



FCC AND ISED CERTIFICATION TEST REPORT

Applicant	:	Edifier International Limited
Address of Applicant	:	P. O. Box 6264 General Post Office Hong Kong
Manufacturer	:	Beijing Edifier Technology Co., Ltd.
Address of Manufacturer	:	815, Floor 8, Shuangqiao Building, No.68, North Fourth Ring West Road, Haidian District, Beijing 100080, P.R.China
Equipment under Test	:	Tabletop Wireless Speaker
Model No.	:	EDF100080
FCC ID	:	Z9G-EDF227
IC	:	10004A-EDF227
Test Standard(s)	:	FCC Rules and Regulations Part 15 Subpart E, RSS-247 Issue 3 August 2023, ANSI C63.10:2013, 789033 D02 General U-NII Test Procedures New Rules v02r01, 662911 D01 Multiple Transmitter Output v02r01, RSS-Gen Issue 5 April 2018
Report No.	:	DDT-RE23121803-2E04
Issue Date	:	2024/01/16
Issue By	:	Guangdong Dongdian Testing Service Co., Ltd.
Address of Laboratory	:	Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808

REPORT

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Test Report Declare

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Equipment under Test	:	Tabletop Wireless Speaker
Model No.	:	EDF100080
Manufacturer	:	Beijing Edifier Technology Co., Ltd.
Address of Manufacturer	:	815, Floor 8, Shuangqiao Building, No.68, North Fourth Ring West Road, Haidian District, Beijing 100080, P.R.China

Test Standard Used:

FCC Rules and Regulations Part 15 Subpart E, RSS-247 Issue 3 August 2023.

Test procedure used:

ANSI C63.10:2013, 789033 D02 General U-NII Test Procedures New Rules v02r01, 662911 D01 Multiple Transmitter Output v02r01, RSS-Gen Issue 5 April 2018

We Declare:

The equipment described above is tested by Guangdong Dongdian Testing Service Co., Ltd. and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Guangdong Dongdian Testing Service Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

After test and evaluation, our opinion is that the equipment provided for test compliance with the requirement of the above standards.

Report No.:	DDT-RE23121803-2E04		
Date of Receipt:	2023/12/20	Date of Test:	2023/12/20-2024/01/16

Prepared By:

Johnson Huang

Johnson Huang/Engineer

Approved By:



Damon Hu/EMC Manager

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Guangdong Dongdian Testing Service Co., Ltd.

Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	2024/01/16	

1. Summary of Test Results

The EUT have been tested according to the applicable standards as referenced below.		
Description of Test Item	Standard	Results
6/26db Bandwidth and 99% Bandwidth	FCC 15.407 (e) RSS-247 Clause 6.2	PASS
Maximum Conducted Output Power	FCC 15.407 (a) RSS-247 Clause 6.2	PASS
Power Spectral Density	FCC 15.407 (a) RSS-247 Clause 6.2	PASS
Frequency Stability Measurement	FCC 15.407 (g) RSS-247 Clause 6.2 RSS-GEN Clause 8.9	PASS
Emissions in restricted frequency bands	FCC 15.407 (b) FCC 15.209 FCC 15.205 RSS-247 Clause 6.2 RSS-GEN Clause 8.9	PASS
Band Edge Compliance	FCC 15.407 (b) FCC 15.209 FCC 15.205 RSS-247 Clause 6.2 RSS-GEN Clause 8.9	PASS
Power Line Conducted Emission	FCC 15.207 RSS-GEN Clause 8.8	PASS
Antenna requirement	FCC 15.203 RSS-GEN Clause 8.3	PASS
Dynamic Frequency Selection	FCC 15.407 (h) RSS-247 Clause 6.8	PASS

2. General Test Information

2.1. Description of EUT

EUT Name	: Tabletop Wireless Speaker
Model Number	: EDF100080
EUT function description	: Please reference user manual of this device
Power Supply	: AC 100-240V, 50/60Hz, 0.5A or powered by a 7.4V built-in lithium battery
Radio Technology	: Bluetooth(BR/EDR/LE), WLAN (2.4 GHz): IEEE 802.11g/n WLAN (5 GHz): IEEE 802.11n
Operation frequency	: Bluetooth (BR/EDR/LE): 2402 MHz-2480 MHz IEEE 802.11g/n: 2412 MHz to 2462 MHz, IEEE 802.11n: 5180 MHz to 5240 MHz, 5260 MHz to 5320 MHz, 5500 MHz to 5720 MHz, 5745 MHz to 5825 MHz
Modulation	: Bluetooth BR/EDR: GFSK, $\pi/4$ -DQPSK, 8DPSK Bluetooth LE: GFSK IEEE 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n: OFDM (64QAM, 16QAM, QPSK, BPSK)
Transmitter rate	: IEEE 802.11g: up to 54 Mbps IEEE 802.11n HT20: up to 144.4 Mbps
Antenna Type	: FPC antenna, Maximum PK gain: 2.3 dBi

Note 1: EUT is the abbreviation of equipment under test.

Note 2: “☑” means to be chosen or applicable; “☐” means don't to be chosen or not applicable; This note applies to entire report.

Note 3: This report only for WLAN (5 GHz): IEEE 802.11n

Channel information	
IEEE 802.11n (HT20)	
UNII-1	
CH	Frequency (MHz)
36	5180
40	5200
44	5220
48	5240
UNII-2A	
52	5260
56	5280
60	5300
64	5320
UNII-2C	
100	5500

104	5520
108	5540
112	5560
116	5580
120	5600
124	5620
128	5640
132	5660
136	5680
140	5700
144	5720
UNII-3	
149	5745
153	5765
157	5785
161	5805
165	5825

2.2. Accessories of EUT

Description of Accessories	Manufacturer	Model number	Description	Remark
N/A	N/A	N/A	N/A	N/A

2.3. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	EMC Compliance	SN
N/A	N/A	N/A	N/A	N/A

2.4. Block diagram of EUT configuration for test



Test software: SSCOM V5.13.1

The test software was used to control EUT work in Continuous Tx mode, and select test channel, wireless mode as below table.

The pathloss of external cable: 2 dB (According to the manufacturer's claims)

Tested mode, channel, and data rate information				
Mode	Setting Tx Power	data rate (Mbps) (see Note)	Channel	Frequency (MHz)
IEEE 802.11n HT20	Deafult	MCS 0	Low: CH36	5180
	Deafult	MCS 0	Middle: CH40	5200
	Deafult	MCS 0	High: CH48	5240
	Deafult	MCS 0	Low: CH52	5260
	Deafult	MCS 0	Middle: CH56	5280
	Deafult	MCS 0	High: CH64	5320
	Deafult	MCS 0	Low: CH100	5500
	Deafult	MCS 0	Middle: CH116	5580
	Deafult	MCS 0	High: CH140	5700
	Deafult	MCS 0	Low: CH149	5745
	Deafult	MCS 0	Middle: CH157	5785
	Deafult	MCS 0	High: CH165	5825

Note: According exploratory test, EUT will have maximum output power in those data rate, so those data rate were used for all test.

2.5. Deviations of test standard

No Deviation.

2.6. Test environment conditions

Temperature range:	+15°C to +35 °C
Humidity range:	20% to 75%
Pressure range:	86 kPa to106 kPa

2.7. Test laboratory

Guangdong Dongdian Testing Service Co., Ltd.

Add.: Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808

Tel.: +86-0769-38826678, <http://www.dgddt.com>, Email: ddt@dgddt.com

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, R-20155, G-20118

2.8. Measurement uncertainty

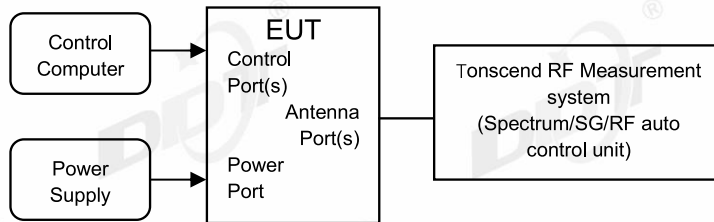
Test Item	Uncertainty
Bandwidth	1.1%
Peak Output Power (Conducted) (Spectrum analyzer)	0.86 dB (10 MHz ≤ f < 3.6 GHz);
	1.38 dB (3.6 GHz ≤ f < 8 GHz)
Peak Output Power (Conducted) (Power Sensor)	0.74 dB
Power Spectral Density	0.74 dB (10 MHz ≤ f < 3.6 GHz);
	1.38 dB (3.6 GHz ≤ f < 8 GHz)
Frequencies Stability	6.7 x 10 ⁻⁸ (Antenna couple method)
	5.5 x 10 ⁻⁸ (Conducted method)
Conducted spurious emissions	0.86 dB (10 MHz ≤ f < 3.6 GHz);
	1.40 dB (3.6 GHz ≤ f < 8 GHz)
	1.66 dB (8 GHz ≤ f < 26.5 GHz)
Uncertainty for radio frequency (RBW < 20 kHz)	3x10 ⁻⁸
Temperature	0.4 °C
Humidity	2 %
Uncertainty for Radiation Emission test (9 kHz – 30 MHz)	3.44 dB
Uncertainty for Radiation Emission test (30 MHz - 1 GHz)	4.70 dB (Antenna Polarize: V)
	4.84 dB (Antenna Polarize: H)
Uncertainty for Radiation Emission test (1 GHz - 40 GHz)	4.10 dB (1 - 6 GHz)
	4.40 dB (6 GHz - 18 GHz)
	3.54 dB (18 GHz - 26 GHz)
	4.30 dB (26 GHz - 40 GHz)
Uncertainty for Power line conduction emission test	3.34dB (150KHz-30MHz)
	3.72dB (9KHz-150KHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

3. Equipment Used During Conductive Test

Equipment	Manufacturer	Model No.	Serial Number	Due Date
☑RF Connected Test (RF Measurement System 3#)				
SIGNAL ANALYZER	R&S	FSV40	101407	2024/07/11
Wideband Radio Communication Tester	R&S	CMW500	117491	2024/04/26
EXG Analog Signal Generator	KEYSIGHT	N5173B	MY62153058	2024/07/11
MXG Vector Signal Generator	Agilent	N5182A	MY48180912	2024/04/22
RF Control Unit	Tonscend	JS0806-2	20C8060230	2024/04/26
TEMP&HUMI Programmable Chamber	ZHIXIANG	ZXGDJS-150L	ZX170110-A	2024/05/14
Test Software	Tonscend	JS1120-3	Ver.3.2.22	N/A

4. 26dB Bandwidth

4.1. Block diagram of test setup



4.2. Limits

FCC Part15, Subpart E/ RSS-247		
Test Item	Limit	Frequency Range (MHz)
26 dB Bandwidth	---	5150 - 5250
	---	5250 - 5350
	---	For FCC: 5470 - 5725 For IC: 5470 - 5600 5650 - 5725

4.3. Test procedure

Connect EUT's antenna output to spectrum analyzer by RF cable.

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	approximately 1% of the emission bandwidth.
VBW	> RBW
Trace	Max hold
Sweep	Auto couple

Allow the trace to stabilize, 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 26 dB relative to the maximum level measured in the fundamental emission.

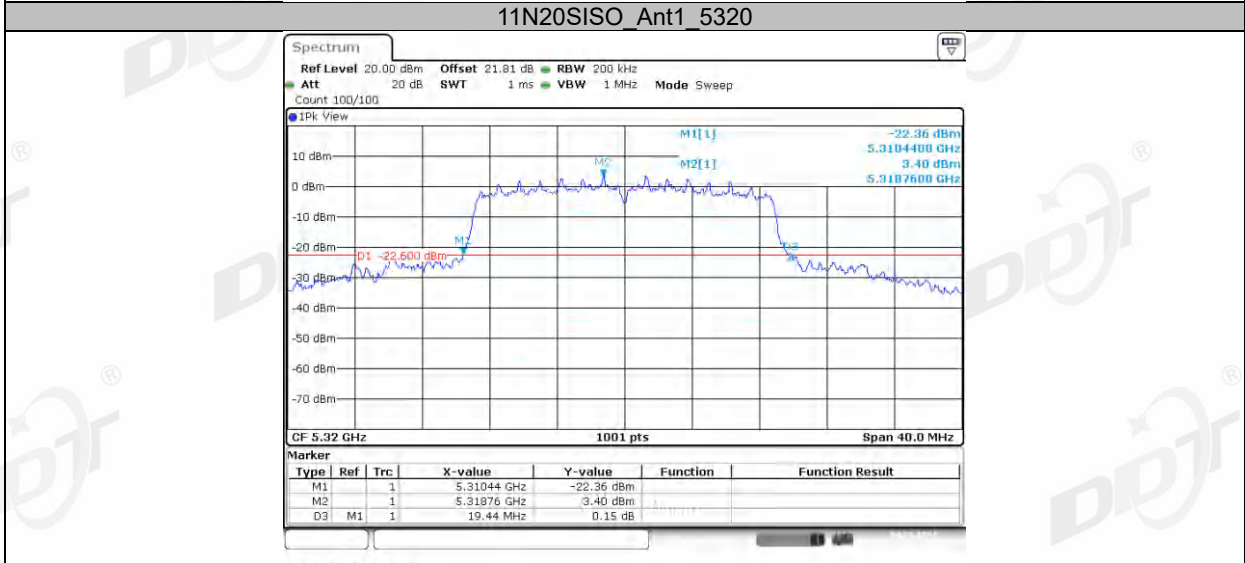
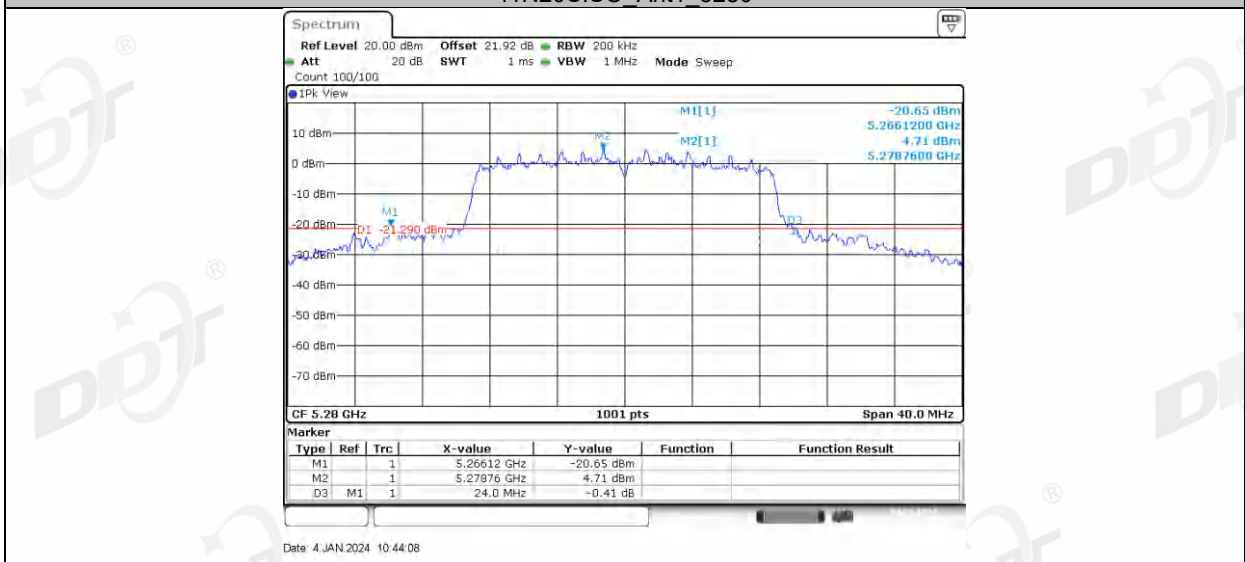
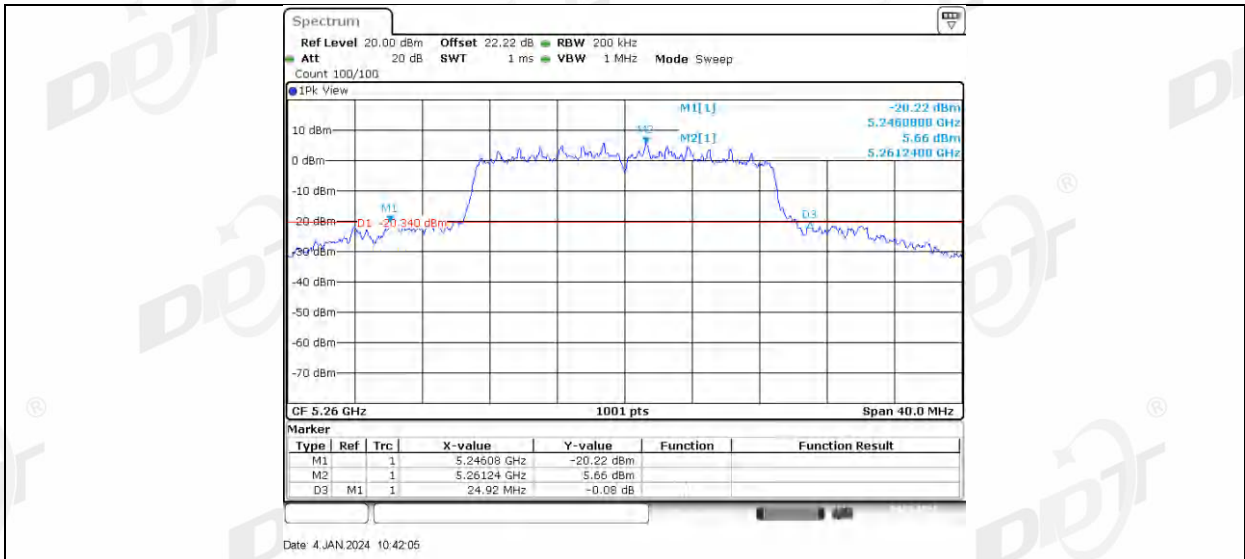
4.4. Test result

Test Engineer:	Zoe	Test Site:	RF Measurement System 3#
Ambient Condition:	20.9°C,43.2%RH	Test Date:	2024.01.04
Test Power Supply:	Battery	EUT:	Tabletop Wireless Speaker
Sample Number:	S23113018-02	Model No.:	EDF100080

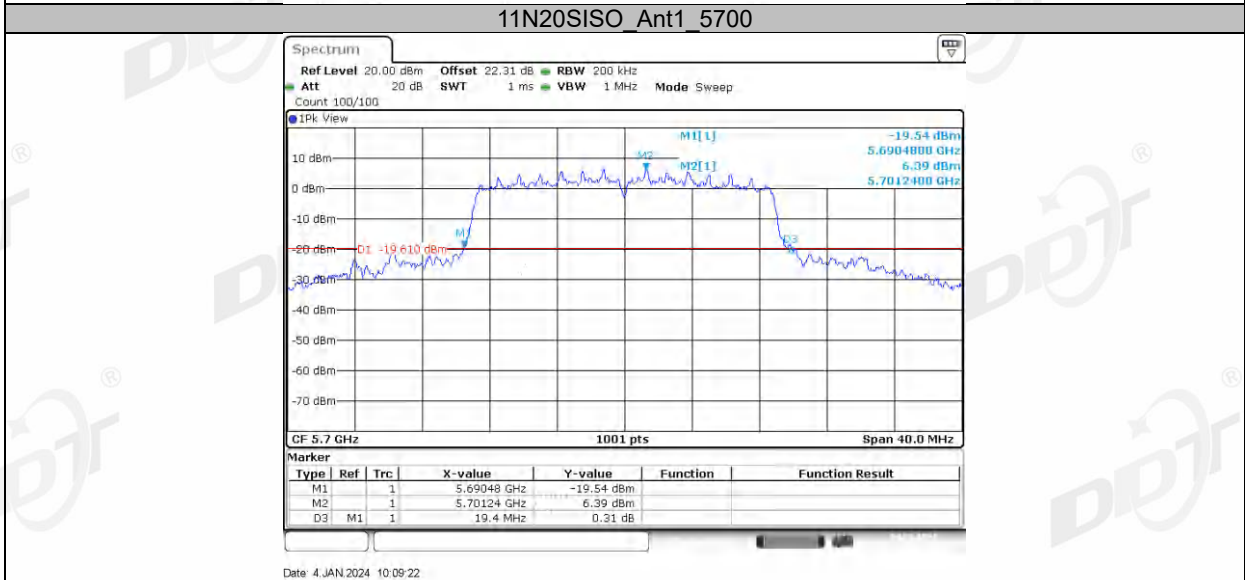
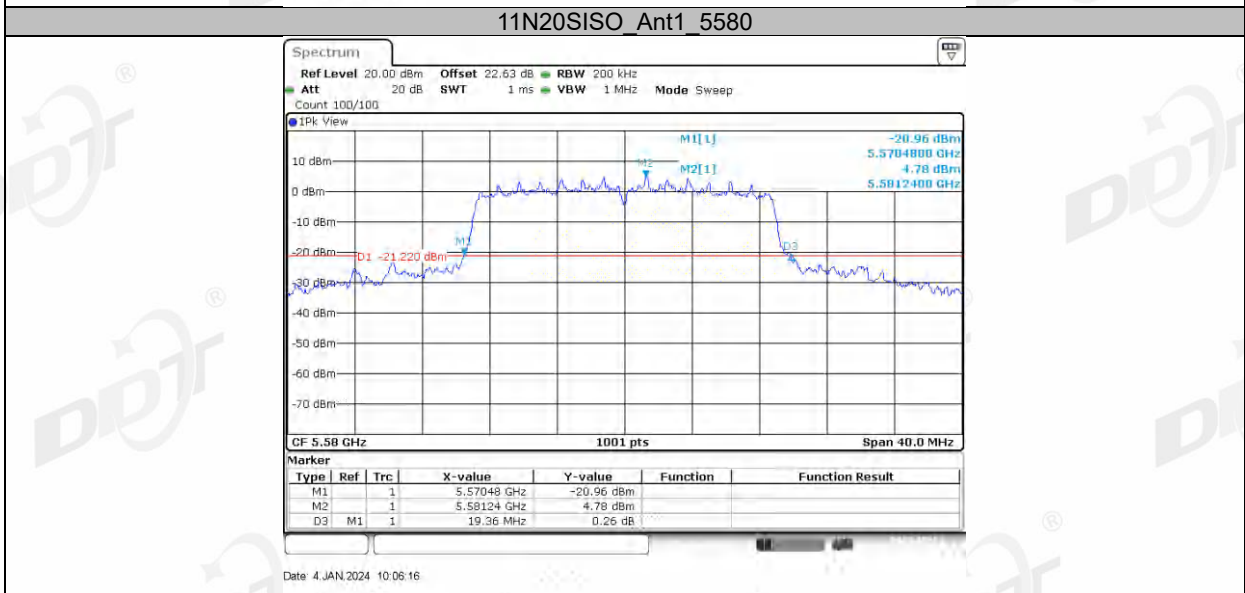
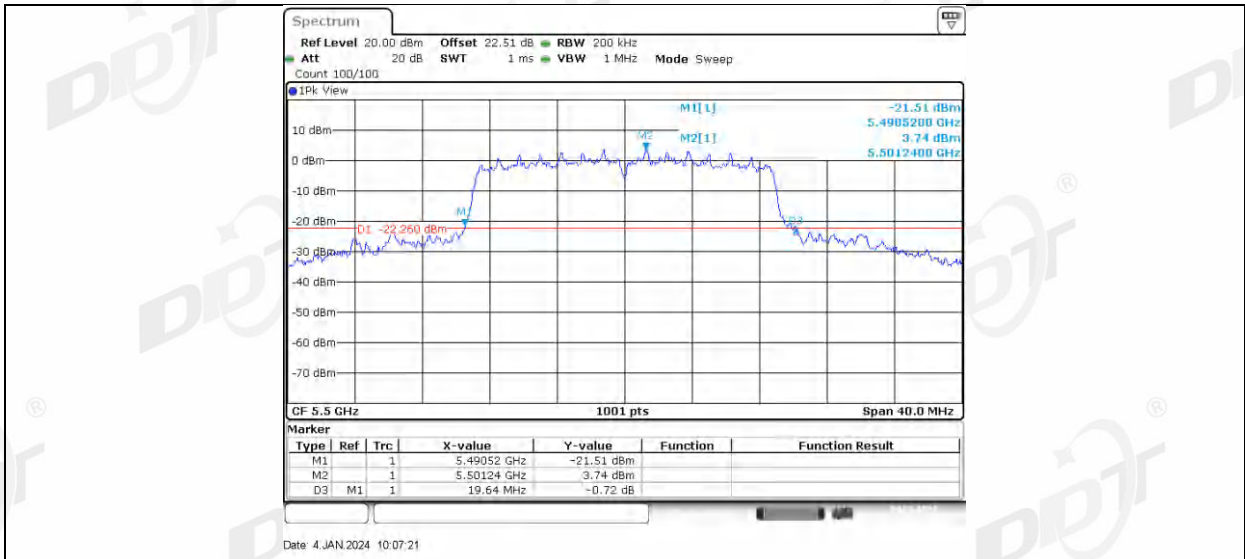
Test Mode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11N20SISO	Ant1	5180	24.96	5166.12	5191.08	---	---
		5200	25.00	5186.08	5211.08	---	---
		5240	24.92	5226.08	5251.00	---	---
		5260	24.92	5246.08	5271.00	---	---
		5280	24.00	5266.12	5290.12	---	---
		5320	19.44	5310.44	5329.88	---	---
		5500	19.64	5490.52	5510.16	---	---
		5580	19.36	5570.48	5589.84	---	---
		5700	19.40	5690.48	5709.88	---	---
		5720	19.44	5710.44	5729.88	---	---
		5720 UNII-2C	14.56	5710.44	5725	---	---
		5720 UNII-3	4.88	5725	5729.88	---	---
		5745	18.96	5735.52	5754.48	---	---
		5785	18.96	5775.52	5794.48	---	---
		5825	18.96	5815.52	5834.48	---	---

4.5. Test graphs

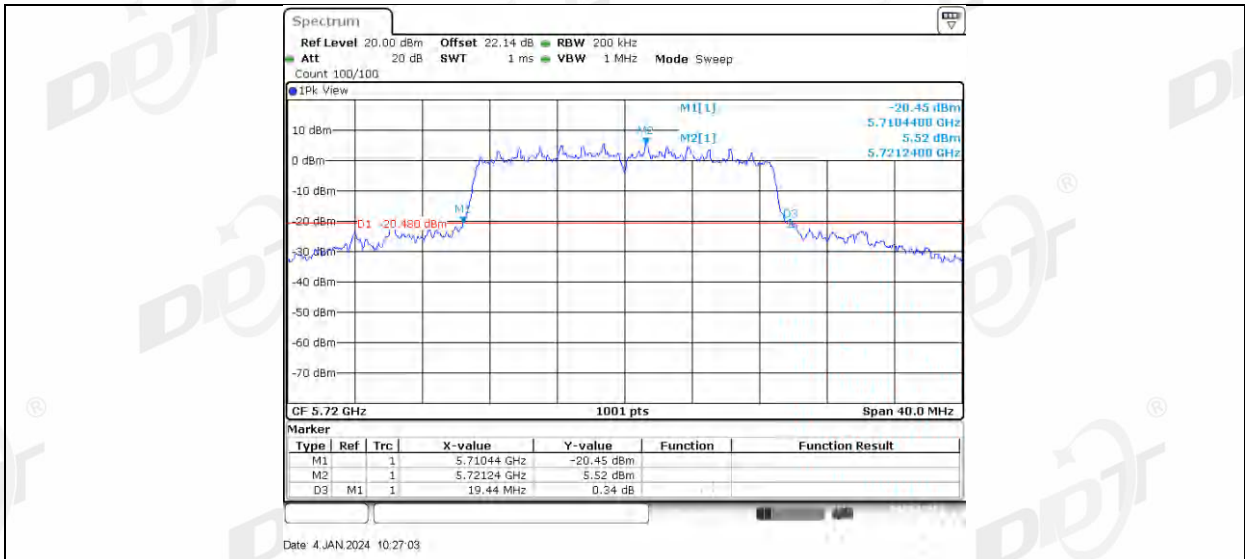




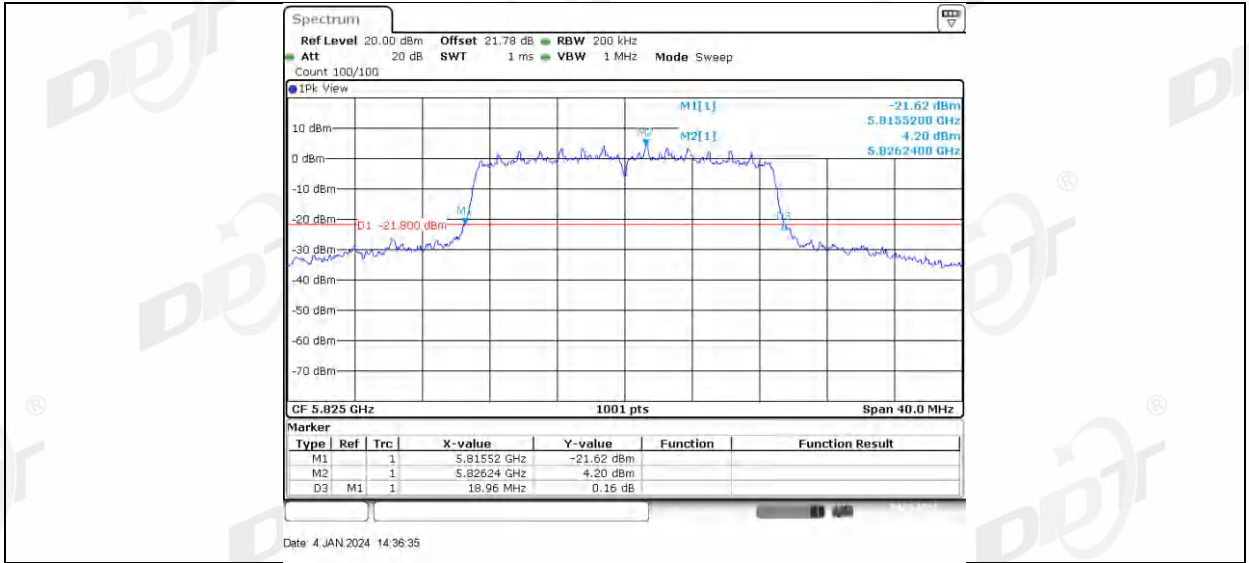
11N20SISO_Ant1_5500



11N20SISO_Ant1_5720

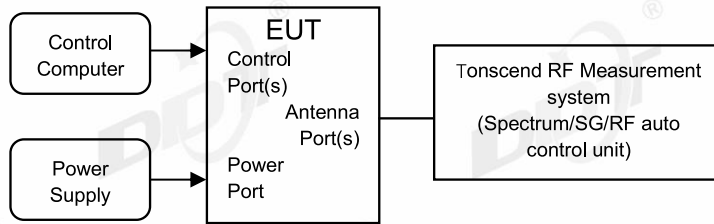


11N20SISO_Ant1_5825



5. 6dB Bandwidth

5.1. Block diagram of test setup



5.2. Limits

FCC Part15, Subpart E/ RSS-247		
Test Item	Limit	Frequency Range (MHz)
6 dB Bandwidth	Minimum 500 kHz	5725 - 5850

5.3. Test procedure

Connect EUT's antenna output to spectrum analyzer by RF cable.

