

FCC RADIO TEST REPORT

Applicant..... : MAGFAST LLC

Address..... : 1 GRANDVIEW AVE Cornwall on Hudson, NY 12520 USA

Manufacturer..... : Shenzhen QiAo Communication Tech Co., Ltd

Address..... : Room ABCDEFGH OF 16F, Block C, Central Avenue, interchange between
XiXiang Road and Baoyuan, Laodong Community, XiXiang Road, Baoan
District, ShenZhen

Factory..... : Dongguan IRice Electronics Development Co.,Ltd.

Address..... : Building 1, No.17, Hudie 1st Road, Tianxin village, Huangjiang town, Dongguan
city, Guangdong province, PRC 523763 China

EUT..... : Wireless charger portable power bank

Brand Name..... : MAGFAST®

Model No. : SBNP-NPK-LX-UU-PP-AW-01

FCC ID..... : 2A2Y4-EXTREME

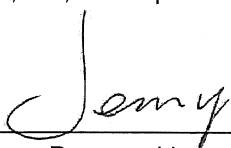
Measurement Standard..... : 47 CFR FCC Part 15, Subpart C

Receipt Date of Samples.... : August 04, 2021

Date of Tested..... : August 04, 2021 to November 12, 2021

Date of Report..... : April 27, 2022

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
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Prepared by

Jenny Liu / Project Engineer



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	---
§15.215	20dB Bandwidth	PASS	---

2. General Description of EUT

Product Information	
Product Name:	Wireless charger portable power bank
Main Model Name:	SBNP-NPK-LX-UU-PP-AW-01
Additional Model Name:	N/A
Model Difference:	N/A
S/N:	E000-A001-0CH0-0069
Brand Name:	MAGFAST®
Hardware Version:	Not Stated
Software Version:	Not Stated
Rating:	DC11.1V Come from Battery, INPUTS: USB-C: DC 5V 3A, 9V 2A, 12V 1.5A PD Qi:5W, Micro- USB: 5V 2A, MAGFAST: 5V2A, OUTPUTS: USB-C: DC 5V 3A, 9V 2A, 12V 1.5A PD USB-A: 5V 2.4A, Qi: 5W, 7.5W, 10W, MAGFAST: 5V 2A, 12V 500+A
Typical Arrangement:	Tabletop
I/O Port:	Reference manual
Accessories Information	
Adapter:	N/A
Cable:	N/A
Other:	N/A
Additional Information	
Note:	N/A
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:	110.5-210KHz
Modulation Type:	FSK
Antenna Type:	Coil antenna

3. Test Channels and Modes Detail

Mode		Modulation
1	1 wireless charging (5W)	FSK
2	1 wireless charging (7.5W)	
3	1 wireless charging (10W)	
4	2 wireless charging (5W)	
5	2 wireless charging (7.5W)	
6	2 wireless charging (10W)	
7	3 wireless charging (5W)	
8	3 wireless charging (7.5W)	
9	3 wireless charging (10W)	
10	1+2+3 wireless charging (5W)	
11	1+2+3 wireless charging (7.5W)	
12	1+2+3 wireless charging (10W)	

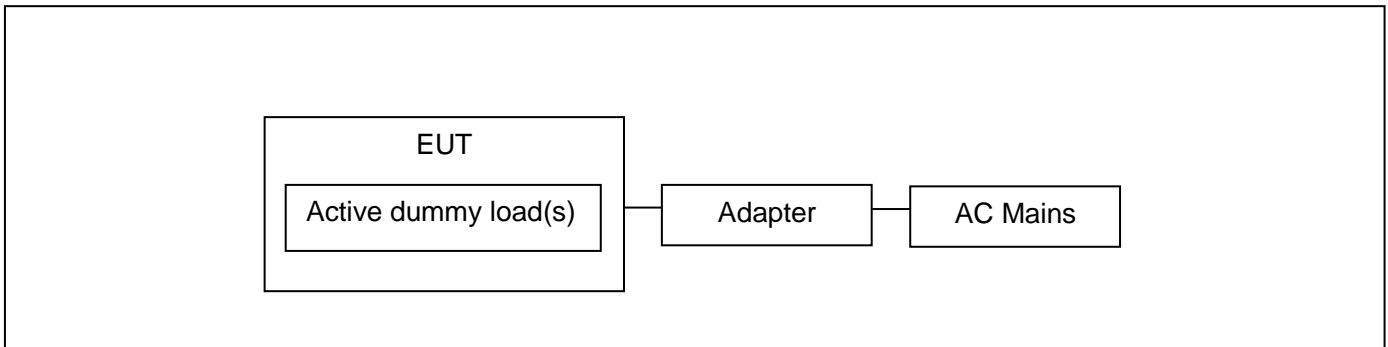
Remarks: The EUT has three charging base.

1 is the first wireless charging base.

2 is the second wireless charging base.

3 is the third wireless charging base.

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	EESON	5/7.5/10W	N/A	---	Provide by the lab
2.	Active Dummy Load	EESON	5/7.5/10/15W	N/A	---	Provide by the lab
3.	Adapter	HW-2003 25CP0	HBL-W19	---	DC Line: 1.15m shielded	I/P: AC 100-240V 50-60Hz, 1.8A O/P: DC 5V, 9V, 12V, 15V or 20V

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>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	1-12	AC 120V 60Hz	Sean Yuan	See note 1
2.	Radiated Emissions	1-12	AC 120V 60Hz DC11.1V	Sean Yuan	See note 1
3.	20dB Bandwidth	1	AC 120V 60Hz	Sean Yuan	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, only the worst case was recorded in this report.
3. AC 120V/60Hz is the input voltage of the AC/DC Adapter.

