FCC TEST REPORT

FCC ID: 2AORFTT-7220

Product Name	:	WIRELESS MICROPHONE
Model Name	:	TT-7220
Brand Name	:	N/A
Report No.	:	PTC18010515501E-FC02
Prepared for		
TouchTunes Interactive Networks		
850 Third Ave, Suite 15th floor New York, NY 10022		
Prepared by		
Dongguan Precise Testing & Certification Corp., Ltd.		
Building D, Baoding Technology Park, Guangming Road 2, Guangming Community, Dongcheng District, Dongguan, Guangdong, China		

1TEST RESULT CERTIFICATION

Applicant's name	:	TouchTunes Interactive Networks
Address	:	850 Third Ave, Suite 15th floor New York, NY 10022
Manufacture's name	:	GUANGDONG TAKSTAR ELECTRONIC CO., LTD.
Address	:	DINGGANG, NO.5 TEAM, XIALIAO VILLAGE, LONGXI TOWN, BOLUO COUNTY, HUIZHOU CITY.
Product name	:	WIRELESS MICROPHONE
Model name	:	TT-7220
Brand Name	:	N/A
Standards	:	FCC CFR47 Part 15 Section 15.249: 2017
Test procedure	:	ANSI C63.10:2013
Test Date	:	January 12, 2018 to January 31, 2018
Date of Issue	:	January 31, 2018
Test Result	:	Pass

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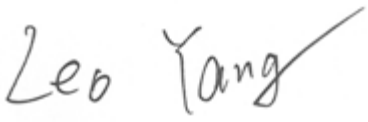
Test Engineer:



Leo Yang / Engineer

Technical Manager:

Chris Du / Manager

Contents

2 Test Summary

Description of Test Item	FCC Rules	Result
AC Power Conducted Emission	15.207	N/A
Radiated Spurious Emissions	15.209(a) 15.249(a) (d)	PASS
Field Strength of Fundamental Emissions	15.249(a)	PASS
Band edge	15.249 15.205	PASS
20dB Bandwidth	15.215(c)	PASS
Antenna Requirement	15.203	PASS

Remark:

1. The EUT only powered by battery, no need to evaluate AC Power Conducted Emission.

2. The EUT is powered by new batteries during the test.

3 TEST FACILITY

Dongguan Precise Testing & Certification Corp., Ltd.

Building D, Baoding Technology Park, Guangming Road2, Dongcheng District, Dongguan, Guangdong, China

FCC Registration Number: 790290

A2LA Certificate No.: 4408.01

IC Registration Number: 12191A-1

4 General Information

4.1 General Description of E.U.T.

Product Name	:	WIRELESS MICROPHONE
Model Name	:	TT-7220
Operating frequency	:	911.05-927.05MHz
Numbers of Channel	:	4
Antenna Type	:	PCB Printed Antenna
Antenna Gain	:	-2.0dBi
Type of Modulation	:	FM
Power supply	:	DC2*1.5V Battery
Hardware Version	:	TRANSMIT UHF 2.AM T7310.TXOA3 W22/12.HZ
Software Version	:	TT-7220-MS

4.2 Test Mode

For Radiated: The EUT's antenna was pre-tested under the following modes:

Test Mode	Description
Mode A	X-Y axis
Mode B	Y-Z axis
Mode C	X-Z axis

From the above modes, the worst case was found in Mode A, Therefore only the test data of the mode was recorded in this report.

Channel List:

Channel	Frequency (MHz)
1	**911.05**
2	**918.85**
3	925.85
4	**927.05**

The 3 channels of lower, middle and higher were chosen for test.

5 Equipment During Test

5.1 Equipments List

RF Conducted Test

Name of Equipment	Manufacturer	Model	Serial No.	Characteristics	Calibration Due
MXG Signal Analyzer	Agilent	N9020A	MY56070279	10Hz-30GHz	Apr. 07, 2018
Coaxial Cable	CDS	79254	46107086	10Hz-30GHz	Oct. 09, 2018
Antenna Connector	Florida RF Labs	N/A	RF01#	N/A	Aug. 26, 2018

Remark: The temporary antenna connector is soldered on the PCB board in order to perform conducted tests and this temporary antenna connector is listed in the equipment list.