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	For 6 dB Bandwidth: RBW=100 kHz For 26 dB Bandwidth: approximately 1% of the emission bandwidth.
VBW	For 6 dB Bandwidth: VBW=300 kHz For 26 dB Bandwidth: >3 RBW
Trace	Max hold
Sweep	Auto couple

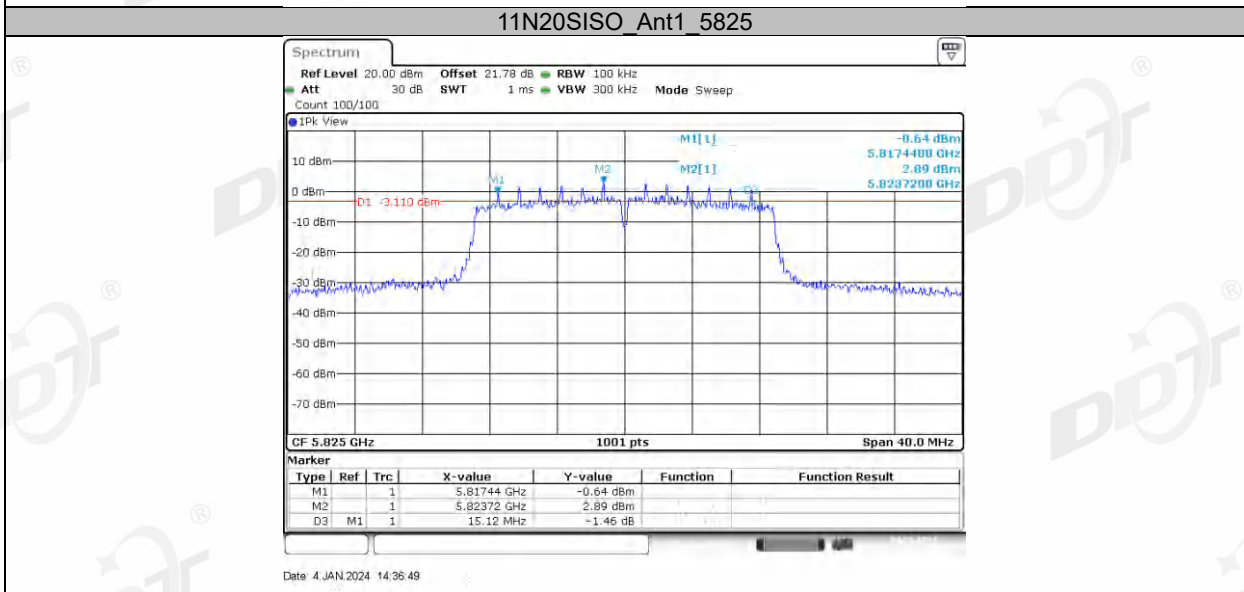
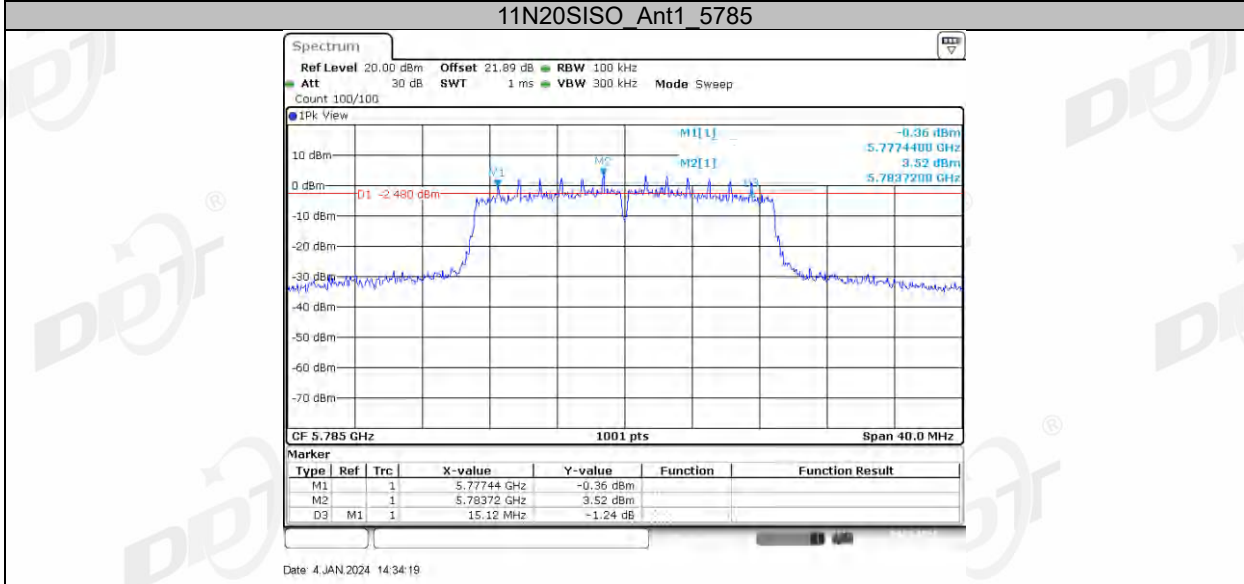
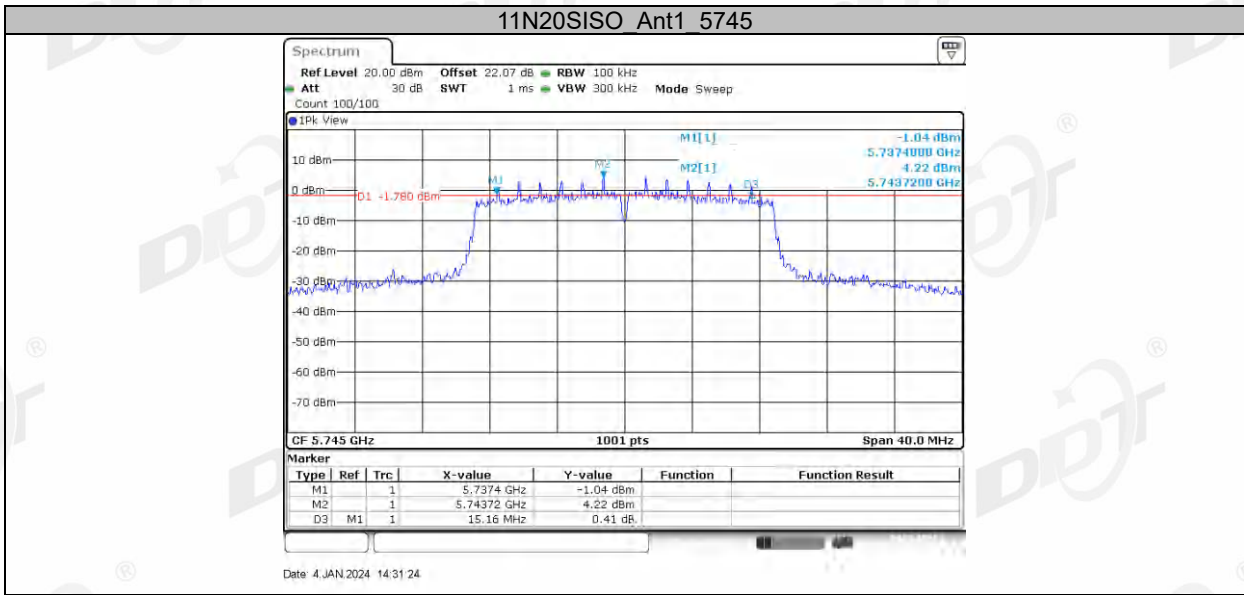
Allow the trace to stabilize, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

5.4. Test result B4

Test Engineer:	Zoe	Test Site:	RF Measurement System 3#
Ambient Condition:	20.9°C,43.2%RH	Test Date:	2024.01.04
Test Power Supply:	Battery	EUT:	Tabletop Wireless Speaker
Sample Number:	S23113018-02	Model No.:	EDF100080

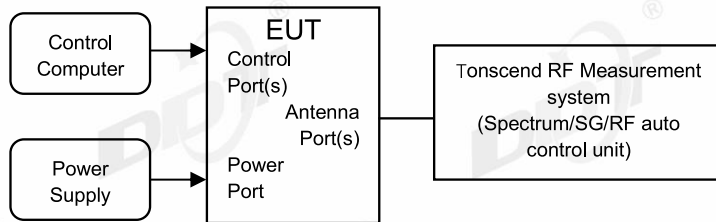
Test Mode	Antenna	Frequency[MHz]	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11N20SISO	Ant1	5745	15.16	5737.40	5752.56	0.5	PASS
		5785	15.12	5777.44	5792.56	0.5	PASS
		5825	15.12	5817.44	5832.56	0.5	PASS

5.5. Test graphs B4



6. 99% Bandwidth

6.1. Block diagram of test setup



6.2. Limits

Just for Report.

6.3. Test procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	1% to 5% of the OBW
VBW	approximately three times the RBW
Trace	Max hold

Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.

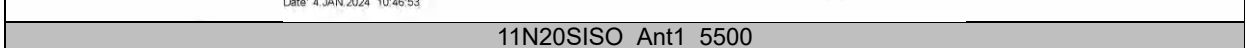
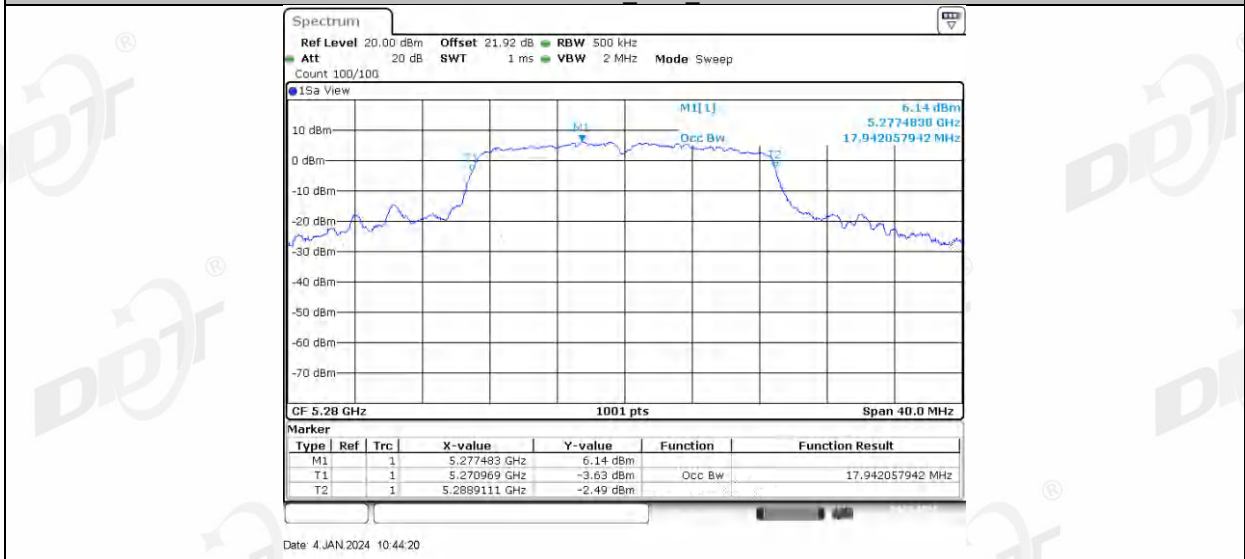
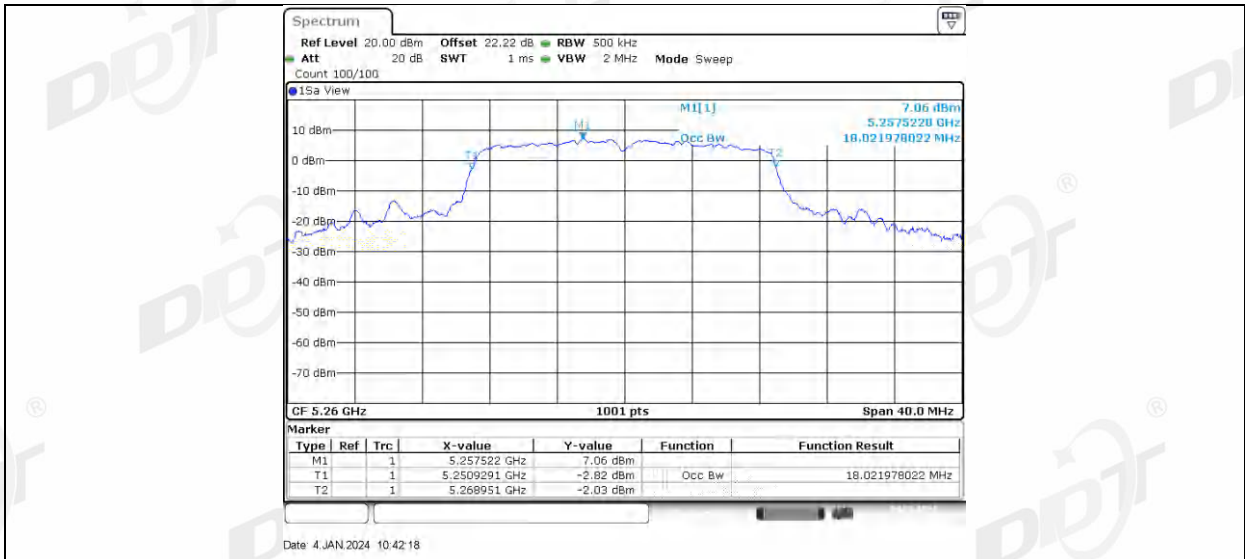
6.4. Test result

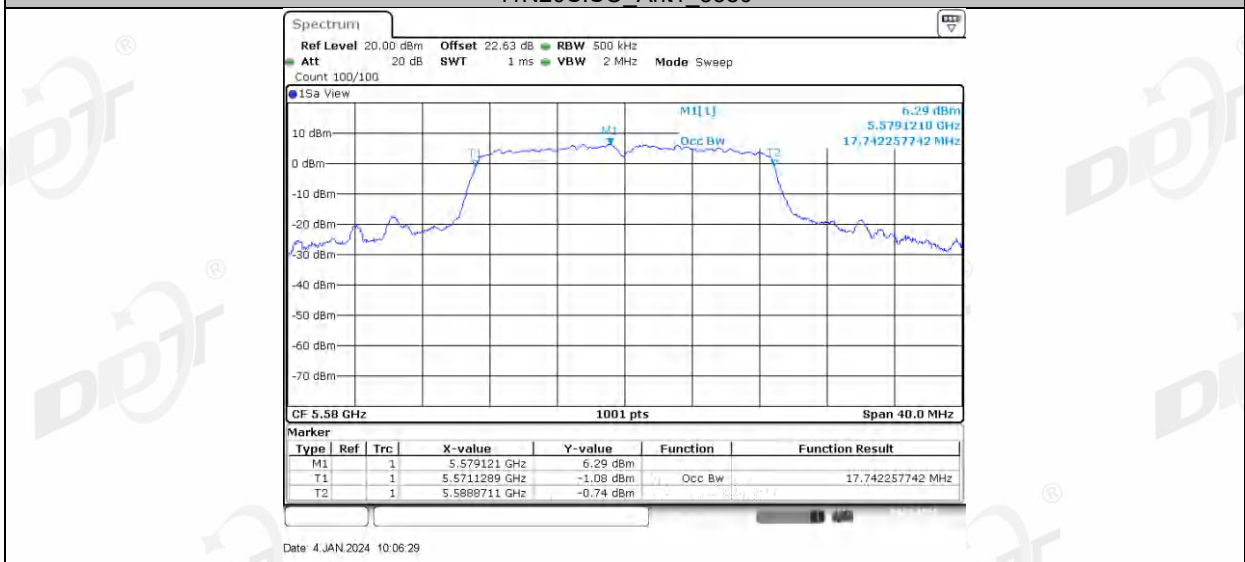
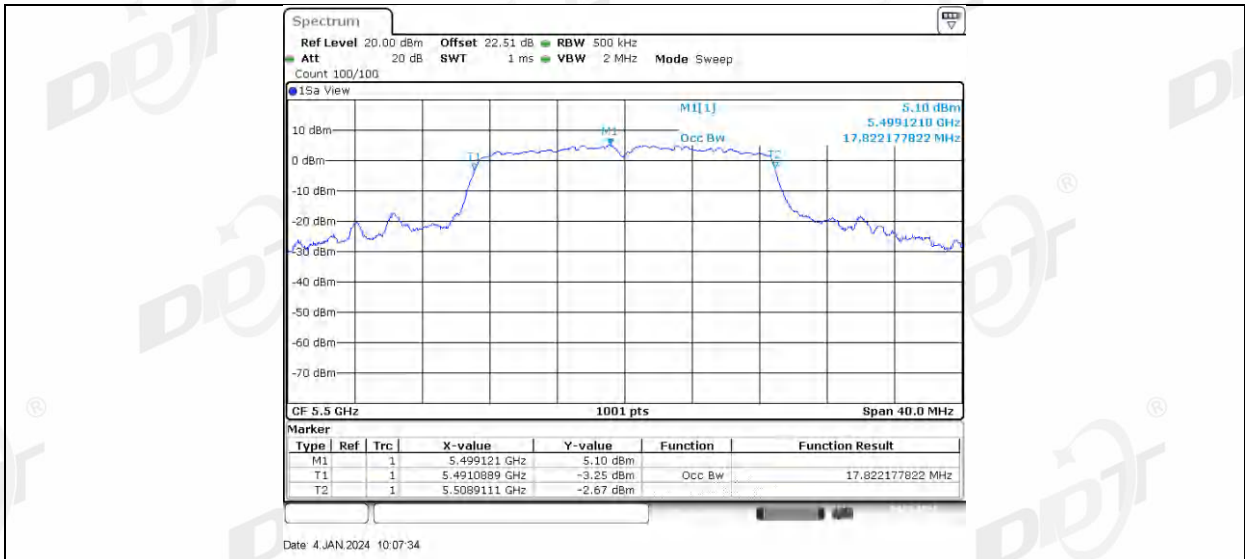
Test Engineer:	Zoe	Test Site:	RF Measurement System 3#
Ambient Condition:	20.9°C,43.2%RH	Test Date:	2024.01.04
Test Power Supply:	Battery	EUT:	Tabletop Wireless Speaker
Sample Number:	S23113018-02	Model No.:	EDF100080

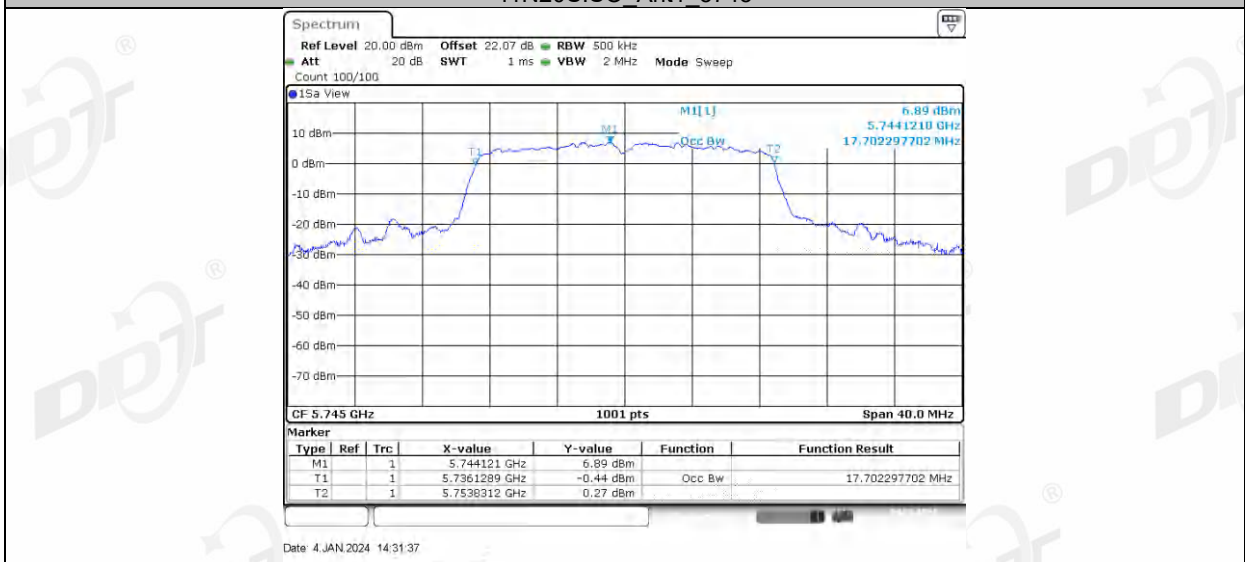
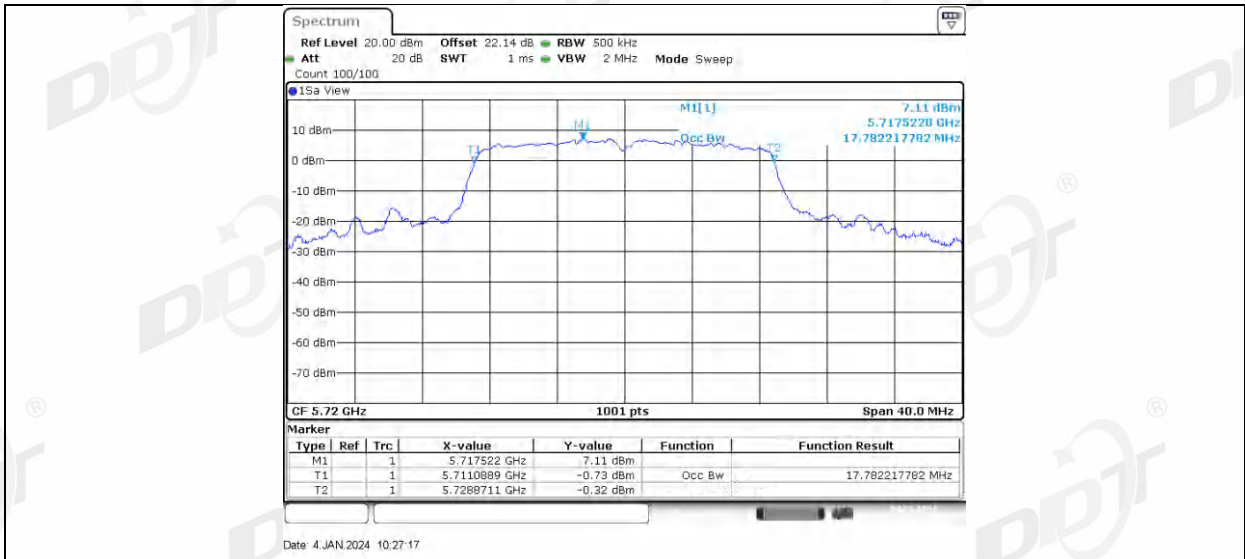
Test Mode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11N20SISO	Ant1	5180	18.062	5170.9291	5188.9910	---	---
		5200	18.142	5190.8492	5208.9910	---	---
		5240	17.982	5230.9291	5248.9111	---	---
		5260	18.022	5250.9291	5268.9510	---	---
		5280	17.942	5270.9690	5288.9111	---	---
		5320	17.822	5311.0490	5328.8711	---	---
		5500	17.822	5491.0889	5508.9111	---	---
		5580	17.742	5571.1289	5588.8711	---	---
		5700	17.782	5691.0889	5708.8711	---	---
		5720	17.782	5711.0889	5728.8711	---	---
		5720 UNII-2C	13.911	5711.0889	5725	---	---
		5720 UNII-3	3.871	5725	5728.8711	---	---
		5745	17.702	5736.1289	5753.8312	---	---
		5785	17.702	5776.1289	5793.8312	---	---
5825	17.702	5816.1289	5833.8312	---	---		

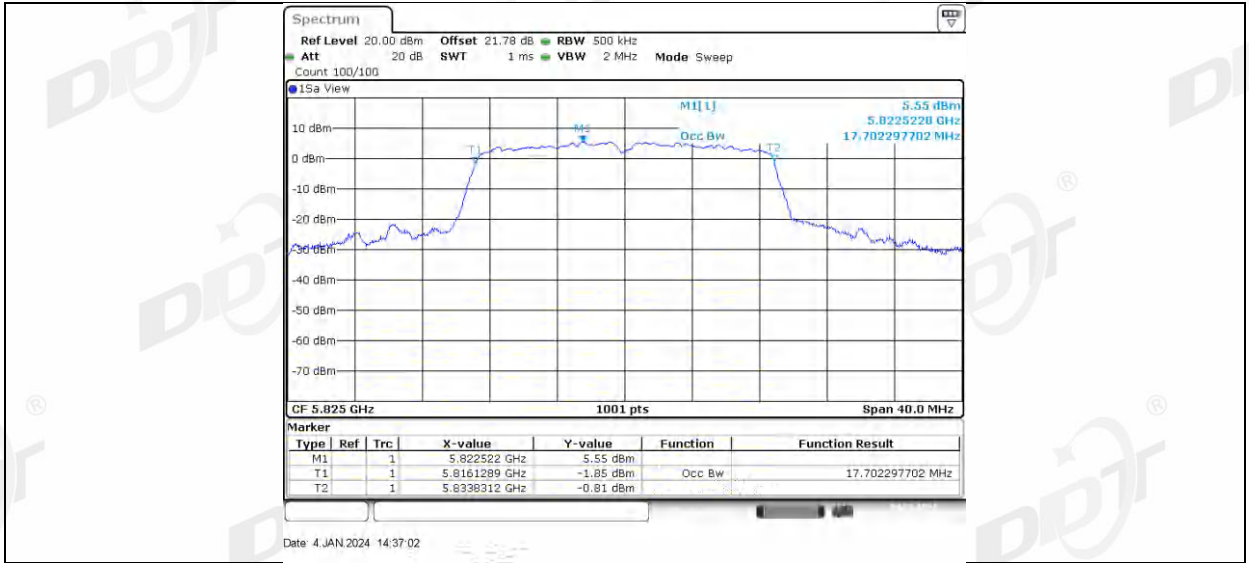
6.5. Test graphs





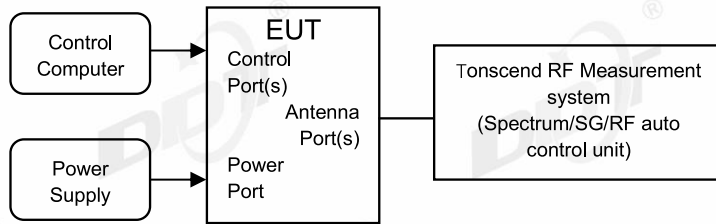






7. Duty Cycle

7.1. Block diagram of test setup



7.2. Limit

Just for Report.

7.3. Test procedure

- (1) Connected the EUT's antenna port to the Spectrum Analyzer by suitable attenuator, The cable loss and attenuator loss have been put into spectrum analyzer as amplitude offset. set the Spectrum Analyzer as below:
 - Centre Frequency: The centre frequency of the middle hopping channel.
 - Resolution BW: 10 MHz.
 - Video BW: 10 MHz.
 - Span: Zero span.
 - Detector: Peak.
 - Trace Mode: Clear Write.
 - Sweep: Video Trigger
- (2) When the trace is complete, measure the sending time of 1 burst and the duty cycle of 1 burst cycle.
- (3) Calculate dwell time follow below formula:

$$\text{Duty cycle} = \text{Pulse's on time} / \text{Burst cycle}$$

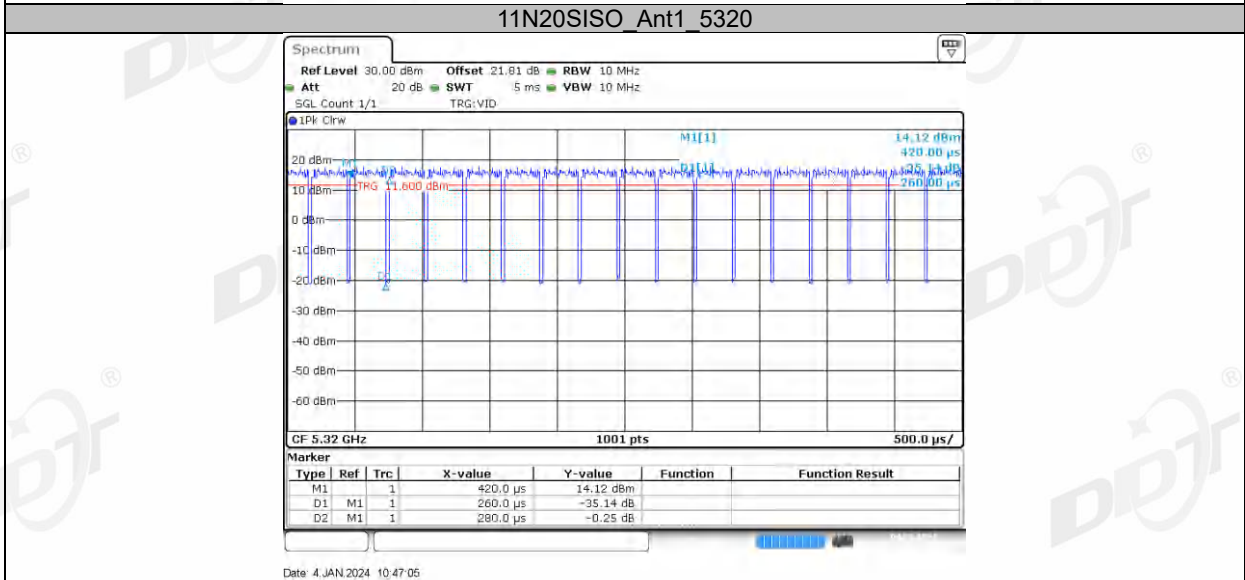
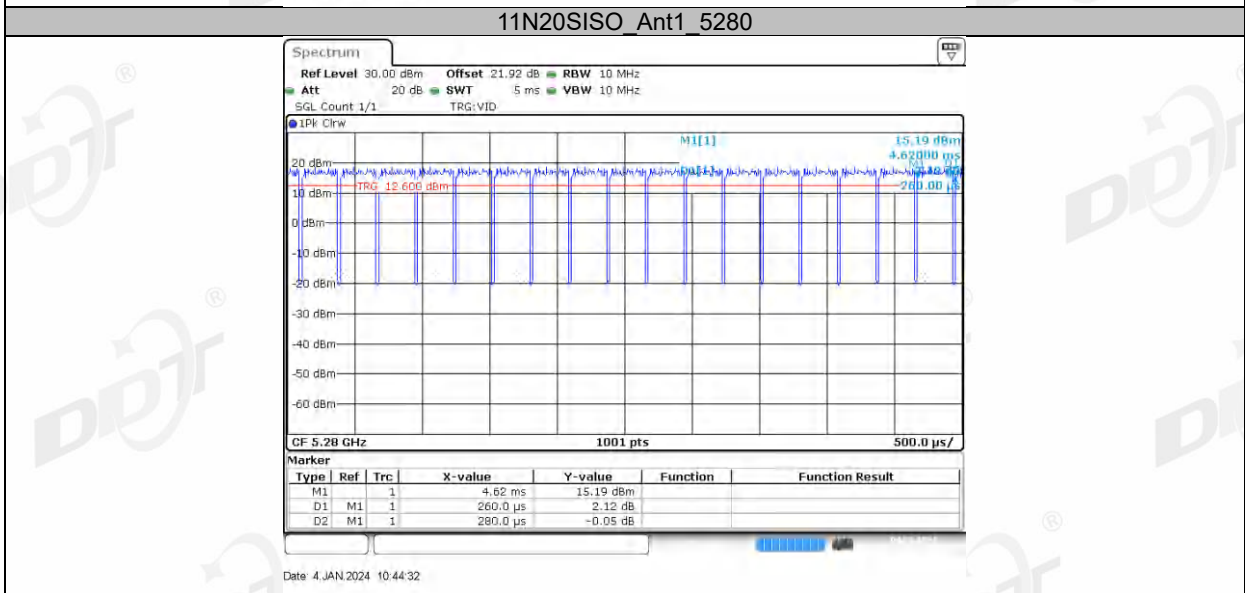
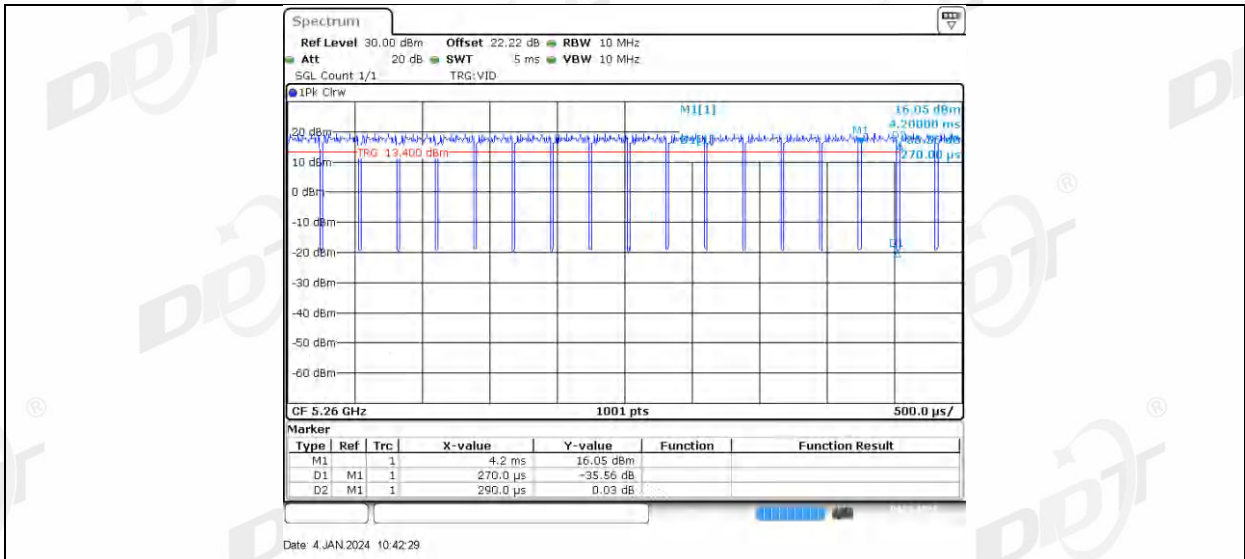
7.4. Test result

Test Engineer:	Zoe	Test Site:	RF Measurement System 3#
Ambient Condition:	20.9°C,43.2%RH	Test Date:	2024.01.04
Test Power Supply:	Battery	EUT:	Tabletop Wireless Speaker
Sample Number:	S23113018-02	Model No.:	EDF100080

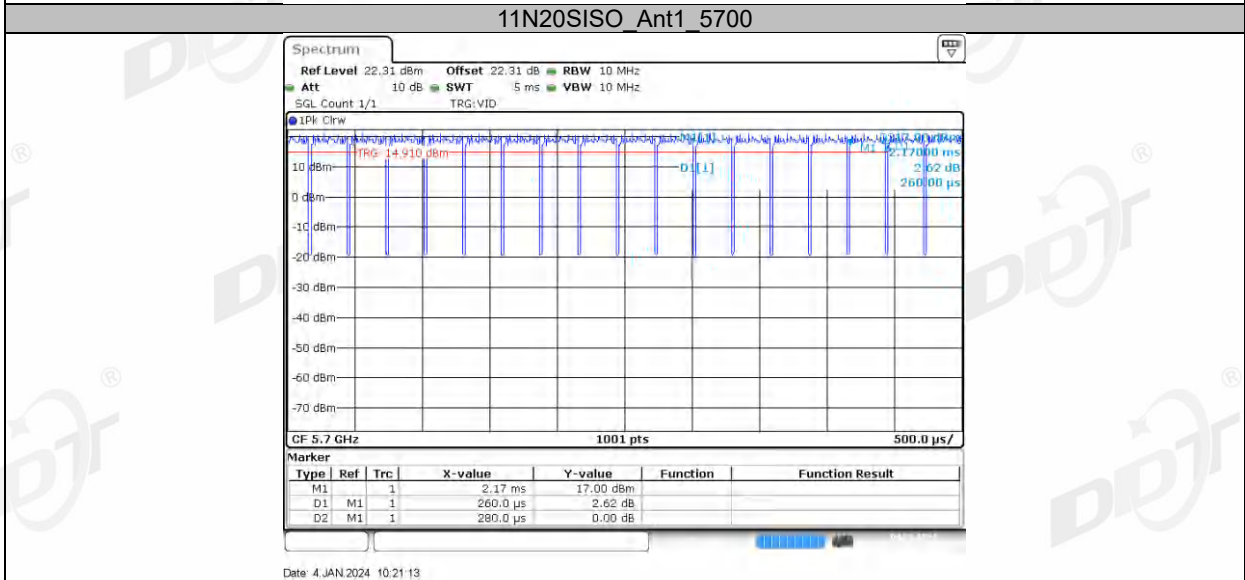
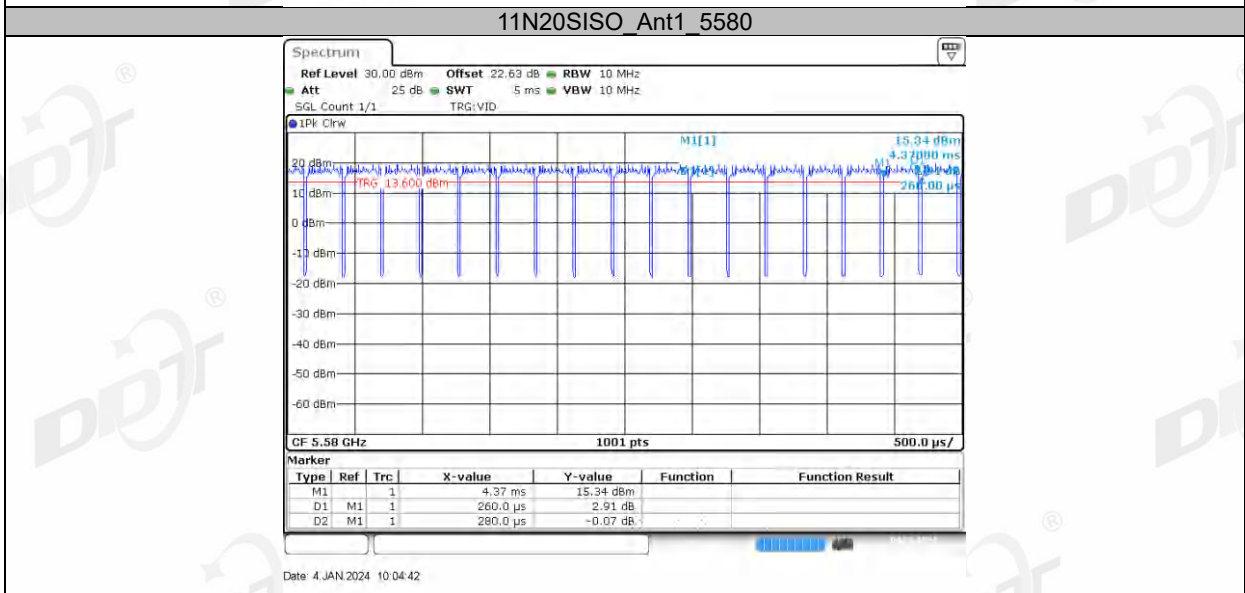
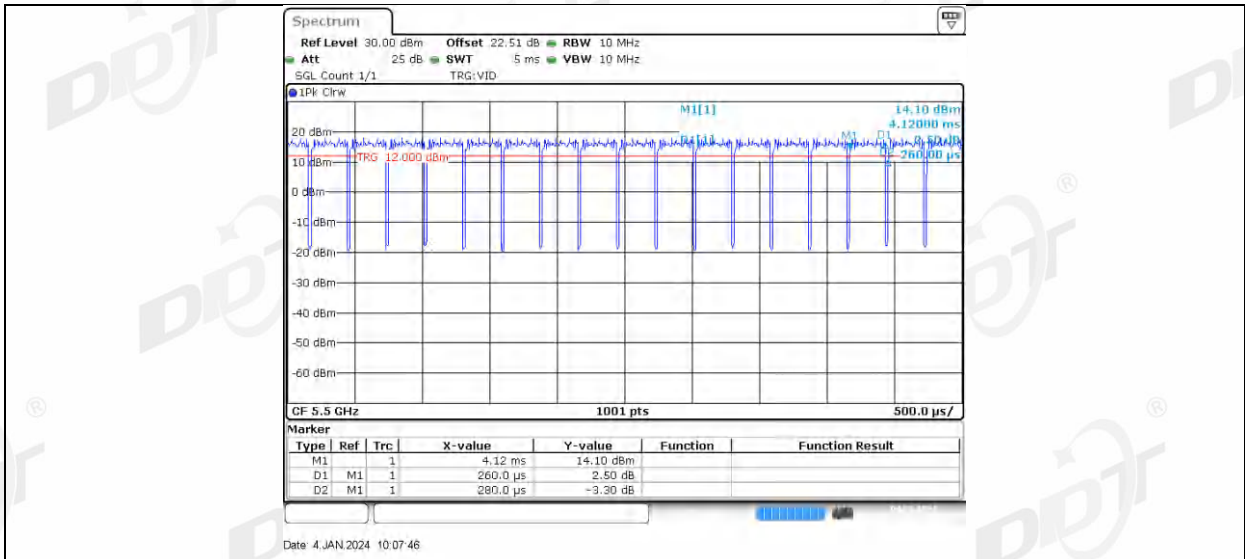
Test Mode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
11N20SISO	Ant1	5180	0.27	0.29	93.10
		5200	0.26	0.29	89.66
		5240	0.26	0.28	92.86
		5260	0.27	0.29	93.10
		5280	0.26	0.28	92.86
		5320	0.26	0.28	92.86
		5500	0.26	0.28	92.86
		5580	0.26	0.28	92.86
		5700	0.26	0.28	92.86
		5720	0.26	0.28	92.86
		5745	0.26	0.28	92.86
		5785	0.26	0.28	92.86
		5825	0.27	0.29	93.10

