.37	23.91	69.54	45.63	Peak

Project No.: 2602P24665E-RF
Polarization: Parallel
Test Mode: NFC Transmitting
Note:
: RBW:9kHz VBW:30kHz

Serial No.: 3GXT-1
Tester: Mikey Lin



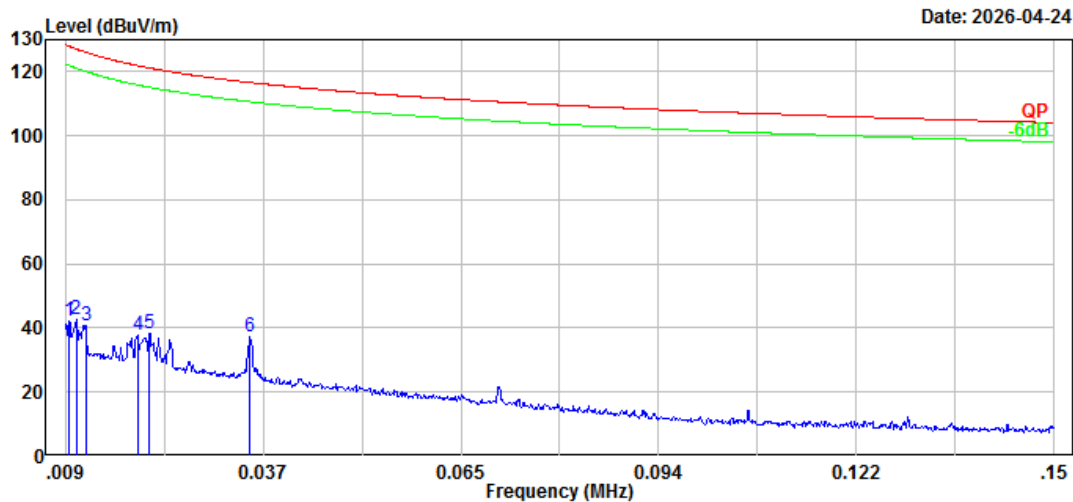
No.	Frequency	Reading	Factor	Result	Limit	Margin	Measurement
	(MHz)	(dBμV)	(dB/m)	(dBμV/m)	(dBμV/m)	(dB)	

1	13.349	27.39	6.78	34.17	80.51	46.34	Peak
2	13.427	27.24	6.76	34.00	90.47	56.47	Peak
3	13.482	28.40	6.76	35.16	90.47	55.31	Peak
4	13.561	49.39	6.75	56.14	124.00	67.86	Peak
5	13.639	28.26	6.74	35.00	90.47	55.47	Peak
6	13.693	27.21	6.73	33.94	90.47	56.53	Peak

Perpendicular

Project No.: 2602P24665E-RF
Polarization: Perpendicular
Test Mode: NFC Transmitting
Note:
: RBW:200Hz VBW:1kHz

Serial No.: 3GXT-1
Tester: Mikey Lin

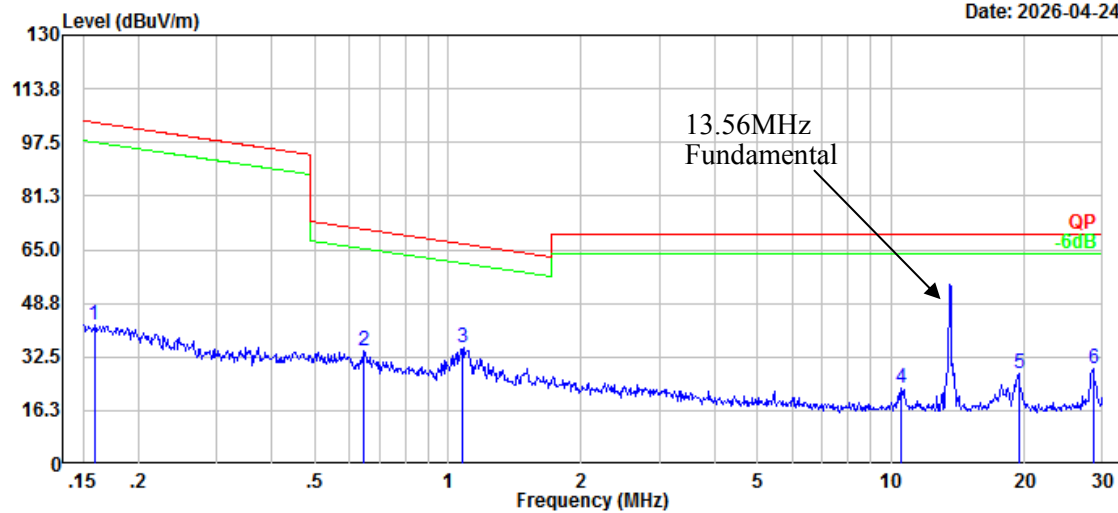


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Measurement
1	0.010	-13.28	55.22	41.94	127.99	86.05	Peak
2	0.011	-12.25	55.04	42.79	127.14	84.35	Peak
3	0.012	-14.02	54.70	40.68	126.05	85.37	Peak
4	0.019	-15.10	52.95	37.85	121.90	84.05	Peak
5	0.021	-14.48	52.60	38.12	121.17	83.05	Peak
6	0.035	-12.44	49.81	37.37	116.63	79.26	Peak

