EV Charging Clean Energy Technology Co., Ltd.

RF TEST REPORT

Report Type:
FCC Part 15.225 & ISED RSS-210 RF report

MODEL:
Atlas D80-US, Atlas D120-US, Atlas D160-US, Atlas D160-US-PRO

REPORT NUMBER:
2310A0991SHA-001

ISSUE DATE:
September 6, 2024

DOCUMENT CONTROL NUMBER:
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TEST REPORT

Report no.: 2310A0991SHA-001

Applicant:	EV Charging Clean Energy Technology Co., Ltd. 3rd Floor Building C-1, No.6 Northern Industry Road, Songshan Lake Sci&Tech Industrial Park, Dongguan city, Guangdong Province, China.
Manufacturer:	EV Charging Clean Energy Technology Co., Ltd. 3rd Floor Building C-1, No.6 Northern Industry Road, Songshan Lake Sci&Tech Industrial Park, Dongguan city, Guangdong Province, China.
Factory:	EV Charging Clean Energy Technology Co., Ltd. 3rd Floor Building C-1, No.6 Northern Industry Road, Songshan Lake Sci&Tech Industrial Park, Dongguan city, Guangdong Province, China.
FCC ID:	2BETU-ATLASD160US
IC:	31984-ATLASD160US

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

RSS-210 Issue 10 (December 2019): Licence-Exempt Radio Apparatus: Category I Equipment

RSS-Gen Issue 5, Amendment 1 (March 2019): General Requirements for Compliance of Radio Apparatus

PREPARED BY:	**REVIEWED BY:**
	
Project Engineer Sky Yang	Reviewer Eric Li

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Revision History

Report No.	Version	Description	Issued Date
2310A0991SHA-001	Rev. 01	Initial issue of report	September 6, 2024

Measurement result summary

TEST ITEM	FCC REFERENCE	IC REFERENCE	RESULT
Fundamental emission	15.225(a) (b) (c)	RSS 210 B.6	Pass
Spurious emission	15.225(d)	RSS 210 B.6	Pass
Frequency stability	15.225(e)	RSS 210 B.6	Pass
Conducted emissions	15.207	RSS-Gen Issue 5 Clause 8.8	Pass
99% and 20dB Bandwidth	15.215(c)	RSS-Gen Issue 5 Clause 6.6	Pass
Antenna requirement	15.203	RSS-GEN 6.8	Pass

Notes: 1: NA =Not Applicable

2: Determination of the test conclusion is based on IEC Guide 115 in consideration of measurement uncertainty.

TEST REPORT

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	Atlas All-in-One DC charger
Type/Model:	Atlas D80-US, Atlas D120-US, Atlas D160-US, Atlas D160-US-PRO
Description of EUT:	The EUT is an electric vehicle DC charger with LTE function. The LTE module FCC ID is XMR202212EG25GL, the LTE module IC is 10224A-2022EG25GL. Atlas D80-US, Atlas D120-US and Atlas D160-US are electrically identical except the rated power. The difference between Atlas D160-US and Atlas D160-US-PRO is Atlas D160-US-PRO has liquid cooling while Atlas D160-US doesn't. We test Atlas D160-US-PRO as representative and list the result in this report.
Rating:	Atlas D80-US: Input: 480VAC, 60Hz, 117A Max Output 1/2: 200-1000VDC, 200A Max, 80kW Max Atlas D120-US: Input: 480VAC, 60Hz, 174A Max Output 1/2: 200-1000VDC, 200A Max, 120kW Max Atlas D160-US: Input: 480VAC, 60Hz, 231A Max Output 1/2: 200-1000VDC, 200A Max, 160kW Max Atlas D160-US-PRO: Input: 480VAC, 60Hz, 232A Max Output 1: 200-1000VDC, 500A Max, 160kW Max Output 2: 200-1000VDC, 200A Max, 160kW Max
Category of EUT:	Class A
EUT type:	☐ Table top ☒ Floor standing
Software Version:	-
Hardware Version:	-
Serial numbers:	A231221-40
Sample received date:	December 21, 2023
Date of test:	December 22, 2023 ~ December 29, 2023

1.2 Technical Specification

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

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

Spurious emission and Conducted emissions tests were sub-contracted.

Name:	Shenzhen Academy of Metrology and Quality Inspection
Address:	NETC Building, No.4 Tongfa Road Xili, Nanshan, Shenzhen, Guangdong, China
Telephone:	+86-13600419320
The test facility is recognized, certified, or accredited by these organizations:	FCC Accredited Lab Designation Number: CN1165
	IC Registration Lab CAB identifier.: CN0009

2 TEST SPECIFICATIONS

2.1 Standards or specification

47CFR Part 15 (2023)
ANSI C63.10 (2020)
RSS-210 Issue 10 (December 2019)
RSS-Gen Issue 5, Amendment 1 (March 2019)

2.2 Mode of operation during the test

While testing, the internal modulation and continuously 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