Radiated Emissions(Test Frequency from 9KHz-18GHz)

Name of Equipment	Manufacturer	Model	Serial No.	Characteristics	Calibration Due
EMI Test Receiver	Rohde&Schwarz	ESCI	101417	9KHz-3GHz	Sep. 03, 2018
Loop Antenna	Schwarzbeck	FMZB 1519	012	9 KHz -30MHz	Aug. 31, 2018
Bilog Antenna	SCHWARZBECK	VULB9160	9160-3355	25MHz-2GHz	Aug.31, 2018
Preamplifier (low frequency)	SCHWARZBECK	BBV 9475	9745-0013	1MHz-1GHz	Sep. 03, 2018
Cable	Schwarzbeck	PLF-100	549489	9KHz-3GHz	Sep. 03, 2018
Spectrum Analyzer	Agilent	E4407B	MY45109572	9KHz-40GHz	Oct. 13, 2018
Horn Antenna	SCHWARZBECK	9120D	9120D-1246	1GHz-18GHz	Aug. 31, 2018
Power Amplifier	LUNAR EM	LNA1G18-40	J10100000081	1GHz-26.5GHz	Aug. 31, 2018
Cable	H+S	CBL-26	N/A	1GHz-26.5GHz	Sep. 03, 2018

Conducted Emissions

Name of Equipment	Manufacturer	Model	Serial No.	Characteristics	Calibration Due
EMI Test Receiver	Rohde&Schwarz	ESCI	101417	9KHz-3GHz	Sep. 03, 2018
Artificial Mains Network	Rohde&Schwarz	L2-16B	000WX31025	9KHz-300MHz	Sep. 03, 2018
Artificial Mains Network	Rohde&Schwarz	ENV216	101342	9KHz-300MHz	Sep. 03, 2018

5.2 Measurement Uncertainty

Parameter	**Uncertainty**
RF output power, conducted	±1.0dB
Power Spectral Density, conducted	±2.2dB
Radio Frequency	± 1 x 10^{-6}
Bandwidth	± 1.5 x 10^{-6}
Time	±2%
Duty Cycle	±2%
Temperature	±1°C
Humidity	±5%
DC and low frequency voltages	±3%
Conducted Emissions (150kHz~30MHz)	±3.64dB
Radiated Emission(30MHz~1GHz)	±5.03dB
Radiated Emission(1GHz~25GHz)	±4.74dB
Remark: The coverage Factor (k=2), and measurement Uncertainty for a level of Confidence of 95%	

5.3 Description of Support Units

Equipment	Model No.	Series No.
N/A	N/A	N/A

6 Conducted Emission

Test Requirement:	:	FCC CFR 47 Part 15 Section 15.207
Test Method:	:	ANSI C63.10:2013
Test Result:	:	PASS
Frequency Range:	:	150kHz to 30MHz
Class/Severity:	:	Class B
Detector:	:	Peak for pre-scan (9kHz Resolution Bandwidth)

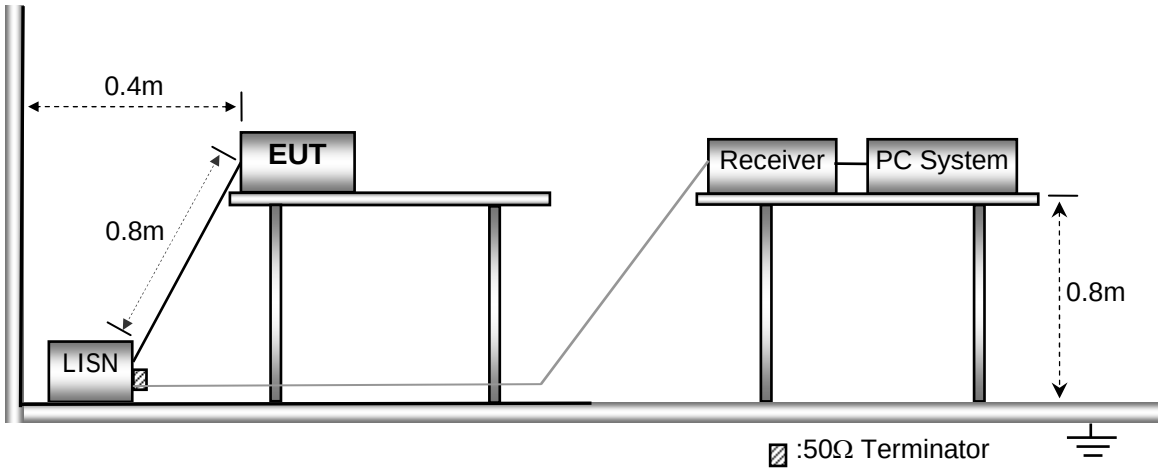
6.1 E.U.T. Operation

Operating Environment **:**

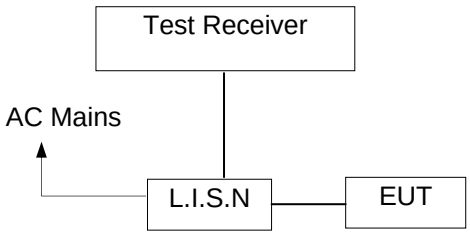
Temperature:	:	25.5 °C
Humidity:	:	51 % RH
Atmospheric Pressure:	:	101.2kPa