Project No.: 2602P24665E-RF
Polarization: Perpendicular
Test Mode: NFC Transmitting
Note:
: RBW:9kHz VBW:30kHz

Serial No.: 3GXT-1
Tester: Mikey Lin

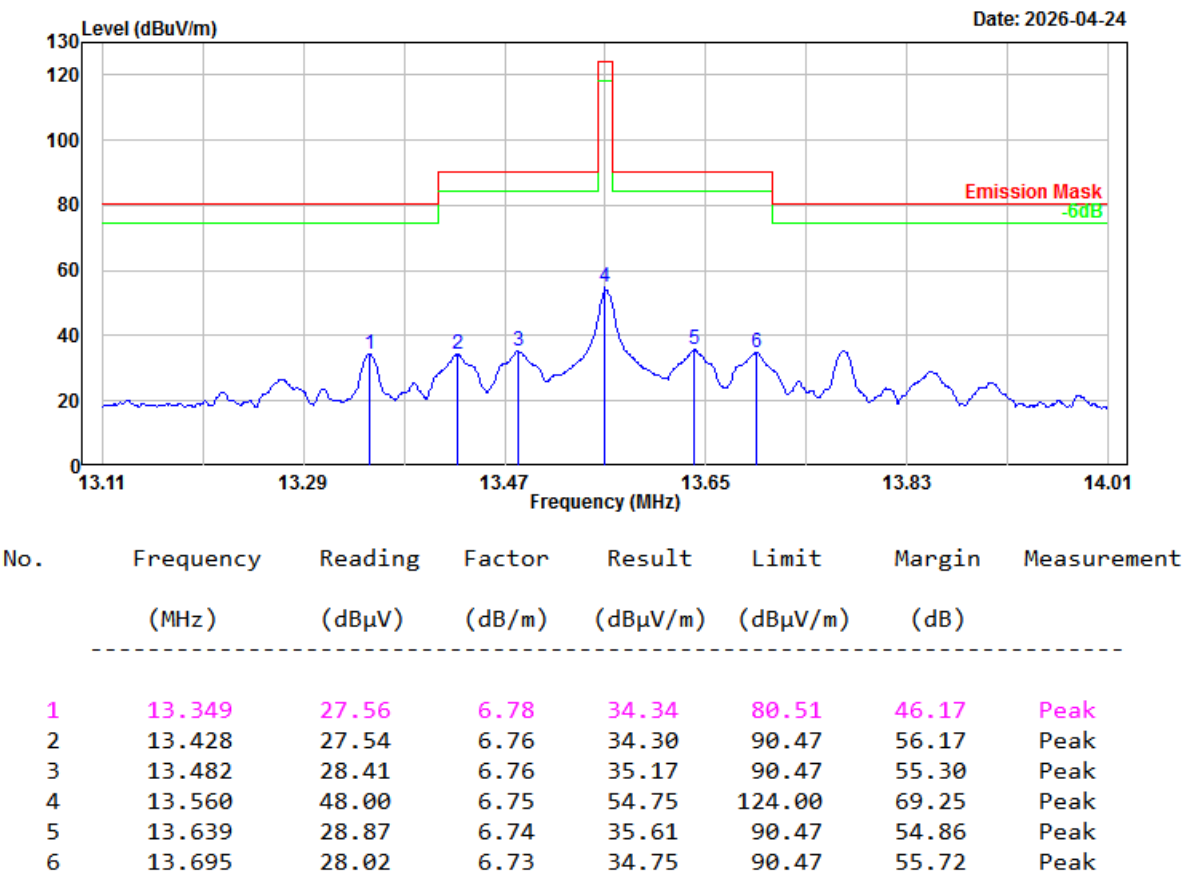
Date: 2026-04-24



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Measurement
1	0.16	7.31	34.98	42.29	103.58	61.29	Peak
2	0.64	10.30	24.10	34.40	71.38	36.98	Peak
3	1.08	17.23	18.12	35.35	66.77	31.42	Peak
4	10.51	16.14	6.89	23.03	69.54	46.51	Peak
5	19.43	21.09	6.37	27.46	69.54	42.08	Peak
6	28.60	22.50	6.31	28.81	69.54	40.73	Peak

Project No.: 2602P24665E-RF
Polarization: Perpendicular
Test Mode: NFC Transmitting
Note:
: RBW:9kHz VBW:30kHz

