



FCC TEST REPORT

FCC ID:2A9NX-WCF021

Report Number..... : ZKT-24123019892E

Date of Test..... Dec. 30, 2024 to Jan. 15, 2025

Date of issue : Jan. 15, 2025

Total number of pages 29

Test Result : PASS

Testing Laboratory..... : Shenzhen ZKT Technology Co., Ltd.

Address 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

Applicant's name : Huizhou OJD Technology Co., Ltd

Address 7F, Building 20, Zoina Hi-tech Industrial Park, No.6 xinhua Avenue, Chenjiang Street, Zhongkai High-tech Zone, Huizhou city, Guangdong Province, China.

Manufacturer's name : Huizhou OJD Technology Co., Ltd

Address 7F, Building 20, Zoina Hi-tech Industrial Park, No.6 xinhua Avenue, Chenjiang Street, Zhongkai High-tech Zone, Huizhou city, Guangdong Province, China.

Test specification:

Standard..... : FCC CFR Title 47 Part 15 Subpart C

Test procedure..... : /

Non-standard test method : N/A

Test Report Form No. : TRF-EL-107_V0

Test Report Form(s) Originator : ZKT Testing

Master TRF : Dated: 2020-01-06

This device described above has been tested by ZKT, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

This report shall not be reproduced except in full, without the written approval of ZKT, this document may be altered or revised by ZKT, personal only, and shall be noted in the revision of the document.

Product name..... : Wireless Charger

Trademark : Hiveact

Model/Type reference : WCF021

Ratings..... Input: 12V  0.5-2A
Wireless Charging Output: 20W(4*5W)



Testing procedure and testing location:

Testing Laboratory : **Shenzhen ZKT Technology Co., Ltd.**

Address : 1/F, No. 101, Building B, No. 6, Tangwei Community
Industrial Avenue, Fuhai Street, Bao'an District,
Shenzhen, China

Tested by (name + signature) : **Jim Liu**

Reviewer (name + signature) : **Jeff Fu**

Approved (name + signature) : **Lake Xie**





TABLE OF CONTENTS

1. VERSION	4
2. TEST SUMMARY	5
2.1 TEST FACILITY	6
2.2 MEASUREMENT UNCERTAINTY	6
3. GENERAL INFORMATION	7
3.1 GENERAL DESCRIPTION OF EUT	7
3.2 Test mode	7
3.3 Block Diagram of EUT Configuration	8
3.4 Test Conditions	8
3.5 Description Of Support Units (Conducted Mode)	8
3.6 EQUIPMENTS LIST FOR ALL TEST ITEMS	9
4. CONDUCTED EMISSION TEST	11
4.1 CONDUCTED EMISSION MEASUREMENT	11
4.1.1 POWER LINE CONDUCTED EMISSION Limits	11
4.1.2 TEST PROCEDURE	11
4.1.3 DEVIATION FROM TEST STANDARD	11
4.1.4 TEST SETUP	12
4.1.5 EUT OPERATING CONDITIONS	12
4.1.6 Test Result	13
5. RADIATED EMISSION MEASUREMENT	15
5.1 Radiated Emission Limits	15
5.2 Anechoic Chamber Test Setup Diagram	16
5.3 Test Procedure	16
5.4 DEVIATION FROM TEST STANDARD	17
5.5 Test Result	17
6. BANDWIDTH TEST	24
7. ANTENNA REQUIREMENT	28
8. TEST SETUP PHOTO	29
9. EUT CONSTRUCTIONAL DETAILS	29



1. VERSION

Report No.	Version	Description	Approved
ZKT-24123019892E	Rev.01	Initial issue of report	Jan. 15, 2025



2. TEST SUMMARY

Test Item	Section in CFR 47	Result
Antenna requirement	15.203	Pass
AC Power Line Conducted Emission	15.207	Pass
Spurious Emission	15.209(a)(f)	Pass
20dB Bandwidth	15.215	Pass

NOTE:
(1) "N/A" denotes test is not applicable in this Test Report



2.1 TEST FACILITY

Shenzhen ZKT Technology Co., Ltd.
Add. : 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

FCC Test Firm Registration Number: 692225
Designation Number: CN1299
IC Registered No.: 27033
CAB identifier: CN0110

2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	3m camber Radiated spurious emission(9KHz-30MHz)	U=4.5dB
2	3m camber Radiated spurious emission(30MHz-1GHz)	U=4.8dB
3	3m chamber Radiated spurious emission(1GHz-6GHz)	U=4.9dB
4	3m chamber Radiated spurious emission(6GHz-40GHz)	U=5.0dB
5	Conducted disturbance	U=3.2dB
6	RF conducted Spurious Emission	U=2.2dB
7	RF Occupied Bandwidth	U=1.8MHz
8	humidity uncertainty	U=5.3%
-	Temperature uncertainty	U=0.59℃



3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Product Name:	Wireless Charger
Model No.:	WCF021
Serial No.:	N/A
Model Difference:	N/A
Hardware version:	N/A
Software version:	N/A
Operation Frequency:	115kHz-205kHz
Modulation type:	ASK
Antenna Type:	loop coil antenna
Antenna gain:	0dBi
Ratings:	Input: 12V  0.5-2A Wireless Charging Output: 20W(4*5W)
Test description:	Phone Battery > 98%, =50% and < 1% are tested, and the worst is < 1%.

3.2 Test mode

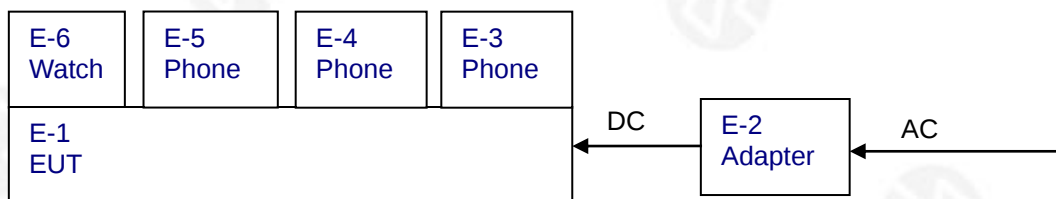
To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Test Modes:	Description:
ANT1+ANT2+ ANT3+ANT4	Mode 1: AC/DC Adapter+EUT + iPhone *4(Battery Status:<1%)
	Mode 2: AC/DC Adapter+EUT + iPhone *4(Battery Status:=50%)
	Mode 3: AC/DC Adapter+EUT + iPhone *4(Battery Status:<100%)
ANT1	Mode 4 :AC/DC Adapter+EUT + iPhone (Battery Status:<1%)
	Mode 5: AC/DC Adapter+EUT + iPhone (Battery Status:=50%)
	Mode 6: AC/DC Adapter+EUT + iPhone (Battery Status:<100%)
ANT2	Mode 7:AC/DC Adapter+EUT + iPhone (Battery Status:<1%)
	Mode 8:AC/DC Adapter+EUT+ iPhone (Battery Status:=50%)
	Mode 9:AC/DC Adapter+EUT + iPhone (Battery Status:<100%)
ANT3	Mode 10 :AC/DC Adapter+EUT + iPhone (Battery Status:<1%)
	Mode 11: AC/DC Adapter+EUT + iPhone (Battery Status:=50%)
	Mode 12: AC/DC Adapter+EUT + iPhone (Battery Status:<100%)
ANT4	Mode 13 :AC/DC Adapter+EUT + iPhone (Battery Status:<1%)
	Mode 14: AC/DC Adapter+EUT + iPhone (Battery Status:=50%)
	Mode 15: AC/DC Adapter+EUT + iPhone (Battery Status:<100%)
No Loads	AC/DC Adapter+EUT

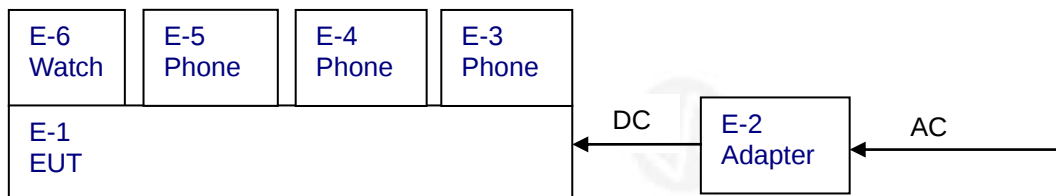


3.3 Block Diagram of EUT Configuration

Conducted Emission



Radiated Emission



3.4 Test Conditions

Temperature: 23~26°C

Relative Humidity: 54~63 %

3.5 Description Of Support Units (Conducted Mode)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E1	Wireless Charger	Hiveact	WCF021	N/A	EUT
E2	AC ADAPTOR	HUAWEI	P0011	N/A	Auxiliary
E3	Phone	Apple	iPhone 13	N/A	Auxiliary
E4	Phone	Apple	iPhone 13	N/A	Auxiliary
E5	Phone	Apple	iPhone 13 Pro	N/A	Auxiliary
E6	Phone	Apple	iPhone 13 Pro	N/A	Auxiliary

Item	Shielded Type	Ferrite Core	Length	Note
C1	NO	NO	0.6M	DC cable unshielded

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
- (3) “YES” is means “shielded” “with core”; “NO” is means “unshielded” “without core”.