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

Used	Equipment	Manufacturer	Type	Internal no.	Due date
☒	Test Receiver	R&S	ESW8	SB21192	2025-07-24
☒	LISN	schwarzbeck	NNLK8130	SB21542	2025-04-15
☒	Test Receiver	R&S	ESI26	SB3436	2024-10-17
☒	Loop Antenna	Schwarzbeck	FMZB1519B	SB19178	2024-11-29
☒	Broadband Antenna	Schwarzbeck	VULB9163	SB19658/01	2025-08-05
☒	Active loop antenna	Schwarzbeck	FMZB1519	EC 5345	2025-07-15
☒	Spectrum Analyzer	Keysight	N9030B	EC 6078	2025-03-18
☒	Climate chamber	GWS	MT3065	EC 6021	2025-03-07
☒	Thermo-Hygrograph	Testo	175h1	EC 6640	2024-08-28

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

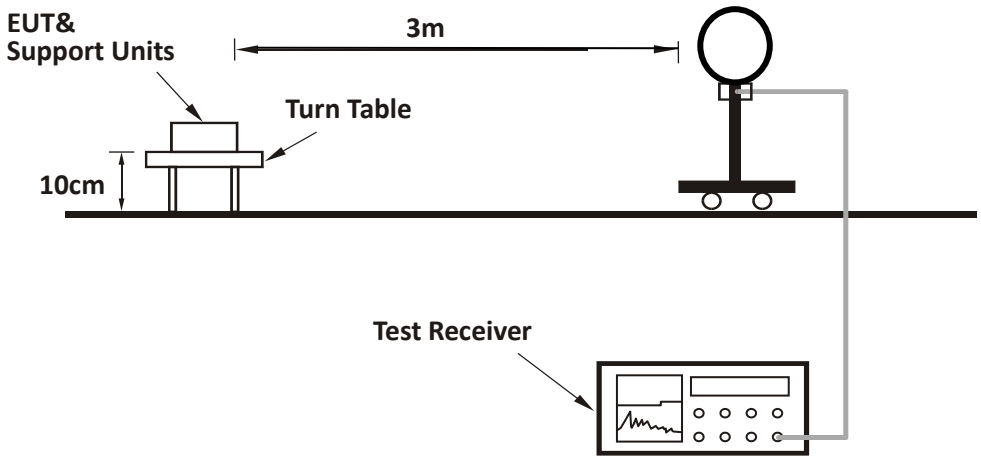
3.2 Measurement Procedure

a) The EUT was placed on a 0.1m 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) Both X and Y axes of the antenna are set to make the measurement.
d) 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.
e) The test-receiver system was set to PK Detect Function and Specified Bandwidth with Maximum Hold Mode.

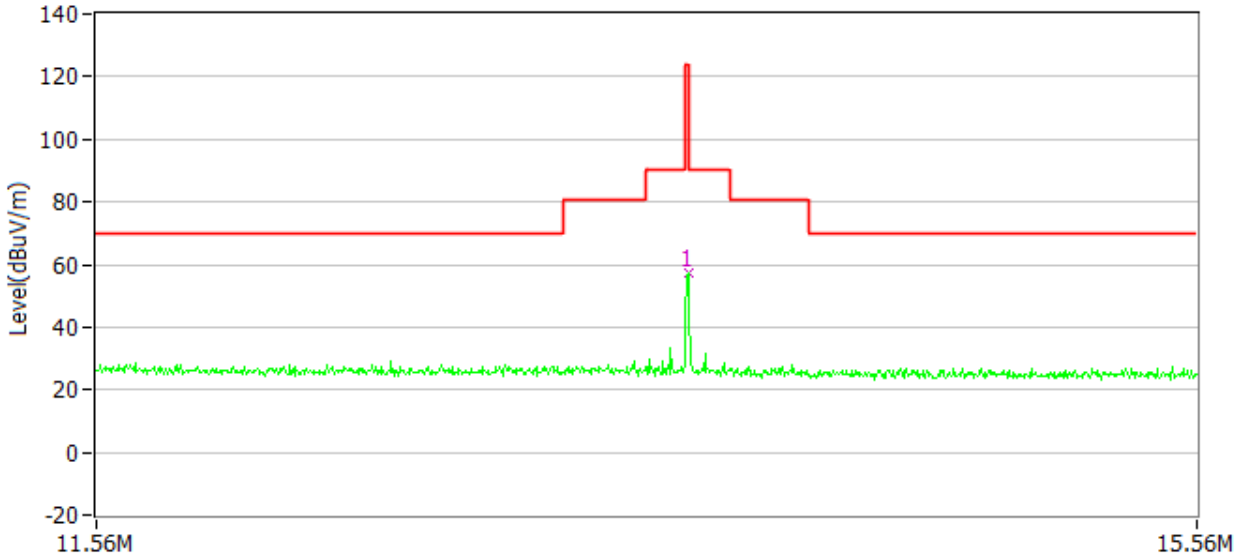
NOTE:

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

3.3 Test Configuration



3.4 Test Results of Fundamental Emissions



Antenna Polarization	Frequency (MHz)	Corrected Reading (dBuV/m)	Limit (dBuV/m)	Margin	Detector
X	13.56	57.2	124.00	66.8	PK
Y	13.56	55.6	124.00	68.4	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:

f) The EUT was placed on a 0.1m 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.
g) The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
h) Both X and Y axes of the antenna are set to make the measurement.
i) 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.
j) The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

NOTE:

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

For Radiated emission above 30MHz:

a) The EUT was placed on a 0.1m 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.