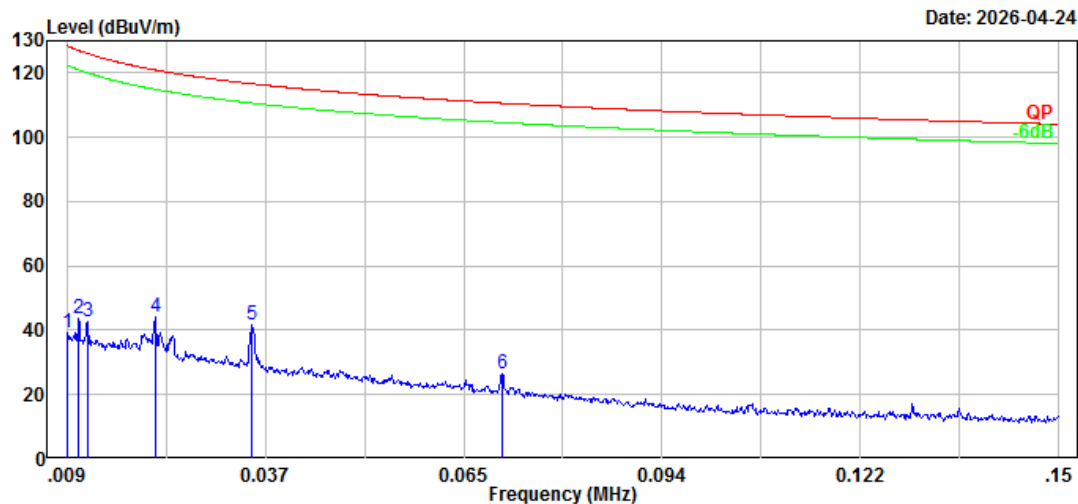
Serial No.: 3GXT-1
Tester: Mikey Lin



Ground-parallel

Project No.: 2602P24665E-RF
Polarization: Ground-parallel
Test Mode: NFC Transmitting
Note:
: RBW:200Hz VBW:1kHz

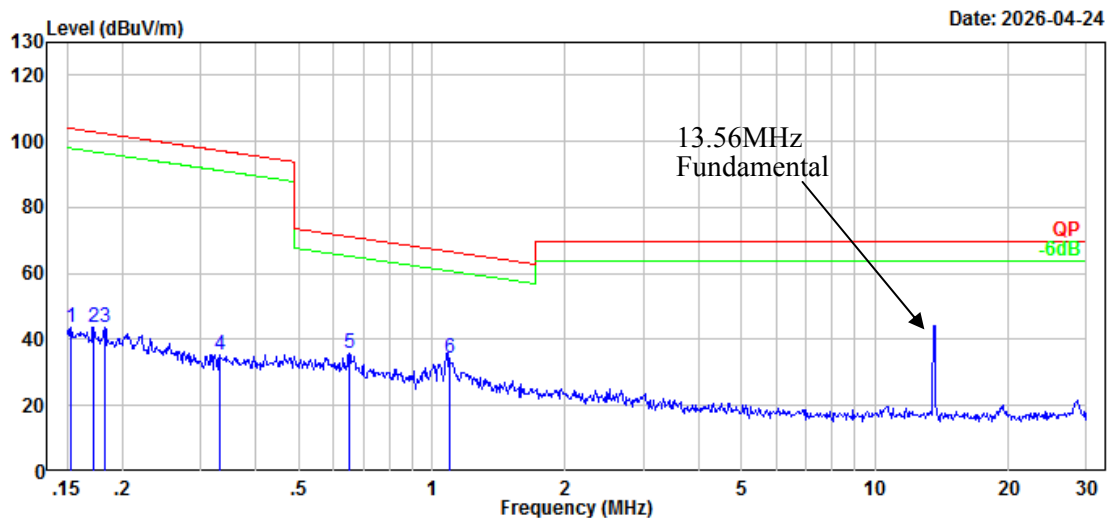
Serial No.: 3GXT-1
Tester: Mikey Lin



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Measurement
1	0.009	-15.95	55.27	39.32	128.52	89.20	Peak
2	0.011	-11.34	55.00	43.66	127.02	83.36	Peak
3	0.012	-11.86	54.70	42.84	126.05	83.21	Peak
4	0.022	-8.55	52.50	43.95	120.94	76.99	Peak
5	0.035	-8.00	49.81	41.81	116.63	74.82	Peak
6	0.071	-17.09	43.49	26.40	110.59	84.19	Peak

Project No.: 2602P24665E-RF
Polarization: Ground-parallel
Test Mode: NFC Transmitting
Note:
: RBW:9kHz VBW:30kHz

