

Shenzhen EVI New Energy Technology Co., Ltd.

RF TEST REPORT

REPORT TYPE:

FCC Part 15.225 RF Report

MODEL:

Please see details in page 6 of this report

REPORT NUMBER:

2406B1399SHA-001

ISSUE DATE:

December 4, 2024

DOCUMENT CONTROL NUMBER:

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Applicant: Shenzhen EVI New Energy Technology Co., Ltd.
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Manufacturer: Shenzhen EVI New Energy Technology Co., Ltd.
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Factory: Shenzhen Juxinyu Technology Co., Ltd.
9th Floor, Senhainuo Technology Innovation Building, No.1 Dezheng Road, Shilong Community, ShiyanStreet, Bao'an District, Shenzhen 518108, CHINA, 5031631

FCC ID: 2BMC7-EVDC1-30K-CUS

SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:

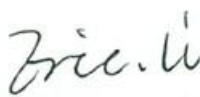
47CFR Part 15 (2023): Radio Frequency Devices (Subpart C)

ANSI C63.10 (2020): American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

PREPARED BY:

REVIEWED BY:

Project Engineer
Scout Gong


Reviewer
Eric Li

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TEST REPORT

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Revision History

Report No.	Version	Description	Issued Date
2406B1399SHA-001	Rev. 01	Initial issue of report	December 4, 2024

Measurement Result Summary

TEST ITEM	FCC REFERENCE	RESULT
Fundamental emission	15.225(a) (b) (c)	Pass
Spurious emission	15.225(d)	Pass
Frequency stability	15.225(e)	Pass
Conducted emissions	15.207	Pass
99% and 20dB Bandwidth	15.215(c)	Pass
Antenna requirement	15.203	Pass

Notes:

1. NA =Not Applicable
2. The determination of the test conclusion is based on IEC Guide 115 in consideration of measurement uncertainty.
3. Additions, Deviations and Exclusions from Standards: None.

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	DC Charging Station																																																																																																																																					
Type/Model:	EVDC1-30K-C-US-01, EVDC1-30K-C-US-02, EVDC1-30K-C-US-03 EVDC1-30K-C-US-04, EVDC1-30K-C-US-05, EVDC1-30K-C-US-06 EVDC1-30K-C-US-07, EVDC1-30K-C-US-08, EVDC1-30K-C-US-09 EVDC1-30K-C-US-10, EVDC1-30K-C-US-11, EVDC1-30K-C-US-12 EVDC1-30K-C-US-13, EVDC1-30K-C-US-14, EVDC1-30K-C-US-15 EVDC1-30K-C-US-16, EVDC1-30K-C-US-17, EVDC1-30K-C-US-18 EVDC1-30K-C-US-19, EVDC1-30K-C-US-20, EVDC1-30K-C-US-21 EVDC1-30K-C-US-22, EVDC1-30K-C-US-23, EVDC1-30K-C-US-24																																																																																																																																					
Description of EUT:	<p>The EUT is an electric vehicle DC charger with verified Wi-Fi/BT, LTE wireless module. The EUT also supports RFID function.</p> <p>Here is the certificate information about the wireless module which EUT equipped.</p> <p>For the Wi-Fi/BT modular, FCC ID is VPYLB1XK.</p> <p>For the LTE modular, FCC ID is XMR201903EG25G.</p> <p>There are 24 models, all models have the same main part. Only the supporting functions are different:</p> <table border="1"> <thead> <tr> <th>Model</th><th>Output Cord</th><th>4G Module</th><th>Electricity Meter</th><th>POS Machine</th><th>Heater</th></tr> </thead> <tbody> <tr><td>EVDC1-30K-C-US-01</td><td rowspan="8">Type CCS1 100A Max (16.5 Feet)</td><td><input checked="" type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>EVDC1-30K-C-US-02</td><td><input checked="" type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>EVDC1-30K-C-US-03</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>EVDC1-30K-C-US-04</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td><input 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TEST REPORT

Rating:	Input: L1+L2+L3+PE, 480V AC, 38A, 60Hz Output: 200-1000V DC, 100A, 30kW Max
EUT type:	<input checked="" type="checkbox"/> Tabletop <input type="checkbox"/> Floor standing
Software Version:	/
Hardware Version:	/
Serial numbers:	A241125-05-001
Sample received date:	November 25, 2024
Date of test:	November 25, 2024, to December 4, 2024

1.2 Technical Specification

Frequency Range:	13.56 MHz ~ 13.56 MHz
Modulation:	ASK
Antenna:	PCB antenna

TEST REPORT**1.3 Description of Test Facility**

Name:	Intertek Testing Services (Shanghai FTZ) Co., Ltd.
Address:	Building 86, No. 1198 Qinzhou Road (North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized, certified, or accredited by these organizations:	CNAS Accreditation Lab Registration No. CNAS L21189
	FCC Accredited Lab Designation Number: CN0175
	IC Registration Lab CAB identifier.: CN0014
	VCCI Registration Lab Member No: 3598 (Registration No.: R-14243, G-10845, C-14723, T-12252)
	A2LA Accreditation Lab Certificate Number: 3309.02

2 TEST SPECIFICATIONS

2.1 Standards or specification

47CFR Part 15 (2023)
ANSI C63.10 (2020)

2.2 Mode of operation during the test

While testing, the internal modulation and continuous transmission was applied.

2.3 Test software list

Test Items	Software	Manufacturer	Version
Conducted emission	SKET Auto EMC Test Software	Keleto	V3.0
Radiated emission	SKET Auto EMC Test Software	Keleto	V3.0

2.4 Test peripherals list

Item No	Description	Band and Model	S/No
1	Resistor Load	-	-

2.5 Test environment condition:

Test items	Temperature	Humidity
Radiated emission	26°C	53% RH
Power line conducted emission	27°C	53% RH

2.6 Instrument list

Conducted Emission					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
<input checked="" type="checkbox"/>	Test Receiver	R&S	ESR7	EC 6194	2025-02-27
<input checked="" type="checkbox"/>	A.M.N.	R&S	ESH2-Z5	EC 3119	2025-05-18
<input checked="" type="checkbox"/>	Attenuator	Hua Xiang	Ts5-10db-6g	EC 6194-1	2025-06-06
<input checked="" type="checkbox"/>	Shielded room	Zhongyu	-	EC 2838	2025-01-11
Radiated Emission					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
<input checked="" type="checkbox"/>	Test Receiver	R&S	ESIB 26	EC 3045	2025-08-18
<input checked="" type="checkbox"/>	Bilog Antenna	TESEQ	CBL 6112B	EC 6411	2025-09-11
<input checked="" type="checkbox"/>	Active loop antenna	Schwarzbeck	FMZB1519	EC 5345	2025-08-10
<input checked="" type="checkbox"/>	Semi-anechoic chamber	Albatross project	-	EC 3048	2026-07-11
RF test					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
<input checked="" type="checkbox"/>	Spectrum Analyzer	Keysight	N9030B	EC 6078	2025-03-18
<input checked="" type="checkbox"/>	Climate chamber	GWS	MT3065	EC 6021	2025-03-07
Additional instrument					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
<input checked="" type="checkbox"/>	Thermo-Hygrograph	Testo	175h1	EC 6640	2025-08-29
<input checked="" type="checkbox"/>	Thermo-Hygrograph	Testo	175h1	EC 6643	2025-08-29