11. Measurement Uncertainty

No.	Test Item	Frequency	Uncertainty	Remarks
1.	Conducted Emission	150KHz ~ 30MHz	± 2.52 dB	---
2.	Radiated Emission Test	9kHz ~ 30MHz	± 2.60 dB	---
		30MHz ~ 1GHz	± 4.68 dB	---
		1GHz ~ 18GHz	± 5.14 dB	---
		18GHz ~ 40GHz	± 5.14 dB	---
3.	RF Conducted Test	10Hz ~ 40GHz	± 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
0.1500	30.40	10.60	41.00	66.00	-25.00	QP
<p>Where,</p> <p>Freq. = Emission frequency in MHz</p> <p>Reading Level = 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	30.0	-18.0	12.00	40.00	-28.00	QP
<p>Where,</p> <p>Freq. = Emission frequency in MHz</p> <p>Reading Level = 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

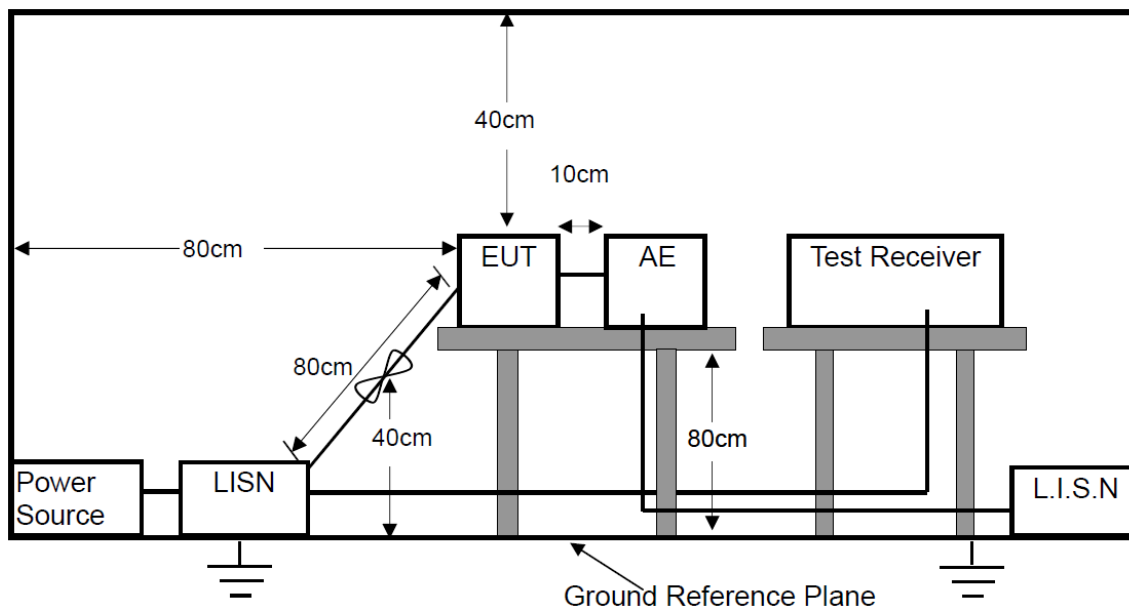
LIMIT

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



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: SBNP-NPK-LX-UU-PP-AW-01

Testing Voltage: AC 120V / 60Hz

Phase: L1

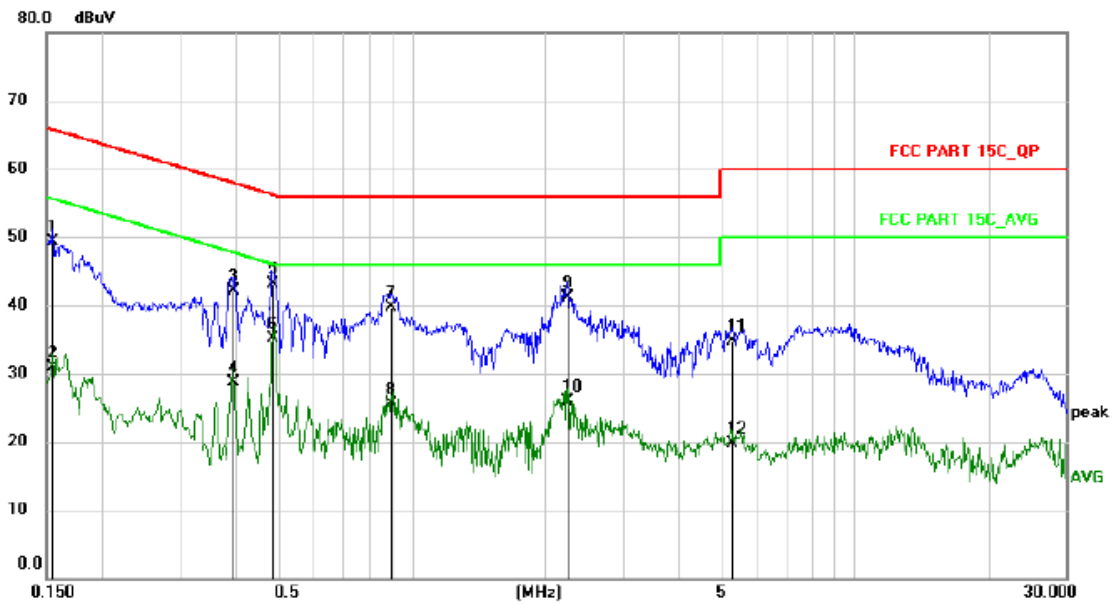
Detector: QP & AVG

Test Mode: 10 (the worst case)