6.2 EUT Setup

The conducted emission tests were performed using the setup accordance with the ANSI C63.10: 2013



6.3 Test SET-UP (Block Diagram of Configuration)



6.4 Measurement Procedure:

1. The EUT was placed on a table, which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured was complete.

6.5 Conducted Emission Limit

Conducted Emission

Frequency(MHz)	Quasi-peak	Average
0.15-0.5	66-56	56-46
0.5-5.0	56	46
5.0-30.0	60	50

Note:
1. The lower limit shall apply at the transition frequencies
2.The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

6.6 Measurement Description

The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.

6.7 Conducted Emission Test Result

N/A

7 Field Strength of Fundamental Emission and Radiated Spurious Emissions

Test Requirement: : FCC CFR47 Part 15 Section 15.209 & 15.247

Test Method: : ANSI C63.10:2013

Test Result: : PASS

Measurement Distance: : 3m

Limit: : See the follow table

Frequency (MHz)	Field Strength		Field Strength Limit at 3m Measurement Dist	
	uV/m	Distance (m)	uV/m	dBuV/m
0.009 ~ 0.490	2400/F(kHz)	300	10000 * 2400/F(kHz)	$20\log^{(2400/F(kHz))} + 80$
0.490 ~ 1.705	24000/F(kHz)	30	100 * 24000/F(kHz)	$20\log^{(24000/F(kHz))} + 40$
1.705 ~ 30	30	30	100 * 30	$20\log^{(30)} + 40$
30 ~ 88	100	3	100	$20\log^{(100)}$
88 ~ 216	150	3	150	$20\log^{(150)}$
216 ~ 960	200	3	200	$20\log^{(200)}$
Above 960	500	3	500	$20\log^{(500)}$

Note: 1. Emission level in dBuV/m=20 log (uV/m)

2. Measurement was performed at an antenna to the closed point of EUT distance of meters.

For intentional radiator device, per 15.249(a), the field strength of emission shall comply with the following:

Frequency	Distance Meters	Fundamental		Harmonic	
(MHz)	(m)	dBuV/m	mV/m	dBuV/m	uV/m
902-928	3	94	50	54	500
2400-2483.5	3	94	50	54	500
5725-5875	3	94	50	54	500
24000-24250	3	108	250	68	2500

In accordance with 15.249(e), limit shown in above table are based on average limits for frequencies above 1000MHz, and frequencies below 1000MHz are based on quasi peak. However, the peak field strength of any emission shall not exceed the maximum permitted average limits by more than 20dB.

7.1 EUT Operation

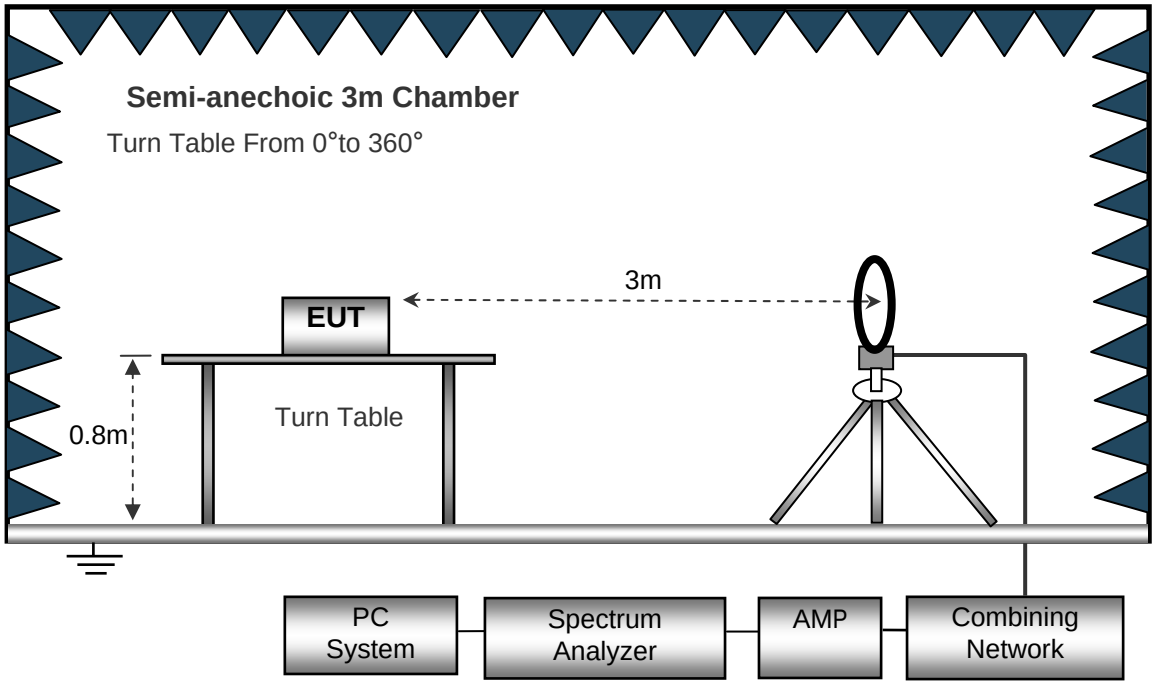
Operating Environment :