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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

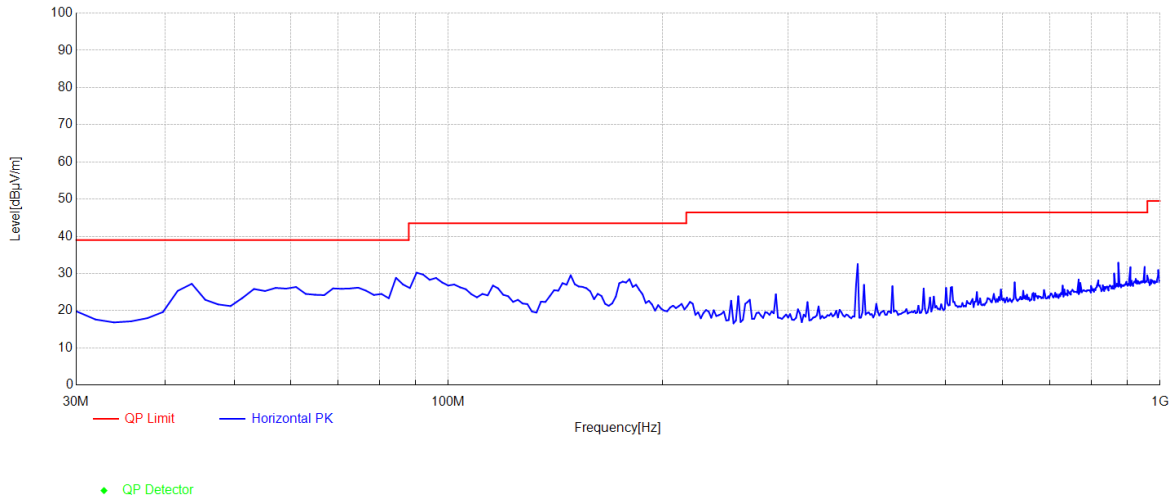
The EUT has been tested in all two orthogonal planes.

Frequency	Limit (dBuV/m)	Level (dBuV/m)	Delta (dB)	Detector	Polarity
528.000kHz	73.2	52.7	20.5	PK	X
591.000kHz	72.2	53.1	19.1	PK	X
739.500kHz	70.2	48.5	21.7	PK	X
7.233MHz	69.5	43.3	26.2	PK	X
7.818MHz	69.5	43.8	25.7	PK	X
10.064MHz	69.5	45.3	24.2	PK	X
537.000kHz	73.0	55.1	17.9	PK	Y
627.000kHz	71.7	53.9	17.8	PK	Y
753.000kHz	70.1	47.4	22.7	PK	Y
7.134MHz	69.5	51.4	18.1	PK	Y
10.064MHz	69.5	46.4	23.1	PK	Y
27.123MHz	69.5	37.6	31.9	PK	Y

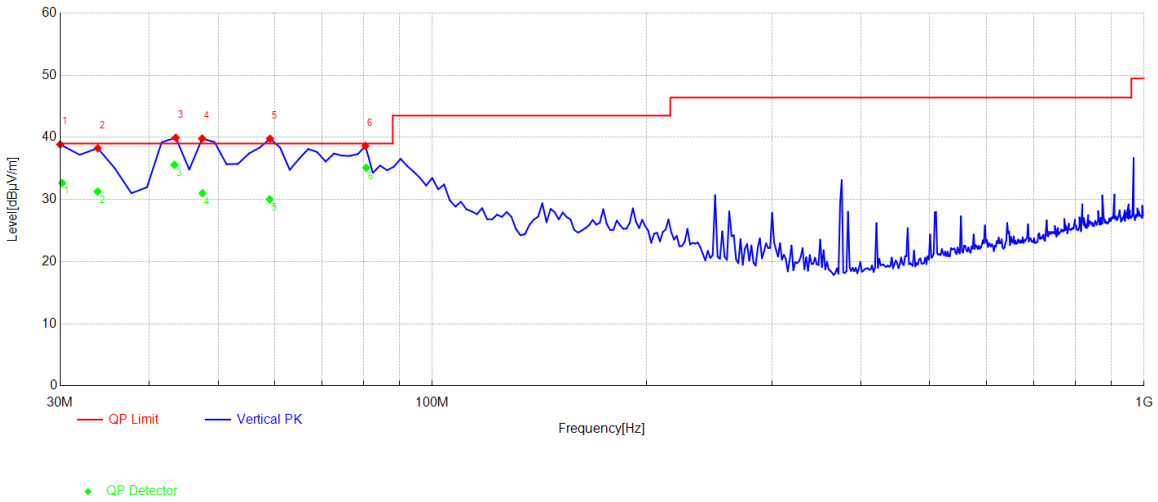
Remark: 1. Correct Factor = Antenna Factor + Cable Loss (+ Amplifier, for higher than 1GHz), the value was added to Original Receiver Reading by the software automatically.
2. Level = Original Receiver Reading + Correct Factor
3. Delta = Limit - Level

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;
Level = 10dBuV + 0.20dB/m = 10.20dBuV/m;
Delta = 44.00dBuV/m - 10.20dBuV/m = 29.80dB.