Conducted Emission Measurement

Date: 2021/8/13

Time: 11:51:10



No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
	MHz	dBuV	dB	dBuV	dBuV	dB		
1	0.1547	38.65	10.60	49.25	65.74	-16.49	QP	
2	0.1547	20.21	10.60	30.81	55.74	-24.93	AVG	
3	0.3940	31.49	10.61	42.10	57.98	-15.88	QP	
4	0.3940	18.19	10.61	28.80	47.98	-19.18	AVG	
5	0.4858	32.47	10.63	43.10	56.24	-13.14	QP	
6 *	0.4858	24.47	10.63	35.10	46.24	-11.14	AVG	
7	0.8980	29.02	10.68	39.70	56.00	-16.30	QP	
8	0.8980	14.82	10.68	25.50	46.00	-20.50	AVG	
9	2.2458	30.50	10.70	41.20	56.00	-14.80	QP	
10	2.2458	15.20	10.70	25.90	46.00	-20.10	AVG	
11	5.2579	23.99	10.71	34.70	60.00	-25.30	QP	
12	5.2579	9.09	10.71	19.80	50.00	-30.20	AVG	

M/N: SBNP-NPK-LX-UU-PP-AW-01

Testing Voltage: AC 120V / 60Hz

Phase: N

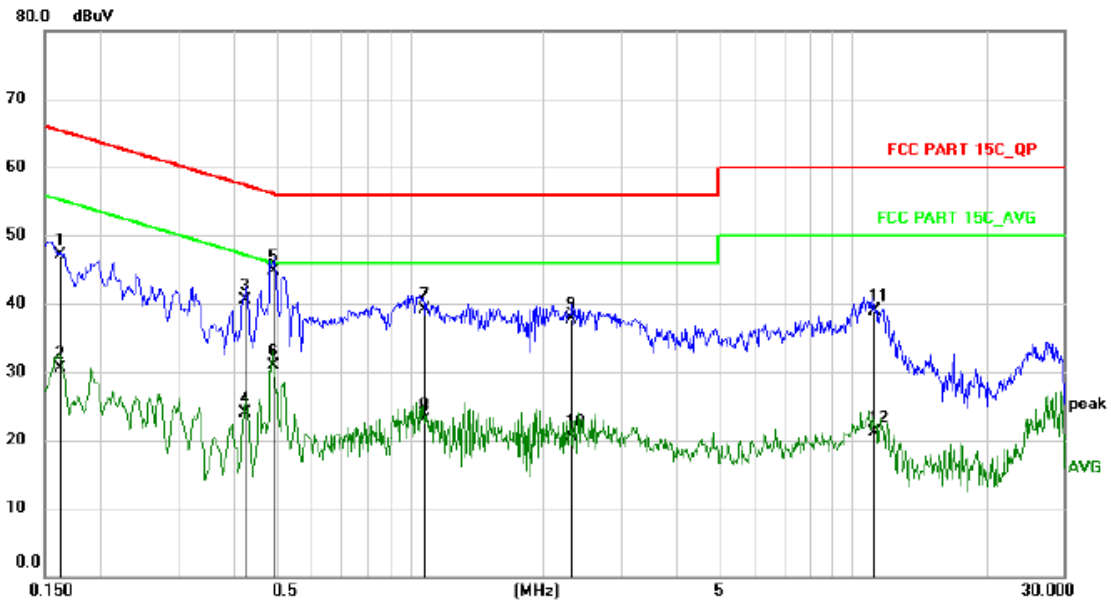
Detector: QP & AVG

Test Mode: 10 (the worst case)

Conducted Emission Measurement

Date: 2021/8/13

Time: 11:58:27



No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
	MHz	dBuV	dB	dBuV	dBuV	dB		
1	0.1620	36.60	10.60	47.20	65.36	-18.16	QP	
2	0.1620	19.90	10.60	30.50	55.36	-24.86	AVG	
3	0.4259	29.88	10.62	40.50	57.33	-16.83	QP	
4	0.4259	13.38	10.62	24.00	47.33	-23.33	AVG	
5 *	0.4900	34.17	10.63	44.80	56.17	-11.37	QP	
6	0.4900	20.37	10.63	31.00	46.17	-15.17	AVG	
7	1.0740	28.50	10.70	39.20	56.00	-16.80	QP	
8	1.0740	12.20	10.70	22.90	46.00	-23.10	AVG	
9	2.3060	27.10	10.70	37.80	56.00	-18.20	QP	
10	2.3060	9.90	10.70	20.60	46.00	-25.40	AVG	
11	11.1936	28.27	10.73	39.00	60.00	-21.00	QP	
12	11.1936	10.47	10.73	21.20	50.00	-28.80	AVG	

13.2 Radiated Spurious Emissions and Restricted Bands Measurement

LIMIT

Frequency range MHz	Distance Meters	Field Strengths Limit (15.209)	
		$\mu\text{V/m}$	
0.009 ~ 0.490	300	2400/F(kHz)	
0.490 ~ 1.705	30	24000/F(kHz)	
1.705 ~ 30	30	30	
30 ~ 88	3	100	
88 ~ 216	3	150	
216 ~ 960	3	200	
Above 960	3	500	
Frequency range MHz	Distance Meters	Field Strengths Limit (15.249)	
		mV/m (Field strength of fundamental)	$\mu\text{V/m}$ (Field strength of Harmonics)
902 ~ 928	3	50	500
2400 ~ 2483.5	3	50	500
5725 ~ 5875	3	50	500
24000 ~ 2425000	3	250	2500

Remark: (1) Emission level (dB) μV = 20 log Emission level $\mu\text{V/m}$

(2) The smaller limit shall apply at the cross point between two frequency bands.