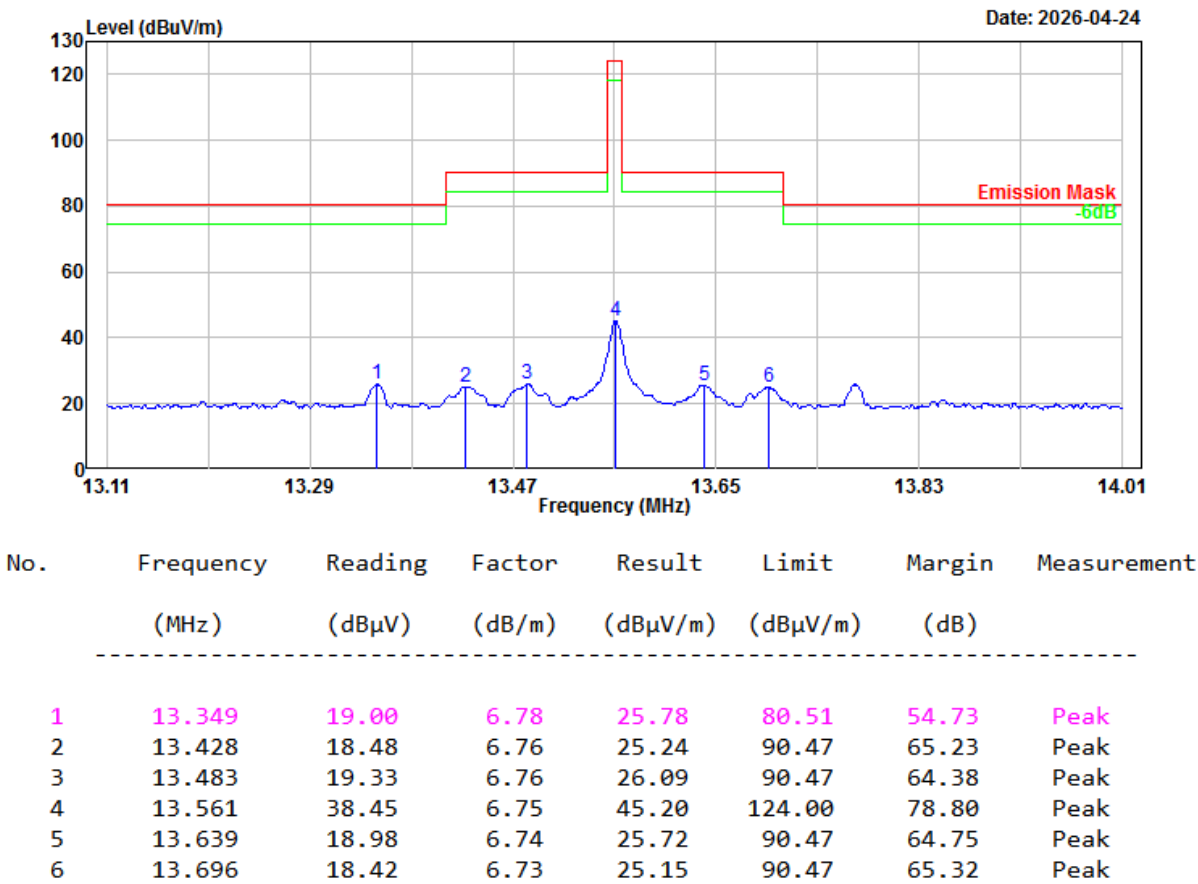
Serial No.: 3GXT-1
Tester: Mikey Lin



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Measurement
1	0.153	8.12	35.32	43.44	103.90	60.46	Peak
2	0.172	9.45	34.21	43.66	102.89	59.23	Peak
3	0.182	9.82	33.61	43.43	102.38	58.95	Peak
4	0.332	8.88	26.56	35.44	97.18	61.74	Peak
5	0.651	11.56	24.03	35.59	71.28	35.69	Peak
6	1.094	16.33	18.07	34.40	66.68	32.28	Peak

Project No.: 2602P24665E-RF
Polarization: Ground-parallel
Test Mode: NFC Transmitting
Note:
: RBW:9kHz VBW:30kHz

