FCC TEST REPORT

FOR

NUM AXES

Canifugue transmitter

Test Model: PFFUGFIL107

Additional Model No.: PFFUGFIL106

Prepared for	:	NUM AXES
Address	:	745, rue de la Bergeresse ZAC des Aulnaies, OLIVET 45161, France
Prepared by	:	Shenzhen LCS Compliance Testing Laboratory Ltd
Address	:	1/F., Xingyuan Industrial Park, Tongda Road, Bao'an Avenue, Bao'an District, Shenzhen, Guangdong, China
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Date of receipt of test sample	:	April 12, 2018
Number of tested samples	:	1
Sample number	:	180402185A
Date of Test	:	Apr 12, 2018~May 08, 2018
Date of Report	:	May 08, 2018

FCC TEST REPORT

FCC CFR 47 PART 15 C

Report Reference No.	**:**	**LCS180402185AEA**
Date of Issue.....	:	May 08, 2018
Testing Laboratory Name	**:**	**Shenzhen LCS Compliance Testing Laboratory Ltd.**
Address.....	:	1/F., Xingyuan Industrial Park, Tongda Road, Bao'an Avenue, Bao'an District, Shenzhen, Guangdong, China
Testing Location/ Procedure	:	Full application of Harmonised standards ■ Partial application of Harmonised standards □ Other standard testing method □
Applicant's Name	**:**	**NUM AXES**
Address.....	:	745, rue de la Bergeresse ZAC des Aulnaies, OLIVET 45161, France
Test Specification		
Standard	:	FCC CFR 47 PART 15 C / ANSI C63.10: 2013
Test Report Form No.....	:	LCSEMC-1.0
TRF Originator.....	:	Shenzhen LCS Compliance Testing Laboratory Ltd.
Master TRF.....	:	Dated 2011-03

Test Item Description.	**:**	**Canifugue transmitter**
Trade Mark	:	NUM AXES
Test Model.....	:	PFFUGFIL107
Ratings.....	:	DC 15V/150mA by power adapter
Result	**:**	**Positive**

Compiled by:	**Supervised by:**	**Approved by:**
Ace chai	Dick Su	Gavin Liang
Ace Chai / Administrators	Dick Su / Technique principal	Gavin Liang/ Manager

FCC -- TEST REPORT

Test Report No. : **LCS180402185AEA**	May 08, 2018 Date of issue

Test Model.....	:	PFFUGFIL107
EUT.....	:	Canifugue transmitter
Applicant.....	**:**	**NUM AXES**
Address.....	:	745, rue de la Bergeresse ZAC des Aulnaies, OLIVET 45161, France
Telephone.....	:	/
Fax.....	:	/
Manufacturer.....	**:**	**NUM AXES**
Address.....	:	745, rue de la Bergeresse ZAC des Aulnaies, OLIVET 45161, France
Telephone.....	:	/
Fax.....	:	/

Test Result	**Positive**

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Revision History

Revision	Issue Date	Revisions	Revised By
000	May 08, 2018	Initial Issue	Gavin Liang

TABLE OF CONTENTS

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT	Canifugue transmitter
Test Model	PFFUGFIL107
Additional Model No.	PFFUGFIL106
Model Declaration	PCB board, structure and internal of these model(s) are the same, So no additional models were tested.
Hardware Version	CPSSECAR143
Software Version	CPELEPRG086 Version Géné-2-H
Power Supply	DC 15V/150mA by power adapter
Wireless technology	
Frequency Range	20KHz
Channel Spacing	N/A
Channel Number	1 channel
Modulation Type	OOK
Antenna Description	External Antenna:AWG20 Copper single core wire 400m Max

1.2. Support Equipment List

Manufacturer	Description	Model	Serial Number	Certificate
HON KWANG ELECTRIC CO LTD	Power adapter	D7300-01	--	FCC VOC
--	--	--	--	--

1.3. External I/O

I/O Port Description	Quantity	Cable
DC in port	1	N/A

1.4. Description of Test Facility

FCC Registration Number. is 254912.

Industry Canada Registration Number. is 9642A-1.

ESMD Registration Number. is ARCB0108.

UL Registration Number. is 100571-492.

TUV SUD Registration Number. is SCN1081.

TUV RH Registration Number. is UA 50296516-001

NVLAP Registration Code is 600167-0

The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.4:2014 and CISPR 16-1-4:2010 SVSWR requirement for radiated emission above 1GHz.

1.5. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. To CISPR 16 – 4 "Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements" and is documented in the LCS quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

1.6. Measurement Uncertainty

Test Item		Frequency Range	Uncertainty	Note
Radiation Uncertainty	:	9KHz~30MHz	3.10dB	(1)
		30MHz~200MHz	2.96dB	(1)
		200MHz~1000MHz	3.10dB	(1)
		1GHz~26.5GHz	4.00dB	(1)
Conduction Uncertainty	:	150kHz~30MHz	1.63dB	(1)
Power disturbance	:	30MHz~300MHz	1.60dB	(1)

(1). This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

1.7. Description of Test Modes

The EUT operates at 20 KHz. The following operating modes were applied for the related test items.