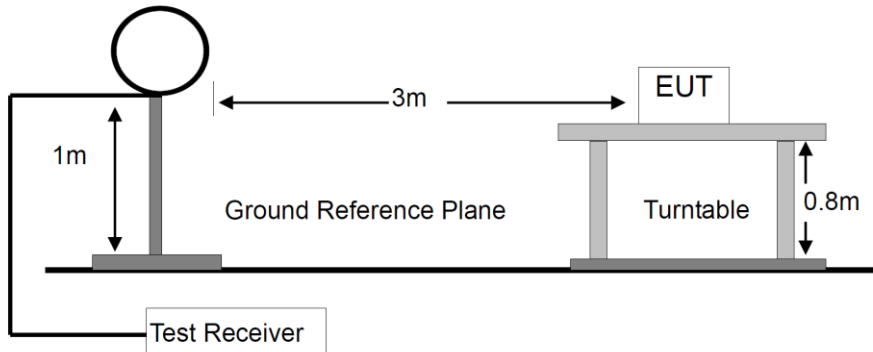
(3) As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

(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.

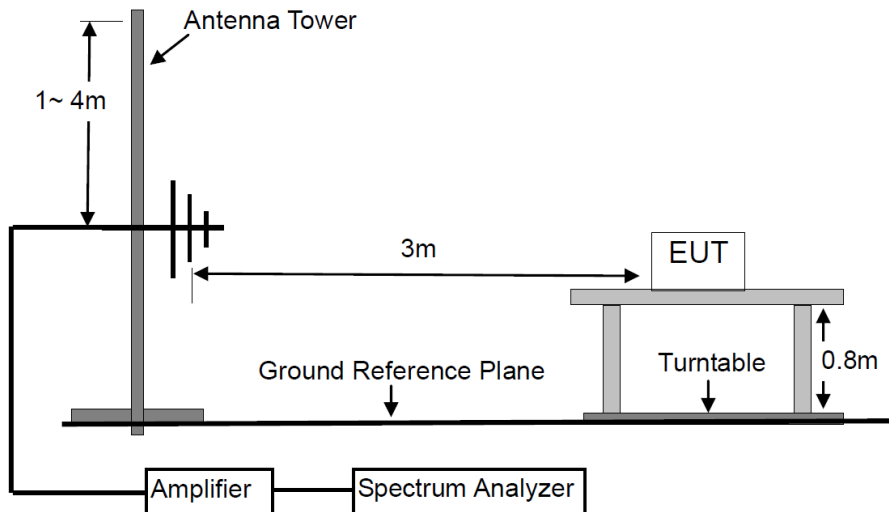
(5) §15.249(d) specifies that emissions which fall in the restricted bands, as defined in §15.205 comply with radiated emission limits specified in §15.209.

BLOCK DIAGRAM OF TEST SETUP

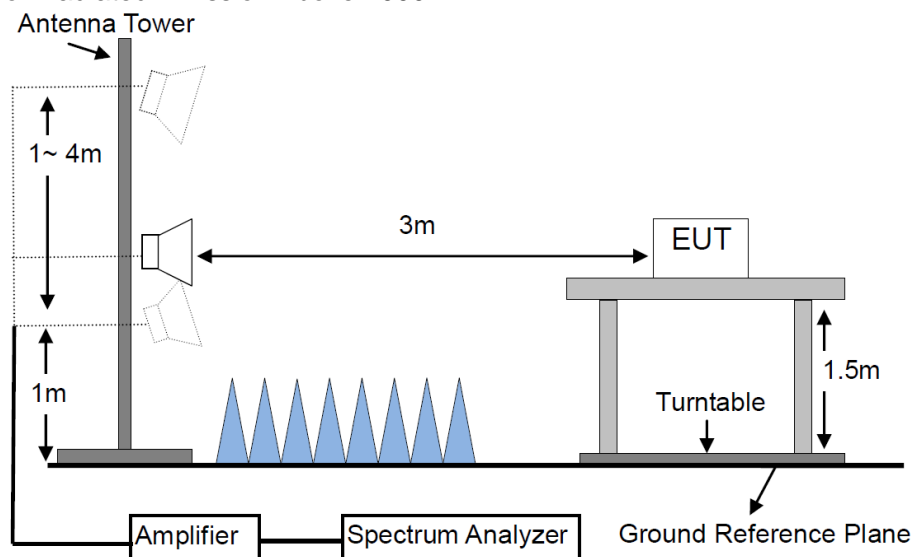
For Radiated Emission below 30MHz



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.

g. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and packet type.

The worst case was found when the EUT was positioned on X axis for radiated emission.

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

Frequency Band	Detector	Resolution Bandwidth	Video Bandwidth
9KHz to 90KHz	AVG	300 Hz	1 KHz
91KHz to 109KHz	QP	300 Hz	1 KHz
110KHz to 490KHz	AVG	300 Hz/ 9 KHz	1 KHz / 30 KHz
150KHz to 30MHz	QP	10KHz	30 KHz
30MHz to 1000MHz	QP	120 KHz	300 KHz
Above 1000MHz	Peak	1 MHz	3 MHz
	Average	1 MHz	10 Hz

TEST RESULTS

PASS

Please refer to the following pages of the worst case.