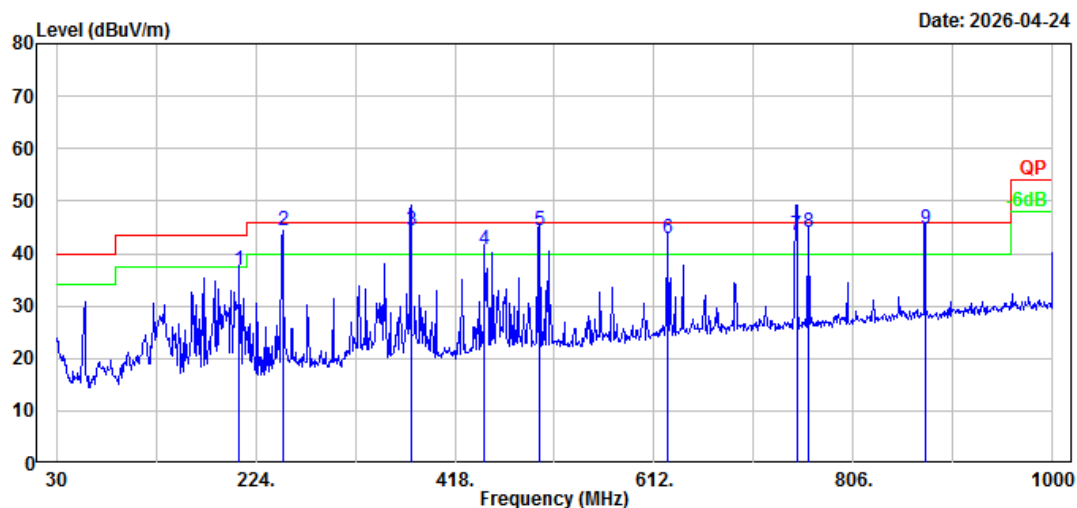
Serial No.: 3GXT-1
Tester: Mikey Lin



2) 30MHz-1GHz

Project No.: 2602P24665E-RF
Polarization: Horizontal
Test Mode: NFC Transmitting
Note:
: RBW:120kHz VBW:500kHz

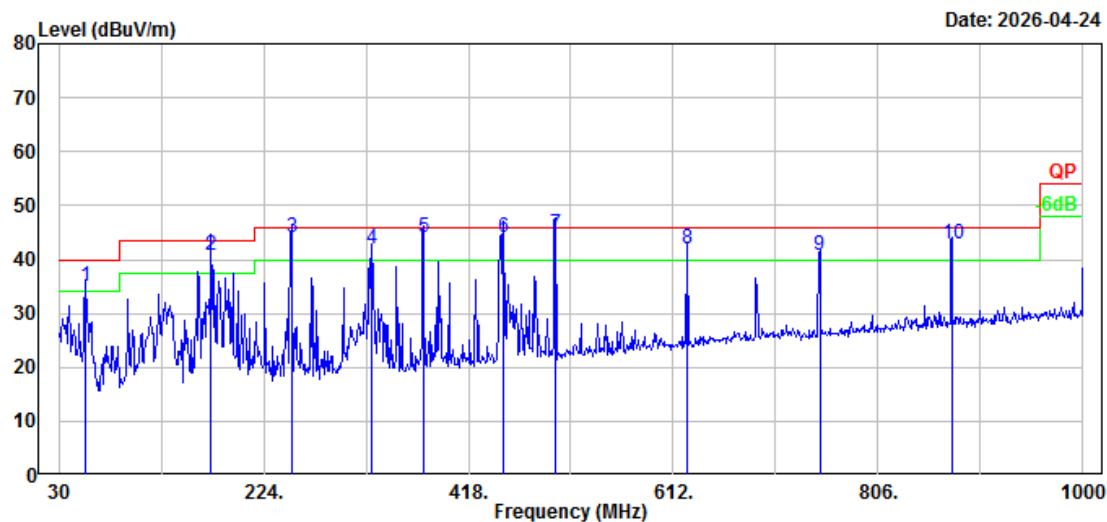
Serial No.: 3GXT-1
Tester: Mikey Lin



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Measurement
1	208.48	47.39	-10.70	36.69	43.50	6.81	QP
2	250.19	55.38	-11.03	44.35	46.00	1.65	QP
3	375.32	51.61	-7.34	44.27	46.00	1.73	QP
4	447.10	46.17	-5.38	40.79	46.00	5.21	QP
5	500.45	48.59	-4.22	44.37	46.00	1.63	QP
6	625.58	45.11	-2.28	42.83	46.00	3.17	QP
7	750.71	43.50	-0.08	43.42	46.00	2.58	QP
8	762.35	44.09	0.13	44.22	46.00	1.78	QP
9	875.84	42.41	2.32	44.73	46.00	1.27	QP

Project No.: 2602P24665E-RF
Polarization: Vertical
Test Mode: NFC Transmitting
Note:
: RBW:120kHz VBW:500kHz

Serial No.: 3GXT-1
Tester: Mikey Lin



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Measurement
1	55.22	49.69	-14.61	35.08	40.00	4.92	QP
2	174.53	51.91	-11.09	40.82	43.50	2.68	QP
3	250.19	55.12	-11.03	44.09	46.00	1.91	QP
4	326.82	50.45	-8.53	41.92	46.00	4.08	QP
5	375.32	51.46	-7.34	44.12	46.00	1.88	QP
6	450.98	49.37	-5.27	44.10	46.00	1.90	QP
7	500.45	49.05	-4.22	44.83	46.00	1.17	QP
8	625.58	44.21	-2.28	41.93	46.00	4.07	QP
9	750.71	40.77	-0.08	40.69	46.00	5.31	QP
10	875.84	40.69	2.32	43.01	46.00	2.99	QP

4.3 20 dB Emission Bandwidth and 99% Occupied 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.

