

EUROFINS ELECTRICAL TESTING SERVICE (SHENZHEN) CO., LTD.

RADIO TEST - REPORT

FCC Compliance Test Report for

Product name: 2-in-1 Magnetic Wireless Charger

Model name: W526

FCC ID: 2BOTB-W526A

Test Report Number: EFGX25120370-IE-03-E01

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1 General Information

1.1 Notes

The results of this test report relate exclusively to the item tested as specified in chapter "Description of test item" and are not transferable to any other test items.

Eurofins Electrical Testing Service (Shenzhen) Co., Ltd. is not responsible for any generalisations and conclusions drawn from this report. Any modification of the test item can lead to invalidity of test results and this test report may therefore be not applicable to the modified test item.

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Operator:

2025-12-21

Bruce Zheng / Project Engineer



Date

Eurofins-Lab.

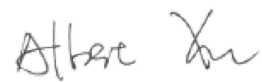
Name / Title

Signature

Technical responsibility for area of testing:

2025-12-21

Albert Xu / Lab Manager



Date

Eurofins

Name / Title

Signature

1.2 Testing laboratory

Eurofins Electrical Testing Service (Shenzhen) Co., Ltd.

Room 20 of 2/F., 1/F., Building 2, Spring Block & Room 102, Building 8, Autumn Block, Meishenghuigu Innovation Park, No.83, Dabao Road, Bao'an District, Shenzhen, Guangdong, China

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The Laboratory has passed the Accreditation by the American Association for Laboratory Accreditation (A2LA). The Accreditation number is 5376.01

The Laboratory has been listed by industry Canada to perform electromagnetic emission measurements, The CAB identifier is CN0088

1.3 Details of applicant

Name	:	America Ugreen Limited
Address	:	108 West, 13Th Street, Wilmington, Delaware 19801, United States
Telephone	:	075528198930
Fax	:	075528198930

1.4 Details of manufacturer

Name	:	America Ugreen Limited
Address	:	108 West, 13Th Street, Wilmington, Delaware 19801, United States
Telephone	:	075528198930
Fax	:	075528198930

1.5 Application details

Date of receipt of application : 2025-12-17
 Date of receipt of test item : 2025-12-17
 Date of test : 2025-12-17 to 2025-12-21
 Date of issue : 2025-12-21

1.6 Test item

Product type : 2-in-1 Magnetic Wireless Charger
 Model name : W526
 Sample ID : 251218-28-003
 Brand : **UGREEN**

Serial number : N/A
 Ratings : USB-C1(IN) Input: 5.0V $\overline{=}$ 3.0A/9.0V $\overline{=}$ 3A /12V $\overline{=}$ 2.5A
 Wireless Charging Output: 20.0W Max(iPhone:7.5W,AirPods:5.0W)
 USB-C2(OUT) Output:5.0V $\overline{=}$ 1.0A 5.0W Max
 Total Output Power:25.0W Max

Test voltage : AC120V/60Hz
 Additional information : N/A

RadioTechnical data

Operating Frequency : 112-148.5kHz
 Modulation : ASK

The above sample(s) and sample information was/were submitted and identified on behalf of the applicant.
 Eurofins assures objectivity and impartiality of the test, and fulfills the obligation of confidentiality for applicant's commercial information and technical documents.

Remark:

- P/N code in the below table, for marketing purpose, will be marked on the marking plate.

35278	35278P	35278X	35278A	35278B	35278U	35278JP	35278ZD	35278T
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1.7 Test standards

Test Standards	
FCC Part 15 Subpart C	PART 15 - RADIO FREQUENCY DEVICES Subpart C - Intentional Radiators

Test Method

- 1: ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.
- 2: ANSI C63.10-2020, American National Standard for Testing Unlicensed Wireless Devices.

2 Technical test

2.1 Summary of test results

No deviations from the technical specification(s) were ascertained in the course of the tests performed.



or

The deviations as specified were ascertained in the course of the tests performed.



2.2 Test environment

Ac line conducted

Enviroment Parameter	Temperature	Relative Humidity
101.2 kPa	24.2℃	57.3%

Radiated

Enviroment Parameter	Temperature	Relative Humidity
101.2 kPa	24.3℃	52.7%

2.3 Measurement uncertainty

The uncertainty is calculated using the methods suggested in the "Guide to the Expression of Uncertainty in Measurement" (GUM) published by ISO.

System Measurement Uncertainty	
Test Items	Extended Uncertainty
Uncertainty in conducted measurements	1.96dB
Uncertainty for Radiated Emission 9KHz-30MHz	4.56dB
Uncertainty for Radiated Emission 30MHz-3000MHz	Horizontal: 4.46dB; Vertical: 4.54dB;

2.4 Test mode

No.	Operating Mode
Mode 1	Wireless Output (Phone:5W)
Mode 2	Wireless Output (Phone:7.5W)
Mode 3	Wireless Output (Phone:10W)
Mode 4	Wireless Output (Phone:15W)
Mode 5	Wireless Output (TWS:5W)
Mode 6	Wireless Output (Phone:5W + TWS:5W)
Mode 7	Wireless Output (Phone:7.5W + TWS:5W)
Mode 8	Wireless Output (Phone:10W + TWS:5W)
Mode 9	Wireless Output (Phone:15W + TWS:5W)
Mode 10	Standby

Note:

Phone 5W: 112-148.5kHz

Phone 7.5W: 112-148.5kHz

Phone 10W: 112-148.5kHz

Phone 15W: 112-148.5kHz

TWS 5W: 112-148.5kHz

2.5 Test equipment utilized

EQUIPMENT ID	EQUIPMENT NAME	MODEL NO.	CAL. DUE DATE
23-2-10-63	Temperature & Humidity Meter	COS-03	2026-03-25
23-2-10-65	Barometer	Baro	2026-03-25
23-2-13-12	Signal Analyzer	N9010B-544	2026-03-25
23-2-10-43	Switch and Control Unit	ERIT-E-JS0806-2	2026-03-25
23-2-10-44	DC power supply	E3642A	2026-03-25
23-2-10-45	Temperature test chamber	SG-80-CC-2	2026-03-25
23-2-10-50	Temperature & Humidity Meter	COS-03	2026-03-25
23-2-10-66	Barometer	Baro	2026-03-25
23-2-13-01	EMI Test Receiver	ESR7	2026-03-25
23-2-13-02	Signal Analyzer	N9020B-544	2026-03-25
23-2-12-01	Active Loop Antenna	FMZB 1519B	2026-05-29
23-2-12-02	TRILOG Broadband Antenna	VULB9168	2026-05-29