3.6 EQUIPMENTS LIST FOR ALL TEST ITEMS

Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	LISN	R&S	ENV216	101471	N/A	Sep. 30, 2024	Sep. 29, 2025
2	LISN	CYBERTEK	EM5040A	E1850400149	N/A	Sep. 30, 2024	Sep. 29, 2025
3	Test Cable	N/A	C-01	N/A	N/A	Sep. 30, 2024	Sep. 29, 2025
4	EMI Test Receiver	R&S	ESCI3	101393	4.42 SP3	Sep. 29, 2024	Sep. 28, 2025
5	EMC Software	Frad	EZ-EMC	Ver.EMC-CON 3A1.1	N/A	\	\

Radiation Test equipment

Item	Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	KEYSIGHT	N9020A	MY55370835	A.17.05	Sep. 29, 2024	Sep. 28, 2025
2	Spectrum Analyzer (10kHz-39.9GHz)	R&S	FSV40-N	100363	1.71 SP2	Sep. 30, 2024	Sep. 29, 2025
3	EMI Test Receiver (9kHz-7GHz)	R&S	ESCI7	100969	4.32	Sep. 29, 2024	Sep. 28, 2025
4	Bilog Antenna (30MHz-1500MHz)	Schwarzbeck	VULB9168	00877	N/A	Sep. 30, 2024	Sep. 29, 2025
5	Horn Antenna (1GHz-18GHz)	Agilent	AH-118	071145	N/A	Sep. 30, 2024	Sep. 29, 2025
6	Horn Antenna (15GHz-40GHz)	A.H.System	SAS-574	588	N/A	Sep. 30, 2024	Sep. 29, 2025
7	Loop Antenna	TESEQ	HLA6121	58357	N/A	Oct. 11, 2024	Oct. 10, 2025
8	Amplifier (30-1000MHz)	EM Electronics	EM330 Amplifier	60747	N/A	Sep. 29, 2024	Sep. 28, 2025
9	Amplifier (1GHz-26.5GHz)	HuiPu	8449B	3008A00315	N/A	Sep. 29, 2024	Sep. 28, 2025
10	Amplifier (500MHz-40GHz)	QuanJuDa	DLE-161	097	N/A	Sep. 30, 2024	Sep. 29, 2025
11	Test Cable	N/A	R-01	N/A	N/A	Sep. 30, 2024	Sep. 29, 2025
12	Test Cable	N/A	R-02	N/A	N/A	Sep. 30, 2024	Sep. 29, 2025
13	Test Cable	N/A	R-03	N/A	N/A	Sep. 30, 2024	Sep. 29, 2025
14	D.C. Power Supply	LongWei	TPR-6405D	N/A	N/A	Sep. 29, 2024	Sep. 28, 2025
15	EMC Software	Frad	EZ-EMC	Ver.EMC-CO N 3A1.1	N/A	\	\
16	Turntable	MF	MF-7802BS	N/A	N/A	\	\
17	Antenna tower	MF	MF-7802BS	N/A	N/A	\	\



RF Test equipment

Item	Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	KEYSIGHT	N9020A	MY55370835	A.17.05	Sep. 29, 2024	Sep. 28, 2025
2	Spectrum Analyzer (10kHz-39.9GHz)	R&S	FSV40-N	100363	1.71 SP2	Sep. 30, 2024	Sep. 29, 2025
3	Test Cable	N/A	RF-01	N/A	N/A	Sep. 30, 2024	Sep. 29, 2025
4	Test Cable	N/A	RF-02	N/A	N/A	Sep. 30, 2024	Sep. 29, 2025
5	Test Cable	N/A	RF-03	N/A	N/A	Sep. 30, 2024	Sep. 29, 2025
6	ESG Signal Generator	Agilent	E4421B	GB40051203	B.03.84	Sep. 29, 2024	Sep. 28, 2025
7	Signal Generator	Agilent	N5182A	MY47420215	A.01.87	Sep. 29, 2024	Sep. 28, 2025
8	Magnetic Field Probe Tester	Narda	ELT-400	0-0344	N/A	Sep. 29, 2024	Sep. 28, 2025
9	Van der Hoofden measuring head	Schwarzbeck Mess-elektronik	VDHH 9502	9502-039	N/A	Sep. 30, 2024	Sep. 29, 2025
10	Wideband Radio Communication Test	R&S	CMW500	106504	V 3.7.22	Sep. 30, 2024	Sep. 29, 2025
11	MWRF Power Meter Test system	MW	MW100-RF CB	10371	N/A	Sep. 29, 2024	Sep. 28, 2025
12	Power Meter	KEYSIGHT	N1912AP	926431	A.05.00	Sep. 29, 2024	Sep. 28, 2025
13	D.C. Power Supply	LongWei	TPR-6405 D	GQ7516	N/A	Sep. 29, 2024	Sep. 28, 2025
14	RF Software	MW	MTS8310	V2.0.0.0	N/A	\	\



4. CONDUCTED EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.207
Test Method:	ANSI C63.10:2013
Test Frequency Range:	150KHz to 30MHz
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto

4.1.1 POWER LINE CONDUCTED EMISSION Limits

FREQUENCY (MHz)	Limit (dBuV)		Standard
	Quas -peak	Average	
0.15 -0.5	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	56.00	46.00	FCC
5.0 -30.0	60.00	50.00	FCC

Note:

(1) *Decreases with the logarithm of the frequency.

4.1.2 TEST PROCEDURE

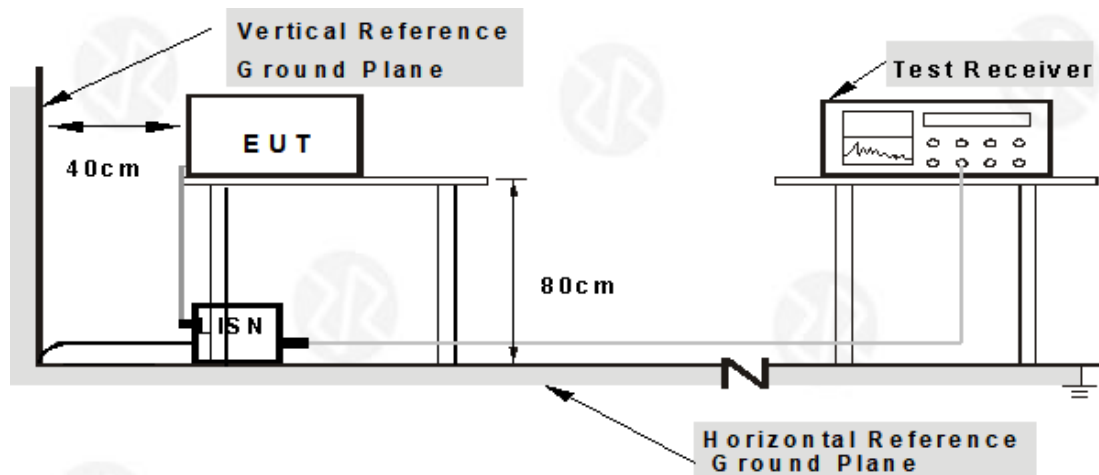
- The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.1.3 DEVIATION FROM TEST STANDARD