2.7 Measurement uncertainty

The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

Measurement	Frequency	Expanded Uncertainty ($k=2$)
Conducted emission at mains ports	9kHz ~ 150kHz	3.52 dB
	150kHz ~ 30MHz	3.19 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	3.06 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	5.02 dB
	6GHz ~ 18GHz	5.28 dB

3 Fundamental Emission

Test result: **PASS**

3.1 Limit

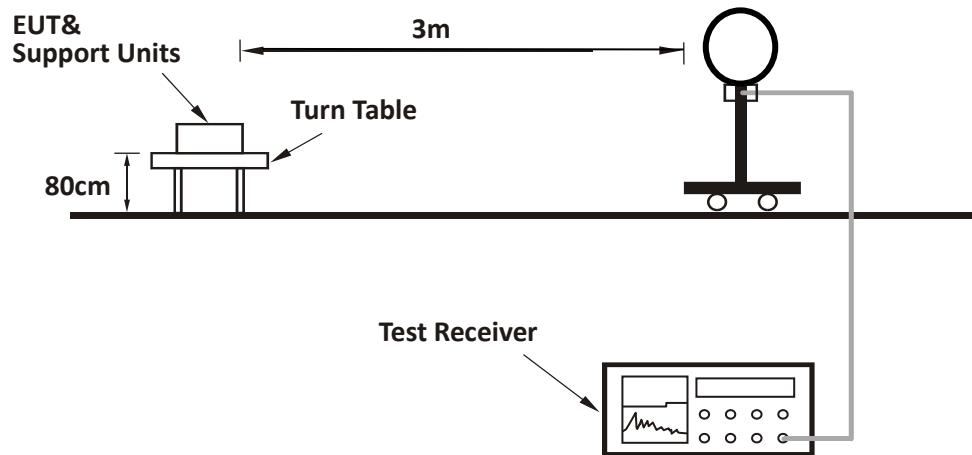
Frequencies (MHz)	Limit at 30m (dBuV/m)	Limit at 3m (dBuV/m)
13.110 – 13.410	40.50	80.50
13.410 – 13.553	50.50	90.50
13.553 – 13.567	84.00	124.00
13.567 – 13.710	50.50	90.50
13.710 – 14.010	40.50	80.50

3.2 Measurement Procedure

- The EUT was placed on a 0.8m plank above the ground at a 3-meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- Both X and Y axes of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to PK Detect Function and Specified Bandwidth with Maximum Hold Mode.

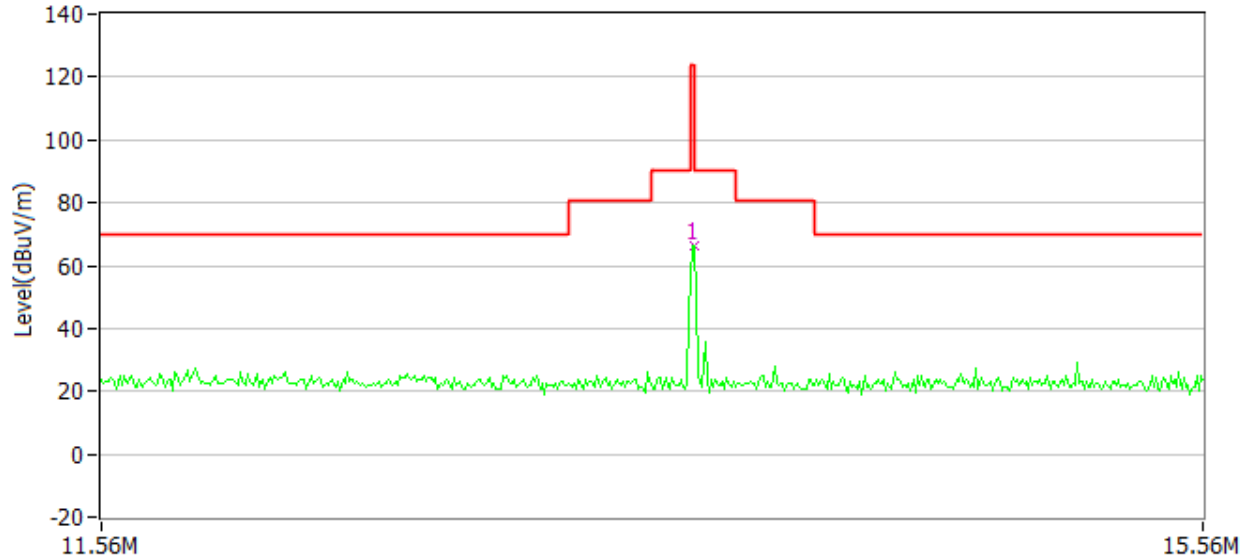
NOTE:

- The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

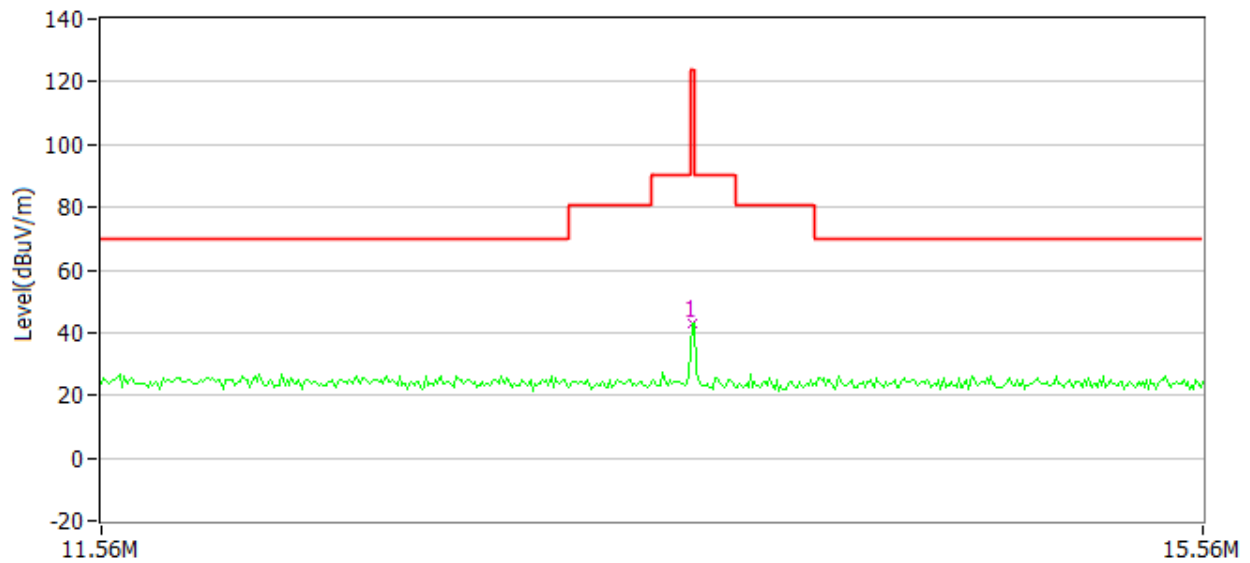
TEST REPORT**3.3 Test Configuration**

3.4 Test Results of Fundamental Emissions

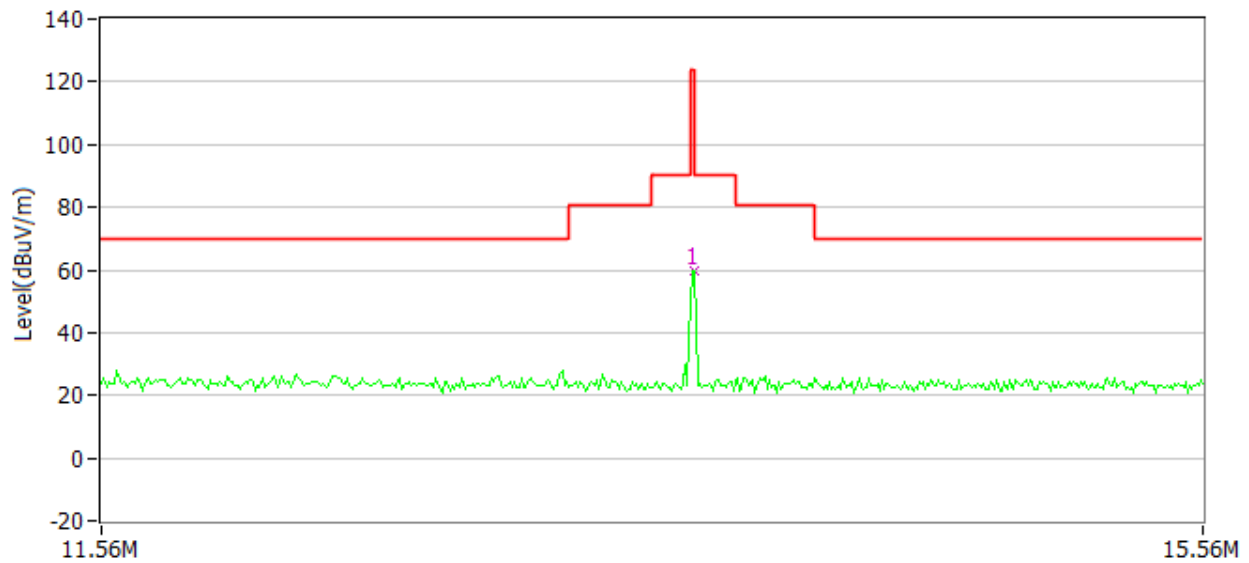
Antenna Polarization: X axis



Antenna Polarization: Y axis



Antenna Polarization: Z axis



Antenna Polarization	Frequency (MHz)	Corrected Reading (dBuV/m)	Correct Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector
X	13.56	66.50	20.50	124.00	57.50	PK
Y	13.56	43.00	20.50	124.00	81.00	PK
Z	13.56	59.50	20.50	124.00	64.50	PK

Remark:

1. *Correct Factor = Antenna Factor + Cable Loss (+ Amplifier, for higher than 1GHz), the value was added to Original Receiver Reading by the software automatically*
2. *Corrected Reading = Original Receiver Reading + Correct Factor*
3. *Margin = Limit - Corrected Reading*

Example:

Assuming Antenna Factor = 30.20dB/m, Cable Loss = 2.00dB

Gain of Preamplifier = 32.00dB, Original Receiver Reading = 10.00dBuV

Limit = 40.00dBuV/m

Then Correct Factor = 30.20 + 2.00 – 32.00 = 0.20dB/m

Corrected Reading = 10dBuV + 0.20dB/m = 10.20dBuV/m

Margin = 40.00dBuV/m - 10.20dBuV/m = 29.80dB

4 Spurious Emission

Test result: **PASS**

4.1 Limit

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

4.2 Measurement Procedure

For Radiated emission below 30MHz:

- The EUT was placed on a 0.8m plank above the ground at a 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- Both X and Y axes of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

NOTE:

- The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

TEST REPORT**For Radiated emission above 30MHz:**

- a) The EUT was placed on a 0.8m plank above the ground at a 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b) The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c) The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d) For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e) The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f) The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

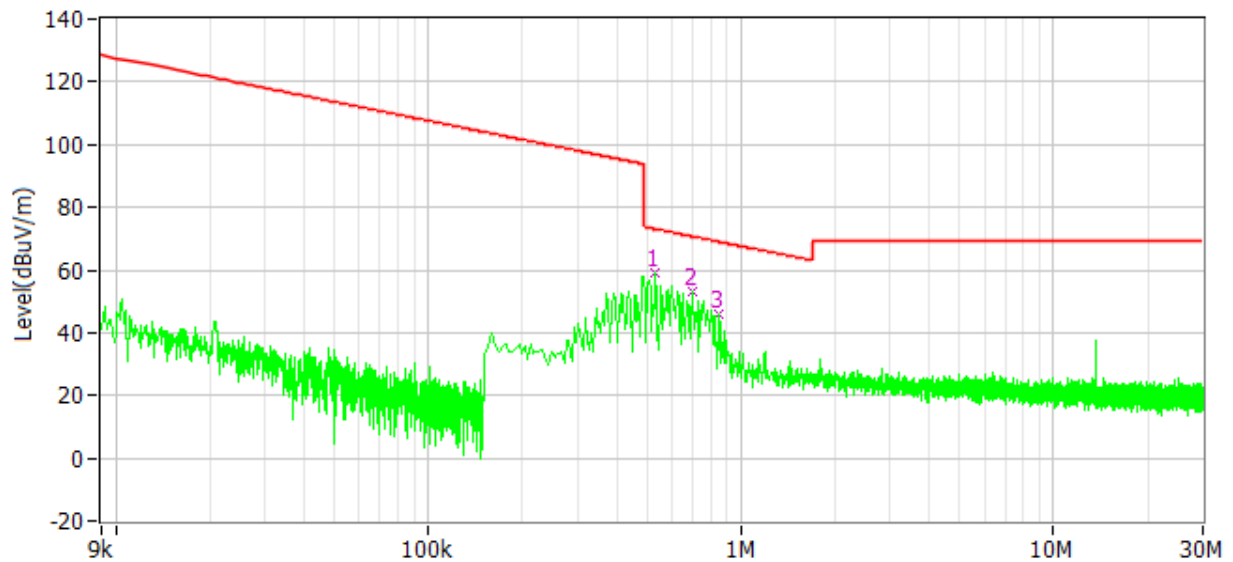
Note:

- 1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
- 2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
- 3. All modes of operation were evaluated and the worst-case emissions were reported