2.6 Auxiliary Equipment Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.	S/N
Wireless charging load	YBZ	YBZ1.1	---
Wireless charging load	YBZ	YBZ3.0	---
Wireless charging load	YBZ	YBZ1.2	---

2.8 Test results

☒ 1st test

☐ test after modification

☐ production test

Technical Requirements				
FCC Part 15 Subpart C				
Test Condition		Test Result	Verdict	Test Site
§15.207	Conducted emission AC power port	See Page 11	Pass	Site 1
§15.209	Radiated Emission	See page 16	Pass	Site 1
§15.215 (c)	20dB Occupied bandwidth	See page 26	Pass	Site 1
§15.203	Antenna requirement	See note 1	Pass	--

Note 1: No antenna connector is used.

3 Technical Requirement

3.1 Conducted emission AC power port

Test Method:

The test method was referred to the subclause 6.2 of ANSI C63.10-2020.

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both Neutral and Live lines.

Limit:

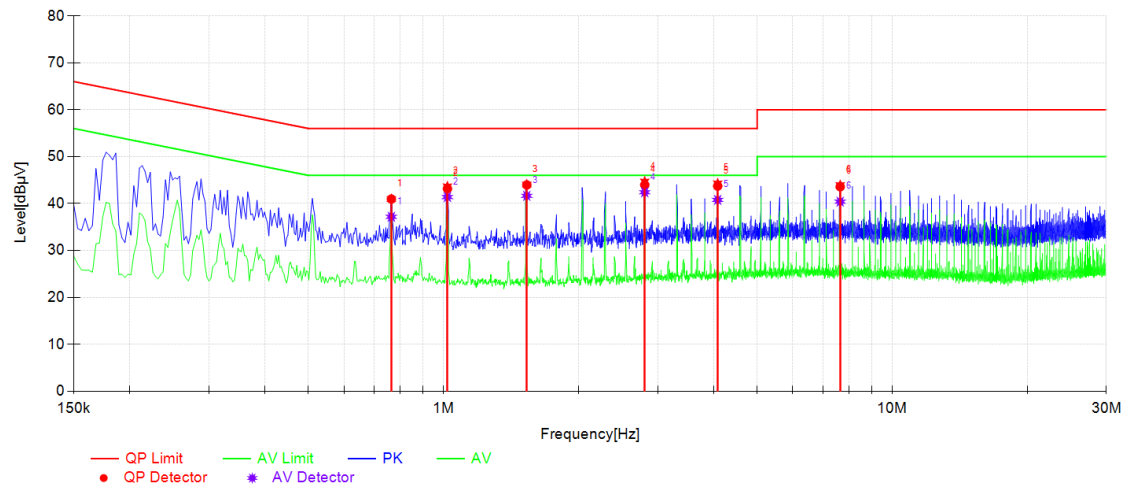
FCC §15.207 (a)

Frequency	QP Limit	AV Limit
MHz	dBμV	dBμV
0.150-0.500	66-56*	56-46*
0.500-5	56	46
5-30	60	50

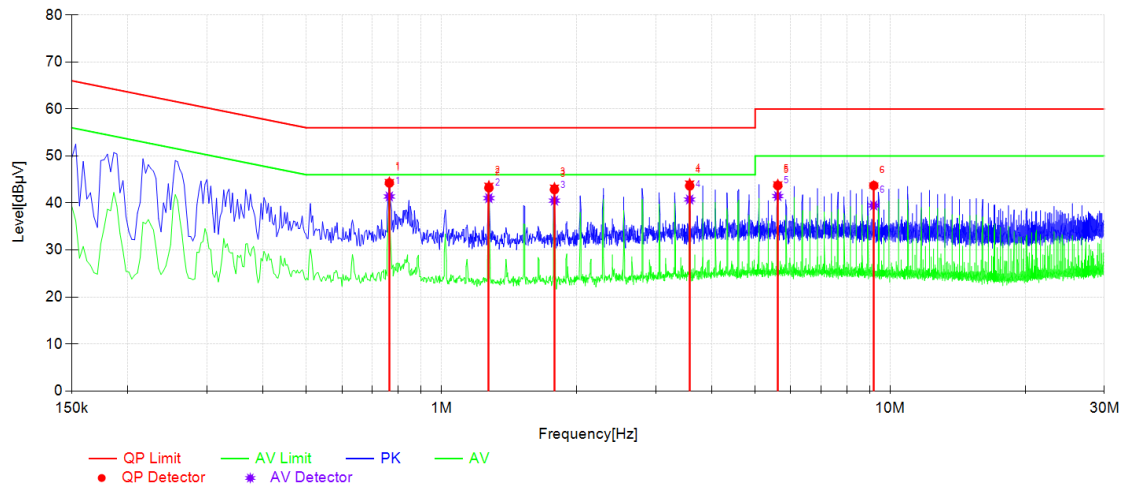
Decreasing linear.

Test Result:

All of the listed pre-test mode were tested, only the data of the worst mode(Mode7) is recorded in the report



Final Data List										
NO.	Freq. [MHz]	Factor [dB]	QP Value [dBμV]	QP Limit [dBμV]	QP Margin [dB]	AV Value [dBμV]	AV Limit [dBμV]	AV Margin [dB]	Type	Verdict
1	0.765	10.28	40.96	56.00	15.04	37.18	46.00	8.82	L1	PASS
2	1.02	10.36	43.18	56.00	12.82	41.40	46.00	4.60	L1	PASS
3	1.533	10.32	43.97	56.00	12.03	41.65	46.00	4.35	L1	PASS
4	2.808	10.29	43.97	56.00	12.03	42.41	46.00	3.59	L1	PASS
5	4.083	10.30	43.73	56.00	12.27	40.78	46.00	5.22	L1	PASS
6	7.656	10.42	43.60	60.00	16.40	40.41	50.00	9.59	L1	PASS