Temperature:	:	23.5 °C
Humidity:	:	51.1 % RH
Atmospheric Pressure:	:	101.2kPa
Test Voltage	:	DC 2*1.5V Battery

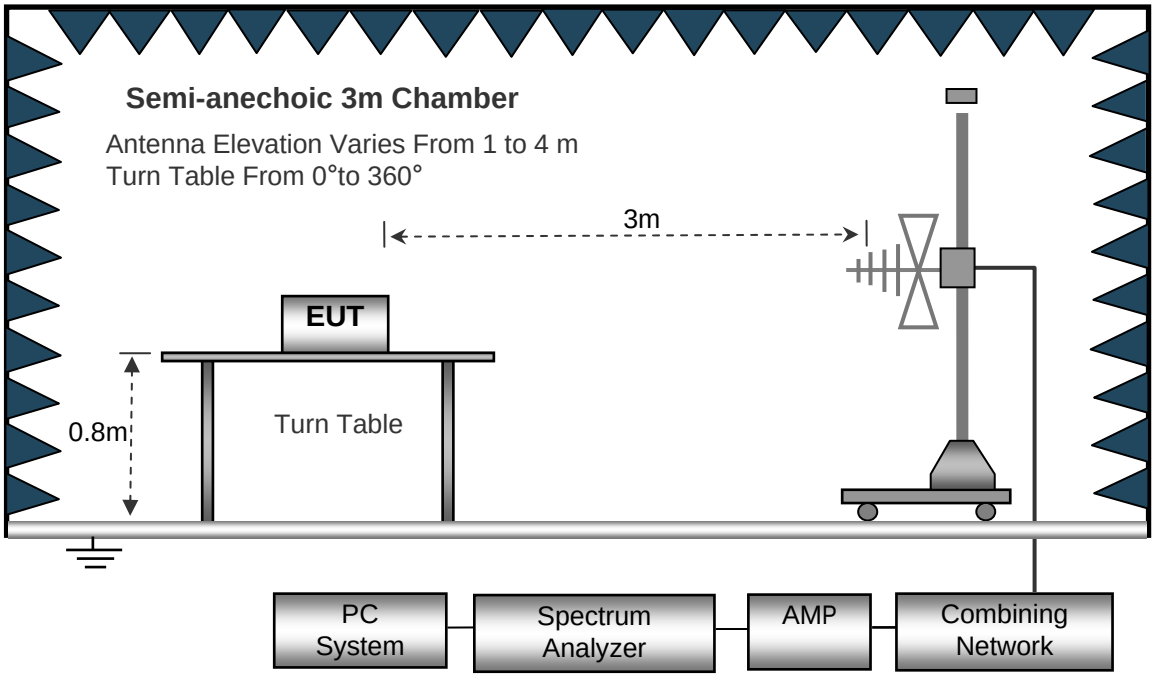
7.2 Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site