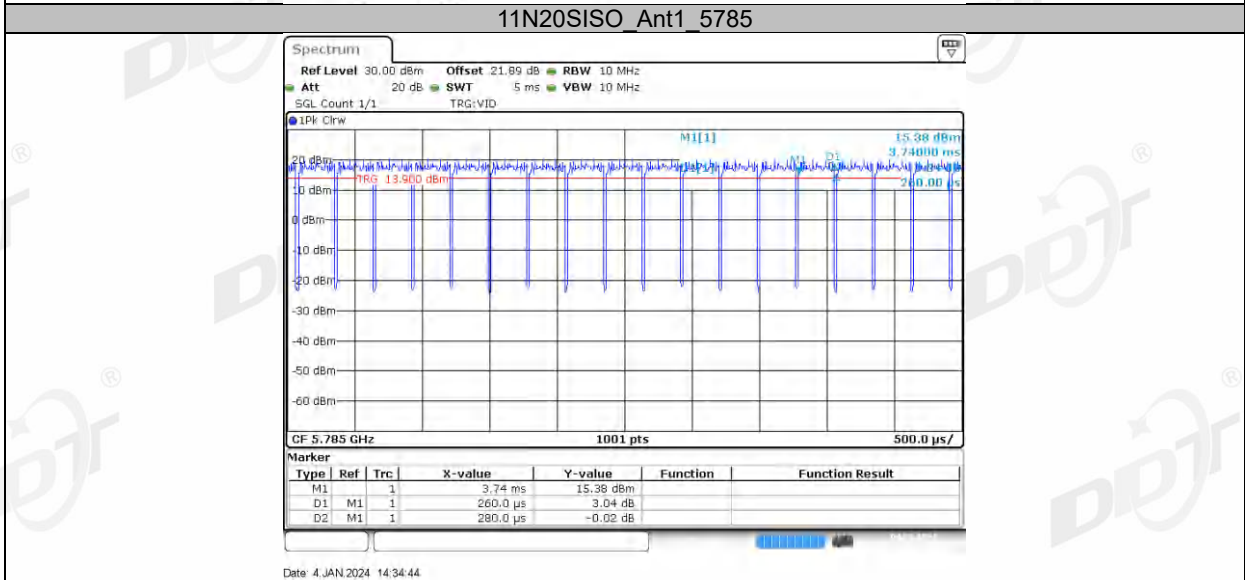
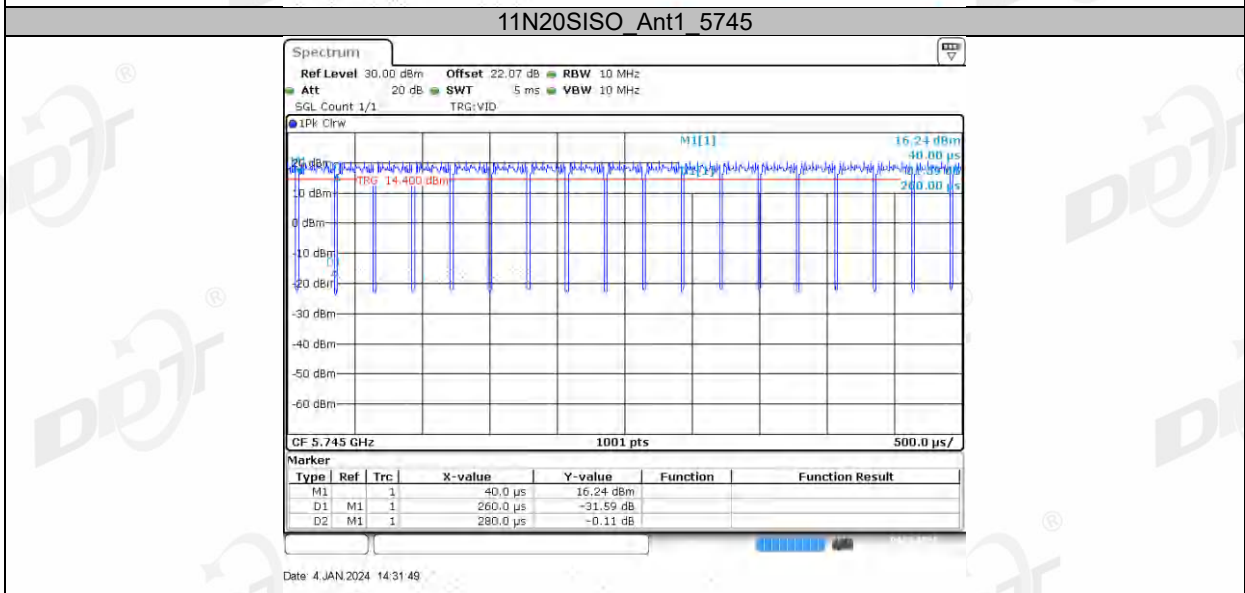
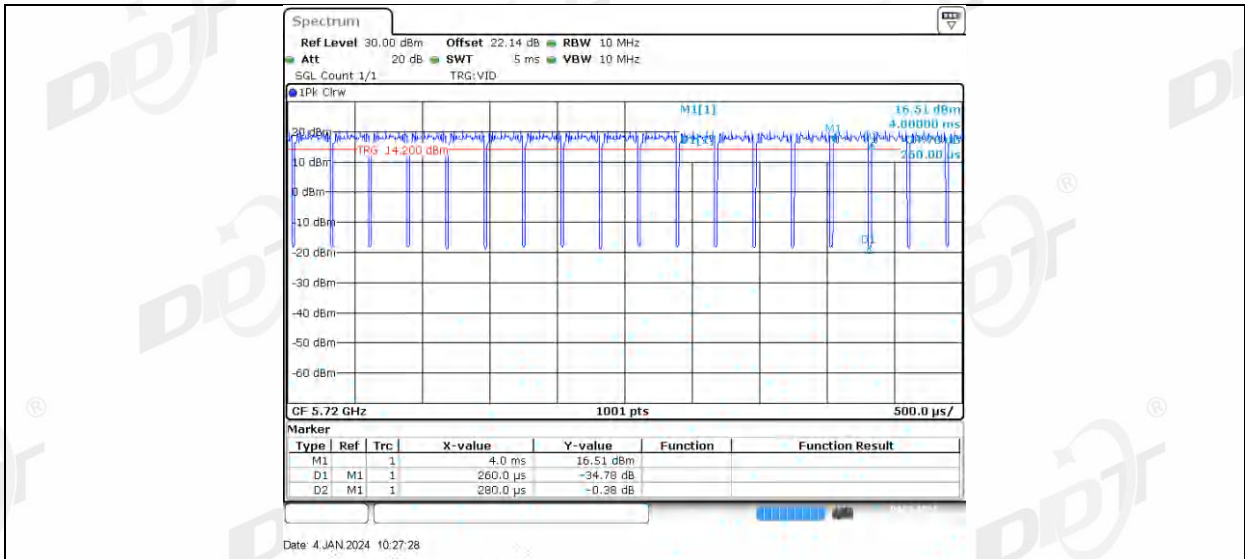
7.5. Test graphs



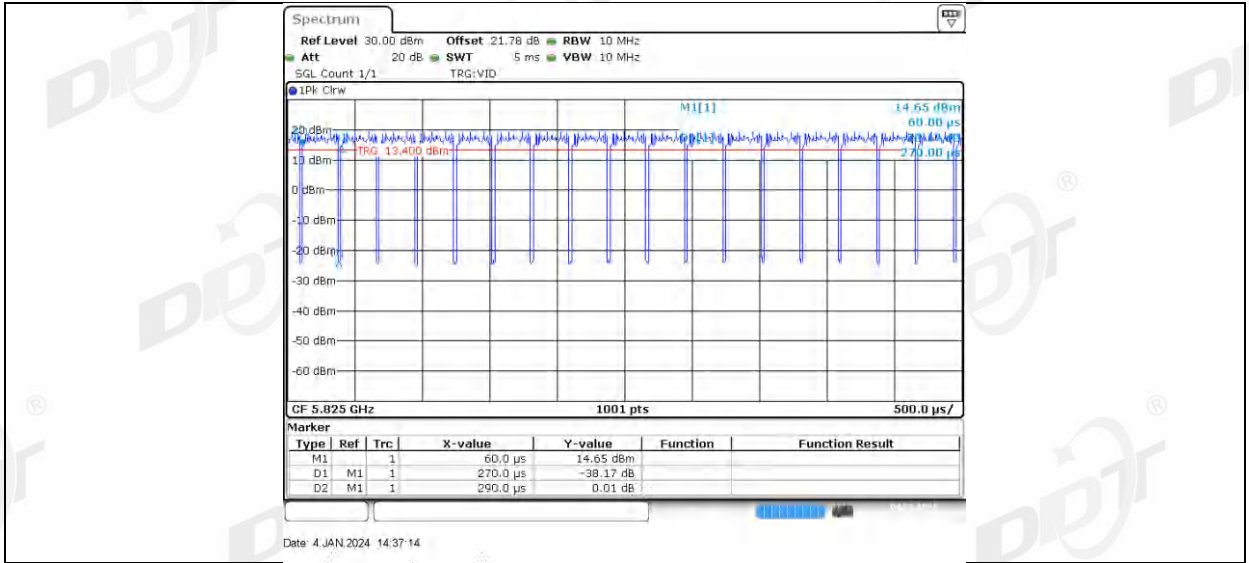


11N20SISO_Ant1_5500



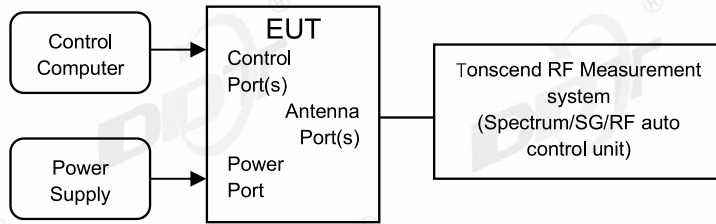


11N20SISO_Ant1_5825



8. Maximum Output Power

8.1. Block diagram of test setup



8.2. Limits

FCC Part15, Subpart E/ RSS-247		
Test Item	Limit	Frequency Range (MHz)
Maximum Output Power	For FCC: outdoor access point: 1 W(30 dBm) indoor access point: 1 W(30 dBm) fixed point-to-point access points1 W(30 dBm) client devices: 250 mW (24 dBm)	5150-5250
	For RSS: e.i.r.p. power: not exceed 200 mW (23 dBm) or $10 + 10 \log_{10} B$	
	For FCC: 250 mW (24 dBm) or $11 + 10 \log_{10} B$	5250-5350
	For RSS: For conducted output power: 250 mW (24 dBm) or $11 + 10 \log_{10} B$	
	For RSS: e.i.r.p. power: not exceed 1.0 W (30 dBm) or $17 + 10 \log_{10} B$	
	For FCC: 250 mW (24 dBm) or $11 + 10 \log_{10} B$	For FCC:5470 - 5725 For IC:5470 - 5600 5650 - 5725
	For RSS: For conducted output power: 250 mW (24 dBm) or $11 + 10 \log_{10} B$	
	For RSS: e.i.r.p. power: not exceed 1.0 W (30 dBm) or $17 + 10 \log_{10} B$	
	1 Watt (30 dBm)	5725-5850

Note 1: For FCC: B=26 bandwidth; For ISCED: B=99% bandwidth.

8.3. Test procedure

Connect each EUT's antenna output to power sensor by RF cable and attenuator
Measure the output power of each antenna port by power sensor.

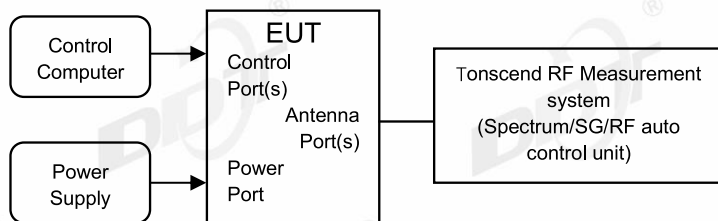
8.4. Test result channel power

Test Engineer:	Zoe	Test Site:	RF Measurement System 3#
Ambient Condition:	20.9°C,43.2%RH	Test Date:	2024.01.04
Test Power Supply:	Battery	EUT:	Tabletop Wireless Speaker
Sample Number:	S23113018-02	Model No.:	EDF100080

Test Mode	Antenna	Frequency [MHz]	Duty Cycle [%]	DC Factor [dB]	Result [dBm]	Limit [dBm]	EIRP [dBm]	EIRP Limit [dBm]	Verdict
11N20SISO	Ant1	5180	93.10	0.31	16.26	≤23.98	18.56	---	PASS
		5200	89.66	0.47	16.12	≤23.98	18.42	---	PASS
		5240	92.86	0.32	15.24	≤23.98	17.54	---	PASS
		5260	93.10	0.31	14.41	≤23.98	16.71	---	PASS
		5280	92.86	0.32	13.48	≤23.98	15.78	---	PASS
		5320	92.86	0.32	12.06	≤23.98	14.36	---	PASS
		5500	92.86	0.32	12.36	≤23.98	14.66	---	PASS
		5580	92.86	0.32	13.79	≤23.98	16.09	---	PASS
		5700	92.86	0.32	14.97	≤23.98	17.27	---	PASS
		5720	92.86	0.32	14.75	≤23.98	17.05	---	PASS
		5745	92.86	0.32	14.73	≤30.00	17.03	---	PASS
		5785	92.86	0.32	14.35	≤30.00	16.65	---	PASS
5825	93.10	0.31	13.82	≤30.00	16.12	---	PASS		

9. Power Spectral Density

9.1. Block diagram of test setup



9.2. Limits

FCC Part15, Subpart E/ RSS-247		
Test Item	Limit	Frequency Range (MHz)
Power Spectral Density	For FCC: Other than Mobile and portable:17 dBm/MHz Mobile and portable client devices:11 dBm/MHz	5150-5250
	For RSS eirp: 10 dBm/MHz	
	11 dBm/MHz	5250-5350
	11 dBm/MHz	For FCC: 5470 - 5725 For ISED: 5470 - 5600 5650 - 5725
	30 dBm/500 kHz	5725-5850

9.3. Test procedure

The transmitter output was connected to a spectrum analyzer. Power density was measured by spectrum analyzer with 1MHz RBW and 3MHz VBW.

Connect the UUT to the spectrum analyser and use the following settings:

5150 MHz~5250 MHz, 5250 MHz~5350 MHz, 5470 MHz~5725 MHz

Center Frequency	The centre frequency of the channel under test
Detector	RMS
RBW	1MHz
VBW	$\geq 3 \times \text{RBW}$
Span	Encompass the entire emissions bandwidth (EBW) of the signal
Trace	Max hold
Sweep time	Auto

5725 MHz-5850 MHz

Center Frequency	The centre frequency of the channel under test
Detector	RMS
RBW	500 kHz

VBW	$\geq 3 \times \text{RBW}$
Span	Encompass the entire emissions bandwidth (EBW) of the signal
Trace	Max hold
Sweep time	Auto

9.4. Test result

Test Engineer:	Zoe	Test Site:	RF Measurement System 3#
Ambient Condition:	20.9°C,43.2%RH	Test Date:	2024.01.04
Test Power Supply:	Battery	EUT:	Tabletop Wireless Speaker
Sample Number:	S23113018-02	Model No.:	EDF100080

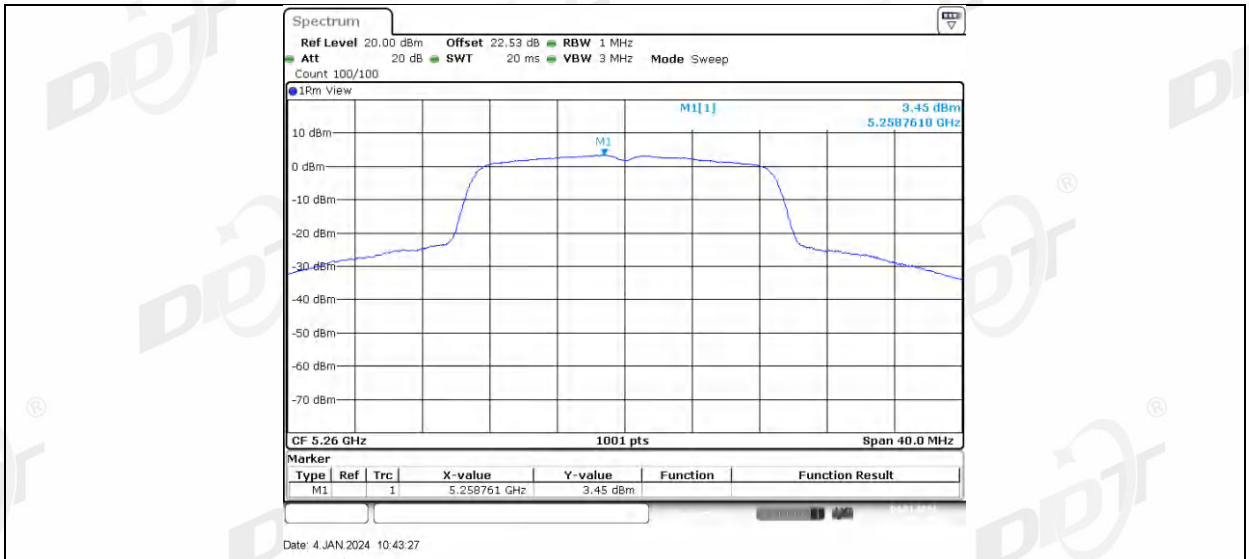
Test Mode	Antenna	Frequency[MHz]	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11N20SISO	Ant1	5180	5.92	≤11.00	PASS
		5200	5.28	≤11.00	PASS
		5240	4.46	≤11.00	PASS
		5260	3.45	≤11.00	PASS
		5280	2.51	≤11.00	PASS
		5320	1.28	≤11.00	PASS
		5500	1.56	≤11.00	PASS
		5580	2.77	≤11.00	PASS
		5700	4.39	≤11.00	PASS
		5720 UNII-2C	3.56	≤11.00	PASS
		5720 UNII-3	-0.83	≤30.00	PASS
		5745	0.72	≤30.00	PASS
		5785	-0.03	≤30.00	PASS
		5825	-0.66	≤30.00	PASS

Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

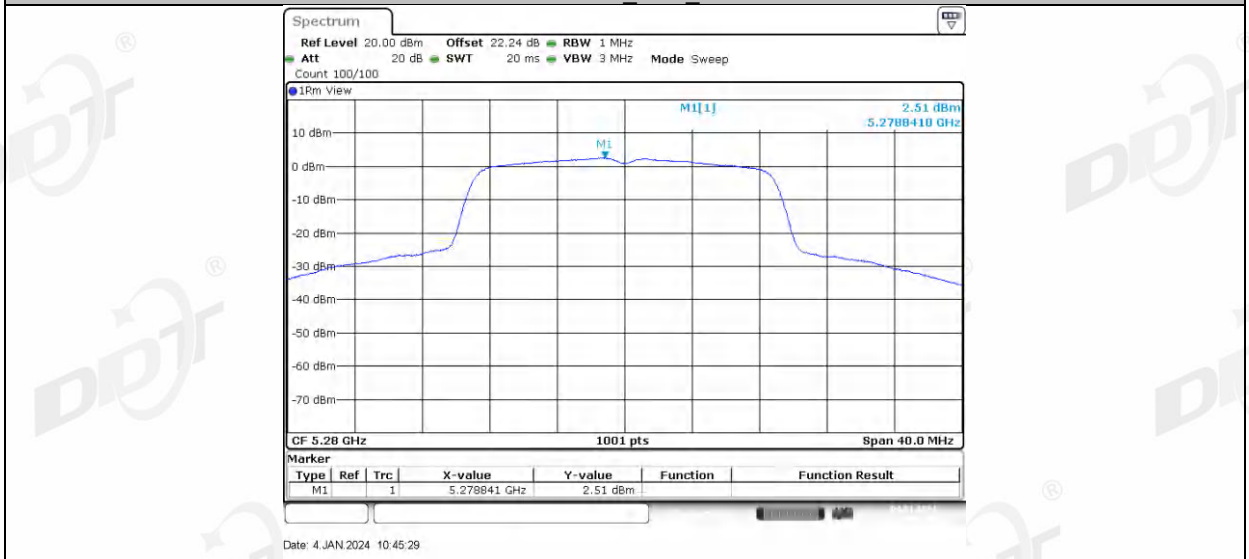
2.The Duty Cycle Factor is compensated in the graph.

9.5. Test graphs

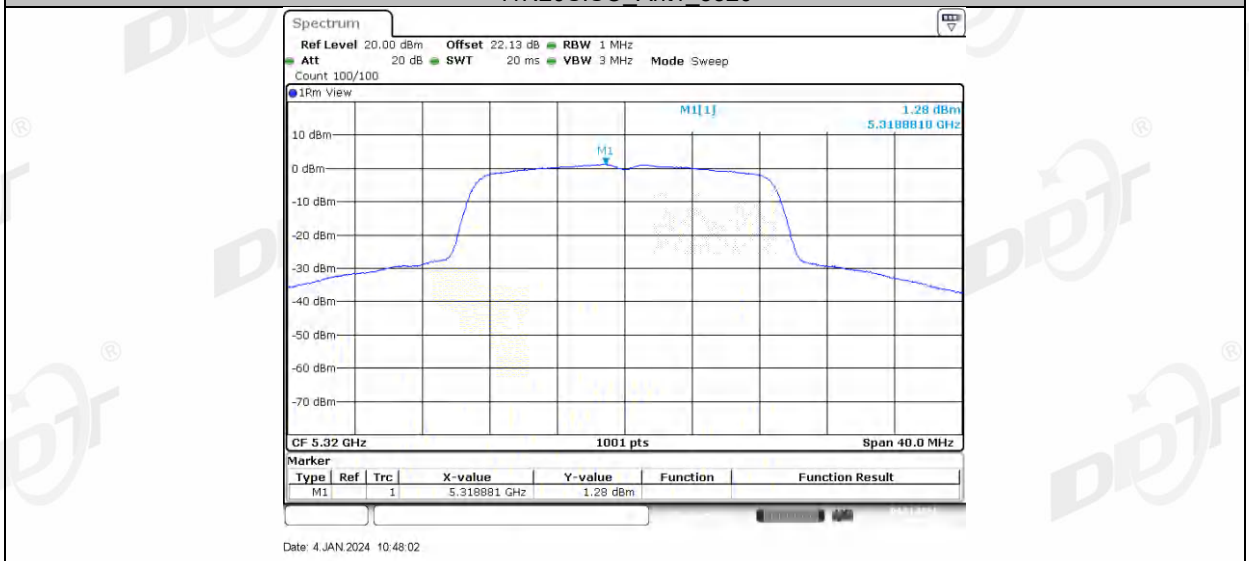




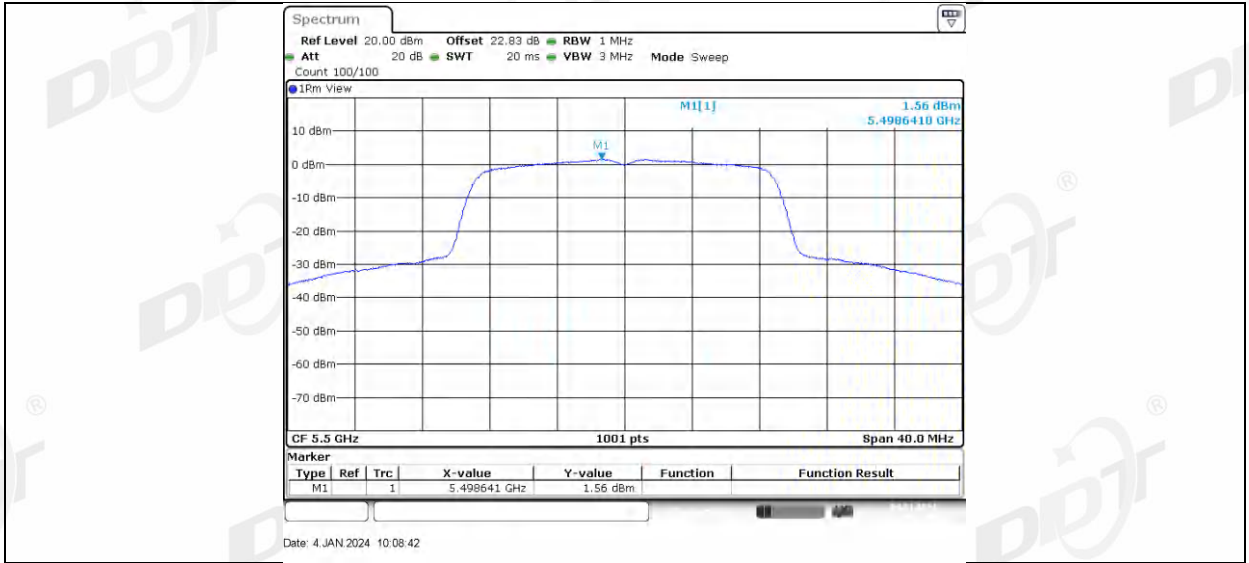
11N20SISO_Ant1_5280



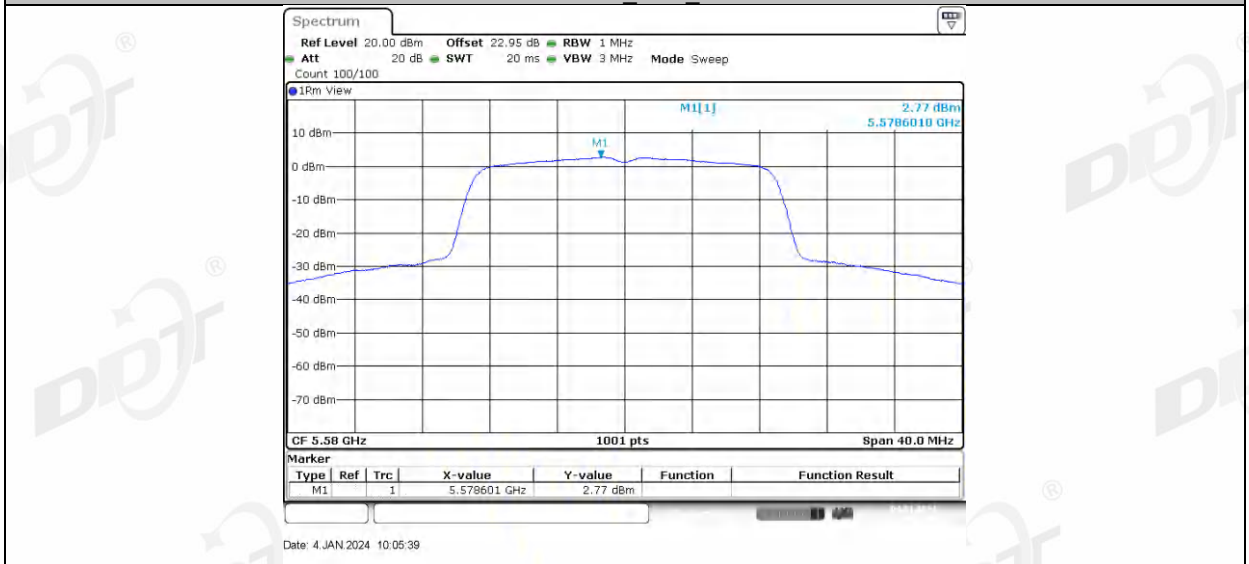
11N20SISO_Ant1_5320



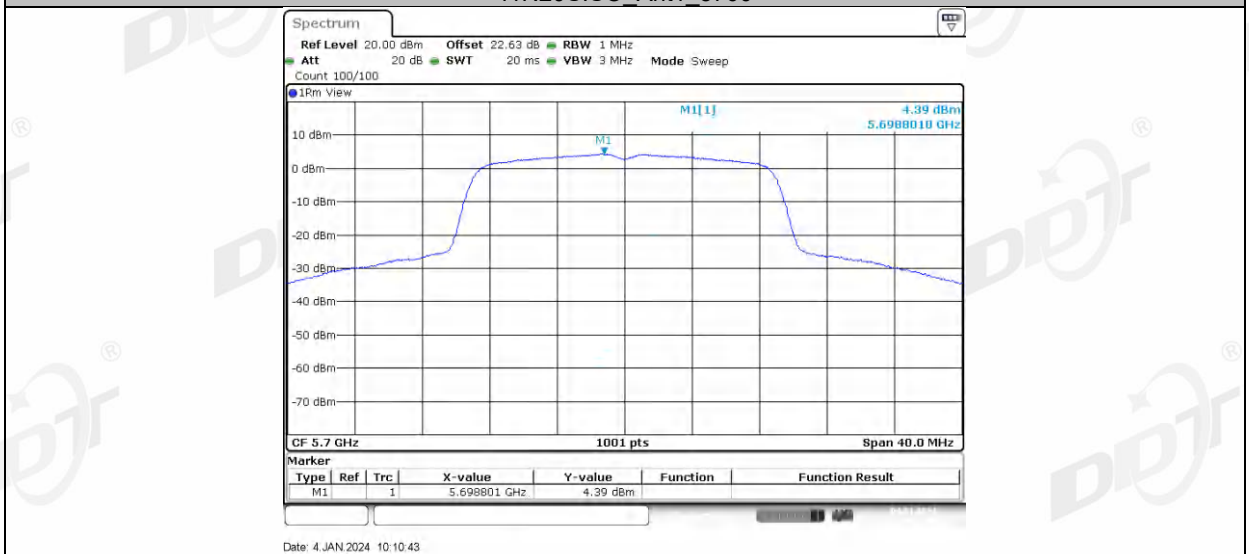
11N20SISO_Ant1_5500



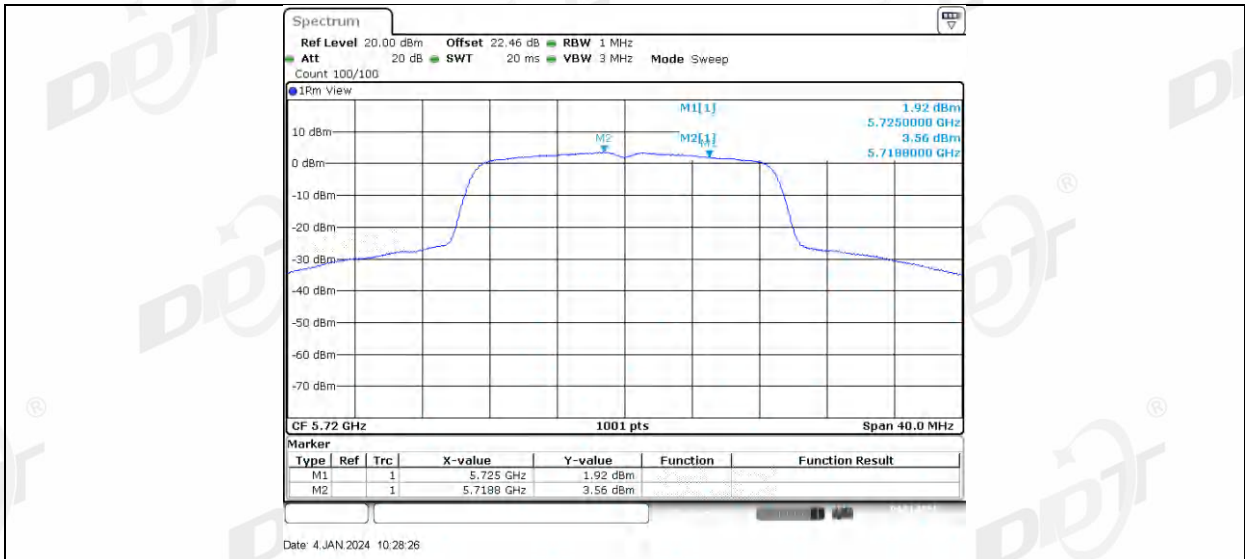
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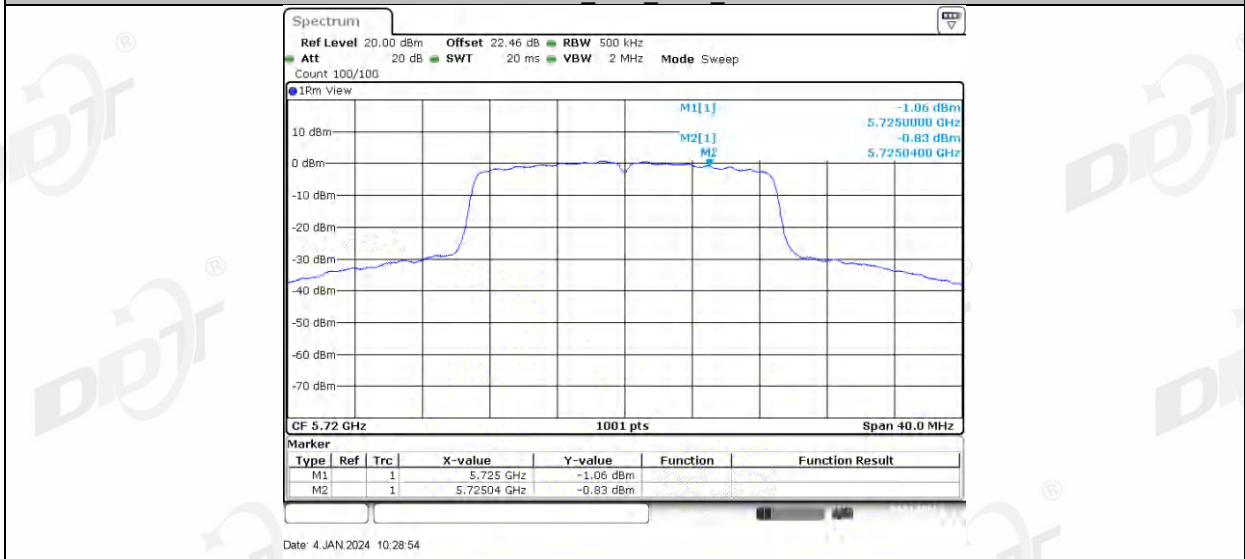
11N20SISO_Ant1_5700