No deviation



4.1.4 TEST SETUP



- Note:** 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

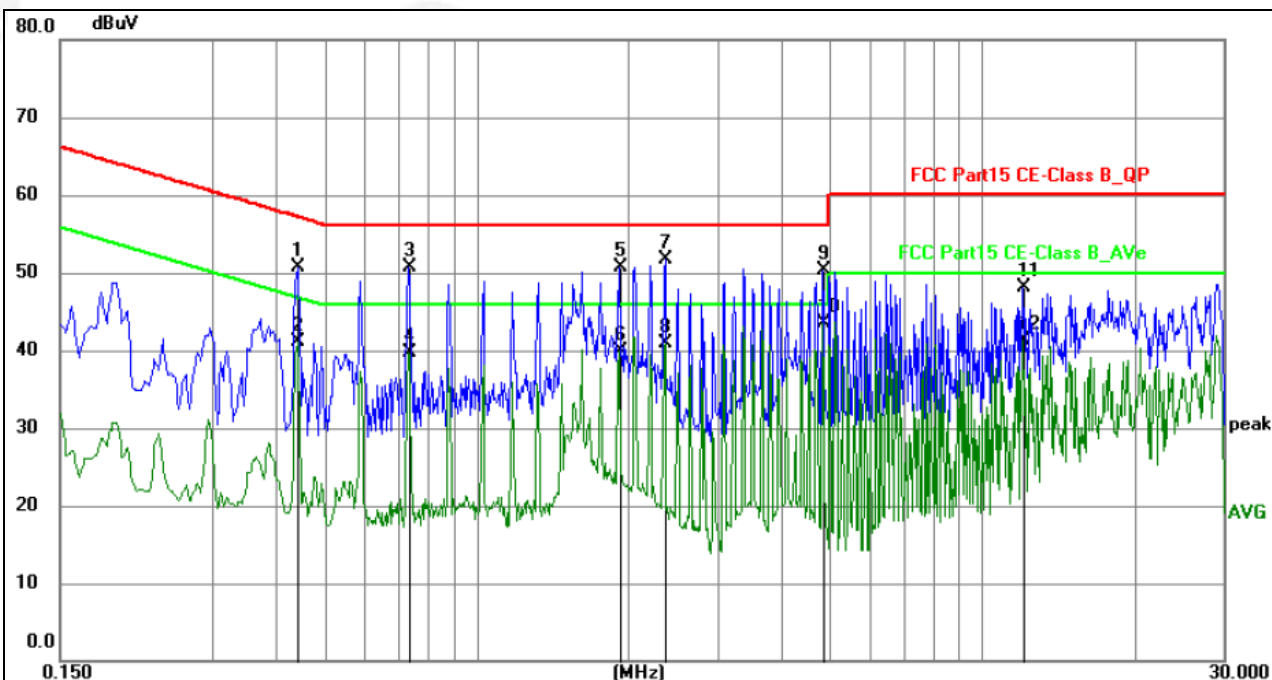
4.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.



4.1.6 Test Result

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101kPa	Phase :	L
Test Voltage :	AC 120V/60Hz	Test Mode:	Mode 1



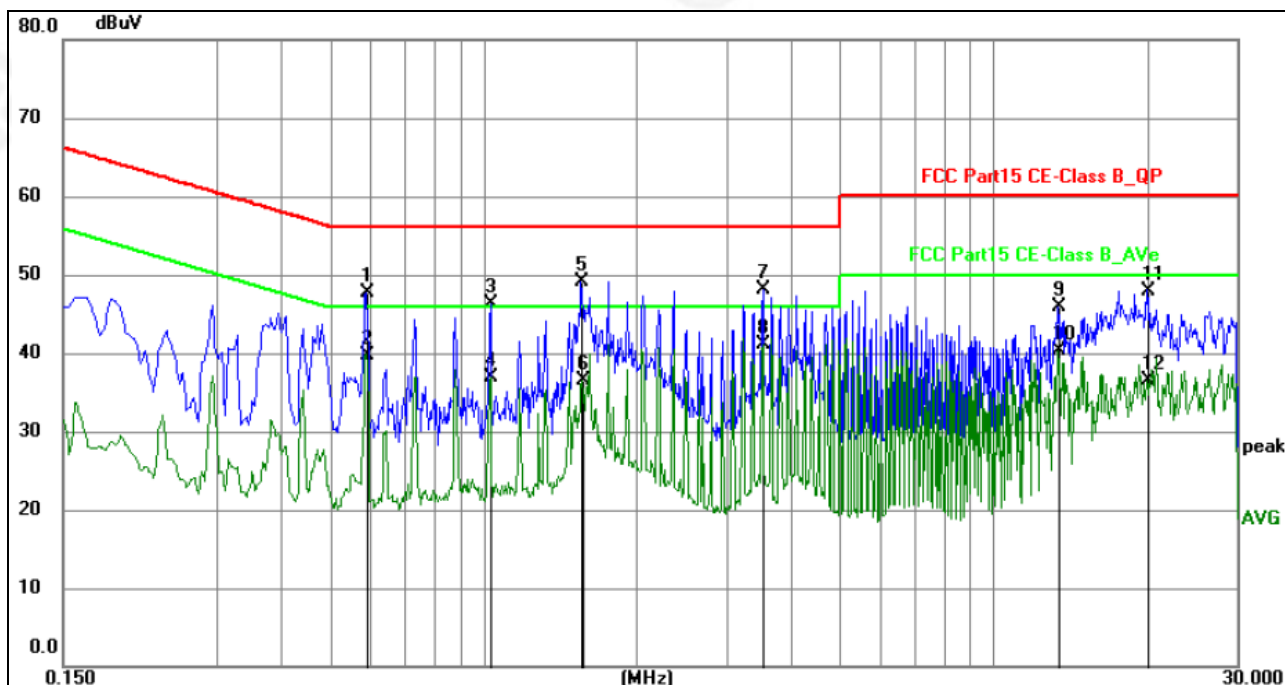
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.4425	30.31	20.31	50.62	57.01	-6.39	QP	P
2	0.4425	20.73	20.31	41.04	47.01	-5.97	AVG	P
3	0.7349	30.46	20.29	50.75	56.00	-5.25	QP	P
4	0.7349	19.40	20.29	39.69	46.00	-6.31	AVG	P
5	1.9184	30.39	20.31	50.70	56.00	-5.30	QP	P
6	1.9184	19.53	20.31	39.84	46.00	-6.16	AVG	P
7	2.3594	31.47	20.32	51.79	56.00	-4.21	QP	P
8	2.3594	20.54	20.32	40.86	46.00	-5.14	AVG	P
9	4.8435	29.98	20.36	50.34	56.00	-5.66	QP	P
10	4.8435	23.23	20.36	43.59	46.00	-2.41	AVG	P
11	12.0390	27.69	20.47	48.16	60.00	-11.84	QP	P
12	12.0390	20.82	20.47	41.29	50.00	-8.71	AVG	P

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Measurement Level = Reading level + Correct Factor



Temperature:	26°C	Relative Humidity:	54%
Pressure:	101kPa	Phase :	N
Test Voltage :	AC 120V/60Hz	Test Mode:	Mode 1



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.5909	27.32	20.30	47.62	56.00	-8.38	QP	P
2	0.5909	19.50	20.30	39.80	46.00	-6.20	AVG	P
3	1.0319	26.00	20.30	46.30	56.00	-9.70	QP	P
4	1.0319	16.61	20.30	36.91	46.00	-9.09	AVG	P
5	1.5539	28.88	20.30	49.18	56.00	-6.82	QP	P
6	1.5629	16.11	20.30	36.41	46.00	-9.59	AVG	P
7	3.5385	27.72	20.33	48.05	56.00	-7.95	QP	P
8	3.5385	20.71	20.33	41.04	46.00	-4.96	AVG	P
9	13.3620	25.46	20.49	45.95	60.00	-14.05	QP	P
10	13.3620	19.83	20.49	40.32	50.00	-9.68	AVG	P
11	20.0490	27.47	20.53	48.00	60.00	-12.00	QP	P
12	20.0490	15.92	20.53	36.45	50.00	-13.55	AVG	P

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Measurement Level = Reading level + Correct Factor



5. RADIATED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.209				
Test Method:	ANSI C63.10:2013				
Test Frequency Range:	9kHz to 1GHz				
Test site:	Measurement Distance: 3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Value
	9KHz-150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak
	150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
	30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10Hz	Average