Final Data List										
NO.	Freq. [MHz]	Factor [dB]	QP Value [dBμV]	QP Limit [dBμV]	QP Margin [dB]	AV Value [dBμV]	AV Limit [dBμV]	AV Margin [dB]	Type	Verdict
1	0.765	10.26	44.26	56.00	11.74	41.39	46.00	4.61	N	PASS
2	1.275	10.29	43.24	56.00	12.76	41.04	46.00	4.96	N	PASS
3	1.785	10.35	42.85	56.00	13.15	40.51	46.00	5.49	N	PASS
4	3.573	10.40	43.64	56.00	12.36	40.74	46.00	5.26	N	PASS
5	5.616	10.41	43.71	60.00	16.29	41.46	50.00	8.54	N	PASS
6	9.189	10.43	43.71	60.00	16.29	39.48	50.00	10.52	N	PASS

3.2 Radiated emissions

Test Method:

Radiated Spurious Emissions Below 30MHz: ANSI C63.10-2020 Section 6.4

Radiated Spurious Emissions 30-1000MHz: ANSI C63.10-2020 Section 6.3 and 6.5

[For 9 kHz ~ 30 MHz]

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. 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. Parallel, perpendicular, and ground-parallel orientations 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. For measurement below 30MHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

NOTE:

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

[For above 30 MHz]

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) above the ground at 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. For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

Note:

- a. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
- b. All modes of operation were investigated and the worst-case emissions are reported.

Limit:

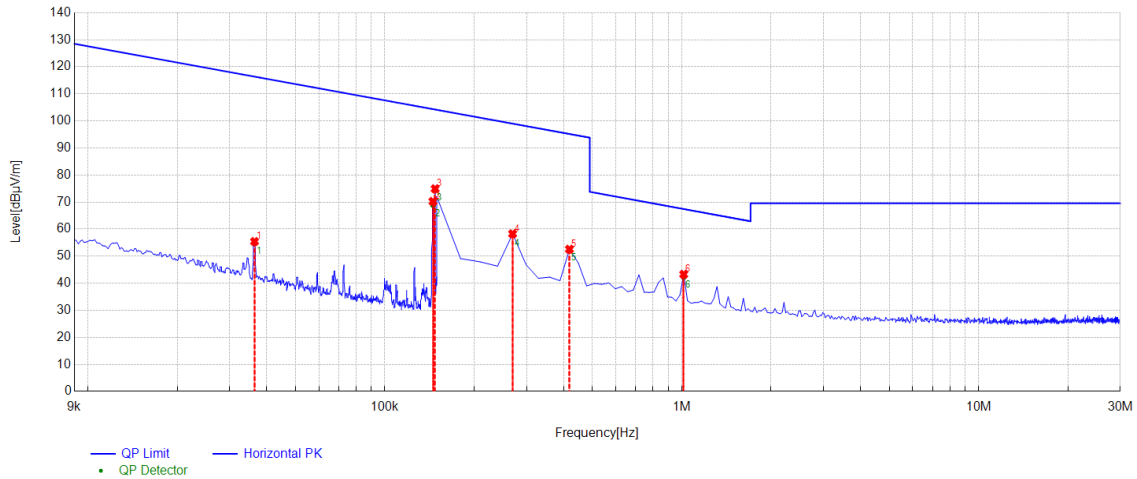
FCC §15.209

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
0.009-0.490	2400/F(kHz) @ 300 m	-
0.490-1.705	24000/F(kHz) @ 30 m	-
1.705 - 30	30 @ 30m	-
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

Test Result:

After pre-scan, the worst emission data was recorded.

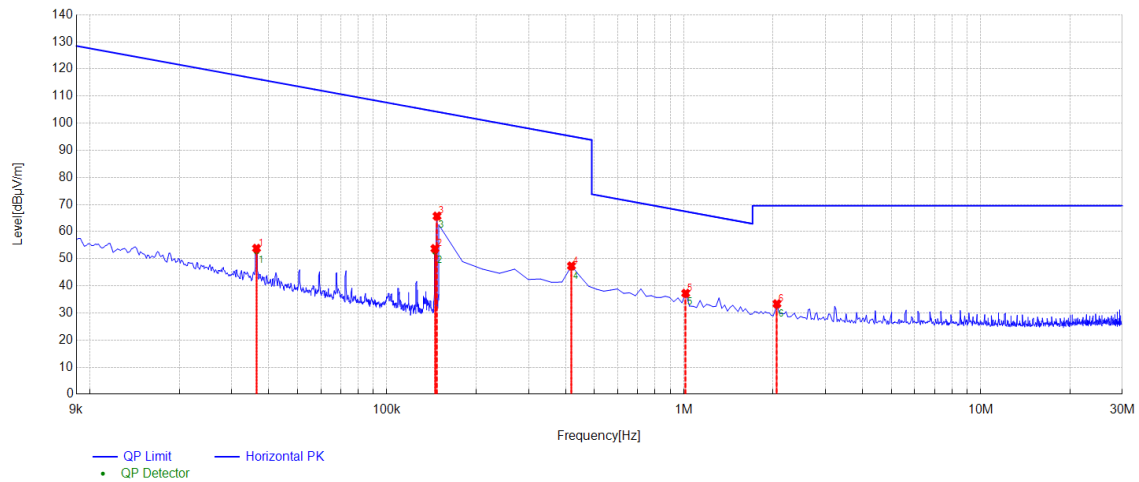
Mode 4



NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	0.0364	55.43	-12.91	116.38	60.95	100	132	X	PASS
2	0.1452	70.25	-12.79	104.36	34.11	100	360	X	PASS
3*	0.1477	74.92	-12.76	104.21	29.29	100	34	X	PASS
4*	0.2694	58.27	-11.52	98.99	40.72	100	346	X	PASS
5*	0.4186	52.57	-10.77	95.17	42.60	100	8	X	PASS
6	1.0156	43.30	-10.55	67.43	24.13	100	44	X	PASS

Remarks:

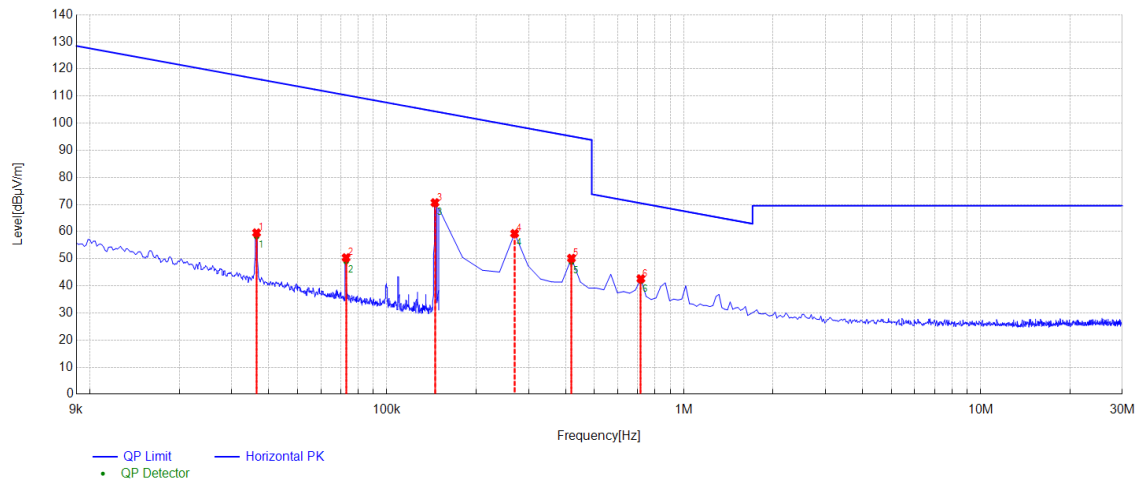
1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamplifier Factor (dB).
4. The other emission levels were very low against the limit.
5. "*" : Fundamental Frequency.



NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	0.0364	53.84	-12.91	116.38	62.54	100	347	Y	PASS
2	0.1452	53.74	-12.79	104.36	50.62	100	291	Y	PASS
3*	0.1476	65.72	-12.76	104.22	38.50	100	314	Y	PASS
4*	0.4186	47.34	-10.77	95.17	47.83	100	294	Y	PASS
5*	1.0156	37.25	-10.55	67.43	30.18	100	265	Y	PASS
6	2.0604	33.36	-10.43	69.50	36.14	100	83	Y	PASS

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamplifier Factor (dB).
4. The other emission levels were very low against the limit.
5. "*" : Fundamental Frequency.

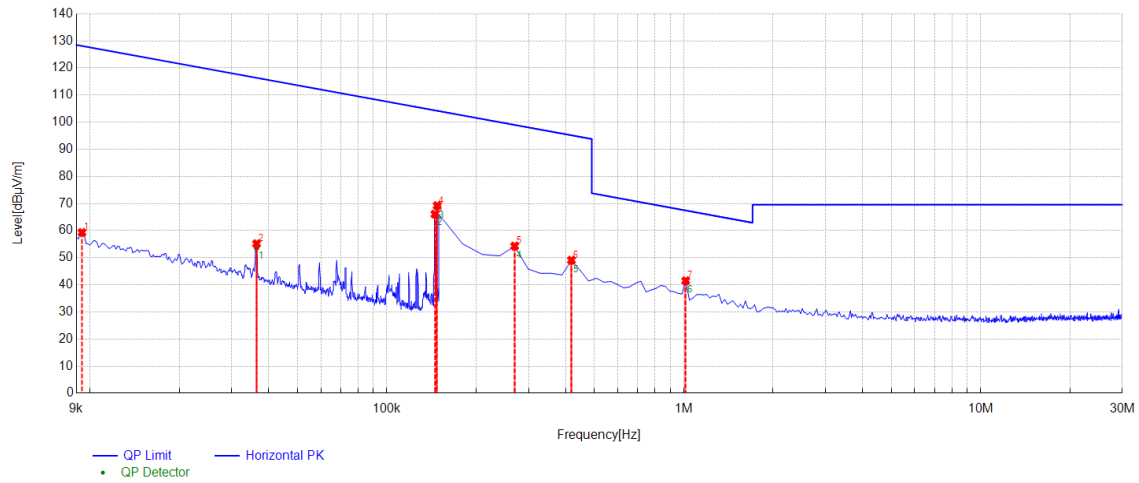


NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	0.0364	59.55	-12.91	116.38	56.83	100	360	Z	PASS
2	0.0729	50.38	-13.75	110.34	59.96	100	171	Z	PASS
3*	0.1452	70.68	-12.79	104.36	33.68	100	358	Z	PASS
4*	0.2694	59.30	-11.52	98.99	39.69	100	7	Z	PASS
5*	0.4186	50.16	-10.77	95.17	45.01	100	343	Z	PASS
6	0.7171	42.61	-10.31	70.47	27.86	100	339	Z	PASS

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The other emission levels were very low against the limit.
5. "*" : Fundamental Frequency.

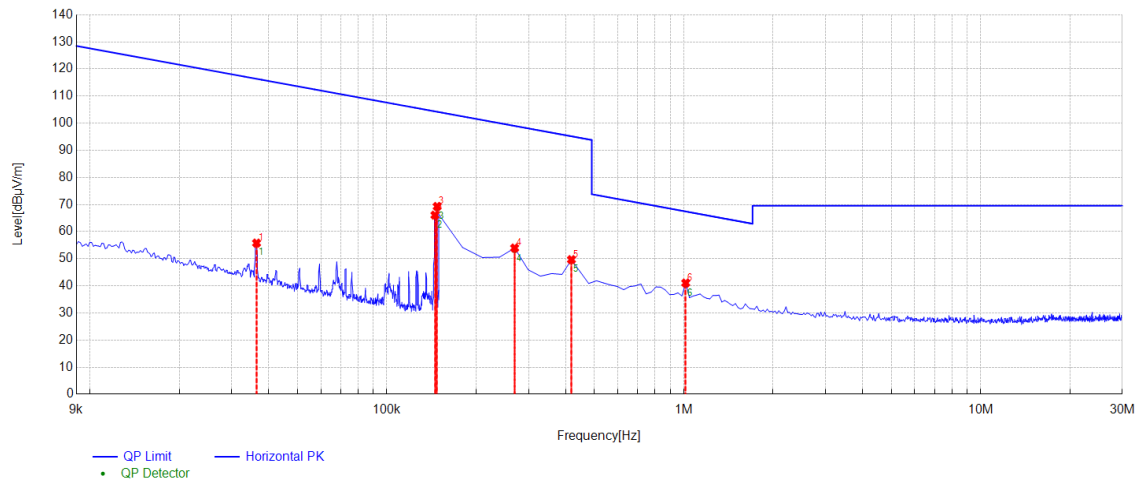
Mode 5



NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	0.0094	59.32	-9.27	128.10	68.78	100	317	X	PASS
2	0.0364	55.16	-12.91	116.38	61.22	100	253	X	PASS
3*	0.1452	66.07	-12.79	104.36	38.29	100	9	X	PASS
4*	0.1477	69.22	-12.76	104.21	34.99	100	304	X	PASS
5*	0.2694	54.28	-11.52	98.99	44.71	100	24	X	PASS
6	0.4186	49.08	-10.77	95.17	46.09	100	316	X	PASS
7*	1.0156	41.49	-10.55	67.43	25.94	100	283	X	PASS