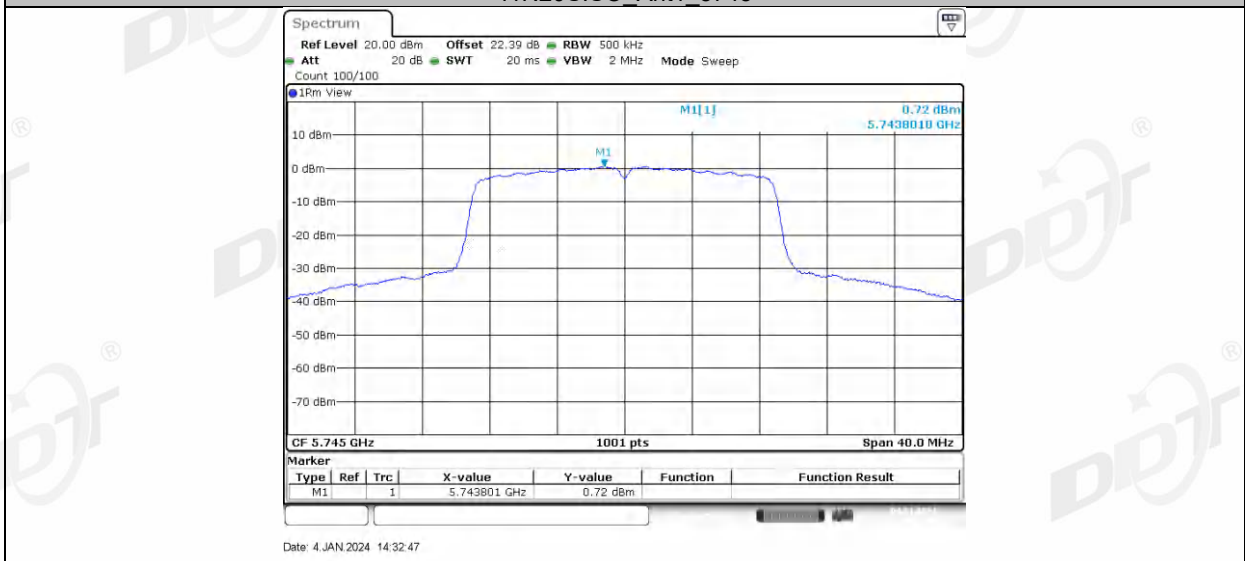
11N20SISO_Ant1_5720_UNII-2C



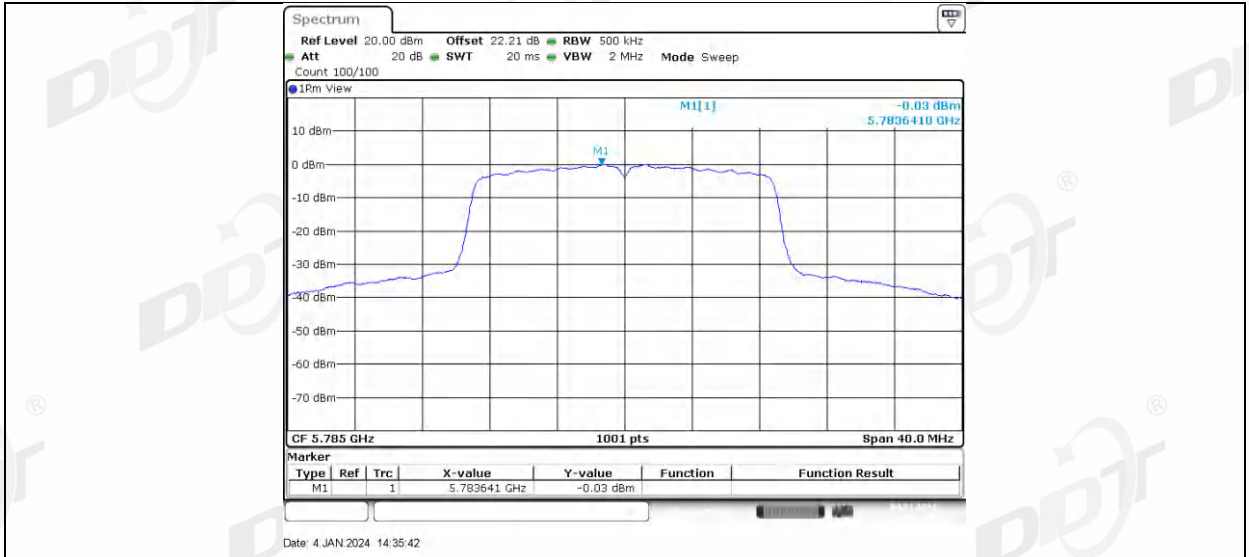
11N20SISO Ant1 5720 UNII-3



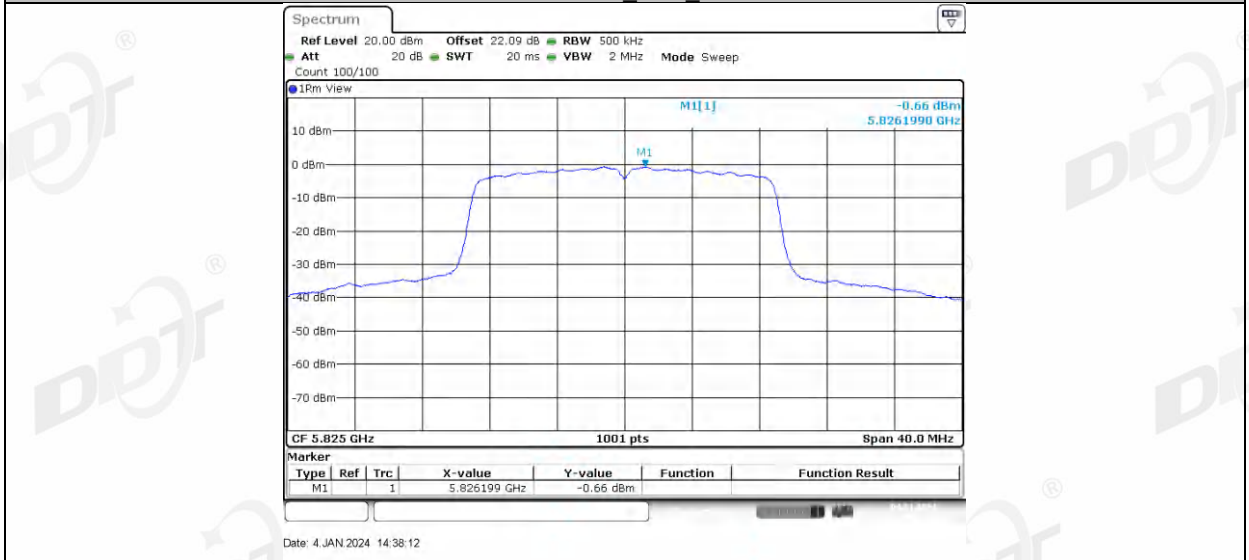
11N20SISO Ant1 5745



11N20SISO Ant1 5785



11N20SISO_Ant1_5825



10. Frequency Stability Measurement

10.1. Limit of Frequency Stability

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

10.2. Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

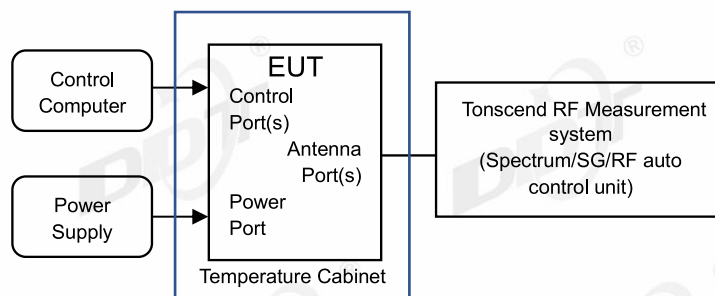
10.3. Test procedures

(1) To ensure emission at the band edge is maintained within the authorized band, those values shall be measured by radiation emissions at upper and lower frequency points, and finally compensated by frequency deviation as procedures below.

(2) The EUT was operated at the maximum output power, and connected to the spectrum analyzer, which is set to maximum hold function and peak detector. The peak value of the power envelope was measured and noted. The upper and lower frequency points were respectively measured relatively 10 dB lower than the measured peak value.

(3) The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

10.4. Test setup



10.5. Test result

Test Engineer:	Zoe	Test Site:	RF Measurement System 3#
Ambient Condition:	20.9℃,43.2%RH	Test Date:	2024.01.04
Test Power Supply:	Battery	EUT:	Tabletop Wireless Speaker
Sample Number:	S23113018-02	Model No.:	EDF100080

Voltage								
Test Mode	Antenna	Frequency[MHz]	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11N20SISO	Ant1	5180	NV	NT	-20000.00	-3.861004	20	PASS
			LV	NT	-20000.00	-3.861004	20	PASS
			HV	NT	-20000.00	-3.861004	20	PASS
		5200	NV	NT	-20000.00	-3.846154	20	PASS
			LV	NT	-20000.00	-3.846154	20	PASS
			HV	NT	-20000.00	-3.846154	20	PASS
		5240	NV	NT	-20000.00	-3.816794	20	PASS
			LV	NT	-20000.00	-3.816794	20	PASS
			HV	NT	-20000.00	-3.816794	20	PASS
		5260	NV	NT	-20000.00	-3.802281	20	PASS
			LV	NT	-20000.00	-3.802281	20	PASS
			HV	NT	-20000.00	-3.802281	20	PASS
		5280	NV	NT	-20000.00	-3.787879	20	PASS
			LV	NT	-20000.00	-3.787879	20	PASS
			HV	NT	-20000.00	-3.787879	20	PASS
		5320	NV	NT	-20000.00	-3.759398	20	PASS
			LV	NT	-20000.00	-3.759398	20	PASS
			HV	NT	-20000.00	-3.759398	20	PASS
		5500	NV	NT	-20000.00	-3.636364	20	PASS
			LV	NT	-20000.00	-3.636364	20	PASS
			HV	NT	-20000.00	-3.636364	20	PASS
		5580	NV	NT	-20000.00	-3.584229	20	PASS
			LV	NT	-20000.00	-3.584229	20	PASS
			HV	NT	-20000.00	-3.584229	20	PASS
		5700	NV	NT	-20000.00	-3.508772	20	PASS
			LV	NT	-20000.00	-3.508772	20	PASS
			HV	NT	-20000.00	-3.508772	20	PASS
		5720	NV	NT	-40000.00	-6.993007	20	PASS
			LV	NT	-40000.00	-6.993007	20	PASS
			HV	NT	-40000.00	-6.993007	20	PASS
		5745	NV	NT	-20000.00	-3.481288	20	PASS
			LV	NT	-20000.00	-3.481288	20	PASS
			HV	NT	-20000.00	-3.481288	20	PASS
		5785	NV	NT	-20000.00	-3.457217	20	PASS
			LV	NT	-20000.00	-3.457217	20	PASS
			HV	NT	-40000.00	-6.914434	20	PASS
		5825	NV	NT	-20000.00	-3.433476	20	PASS
			LV	NT	-40000.00	-6.866953	20	PASS
			HV	NT	-20000.00	-3.433476	20	PASS

Temperature								
Test Mode	Antenna	Frequency[MHz]	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11N20SISO	Ant1	5180	NV	0	-20000.00	-3.861004	20	PASS
			NV	10	-20000.00	-3.861004	20	PASS
			NV	20	-20000.00	-3.861004	20	PASS
			NV	30	-20000.00	-3.861004	20	PASS
			NV	35	-20000.00	-3.861004	20	PASS
		5200	NV	0	-20000.00	-3.846154	20	PASS
			NV	10	-20000.00	-3.846154	20	PASS
			NV	20	-20000.00	-3.846154	20	PASS
			NV	30	-20000.00	-3.846154	20	PASS
			NV	35	-20000.00	-3.846154	20	PASS

5240	NV	0	-20000.00	-3.816794	20	PASS
	NV	10	-20000.00	-3.816794	20	PASS
	NV	20	-20000.00	-3.816794	20	PASS
	NV	30	-20000.00	-3.816794	20	PASS
5260	NV	35	-20000.00	-3.816794	20	PASS
	NV	0	-20000.00	-3.802281	20	PASS
	NV	10	-20000.00	-3.802281	20	PASS
	NV	20	-20000.00	-3.802281	20	PASS
5280	NV	30	-20000.00	-3.802281	20	PASS
	NV	35	-20000.00	-3.802281	20	PASS
	NV	0	-20000.00	-3.787879	20	PASS
	NV	10	-20000.00	-3.787879	20	PASS
5320	NV	20	-20000.00	-3.787879	20	PASS
	NV	30	-20000.00	-3.787879	20	PASS
	NV	35	-20000.00	-3.787879	20	PASS
	NV	0	-20000.00	-3.759398	20	PASS
5500	NV	10	-20000.00	-3.759398	20	PASS
	NV	20	-20000.00	-3.759398	20	PASS
	NV	30	-20000.00	-3.759398	20	PASS
	NV	35	-20000.00	-3.759398	20	PASS
5580	NV	0	-20000.00	-3.636364	20	PASS
	NV	10	-20000.00	-3.636364	20	PASS
	NV	20	-20000.00	-3.636364	20	PASS
	NV	30	-20000.00	-3.636364	20	PASS
5700	NV	35	-20000.00	-3.636364	20	PASS
	NV	0	-20000.00	-3.584229	20	PASS
	NV	10	-20000.00	-3.584229	20	PASS
	NV	20	-20000.00	-3.584229	20	PASS
5720	NV	30	-20000.00	-3.584229	20	PASS
	NV	35	-20000.00	-3.584229	20	PASS
	NV	0	-20000.00	-3.508772	20	PASS
	NV	10	-20000.00	-3.508772	20	PASS
5745	NV	20	-20000.00	-3.508772	20	PASS
	NV	30	-20000.00	-3.508772	20	PASS
	NV	35	-20000.00	-3.508772	20	PASS
	NV	0	-40000.00	-6.993007	20	PASS
5785	NV	10	-40000.00	-6.993007	20	PASS
	NV	20	-40000.00	-6.993007	20	PASS
	NV	30	-40000.00	-6.993007	20	PASS
	NV	35	-40000.00	-6.993007	20	PASS
5825	NV	0	-20000.00	-3.481288	20	PASS
	NV	10	-20000.00	-3.481288	20	PASS
	NV	20	-20000.00	-3.481288	20	PASS
	NV	30	-20000.00	-3.481288	20	PASS
5825	NV	35	-20000.00	-3.481288	20	PASS
	NV	0	-20000.00	-3.457217	20	PASS
	NV	10	-20000.00	-3.457217	20	PASS
	NV	20	-20000.00	-3.457217	20	PASS
5825	NV	30	-20000.00	-3.457217	20	PASS
	NV	35	-20000.00	-3.457217	20	PASS
	NV	0	-20000.00	-3.433476	20	PASS
	NV	10	-20000.00	-3.433476	20	PASS
5825	NV	20	-40000.00	-6.866953	20	PASS
	NV	30	-40000.00	-6.866953	20	PASS
	NV	35	-40000.00	-6.866953	20	PASS
	NV	0	-40000.00	-6.866953	20	PASS

11. Dynamic Frequency Selection

11.1. Applicability of DFS requirements

Table 1: Applicability of DFS Requirements Prior to Use of a Channel

Requirement	Operational Mode		
	<input type="checkbox"/> Master	<input checked="" type="checkbox"/> Client Without Radar Detection	<input type="checkbox"/> Client with Radar Detection
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 2: Applicability of DFS requirements during normal operation

Requirement	Operational Mode	
	<input type="checkbox"/> Master Device or Client with Radar Detection	<input checked="" type="checkbox"/> Client Without Radar Detection
DFS Detection Threshold	Yes	Not required
Channel Closing Transmission Time	Yes	Yes
Channel Move Time	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required

Additional requirements for devices with multiple bandwidth modes	<input type="checkbox"/> Master Device or Client with Radar Detection	<input checked="" type="checkbox"/> Client Without Radar Detection
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required

Note: Frequencies selected for statistical performance check should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.

11.2. Limit

(1) DFS Detection Thresholds

Table 3: DFS Detection Thresholds for Master Devices and Client Devices with Radar Detection

Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP \geq 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm

Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna.
 Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.
 Note3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.

(2) DFS Response Requirements

Table 4: DFS Response Requirement Values

Parameter	Value
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds See Note 1.
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.

Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.
 Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required facilitating a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.
 Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

11.3. Parameters of radar test waveforms

This section provides the parameters for required test waveforms, minimum percentage of successful detections, and the minimum number of trials that must be used for determining DFS conformance. Step intervals of 0.1 microsecond for Pulse Width, 1 microsecond for PRI, 1 MHz for chirp width and 1 for the number of pulses will be utilized for the random determination of specific test waveforms.

Table 5 Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (µsec)	PRI (µsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A	Roundup $\left\lceil \frac{L}{360} \right\rceil$ $\left\lceil \frac{19 \cdot 10^6}{PRI_{min}} \right\rceil$	60%	30
		Test B			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120
<p>Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.</p> <p>Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a</p> <p>Test B: 15 unique PRI values randomly selected within the range of 518-3066 µsec, with a minimum increment of 1 µsec, excluding PRI values selected in Test A</p>					

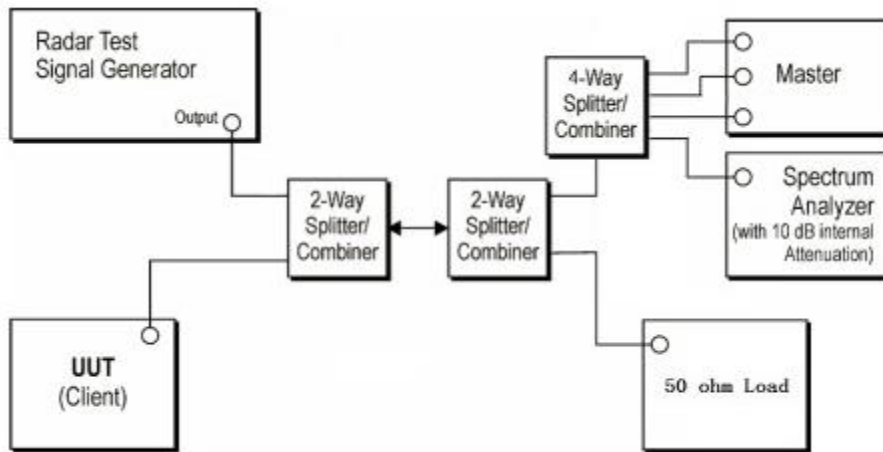
A minimum of 30 unique waveforms are required for each of the Short Pulse Radar Types 2 through 4. If more than 30 waveforms are used for Short Pulse Radar Types 2 through 4, then each additional waveform must also be unique and not repeated from the previous waveforms. If more than 30 waveforms are used for Short Pulse Radar Type 1, then each additional waveform is generated with Test B and must also be unique and not repeated from the previous waveforms in Tests A or B. Test aggregate is average of the percentage of successful detections of short pulse radar types 1-4

11.4. Calibration of radar waveform

Radar Waveform Calibration Procedure:

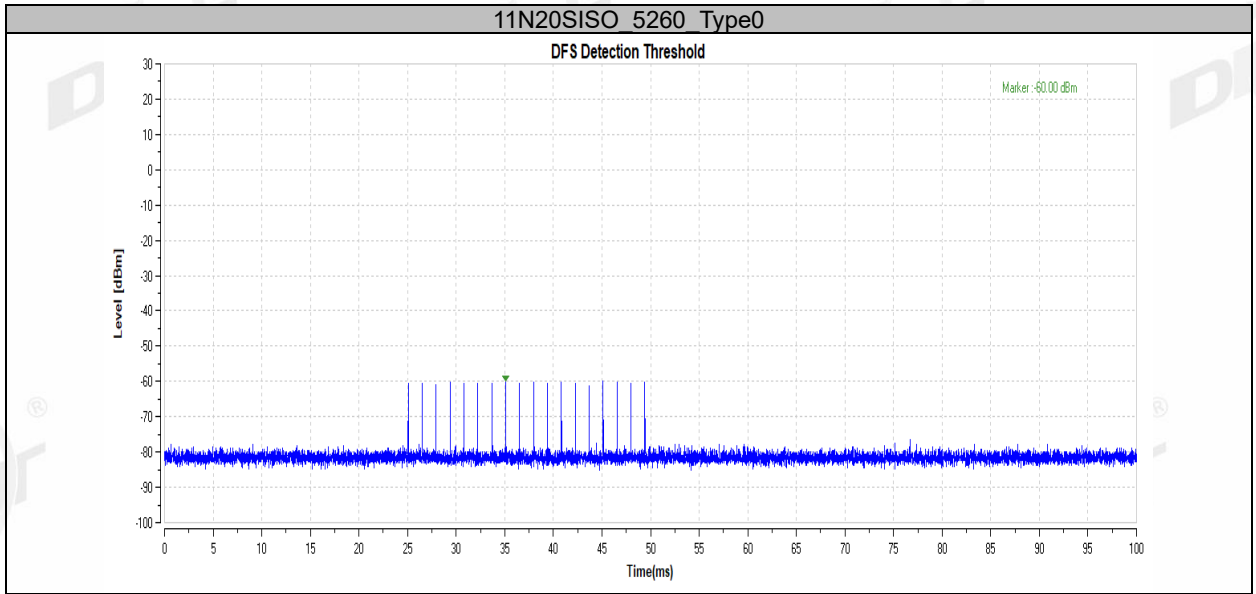
- (1) A 50 ohm load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected to place of the master
- (2) The interference Radar Detection Threshold Level is $-62\text{dBm} + 0\text{dBi} + 1\text{dB} = -61\text{dBm}$ that had been taken into account the output power range and antenna gain.
- (3) The following equipment setup was used to calibrate the conducted radar waveform. A vector signal generator was utilized to establish the test signal level for radar type 0. During this process there were no transmissions by either the master or client device. The spectrum analyzer was switched to the zero spans (time domain) at the frequency of the radar waveform generator. Peak detection was used. The spectrum analyzer resolution bandwidth (RBW) and video bandwidth (VBW) were set to 3 MHz. The spectrum analyzer had offset -1.0dB to compensate RF cable loss 1.0dB .
- (4) The vector signal generator amplitude was set so that the power level measured at the spectrum analyzer was $-62\text{dBm} + 0\text{dBi} + 1\text{dB} = -61\text{dBm}$. Capture the spectrum analyzer plots on short pulse radar waveform.

Conducted Calibration Setup:



Note: 1. Use the software "Web" to set the frequency channel.
 2. EUT is not support TPC and not with Radar detection.
 Radar Waveform Calibration Result:

Frequency[MHz]	Radar Type	Result	Limit[dbm]	Verdict
5260	Type0	-60.00	-59.70	PASS



11.5. Channel closing transmission time, channel move time and non-occupancy period

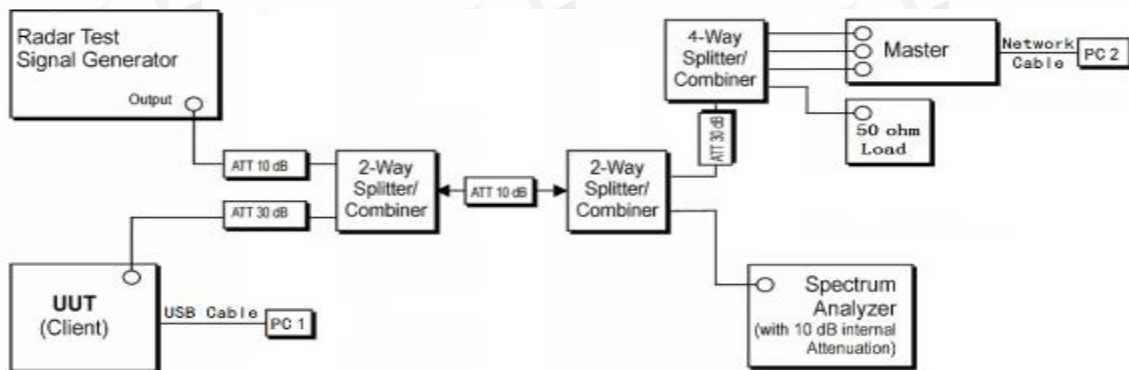
Block diagram of test setup Test Procedure:

- (1) The radar pulse generator is setup to provide a pulse at frequency that the master and client are operating. A type 0 radar pulse with a 1us pulse width and a 1428us PRI is used for the testing.
- (2) The vector signal generator is adjusted to provide the radar burst (18 pulses) at the level of approximately -61dBm at the antenna port of the master device.
- (3) A trigger is provided from the pulse generator to the DFS monitoring system in order to capture the traffic and the occurrence of the radar pulse.
- (4) EUT will associate with the master at channel. The file "iperf.exe" specified by the FCC is streamed from the PC 2 through the master and the client device to the PC 1 and played in full motion video using Test Software in order to properly load the network for the entire period of the test.
- (5) When radar burst with a level equal to the DFS Detection Threshold +1dB is generated on the operating channel of the U-NII device. At time T0 the radar waveform generator sends a burst of pulse of the radar waveform at Detection Threshold +1dB.
- (6) Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). One 15 seconds plot is reported for the Short Pulse Radar Type 0. The plot for the Short Pulse Radar Types start at the end of the radar burst. The Channel Move Time will be calculated based on the zoom in 600ms plot of the Short Pulse Radar Type.
- (7) Measurement of the aggregate duration of the Channel Closed Transmission Time method. With the
- (8) spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by: $Dwell (0.3ms) = S (12000ms) / B (4000)$; where Dwell is the dwell time per spectrum analyzer sampling bin, S is sweep time and B is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by: $C (ms) = N \times Dwell (0.3ms)$; where C is the Closing Time, N is the number of spectrum analyzer sampling bins (intermittent control signals) showing a U-NII transmission and Dwell is the dwell time per bin.

Measurement the EUT for more than 30 minutes following the channel move time to verify that no transmission or beacons occur on this channel.

11.6. Test setup

Setup for Client with injection at the Master

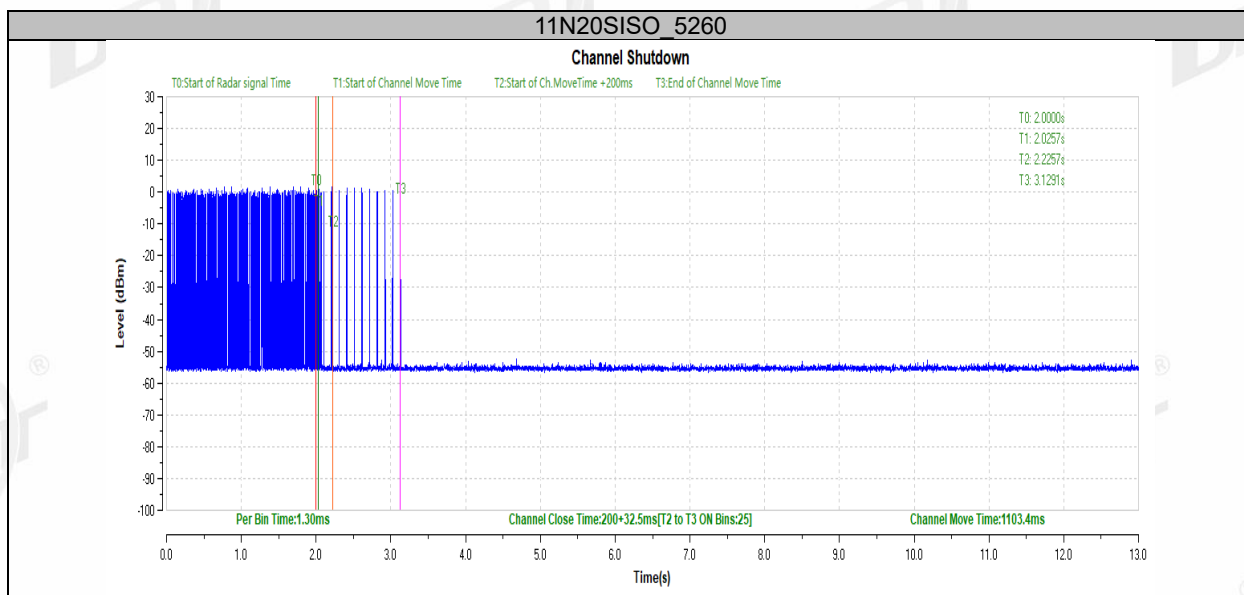


11.7. Test result

Test Engineer:	Zoe	Test Site:	RF Measurement System 3#
Ambient Condition:	20.9°C,43.2%RH	Test Date:	2024.01.04
Test Power Supply:	Battery	EUT:	Tabletop Wireless Speaker
Sample Number:	S23113018-02	Model No.:	EDF100080

TestMode	Frequency[MHz]	CCTT[ms]	Limit[ms]	CMT[ms]	Limit[ms]	Verdict
11N20SISO	5260	200+32.5	200+60	1103.4	10000	PASS

Test plots as follows:



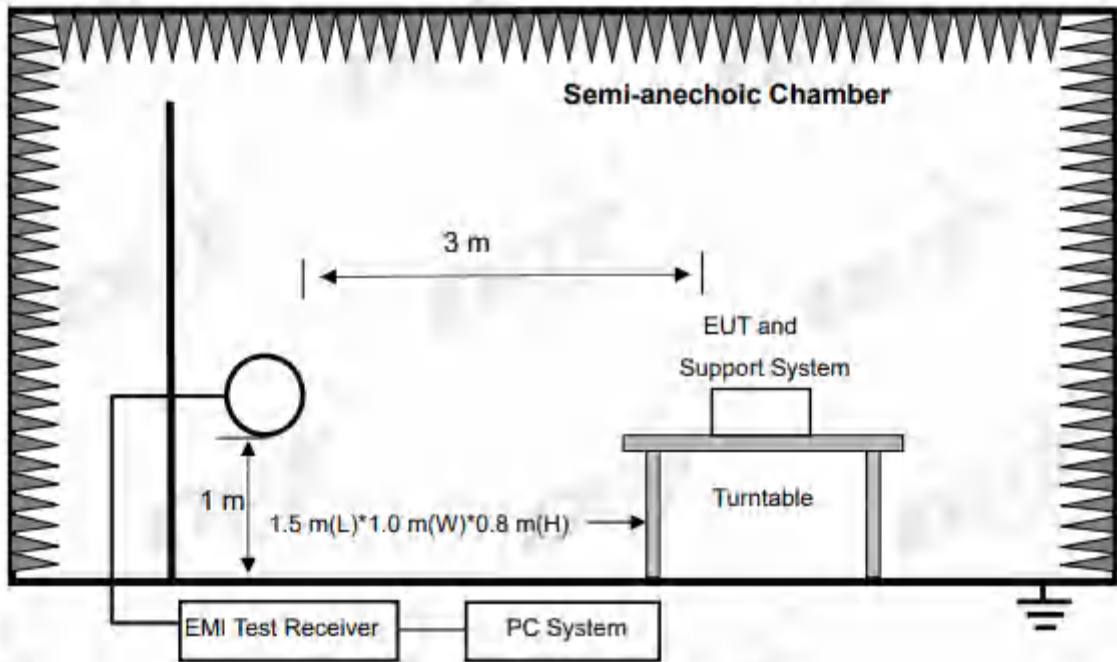
12. Emissions in Restricted Frequency Bands

12.1. Test equipment

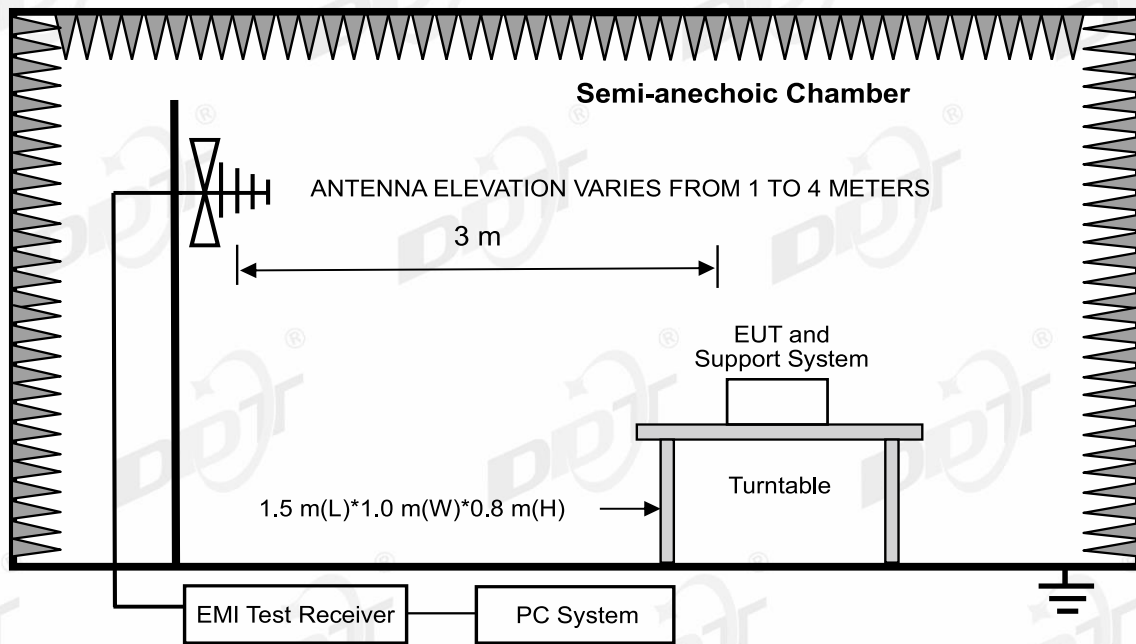
Equipment	Manufacturer	Model No.	Serial Number	Due Date
☑Radiation 3#Chamber				
EMI TEST RECEIVER	R&S	ESU26	100472	2024/04/22
PSA Series Spectrum Analyzer	Agilent	E4447A	MY50180031	2024/04/22
Active Loop Antenna	Schwarzbeck	FMZB-1519	1519-038	2024/09/10
Trilog Broadband Antenna	Schwarzbeck	VULB 9163	01429	2024/07/11
Double Ridged Horn Antenna	Schwarzbeck	BBHA 9120 D	02468	2024/09/17
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	790	2024/04/25
Pre-amplifier	COM-POWER	PAM-118A	18040084	2024/07/14
Pre-amplifier	COM-POWER	PAM-840A	461369	2024/04/26
RE Cable	N/A	W23.02 CP1-X2 + W23.09 AP1-X8+ JCT26S-NJ-NJ- 1.5M	4.5M+8M+1.5 M	2024/04/20
RF Cable	Yuhu	JCTB810-NJ-NJ- 9M+ ZT26S- SMAJ-SMAJ-1M	21123964	2024/04/22
Band Reject Filter(5150-5880 MHz)	REBES	BRM50716	G392	N/A
Test Software	Tonscend	JS32-RE	V 5.0.0.1	N/A

12.2. Block diagram of test setup

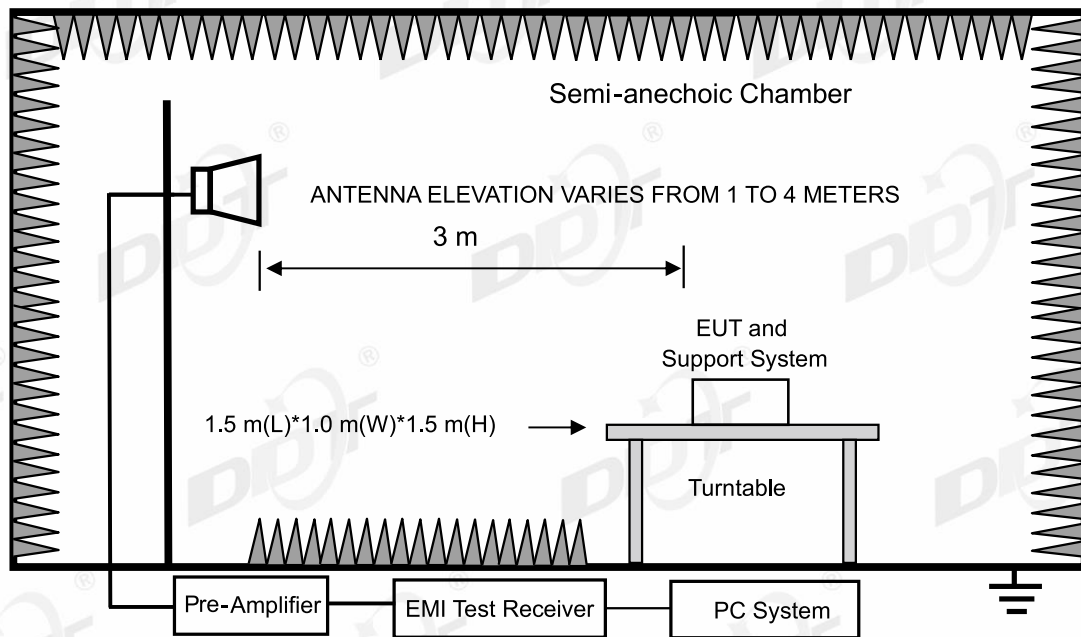
In 3 m Anechoic Chamber, test setup diagram for 9 kHz - 30 MHz:



In 3 m Anechoic Chamber, test setup diagram for 30 MHz - 1 GHz:



In 3 m Anechoic Chamber, test setup diagram for frequency above 1 GHz:



Note: For harmonic emissions test an appropriate high pass filter was inserted in the input port of AMP.