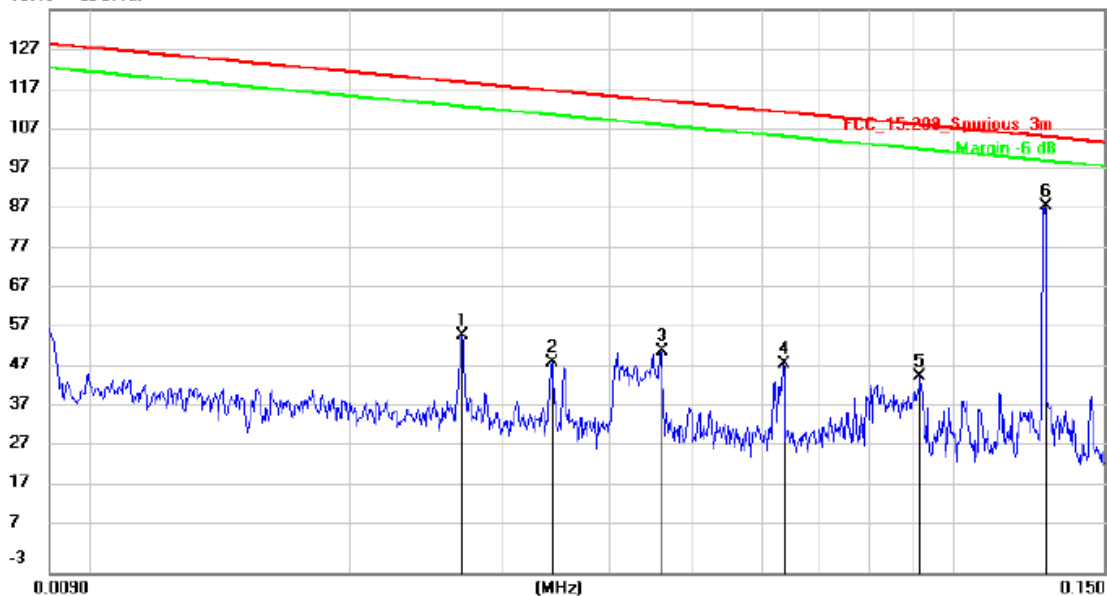
M/N: SBNP-NPK-LX-UU-PP-AW-01	Testing Voltage: AC 120V 60Hz
Polarization: Horizontal	Detector: Peak
Test Mode: 10 (the worst case)	Distance: 3m

Radiated Emission Measurement

Date: 2021/8/12

Time: 1:49:32

137.0 dB μ V/m



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dB μ V	dB/m	dB μ V/m	dB μ V/m	dB	Detector	Comment
1		0.0270	35.47	20.49	55.96	118.91	-62.95	peak	
2		0.0343	28.81	20.52	49.33	116.83	-67.50	peak	
3		0.0459	31.43	20.59	52.02	114.31	-62.29	peak	
4		0.0636	28.57	20.53	49.10	111.49	-62.39	peak	
5		0.0916	25.26	20.54	45.80	108.33	-62.53	peak	
6	*	0.1278	67.54	20.53	88.07	105.44	-17.37	peak	

Note: Since the measured peak levels are lower than the allowable QP and AVG limits, the QP and AVG levels are considered compliance with the requirements in accordance with the standard.

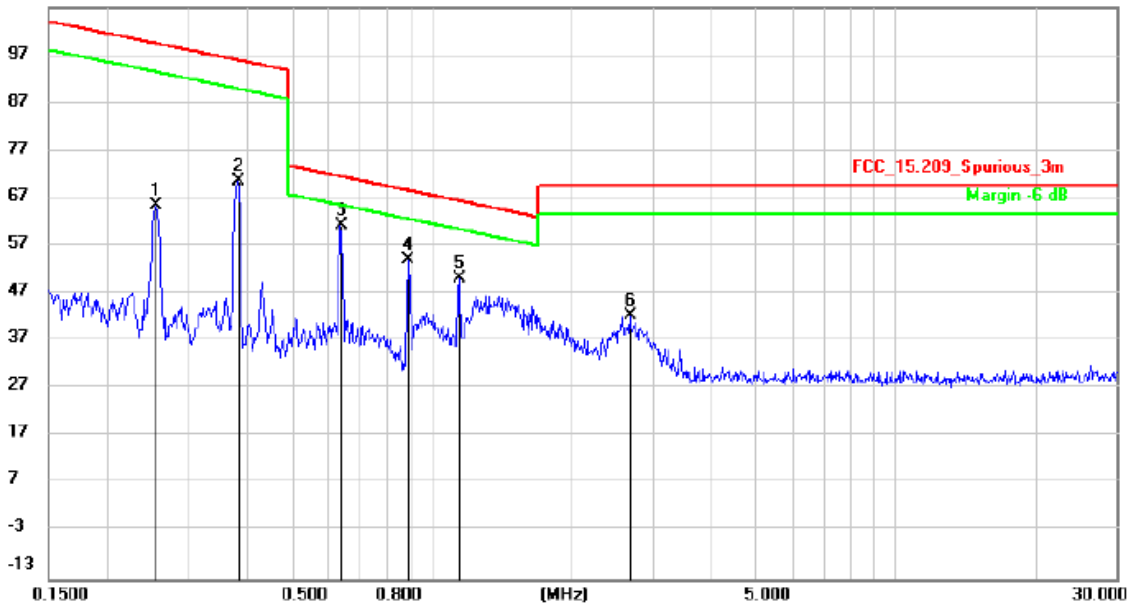
M/N: SBNP-NPK-LX-UU-PP-AW-01	Testing Voltage: AC 120V 60Hz
Polarization: Horizontal	Detector: Peak
Test Mode: 10 (the worst case)	Distance: 3m

Radiated Emission Measurement

Date: 2021/8/12

Time: 1:41:00

107.0 dBuV/m



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.2548	45.03	20.50	65.53	99.46	-33.93	peak	
2		0.3832	50.23	20.46	70.69	95.93	-25.24	peak	
3	*	0.6372	40.78	20.43	61.21	71.52	-10.31	peak	
4		0.8944	33.64	20.40	54.04	68.57	-14.53	peak	
5		1.1473	29.80	20.40	50.20	66.41	-16.21	peak	
6		2.6783	22.00	20.40	42.40	69.50	-27.10	peak	