Remarks:

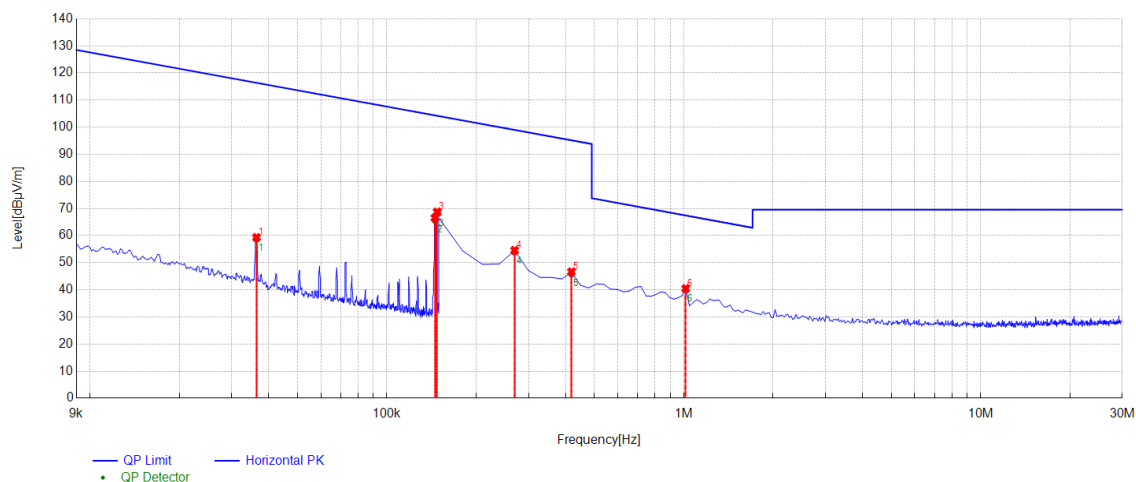
1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamplifier Factor (dB).
4. The other emission levels were very low against the limit.
5. "*" : Fundamental Frequency.



NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	0.0364	55.77	-12.91	116.38	60.61	100	62	Y	PASS
2	0.1452	66.07	-12.79	104.36	38.29	100	11	Y	PASS
3*	0.1477	69.28	-12.76	104.21	34.93	100	304	Y	PASS
4*	0.2694	53.95	-11.52	98.99	45.04	100	58	Y	PASS
5*	0.4186	49.67	-10.77	95.17	45.50	100	337	Y	PASS

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The other emission levels were very low against the limit.
5. "*" : Fundamental Frequency.

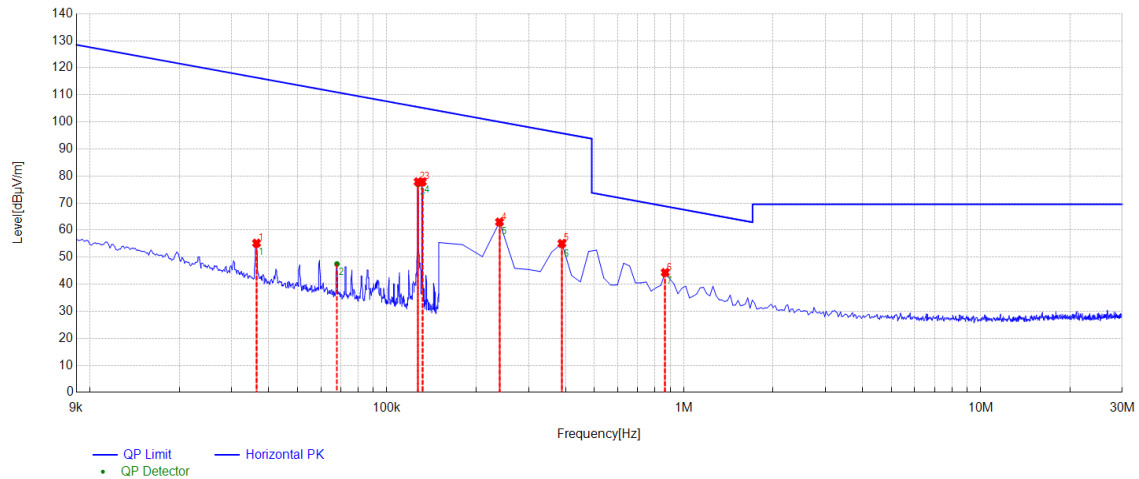


NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	0.0364	59.32	-12.91	116.38	57.06	100	177	Z	PASS
2	0.1452	66.55	-12.79	104.36	37.81	100	1	Z	PASS
3*	0.1477	68.73	-12.76	104.21	35.48	100	321	Z	PASS
4*	0.2694	54.56	-11.52	98.99	44.43	100	347	Z	PASS
5*	0.4186	46.63	-10.77	95.17	48.54	100	318	Z	PASS
6	1.0156	40.46	-10.55	67.43	26.97	100	306	Z	PASS

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The other emission levels were very low against the limit.
5. "*" : Fundamental Frequency.