H


100
90
80
70
60
50
40
30
20
10
0
Level[dBµV/m]
30M
100M
1G
Frequency[Hz]
QP Limit
Horizontal PK
QP Detector

V


60
50
40
30
20
10
0
Level[dBµV/m]
1
2
3
4
5
6
30M
100M
1G
Frequency[Hz]
QP Limit
Vertical PK
QP Detector

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Test data from 30MHz to 1000MHz:

Antenna Polarization	Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Delta (dB)	Detector
H	43.760	23.1	39.0	15.9	QP
H	57.273	22.8	39.0	16.2	QP
H	72.536	21.1	39.0	17.9	QP
H	90.629	22.1	43.5	21.4	QP
H	148.960	23.8	43.5	19.7	QP
H	179.335	19.9	43.5	23.6	QP
V	30.194	32.7	39.0	6.3	QP
V	33.856	31.3	39.0	7.7	QP
V	43.409	35.6	39.0	3.4	QP
V	47.546	31.0	39.0	8.0	QP
V	59.091	30.0	39.0	9.0	QP
V	80.776	35.1	39.0	3.9	QP

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. Level = Original Receiver Reading + Correct Factor
3. Delta = Limit - Level

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;
Level = 10dBuV + 0.20dB/m = 10.20dBuV/m;
Delta = 44.00dBuV/m - 10.20dBuV/m = 29.80dB.

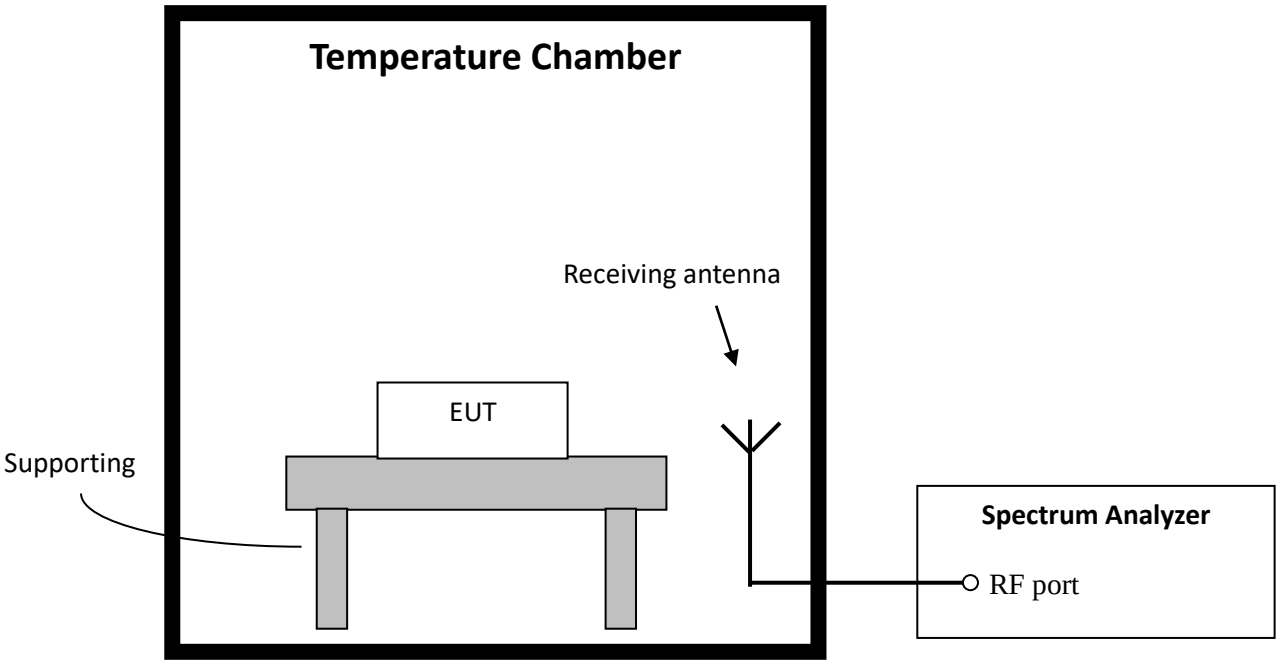
5 Frequency Stability (Temperature Variation)

Test result: PASS

5.1 Test limit

The frequency tolerance of the carrier signal shall be maintained within ±0.01% of the operating frequency over a temperature variation of −30 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 (ºC)	Freq measured (MHz)	Freq nominal (MHz)	Tolerance (%)	Limit (%)
480	-30	13.5597	13.56	-0.002	±0.01
	-20	13.5596		-0.003	
	-10	13.5601		0.0007	
	0	13.5602		0.001	
	10	13.5598		-0.001	
	20	13.5600		0	
	30	13.5600		0	
	40	13.5602		0.001	
	50	13.5597		-0.002	