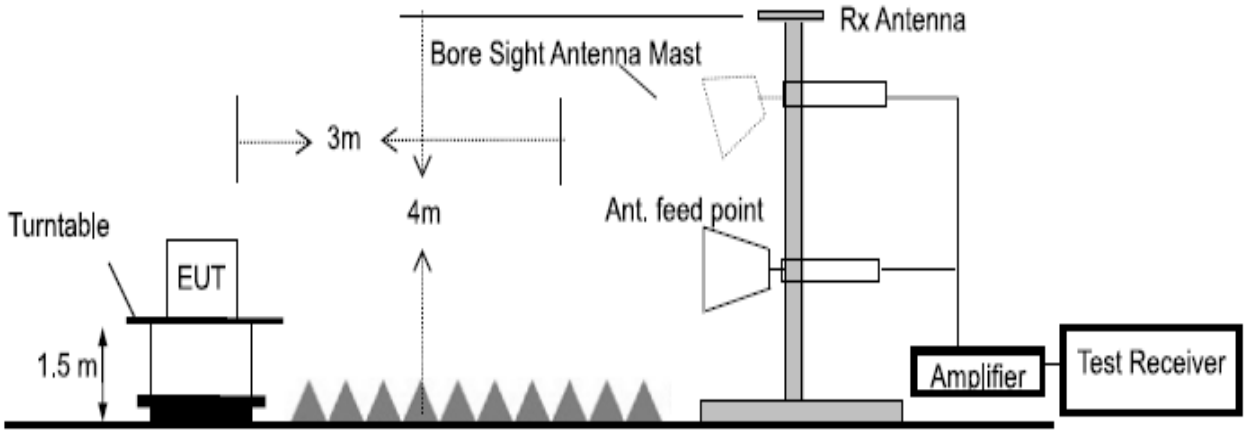
The test setup for emission measurement below 30MHz.



The test setup for emission measurement from 30 MHz to 1 GHz.



The test setup for emission measurement above 1 GHz.



7.3 Spectrum Analyzer Setup

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / *10Hz* for Average

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

7.4 Test Procedure

1. The testing follows the guidelines in Spurious Radiated Emissions of ANSI C63.10-2013.

2. Below 1000MHz, The EUT was placed on a turn table which is 0.8m above ground plane. And above 1000MHz, The EUT was placed on a styrofoam table which is 1.5m above ground plane.

3. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

4. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (From 1m to 4m) and turntable (from 0 degree to 360 degree) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.

5. Set to the maximum power setting and enable the EUT transmit continuously.

6. Final measurement (Above 1GHz): The frequency range will be divided into different sub ranges depending of the frequency range of the used horn antenna. The EMI Receiver set to peak and average mode and a resolution bandwidth of 1MHz. The measurement will be performed in horizontal and vertical polarization of the measuring antenna and while rotating the EUT in its vertical axis in the range of 0 degree to 360 degree in order to have the antenna inside the cone of radiation.

7. Test Procedure of measurement (For Above 1GHz):

1) Monitor the frequency range at horizontal polarization and move the antenna over all sides of the EUT(if necessary move the EUT to another orthogonal axis).

2) Change the antenna polarization and repeat 1) with vertical polarization.

3) Make a hardcopy of the spectrum.

4) Measure the frequency of the detected emissions with a lower span and resolution bandwidth to increase the accuracy and note the frequency value.

5) Change the analyser mode to Clear/ Write and found the cone of emission.

6) Rotate and move the EUT, so that the measuring distance can be enlarged to 3m and the antenna will be still inside the cone of emission.

7) Measure the level of the detected frequency with the correct resolution bandwidth, with the antenna polarization and azimuth and the peak and average detector, which causes the maximum emission.

8) Repeat steps 1) to 7) for the next antenna spot if the EUT is larger than the antenna beamwidth.

7. The radiation measurements are tested under 3-axes(X,Y,Z) position(X denotes lying on the table, Y denotes side stand and Z denotes vertical stand), After pre-test, It was found that the worse radiation emission was get at the X position. So the data shown was the X position only.

7.5 Summary of Test Results

Test Frequency: 9KHz-30MHz

Freq. (MHz)	Ant.Pol. H/V	Emission Level (dBuV/m)	Limit 3m (dBuV/m)	Over (dB)
--	--	--	--	>20

Note:

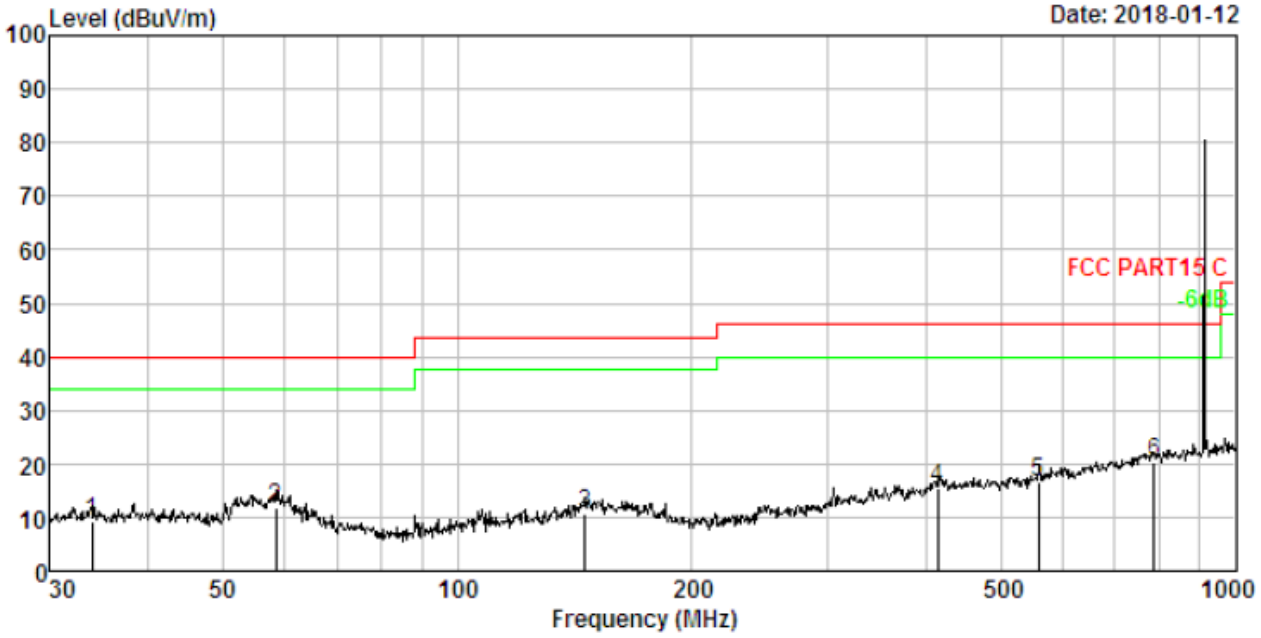
The amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

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

Test Frequency: 30MHz ~ 1GHz

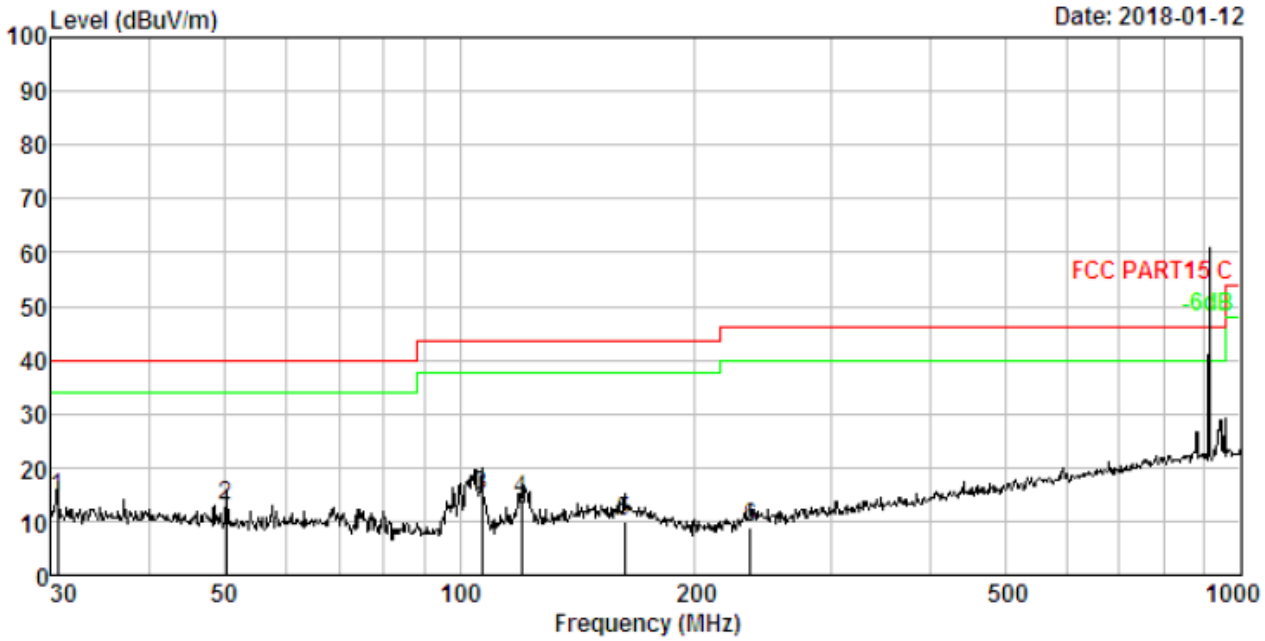
Remark: only the worst data were reported.

