

## FCC RADIO TEST REPORT

Applicant..... : MODO Innovation Technology Co., Ltd.  
Address..... : 412, building 1, Xinyi Lingyu R&D center, No.30, Honglang North 2nd Road,  
Xin'an street, Bao'an District, Shenzhen City, China, 518052  
Manufacturer..... : MODO Innovation Technology Co., Ltd.  
Address..... : 412, building 1, Xinyi Lingyu R&D center, No.30, Honglang North 2nd Road,  
Xin'an street, Bao'an District, Shenzhen City, China, 518052  
Factory..... : MODO Innovation Technology Co., Ltd.  
Address..... : 412, building 1, Xinyi Lingyu R&D center, No.30, Honglang North 2nd Road,  
Xin'an street, Bao'an District, Shenzhen City, China, 518052  
Product Name..... : NitroCharge 120 Pro  
Brand Name..... : EXCITRUS  
Model No. .... : PDW100256, PDW100208 (For model difference refer to section 2)  
FCC ID..... : 2ARYFPDW100256  
Measurement Standard..... : 47 CFR FCC Part 15, Subpart C  
Receipt Date of Samples.... : July 20, 2021  
Date of Tested..... : July 20, 2021 to August 06, 2021  
Date of Report..... : October 15, 2021

This report shows that above equipment is technically compliant with the requirements of the standards above. All test results in this report apply only to the tested sample(s). Without prior written approval of Dongguan Nore Testing Center Co., Ltd, this report shall not be reproduced except in full.



Prepared by

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Approved by  
Iori Fan / Authorized Signatory

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**1. Summary of Test Result**

FCC Rules	Description of Test	Result	Remarks
§15.207 (a)	AC Power Conducted Emission	PASS	---
§15.209	Radiated Emissions	PASS	---
§15.35	20dB Bandwidth	PASS	---
§15.203	Antenna Requirement	PASS	---

## 2. General Description of EUT

Product Information	
Product Name:	NitroCharge 120 Pro
Main Model Name:	PDW100256
Additional Model Name:	PDW100208
Model Difference:	Both of models have the same circuit schematic, construction, PCB Layout and critical components. The difference is model name due to trading purpose.
S/N:	2107-3787
Brand Name:	EXCITRUS
Hardware Version:	V01
Software Version:	V01
Rating:	Details refer to model list
Typical Arrangement:	Table-top
I/O Port:	USB Type-C in & out Port*1, Type-C out Port*1, USB Type A Port*1
Accessories Information	
Adapter:	N/A
Cable:	USB Line: 0.60cm unshielded
Other:	N/A
Additional Information	
Note:	1. According to the model difference, all tests were performed on model PDW100256. 2. This report applies to wireless charging function.
Remark:	All the information above are provided by the manufacturer. More detailed feature of the EUT please refers to the user manual.

### Technical Specification

Frequency Range:	110.5-205KHz
Modulation Type:	FSK
Antenna Type:	Coil antenna

### Model list:

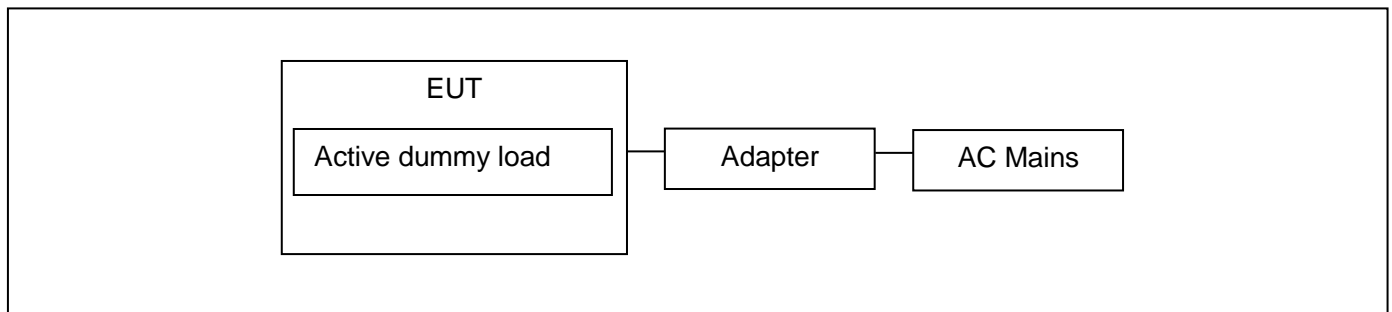
Model:	<b>PDW100256</b>	USB-C1	USB-C2	USB-A	Wireless Charging	Total
Single Output	USB-C1	100	--	--	--	100
	USB-C2	--	45	--	--	45
	USB-A	--	--	18	--	18
	Wireless Charging	--	--	--	10	10
Dual Outputs	C1+C2	65	30	--	--	95
	C1+A	65	--	18	--	83
	C1+Wireless Charging	100	--	--	10	110
	C2+A	--	45	18	--	63
	C2+Wireless Charging	--	45	--	10	55
	A+Wireless Charging	--	--	18	10	28
Triple Outputs	C1+C2+A	65	30	18	--	113
	C1+C2+Wireless Charging	65	30	--	10	105
	C1+A+Wireless Charging	65	--	18	10	93
	C2+A+Wireless Charging	--	45	18	10	73
Quad Outputs	C1+C2+A+Wireless Charging	65	30	18	10	123
	Over temp	45	30	18	10	103
Full	C1+C2+A+Wireless Charging	65(input)	30	18	10	--
Charging	C1 Charging	100(input)	--	--	--	--
	Over temp C1 Charging	65(input)	--	--	--	--

Model:	PDW100208	USB-C1	USB-C2	USB-A	Wireless Charging	Total
Single Output	USB-C1	100	--	--	--	100
	USB-C2	--	45	--	--	45
	USB-A	--	--	18	--	18
	Wireless Charging	--	--	--	10	10
Dual Outputs	C1+C2	45	30	--	--	75
	C1+A	45	--	18	--	63
	C1+Wireless Charging	45	--	--	10	55
	C2+A	--	45	18	--	63
	C2+Wireless Charging	--	45	--	10	55
	A+Wireless Charging	--	--	18	10	28
Triple Outputs	C1+C2+A	45	30	18	--	93
	C1+C2+Wireless Charging	45	30	--	10	85
	C1+A+Wireless Charging	45	--	18	10	73
	C2+A+Wireless Charging	--	45	18	10	73
Quad Outputs	C1+C2+A+Wireless Charging	45	30	18	10	103
	Over temp	30	30	18	10	88
Full	C1+C2+A+Wireless Charging	65(input)	30	18	10	--
Charging	C1 Charging	65(input)	--	--	--	--
	Over temp C1 Charging	45(input)	--	--	--	--

### 3. Test Channels and Modes Detail

Mode		Modulation
1.	Full Load	FSK
2.	Half Load	FSK
3.	Empty Load	FSK

### 4. Configuration of EUT



### 5. Modification of EUT

No modifications are made to the EUT during all test items.