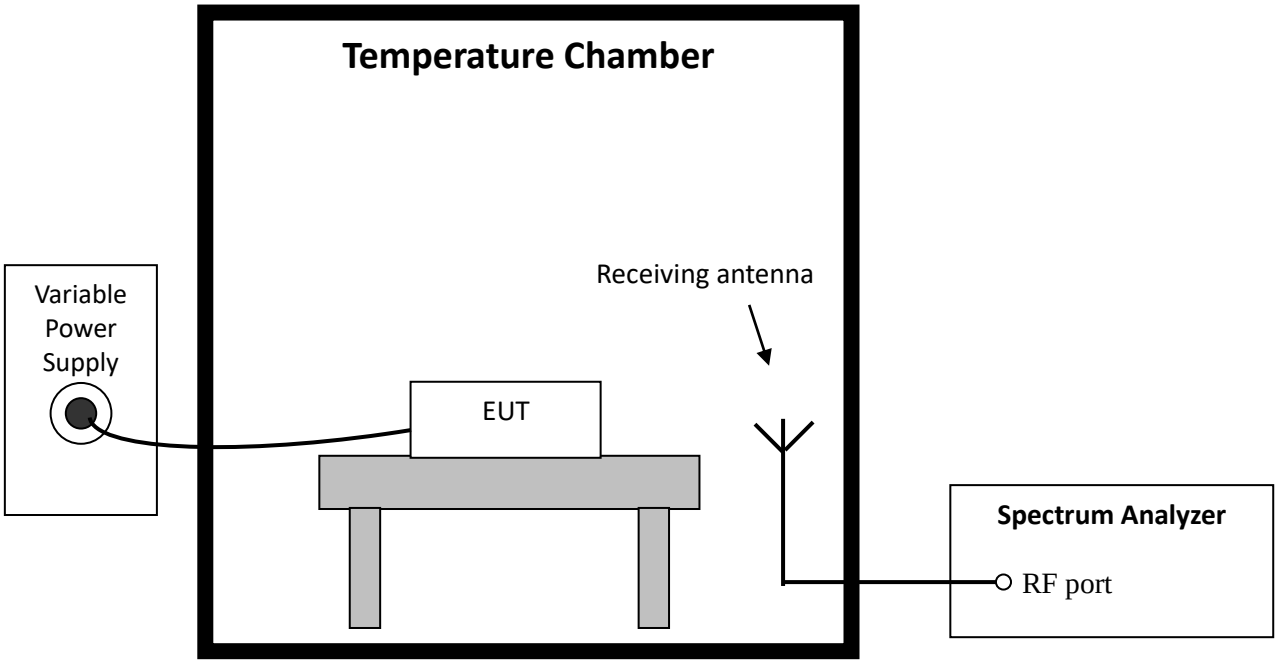
6 Frequency Stability (Voltage Variation)

Test result: PASS

6.1 Test limit

The frequency tolerance of the carrier signal shall be maintained within ±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.

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6.4 Test protocol

Temp (ºC)	Voltage (V)	Freq Measured (MHz)	Freq nominal (MHz)	Tolerance (%)	Limit (%)
20	408	13.5598	13.56	-0.001	±0.01
	480	13.5600		0	
	552	13.5602		0.001	

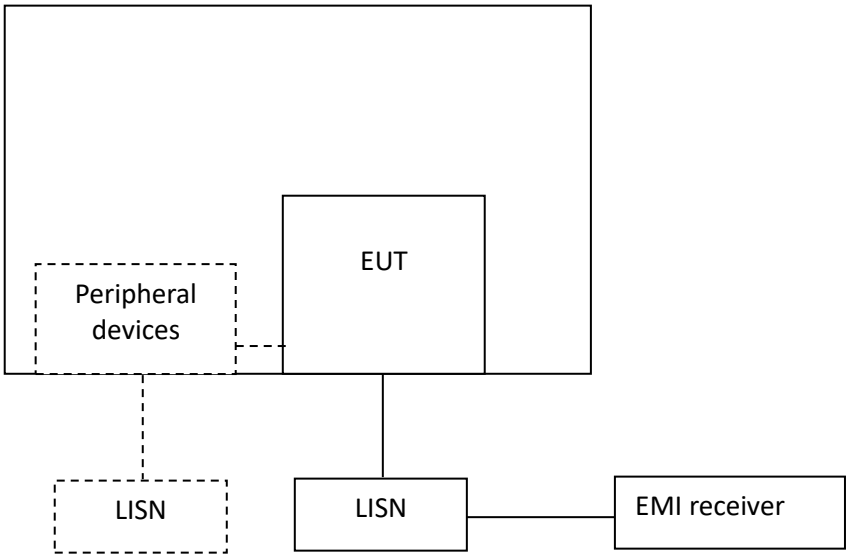
7 Conducted emissions

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

7.2 Test Configuration



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.

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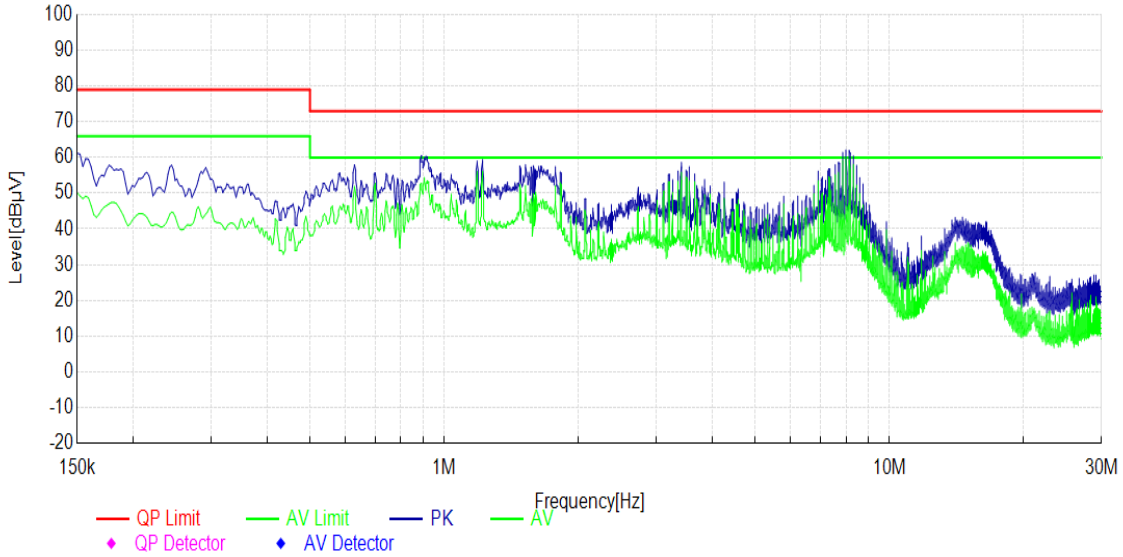
7.4 Test Results of Conducted Emissions