5.1 Radiated Emission Limits

Limits for frequency below 30MHz

Frequency	Limit (uV/m)	Measurement Distance(m)	Remark
0.009-0.490	2400/F(kHz)	300	Quasi-peak Value
0.490-1.705	24000/F(kHz)	30	Quasi-peak Value
1.705-30	30	30	Quasi-peak Value

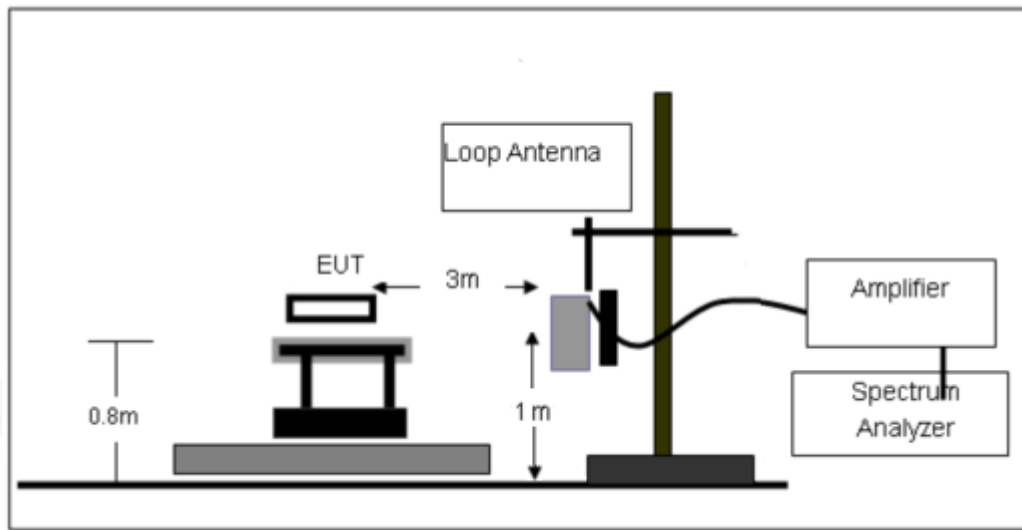
Limits for frequency Above 30MHz

Frequency	Limit (dBuV/m @3m)	Remark
30MHz-88MHz	40.00	Quasi-peak Value
88MHz-216MHz	43.50	Quasi-peak Value
216MHz-960MHz	46.00	Quasi-peak Value
960MHz-1GHz	54.00	Quasi-peak Value
Above 1GHz	54.00	Average Value
	74.00	Peak Value

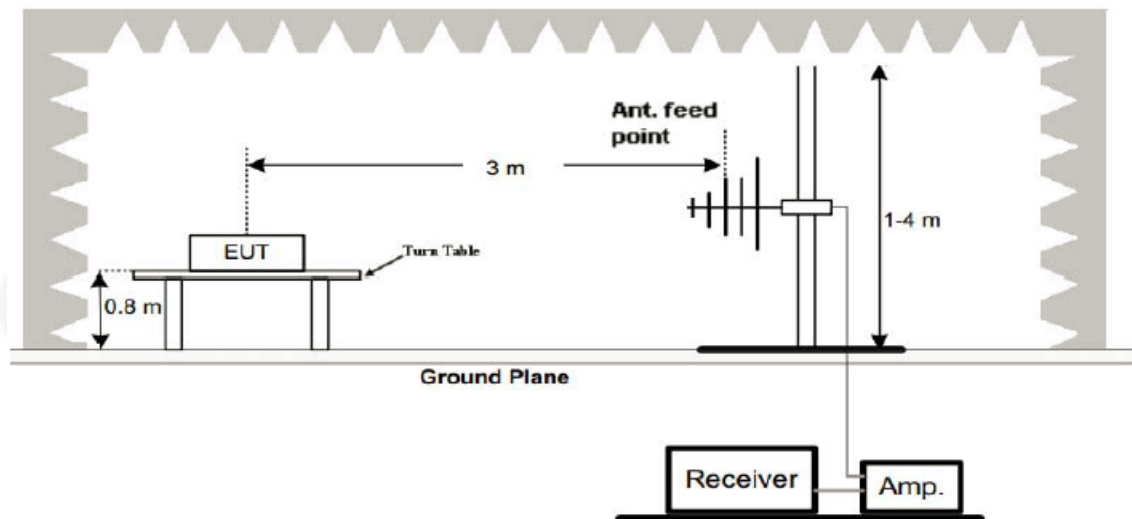


5.2 Anechoic Chamber Test Setup Diagram

(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209 and FCC 15.205 limits.

5.3 Test Procedure

Below 1GHz test procedure as below:

- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. 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.
- The antenna height 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.
- 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 (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.



5.4 DEVIATION FROM TEST STANDARD

No deviation

5.5 Test Result

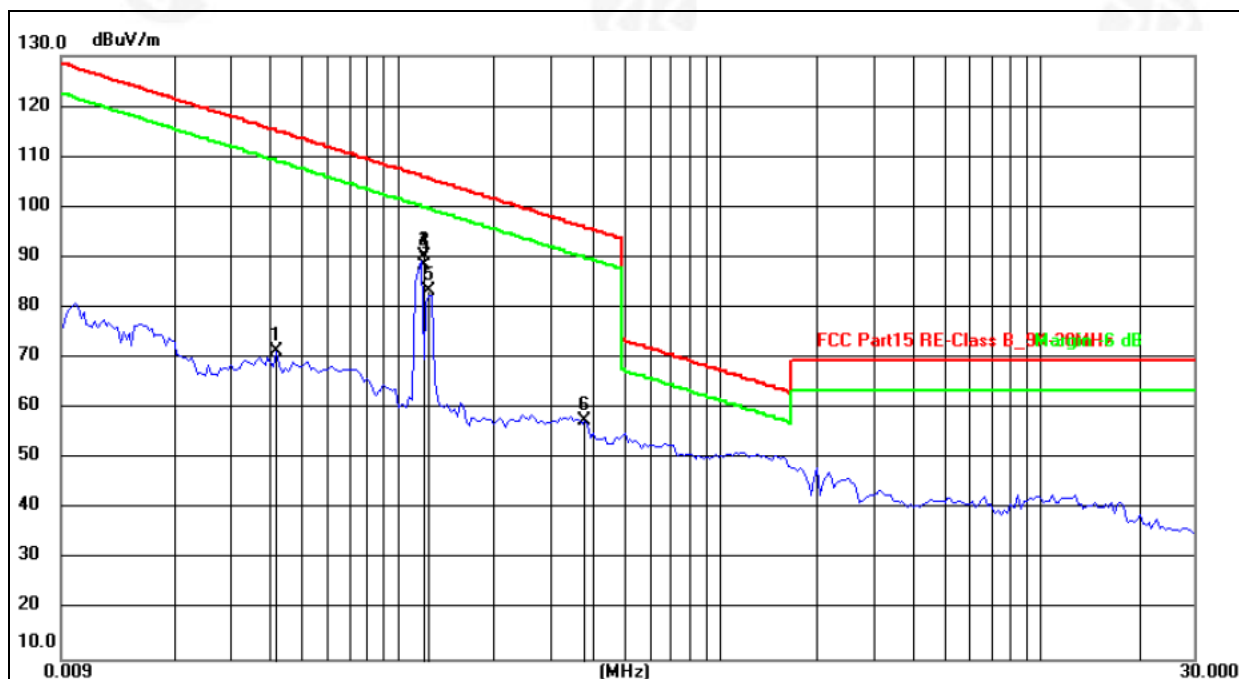
Measurement data:

Note: Limit dBuV/m @3m = Limit dBuV/m @300m+ 80

Limit dBuV/m @3m = Limit dBuV/m @30m + 40

9 kHz~30 MHz

Temperature:	26°C	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	coaxial
Test Voltage:	DC 12V	Simultaneously:	Mode 1