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.

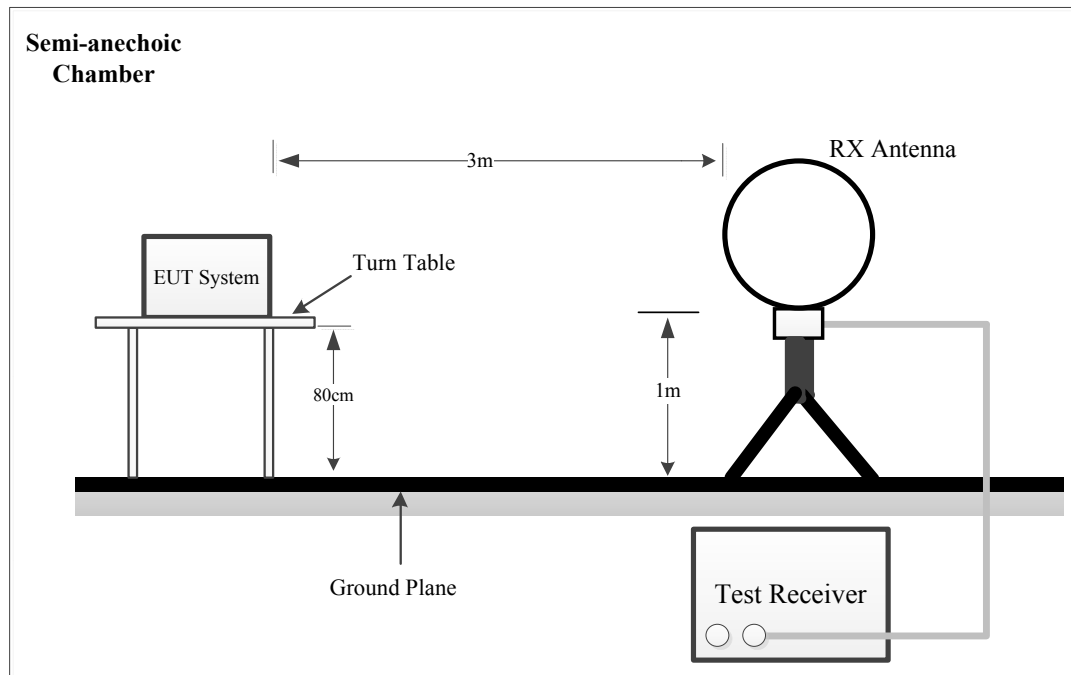
The detector of the spectrum analyzer shall be set to “Sample”. However, a peak, or peak hold, may be used in place of the sampling detector since this usually produces a wider bandwidth than the actual bandwidth (worst-case measurement). Use of a peak hold (or “Max Hold”) may be necessary to determine 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).

4.3.2 EUT Setup



4.3.3 Test Procedure

According to ANSI C63.10-2020 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 $[10 \log (\text{OBW}/\text{RBW})]$ 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 $[(\text{reference value}) - \text{xx}]$. 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).
- 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).

According to ANSI C63.10-2020 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 $[10 \log (\text{OBW/RBW})]$ 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).