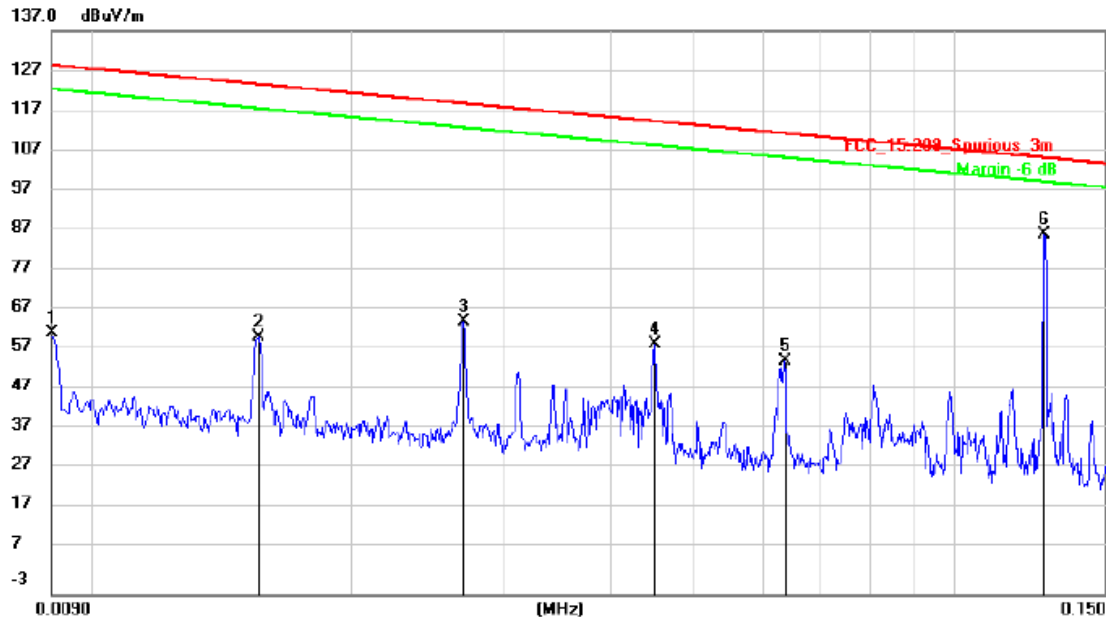
Note: Since the measured peak levels are lower than the allowable QP and AVG limits, the QP and AVG levels are considered compliance with the requirements in accordance with the standard.

M/N: SBNP-NPK-LX-UU-PP-AW-01	Testing Voltage: AC 120V 60Hz
Polarization: Vertical	Detector: Peak
Test Mode: 10 (the worst case)	Distance: 3m

Radiated Emission Measurement

Date: 2021/8/12

Time: 1:27:46



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1		0.0090	44.35	17.66	62.01	128.42	-66.41	peak	
2		0.0156	40.83	20.05	60.88	123.66	-62.78	peak	
3		0.0270	44.18	20.49	64.67	118.91	-54.24	peak	
4		0.0450	38.60	20.59	59.19	114.48	-55.29	peak	
5		0.0636	34.50	20.53	55.03	111.49	-56.46	peak	
6	*	0.1274	65.95	20.53	86.48	105.47	-18.99	peak	

Note: Since the measured peak levels are lower than the allowable QP and AVG limits, the QP and AVG levels are considered compliance with the requirements in accordance with the standard.

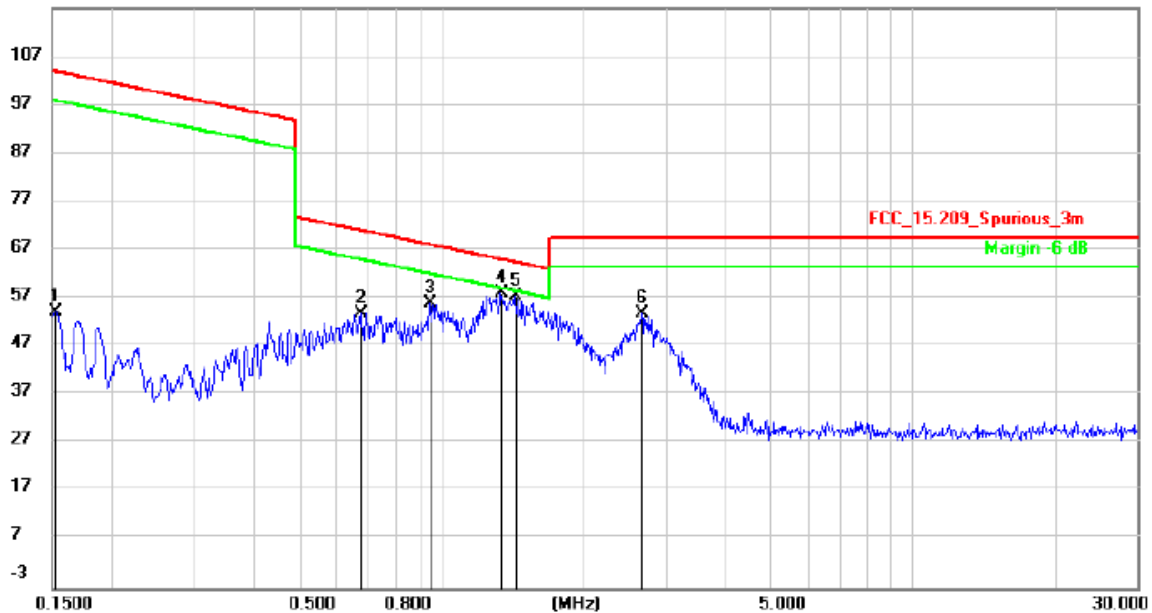
M/N: SBNP-NPK-LX-UU-PP-AW-01	Testing Voltage: AC 120V 60Hz
Polarization: Vertical	Detector: Peak
Test Mode: 10 (the worst case)	Distance: 3m

Radiated Emission Measurement

Date: 2021/8/12

Time: 1:34:12

117.0 dBuV/m



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector Comment
1		0.1524	33.67	20.52	54.19	103.89	-49.70	peak
2		0.6753	33.46	20.43	53.89	71.01	-17.12	peak
3		0.9431	35.42	20.40	55.82	68.11	-12.29	peak
4		1.3379	37.54	20.40	57.94	65.08	-7.14	peak
5	*	1.4333	37.11	20.40	57.51	64.48	-6.97	peak
6		2.6641	33.55	20.40	53.95	69.50	-15.55	peak

Note: Since the measured peak levels are lower than the allowable QP and AVG limits, the QP and AVG levels are considered compliance with the requirements in accordance with the standard.