All test modes were tested, only the result of the worst case was recorded in the report.

It was pre-tested on the positioned of each 3 axis. The worst case was found positioned on X-plane.

Mode of Operations	Transmitting Frequency (KHz)
OOK	20
For Conducted Emission	
Test Mode	TX Mode
For Radiated Emission	
Test Mode	TX Mode

***Note: Using a temporary antenna connector for the EUT when the conducted measurements are performed.

2. TEST METHODOLOGY

All measurements contained in this report were conducted with ANSI C63.10: 2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

The radiated testing was performed at an antenna-to-EUT distance of 3 meters. All radiated and conducted emissions measurement was performed at Shenzhen LCS Compliance Testing Laboratory Ltd.

2.1. EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

2.2. EUT Exercise

The EUT was operated in the engineering mode to fix the TX frequency that was for the purpose of the measurements.

According to its specifications, the EUT must comply with the requirements of the Section 15.201, 15.203, 15.205, 15.207, 15.209 under the FCC Rules Part 15 Subpart C.

2.3. General Test Procedures

2.3.1 Conducted Emissions

According to the requirements in Section 6.2 of ANSI C63.10: 2013, AC power-line conducted emissions shall be measured in the frequency range between 0.15 MHz and 30MHz using Quasi-peak and average detector modes.

2.3.2 Radiated Emissions

The EUT is placed on a turn table and the turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 6.3 of ANSI C63.10: 2013.

3. CONNECTION DIAGRAM OF TEST SYSTEM

3.1. Justification

The system was configured for testing in a continuous transmitting condition.

3.2. EUT Exercise Software

Powered on the EUT then the EUT will transmit at 20 KHz.

3.3. Special Accessories

N/A

3.4. Block Diagram/Schematics

Please refer to the related document

3.5. Equipment Modifications

Shenzhen LCS Compliance Testing Laboratory Ltd. has not done any modification on the EUT.

3.6. Test Setup

Please refer to the test setup photo.

4. SUMMARY OF TEST RESULTS

Applied Standard: FCC Part 15 Subpart C		
FCC Rules	Description Of Test	Result
§15.203	Antenna Requirement	Compliant
§15.207(a)	Power Line Conducted Emissions	Compliant
§15.201(a), §15.205(a), §15.209(a), §15.215(a)	Radiated Emissions Measurement	Compliant
§2.1049 §15.215	99% and 20dB Bandwidth	Compliant

Remark:

Note 1 --- Test results inside test report.

5. POWER LINE CONDUCTED EMISSIONS

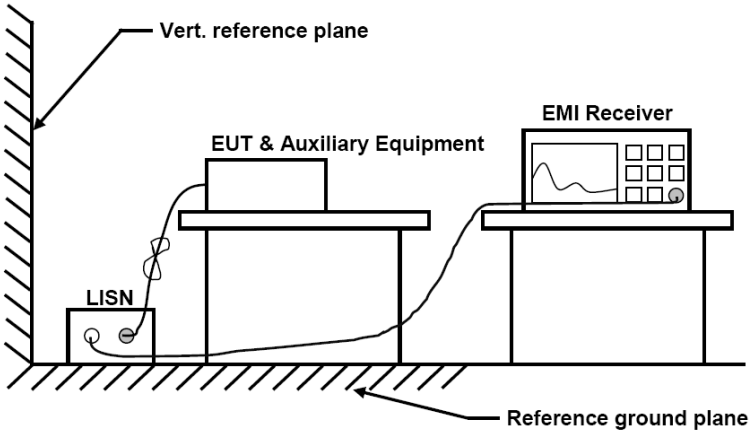
5.1 Standard Applicable

According to §15.207 (a): For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed 250 microvolts (The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz). The limits at specific frequency range is listed as follows:

Frequency Range (MHz)	Limits (dBμV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