4.3.4 Test Data

Serial Number:	3GXT-1	Test Date:	2026/5/20
Test Site:	Chamber 10m	Test Mode:	Transmitting
Tester:	Mikey Lin	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	23	Relative Humidity: (%)	47	ATM Pressure: (kPa)	100.1
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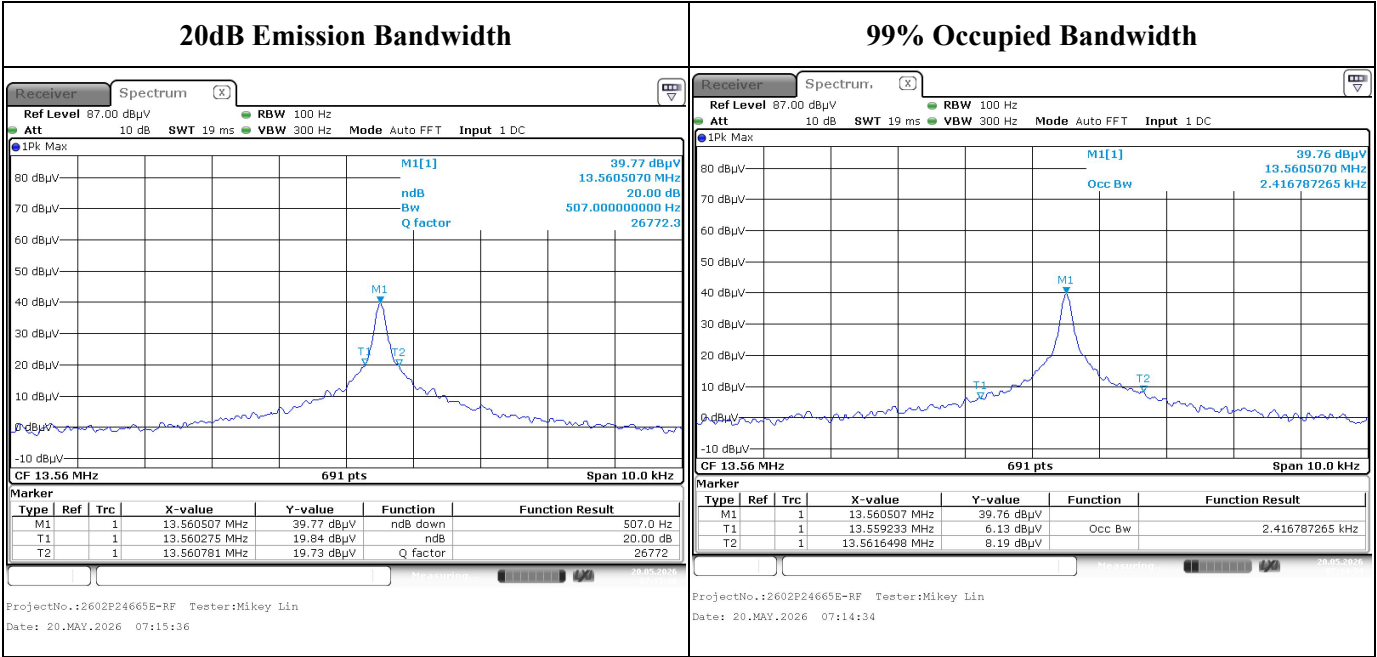
Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
EMCO	Passive Loop Antenna	6512	9706-1206	2023/10/25	2026/10/24
Unknown	Coaxial Cable	C-NJNJ-50	C-1000-01	2025/7/1	2026/6/30
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-04	2025/7/1	2026/6/30
Unknown	Coaxial Cable	C-NJNJ-50	C-0530-01	2025/7/1	2026/6/30
Sonoma	Amplifier	310N	185914	2025/8/25	2026/8/24
R&S	EMI Test Receiver	ESR3	102453	2025/6/25	2026/6/24

* 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)	99% Occupied Bandwidth (kHz)
13.56	0.507	2.417



4.4 Frequency Stability

4.4.1 Applicable Standard

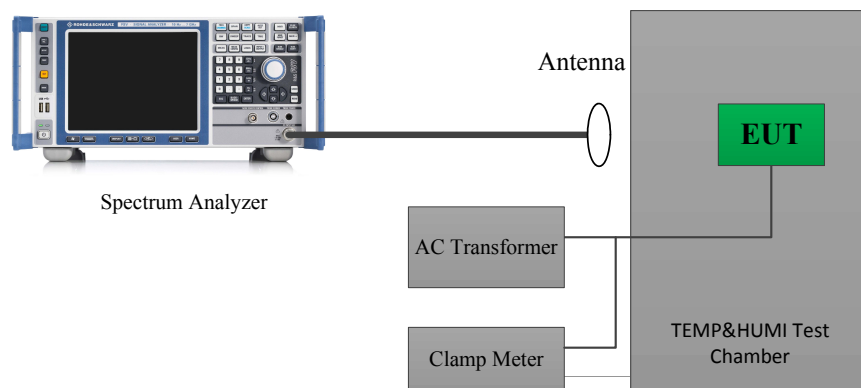
FCC Part 15.225:

The frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ 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

4.4.2 EUT Setup



4.4.3 Test Procedure

According to ANSI C63.10-2020 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 than 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.

4.4.4 Test Result

Serial Number:	3GXT-1	Test Date:	2026/5/20
Test Site:	RF Room	Test Mode:	Transmitting
Tester:	Mikey Lin	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	23	Relative Humidity: (%)	47	ATM Pressure: (kPa)	100.1
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Unknown	Coaxial Cable	C-NJNJ-50	C-1000-01	2025/7/1	2026/6/30
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-04	2025/7/1	2026/6/30
Unknown	Coaxial Cable	C-NJNJ-50	C-0530-01	2025/7/1	2026/6/30
Sonoma	Amplifier	310N	185914	2025/8/25	2026/8/24
R&S	EMI Test Receiver	ESR3	102453	2025/6/25	2026/6/24
GLOBAL	TEMP&HUMI Test Chamber	BTH-150-40	30173	2025/8/1	2026/7/31
All-sun	Clamp Meter	EM305A	8348897	2025/8/18	2026/8/17
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:

$f_0 = 13.56 \text{ MHz}$				
Temperature	Voltage	Measured frequency	Frequency Error	Limit
°C	V _{AC}	MHz	Hz	Hz
-20	240	13.5605094	509.4	±1356
-10		13.5605019	501.9	±1356
0		13.5605028	502.8	±1356
10		13.5605046	504.6	±1356
20		13.560507	507	±1356
30		13.5605099	509.9	±1356
40		13.5605027	502.7	±1356
50		13.5605016	501.6	±1356
20	204	13.5605093	509.3	±1356
20	264	13.5605074	507.4	±1356

Note: the voltage range was declared by manufacturer▲.