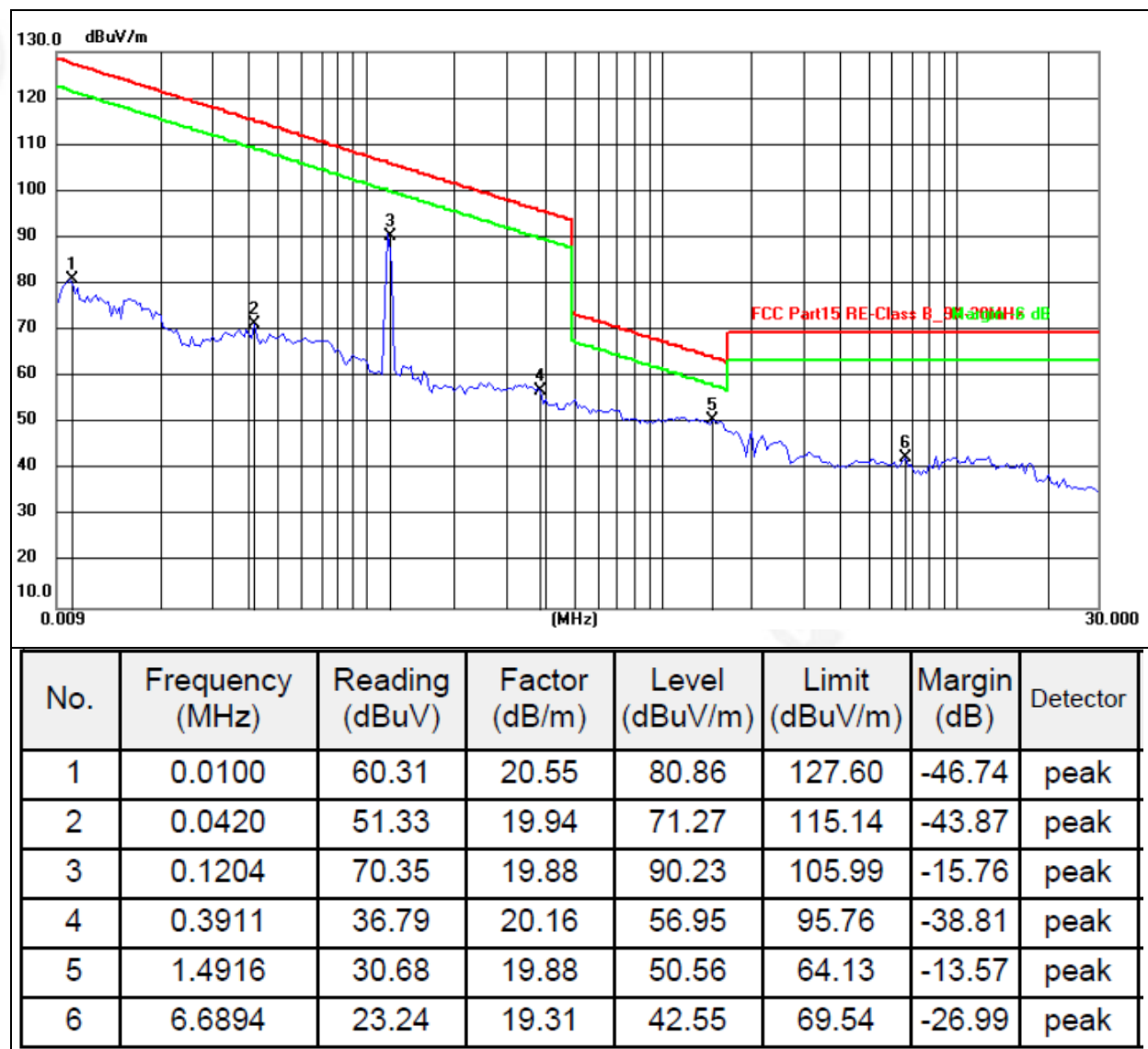
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.0420	51.33	19.94	71.27	115.14	-43.87	peak
2	0.1189	70.48	19.87	90.35	106.10	-15.75	peak
3	0.1195	68.47	19.88	88.35	106.06	-17.71	peak
4	0.1204	70.35	19.88	90.23	105.99	-15.76	peak
5	0.1244	63.44	19.91	83.35	105.71	-22.36	peak
6	0.3830	37.29	20.16	57.45	95.94	-38.49	peak

Remarks:

- 1.Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
- 2.The emission levels of other frequencies are very lower than the limit and not show in test report.



Temperature:	26℃	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	coaxial
Test Voltage:	DC 12V	Phone Coi:	Mode 4

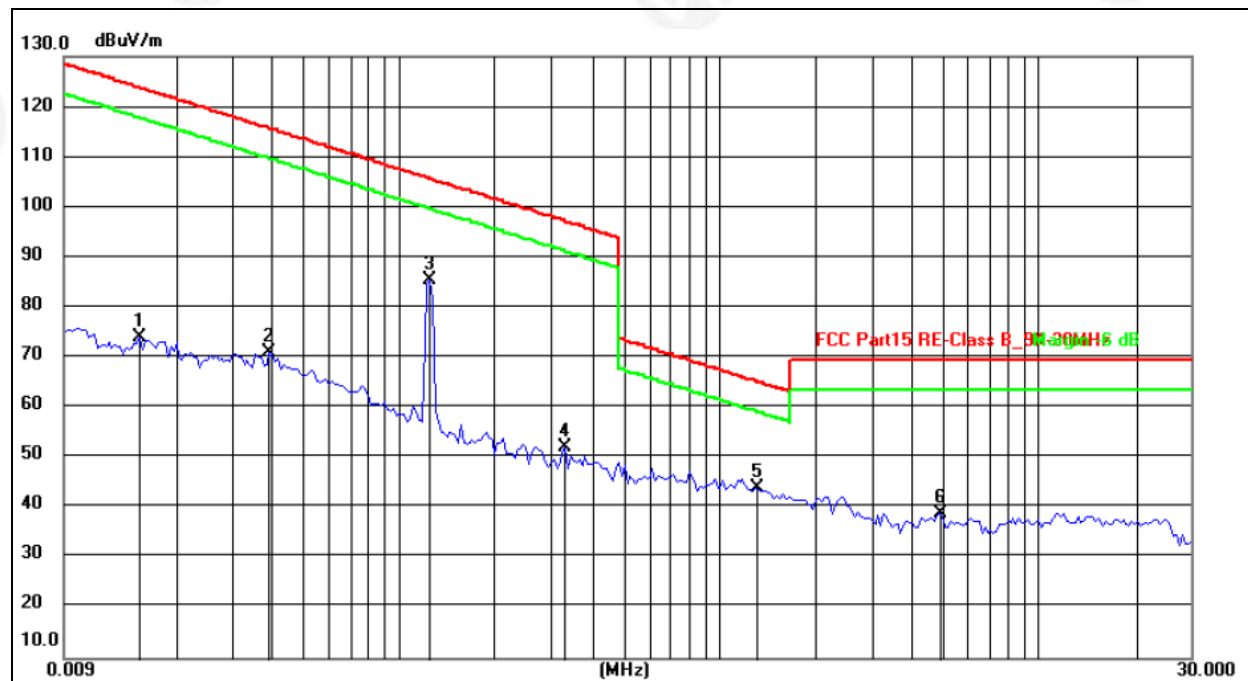


Remarks:

- 1.Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
- 2.The emission levels of other frequencies are very lower than the limit and not show in test report.