### 6. Description of Support Device

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

No.	Equipment	Brand	M/N	S/N	Cable Specification	Remarks
1.	Active dummy load	---	Qi S(5W/7.5W/10W)	---	---	Provided by the Lab.
2.	Adapter	HUAW EI	HW-200325CP0	---	---	Input: AC100-240V 50/60Hz, 1.8A Output: DC 5V 2A or DC 9V 2A or DC 12V 2A or DC 15V 3A or DC 20V 3.25A Provided by the Lab.



## 7. Test Facility and Location

Test Site	:	Dongguan Nore Testing Center Co., Ltd. (Dongguan NTC Co., Ltd.)
Accreditations and Authorizations	:	<p>The Laboratory has been assessed and proved to be in compliance with CNAS/CL01</p> <p>Listed by CNAS, August 13, 2018</p> <p>The Certificate Registration Number is L5795.</p> <p>The Certificate is valid until August 13, 2024</p> <p>The Laboratory has been assessed and proved to be in compliance with ISO17025</p> <p>Listed by A2LA, November 01, 2017</p> <p>The Certificate Registration Number is 4429.01</p> <p>The Certificate is valid until December 31, 2021</p> <p>Listed by FCC, November 06, 2017</p> <p>Test Firm Registration Number is 907417</p> <p>Listed by Industry Canada, June 08, 2017</p> <p>The Certificate Registration Number is 46405-9743A</p> <p>The CAB identifier number is CN0015</p>
Test Site Location	:	Building D, Gaosheng Science and Technology Park, Hongtu Road, Nancheng District, Dongguan City, Guangdong Province, China

## 8. Applicable Standards and References

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

### Test Standards:

47 CFR Part 15, Subpart C

ANSI C63.10-2013

### References Test Guidance:

N/A

## 9. Deviations and Abnormalities from Standard Conditions

No additions, deviations and exclusions from the standard.

## 10. Test Conditions

No.	Test Item	Test Mode	Test Voltage	Tested by	Remarks
1.	AC Power Conducted Emission	1-3	AC 120V 60Hz	Sean Yuan	See note 1
2.	Radiated Emissions	1-3	AC 120V 60Hz, DC 16.8V	Sean Yuan	See note 1
3.	20dB Bandwidth	1	AC 120V 60Hz	Sean Yuan	See note 1
4.	Antenna Requirement	---	---	---	See note 1

### Note:

1. The testing climatic conditions for temperature, humidity, and atmospheric pressure are within: 15~35℃, 30~70%, 86~106kPa.
2. For the test voltage AC 120V 60Hz was come from power adapter, only the worst case was recorded in this report.
3. As the EUT can be operated multiple positions, all X,Y,Z axis were considered during the test and only the worst case X was recorded.

## 11. Measurement Uncertainty

No.	Test Item	Frequency	Uncertainty	Remarks
1.	Conducted Emission	150KHz ~ 30MHz	$\pm 2.52$ dB	---
2.	Radiated Emission Test	9kHz ~ 30MHz	$\pm 2.60$ dB	---
		30MHz ~ 1GHz	$\pm 4.68$ dB	---
		1GHz ~ 18GHz	$\pm 5.14$ dB	---
		18GHz ~ 40GHz	$\pm 5.14$ dB	---
3.	RF Conducted Test	10Hz ~ 40GHz	$\pm 1.06$ dB	---

**Note:**

1. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k=2$ .
2. The measurement uncertainty levels above are estimated and calculated according to CISPR 16-4-2.
3. The conformity assessment statement in this report is based solely on the test results, measurement uncertainty is excluded.

## 12. Sample Calculations

Conducted Emission						
Freq. (MHz)	Reading Level (dBUV)	Correct Factor (dB)	Measurement (dBUV)	Limit (dBUV)	Over (dB)	Detector
0.1900	30.10	10.60	40.70	79.00	-38.30	QP
<p>Where,</p> <p>Freq. = Emission frequency in MHz</p> <p>Reading Level = Uncorrected Analyzer/Receiver reading</p> <p>Corrector Factor = Insertion loss of LISN + Cable Loss + RF Switching Unit attenuation</p> <p>Measurement = Reading + Corrector Factor</p> <p>Limit = Limit stated in standard</p> <p>Margin = Measurement - Limit</p> <p>Detector = Reading for Quasi-Peak / Average / Peak</p>						

Radiated Spurious Emissions and Restricted Bands						
Freq. (MHz)	Reading Level (dBUV)	Correct Factor (dB/m)	Measurement (dBUV/m)	Limit (dBUV/m)	Over (dB)	Detector
60.0700	45.88	-18.38	27.50	49.00	-21.50	QP
<p>Where,</p> <p>Freq. = Emission frequency in MHz</p> <p>Reading Level = Uncorrected Analyzer/Receiver reading</p> <p>Corrector Factor = Antenna Factor + Cable Loss - Pre-amplifier</p> <p>Measurement = Reading + Corrector Factor</p> <p>Limit = Limit stated in standard</p> <p>Over = Margin, which calculated by Measurement - Limit</p> <p>Detector = Reading for Quasi-Peak / Average / Peak</p>						

Note: For all conducted test items, the spectrum analyzer offset or transducer is derived from RF cable loss and attenuator factor. The offset or transducer is equal to the RF cable loss plus attenuator factor.