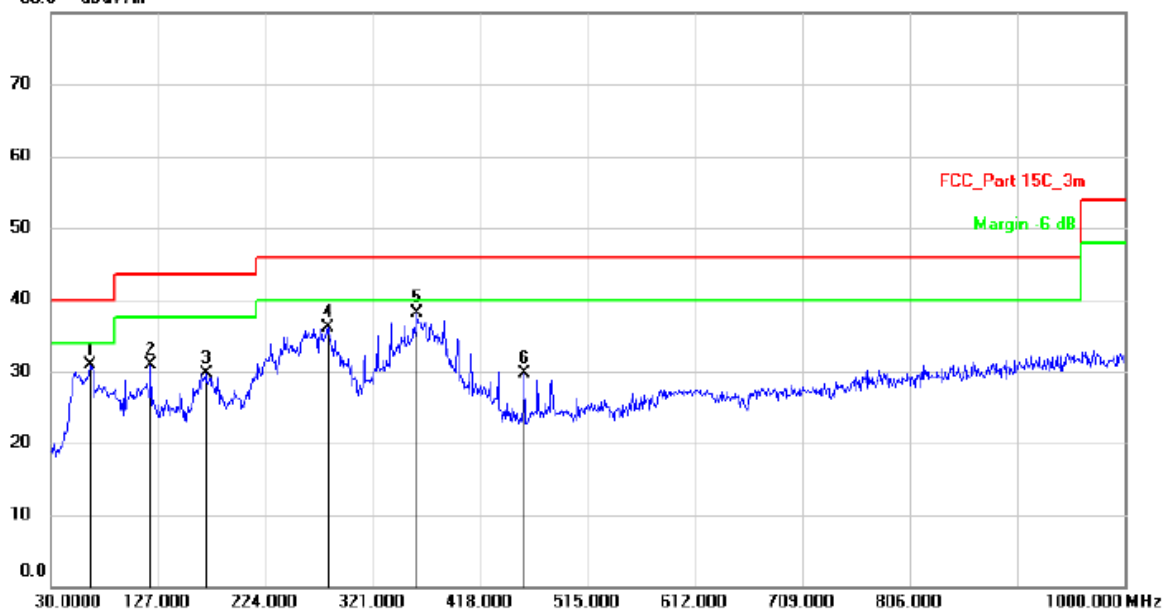
M/N: SBNP-NPK-LX-UU-PP-AW-01	Testing Voltage: AC 120V 60Hz
Polarization: Horizontal	Detector: QP
Test Mode: 12 (the worst case)	Distance: 3m

Radiated Emission Measurement

Date: 2021/9/11

Time: 14:27:54

80.0 dBuV/m



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		65.8900	38.85	-7.90	30.95	40.00	-9.05	QP	
2		120.2100	40.35	-9.45	30.90	43.50	-12.60	QP	
3		169.6799	39.77	-10.02	29.75	43.50	-13.75	QP	
4		280.2600	41.97	-5.87	36.10	46.00	-9.90	QP	
5	*	360.7700	42.10	-4.00	38.10	46.00	-7.90	QP	
6		457.7700	32.14	-2.42	29.72	46.00	-16.28	QP	

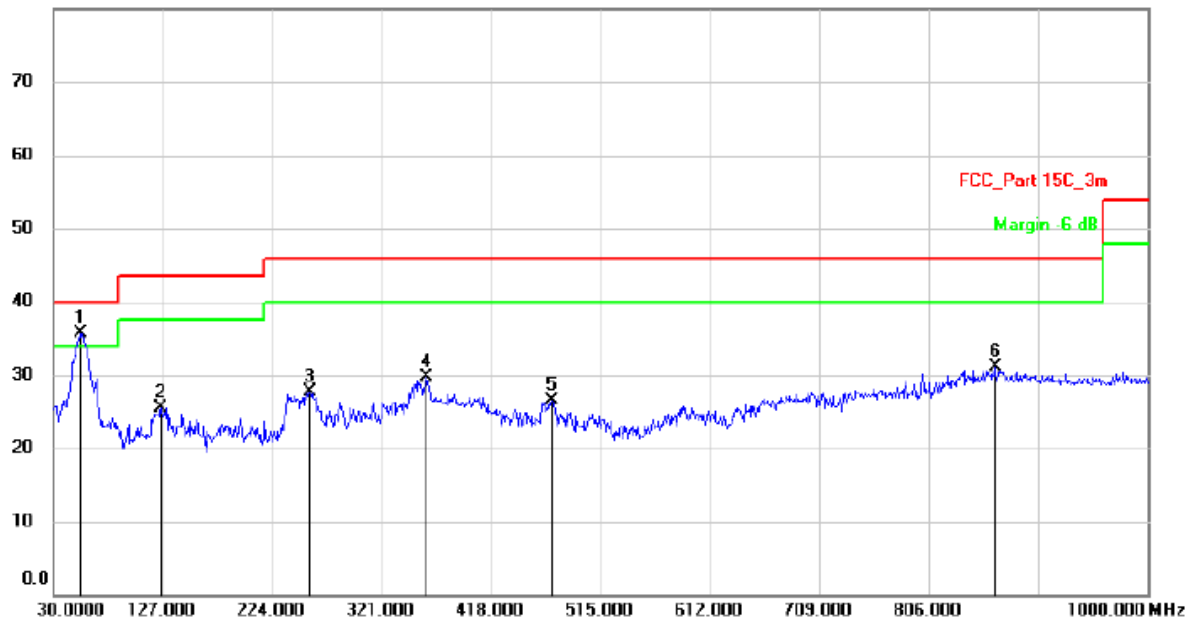
M/N: SBNP-NPK-LX-UU-PP-AW-01	Testing Voltage: AC 120V 60Hz
Polarization: Vertical	Detector: QP
Test Mode: 12 (the worst case)	Distance: 3m