Temperature:	26°C	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	coaxial
Test Voltage:	DC 12V	Airpods Coil:	Mode 7



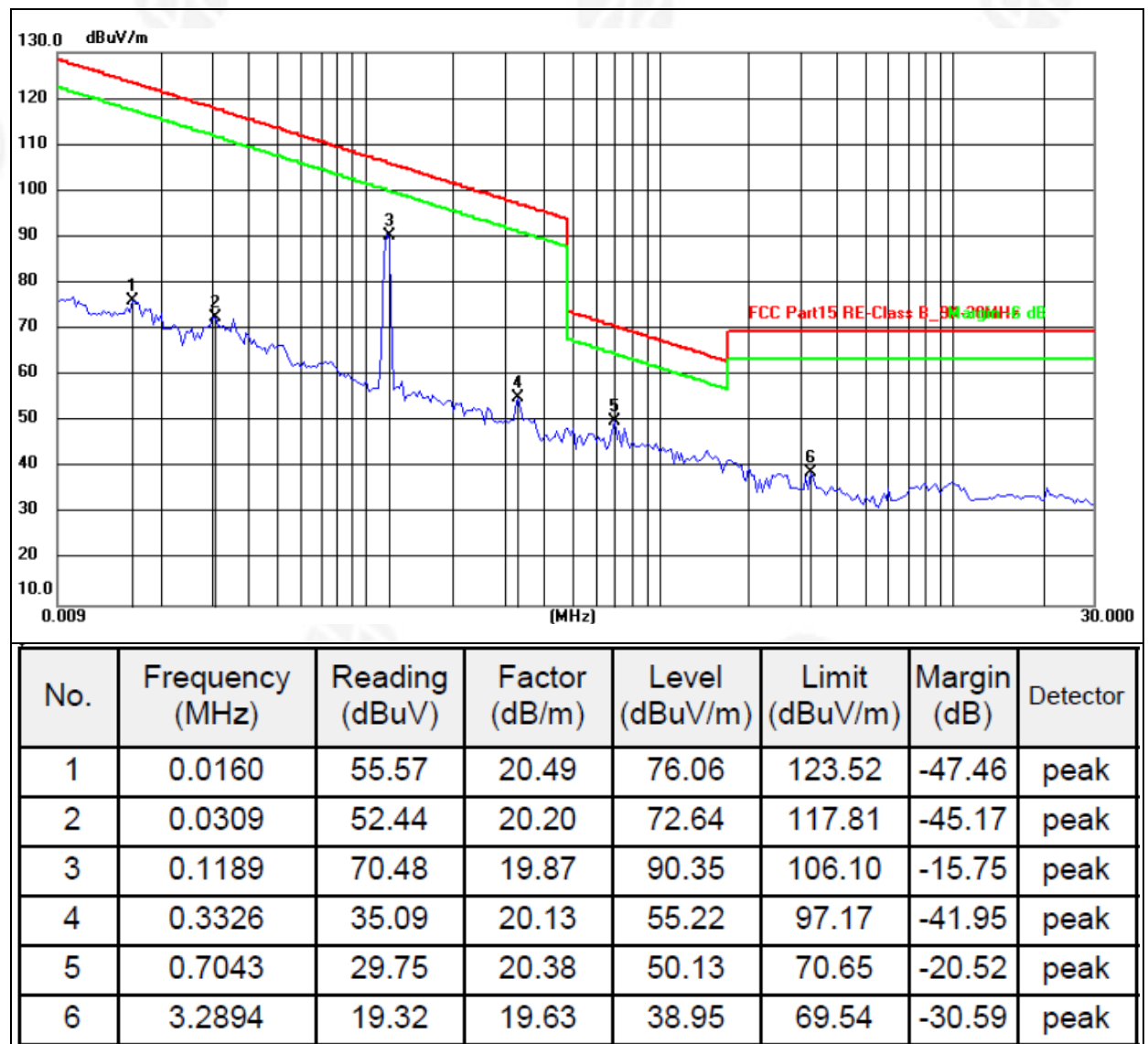
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.0154	53.57	20.50	74.07	123.85	-49.78	peak
2	0.0395	51.15	19.99	71.14	115.67	-44.53	peak
3	0.1244	65.44	19.91	85.35	105.71	-20.36	peak
4	0.3326	32.09	20.13	52.22	97.17	-44.95	peak
5	1.3204	24.11	19.91	44.02	65.19	-21.17	peak
6	4.9348	19.59	19.47	39.06	69.54	-30.48	peak

Remarks:

- 1.Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
- 2.The emission levels of other frequencies are very lower than the limit and not show in test report.



Temperature:	26℃	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	coaxial
Test Voltage:	DC 12V	Watch Coil:	Mode 10

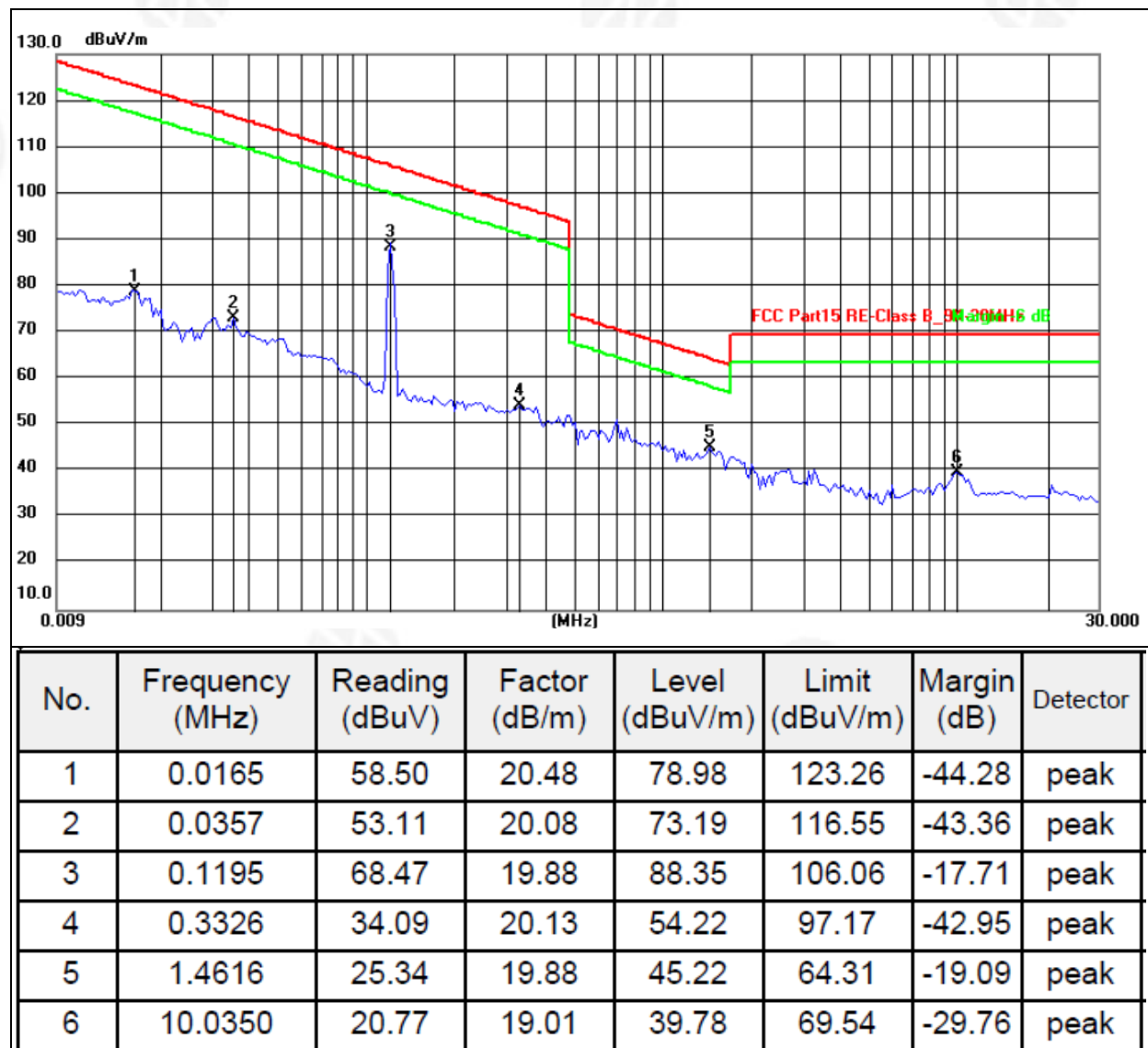


Remarks:

- 1.Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
- 2.The emission levels of other frequencies are very lower than the limit and not show in test report.