## 13. Test Items and Results

### 13.1 Conducted Emissions Measurement

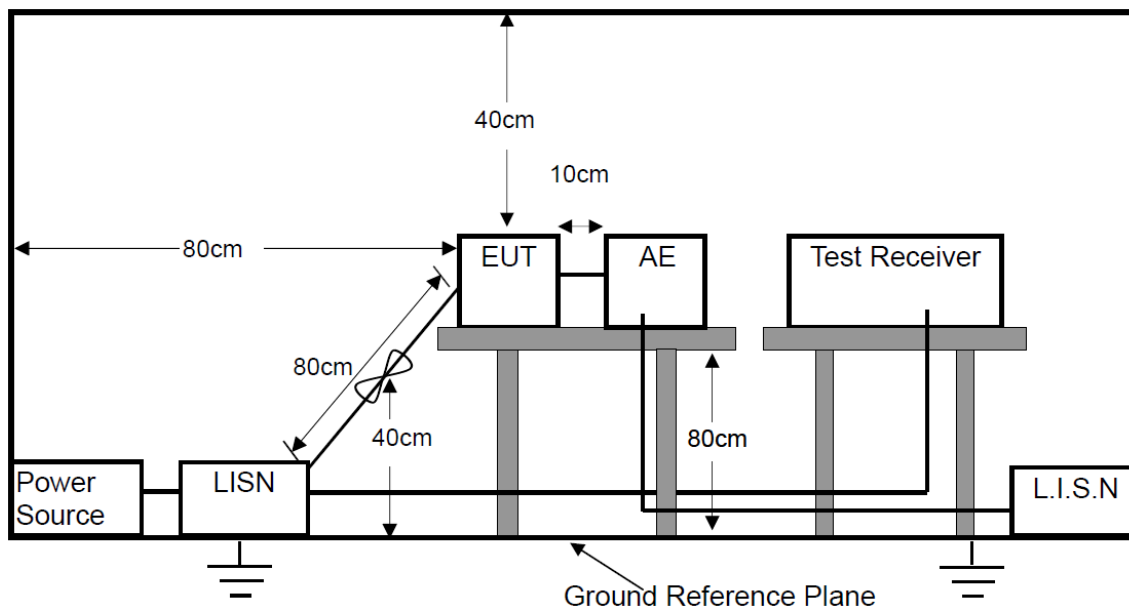
#### LIMITS

According to the requirements of FCC PART 15.207, the limits are as follows:

Frequency (MHz)	Quasi-peak	Average
0.15 to 0.5	66 to 56	56 to 46
0.5 to 5	56	46
5 to 30	60	50

- Note:
1. If the limits for the average detector are met when using the quasi-peak detector, then the limits for the measurements with the average detector are considered to be met.
  2. The lower limit shall apply at the transition frequencies.
  3. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5MHz.

#### BLOCK DIAGRAM OF TEST SETUP



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## TEST PROCEDURES

- a. The EUT was placed on a wooden table 0.8m height from the metal ground plan and 0.4m from the conducting wall of the shielding room and it was kept at 0.8m from any other grounded conducting surface.
- b. All I/O cables and support devices were positioned as per ANSI C63.10.
- c. Connect mains power port of the EUT to a line impedance stabilization network (LISN).
- d. Connect all support devices to the other LISN and AAN, if needed.
- e. Scan the frequency range from 150KHz to 30MHz at both sides of AC line for maximum conducted interference checking and record the test data.

## TEST RESULTS

PASS

Please refer to the following pages of the worst case.

M/N: PDW100256

Testing Voltage: AC 120V / 60Hz

Phase: L1

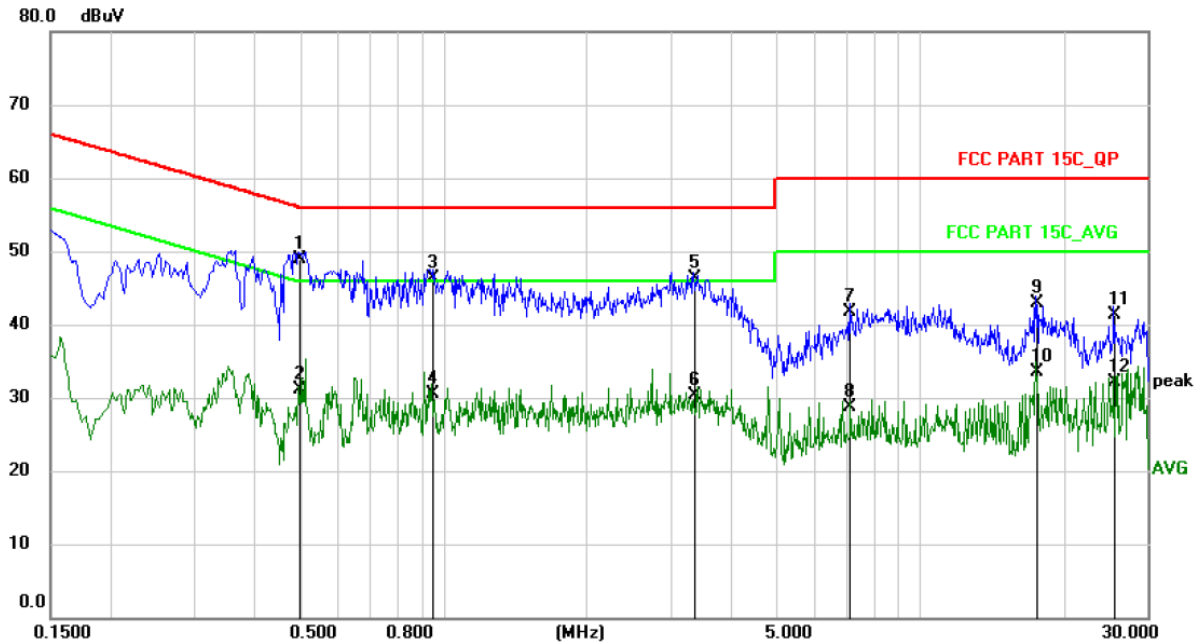
Detector: QP &amp; AVG

Test Mode: 1

## Conducted Emission Measurement

Date: 2021/7/27

Time: 15:17:38



No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1 *	0.4979	38.30	10.63	48.93	56.03	-7.10	QP	
2	0.4979	20.39	10.63	31.02	46.03	-15.01	AVG	
3	0.9500	35.67	10.69	46.36	56.00	-9.64	QP	
4	0.9500	19.81	10.69	30.50	46.00	-15.50	AVG	
5	3.3620	35.50	10.71	46.21	56.00	-9.79	QP	
6	3.3620	19.69	10.71	30.40	46.00	-15.60	AVG	
7	7.1139	31.08	10.72	41.80	60.00	-18.20	QP	
8	7.1139	17.98	10.72	28.70	50.00	-21.30	AVG	
9	17.5537	32.11	10.76	42.87	60.00	-17.13	QP	
10	17.5537	22.78	10.76	33.54	50.00	-16.46	AVG	
11	25.5338	30.47	10.78	41.25	60.00	-18.75	QP	
12	25.5338	21.37	10.78	32.15	50.00	-17.85	AVG	