Test Voltage: 480VAC/60Hz

L1 Line



Test Data:

NO.	Freq. [MHz]	Level [dBµV]	Limit [dBµV]	Delta [dB]	Detector	Verdict
1	1.223	58.39	73.00	14.61	QP	PASS
2	1.223	55.77	60.00	4.23	AV	PASS
3	3.417	57.26	73.00	15.74	QP	PASS
4	3.417	56.10	60.00	3.90	AV	PASS
5	7.874	61.27	73.00	11.73	QP	PASS
6	7.874	59.90	60.00	0.10	AV	PASS
7	8.022	62.34	73.00	10.66	QP	PASS
8	8.022	58.91	60.00	1.09	AV	PASS
9	8.171	61.32	73.00	11.68	QP	PASS
10	8.171	59.90	60.00	0.10	AV	PASS
11	8.319	60.11	73.00	12.89	QP	PASS
12	8.319	58.61	60.00	1.39	AV	PASS

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 = Limit - Level
4. If the PK Level is lower than AV limit, the AV test can be elided.

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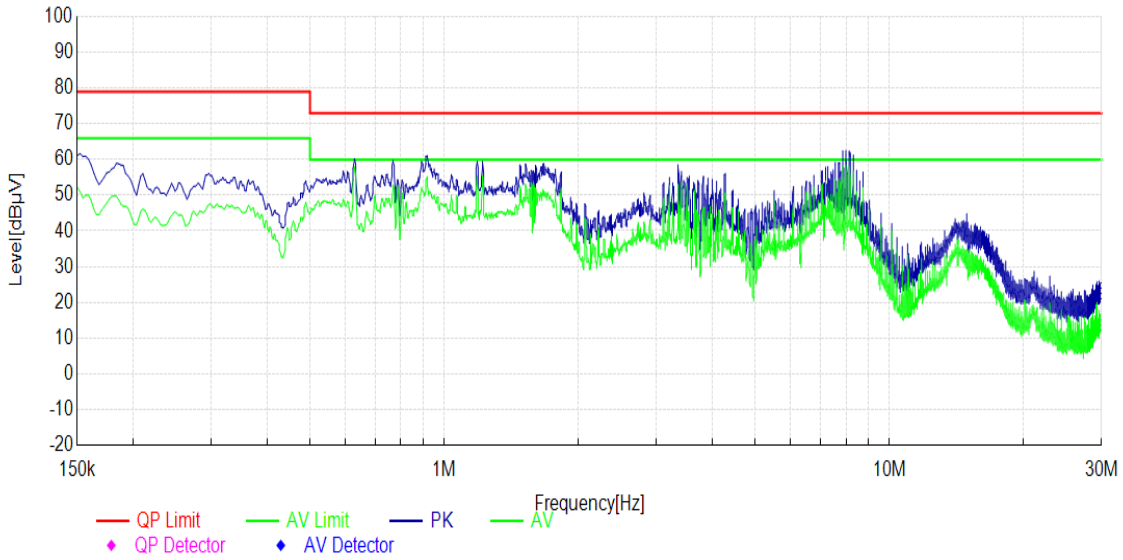
L2 Line



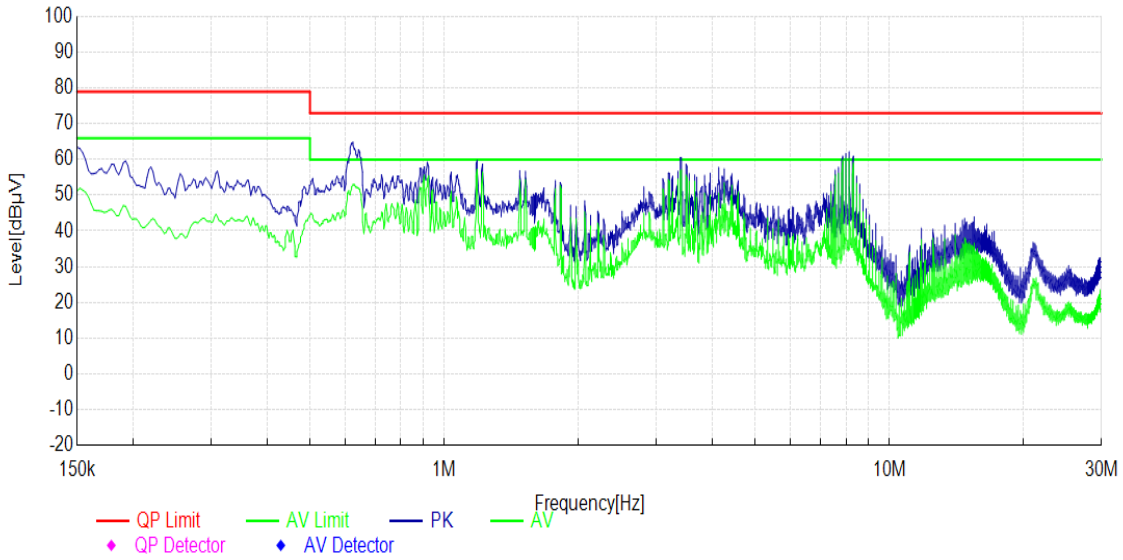
Test Data:

NO.	Freq. [MHz]	Level [dBµV]	Limit [dBµV]	Delta [dB]	Detector	Verdict
1	0.631	65.14	73.00	7.86	QP	PASS
2	0.631	59.11	60.00	0.89	AV	PASS
3	1.223	57.95	73.00	15.05	QP	PASS
4	1.223	55.20	60.00	4.80	AV	PASS
5	1.594	56.28	73.00	16.72	QP	PASS
6	1.594	51.46	60.00	8.54	AV	PASS
7	7.874	60.99	73.00	12.01	QP	PASS
8	7.874	59.45	60.00	0.55	AV	PASS
9	8.022	61.88	73.00	11.12	QP	PASS
10	8.022	59.36	60.00	0.64	AV	PASS
11	8.171	61.03	73.00	11.97	QP	PASS
12	8.171	59.50	60.00	0.50	AV	PASS

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 = Limit - Level
4. If the PK Level is lower than AV limit, the AV test can be elided.

TEST REPORT

L3 Line



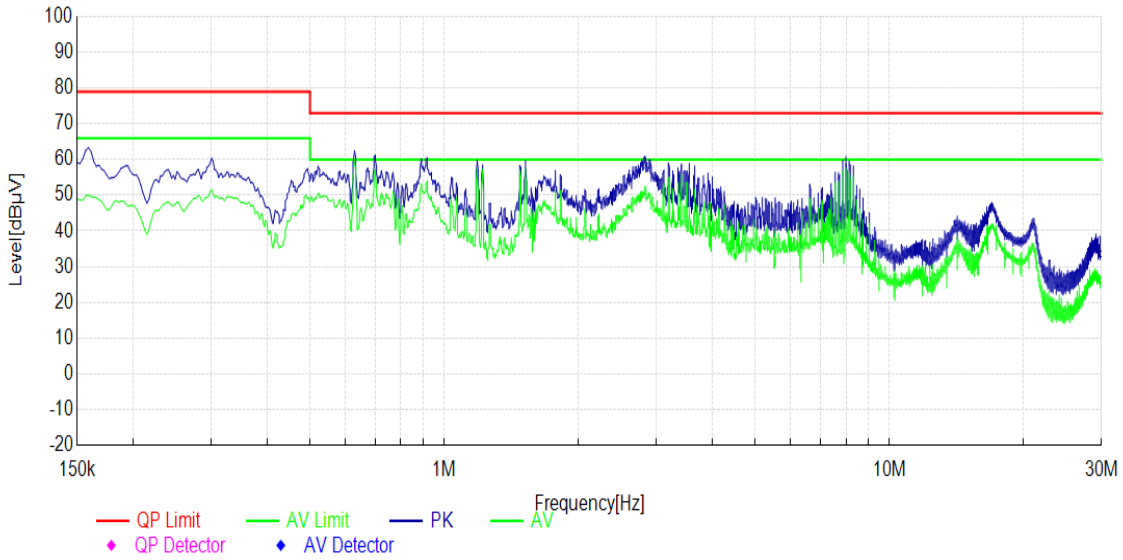
Test Data:

NO.	Freq. [MHz]	Level [dBµV]	Limit [dBµV]	Delta [dB]	Detector	Verdict
1	0.903	56.35	73.00	16.65	QP	PASS
2	0.903	50.77	60.00	9.23	AV	PASS
3	1.187	58.89	73.00	14.11	QP	PASS
4	1.187	56.72	60.00	3.28	AV	PASS
5	3.414	58.46	73.00	14.54	QP	PASS
6	3.414	56.95	60.00	3.05	AV	PASS
7	8.016	61.13	73.00	11.87	QP	PASS
8	8.016	58.12	60.00	1.88	AV	PASS
9	8.164	60.85	73.00	12.15	QP	PASS
10	8.164	59.32	60.00	0.68	AV	PASS
11	8.313	59.58	73.00	13.42	QP	PASS
12	8.313	57.82	60.00	2.18	AV	PASS

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 = Limit - Level
4. If the PK Level is lower than AV limit, the AV test can be elided.

TEST REPORT

N Line



Test Data:

NO.	Freq. [MHz]	Level [dBµV]	Limit [dBµV]	Delta [dB]	Detector	Verdict
1	0.631	66.55	73.00	6.45	QP	PASS
2	0.631	59.78	60.00	0.22	AV	PASS
3	0.701	58.51	73.00	14.49	QP	PASS
4	0.701	55.97	60.00	4.03	AV	PASS
5	1.189	58.31	73.00	14.69	QP	PASS
6	1.189	57.23	60.00	2.77	AV	PASS
7	1.529	58.42	73.00	14.58	QP	PASS
8	1.529	57.27	60.00	2.73	AV	PASS
9	7.874	58.81	73.00	14.19	QP	PASS
10	7.874	57.56	60.00	2.44	AV	PASS
11	8.025	59.80	73.00	13.20	QP	PASS
12	8.025	58.38	60.00	1.62	AV	PASS

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 = Limit - Level
4. If the PK Level is lower than AV limit, the AV test can be elided.