12.3. Limit

(1) FCC 15.205 Restricted frequency band

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
10.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.1772&4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.2072&4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(²)
13.36-13.41			

¹Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

²Above 38.6

RSS-Gen section 8.10 Restricted frequency bands*

MHz	MHz	MHz	GHz
0.090-0.110	12.51975-12.52025	240-285	3.5-4.4
0.495-0.505	12.57675-12.57725	322-335.4	4.5-5.15
2.1735-2.1905	13.36-13.41	399.9-410	5.35-5.46
3.020-3.026	16.42-16.423	608-614	7.25-7.75
4.125-4.128	16.69475-16.69525	960-1427	8.025-8.5
4.1772&4.17775	16.80425-16.80475	1435-1626.5	9.0-9.2
4.2072&4.20775	25.5-25.67	1645.5-1646.5	9.3-9.5
5.677-5.683	37.5-38.25	1660-1710	10.6-12.7
6.215-6.218	73-74.6	1718.8-1722.2	13.25-13.4
6.26775-6.26825	74.8-75.2	2200-2300	14.47-14.5
6.31175-6.31225	108-138	2310-2390	15.35-16.2
8.291-8.294	149.9-150.05	2483.5-2500	17.7-21.4
8.362-8.366	156.52475-156.52525	2655-2900	22.01-23.12
8.37625-8.38675	156.7-156.9	3260-3267	23.6-24.0
8.41425-8.41475	162.0125-167.17	3332-3339	31.2-31.8
12.29-12.293	167.72-173.2	3345.8-3358	36.43-36.5
			Above 38.6

* Certain frequency bands listed in table and in bands above 38.6 GHz are designated for licence-exempt applications. These frequency bands and the requirements that apply to related devices are set out in the 200 and 300 series of RSSs.

(2) FCC 15.209 Limit & RSS-Gen section 8.9 Limit

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		$\mu\text{V}/\text{m}$	$\text{dB}(\mu\text{V})/\text{m}$
0.009 ~ 0.490	300	2400/F(kHz)	67.6-20log(F)
0.490 ~ 1.705	30	24000/F(kHz)	87.6-20log(F)
1.705 ~ 30.0	30	30	29.54
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 $\text{dB}(\mu\text{V})/\text{m}$ (Peak) 54.0 $\text{dB}(\mu\text{V})/\text{m}$ (Average)	

Note:

(1) The emission limits shown in the above table are based on measurements employing a CISPR

QP detector except for the frequency bands 9 - 90 kHz, 110 - 490 kHz and above 1000 MHz. Radiated emissions limits in these three bands are based on measurements employing an average detector.

(2) At frequencies below 30 MHz, measurement may be performed at a distance closer than that specified, and the limit at closer measurement distance can be extrapolated by below formula:

$$\text{Limit}_{3m}(\text{dBuV/m}) = \text{Limit}_{30m}(\text{dBuV/m}) + 40\text{Log}(30m/3m)$$

(3) Limit for this EUT

The emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, and the emissions appearing within RSS-Gen section 8.10 Restricted frequency bands shall not exceed the limits shown in RSS-Gen section 8.9, all the other emissions shall be at least 20 dB below the fundamental emissions or comply with 15.209 limits and RSS-Gen section 8.9 limits..

12.4. Test Procedure

(1) EUT height should be 0 m for below 1 GHz at a semi - anechoic chamber while EUT height should be 0 m for above 1GHz at full chamber or semi - anechoic chamber ground with absorbers

(2) Setup EUT and assistant system according clause 2.3 and 8.2

(3) Test antenna was located 3m from the EUT on an adjustable mast, and the antenna used as below table.

Test frequency range	Test antenna used	Test distance
9 kHz-30 MHz	Active Loop antenna	3 m
30 MHz-1 GHz	Trilog Broadband Antenna	3 m
1 GHz-18 GHz	Double Ridged Horn Antenna(1GHz-18GHz)	3 m
18 GHz-40 GHz	Horn Antenna(18GHz-40GHz)	1 m

According ANSI C63.10:2013 clause 6.4.4.2 and 6.5.3, for measurements below 30 MHz, the loop antenna was positioned with its plane vertical from the EUT and rotated about its vertical axis for maximum response at each azimuth position around the EUT. And the loop antenna also be positioned with its plane horizontal at the specified distance from the EUT. The center of the loop is 1 m above the ground. for measurement above 30 MHz, the Trilog Broadband Antenna or Horn Antenna was located 3m from EUT, Measurements were made with the antenna positioned in both the horizontal and vertical planes of Polarization, and the measurement antenna was varied from 1 m to 4 m. in height above the reference ground plane to obtain the maximum signal strength.

(4) Below pre-scan procedure was first performed in order to find prominent frequency spectrum radiated emissions from 9 kHz to 40 GHz:

(a) Scanning the peak frequency spectrum with the antenna specified in step (3), and the EUT was rotated 360 degree, the antenna height was varied from 1 m to 4 m (Except loop antenna, it's fixed 1m above ground.)

(b) Change work frequency or channel of device if practicable.

(c) Change modulation type of device if practicable.

(d) Change power supply range from 85% to 115% of the rated supply voltage

(e) Rotated EUT through three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions.

Spectrum frequency from 9 kHz to 40 GHz (tenth harmonic of fundamental frequency) was investigated, and no any obvious emission were detected from 9 kHz to 30 MHz and 18 GHz to 40 GHz, so below final test was performed with frequency range from 30 MHz to 18 GHz.

(5) For final emissions measurements at each frequency of interest, the EUT was rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10:2013 on Radiated Emission test.

(6) The emissions from 9 kHz to 1 GHz were measured based on CISPR QP detector except for the frequency bands 9-90 kHz, 110-490 kHz, for emissions from 9 kHz-90kHz, 110kHz-490kHz and above 1GHz were measured based on average detector, for emissions above 1 GHz, peak emissions also be measured and need comply with Peak limit.

(7) The emissions from 9 kHz to 1 GHz, QP or average values were measured with EMI receiver with below RBW

Frequency band	RBW
9 kHz-150 kHz	200 Hz
150 kHz-30 MHz	9 kHz
30 MHz-1 GHz	120 kHz

(8) For emissions above 1 GHz, both Peak and Average level were measured with Spectrum Analyzer, and the RBW is set at 1 MHz, VBW is set at 3MHz for Peak measure, the RBW is set at 1 MHz, VBW is set at 10 Hz for AV value.

12.5. Test result

Pass. (See below detailed test result)

All the emissions except fundamental emission from 9 kHz to 25 GHz were comply with 15.209 limits and RSS-Gen section 8.9 limits.

Note1: According exploratory test no any obvious emission was detected from 9 kHz to 30 MHz and 18 GHz to 40 GHz, so the final test was performed with frequency range from 30 MHz to 18 GHz and recorded in below.

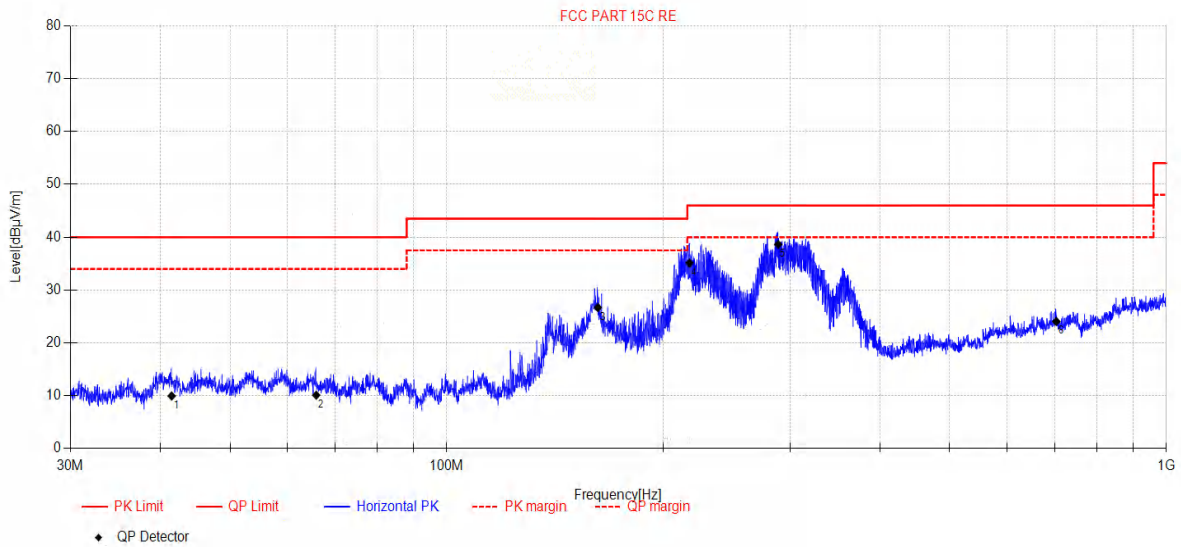
Note2: For emissions below 1 GHz, according exploratory explorer test, when change Tx mode and channel, have no distinct influence on emissions level, so for emissions below 1 GHz, the final test was only performed with EUT working in 802.11n HT20 mode.

Note3: For emissions above 1 GHz. If peak results comply with AV limit, AV Result is deemed to comply with AV limit. And the 802.11n HT20 is the worst simultaneous case and reported.

Radiated Emission test (below 1GHz)

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-29 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: WIFI5G MODE **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC BELOW 1G\20231229-224148_H
Memo: Sample Number:S23113018-01 Power Setting:NA



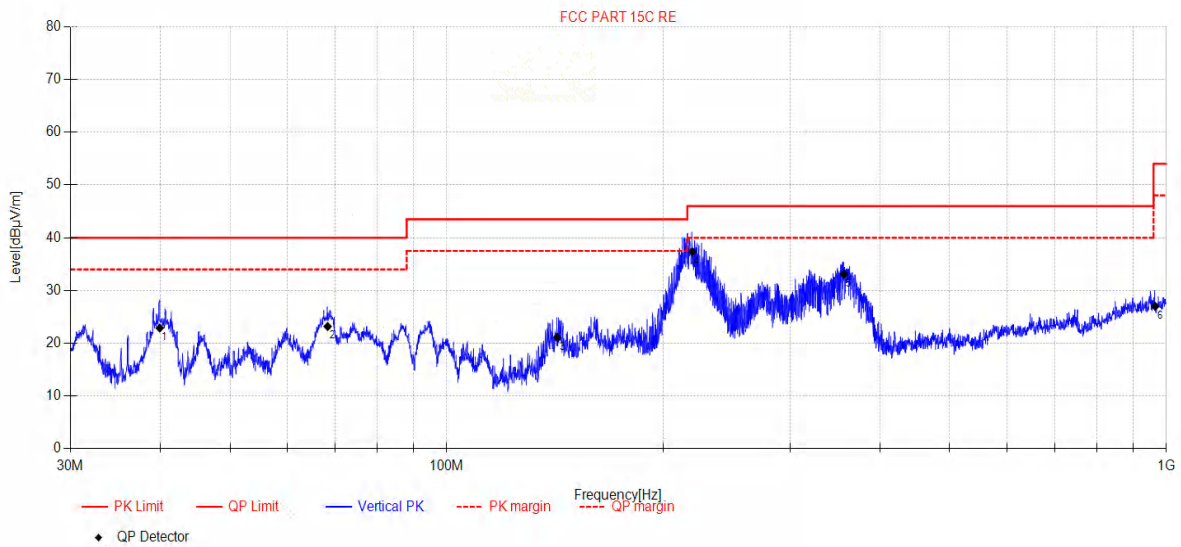
Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable Loss [dB]	AMP [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	41.48	23.44	12.73	4.62	-30.83	9.96	40.00	30.04	QP	Horizontal
2	65.89	24.43	11.49	4.78	-30.59	10.11	40.00	29.89	QP	Horizontal
3	162.21	42.88	9.08	5.42	-30.71	26.67	43.50	16.83	QP	Horizontal
4	217.46	48.98	10.85	5.80	-30.55	35.08	46.00	10.92	QP	Horizontal
5	288.87	49.89	12.97	6.10	-30.33	38.63	46.00	7.37	QP	Horizontal
6	703.29	26.51	19.67	7.77	-29.90	24.05	46.00	21.95	QP	Horizontal

Note:

1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-29 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: WIFI5G MODE **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC BELOW 1G\20231229-224233_V
Memo: Sample Number:S23113018-01 Power Setting:NA



Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable Loss [dB]	AMP [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	39.94	37.17	11.97	4.60	-30.85	22.89	40.00	17.11	QP	Vertical
2	68.33	38.69	10.30	4.78	-30.58	23.19	40.00	16.81	QP	Vertical
3	142.48	37.82	8.79	5.28	-30.77	21.12	43.50	22.38	QP	Vertical
4	219.45	51.1	10.97	5.81	-30.54	37.34	46.00	8.66	QP	Vertical
5	356.50	41.51	15.32	6.46	-30.19	33.10	46.00	12.90	QP	Vertical
6	964.87	24.93	21.91	8.57	-28.42	26.99	54.00	27.01	QP	Vertical

Note:

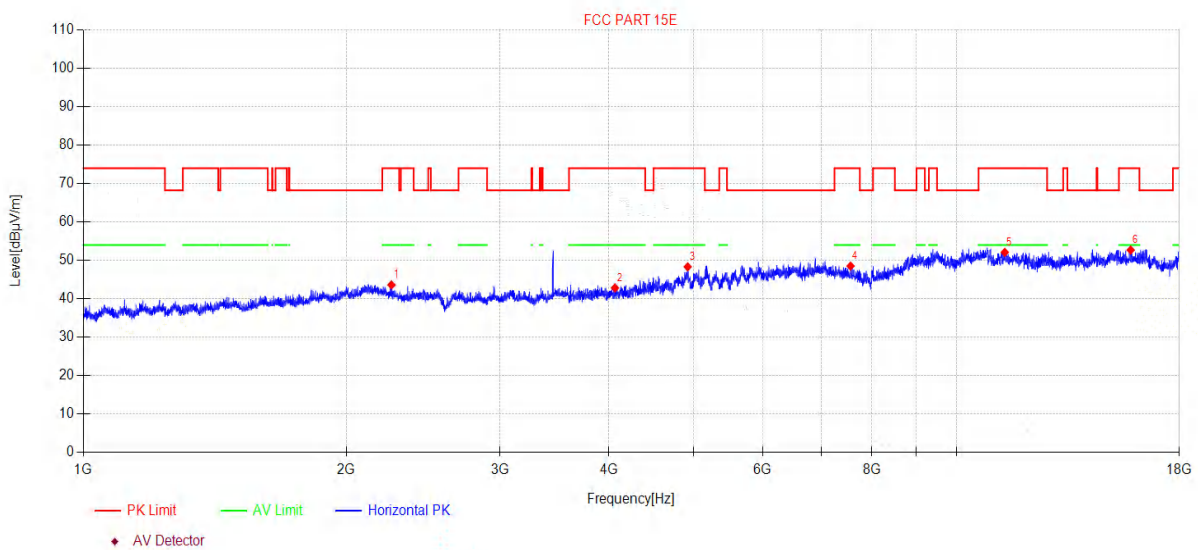
1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

Radiated Emission test (above 1GHz)

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5180MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\1
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2253.97	48.07	27.26	6.01	-37.73	43.61	74.00	30.39	PK	Horizontal
2	4063.23	46.03	31.03	6.20	-40.43	42.83	74.00	31.17	PK	Horizontal
3	4922.82	47.52	33.05	7.86	-40.11	48.32	74.00	25.68	PK	Horizontal
4	7563.60	45.33	36.43	8.87	-42.11	48.52	74.00	25.48	PK	Horizontal
5	11358.67	42.29	39.26	9.81	-39.26	52.10	74.00	21.90	PK	Horizontal
6	15832.30	38.49	38.24	15.22	-39.26	52.69	74.00	21.31	PK	Horizontal

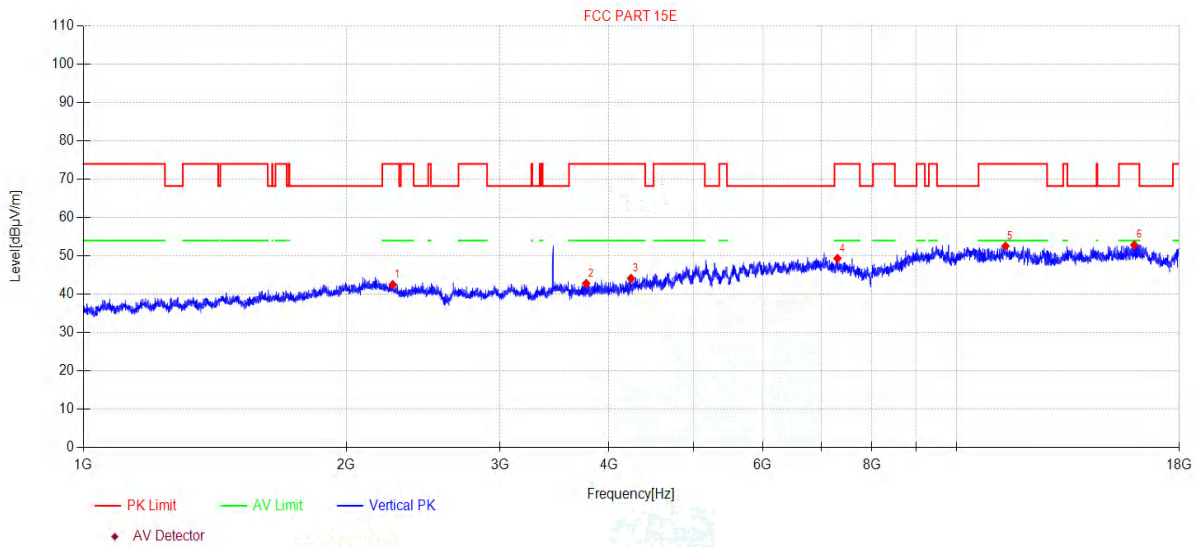
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5180MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\2
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2261.14	47.10	27.19	6.00	-37.75	42.54	74.00	31.46	PK	Vertical
2	3766.92	46.64	30.57	5.91	-40.31	42.81	74.00	31.19	PK	Vertical
3	4238.35	46.59	31.35	6.54	-40.36	44.12	74.00	29.88	PK	Vertical
4	7307.89	45.04	36.88	8.91	-41.47	49.36	74.00	24.64	PK	Vertical
5	11381.68	42.72	39.28	9.83	-39.27	52.56	74.00	21.44	PK	Vertical
6	15984.02	38.20	38.02	15.99	-39.35	52.86	74.00	21.14	PK	Vertical

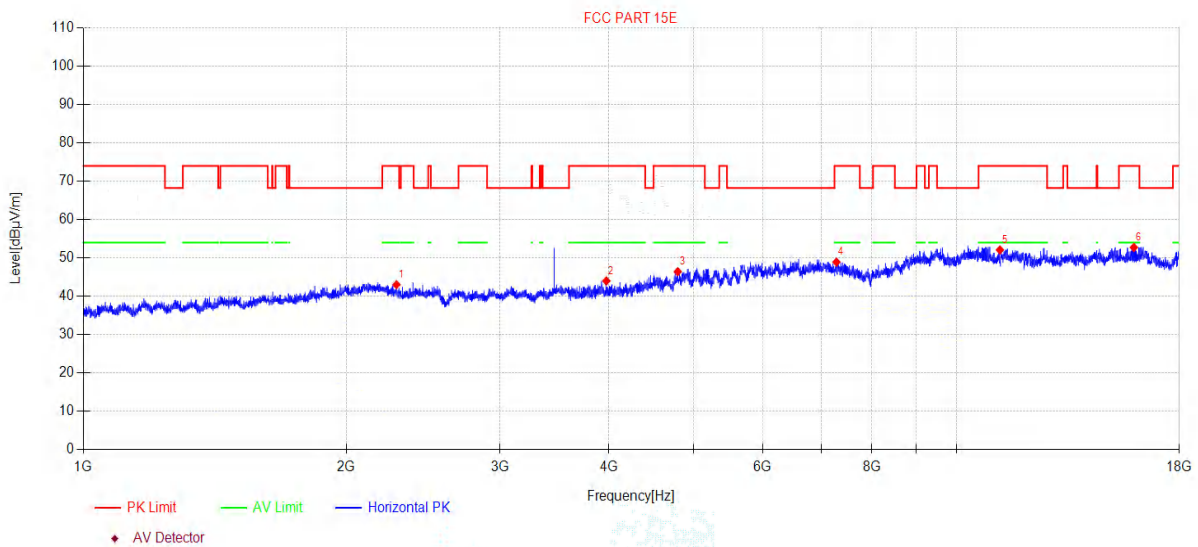
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5200MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\3
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2283.47	47.88	26.97	5.98	-37.81	43.02	74.00	30.98	PK	Horizontal
2	3971.51	47.36	31.01	6.06	-40.43	44.00	74.00	30.00	PK	Horizontal
3	4795.03	46.47	32.48	7.61	-40.16	46.40	74.00	27.60	PK	Horizontal
4	7286.80	44.57	36.87	8.91	-41.42	48.93	74.00	25.07	PK	Horizontal
5	11215.15	42.39	39.20	9.69	-39.19	52.09	74.00	21.91	PK	Horizontal
6	15965.55	38.15	38.03	15.90	-39.34	52.74	74.00	21.26	PK	Horizontal

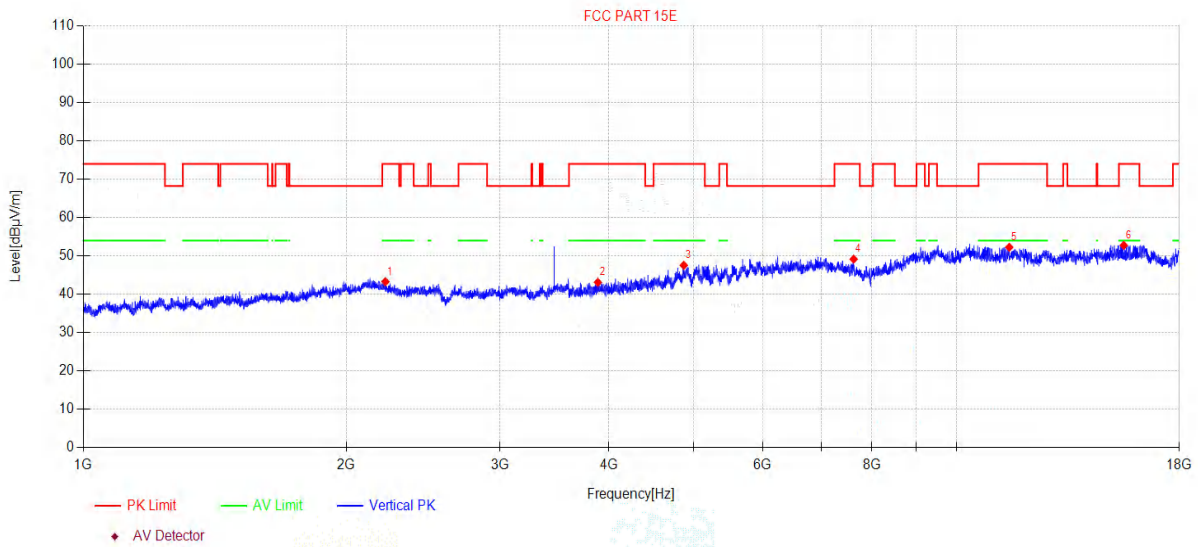
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5200MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\4
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2217.78	47.25	27.62	6.04	-37.63	43.28	74.00	30.72	PK	Vertical
2	3884.11	46.40	31.10	6.00	-40.38	43.12	74.00	30.88	PK	Vertical
3	4871.86	46.47	33.45	7.76	-40.13	47.55	74.00	26.45	PK	Vertical
4	7625.05	46.00	36.55	8.86	-42.26	49.15	74.00	24.85	PK	Vertical
5	11494.07	42.45	39.21	9.92	-39.32	52.26	74.00	21.74	PK	Vertical
6	15546.64	39.34	38.71	13.79	-39.09	52.75	74.00	21.25	PK	Vertical

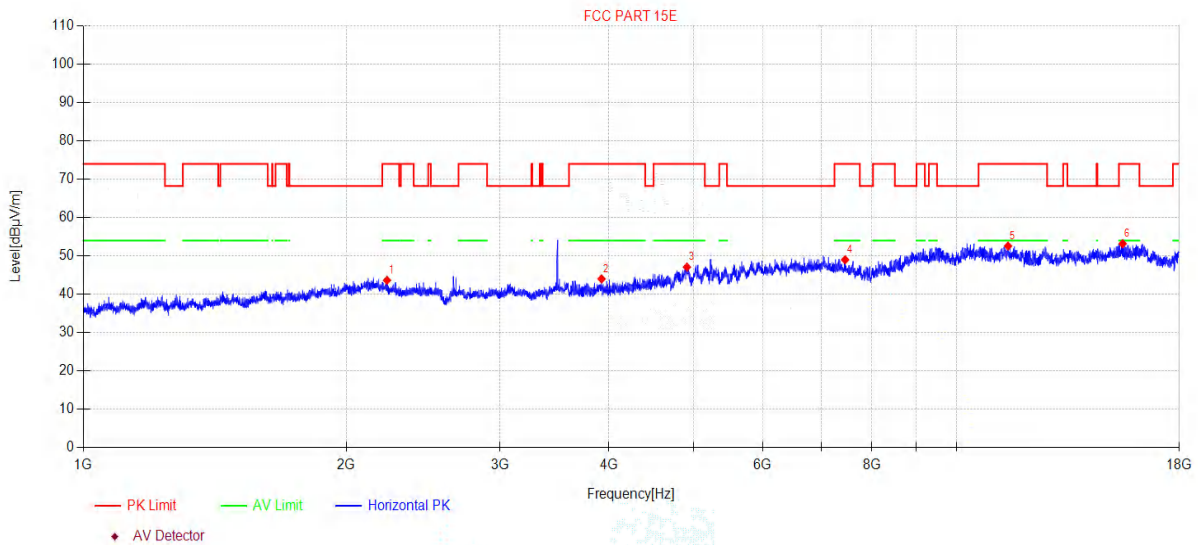
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5240MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\5
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List

N O.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2227.42	47.73	27.53	6.03	-37.65	43.64	74.00	30.36	PK	Horizontal
2	3922.46	47.23	31.16	6.02	-40.40	44.01	74.00	29.99	PK	Horizontal
3	4912.87	46.32	33.03	7.84	-40.11	47.08	74.00	26.92	PK	Horizontal
4	7455.09	45.36	36.59	8.89	-41.84	49.00	74.00	25.00	PK	Horizontal
5	11457.58	42.75	39.24	9.89	-39.31	52.57	74.00	21.43	PK	Horizontal
6	15501.77	39.89	38.80	13.56	-39.06	53.19	74.00	20.81	PK	Horizontal

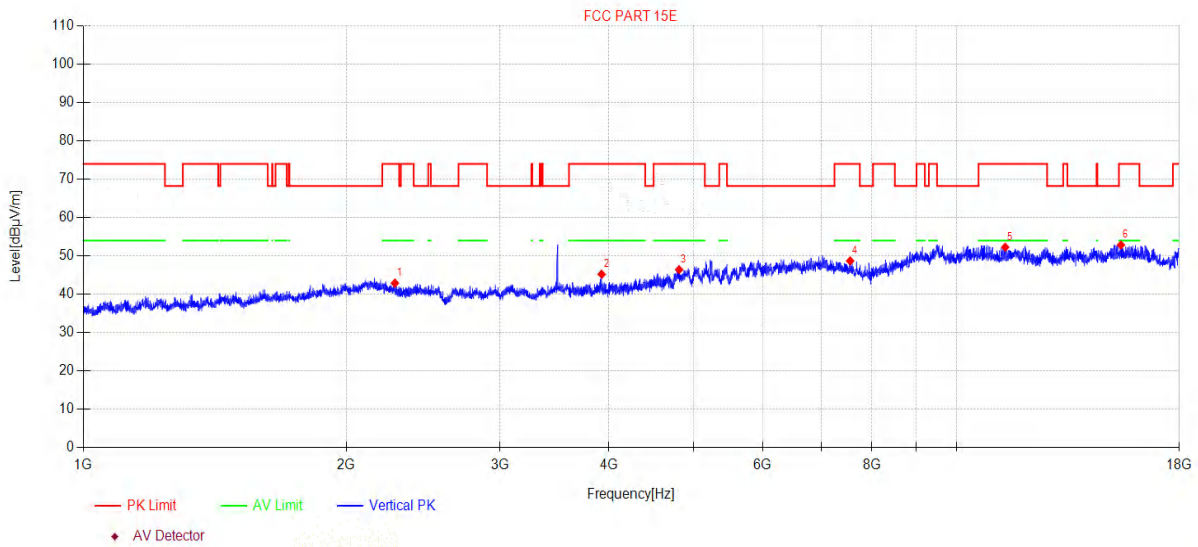
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5240MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\6
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2274.25	47.65	27.06	5.99	-37.79	42.91	74.00	31.09	PK	Vertical
2	3923.60	48.46	31.15	6.02	-40.40	45.23	74.00	28.77	PK	Vertical
3	4811.69	46.13	32.80	7.65	-40.15	46.43	74.00	27.57	PK	Vertical
4	7554.86	45.52	36.41	8.87	-42.09	48.71	74.00	25.29	PK	Vertical
5	11371.81	42.44	39.27	9.82	-39.26	52.27	74.00	21.73	PK	Vertical
6	15430.26	39.74	38.94	13.20	-39.02	52.86	74.00	21.14	PK	Vertical

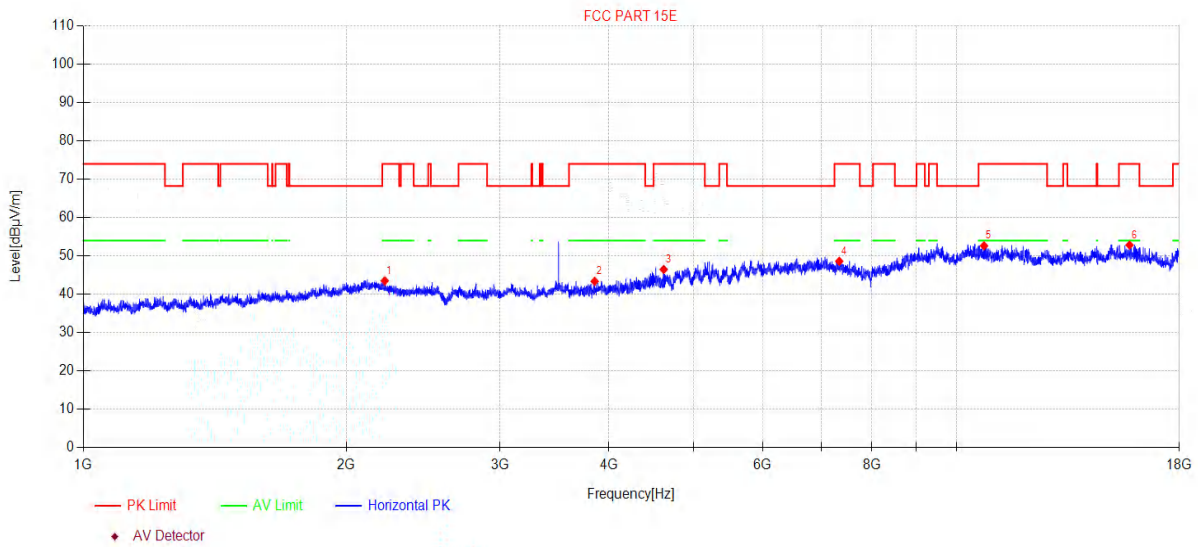
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5260MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\7
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2213.94	47.43	27.66	6.04	-37.62	43.51	74.00	30.49	PK	Horizontal
2	3851.69	46.85	30.91	5.97	-40.36	43.37	74.00	30.63	PK	Horizontal
3	4620.89	47.47	31.94	7.28	-40.22	46.47	74.00	27.53	PK	Horizontal
4	7341.76	44.43	36.82	8.91	-41.55	48.61	74.00	25.39	PK	Horizontal
5	10754.87	42.74	39.40	9.50	-39.00	52.64	74.00	21.36	PK	Horizontal
6	15786.61	38.74	38.33	14.99	-39.23	52.83	74.00	21.17	PK	Horizontal