M/N: PDW100256

Testing Voltage: AC 120V / 60Hz

Phase: N

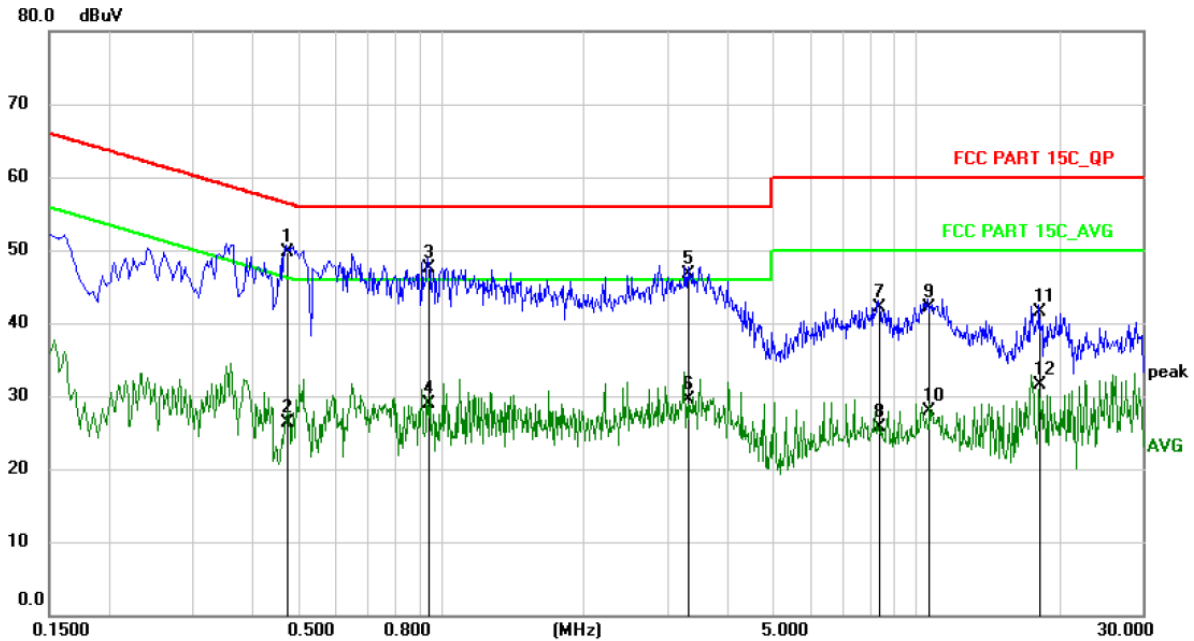
Detector: QP & AVG

Test Mode: 1

## Conducted Emission Measurement

Date: 2021/7/27

Time: 15:24:06



No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1 *	0.4738	39.04	10.62	49.66	56.45	-6.79	QP	
2	0.4738	15.73	10.62	26.35	46.45	-20.10	AVG	
3	0.9418	36.85	10.69	47.54	56.00	-8.46	QP	
4	0.9418	18.19	10.69	28.88	46.00	-17.12	AVG	
5	3.3260	36.08	10.71	46.79	56.00	-9.21	QP	
6	3.3260	18.74	10.71	29.45	46.00	-16.55	AVG	
7	8.3338	31.33	10.72	42.05	60.00	-17.95	QP	
8	8.3338	14.91	10.72	25.63	50.00	-24.37	AVG	
9	10.6178	31.43	10.73	42.16	60.00	-17.84	QP	
10	10.6178	17.18	10.73	27.91	50.00	-22.09	AVG	
11	18.1377	30.75	10.76	41.51	60.00	-18.49	QP	
12	18.1377	20.70	10.76	31.46	50.00	-18.54	AVG	



## 13.2 Radiated Spurious Emissions and Restricted Bands Measurement

### LIMITS

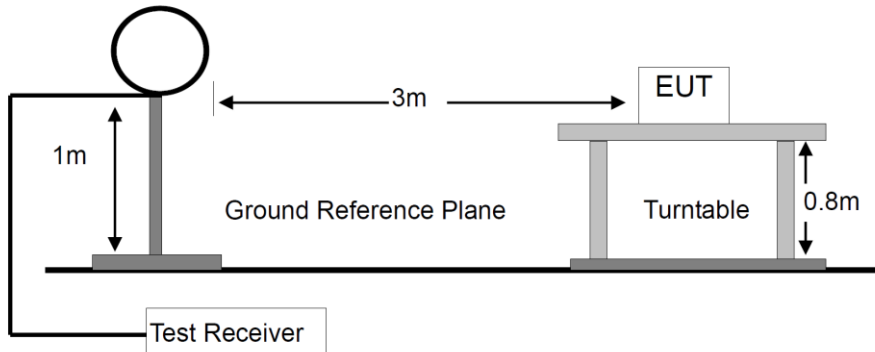
Frequency range MHz	Distance Meters	Field Strengths Limit (15.209)
		$\mu\text{V/m}$
0.009 ~ 0.490	300	$2400/F(\text{kHz})$
0.490 ~ 1.705	30	$24000/F(\text{kHz})$
1.705 ~ 30	30	30
30 ~ 88	3	100
88 ~ 216	3	150
216 ~ 960	3	200
Above 960	3	500

Remark:

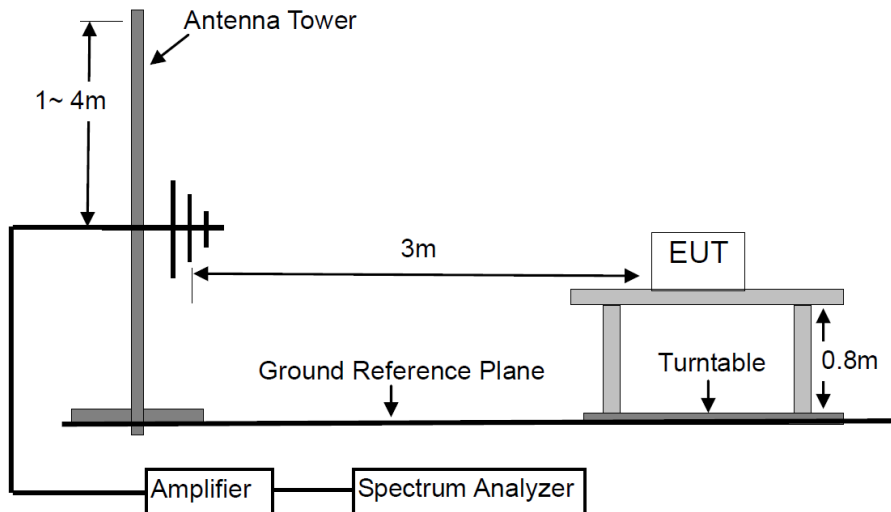
- (1) Emission level  $(\text{dB})\mu\text{V} = 20 \log \text{Emission level } \mu\text{V/m}$
- (2) The smaller limit shall apply at the cross point between two frequency bands.
- (3) As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.
- (4) The frequency range scanned is from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or 40 GHz, whichever is lower.
- (5) The specifies that emissions which fall in the restricted bands, as defined in §15.205 comply with radiated emission limits specified in §15.209.