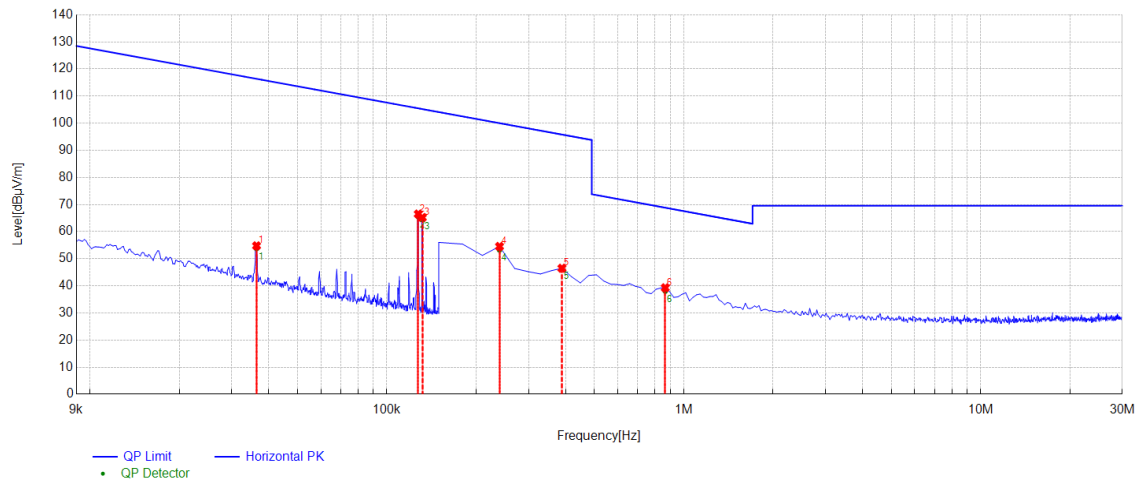
Mode 9



NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	0.0364	55.18	-12.91	116.38	61.20	100	191	X	PASS
2	0.1274	77.87	-13.02	105.49	27.62	100	0	X	PASS
3*	0.1317	77.86	-12.97	105.21	27.35	100	0	X	PASS
4*	0.2396	63.00	-11.81	100.01	37.01	100	360	X	PASS
5*	0.3888	55.08	-10.88	95.81	40.73	100	352	X	PASS
6	0.8664	44.34	-10.36	68.82	24.48	100	20	X	PASS

Remarks:

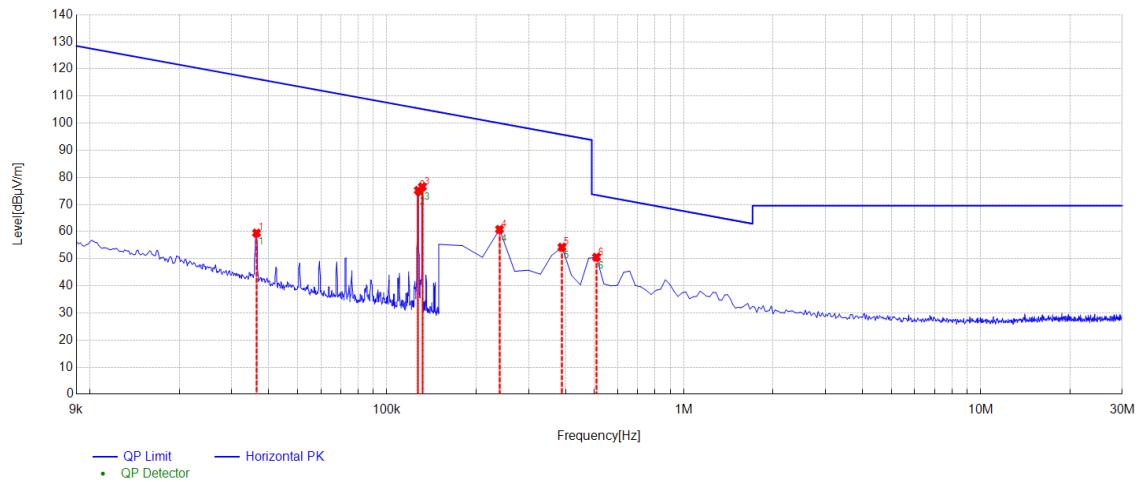
1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The other emission levels were very low against the limit.
5. "*" : Fundamental Frequency.



NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	0.0364	54.77	-12.91	116.38	61.61	100	111	Y	PASS
2	0.1276	66.49	-13.02	105.48	38.99	100	86	Y	PASS
3*	0.1317	65.18	-12.97	105.21	40.03	100	82	Y	PASS
4*	0.2396	54.54	-11.81	100.01	45.47	100	309	Y	PASS
5*	0.3888	46.48	-10.88	95.81	49.33	100	283	Y	PASS
6	0.8664	39.28	-10.36	68.82	29.54	100	72	Y	PASS

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The other emission levels were very low against the limit.
5. “*” : Fundamental Frequency.

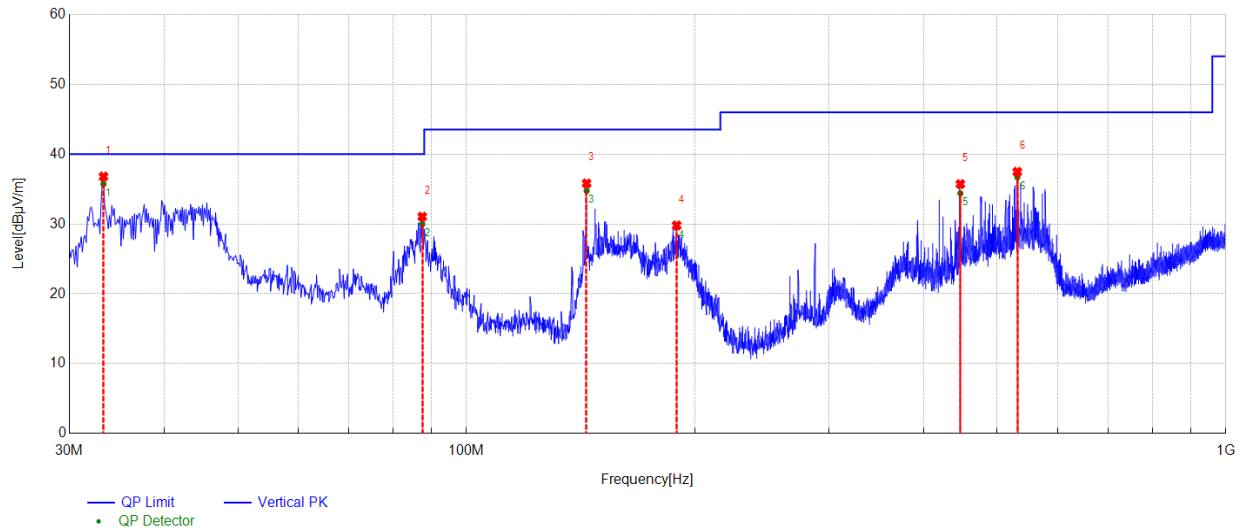


NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	0.0364	59.48	-12.91	116.38	56.90	100	144	Z	PASS
2	0.1276	75.21	-13.02	105.48	30.27	100	346	Z	PASS
3*	0.1317	76.57	-12.97	105.21	28.64	100	0	Z	PASS
4*	0.2396	60.83	-11.81	100.01	39.18	100	360	Z	PASS
5*	0.3888	54.25	-10.88	95.81	41.56	100	345	Z	PASS
6	0.5082	50.54	-10.48	73.48	22.94	100	354	Z	PASS

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).
4. The other emission levels were very low against the limit.
5. "*" : Fundamental Frequency.