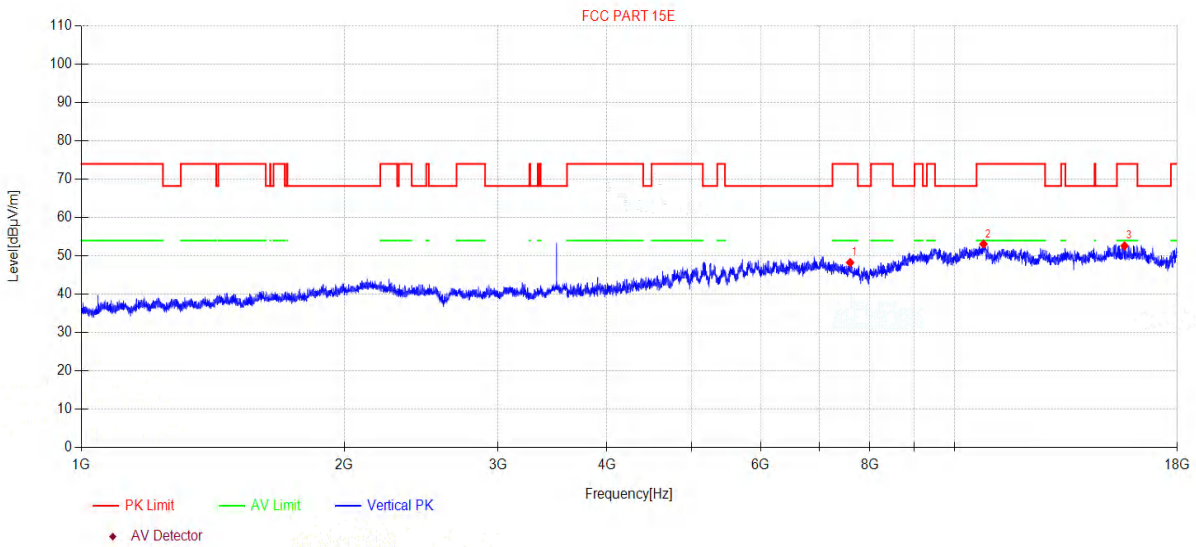
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5260MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\8
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	7594.26	45.11	36.49	8.86	-42.19	48.27	74.00	25.73	PK	Vertical
2	10795.36	43.19	39.40	9.50	-39.01	53.08	74.00	20.92	PK	Vertical
3	15659.37	38.90	38.54	14.35	-39.16	52.63	74.00	21.37	PK	Vertical

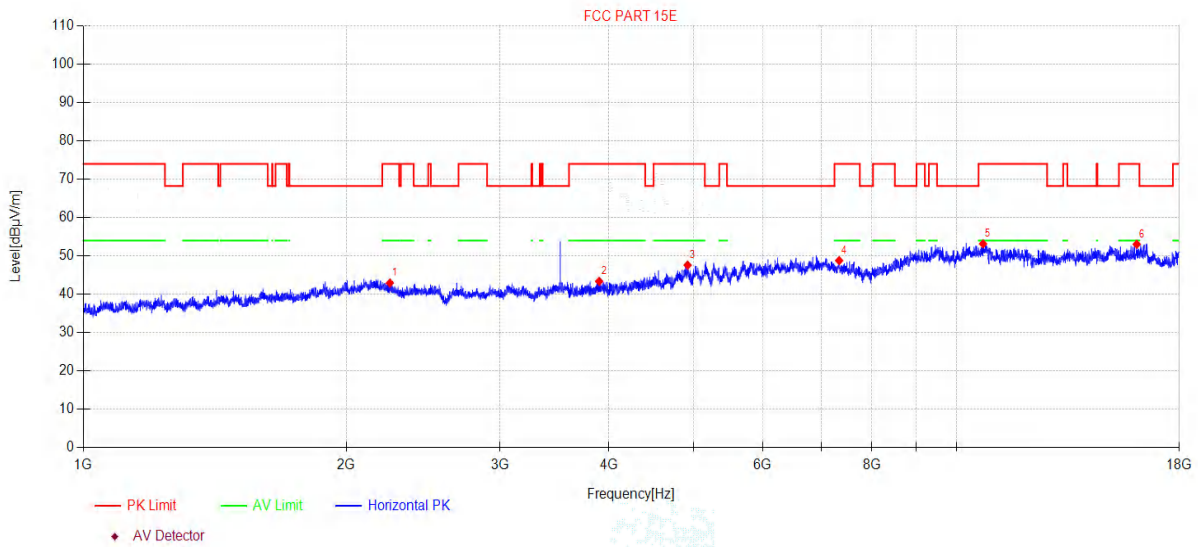
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5280MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\9
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2244.22	47.25	27.36	6.02	-37.70	42.93	74.00	31.07	PK	Horizontal
2	3897.60	46.57	31.19	6.01	-40.39	43.38	74.00	30.62	PK	Horizontal
3	4921.39	46.81	33.04	7.86	-40.11	47.60	74.00	26.40	PK	Horizontal
4	7339.64	44.60	36.82	8.91	-41.55	48.78	74.00	25.22	PK	Horizontal
5	10726.94	43.25	39.40	9.49	-38.99	53.15	74.00	20.85	PK	Horizontal
6	16085.97	38.84	37.91	15.71	-39.43	53.03	74.00	20.97	PK	Horizontal

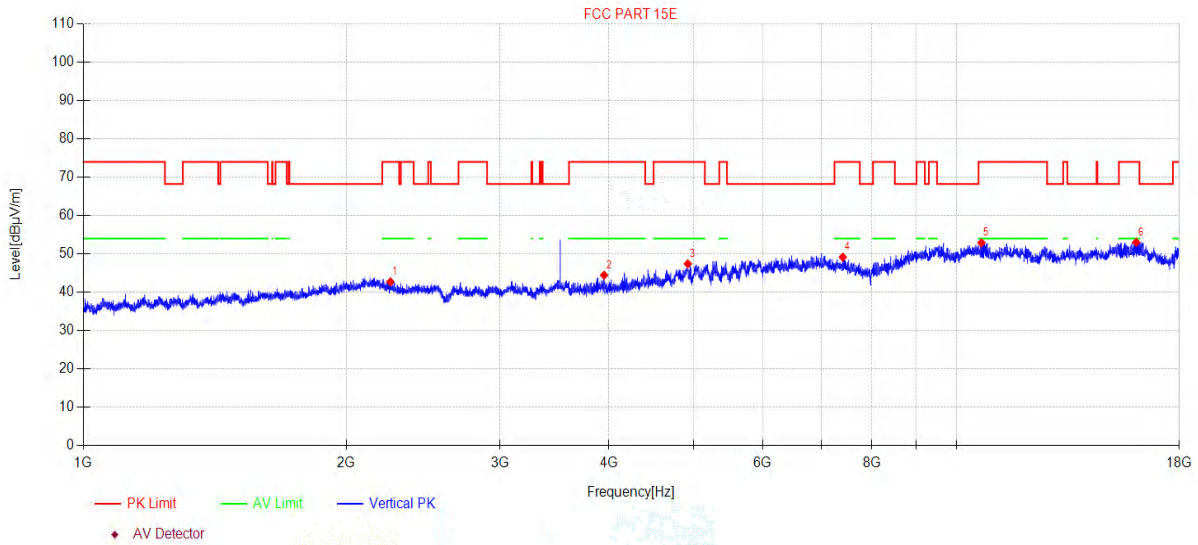
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5280MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\10
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2247.46	47.09	27.33	6.01	-37.71	42.72	74.00	31.28	PK	Vertical
2	3948.62	47.74	31.10	6.04	-40.42	44.46	74.00	29.54	PK	Vertical
3	4924.24	46.62	33.05	7.86	-40.11	47.42	74.00	26.58	PK	Vertical
4	7409.98	45.31	36.68	8.89	-41.72	49.16	74.00	24.84	PK	Vertical
5	10680.53	43.01	39.36	9.49	-38.97	52.89	74.00	21.11	PK	Vertical
6	16062.74	38.67	37.94	15.81	-39.41	53.01	74.00	20.99	PK	Vertical

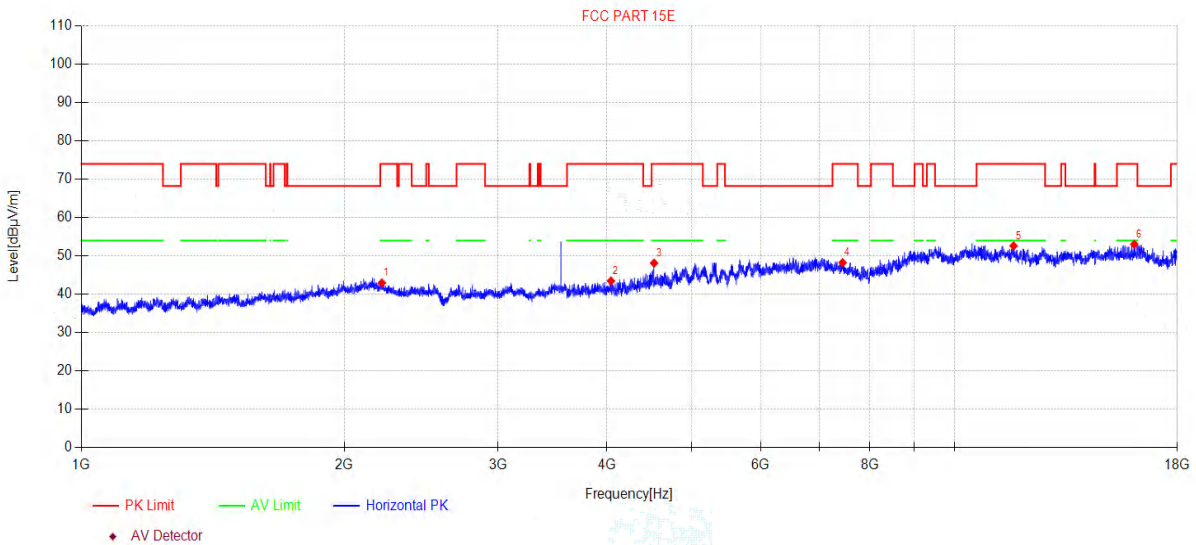
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5320MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\11
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List

N O.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2208.82	46.81	27.71	6.05	-37.60	42.97	74.00	31.03	PK	Horizontal
2	4042.15	46.75	30.98	6.16	-40.43	43.46	74.00	30.54	PK	Horizontal
3	4528.35	49.42	31.86	7.10	-40.25	48.13	74.00	25.87	PK	Horizontal
4	7444.32	44.55	36.61	8.89	-41.81	48.24	74.00	25.76	PK	Horizontal
5	11688.36	42.95	39.00	10.07	-39.41	52.61	74.00	21.39	PK	Horizontal
6	16067.39	38.74	37.93	15.79	-39.41	53.05	74.00	20.95	PK	Horizontal

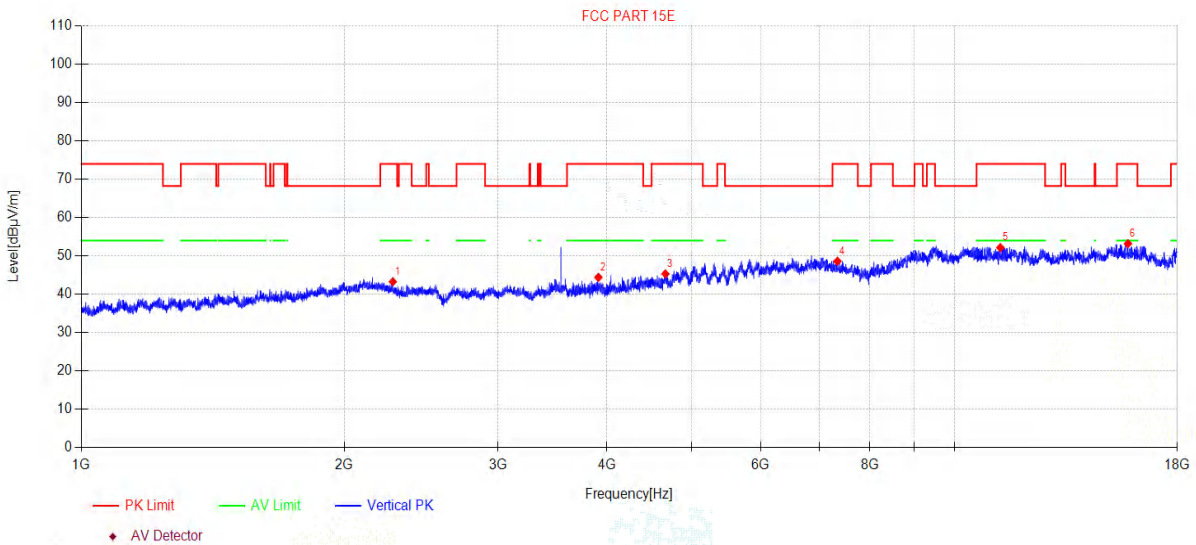
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5320MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\12
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List

N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2273.59	48.01	27.06	5.99	-37.78	43.28	74.00	30.72	PK	Vertical
2	3910.01	47.64	31.18	6.01	-40.40	44.43	74.00	29.57	PK	Vertical
3	4666.52	46.08	32.07	7.37	-40.20	45.32	74.00	28.68	PK	Vertical
4	7343.89	44.47	36.81	8.90	-41.56	48.62	74.00	25.38	PK	Vertical
5	11286.68	42.43	39.20	9.75	-39.22	52.16	74.00	21.84	PK	Vertical
6	15804.87	39.05	38.29	15.09	-39.24	53.19	74.00	20.81	PK	Vertical

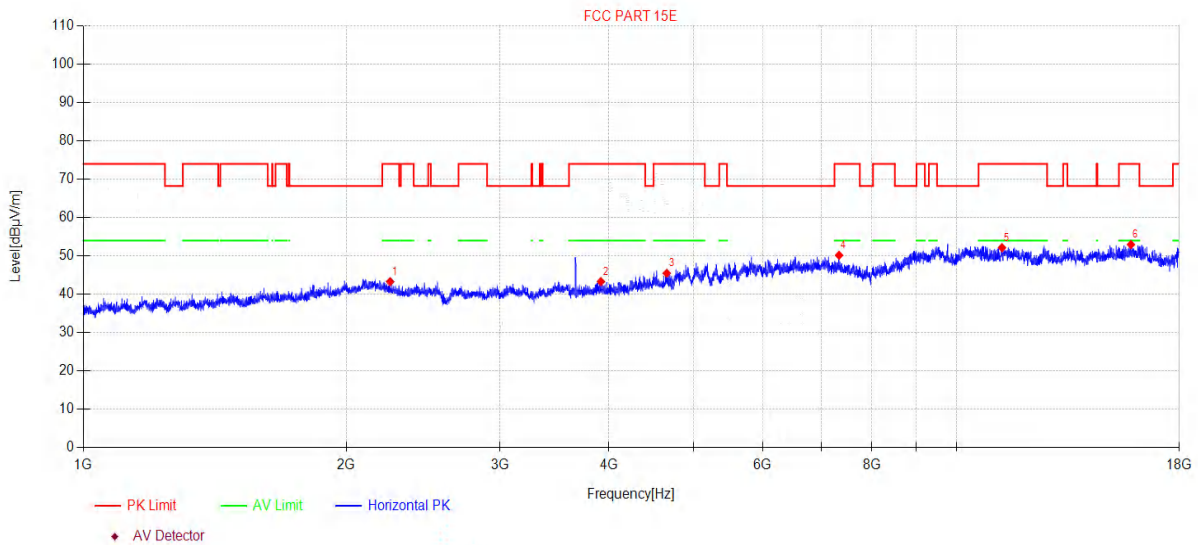
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5500MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\13
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2246.16	47.65	27.34	6.01	-37.71	43.29	74.00	30.71	PK	Horizontal
2	3915.67	46.51	31.17	6.02	-40.40	43.30	74.00	30.70	PK	Horizontal
3	4658.44	46.32	32.03	7.35	-40.21	45.49	74.00	28.51	PK	Horizontal
4	7337.52	45.98	36.82	8.91	-41.54	50.17	74.00	23.83	PK	Horizontal
5	11276.90	42.43	39.20	9.74	-39.22	52.15	74.00	21.85	PK	Horizontal
6	15841.45	38.73	38.22	15.27	-39.26	52.96	74.00	21.04	PK	Horizontal

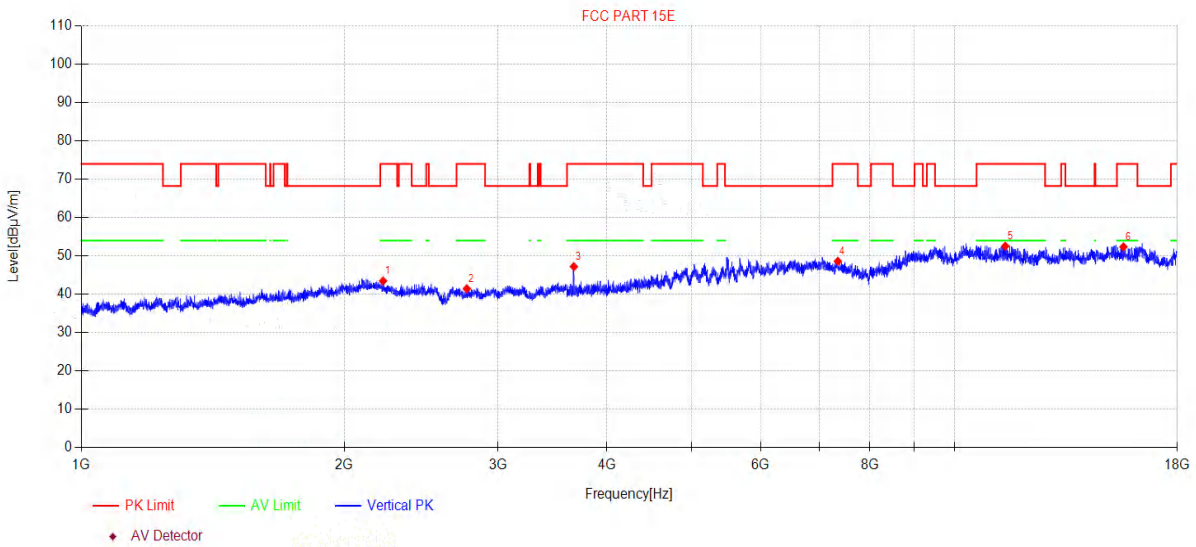
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5500MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\14
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2215.86	47.43	27.64	6.04	-37.62	43.49	74.00	30.51	PK	Vertical
2	2764.14	47.51	27.54	5.56	-39.17	41.44	74.00	32.56	PK	Vertical
3	3665.97	51.35	30.26	5.84	-40.25	47.20	74.00	26.80	PK	Vertical
4	7352.38	44.48	36.80	8.90	-41.58	48.60	74.00	25.40	PK	Vertical
5	11434.43	42.70	39.27	9.87	-39.29	52.55	74.00	21.45	PK	Vertical
6	15614.18	38.77	38.59	14.13	-39.13	52.36	74.00	21.64	PK	Vertical

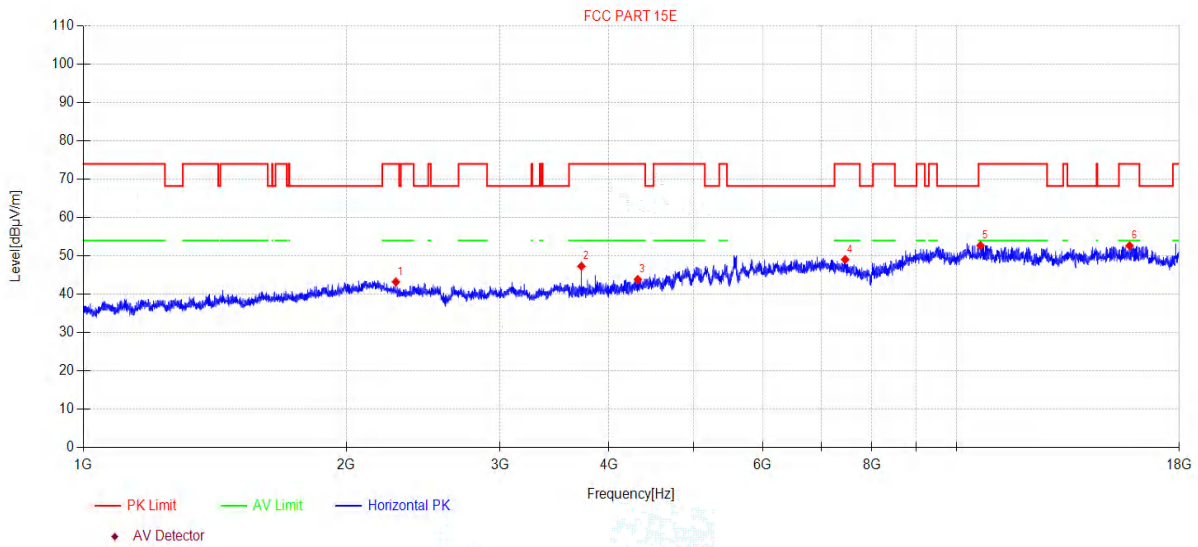
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5580MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\15
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2280.17	48.04	27.00	5.98	-37.80	43.22	74.00	30.78	PK	Horizontal
2	3719.33	51.25	30.44	5.88	-40.28	47.29	74.00	26.71	PK	Horizontal
3	4316.23	45.90	31.60	6.69	-40.33	43.86	74.00	30.14	PK	Horizontal
4	7455.09	45.41	36.59	8.89	-41.84	49.05	74.00	24.95	PK	Horizontal
5	10655.87	42.86	39.31	9.49	-38.96	52.70	74.00	21.30	PK	Horizontal
6	15786.61	38.56	38.33	14.99	-39.23	52.65	74.00	21.35	PK	Horizontal

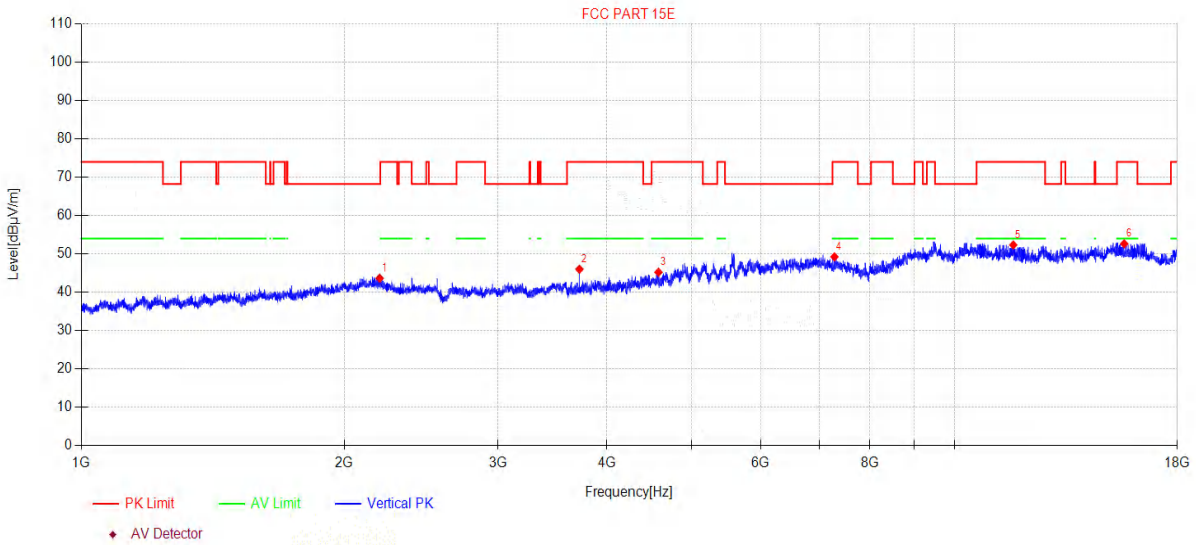
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5580MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\16
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2196.09	47.37	27.78	6.06	-37.56	43.65	68.20	24.55	PK	Vertical
2	3719.33	49.98	30.44	5.88	-40.28	46.02	74.00	27.98	PK	Vertical
3	4582.33	46.35	31.90	7.20	-40.23	45.22	74.00	28.78	PK	Vertical
4	7286.80	44.88	36.87	8.91	-41.42	49.24	74.00	24.76	PK	Vertical
5	11678.23	42.68	39.00	10.06	-39.41	52.33	74.00	21.67	PK	Vertical
6	15645.80	38.96	38.55	14.28	-39.15	52.64	74.00	21.36	PK	Vertical

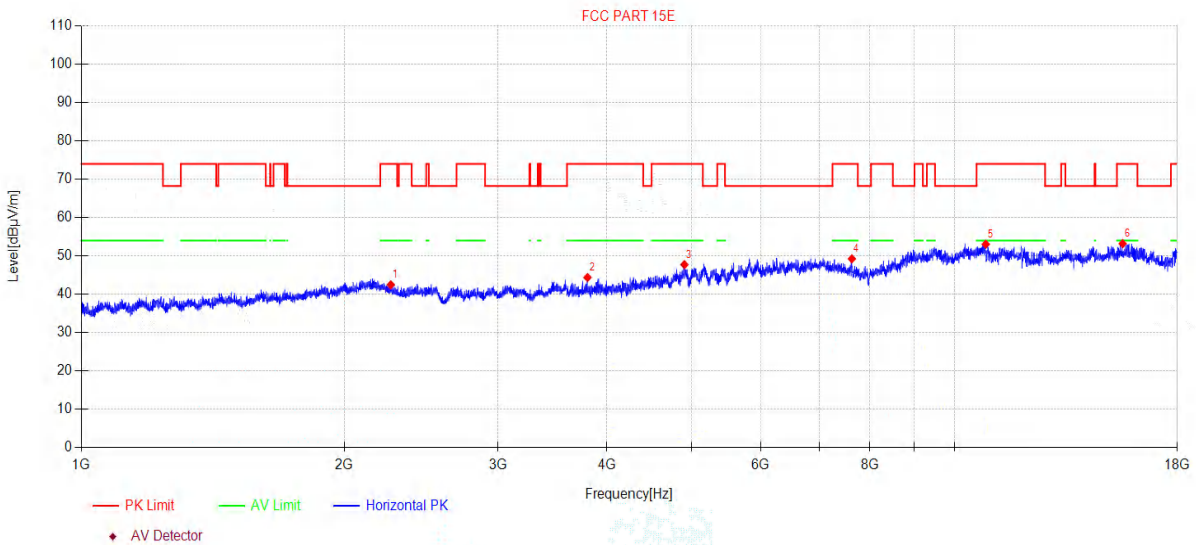
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5700MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\17
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2261.80	47.05	27.18	6.00	-37.75	42.48	74.00	31.52	PK	Horizontal
2	3799.73	48.07	30.70	5.93	-40.33	44.37	74.00	29.63	PK	Horizontal
3	4905.77	47.00	33.01	7.83	-40.11	47.73	74.00	26.27	PK	Horizontal
4	7629.46	46.09	36.56	8.86	-42.27	49.24	74.00	24.76	PK	Horizontal
5	10861.07	43.24	39.34	9.51	-39.04	53.05	74.00	20.95	PK	Horizontal
6	15582.63	39.71	38.63	13.97	-39.11	53.20	74.00	20.80	PK	Horizontal

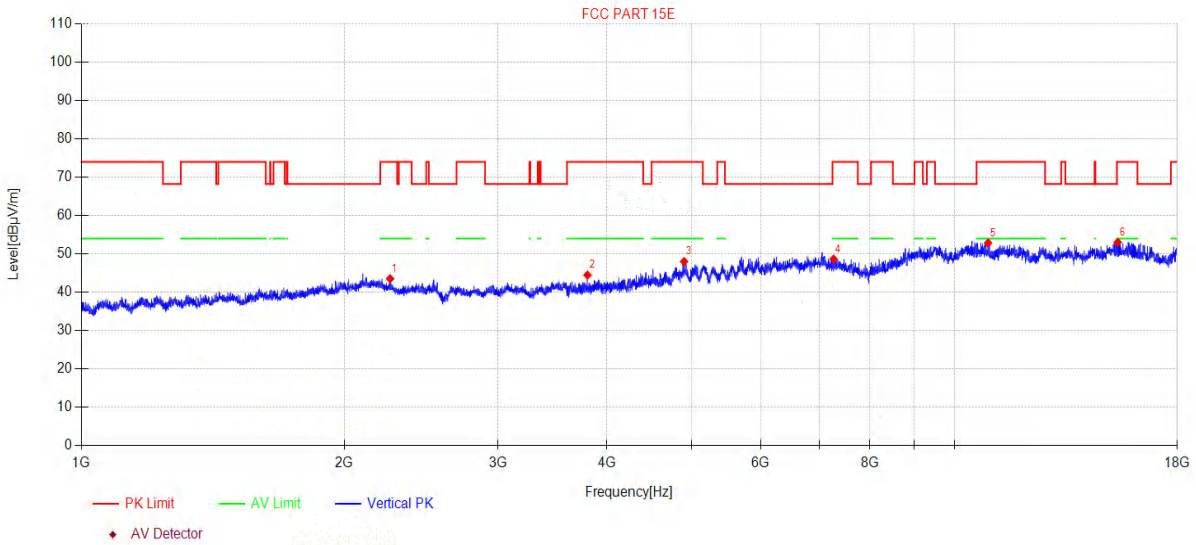
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5700MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\18
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2257.23	48.04	27.23	6.00	-37.74	43.53	74.00	30.47	PK	Vertical
2	3799.73	48.20	30.70	5.93	-40.33	44.50	74.00	29.50	PK	Vertical
3	4901.52	47.32	33.00	7.82	-40.12	48.02	74.00	25.98	PK	Vertical
4	7269.97	44.27	36.84	8.92	-41.37	48.66	74.00	25.34	PK	Vertical
5	10927.19	43.10	39.30	9.51	-39.06	52.85	74.00	21.15	PK	Vertical
6	15381.28	39.93	39.15	12.95	-38.99	53.04	74.00	20.96	PK	Vertical

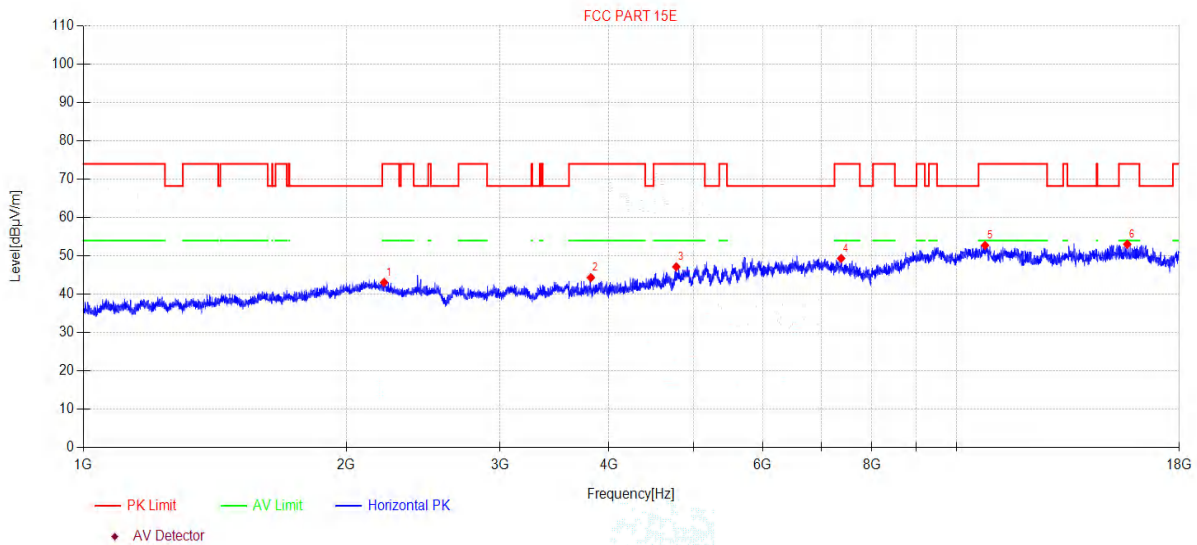
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5720MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\19
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List

N O.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2210.10	46.94	27.70	6.05	-37.60	43.09	74.00	30.91	PK	Horizontal
2	3812.93	48.00	30.75	5.94	-40.34	44.35	74.00	29.65	PK	Horizontal
3	4777.05	47.33	32.41	7.58	-40.16	47.16	74.00	26.84	PK	Horizontal
4	7377.92	45.35	36.74	8.90	-41.64	49.35	74.00	24.65	PK	Horizontal
5	10782.88	42.87	39.40	9.50	-39.01	52.76	74.00	21.24	PK	Horizontal
6	15691.09	39.18	38.51	14.51	-39.17	53.03	74.00	20.97	PK	Horizontal