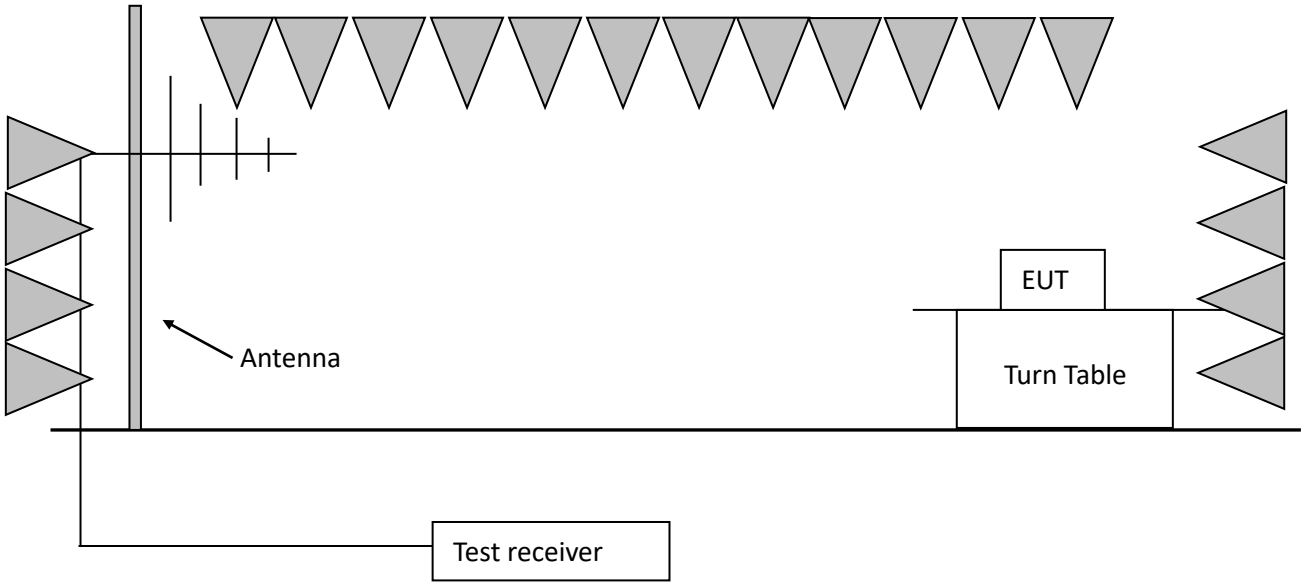
8 20dB Bandwidth

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.

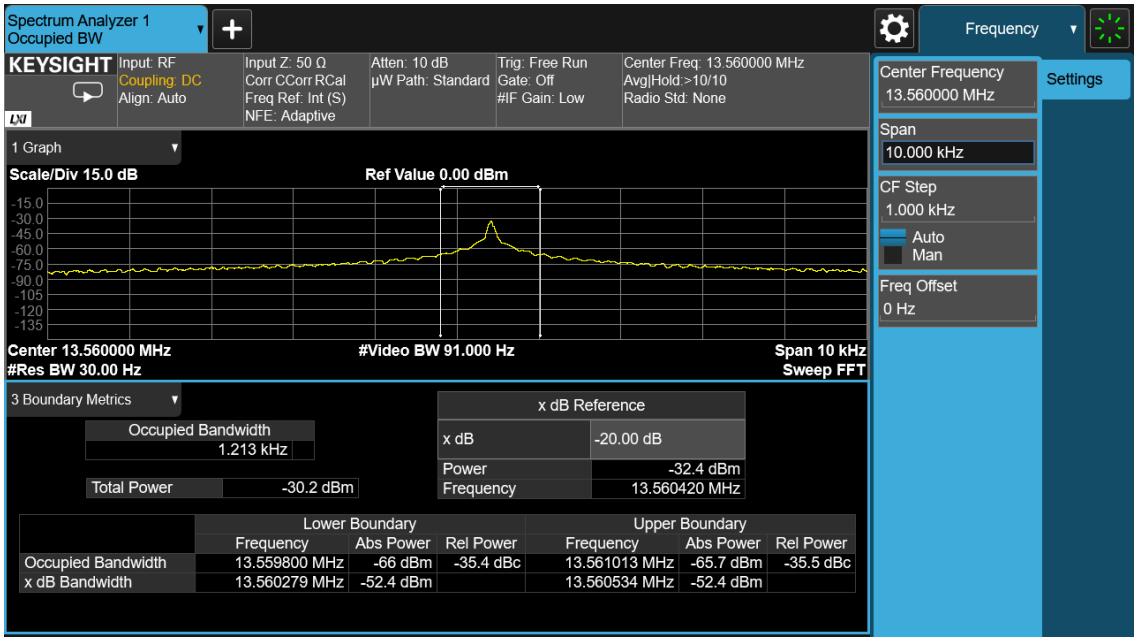
The center of the loop antenna shall be 1 m above the horizontal metal ground plane.

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 ≥ 3 · 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	13.560279	13.560534	0.255	13.553 ~ 13.567
Occupied bandwidth	13.559800	13.561013	1.213	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 **********