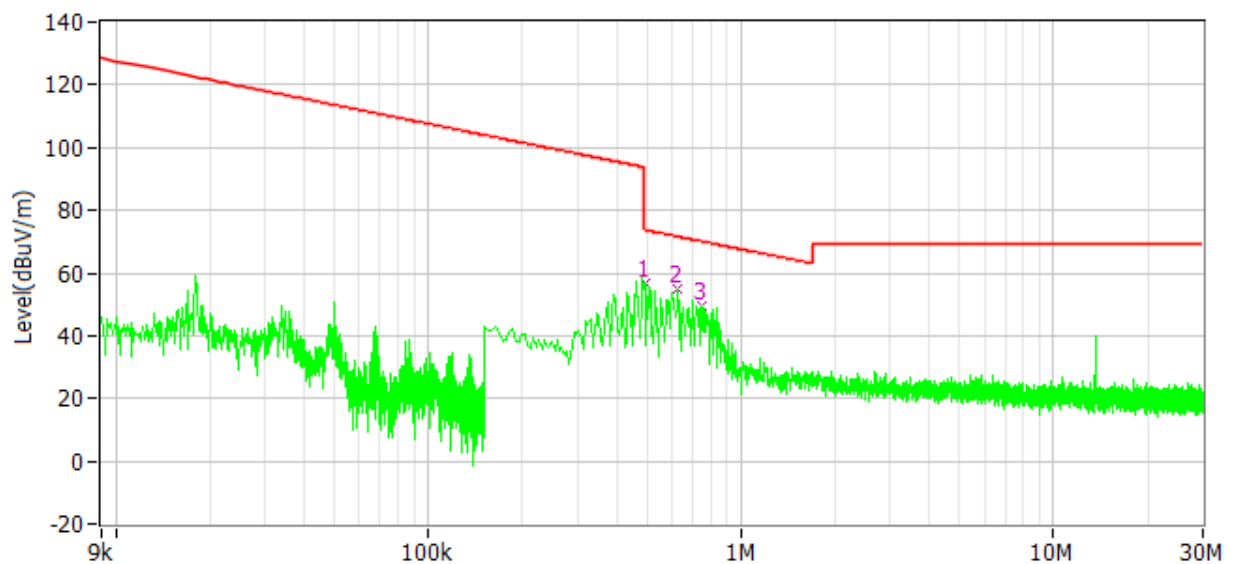
4.3 Test Results of Radiated Emissions

Test Curve (below 30MHz):

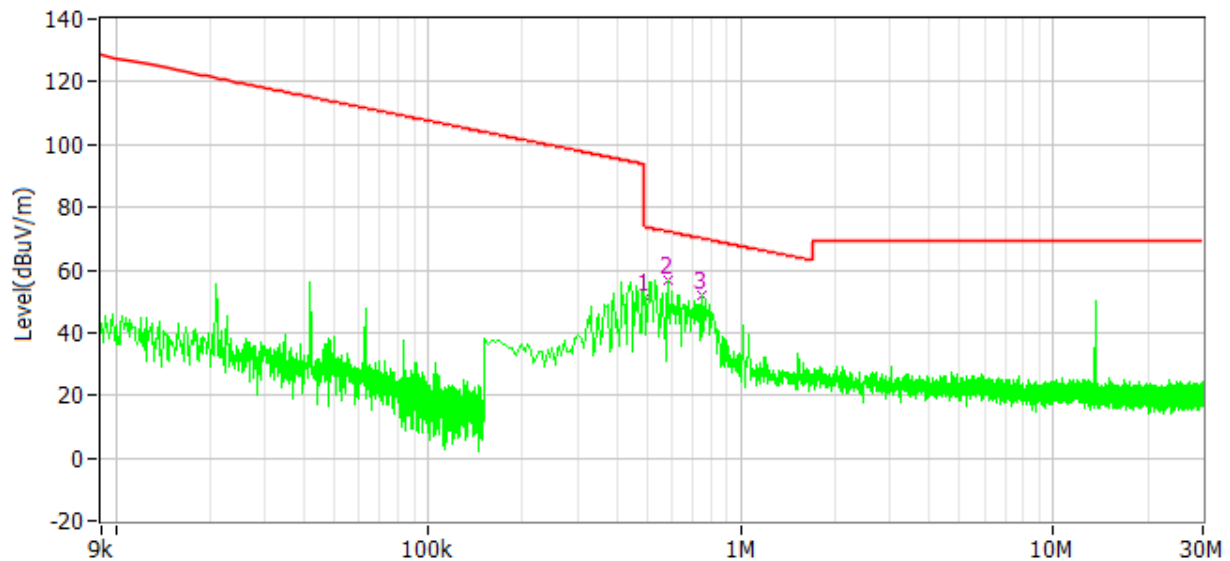
Antenna Polarization: X axis



Antenna Polarization: Y axis



Antenna Polarization: Z axis


Test data below 30MHz:

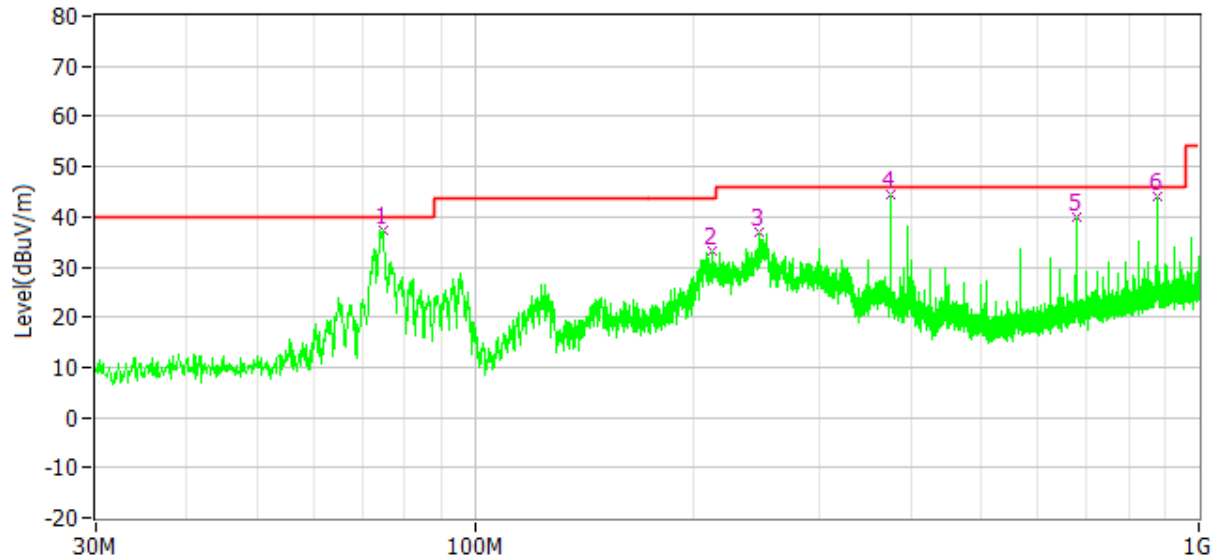
Frequency	Limit (dBuV/m)	Corrected Reading (dBuV/m)	Margin (dB)	Reading (dBuV)	Factor (dB/m)	Detector	Polarity
532.500kHz	73.10	58.90	14.20	40.00	18.90	PK	X
703.500kHz	70.70	53.30	17.40	34.40	18.90	PK	X
843.000kHz	69.10	46.20	22.90	27.30	18.90	PK	X
492.000kHz	73.80	56.70	17.10	37.80	18.90	PK	Y
627.000kHz	71.70	55.10	16.60	36.20	18.90	PK	Y
753.000kHz	70.10	49.70	20.40	30.80	18.90	PK	Y
496.500kHz	73.70	51.20	22.50	32.30	18.90	PK	Z
582.000kHz	72.30	56.70	15.60	37.80	18.90	PK	Z
753.000kHz	70.10	52.10	18.00	33.20	18.90	PK	Z

Remark:

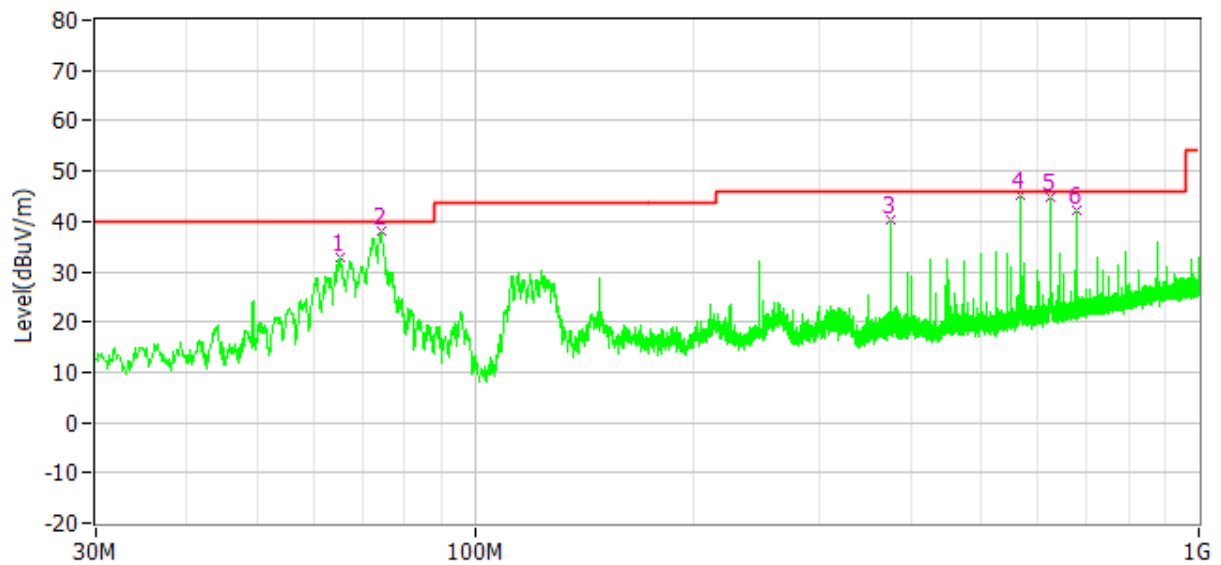
1. Correct Factor = Antenna Factor + Cable Loss (+ Amplifier, for higher than 1GHz), the value was added to Original Receiver Reading by the software automatically.
2. Corrected Reading = Original Receiver Reading + Correct Factor
3. Margin = Limit - Corrected Reading
4. If the PK Corrected Reading is lower than AV limit, the AV test can be elided.

Test Curve (30MHz to 1000MHz):

Horizontal



Vertical



TEST REPORT

Test data (30MHz to 1000MHz)

Frequency (MHz)	Limit (dBuV/m)	Corrected Reading (dBuV/m)	Margin (dB)	Original Reading (dBuV)	Correct Factor (dB/m)	Detector	Polar
74.620	40.00	37.38	2.62	25.94	11.44	PK	Hor
212.942	43.50	33.27	10.23	21.21	12.06	PK	Hor
247.474	46.00	37.02	8.98	23.52	13.50	PK	Hor
375.029	46.00	44.54	1.46	27.29	17.25	PK	Hor
678.833	46.00	40.05	5.95	16.26	23.79	PK	Hor
875.064	46.00	43.86	2.14	17.05	26.81	PK	Hor
65.114	40.00	32.77	7.23	19.64	13.13	PK	Ver
74.426	40.00	37.91	2.09	26.43	11.48	PK	Ver
375.029	46.00	40.33	5.67	23.08	17.25	PK	Ver
565.731	46.00	45.34	0.66	23.43	21.91	PK	Ver
624.998	46.00	44.76	1.24	21.77	22.99	PK	Ver
678.833	46.00	42.00	4.00	18.21	23.79	PK	Ver

Remark:

1. Correct Factor = Antenna Factor + Cable Loss (+ Amplifier, higher than 1GHz), the value was added to Original Receiver Reading by the software automatically.
2. Corrected Reading = Original Receiver Reading + Correct Factor
3. Margin = Limit - Corrected Reading
4. If the PK Corrected Reading is lower than AV limit, the AV test can be elided.

Example:

Assuming Antenna Factor = 30.20dB/m, Cable Loss = 2.00dB,
Gain of Preamplifier = 32.00dB, Original Receiver Reading = 10.00dBuV,
Limit = 40.00dBuV/m.
Then Correct Factor = 30.20 + 2.00 – 32.00 = 0.20dB/m;
Corrected Reading = 10dBuV + 0.20dB/m = 10.20dBuV/m;
Margin = 40.00dBuV/m - 10.20dBuV/m = 29.80dB.

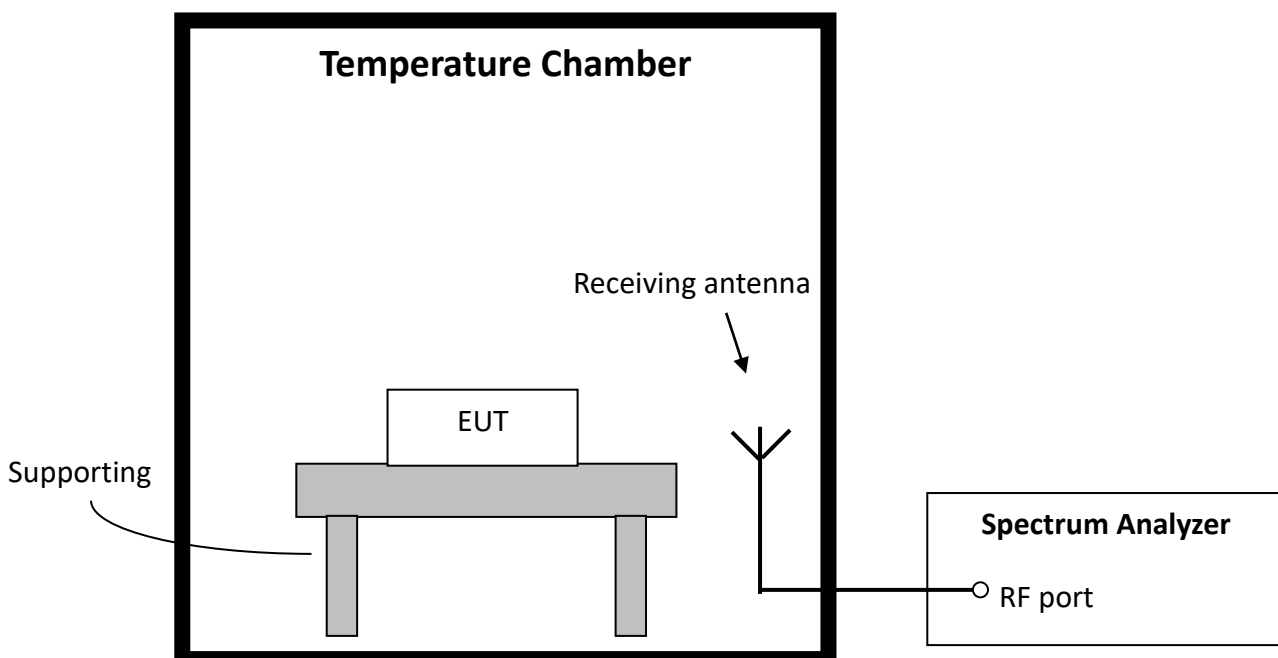
5 Frequency Stability (Temperature Variation)

Test result: **PASS**

5.1 Test limit

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.