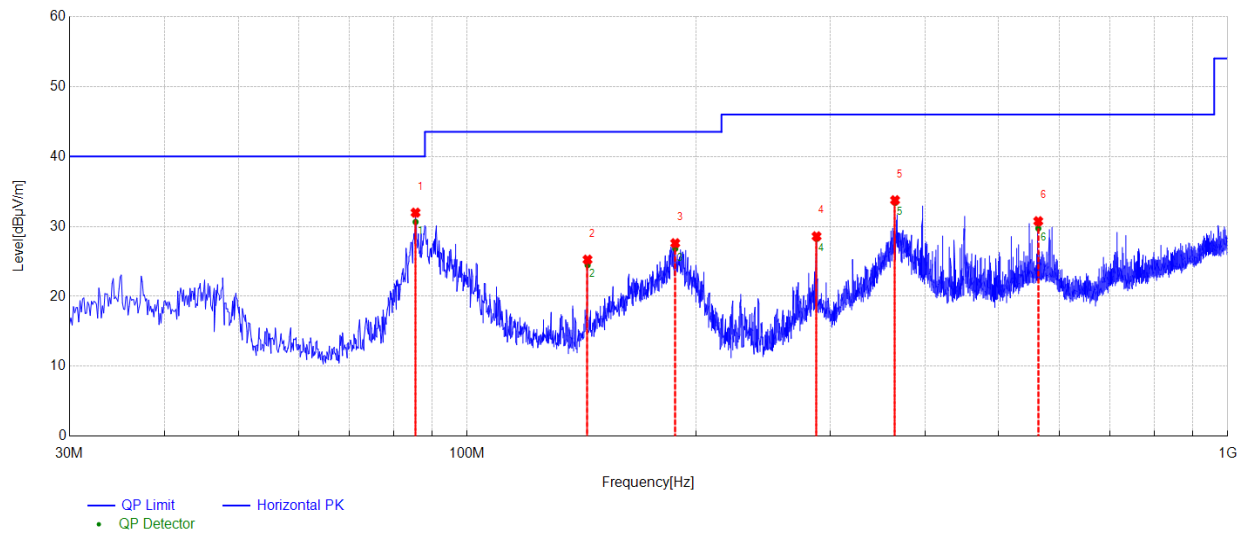
30-1000MHz
Mode 8



NO.	Freq. [MHz]	Level [dBuV/m]	Factor [dB/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	33.2738	36.79	-16.29	40.00	3.21	100	187	Vertical	PASS
2	87.4725	31.05	-20.29	40.00	8.95	100	26	Vertical	PASS
3	143.975	35.81	-16.26	43.50	7.69	100	105	Vertical	PASS
4	189.201	29.80	-18.50	43.50	13.70	100	121	Vertical	PASS
5	447.100	35.72	-12.02	46.00	10.28	100	141	Vertical	PASS
6	531.368	37.47	-10.73	46.00	8.53	100	5	Vertical	PASS

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).



NO.	Freq. [MHz]	Level [dBuV/m]	Factor [dB/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	85.5325	31.97	-20.18	40.00	8.03	200	1	Horizontal	PASS
2	143.975	25.26	-16.26	43.50	18.24	200	72	Horizontal	PASS
3	187.746	27.61	-18.27	43.50	15.89	100	298	Horizontal	PASS
4	288.020	28.59	-16.49	46.00	17.41	100	250	Horizontal	PASS
5	365.256	33.75	-14.50	46.00	12.25	100	80	Horizontal	PASS
6	563.500	30.75	-9.60	46.00	15.25	200	79	Horizontal	PASS

Remarks:

1. Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
2. Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
3. Correction Factor (dB/m) = Antenna Factor (dBuV/m) + Cable Loss (dB) - Preamp Factor (dB).

3.3 20dB Occupied bandwidth

Test Method:

The test method was referred to the subclause 6.9.2 of ANSI C63.10-2020.

The occupied bandwidth is measured as the width of the spectral envelope of the modulated signal, at an amplitude level reduced from a reference value by a specified ratio (or in decibels, a specified number of dB down from the reference value). Typical ratios, expressed in dB, are -6 dB, -20 dB, and -26 dB, corresponding to 6 dB BW, 20 dB BW, and 26 dB BW, respectively. In this subclause, the ratio is designated by “-xx dB.” The reference value is either the level of the unmodulated carrier or the highest level of the spectral envelope of the modulated signal, as stated by the applicable requirement. Some requirements might specify a specific maximum or minimum value for the “-xx dB” bandwidth; other requirements might specify that the “-xx dB” bandwidth be entirely contained within the authorized or designated frequency band.