* Decreasing linearly with the logarithm of the frequency

5.2 Block Diagram of Test Setup



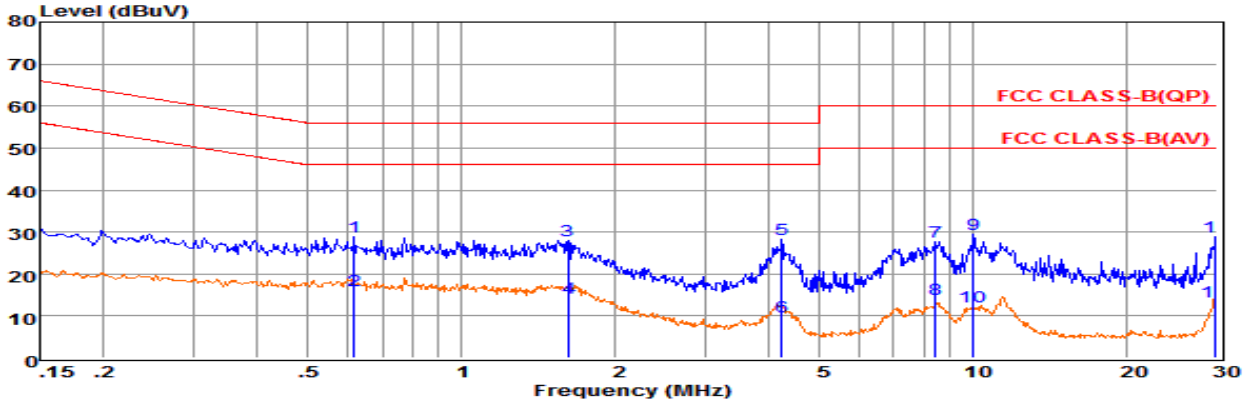
5.3 Test Results

PASS.

The test data please refer to following page.

AC Conducted Emission of charge from power adapter mode @ AC 120V/60Hz @ (worst case)

Line

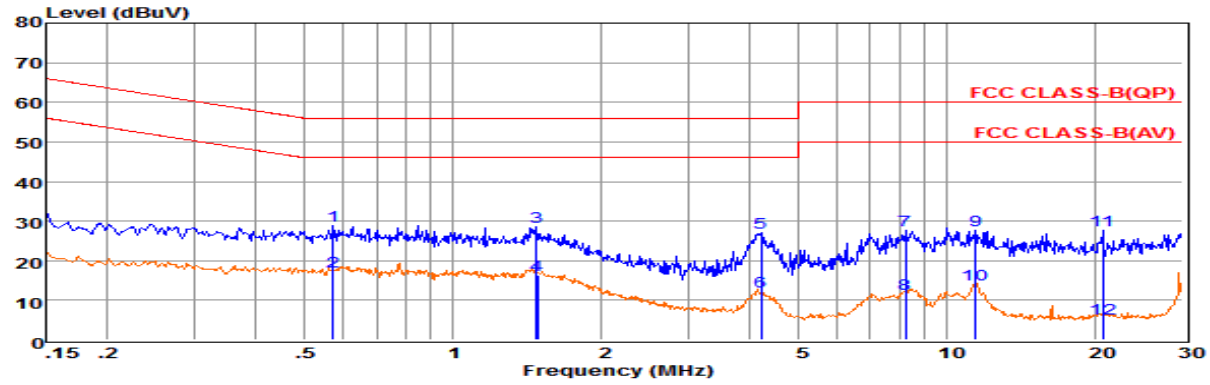


Pol: LINE

	Freq	Reading	LISNFac	CabLos	Aux2Fac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.62	9.31	9.63	0.04	10.00	28.98	56.00	-27.02	QP
2	0.62	-3.61	9.63	0.04	10.00	16.06	46.00	-29.94	Average
3	1.62	8.39	9.64	0.05	10.00	28.08	56.00	-27.92	QP
4	1.62	-5.44	9.64	0.05	10.00	14.25	46.00	-31.75	Average
5	4.22	8.69	9.65	0.06	10.00	28.40	56.00	-27.60	QP
6	4.23	-9.91	9.65	0.06	10.00	9.80	46.00	-36.20	Average
7	8.46	7.91	9.69	0.08	10.00	27.68	60.00	-32.32	QP
8	8.46	-5.90	9.69	0.08	10.00	13.87	50.00	-36.13	Average
9	10.02	9.78	9.69	0.08	10.00	29.55	60.00	-30.45	QP
10	10.02	-7.73	9.69	0.08	10.00	12.04	50.00	-37.96	Average
11	29.84	9.01	9.71	0.14	10.00	28.86	60.00	-31.14	QP
12	29.84	-6.55	9.71	0.14	10.00	13.30	50.00	-36.70	Average

Remarks: 1. Measured = Reading + LISNFac + Cable Loss + Aux2 Fac.
2. The emission levels that are 20dB below the official limit are not reported.