Radiated Emission Measurement

Date: 2021/9/11

Time: 14:20:22

80.0 dBuV/m



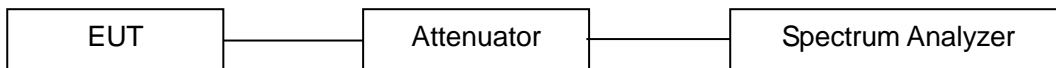
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1	*	54.2500	43.33	-7.64	35.69	40.00	-4.31	QP	
2		125.0600	36.68	-11.23	25.45	43.50	-18.05	QP	
3		256.9800	35.01	-7.22	27.79	46.00	-18.21	QP	
4		359.8000	34.71	-5.01	29.70	46.00	-16.30	QP	
5		471.3500	29.66	-3.20	26.46	46.00	-19.54	QP	
6		864.2000	26.12	4.90	31.02	46.00	-14.98	QP	

13.3 20dB Bandwidth Measurement

LIMIT

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 15.215:

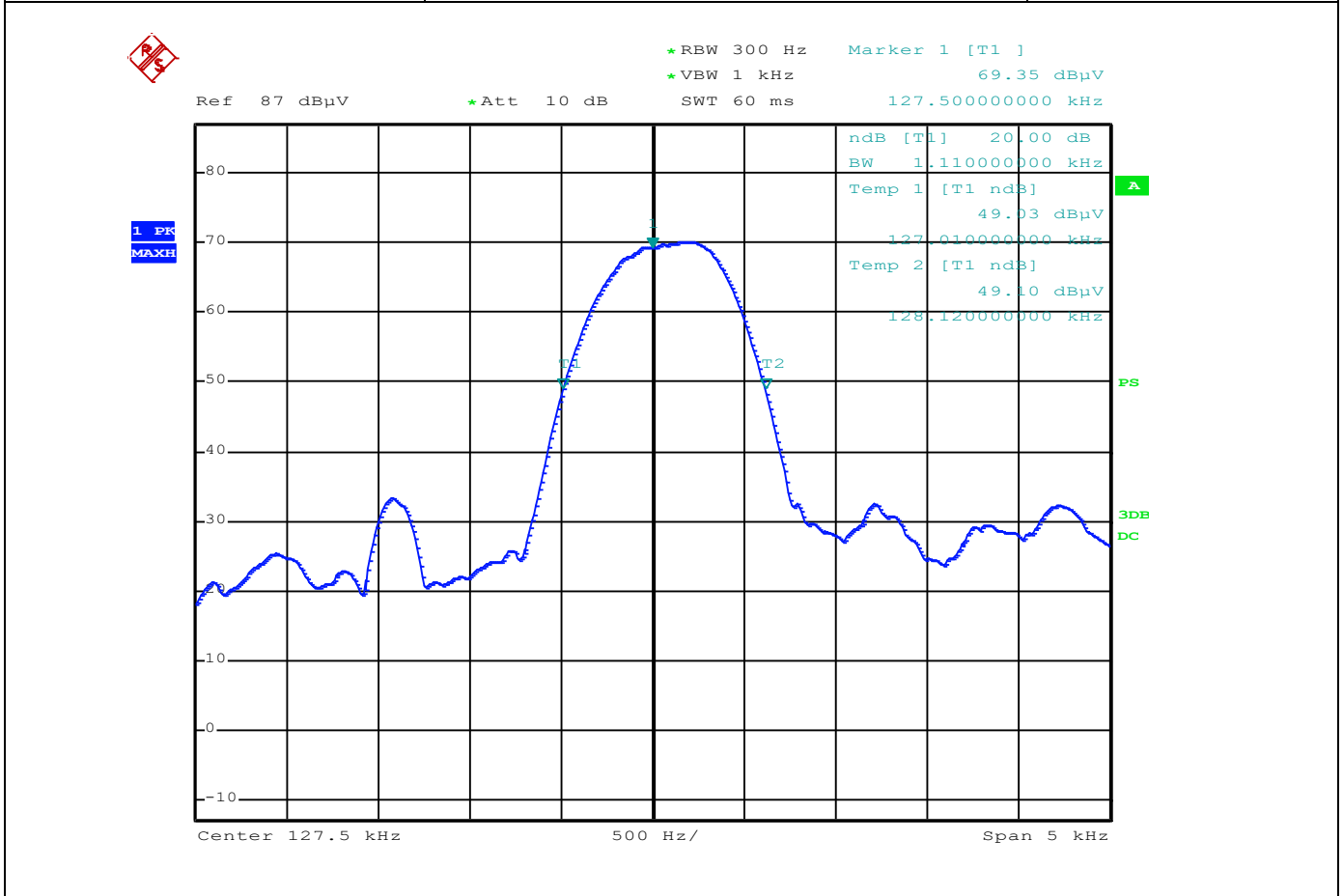
The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer RBW was chosen so that the display was a result of the tested channel modulation. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. Use the spectrum 20dB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

TEST RESULTS

PASS

Please refer to the following table.

FSK		
Frequency (KHz)	20dB Bandwidth (Hz)	Result
127.5	1110	Reporting only



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---