Temperature:	26°C	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	coaxial
Test Voltage:	DC 12V	Watch Coil:	Mode 13



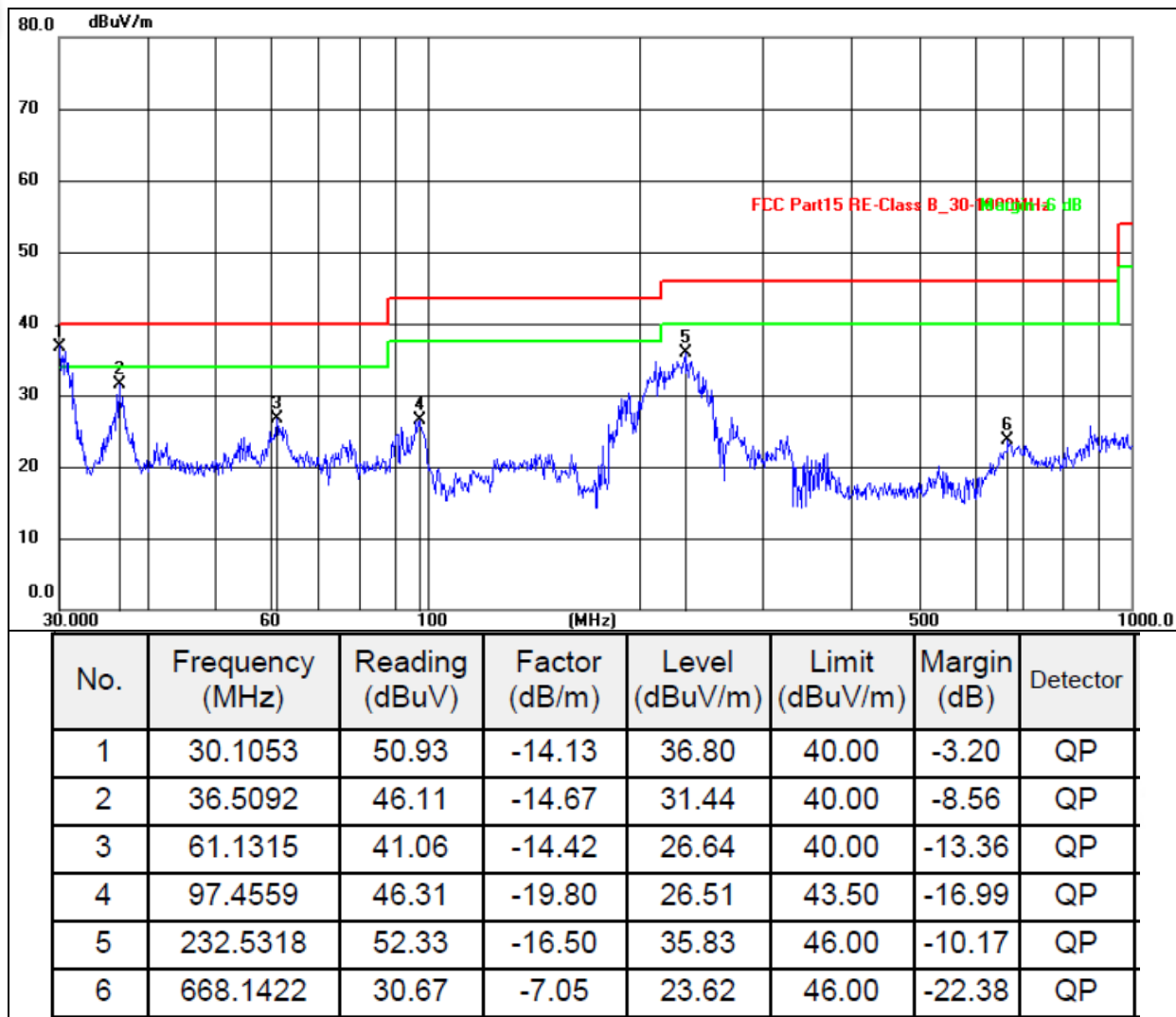
Remarks:

- 1.Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
- 2.The emission levels of other frequencies are very lower than the limit and not show in test report.



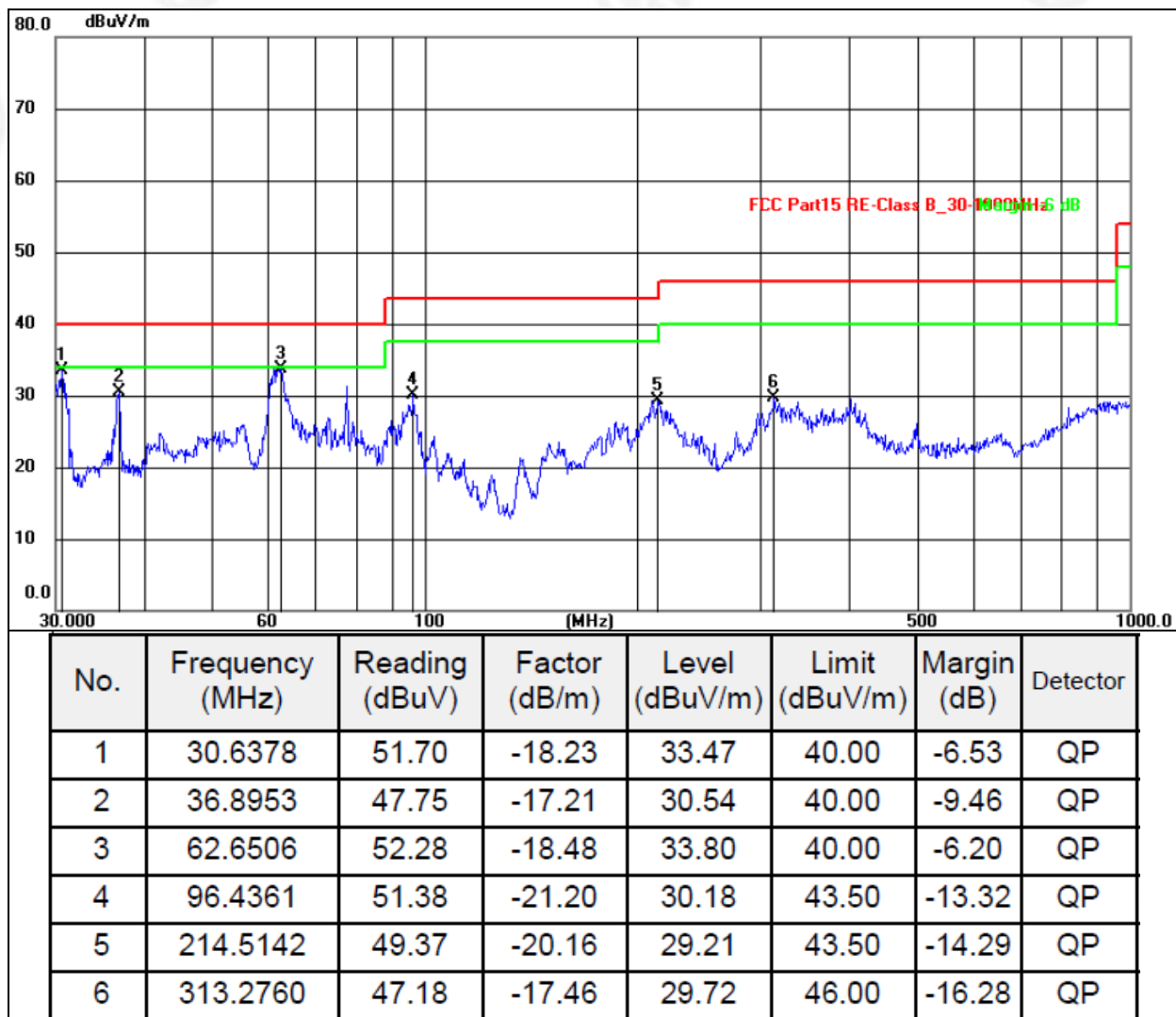
30MHz-1GHz

Temperature:	26℃	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	Horizontal
Test Voltage:	DC 12V	Test Mode:	Mode 1





Temperature:	26℃	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Vertical
Test Voltage:	DC 12V	Test Mode:	Mode 1



Remarks:

- 1.Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
- 2.The emission levels of other frequencies are very lower than the limit and not show in test report.



6. BANDWIDTH TEST

1. Set RBW = 1%~5% OBW.
2. Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 20 dB relative to the maximum level measured in the fundamental emission.