Neutral



Pol: NEUTRAL

	Freq	Reading	LISNFac	CabLos	Aux2Fac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.57	9.15	9.62	0.04	10.00	28.81	56.00	-27.19	QP
2	0.57	-2.44	9.62	0.04	10.00	17.22	46.00	-28.78	Average
3	1.48	8.79	9.63	0.05	10.00	28.47	56.00	-27.53	QP
4	1.48	-3.18	9.63	0.05	10.00	16.50	46.00	-29.50	Average
5	4.20	7.46	9.65	0.06	10.00	27.17	56.00	-28.83	QP
6	4.20	-7.64	9.65	0.06	10.00	12.07	46.00	-33.93	Average
7	8.24	7.79	9.70	0.07	10.00	27.56	60.00	-32.44	QP
8	8.24	-8.08	9.70	0.07	10.00	11.69	50.00	-38.31	Average
9	11.44	7.87	9.73	0.09	10.00	27.69	60.00	-32.31	QP
10	11.44	-5.88	9.73	0.09	10.00	13.94	50.00	-36.06	Average
11	20.70	7.55	9.86	0.12	10.00	27.53	60.00	-32.47	QP
12	20.70	-14.68	9.86	0.12	10.00	5.30	50.00	-44.70	Average

Remarks: 1. Measured = Reading + LISNFac + Cable Loss + Aux2 Fac.
2. The emission levels that are 20dB below the official limit are not reported.

****Note: Pre-scan all modes and recorded the worst case results in this report.*

6. RADIATED EMISSION MEASUREMENT

6.1. Standard Applicable

According to FCC §15.201 (a) “Intentional radiators operated as carrier current systems, devices operated under the provisions of §§15.211, 15.213, and 15.221, and devices operating below 490 kHz in which all emissions are at least 40 dB below the limits in §15.209 are subject to Suppliers Declaration of Conformity pursuant to the procedures in subpart J of part 2 of this chapter prior to marketing.”

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

6.2. Instruments Setting

Please refer to of equipment list in this report. The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10^{th} carrier harmonic
RB / VB (Emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 1/B kHz for Average
RB / VB (Emission in non-restricted band)	1MHz / 1MHz for Peak, 1 MHz / 1/B kHz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB/VB 200Hz/1KHz for QP/AVG
Start ~ Stop Frequency	150kHz~30MHz / RB/VB 9kHz/30KHz for QP/AVG
Start ~ Stop Frequency	30MHz~1000MHz / RB/VB 120kHz/1MHz for QP

6.3. Test Procedure

1) Sequence of testing 9 kHz to 30 MHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 0.8 m height is used.

--- If the EUT is a floor standing device, it is placed on the ground.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions.

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

Premeasurement:

--- The turntable rotates from 0° to 315° using 45° steps.

--- The antenna height is 0.8 meter.

--- At each turntable position the analyzer sweeps with peak detection to find the maximum of all emissions

Final measurement:

--- Identified emissions during the premeasurement the software maximizes by rotating the turntable position (0° to 360°) and by rotating the elevation axes (0° to 360°).

--- The final measurement will be done in the position (turntable and elevation) causing the highest emissions with QPK detector.

--- The final levels, frequency, measuring time, bandwidth, turntable position, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.

2) Sequence of testing 30 MHz to 1 GHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a table with 0.8 m height is used, which is placed on the ground plane.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

Premeasurement:

--- The turntable rotates from 0° to 315° using 45° steps.

--- The antenna is polarized vertical and horizontal.

--- The antenna height changes from 1 to 3 meter.

--- At each turntable position, antenna polarization and height the analyzer sweeps three times in peak to find the maximum of all emissions.

Final measurement:

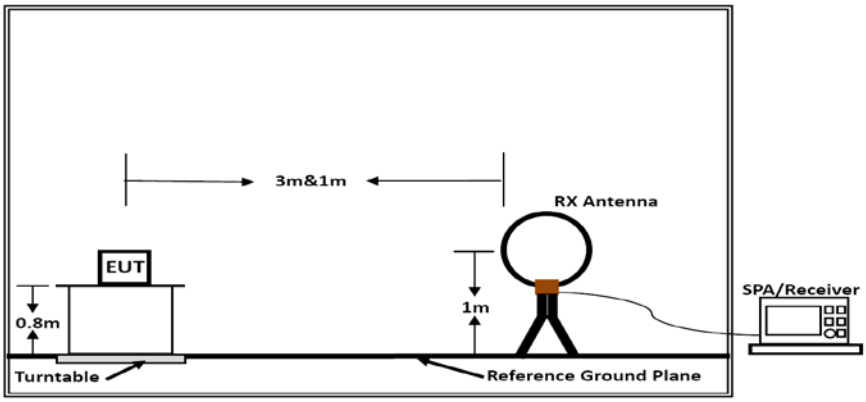
--- The final measurement will be performed with minimum the six highest peaks.

--- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable position (± 45°) and antenna movement between 1 and 4 meter.