Test plot for Horizontal: 911.05MHz



No.	Freq MHz	Cable Loss dB	ANT Factor dB/m	Receiver Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limit dBuV/m	Over Limit dB	Remark
1.	33.917	1.17	13.32	24.77	30.01	9.25	40.00	-30.75	QP
2.	58.407	1.66	12.09	28.44	30.20	11.99	40.00	-28.01	QP
3.	145.861	2.49	13.68	24.99	30.52	10.64	43.50	-32.86	QP
4.	414.722	3.43	15.60	27.33	30.88	15.48	46.00	-30.52	QP
5.	558.730	3.70	18.14	25.67	30.99	16.52	46.00	-29.48	QP
6.	785.093	4.01	21.55	25.68	31.11	20.13	46.00	-25.87	QP

Test plot for Vertical: 911.05MHz



No.	Freq MHz	Cable Loss dB	ANT Factor dB/m	Receiver Reading dBuV	Preamp Factor dB	Emission Level dBuV/m	Limit dBuV/m	Over Limit dB	Remark
1.	30.531	1.07	13.24	30.17	29.98	14.50	40.00	-25.50	QP
2.	50.232	1.52	12.25	29.25	30.15	12.87	40.00	-27.13	QP
3.	106.759	2.20	10.81	32.16	30.41	14.76	43.50	-28.74	QP
4.	119.856	2.31	12.02	29.98	30.45	13.86	43.50	-29.64	QP
5.	162.611	2.59	13.73	24.19	30.56	9.95	43.50	-33.55	QP
6.	235.816	2.92	11.52	25.29	30.69	9.04	46.00	-36.96	QP

Above 1000MHz-10th Harmonics:

Operation Mode: CH1: 911.05MHz)

Frequency	Ant.Pol.	Reading (dBuV)		Corrected Factor	Corrected Amplitude (dBuV/m)		limit		Margin (dB)	
(MHz)	H/V	PK	AV	(dB)	PK	AV	PK	AV	PK	AV
911.05(F)	V	86.24	65.32	1.45	87.69	66.77	94	74	-6.31	-7.23
1822.10	V	54.01	46.35	3.24	57.25	49.59	74	54	-16.75	-4.41
2733.15	V	52.36	44.12	5.51	57.87	49.63	74	54	-16.13	-4.37
3644.20	V	50.48	42.92	6.22	56.7	49.14	74	54	-17.3	-4.86
4555.25	V	47.13	38.04	8.05	55.18	46.09	74	54	-18.82	-7.91
911.05(F)	H	84.07	68.14	1.45	85.52	69.59	94	74	-8.48	-4.41
1822.10	H	55.04	45.51	3.24	58.28	48.75	74	54	-15.72	-5.25
2733.15	H	53.46	43.29	5.51	58.97	48.8	74	54	-15.03	-5.2
3644.20	H	50.85	40.57	6.22	57.07	46.79	74	54	-16.93	-7.21
4555.25	H	48.69	38.14	8.05	56.74	46.19	74	54	-17.26	-7.81

Operation Mode: CH2: 918.85MHz

Frequency	Ant.Pol.	Reading (dBuV)		Corrected Factor	Corrected Amplitude (dBuV/m)		limit		Margin (dB)	
(MHz)	H/V	PK	AV	(dB)	PK	AV	PK	AV	PK	AV
918.85(F)	V	85.04	66.14	1.84	86.88	67.98	94	74	-7.12	-6.02
1837.70	V	55.26	45.03	4.36	59.62	49.39	74	54	-14.38	-4.61
2756.55	V	53.04	42.17	6.29	59.33	48.46	74	54	-14.67	-5.54
3675.40	V	51.42	40.6	8.79	60.21	49.39	74	54	-13.79	-4.61
4594.25	V	48.42	37.24	9.24	57.66	46.48	74	54	-16.34	-7.52
918.85(F)	H	84.72	63.18	1.84	86.56	65.02	94	74	-7.44	-8.98
1837.70	H	54.69	46.24	4.36	59.05	50.6	74	54	-14.95	-3.4
2756.55	H	52.04	42.04	6.29	58.33	48.33	74	54	-15.67	-5.67
3675.40	H	50.69	38.25	8.79	59.48	47.04	74	54	-14.52	-6.96
4594.25	H	47.69	35.06	9.24	56.93	44.3	74	54	-17.07	-9.7