5.2 Test Configuration



5.3 Test procedure and test setup

Test Procedure as per ANSI 63.10 clause 6.8.1.

5.4 Test protocol

Voltage (V)	Temp (°C)	Freq Measured (MHz)	Freq Nominal (MHz)	Tolerance (%)	Limit (%)
400	-20	13.5603	13.5600	0.0022	± 0.0100
	-10	13.5603		0.0022	
	0	13.5604		0.0029	
	10	13.5603		0.0022	
	20	13.5605		0.0037	
	30	13.5603		0.0022	
	40	13.5604		0.0029	
	50	13.5603		0.0022	

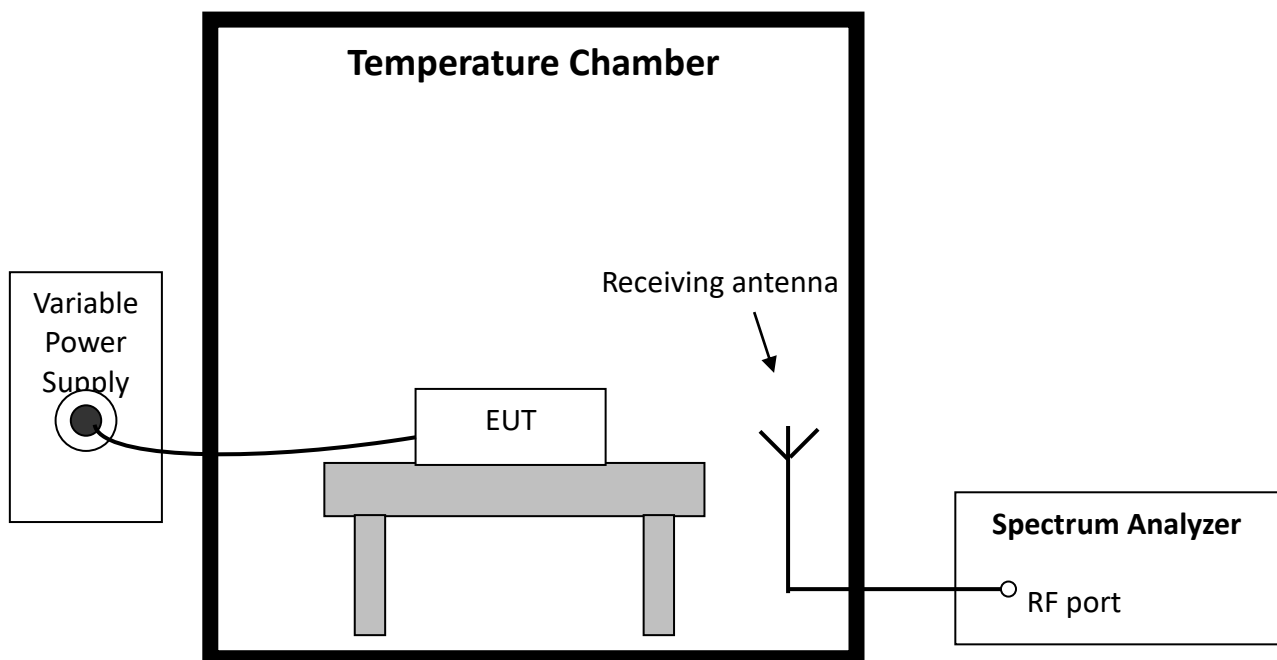
6 Frequency Stability (Voltage Variation)

Test result: **PASS**

6.1 Test limit

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

6.2 Test Configuration



6.3 Test procedure and test setup

Test Procedure as per ANSI 63.10 clause 6.8.2.

6.4 Test protocol

Temp (°C)	Voltage (V)	Freq Measured (MHz)	Freq nominal (MHz)	Tolerance (%)	Limit (%)
20	340	13.5603	13.5600	0.0022	± 0.0100
	400	13.5603		0.0022	
	460	13.5603		0.0022	

7 Conducted emissions

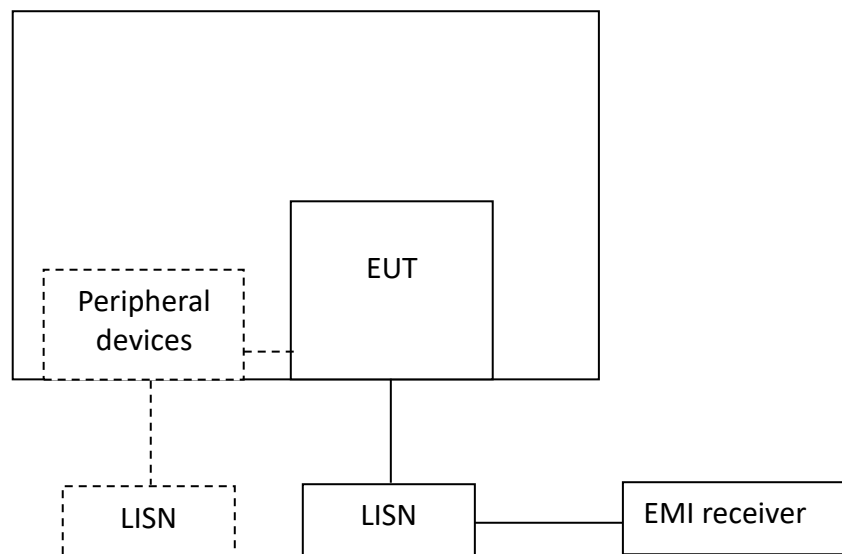
Test result: **PASS**

7.1 Limit

Frequency range (MHz)	Limits dB(μV)	
	Quasi-peak	Average
0.15 ~ 0.5	79	66
0.5 ~ 30	73	60

Note: If the limit for the measurement with the average detector is met when using a receiver with a quasi-peak detector, the equipment under test shall be deemed to meet both limits and the measurement using the receiver with an average detector need not be carried out.

7.2 Test Configuration



TEST REPORT**7.3 Measurement Procedure**

Measured levels of ac power-line conducted emission shall be the emission voltages from the voltage probe, where permitted, or across the 50 Ω LISN port (to which the EUT is connected), where permitted, terminated into a 50 Ω measuring instrument. All emission voltage and current measurements shall be made on each current-carrying conductor at the plug end of the EUT power cord by the use of mating plugs and receptacles on the LISN, if used. Equipment shall be tested with power cords that are normally supplied or recommended by the manufacturer and that have electrical and shielding characteristics that are the same as those cords normally supplied or recommended by the manufacturer. For those measurements using a LISN, the 50 Ω measuring port is terminated by a measuring instrument having 50 Ω input impedance. All other ports are terminated in 50 Ω loads.