4.5 Antenna Requirement

4.5.1 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.

4.5.2 Judgment

Please refer to the Antenna Information detail in Section 1.3.

EXHIBIT A - EUT PHOTOGRAPHS

Please refer to the attachment 2602P24665E-RF-EXP EUT external photographs and 2602P24665E-RF-INP EUT internal photographs.

EXHIBIT B - TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2602P24665E-RF-00A-TSP test setup photographs.

EXHIBIT C - RF EXPOSURE EVALUATION

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) (§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/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.

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

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

Calculated Data:

Operation Mode	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)			
BT	2402-2480	2.7	1.86	8.0	6.31	20.00	0.002	1.0
BLE	2402-2480	2.7	1.86	5.0	3.16	20.00	0.001	1.0
2.4G Wifi	2412-2462	2.7	1.86	24.5	281.84	20.00	0.104	1.0
NFC	13.56	/	/	-39.06	0.0001	20.00	<<0.001	0.98

Note:
 1.NFC field strength is 56.14dBμV/m @ 3m = -39.06 dBm(0.0001mW) EIRP. That equal to antenna gain is 0dBi and used the EIRP value as conducted power.
 2. The device built in a certified Bluetooth&Wifi module, FCC ID: 2AC7Z-ESPWROOM32UE, certified on 2022/01/25.

Note:

The Antenna Gain and Conducted output power including Tune-up Tolerance provided by manufacturer.

BT/BLE/2.4G Wifi can't transmit simultaneously, but BT, BLE or 2.4G Wifi can transmit simultaneously with NFC:

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

$$= S_{2.4G\ Wifi} / S_{limit-2.4G\ Wifi} + S_{NFC} / S_{limit- NFC}$$

$$= 0.104/1.0 + 0.001/0.98$$

$$= 0.105$$

$$< 1$$

Result: Compliant. The devices meet FCC MPE at 20 cm distance

Exemption Limits For Routine Evaluation-RF Exposure Evaluation

Applicable Standard

RSS-102, Issue 6, Clause 6.6:

Field reference level (FRL) exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm (i.e. mobile devices), except when the device operates as follows:

- below 20 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 1 W (adjusted for tune-up tolerance);
- at or above 20 MHz and below 48 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $4.49/f^{0.5}$ W (adjusted for tune-up tolerance), where f is in MHz;
- at or above 48 MHz and below 300 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 0.6 W (adjusted for tune-up tolerance);
- at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $1.31 \times 10^{-2} f^{0.6834}$ W (adjusted for tune-up tolerance), where f is in MHz;
- at or above 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 5 W (adjusted for tune-up tolerance).

In these cases, the information contained in the RF exposure technical brief may be limited to information that demonstrates how the e.i.r.p. was derived.

Calculated Data:

Mode	Frequency (MHz)	Antenna Gain [▲]	Conducted output power including Tune- up Tolerance [▲]	EIRP		Exemption limits (mW)
		(dBi)	(dBm)	(dBm)	(mW)	
BT	2402-2480	2.7	8.0	10.7	11.75	2676
BLE	2402-2480	2.7	5.0	7.7	5.89	2676
2.4G Wifi	2412-2462	2.7	24.5	27.2	524.81	2684
NFC	13.56	/	-39.06	-39.06	0.0001	1000
Note: 1.NFC field strength is 56.14dBμV/m @ 3m = -39.06 dBm(0.0001mW) EIRP. That equal to antenna gain is 0dBi and used the EIRP value as conducted power. 2. The device built in a certified Bluetooth&Wifi module, IC: 21098-ESPWROOMUE, certified on 2022/01/27.						

Note:

The Antenna Gain and Conducted output power including Tune-up Tolerance provided by manufacturer.

For Simultaneous transmission:

BT/BLE/2.4G Wifi can't transmit simultaneously, but BT, BLE or 2.4G Wifi can transmit simultaneously with NFC:

$$= \text{EIRP}_{2.4G \text{ Wifi}} / \text{EIRP}_{\text{limit-2.4G Wifi}} + \text{EIRP}_{\text{NFC}} / \text{EIRP}_{\text{limit-NFC}}$$

$$= 524.81/2684 + 0.0001/1000$$

$$= 0.196$$

$$< 1.0$$

Result: So the device is compliance with the exemption from Routine Evaluation Limits –RF exposure Evaluation.

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