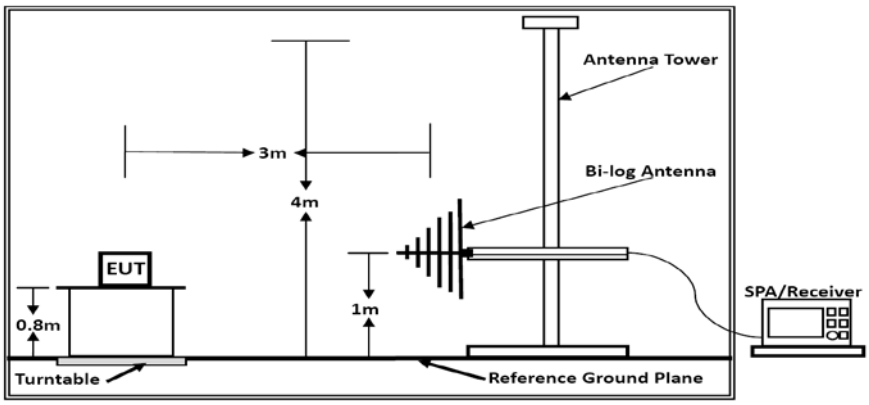
--- The final measurement will be done with QP detector with an EMI receiver.

--- The final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

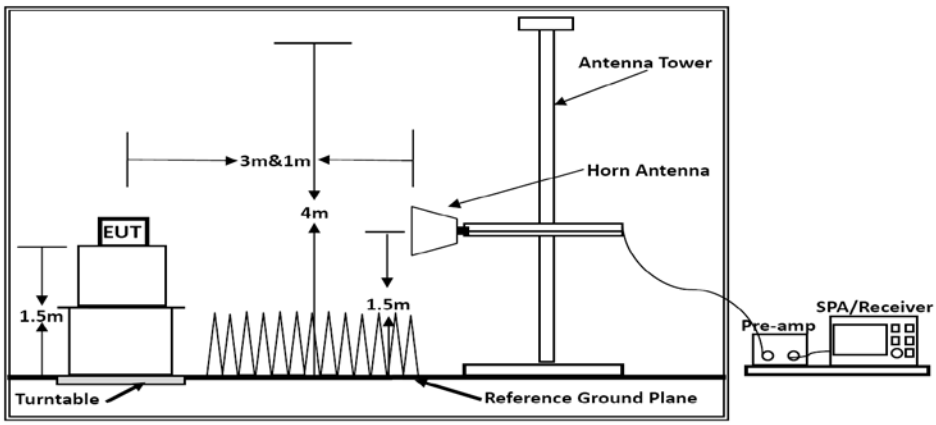
6.4. Block Diagram of Test Setup



Below 30MHz



Below 1GHz



Above 1GHz

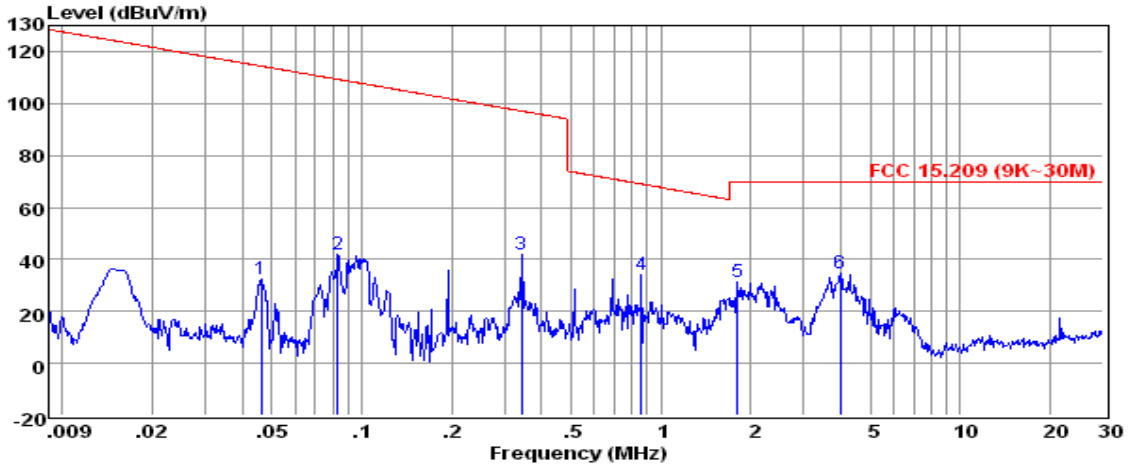
Above 18 GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade form 3m to 1m.

Distance extrapolation factor = 20 log (specific distanc [3m] / test distance [1m]) (dB);
Limit line = specific limits (dBuV) + distance extrapolation factor [6 dB].

6.5. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

6.6. Results of Radiated Emissions (9 KHz~30MHz)



pol:

	Freq	Reading	CabLos	Antfac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	0.05	11.33	0.30	20.61	32.24	114.36	-82.12	QP
2	0.08	21.14	0.30	20.53	41.97	109.32	-67.35	QP
3	0.34	21.00	0.30	20.42	41.72	97.06	-55.34	QP
4	0.86	13.67	0.30	20.31	34.28	69.05	-34.77	QP
5	1.80	10.57	0.30	20.29	31.16	69.50	-38.34	QP
6	3.98	14.10	0.30	20.30	34.70	69.50	-34.80	QP

Note: 1. All readings are Quasi-peak values.
2. Measured= Reading + Antenna Factor + Cable Loss
3. The emission that ate 20db blow the offficial limit are not reported

Note:

The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.