TEST SETUP

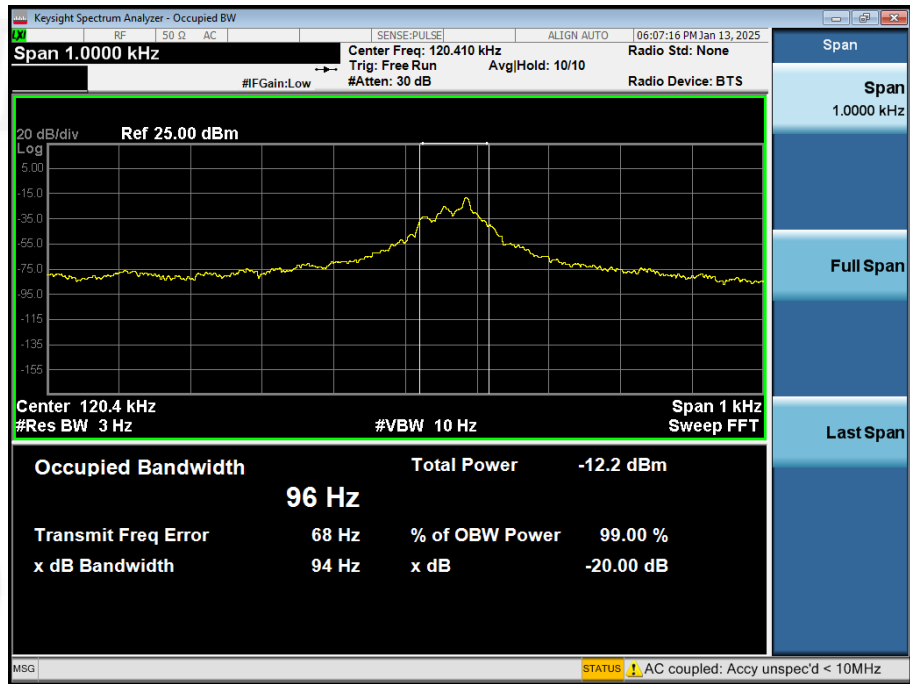




Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101kPa		

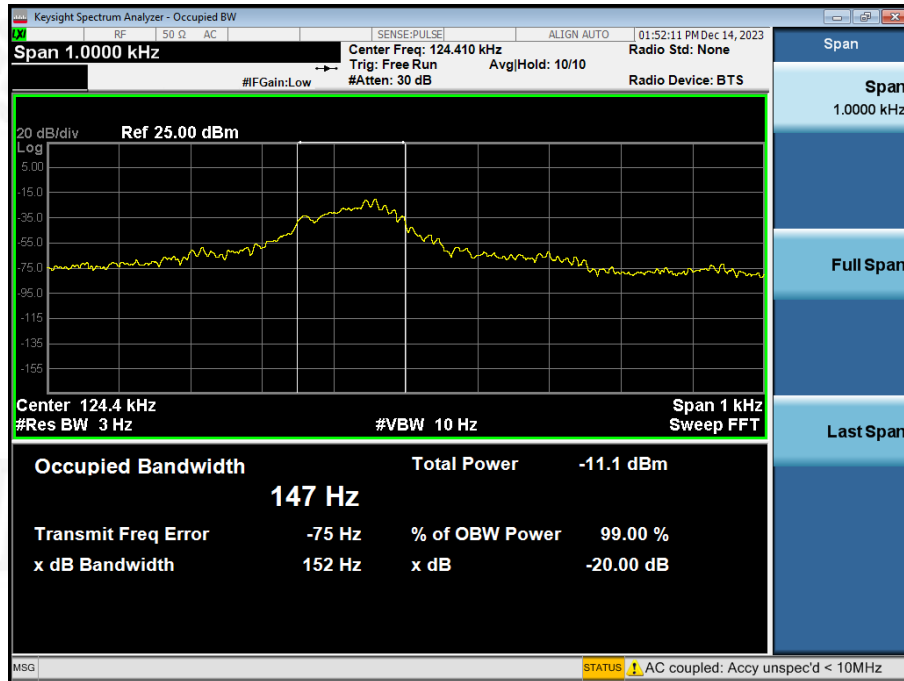
Test Coil	Frequency (KHz)	20dB bandwidth (Hz)	Result
ANT1	120.4	94	Pass
ANT2	124.4	152	Pass
ANT3	118.9	143	Pass
ANT4	119.5	109	Pass

ANT1:

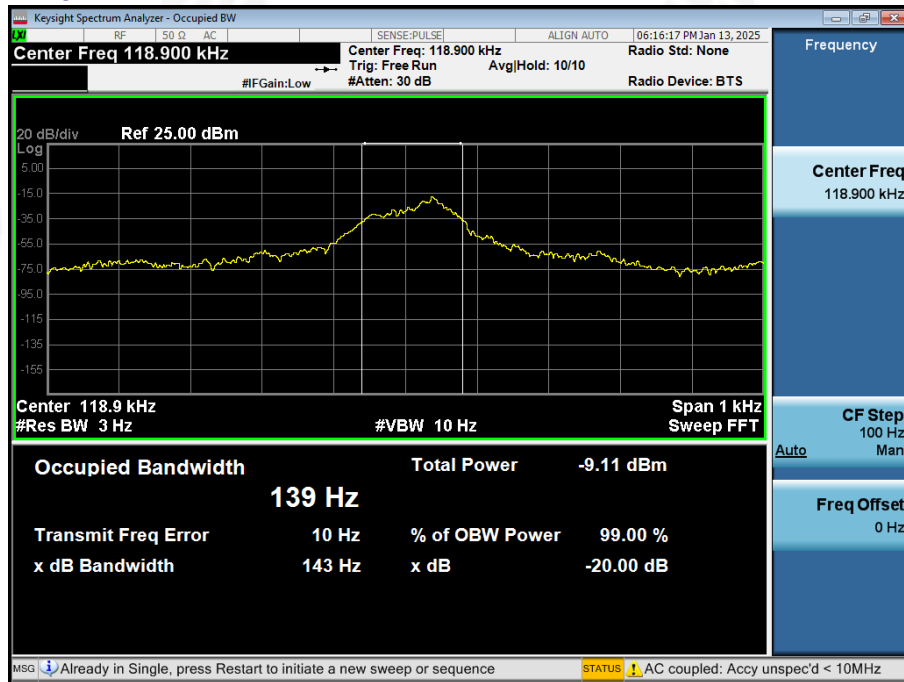




ANT2:

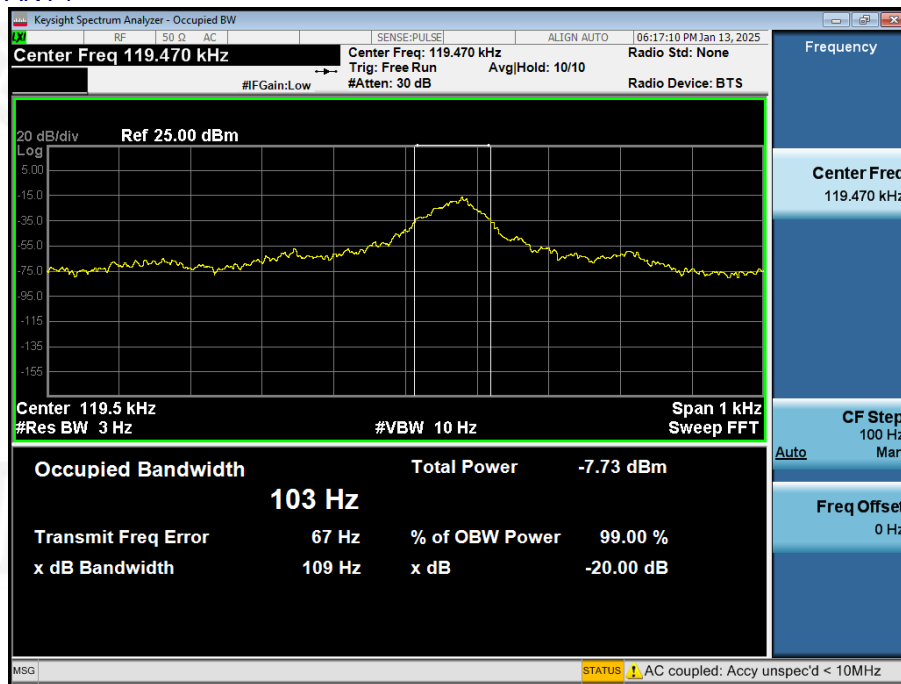


ANT3:





ANT4





7. ANTENNA REQUIREMENT

Standard requirement:	FCC Part15 C Section 15.203
15.203 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, 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.	
EUT Antenna:	
The antenna is Loop antenna, the best case gain of the antennas is 0dBi, reference to the appendix II for details	



8. TEST SETUP PHOTO

Reference to the appendix I for details.

9. EUT CONSTRUCTIONAL DETAILS

Reference to the appendix II for details.

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