## BLOCK DIAGRAM OF TEST SETUP

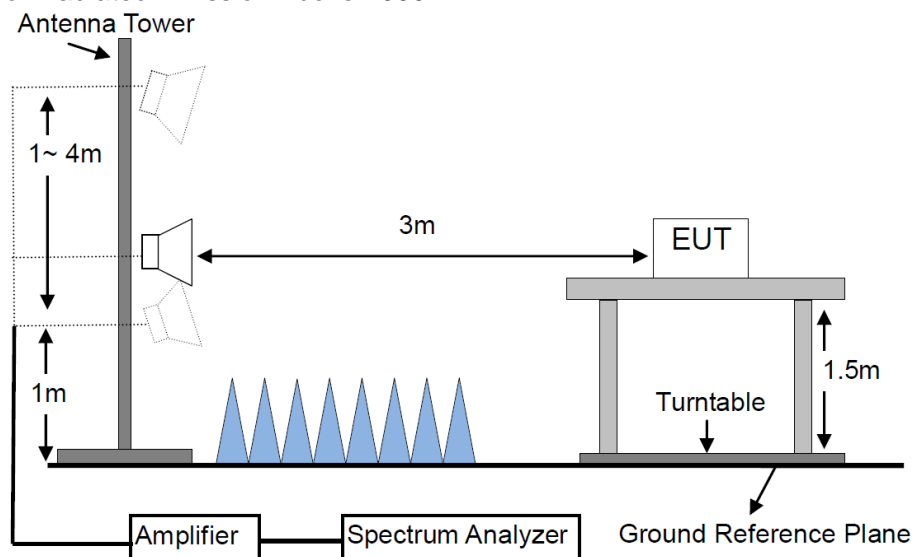
For Radiated Emission below 30MHz



For Radiated Emission 30-1000MHz



For Radiated Emission Above 1000MHz.



## TEST PROCEDURES

- a. Below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi- anechoic chamber room.
- b. For the radiated emission test above 1GHz:  
The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter full anechoic chamber room. The table was rotated 360 degrees to determine the position of the highest radiation. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- c. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. The test-receiver system was set to peak detect function and specified bandwidth with maximum hold mode.
- f. A Quasi-peak measurement was then made for that frequency point for below 1GHz test. PK and AV for above 1GHz emission test.

During the radiated emission test, the spectrum analyzer was set with the following configurations:

Frequency Band	Detector	Resolution Bandwidth	Video Bandwidth
9KHz to 150KHz	QP	300Hz	1KHz
150KHz to 30MHz	QP	10KHz	30KHz
30MHz to 1000MHz	QP	120 KHz	300 KHz
Above 1000MHz	Peak	1 MHz	3 MHz
	Average	1 MHz	10 Hz

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## TEST RESULTS

PASS

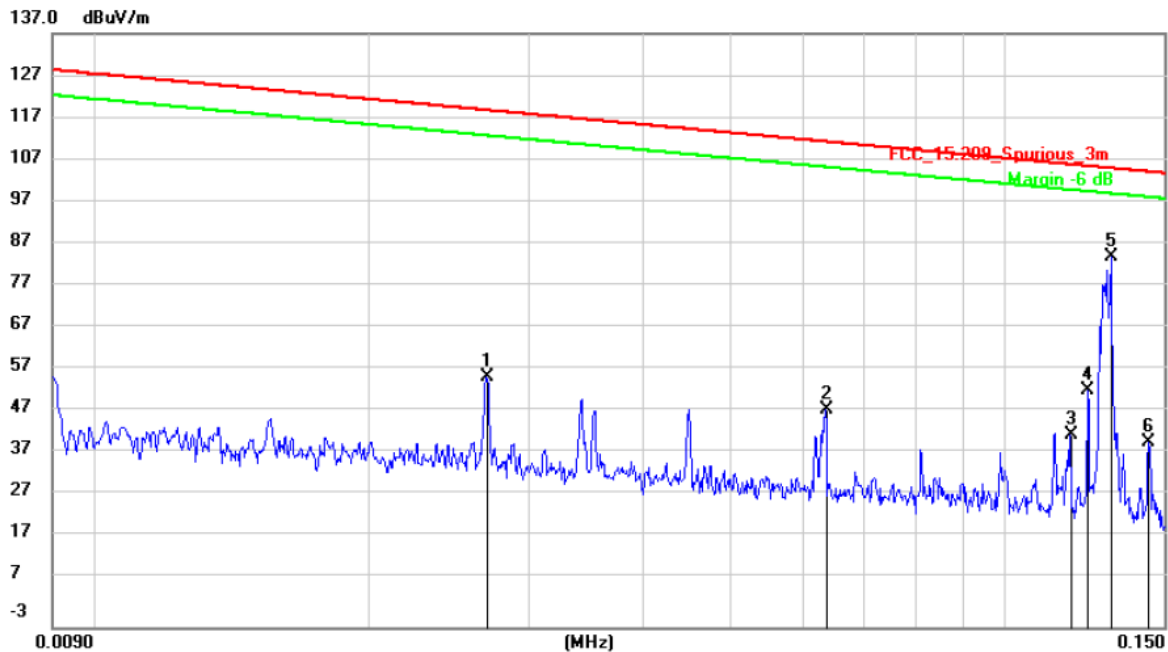
Please refer to the following pages of the worst case.

M/N: PDW100256	Testing Voltage: AC 120V 60Hz
Polarization: Horizontal	Detector: QP
Test Mode: 1	Distance: 3m

## Radiated Emission Measurement

Date: 2021/7/26

Time: 19:34:36



No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1	0.0270	35.43	20.49	55.92	118.91	-62.99	peak	
2	0.0636	27.89	20.53	48.42	111.49	-63.07	peak	
3	0.0981	21.70	20.53	42.23	106.12	-63.89	peak	
4	0.1035	32.30	20.53	52.83	105.74	-52.91	peak	
5 *	0.1122	63.71	20.53	84.24	105.23	-20.99	peak	
6	0.1442	20.00	20.53	40.53	104.40	-63.87	peak	

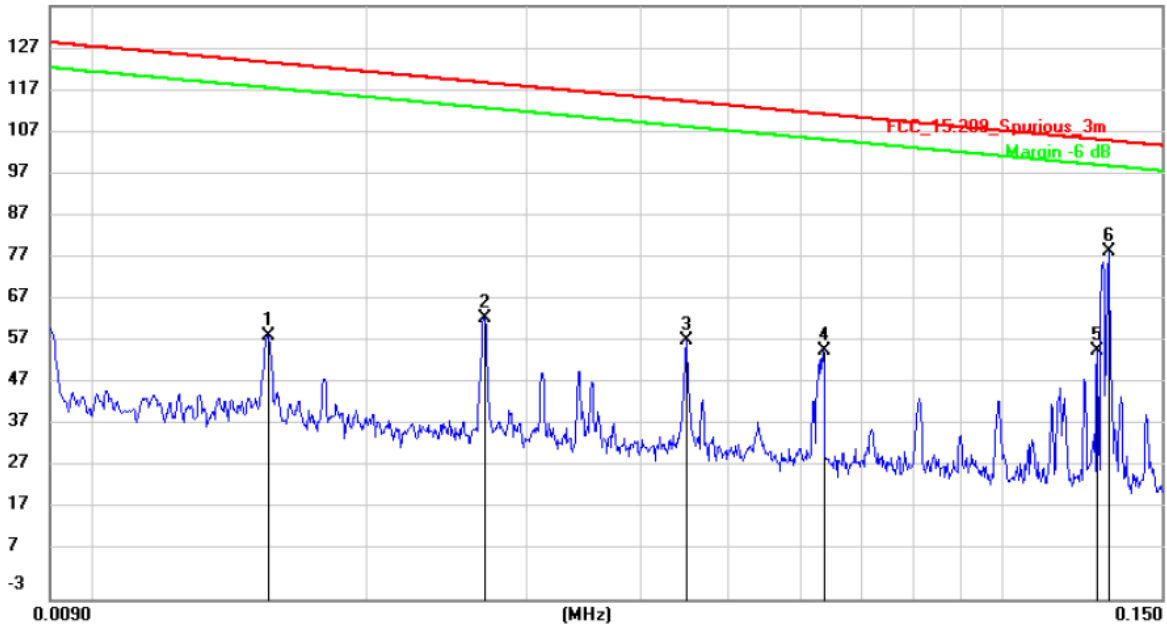
M/N: PDW100256	Testing Voltage: AC 120V 60Hz
Polarization: Vertical	Detector: QP
Test Mode: 1	Distance: 3m