Distance extrapolation factor = 40 log (specific distance / test distance) (dB);
Limit line = specific limits (dBuV) + distance extrapolation factor.

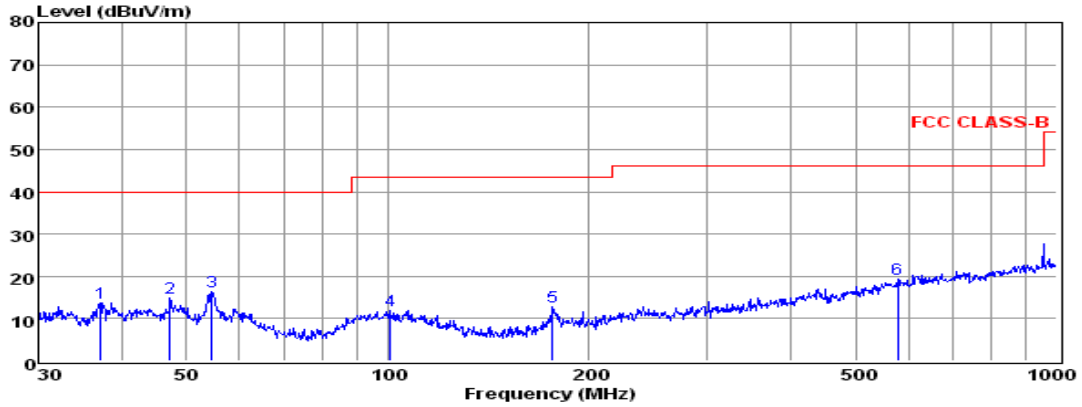
6.7. Results of Radiated Emissions (30 MHz~1000 MHz)

PASS.

Only record the worst test result in this report.

The test data please refer to following page.

Horizontal

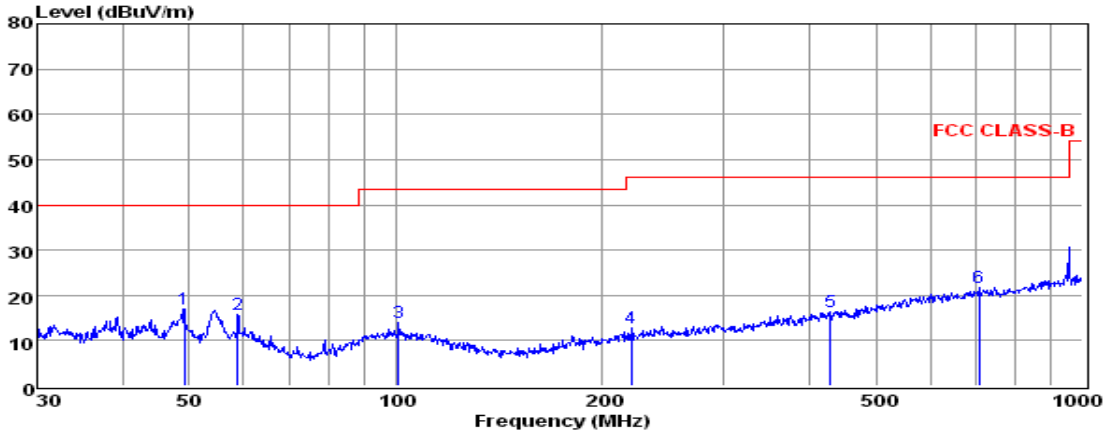


pol: HORIZONTAL

	Freq	Reading	CabLos	Antfac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	37.15	0.53	0.41	12.85	13.79	40.00	-26.21	QP
2	47.16	1.08	0.35	13.42	14.85	40.00	-25.15	QP
3	54.45	2.99	0.46	13.05	16.50	40.00	-23.50	QP
4	100.93	-1.76	0.60	13.08	11.92	43.50	-31.58	QP
5	176.27	2.56	0.73	9.42	12.71	43.50	-30.79	QP
6	578.67	-0.08	1.44	18.05	19.41	46.00	-26.59	QP

Note: 1. All readings are Quasi-peak values.
2. Measured= Reading + Antenna Factor + Cable Loss
3. The emission that ate 20db blow the offficial limit are not reported

Vertical



pol: VERTICAL

	Freq	Reading	CabLos	Antfac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	49.19	3.39	0.35	13.30	17.04	40.00	-22.96	QP
2	58.82	2.48	0.49	12.77	15.74	40.00	-24.26	QP
3	100.93	0.43	0.60	13.08	14.11	43.50	-29.39	QP
4	219.84	0.59	0.95	11.20	12.74	46.00	-33.26	QP
5	429.52	-0.47	1.28	15.51	16.32	46.00	-29.68	QP
6	706.70	1.18	1.60	18.89	21.67	46.00	-24.33	QP

Note: 1. All readings are Quasi-peak values.
2. Measured= Reading + Antenna Factor + Cable Loss
3. The emission that ate 20db blow the offficial limit are not reported

****Note:*

1). Pre-scan all modes and recorded the worst case results in this report (TX).