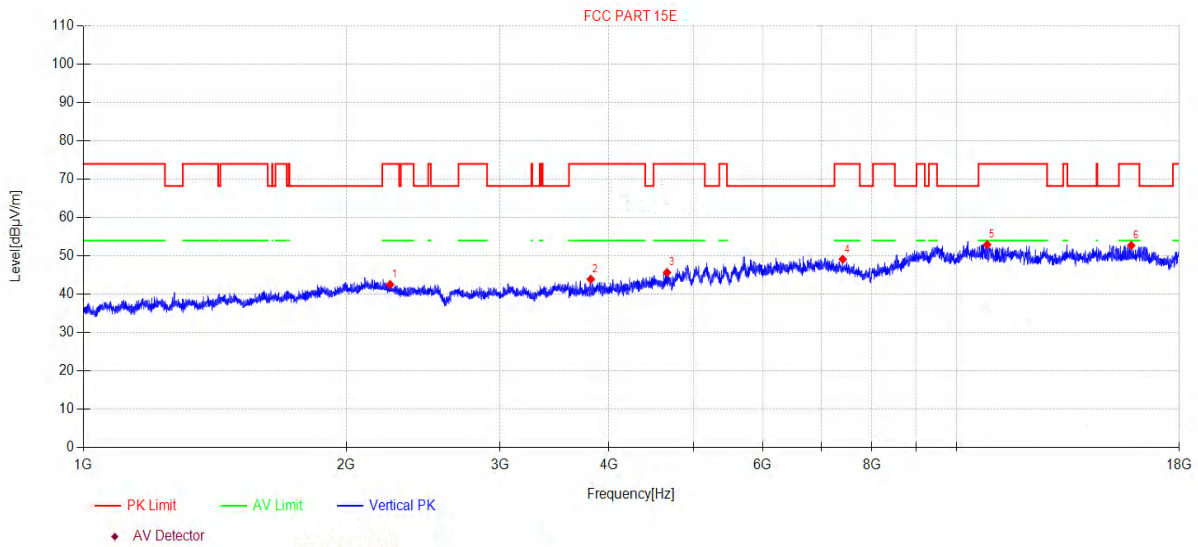
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5720MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\20
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2246.16	46.90	27.34	6.01	-37.71	42.54	74.00	31.46	PK	Vertical
2	3812.93	47.57	30.75	5.94	-40.34	43.92	74.00	30.08	PK	Vertical
3	4661.13	46.47	32.04	7.36	-40.21	45.66	74.00	28.34	PK	Vertical
4	7409.98	45.28	36.68	8.89	-41.72	49.13	74.00	24.87	PK	Vertical
5	10845.39	43.13	39.35	9.50	-39.03	52.95	74.00	21.05	PK	Vertical
6	15855.19	38.46	38.19	15.34	-39.27	52.72	74.00	21.28	PK	Vertical

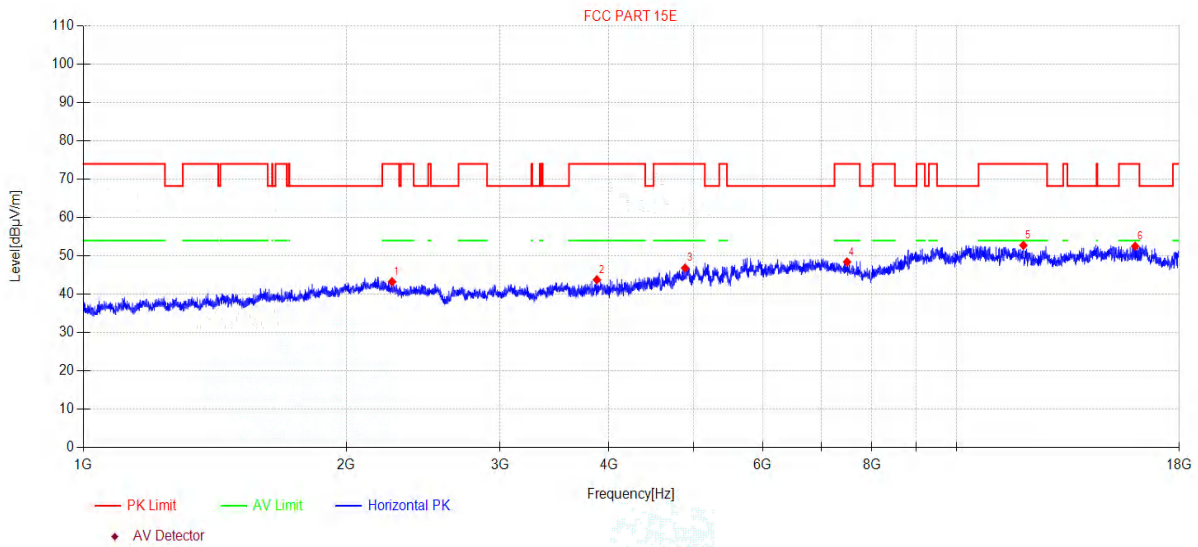
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5745MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 5.8G1
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2257.23	47.75	27.23	6.00	-37.74	43.24	74.00	30.76	PK	Horizontal
2	3874.02	47.12	31.04	5.99	-40.37	43.78	74.00	30.22	PK	Horizontal
3	4888.79	45.99	33.18	7.80	-40.12	46.85	74.00	27.15	PK	Horizontal
4	7493.97	44.96	36.51	8.88	-41.93	48.42	74.00	25.58	PK	Horizontal
5	11930.68	43.03	38.99	10.26	-39.53	52.75	74.00	21.25	PK	Horizontal
6	16021.02	37.94	37.98	15.98	-39.38	52.52	74.00	21.48	PK	Horizontal

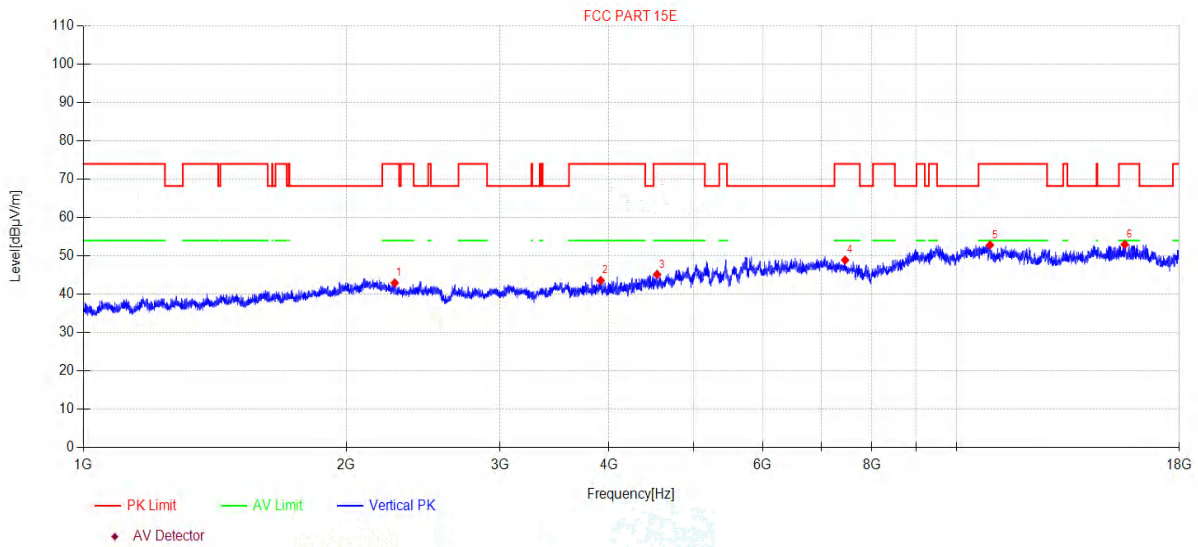
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5745MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 5.8G\2
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2272.94	47.68	27.07	5.99	-37.78	42.96	74.00	31.04	PK	Vertical
2	3913.41	46.82	31.17	6.02	-40.40	43.61	74.00	30.39	PK	Vertical
3	4541.45	46.41	31.88	7.13	-40.25	45.17	74.00	28.83	PK	Vertical
4	7455.09	45.28	36.59	8.89	-41.84	48.92	74.00	25.08	PK	Vertical
5	10924.04	43.08	39.30	9.51	-39.06	52.83	74.00	21.17	PK	Vertical
6	15587.13	39.48	38.63	13.99	-39.11	52.99	74.00	21.01	PK	Vertical

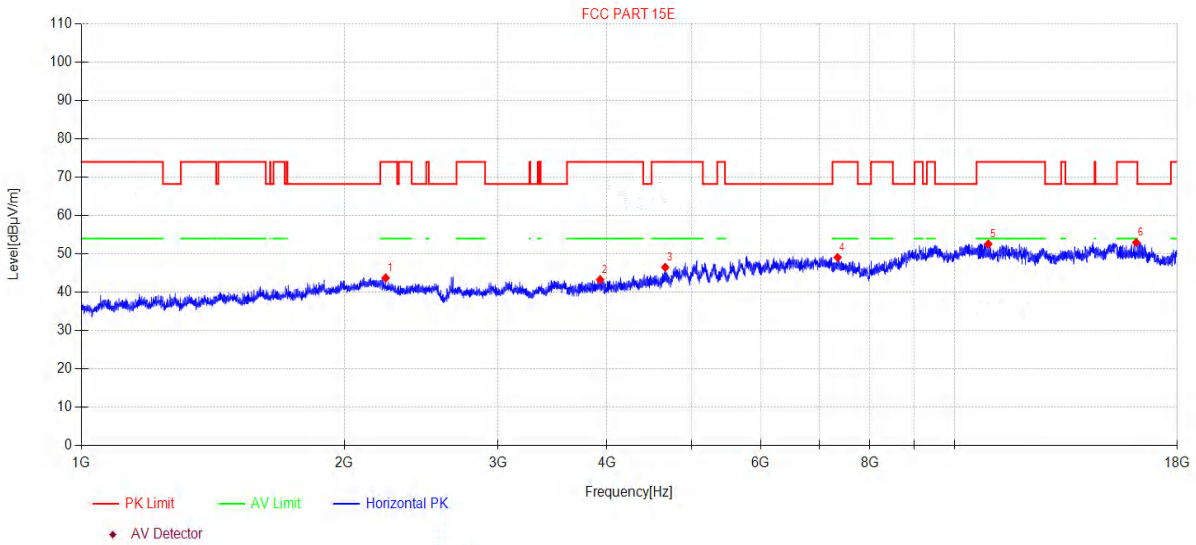
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5785MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 5.8G\3
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2231.28	47.89	27.49	6.03	-37.66	43.75	74.00	30.25	PK	Horizontal
2	3928.14	46.54	31.14	6.03	-40.41	43.30	74.00	30.70	PK	Horizontal
3	4663.83	47.29	32.06	7.36	-40.20	46.51	74.00	27.49	PK	Horizontal
4	7348.13	44.96	36.80	8.90	-41.57	49.09	74.00	24.91	PK	Horizontal
5	10933.51	42.82	39.30	9.51	-39.07	52.56	74.00	21.44	PK	Horizontal
6	16151.19	39.13	37.85	15.44	-39.48	52.94	74.00	21.06	PK	Horizontal

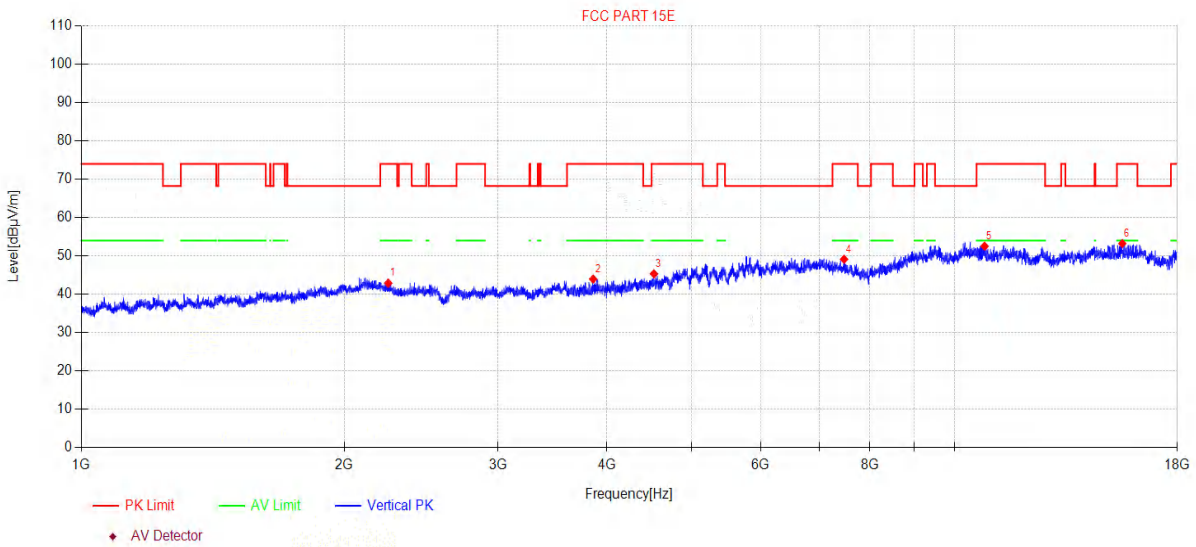
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5785MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 5.8G\4
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2246.16	47.26	27.34	6.01	-37.71	42.90	74.00	31.10	PK	Vertical
2	3856.15	47.42	30.94	5.97	-40.36	43.97	74.00	30.03	PK	Vertical
3	4527.04	46.63	31.85	7.10	-40.25	45.33	74.00	28.67	PK	Vertical
4	7474.50	45.58	36.55	8.88	-41.89	49.12	74.00	24.88	PK	Vertical
5	10826.60	42.70	39.37	9.50	-39.03	52.54	74.00	21.46	PK	Vertical
6	15569.12	39.77	38.66	13.90	-39.10	53.23	74.00	20.77	PK	Vertical

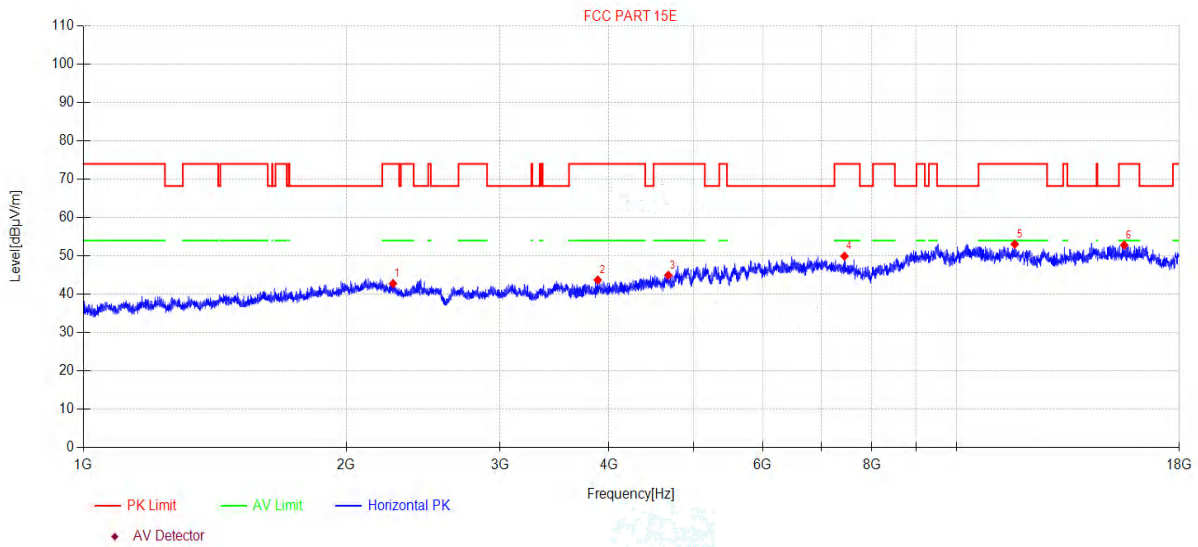
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5825MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 5.8G\5
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2263.10	47.36	27.17	6.00	-37.75	42.78	74.00	31.22	PK	Horizontal
2	3882.99	47.02	31.10	5.99	-40.38	43.73	74.00	30.27	PK	Horizontal
3	4677.32	45.65	32.11	7.39	-40.20	44.95	74.00	29.05	PK	Horizontal
4	7442.17	46.23	36.62	8.89	-41.81	49.93	74.00	24.07	PK	Horizontal
5	11661.37	43.41	39.00	10.05	-39.40	53.06	74.00	20.94	PK	Horizontal
6	15564.62	39.39	38.67	13.88	-39.10	52.84	74.00	21.16	PK	Horizontal

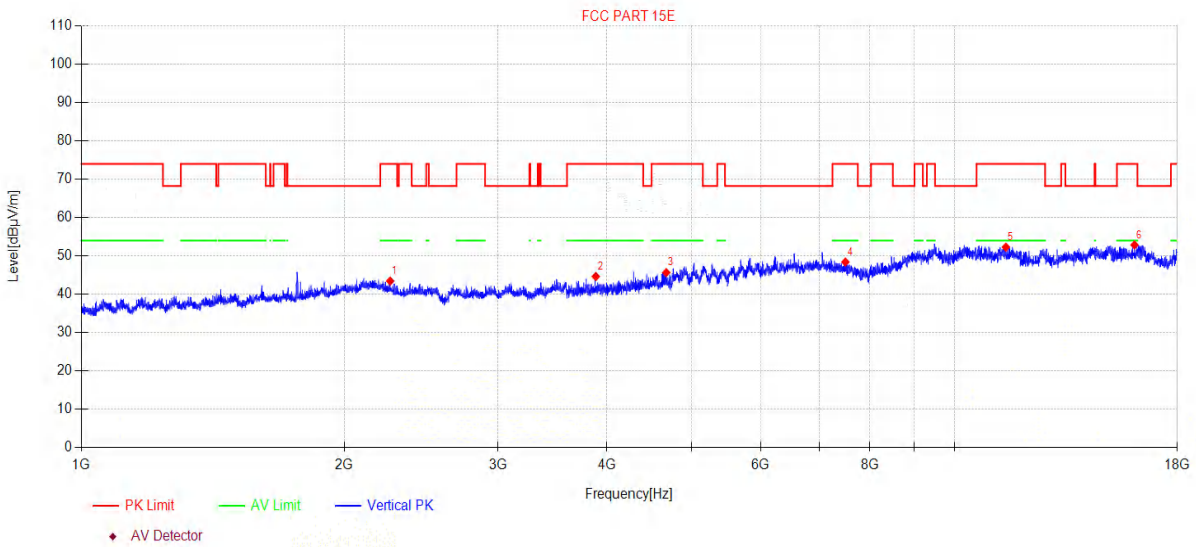
Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5825MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 5.8G\6
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	2257.88	47.97	27.22	6.00	-37.74	43.45	74.00	30.55	PK	Vertical
2	3882.99	47.93	31.10	5.99	-40.38	44.64	74.00	29.36	PK	Vertical
3	4675.97	46.38	32.10	7.38	-40.20	45.66	74.00	28.34	PK	Vertical
4	7500.47	44.98	36.50	8.88	-41.95	48.41	74.00	25.59	PK	Vertical
5	11450.96	42.46	39.25	9.88	-39.30	52.29	74.00	21.71	PK	Vertical
6	16076.68	38.60	37.92	15.75	-39.42	52.85	74.00	21.15	PK	Vertical

Note:

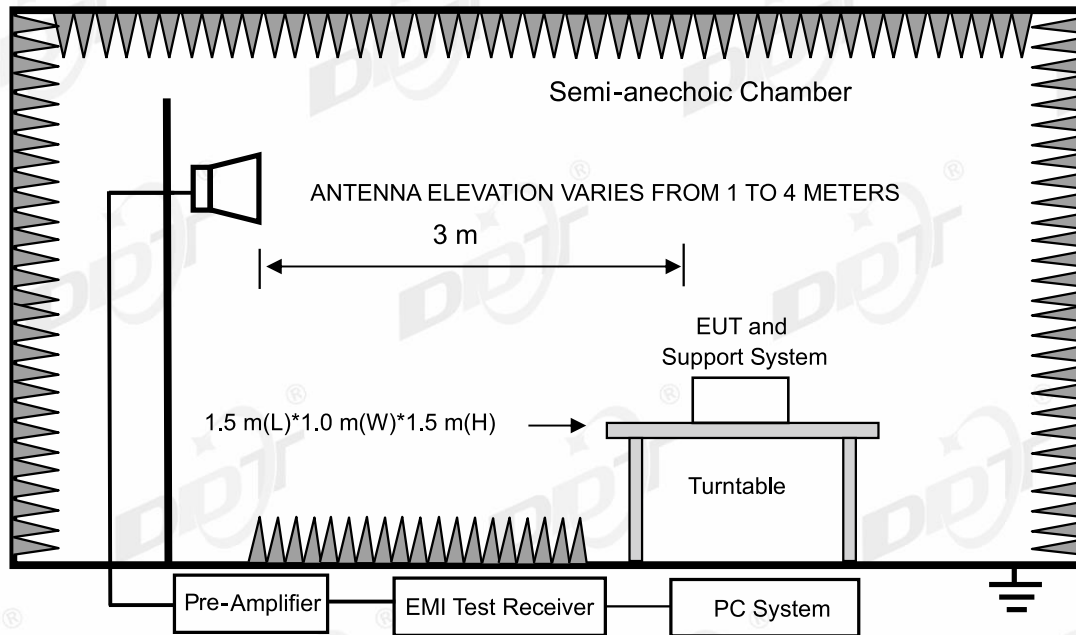
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

13. Band Edge Compliance

13.1. Test equipment

Equipment	Manufacturer	Model No.	Serial Number	Due Date
☑Radiation 3#Chamber				
EMI TEST RECEIVER	R&S	ESU26	100472	2024/04/22
Double Ridged Horn Antenna	Schwarzbeck	BBHA 9120 D	02468	2024/09/17
Pre-amplifier	COM-POWER	PAM-118A	18040084	2024/07/14
RF Cable	Yuhu	JCTB810-NJ-NJ-9M+ ZT26S-SMAJ-SMAJ-1M	21123964	2024/04/22
Test Software	Tonscend	JS32-RE	V 5.0.0.1	N/A

13.2. Block diagram of test setup



13.3. Limit

- (1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (4) For transmitters operating solely in the 5.725-5.850 GHz band:

All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from

25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

13.4. Test Procedure

Same with Emissions in Restricted Frequency Bands except change investigated frequency range from 5.15-5.25 GHz, 5250-5350 GHz, 5470-5725 GHz, 5.725-5.85 GHz.

Remark: All restriction band have been tested, and only the worst case is shown in report.

13.5. Test result

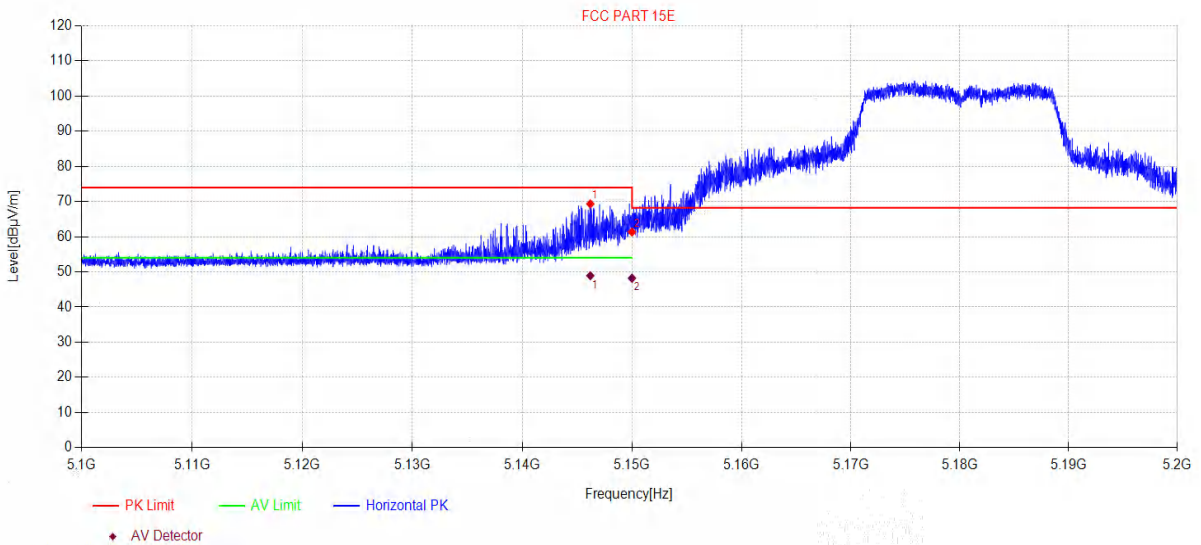
Pass. (See below detailed test result)

Note: As specified in 15.407(b), emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz. However, out-of-band emission that complies with both the average and peak limits of 15.209 is not required to satisfy the -27 dBm/MHz peak emission limit

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5180MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\21
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	5146.20	60.41	33.40	5.58	-30.06	69.33	74.00	4.67	PK	Horizontal
2	5150.00	52.41	33.40	5.59	-30.06	61.34	68.20	6.86	PK	Horizontal

Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	5146.20	40	33.40	5.58	-30.06	48.92	54.00	5.08	AV	Horizontal
2	5150.00	39.28	33.40	5.59	-30.06	48.21	54.00	5.79	AV	Horizontal

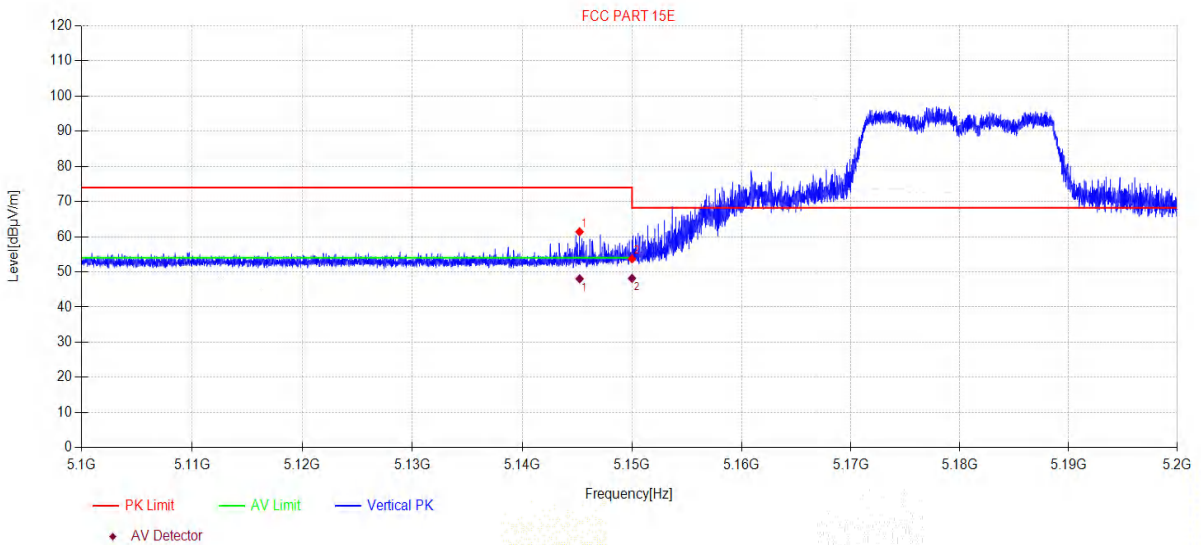
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5180MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\22
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	5145.22	52.47	33.40	5.58	-30.06	61.39	74.00	12.61	PK	Vertical
2	5150.00	44.80	33.40	5.59	-30.06	53.73	68.20	14.47	PK	Vertical

Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	5145.22	39.12	33.40	5.58	-30.06	48.04	54.00	5.96	AV	Vertical
2	5150.00	39.24	33.40	5.59	-30.06	48.17	54.00	5.83	AV	Vertical

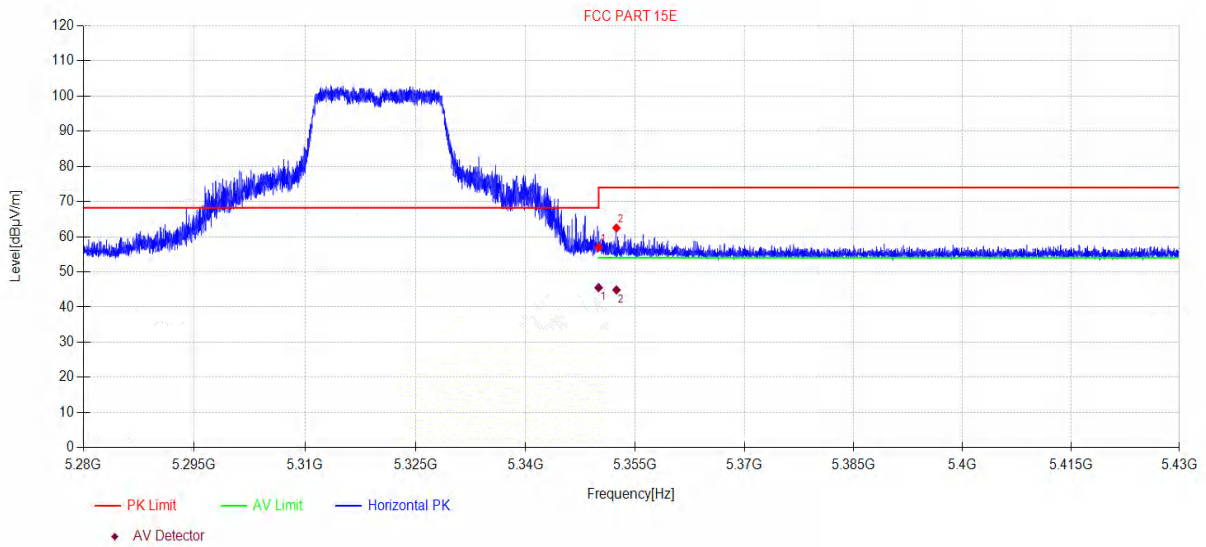
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5320MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\23
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	5350.00	48.25	33.10	5.69	-30.03	57.01	74.00	16.99	PK	Horizontal
2	5352.44	53.76	33.10	5.69	-30.03	62.52	74.00	11.48	PK	Horizontal

Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	5350.00	36.75	33.10	5.69	-30.03	45.51	54.00	8.49	AV	Horizontal
2	5352.44	36.10	33.10	5.69	-30.03	44.86	54.00	9.14	AV	Horizontal

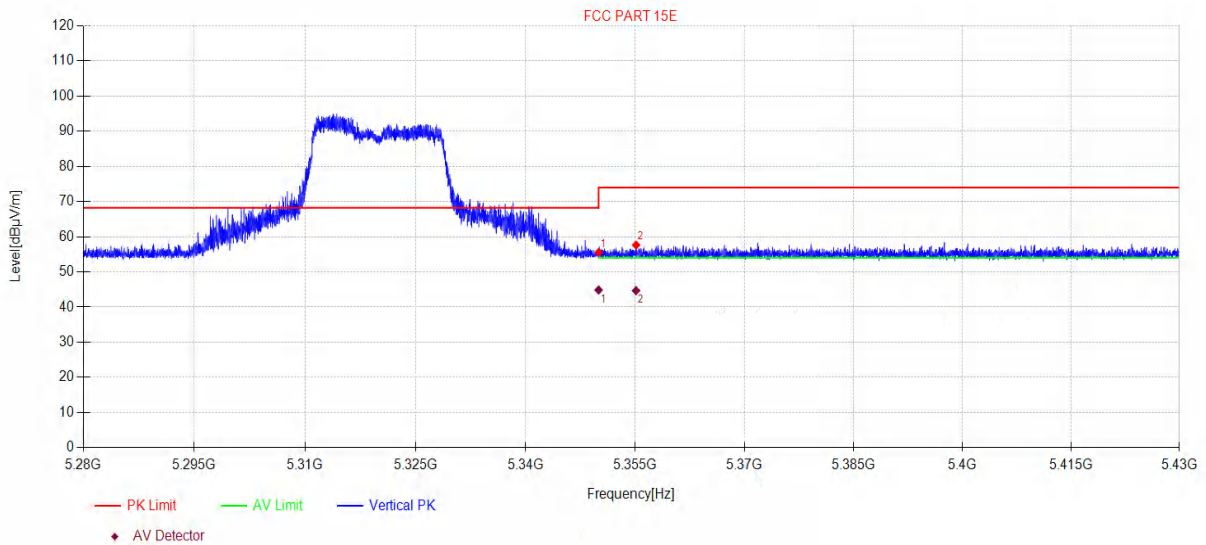
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5320MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\24
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	5350.00	46.78	33.10	5.69	-30.03	55.54	74.00	18.46	PK	Vertical
2	5355.12	48.88	33.10	5.69	-30.03	57.64	74.00	16.36	PK	Vertical

Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	5350.00	36.10	33.10	5.69	-30.03	44.86	54.00	9.14	AV	Vertical
2	5355.12	35.92	33.10	5.69	-30.03	44.68	54.00	9.32	AV	Vertical

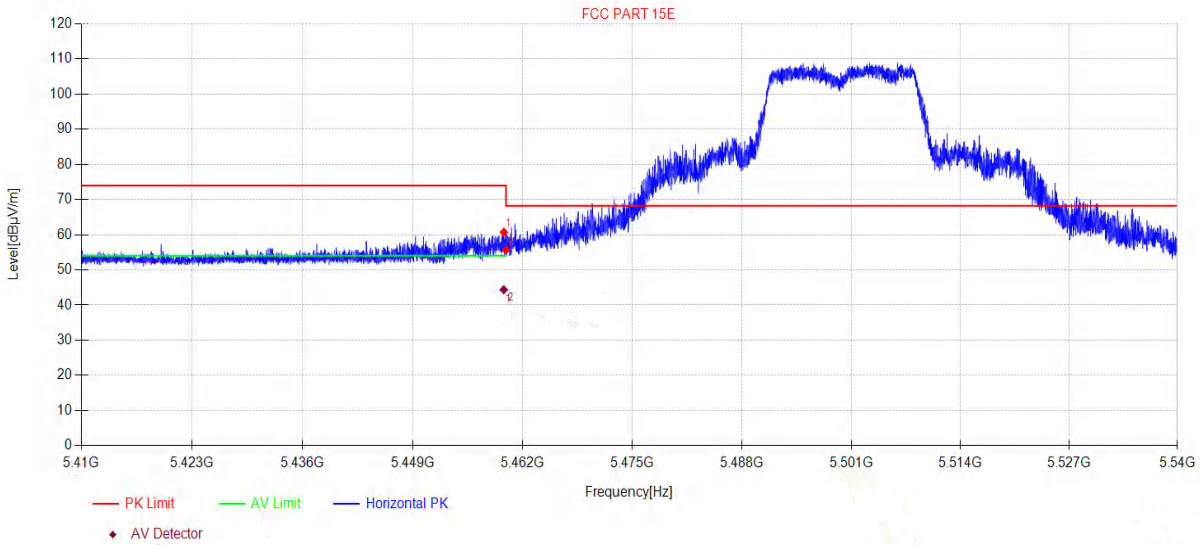
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5500MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\25
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	5459.75	51.99	33.00	5.74	-30.02	60.71	74.00	13.29	PK	Horizontal
2	5460.00	47.00	33.00	5.74	-30.02	55.72	68.20	12.48	PK	Horizontal

Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	5459.75	35.64	33.00	5.74	-30.02	44.36	54.00	9.64	AV	Horizontal
2	5460.00	36.08	33.00	5.74	-30.02	44.80	54.00	9.20	AV	Horizontal