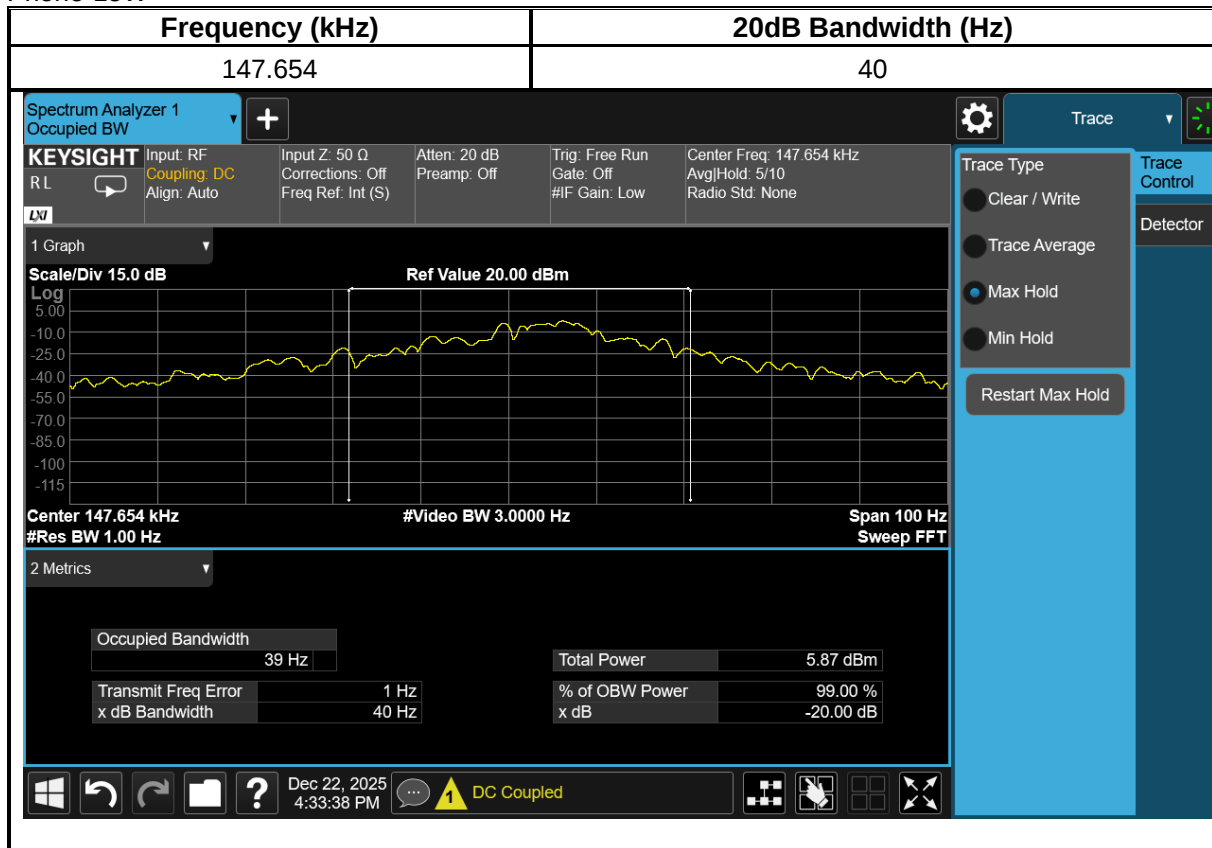
- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the EMI receiver or spectrum analyzer shall be between two times and five times the OBW.
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and 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). 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).

Limit:

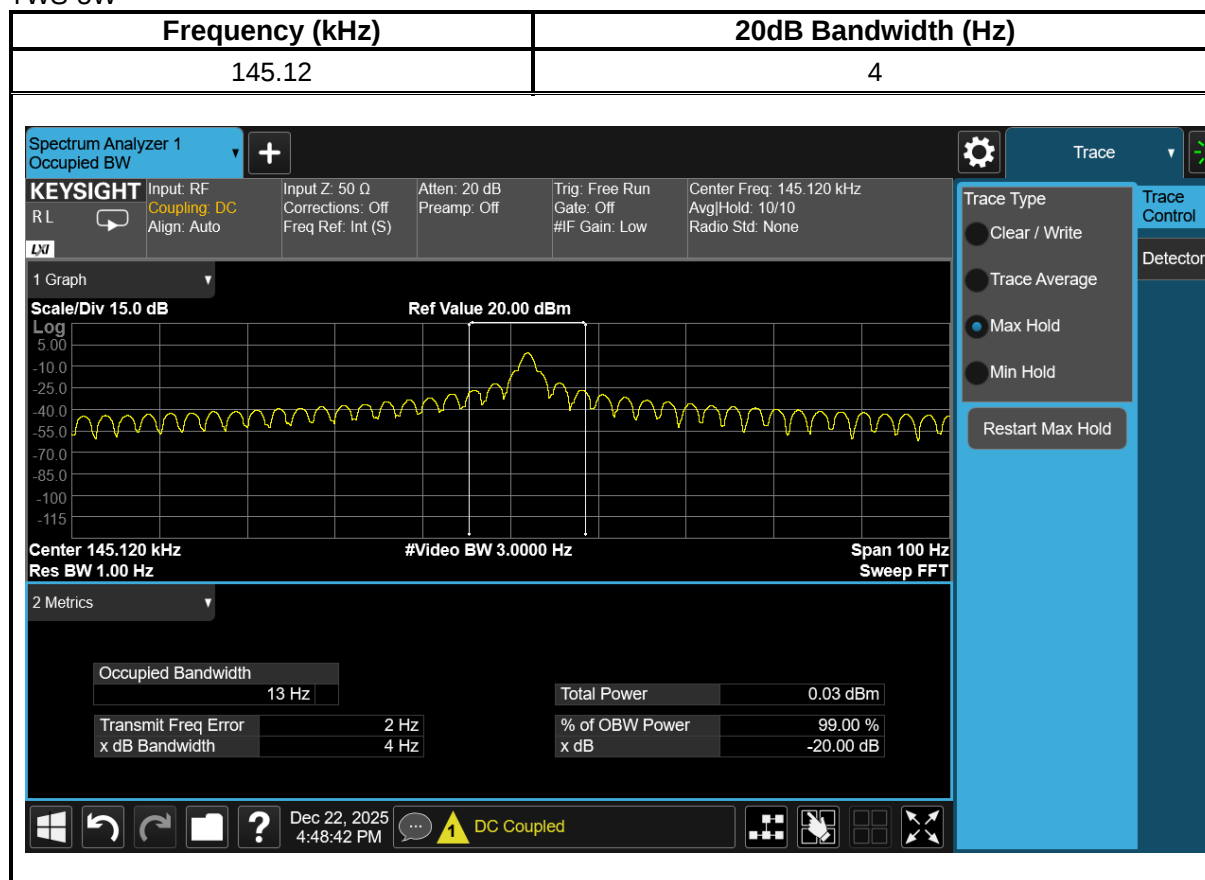
The field strength of any emissions appearing between the band edges and out of band shall be attenuated at least 20 dB below the level of the unmodulated carrier or to the general limits in Section 15.209.

Test Result:

Phone-15W



TWS-5W



-End of report-