2). Emission level (dBuV/m) = 20 log Emission level (uV/m).

3). Corrected Reading: Antenna Factor + Cable Loss + Read Level = Level.

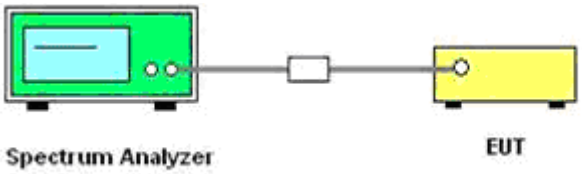
7. 99% AND 20 DB BANDWIDTH MEASUREMENT

7.1. Standard Applicable

According to §15.215, device must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

According to §2.1049, The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured under the following conditions as applicable.

7.2. Block Diagram of Test Setup



7.3. Test Procedure

Use the following spectrum analyzer settings:

Span = 3 KHz

RBW = 100 Hz

VBW = 300 Hz

Sweep = auto

Detector function = peak

Trace = max hold

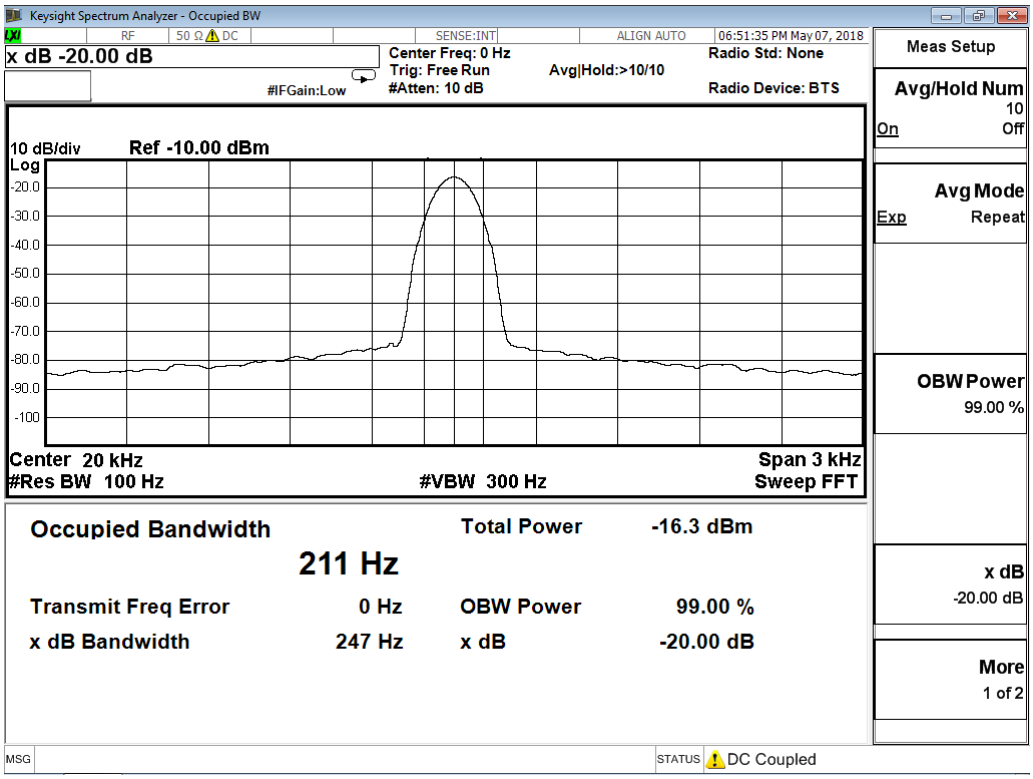
The EUT should be transmitting at its maximum data rate. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. Use the marker-delta function to measure 20 dB down one side of the emission. Reset the marker-delta function, and move the marker to the other side of the emission, until it is (as close as possible to) even with the reference marker level. The marker-delta reading at this point is the 20 dB bandwidth of the emission. If this value varies with different modes of operation (e.g., data rate, modulation format, etc.), repeat this test for each variation. The limit is specified in one of the subparagraphs of this Section. Submit this plot(s).