## Radiated Emission Measurement

Date: 2021/7/26

Time: 19:48:05

137.0 dBuV/m



No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1	0.0156	39.09	20.05	59.14	123.66	-64.52	peak	
2	0.0270	42.88	20.49	63.37	118.91	-55.54	peak	
3	0.0450	37.33	20.59	57.92	114.48	-56.56	peak	
4	0.0636	35.10	20.53	55.63	111.49	-55.86	peak	
5	0.1104	35.20	20.53	55.73	105.47	-49.74	peak	
6 *	0.1122	58.44	20.53	78.97	105.23	-26.26	peak	

M/N: PDW100256

Testing Voltage: AC 120V 60Hz

Polarization: Horizontal

Detector: QP

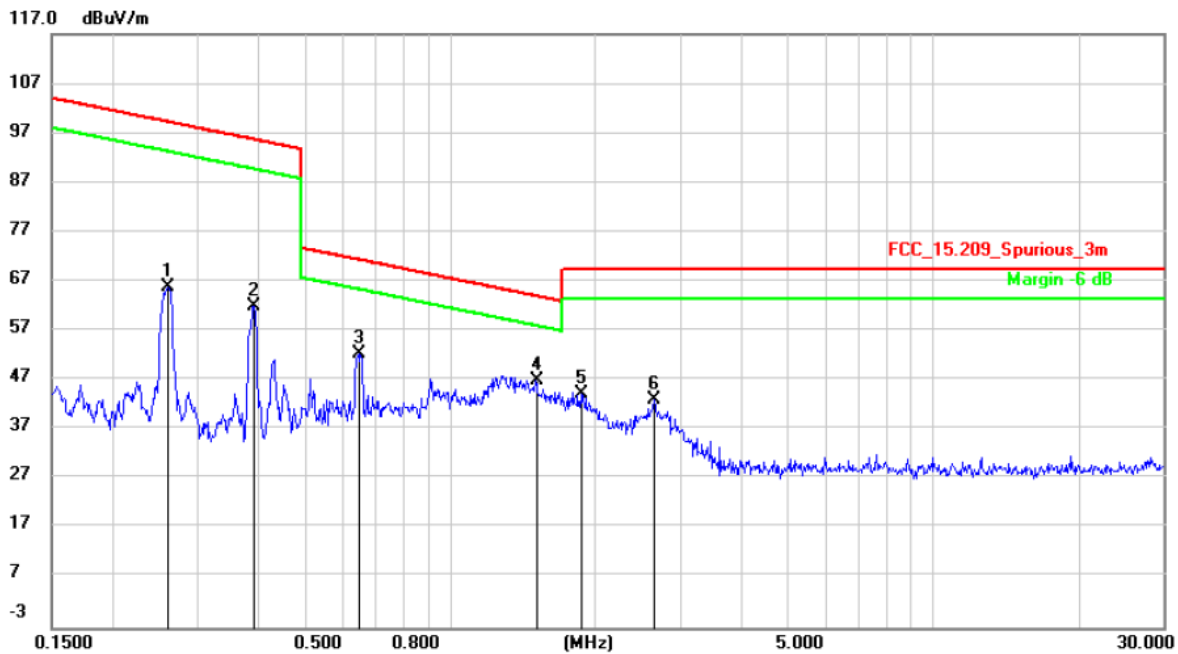
Test Mode: 1

Distance: 3m

## Radiated Emission Measurement

Date: 2021/7/26

Time: 19:41:30



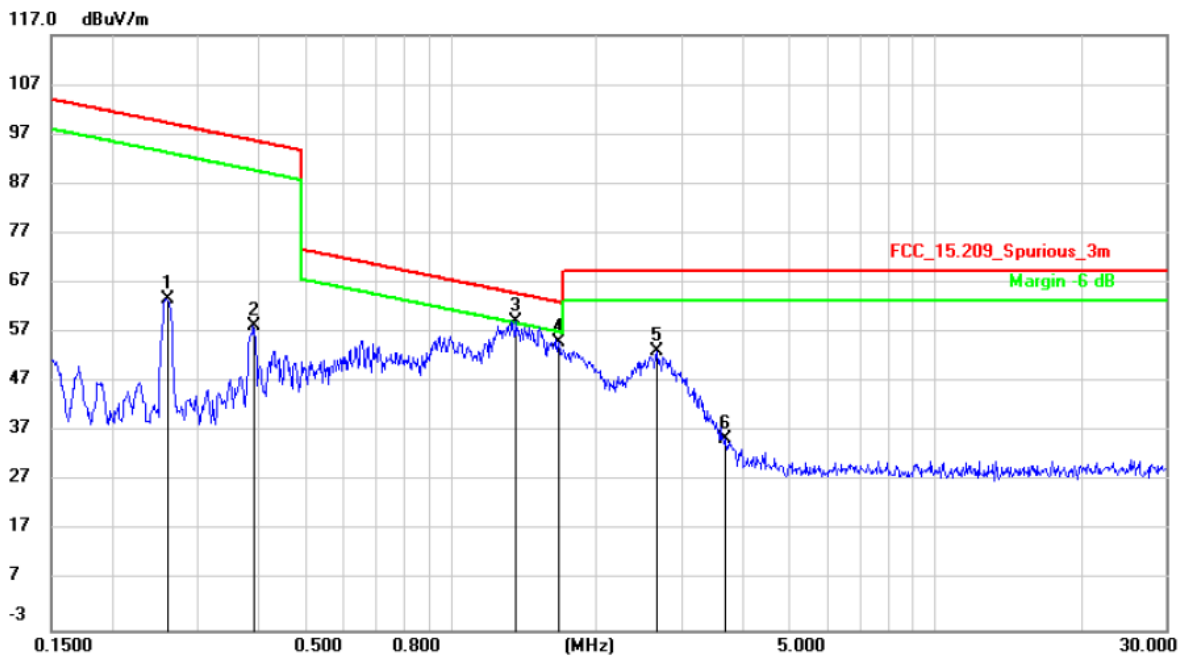
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.2603	45.49	20.50	65.99	99.28	-33.29	peak	
2		0.3933	41.63	20.46	62.09	95.70	-33.61	peak	
3		0.6474	31.92	20.43	52.35	71.38	-19.03	peak	
4	*	1.5033	26.56	20.40	46.96	64.06	-17.10	peak	
5		1.8680	23.74	20.40	44.14	69.50	-25.36	peak	
6		2.6500	22.78	20.40	43.18	69.50	-26.32	peak	