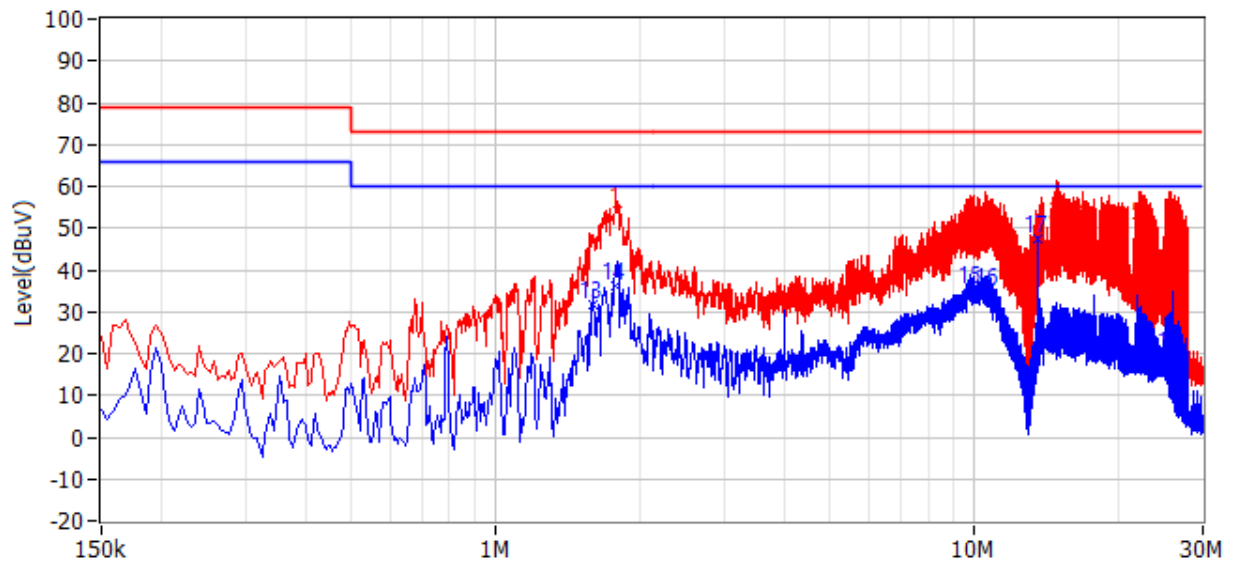
Tabletop devices shall be placed on a platform of nominal size 1 m by 1.5 m, raised 80 cm above the reference ground plane. The vertical conducting plane or wall of an RF-shielded (screened) room shall be located 40 cm to the rear of the EUT. Floor-standing devices shall be placed either directly on the reference ground-plane or on insulating material as described in ANSI C63.4. All other surfaces of tabletop or floor-standing EUTs shall be at least 80 cm from any other grounded conducting surface, including the case or cases of one or more LISNs.

The bandwidth of the test receiver is set at 9 kHz.

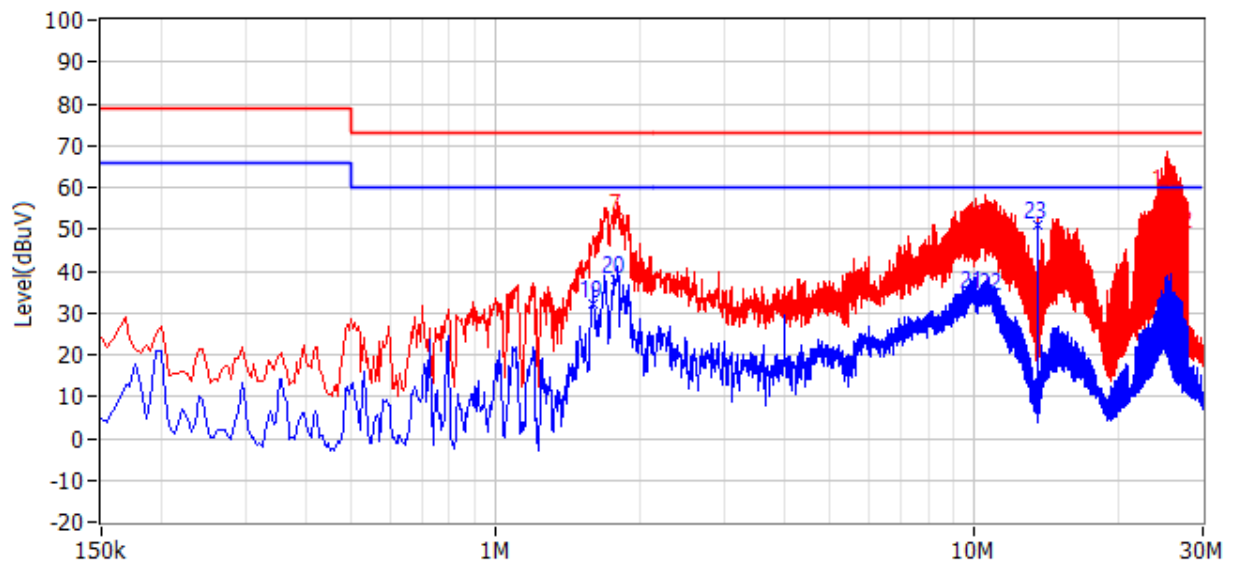
TEST REPORT

7.4 Test Results of Conducted Emissions

Test Curve:

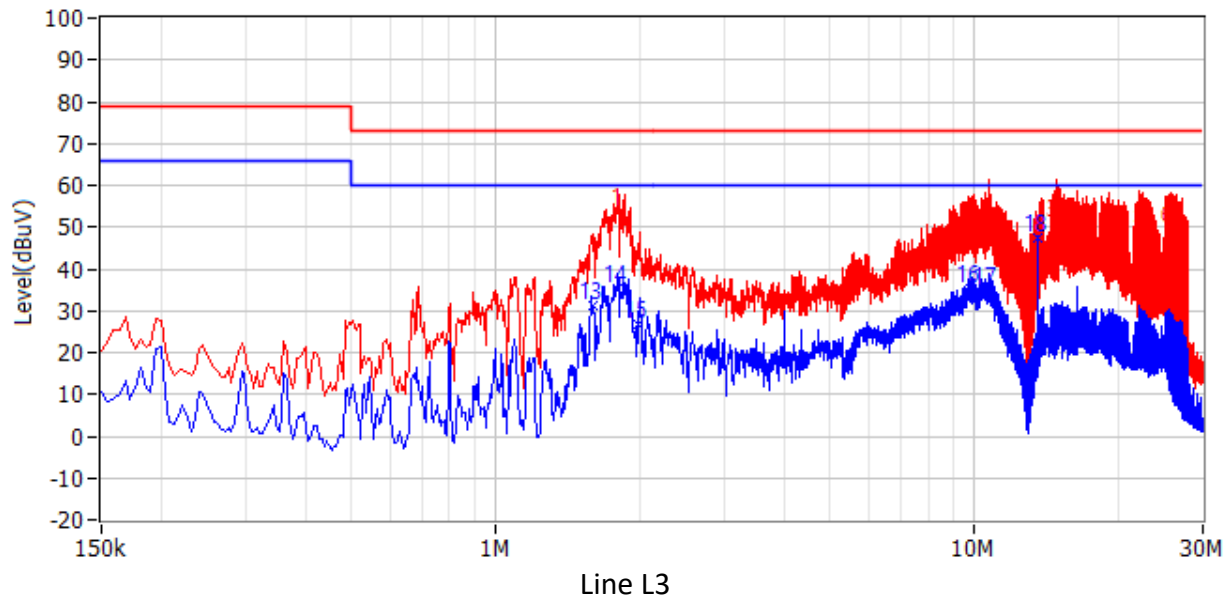


Line L1



Line L2

TEST REPORT



Test Data:

Frequency	Limit (dBuV)	Level (dBuV)	Delta (dB)	Original Receiver Reading (dBuV)	Correct Factor (dB)	Detector	Phase
1.802MHz	73.00	54.01	-18.99	47.81	6.20	QP	L1
10.518MHz	73.00	49.25	-23.75	42.55	6.70	QP	L1
14.825MHz	73.00	50.78	-22.22	43.88	6.90	QP	L1
16.791MHz	73.00	50.05	-22.95	42.95	7.10	QP	L1
22.119MHz	73.00	50.64	-22.36	43.24	7.40	QP	L1
25.931MHz	73.00	50.48	-22.52	42.88	7.60	QP	L1
1.599MHz	60.00	31.75	-28.25	25.55	6.20	CAV	L1
1.779MHz	60.00	36.39	-23.61	30.19	6.20	CAV	L1
9.920MHz	60.00	35.49	-24.51	28.89	6.60	CAV	L1
10.707MHz	60.00	34.71	-25.29	28.01	6.70	CAV	L1
13.560MHz	60.00	47.36	-12.64	40.56	6.80	CAV	L1
25.787MHz	60.00	19.38	-40.62	11.78	7.60	CAV	L1
1.793MHz	73.00	52.81	-20.19	46.61	6.20	QP	L2
9.722MHz	73.00	48.58	-24.42	41.98	6.60	QP	L2
10.523MHz	73.00	50.43	-22.57	43.73	6.70	QP	L2
11.544MHz	73.00	47.64	-25.36	40.94	6.70	QP	L2
25.103MHz	73.00	58.46	-14.54	51.06	7.40	QP	L2
27.447MHz	73.00	48.88	-24.12	41.28	7.60	QP	L2
1.599MHz	60.00	32.06	-27.94	25.86	6.20	CAV	L2
1.784MHz	60.00	37.84	-22.16	31.64	6.20	CAV	L2

TEST REPORT

Frequency	Limit (dBuV)	Level (dBuV)	Delta (dB)	Original Receiver Reading (dBuV)	Correct Factor (dB)	Detector	Phase
9.969MHz	60.00	34.57	-25.43	27.97	6.60	CAV	L2
10.914MHz	60.00	33.95	-26.05	27.25	6.70	CAV	L2
13.560MHz	60.00	51.01	-8.99	44.21	6.80	CAV	L2
25.724MHz	60.00	26.18	-33.82	18.68	7.50	CAV	L2
1.806MHz	73.00	53.86	-19.14	47.66	6.20	QP	L3
10.721MHz	73.00	50.41	-22.59	43.71	6.70	QP	L3
14.672MHz	73.00	51.02	-21.98	44.12	6.90	QP	L3
16.404MHz	73.00	49.55	-23.45	42.55	7.00	QP	L3
22.218MHz	73.00	49.52	-23.48	42.12	7.40	QP	L3
25.535MHz	73.00	49.63	-23.37	42.03	7.60	QP	L3
1.595MHz	60.00	31.05	-28.95	24.85	6.20	CAV	L3
1.797MHz	60.00	35.46	-24.54	29.26	6.20	CAV	L3
1.991MHz	60.00	26.81	-33.19	20.61	6.20	CAV	L3
9.803MHz	60.00	35.19	-24.81	28.59	6.60	CAV	L3
10.626MHz	60.00	34.81	-25.19	28.11	6.70	CAV	L3
13.560MHz	60.00	47.32	-12.68	40.52	6.80	CAV	L3

Remark:

1. *Correct Factor = LISN Factor + Cable Loss, the value was added to Original Receiver Reading by the software automatically.*
2. *Level = Original Receiver Reading + Correct Factor*
3. *Delta = Level – Limit*
4. *If the PK Level is lower than AV limit, the AV test can be elided.*
5. *the emissions of 13.56MHz are the product's RF signal.*

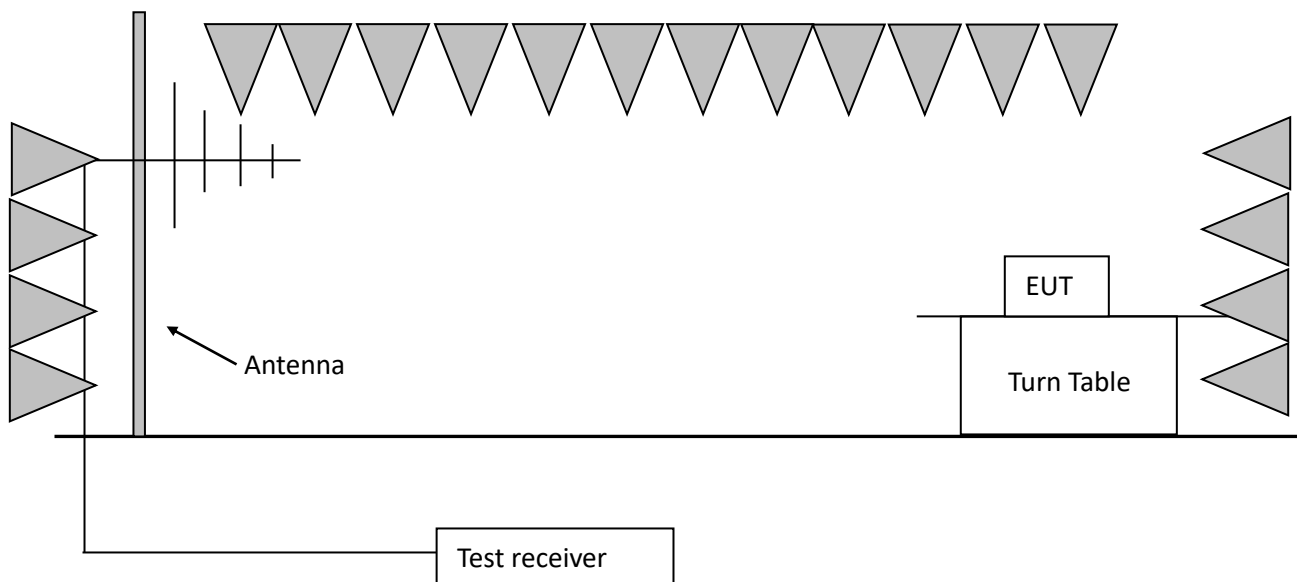
8 20dB Bandwidth

Test result: **PASS**

8.1 Limit

The 20dB bandwidth should be fallen in the allocated operating frequency range.
No limit for 99% bandwidth.

8.2 Test configuration



8.3 Test procedure and test set up

The measurement was applied in a 3m semi-anechoic chamber.

The center of the loop antenna shall be 1 m above the horizontal metal ground plane.

The following procedure shall be used for measuring (99 %) power bandwidth:

1. Set center frequency to the nominal EUT channel center frequency.
2. Set RBW = 1 % to 5 % of the OBW
3. Set VBW $\geq 3 \cdot$ RBW
4. 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.
5. Use the 99 % power bandwidth function of the instrument (if available).
6. the 20dB bandwidth is also measured with the same setting.

8.4 Test protocol

	Lower point (MHz)	Higher point (MHz)	Bandwidth (kHz)	Allocated bandwidth (MHz)
20dB Bandwidth	13.559556	13.561870	2.314	13.553 ~ 13.567
Occupied bandwidth	13.559731	13.561698	1.967	13.553 ~ 13.567



9 Antenna requirement

Requirement:

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.

Result:

EUT uses permanently attached antenna to the intentional radiator, so it can comply with the provisions of this section.

***** END *****