7.4. Test Results

Test Result Of 99% and 20dB Bandwidth Measurement			
Test Frequency (KHz)	99% Bandwidth (Hz)	20dB Bandwidth (Hz)	Limit (MHz)
20.00	211.00	247.00	No Limit

Remark:

1. *Test results including cable loss;*
2. *Please refer to following test plots;*


Keysight Spectrum Analyzer - Occupied BW
RF
50 Ω DC
SENSE:INT
ALIGN AUTO
06:51:35 PM May 07, 2018
x dB -20.00 dB
Center Freq: 0 Hz
Trig: Free Run
Avg|Hold:>10/10
#IFGain:Low
#Atten: 10 dB
Radio Std: None
Radio Device: BTS
10 dB/div
Ref -10.00 dBm
Log
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
-100
Center 20 kHz
#Res BW 100 Hz
#VBW 300 Hz
Span 3 kHz
Sweep FFT
Occupied Bandwidth
211 Hz
Total Power -16.3 dBm
Transmit Freq Error 0 Hz
OBW Power 99.00 %
x dB Bandwidth 247 Hz
x dB -20.00 dB
Meas Setup
Avg/Hold Num
10
On Off
Avg Mode
Exp Repeat
OBW Power
99.00 %
x dB
-20.00 dB
More
1 of 2
MSG
STATUS
DC Coupled

8. ANTENNA REQUIREMENTS

8.1 Standard Applicable

According to antenna requirement of §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 shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be re-placed by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of Sections 15.211, 15.213, 15.217, 15.219, or 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with Section 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this Part are not exceeded.

8.2 Antenna Connected Construction

8.2.1. Standard Applicable

According to § 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.

8.2.2. Antenna Connector Construction

The antenna gain used for transmitting is 0dBi, the EUT use external antenna and a unique antenna connector. Please see EUT photo for details.

8.2.3. Results: Compliance.

9. LIST OF MEASURING EQUIPMENT

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1	Power Meter	R&S	NRVS	100444	2017-06-17	2018-06-16
2	Power Sensor	R&S	NRV-Z81	100458	2017-06-17	2018-06-16
3	Power Sensor	R&S	NRV-Z32	10057	2017-06-17	2018-06-16
4	EPM Series Power Meter	Agilent	E4419B	MY45104493	2017-06-17	2018-06-16
5	E-SERIES AVG POWER SENSOR	Agilent	E9301H	MY41495234	2017-06-17	2018-06-16
6	ESA-E SERIES SPECTRUM ANALYZER	Agilent	E4407B	MY41440754	2017-11-18	2018-11-17
7	MXA Signal Analyzer	Agilent	N9020A	MY49100040	2017-06-17	2018-06-16
8	SPECTRUM ANALYZER	R&S	FSP	100503	2017-06-17	2018-06-16
9	3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	2017-06-17	2018-06-16
10	Positioning Controller	MF	MF-7082	/	2017-06-17	2018-06-16
11	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
12	EMI Test Receiver	ROHDE & SCHWARZ	ESR 7	101181	2017-06-17	2018-06-16
13	AMPLIFIER	QuieTek	QTK-A2525G	CHM10809065	2017-11-18	2018-11-17
14	Active Loop Antenna	SCHWARZBECK	FMZB 1519B	00005	2017-06-23	2018-06-22
15	By-log Antenna	SCHWARZBECK	VULB9163	9163-470	2017-05-02	2018-05-01
16	Horn Antenna	EMCO	3115	6741	2017-06-23	2018-06-22
17	RF Cable-R03m	Jye Bao	RG142	CB021	2017-06-17	2018-06-16
18	RF Cable-HIGH	SUHNER	SUCOFLEX 106	03CH03-HY	2017-06-17	2018-06-16
19	TEST RECEIVER	R&S	ESCI	101142	2017-06-17	2018-06-16
20	RF Cable-CON	UTIFLEX	3102-26886-4	CB049	2017-06-17	2018-06-16
21	10dB Attenuator	SCHWARZBECK	MTS-IMP136	261115-001-0032	2017-06-17	2018-06-16
22	Artificial Mains	R&S	ENV216	101288	2017-06-17	2018-06-16
23	X-series USB Peak and Average Power Sensor Aglient	Agilent	U2021XA	MY54080022	2017-10-27	2018-10-26
24	4 CH. Simultaneous Sampling 14 Bits 2MS/s	Agilent	U2531A	MY54080016	2017-10-27	2018-10-26
25	Test Software	Ascentest	AT890-SW	20160630	N/A	N/A
26	RF Control Unit	Ascentest	AT890-RFB	N/A	2017-06-17	2018-06-16

10. TEST SETUP PHOTOGRAPHS

Please refer to separated files for Test Setup Photos of the EUT.

11. EXTERIOR HOTOGRAPHS

Please refer to separated files for External Photos of the EUT.

12. INTERIOR PHOTOGRAPHS

Please refer to separated files for Internal Photos of the EUT.

----------THE END OF TEST REPORT----------