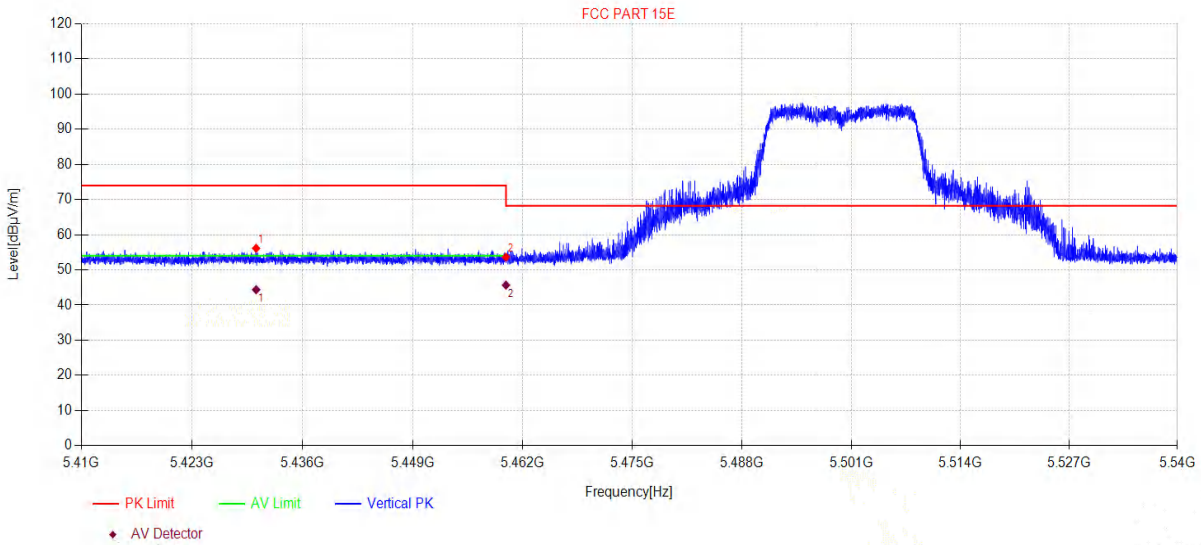
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5500MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\26
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	5430.53	47.39	33.04	5.73	-30.02	56.14	74.00	17.86	PK	Vertical
2	5460.00	44.91	33.00	5.74	-30.02	53.63	68.20	14.57	PK	Vertical

Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	5430.53	35.62	33.04	5.73	-30.02	44.37	54.00	9.63	AV	Vertical
2	5460.00	36.95	33.00	5.74	-30.02	45.67	54.00	8.33	AV	Vertical

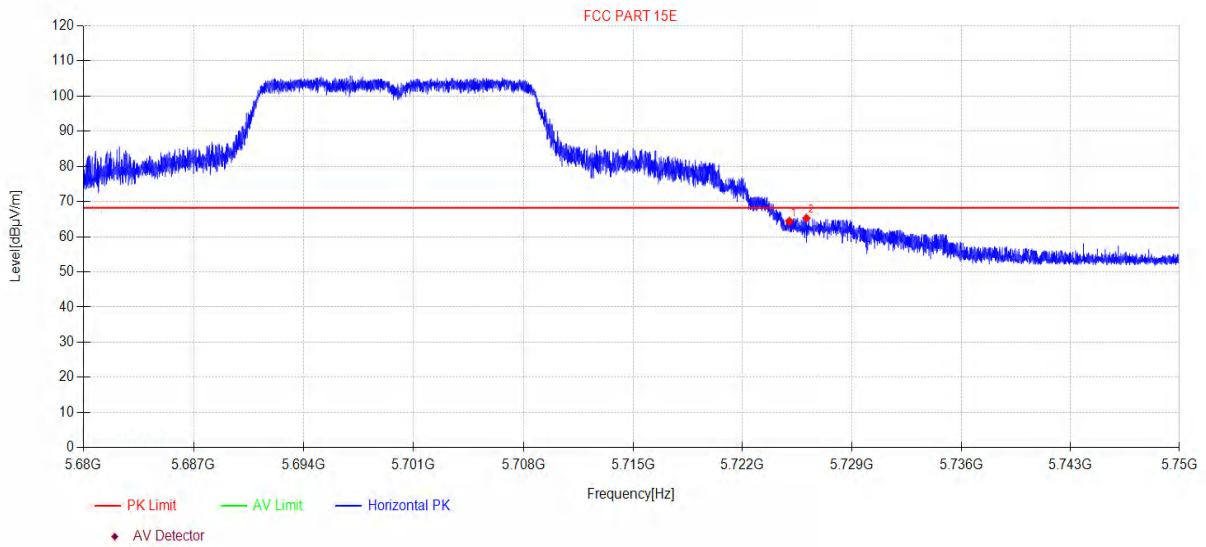
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5700MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\27
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	5725.00	54.74	33.75	5.87	-29.99	64.37	68.20	3.83	PK	Horizontal
2	5726.09	55.64	33.76	5.87	-29.99	65.28	68.20	2.92	PK	Horizontal

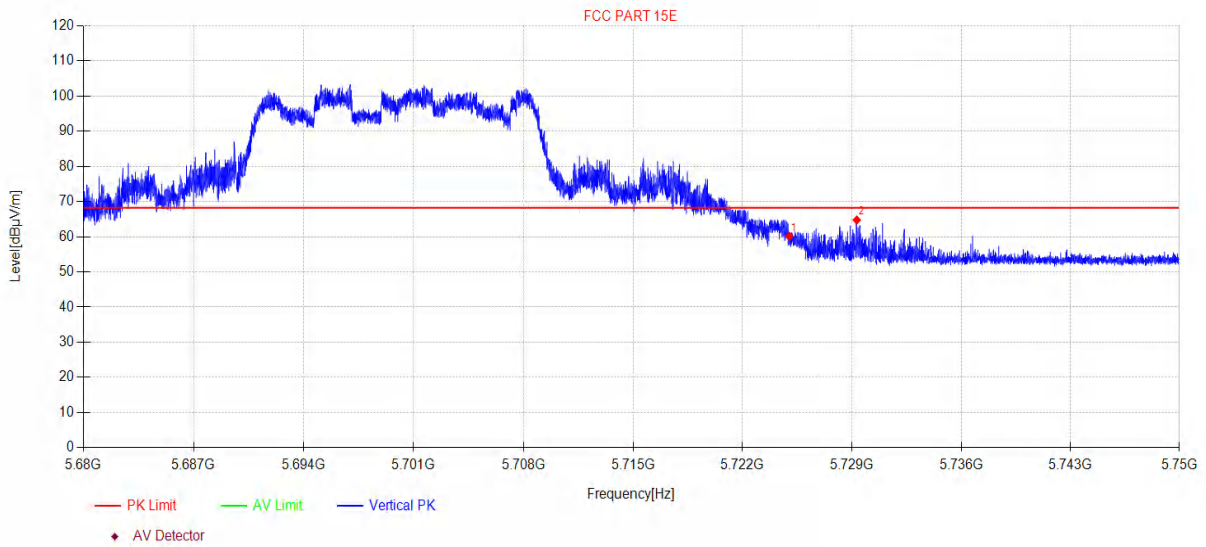
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5700MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 1G 5G\28
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	5725.00	50.49	33.75	5.87	-29.99	60.12	68.20	8.08	PK	Vertical
2	5729.31	55.09	33.78	5.87	-29.99	64.75	68.20	3.45	PK	Vertical

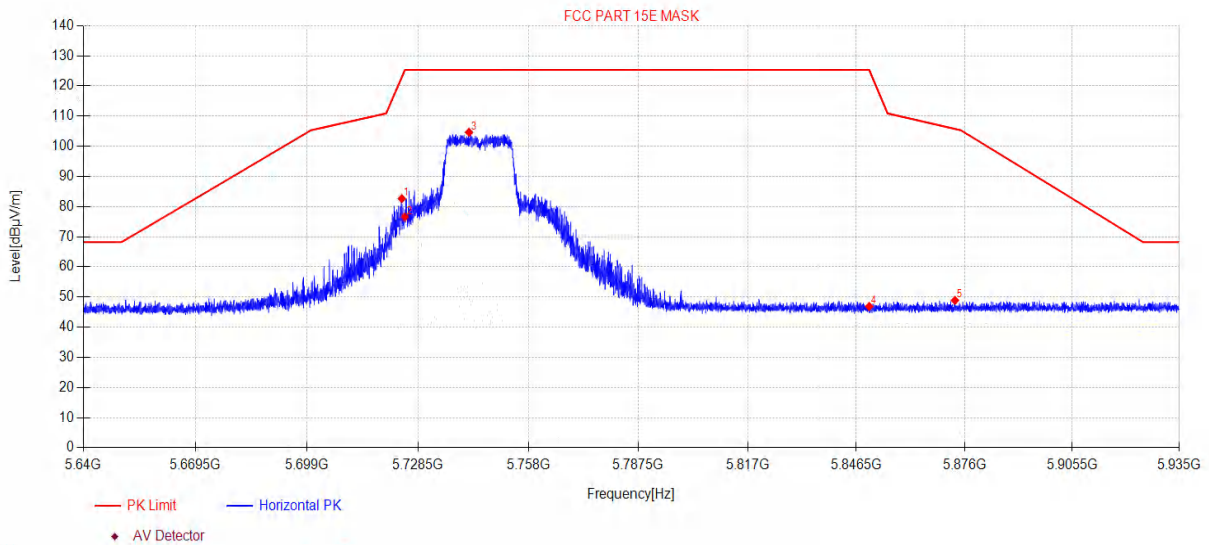
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5745MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 5.8G MASK\1
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	5724.16	83.01	33.74	5.87	-39.99	82.63	122.89	40.26	PK	Horizontal
2	5725.00	76.94	33.75	5.87	-39.99	76.57	125.30	48.73	PK	Horizontal
3	5742.10	104.87	33.85	5.88	-39.98	104.62	125.30	20.68	PK	Horizontal
4	5850.00	46.92	34.00	5.94	-39.97	46.89	125.27	78.38	PK	Horizontal
5	5873.37	48.86	34.05	5.95	-39.97	48.89	105.76	56.87	PK	Horizontal

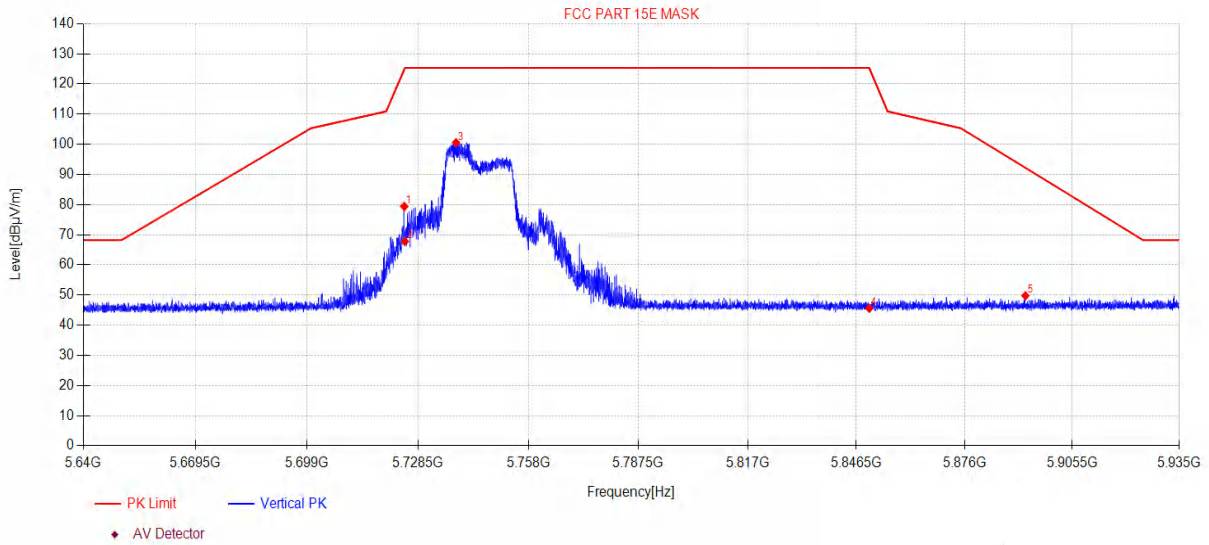
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5745MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 5.8G MASK\2
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	5724.84	79.76	33.75	5.87	-39.99	79.39	124.84	45.45	PK	Vertical
2	5725.00	68.13	33.75	5.87	-39.99	67.76	125.30	57.54	PK	Vertical
3	5738.62	100.83	33.83	5.88	-39.98	100.56	125.30	24.74	PK	Vertical
4	5850.00	45.63	34.00	5.94	-39.97	45.60	125.27	79.67	PK	Vertical
5	5892.67	49.68	34.09	5.96	-39.96	49.77	92.19	42.42	PK	Vertical

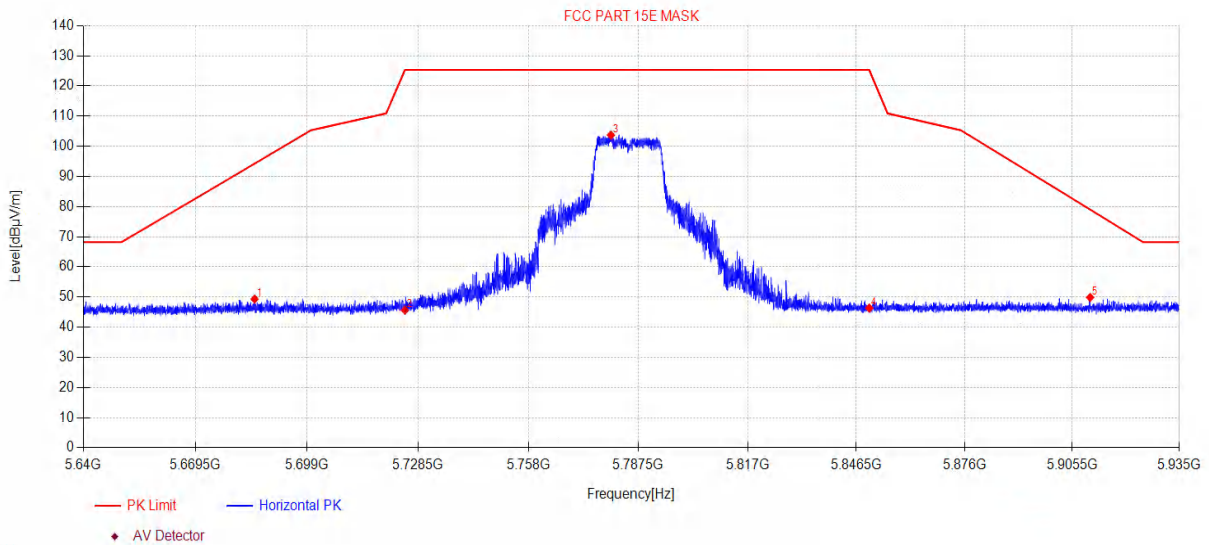
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-27 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5785MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 5.8G MASK\3
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	5685.11	49.93	33.54	5.85	-39.99	49.33	94.25	44.92	PK	Horizontal
2	5725.00	46.01	33.75	5.87	-39.99	45.64	125.30	79.66	PK	Horizontal
3	5780.13	103.73	34.08	5.90	-39.98	103.73	125.30	21.57	PK	Horizontal
4	5850.00	46.37	34.00	5.94	-39.97	46.34	125.27	78.93	PK	Horizontal
5	5910.43	49.75	34.12	5.97	-39.96	49.88	79.01	29.13	PK	Horizontal

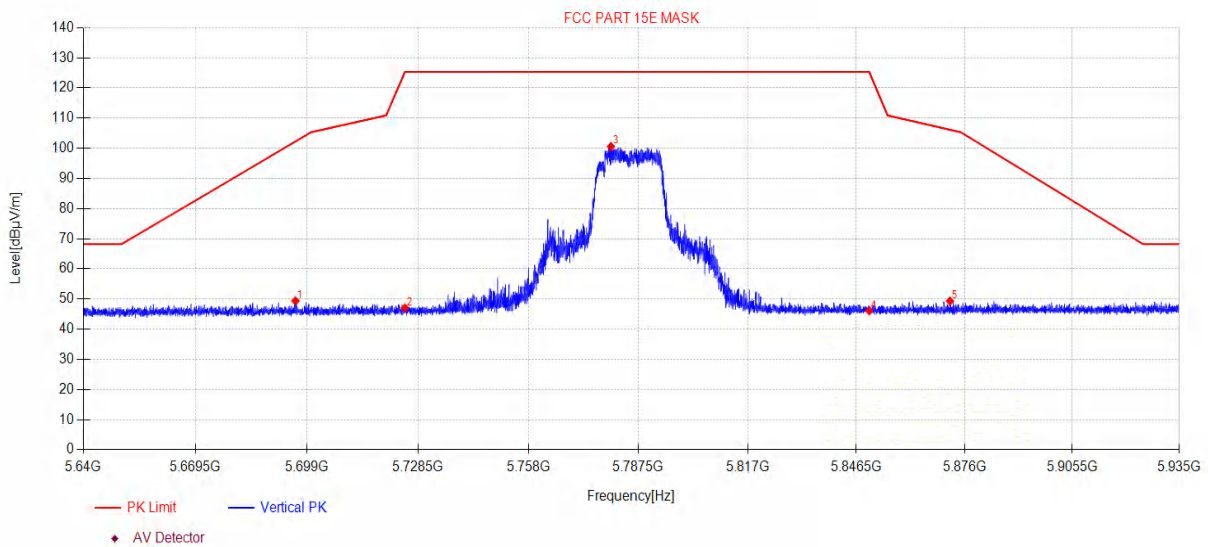
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-28 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5785MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 5.8G MASK\4
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	5695.93	49.94	33.58	5.86	-39.99	49.39	102.28	52.89	PK	Vertical
2	5725.00	47.42	33.75	5.87	-39.99	47.05	125.30	78.25	PK	Vertical
3	5780.13	100.57	34.08	5.90	-39.98	100.57	125.30	24.73	PK	Vertical
4	5850.00	46.16	34.00	5.94	-39.97	46.13	125.27	79.14	PK	Vertical
5	5872.02	49.31	34.04	5.95	-39.97	49.33	106.14	56.81	PK	Vertical

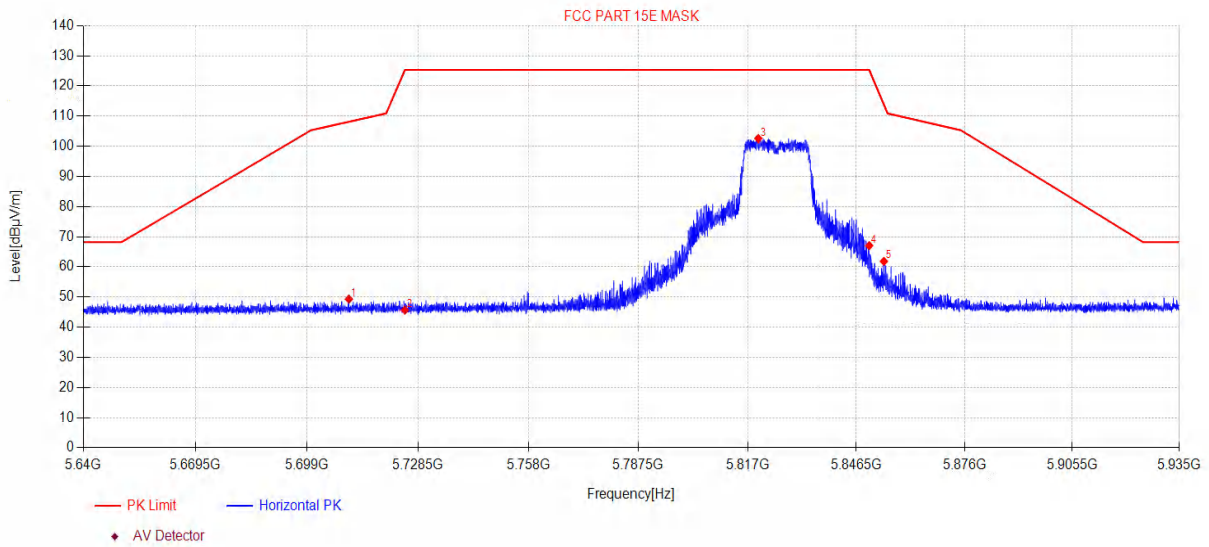
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-28 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5825MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 5.8G MASK\5
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	5710.09	49.76	33.66	5.87	-39.99	49.30	108.13	58.83	PK	Horizontal
2	5725.00	46.04	33.75	5.87	-39.99	45.67	125.30	79.63	PK	Horizontal
3	5819.89	102.52	34.12	5.92	-39.97	102.59	125.30	22.71	PK	Horizontal
4	5850.00	67.07	34.00	5.94	-39.97	67.04	125.27	58.23	PK	Horizontal
5	5853.99	61.87	34.01	5.94	-39.97	61.85	113.80	51.95	PK	Horizontal

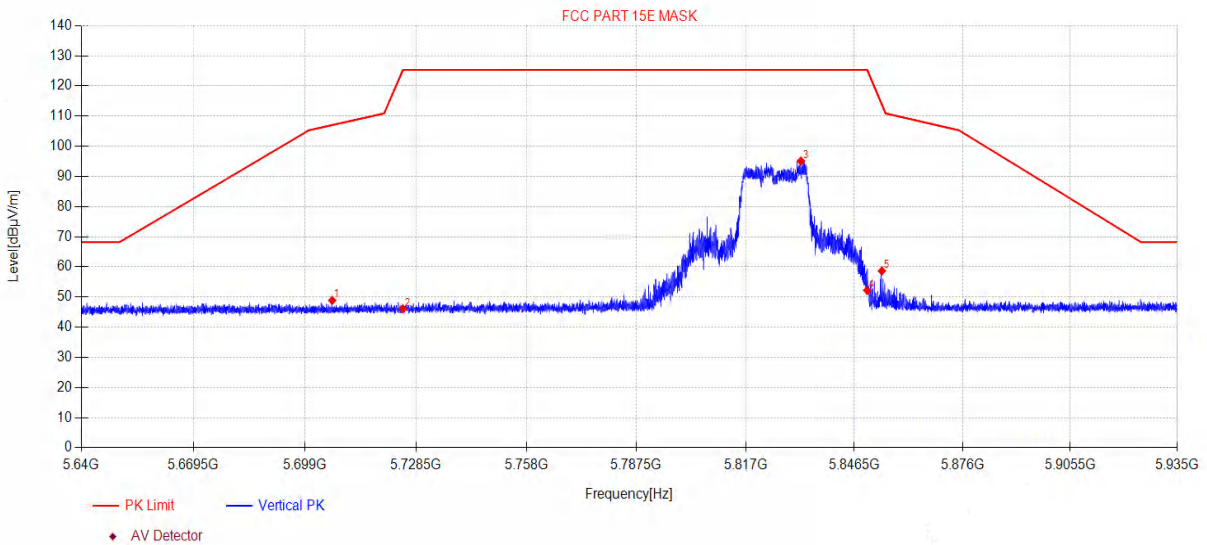
Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-12-28 **Tested By:** Junchang Du
EUT: Tabletop Wireless Speaker **Model Number:** EDF100080
Test Mode: 11N20 TX 5825MHz **Power Supply:** AC 120V/60Hz
Condition: Temp:21.4°C;Humi:54.5% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23121803-2E EDF100080\FCC ABOVE 5.8G MASK\6
Memo: Sample Number:S23113018-01 Power Setting:NA

Test Graph



Data List										
N O.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	5706.20	49.36	33.64	5.86	-39.99	48.87	107.04	58.17	PK	Vertical
2	5725.00	46.44	33.75	5.87	-39.99	46.07	125.30	79.23	PK	Vertical
3	5831.99	95.08	34.07	5.93	-39.97	95.11	125.30	30.19	PK	Vertical
4	5850.00	52.23	34.00	5.94	-39.97	52.20	125.27	73.07	PK	Vertical
5	5853.99	58.68	34.01	5.94	-39.97	58.66	113.80	55.14	PK	Vertical

Note:

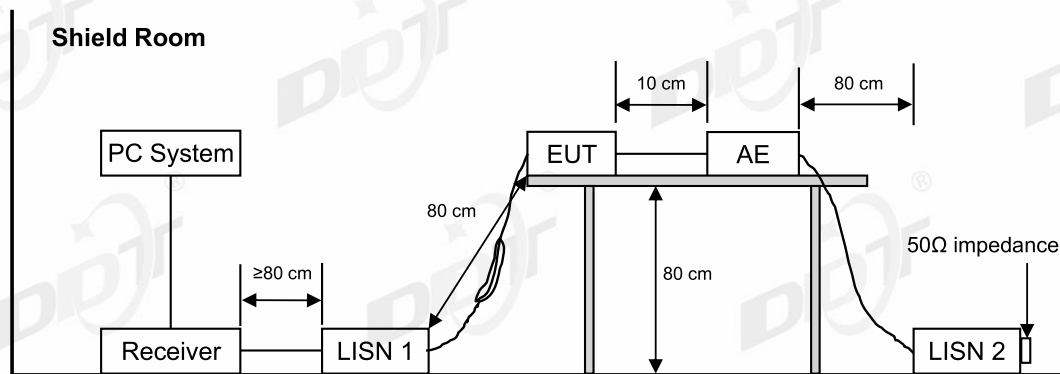
1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

14. Power Line Conducted Emission

14.1. Test equipment

Equipment	Manufacturer	Model No.	Serial Number	Due Date
☑Power Line Conducted Emissions Test 1#				
Test Receiver	R&S	ESCI	100551	2024/07/10
LISN 1	R&S	ENV216	101109	2024/07/10
LISN 2	R&S	ESH2-Z5	100309	2024/07/11
Pulse Limiter	R&S	ESH3-Z2	101242	2024/07/14
CE Cable 1	HUBSER	N/A	W10.01	2024/07/14
Test software	Audix	E3	V 6.11111b	N/A

14.2. Block diagram of test setup



14.3. Power Line Conducted Emission Limits

Frequency	Quasi-Peak Level dB(μ V)	Average Level dB(μ V)
150 kHz ~ 500 kHz	66 ~ 56*	56 ~ 46*
500 kHz ~ 5 MHz	56	46
5 MHz ~ 30 MHz	60	50

Note 1: * Decreasing linearly with logarithm of frequency.

Note 2: The lower limit shall apply at the transition frequencies.

14.4. Test Procedure

The EUT and Support equipment, if needed, were put placed on a non-metallic table, 80cm above the ground plane.

All support equipment power received from a second LISN.

Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.

The Receiver scanned from 150 kHz to 30 MHz for emissions in each of the test modes.

During the above scans, the emissions were maximized by cable manipulation.

The test mode(s) described in clause 2.4 were scanned during the preliminary test.

After the preliminary scan, we found the test mode producing the highest emission level.

The EUT configuration and worse cable configuration of the above highest emission levels were recorded for reference of the final test.

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test.

A scan was taken on both power lines, Neutral and Line, recording at least the six highest emissions.

Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.

The test data of the worst-case condition(s) was recorded.

The bandwidth of test receiver is set at 9 kHz.

14.5. Test Result

Pass. (See below detailed test result)

Note1: All emissions not reported below are too low against the prescribed limits.

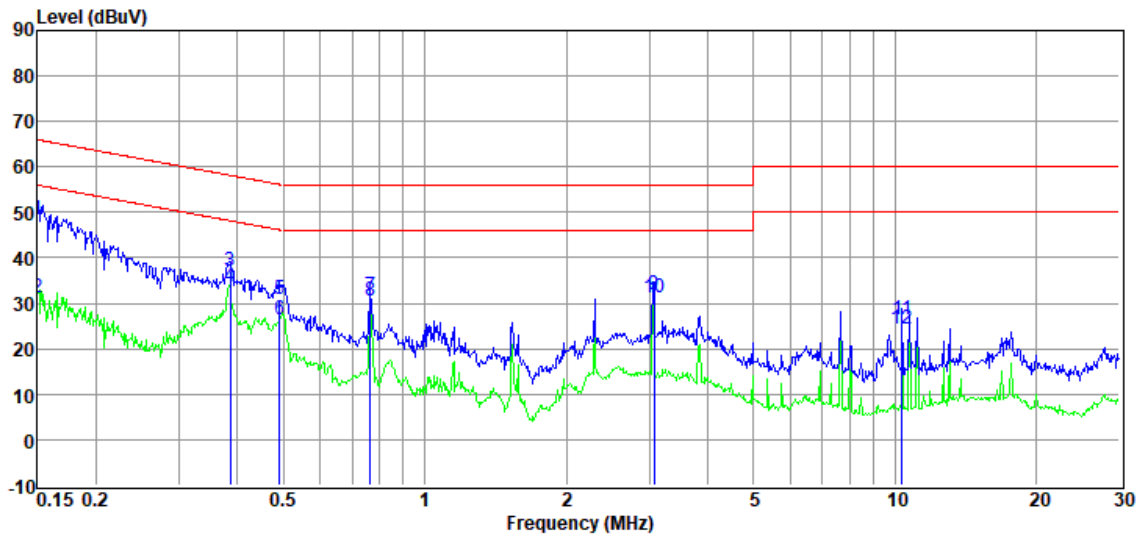
Note2: "----" means peak detection; "----" means average detection

Note3: Pre-test AC conducted emission at both voltage AC 120V/60Hz and AC 240V/50Hz, recorded worse case.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 1# Shield Room D:\2023 CE report data\Q23121803-2E\FCC CE.EM6
Test Date : 2024-01-15 **Tested By** : Junchang Du
EUT : Tabletop Wireless Speaker **Model Number** : EDF100080
Power Supply : AC 120V/60Hz **Test Mode** : 5G WIFI TX
Condition : TEMP:26.2°C, RH:58.9% **LISN** : 2023 1# ENV216/LINE
Memo : Sample Number:S23113018-10

Data: 18



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBμV)	Limit Line (dBμV)	Over Limit (dB)	Detector	Phase
1	0.15	28.04	9.85	0.92	9.68	48.49	66.00	-17.51	QP	LINE
2	0.15	10.84	9.85	0.92	9.68	31.29	56.00	-24.71	Average	LINE
3	0.39	16.92	9.75	0.85	9.71	37.23	58.17	-20.94	QP	LINE
4	0.39	13.47	9.75	0.85	9.71	33.78	48.17	-14.39	Average	LINE
5	0.49	10.57	9.81	0.86	9.71	30.95	56.14	-25.19	QP	LINE
6	0.49	6.19	9.81	0.86	9.71	26.57	46.14	-19.57	Average	LINE
7	0.77	11.16	9.79	0.75	9.72	31.42	56.00	-24.58	QP	LINE
8	0.77	10.14	9.79	0.75	9.72	30.40	46.00	-15.60	Average	LINE
9	3.07	11.85	9.63	0.59	9.77	31.84	56.00	-24.16	QP	LINE
10	3.07	11.08	9.63	0.59	9.77	31.07	46.00	-14.93	Average	LINE
11	10.34	6.64	9.82	0.19	9.82	26.47	60.00	-33.53	QP	LINE
12	10.34	4.64	9.82	0.19	9.82	24.47	50.00	-25.53	Average	LINE

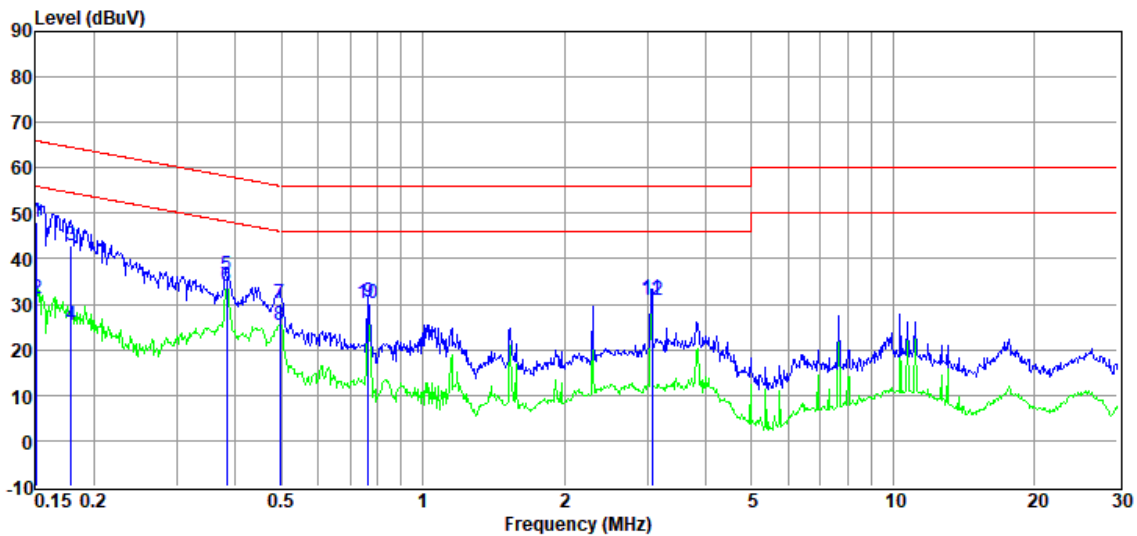
Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 1# Shield Room D:\2023 CE report data\Q23121803-2E\FCC CE.EM6
Test Date : 2024-01-15 **Tested By** : Junchang Du
EUT : Tabletop Wireless Speaker **Model Number** : EDF100080
Power Supply : AC 120V/60Hz **Test Mode** : 5G WIFI TX
Condition : TEMP:26.2°C, RH:58.9% **LISN** : 2023 1# ENV216/NEUTRAL
Memo : Sample Number:S23113018-10

Data: 20



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBμV)	Limit Line (dBμV)	Over Limit (dB)	Detector	Phase
1	0.15	27.80	9.83	0.92	9.68	48.23	65.96	-17.73	QP	NEUTRAL
2	0.15	10.69	9.83	0.92	9.68	31.12	55.96	-24.84	Average	NEUTRAL
3	0.18	22.34	9.83	0.91	9.69	42.77	64.55	-21.78	QP	NEUTRAL
4	0.18	5.08	9.83	0.91	9.69	25.51	54.55	-29.04	Average	NEUTRAL
5	0.38	15.99	9.71	0.85	9.71	36.26	58.21	-21.95	QP	NEUTRAL
6	0.38	13.62	9.71	0.85	9.71	33.89	48.21	-14.32	Average	NEUTRAL
7	0.50	9.78	9.80	0.86	9.71	30.15	56.05	-25.90	QP	NEUTRAL
8	0.50	5.01	9.80	0.86	9.71	25.38	46.05	-20.67	Average	NEUTRAL
9	0.77	10.37	9.82	0.75	9.72	30.66	56.00	-25.34	QP	NEUTRAL
10	0.77	9.82	9.82	0.75	9.72	30.11	46.00	-15.89	Average	NEUTRAL
11	3.07	11.19	9.71	0.59	9.77	31.26	56.00	-24.74	QP	NEUTRAL
12	3.07	10.67	9.71	0.59	9.77	30.74	46.00	-15.26	Average	NEUTRAL

Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

15. Antenna Requirements

15.1. Limit

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For intentional device, according to RSS-Gen issue 5 section 6.8.

The applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list.

15.2. Result

The antenna used for this product and no antenna other than that furnished by the responsible party shall be used with the device, maximum antenna gain is 2.3 dBi

17. Photos of the EUT

Please refer to appendix I.

END OF REPORT