M/N: PDW100256	Testing Voltage: AC 120V 60Hz
Polarization: Vertical	Detector: QP
Test Mode: 1	Distance: 3m

## Radiated Emission Measurement

Date: 2021/7/26

Time: 19:55:39



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.2589	43.39	20.50	63.89	99.33	-35.44	peak	
2		0.3914	37.82	20.46	58.28	95.75	-37.47	peak	
3	*	1.3665	38.94	20.40	59.34	64.89	-5.55	peak	
4		1.6713	34.54	20.40	54.94	63.14	-8.20	peak	
5		2.6641	32.93	20.40	53.33	69.50	-16.17	peak	
6		3.6806	15.22	20.42	35.64	69.50	-33.86	peak	

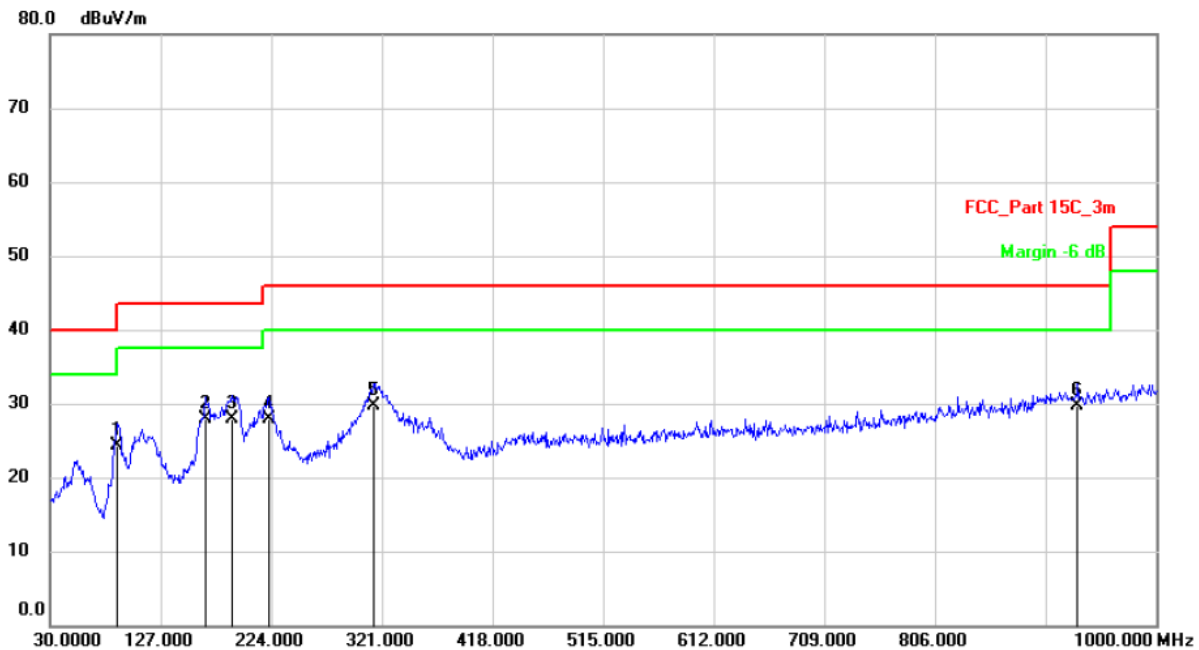


M/N: PDW100256	Testing Voltage: DC 16.8V
Polarization: Horizontal	Detector: QP
Test Mode: 1	Distance: 3m

## Radiated Emission Measurement

Date: 2021/7/31

Time: 15:01:52



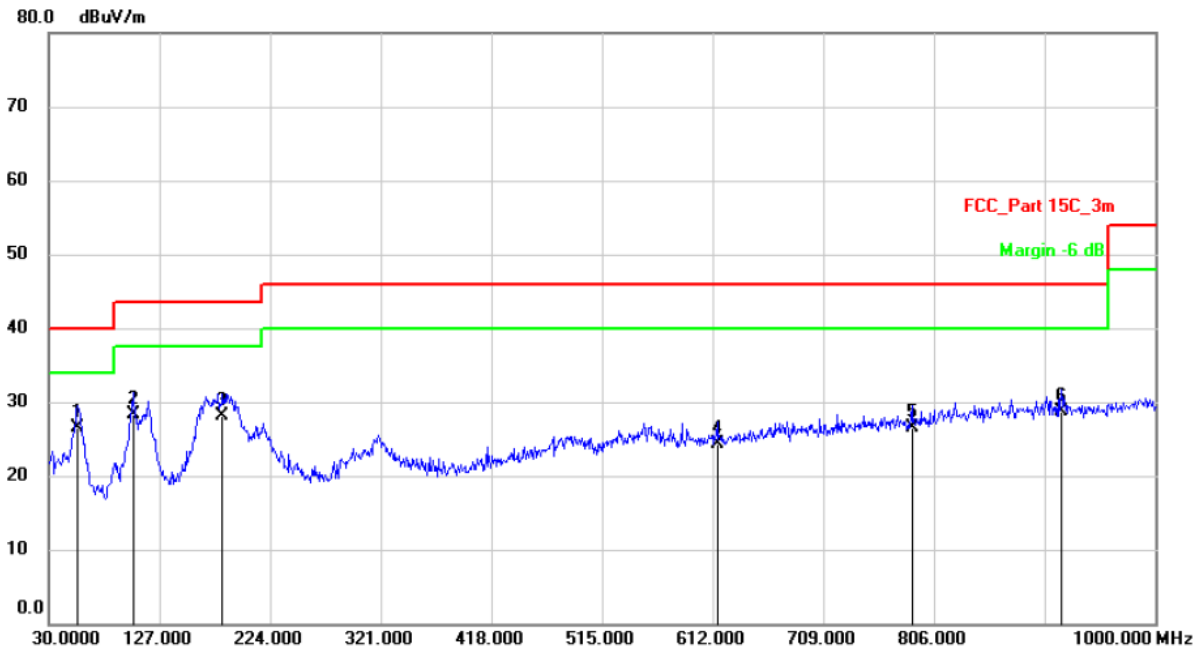
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		89.1700	33.93	-9.63	24.30	43.50	-19.20	QP
2		165.8000	38.08	-10.18	27.90	43.50	-15.60	QP
3	*	189.0800	36.36	-8.36	28.00	43.50	-15.50	QP
4		222.0600	35.21	-7.31	27.90	46.00	-18.10	QP
5		314.2100	34.94	-5.14	29.80	46.00	-16.20	QP
6		931.1300	23.46	6.24	29.70	46.00	-16.30	QP

M/N: PDW100256	Testing Voltage: DC 16.8V
Polarization: Vertical	Detector: QP
Test Mode: 1	Distance: 3m

## Radiated Emission Measurement

Date: 2021/7/31

Time: 15:09:03



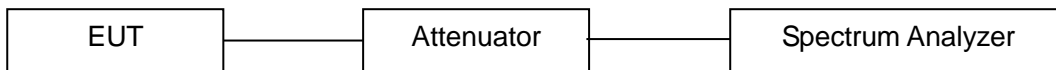
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	55.2200	34.25	-7.75	26.50	40.00	-13.50	QP	
2		103.7200	37.38	-9.08	28.30	43.50	-15.20	QP	
3		182.2899	37.41	-9.31	28.10	43.50	-15.40	QP	
4		615.8800	24.34	-0.04	24.30	46.00	-21.70	QP	
5		786.6000	22.78	3.72	26.50	46.00	-19.50	QP	
6		917.5500	23.82	4.98	28.80	46.00	-17.20	QP	

### 13.3 20dB Bandwidth Measurement

#### LIMITS

There is no limit.

#### BLOCK DIAGRAM OF TEST SETUP



#### TEST PROCEDURES

The 20dB bandwidth of the emission was contained within the frequency band designated which the EUT operated. The effects, if any, from frequency sweeping, frequency hopping, other modulation techniques and frequency stability over excepted variations in temperature and supply voltage were considered, FCC Rule 15.35:

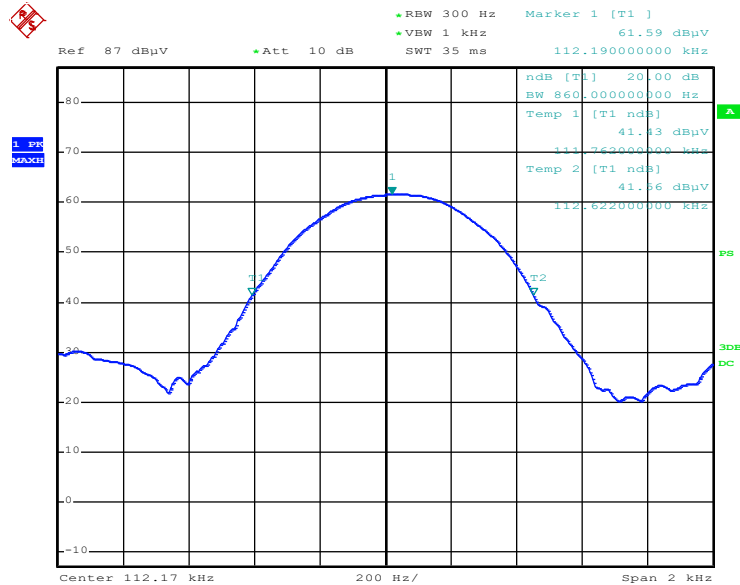
The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer RBW was chosen so that the display was a result of the tested channel modulation. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. Use the spectrum 20dB down delta function to measure the bandwidth.

#### TEST RESULTS

PASS

Please refer to the following table.

FSK		
Frequency (KHz)	20dB Bandwidth (Hz)	Result
112.17	860	PASS



20

Date: 28.JUL.2021 16:40:27

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## **13.4 Antenna Requirement**

### **STANDARD APPLICABLE**

According to of FCC part 15C 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

Systems operating in the 2400-2483.5MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum peak output power of the intentional radiator is reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

### **ANTENNA CONNECTED CONSTRUCTION**

The antenna is Coil antenna that no antenna other than furnished by the responsible party shall be used with the device. Therefore, the antenna is consider meet the requirement.

## 14. Test Equipment List

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESCI7	100837	Mar. 13, 2021	1 Year
2.	Antenna	Schwarzbeck	VULB9162	9162-010	Mar. 23, 2021	1 Year
3.	Spectrum Analyzer	Rohde & Schwarz	FSU26	200409/026	Mar. 13, 2021	1 Year
4.	Spectrum Analyzer	Keysight	N9020A	MY54200831	Mar. 13, 2021	1 Year
5.	Spectrum Analyzer	Rohde & Schwarz	FSV40	101094	Mar. 13, 2021	1 Year
6.	Horn Antenna	Schwarzbeck	BBHA9170	9170-172	Mar. 22, 2021	2 Year
7.	Power Sensor	DARE	RPR3006W	15I00041SNO 64	Mar. 13, 2021	1 Year
8.	Communication Tester	Rohde & Schwarz	CMW500	149004	Mar. 13, 2021	1 Year
9.	Horn Antenna	COM-Power	AH-118	071078	Mar. 23, 2021	1 Year
10.	Pre-Amplifier	HP	HP 8449B	3008A00964	Mar. 13, 2021	1 Year
11.	Pre-Amplifier	HP	HP 8447D	1145A00203	Mar. 13, 2021	1 Year
12.	Loop Antenna	Schwarzbeck	FMZB 1513	1513-272	Mar. 23, 2021	1 Year
13.	Test Receiver	Rohde & Schwarz	ESCI	101152	Mar. 14, 2021	1 Year
14.	L.I.S.N	Rohde & Schwarz	ENV 216	101317	Mar. 13, 2021	1 Year
15.	L.I.S.N	Rohde & Schwarz	ESH2-Z5	893606/014	Mar. 13, 2021	1 Year
16.	RF Switching Unit	Compliance Direction Systems Inc.	RSU-M2	38311	Mar.13, 2021	1 Year
17.	Temperature & Humidity Chamber	REMAFEE	SYHR225L	N/A	Mar. 13, 2021	1 Year
18.	DC Source	Maynuo	MY8811	N/A	Mar. 13, 2021	1 Year
19.	Temporary antenna connector	TESCOM	SS402	N/A	N/A	N/A
20.	Chamber	SAEMC	9*7*7m	N/A	Apr. 21, 2021	2 Year
21.	Test Software	EZ	EZ_EM C	N/A	N/A	N/A

Note: For photographs of EUT and measurement, please refer to appendix in separate documents.

---End---