Operation Mode: CH4: 927.05MHz

Frequency	Ant.Pol.	Reading (dBuV)		Corrected Factor	Corrected Amplitude (dBuV/m)		limit		Margin (dB)	
(MHz)	H/V	PK	AV	(dB)	PK	AV	PK	AV	PK	AV
927.05(F)	V	86.29	61.58	1.35	87.64	62.93	94	74	-6.36	-11.07
1854.10	V	57.42	43.24	3.19	60.61	46.43	74	54	-13.39	-7.57
2781.15	V	53.01	41.65	5.04	58.05	46.69	74	54	-15.95	-7.31
3708.20	V	48.69	37.02	7.11	55.80	44.13	74	54	-18.20	-9.87
4635.25	V	45.92	35.01	9.27	55.19	44.28	74	54	-18.81	-9.72
927.05(F)	H	85.01	62.06	1.35	86.36	63.41	94	74	-7.64	-10.59
1854.10	H	58.18	44.62	3.19	61.37	47.81	74	54	-12.63	-6.19
2781.15	H	52.69	42.17	5.04	57.73	47.21	74	54	-16.27	-6.79
3708.20	H	49.28	40.28	7.11	56.39	47.39	74	54	-17.61	-6.61
4635.25	H	45.36	37.59	9.27	54.63	46.86	74	54	-19.37	-7.14

Note:

1. The testing has been conformed to 10*927.05MHz=9270.5MHz.
2. All other emissions more than 30dB below the limit.
3. Corrected Factor = Antenna Factor + Cable Loss – Pre-amplifier.
   Corrected Amplitude = Reading + Factor
   Margin= Corrected Amplitude -Limit
4. X-Axis, Y-Axis and Z-Axis were investigated. The results above show only the worst case.

8 BAND EDGE EMISSION

8.1 TEST PROCEDURE

The EUT was placed on a styrofoam table which is 1.5m above ground plane.

The measurement procedure at the ban edges was simplified by performing the measurement in just one plot. Both, the in-band-emission and the unwanted emission were be encompassed by the span. After trace stabilization, the maximum peak was be determined by a peak detector and the value was marked by an appropriate limit line. The second limit line, which is 20dB below the first, marks the limit for the emissions in the unrestricted band. A maximum-peak-detector marks the highest emission in the unrestricted band next to the band edge.

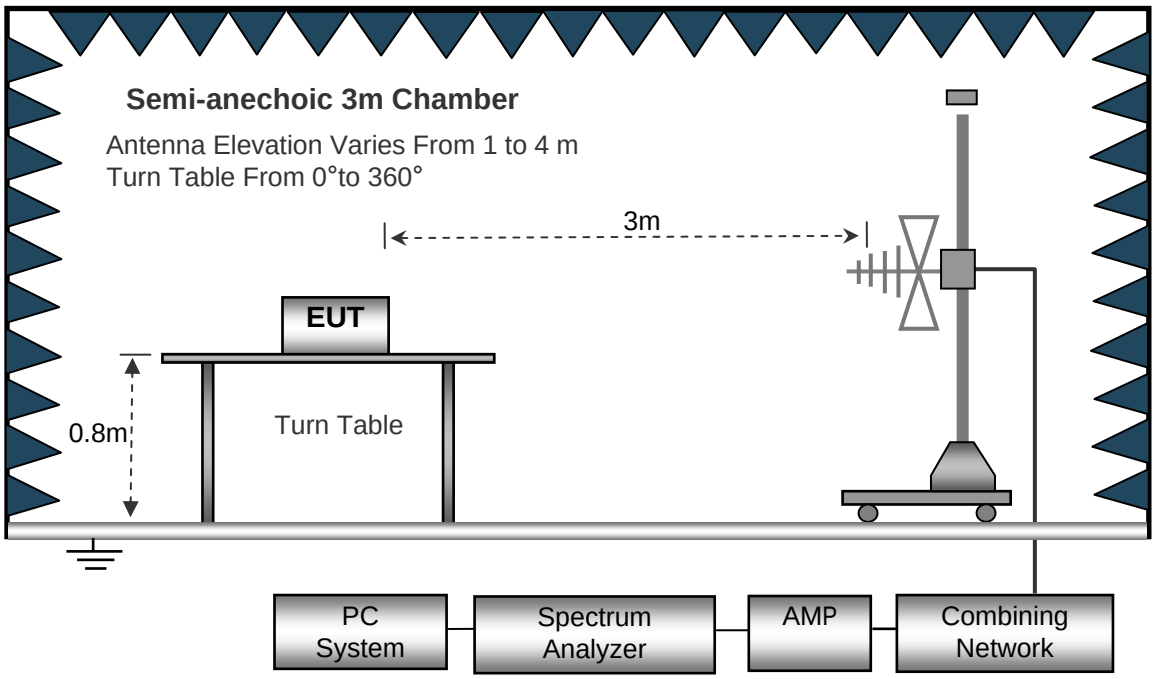
The measurements were performed at the lower end of the 2.4GHz band.

Use the following spectrum analyzer settings:

When spectrum scanned above 1GHz setting resolution bandwidth 1MHz, video bandwidth 3MHz:

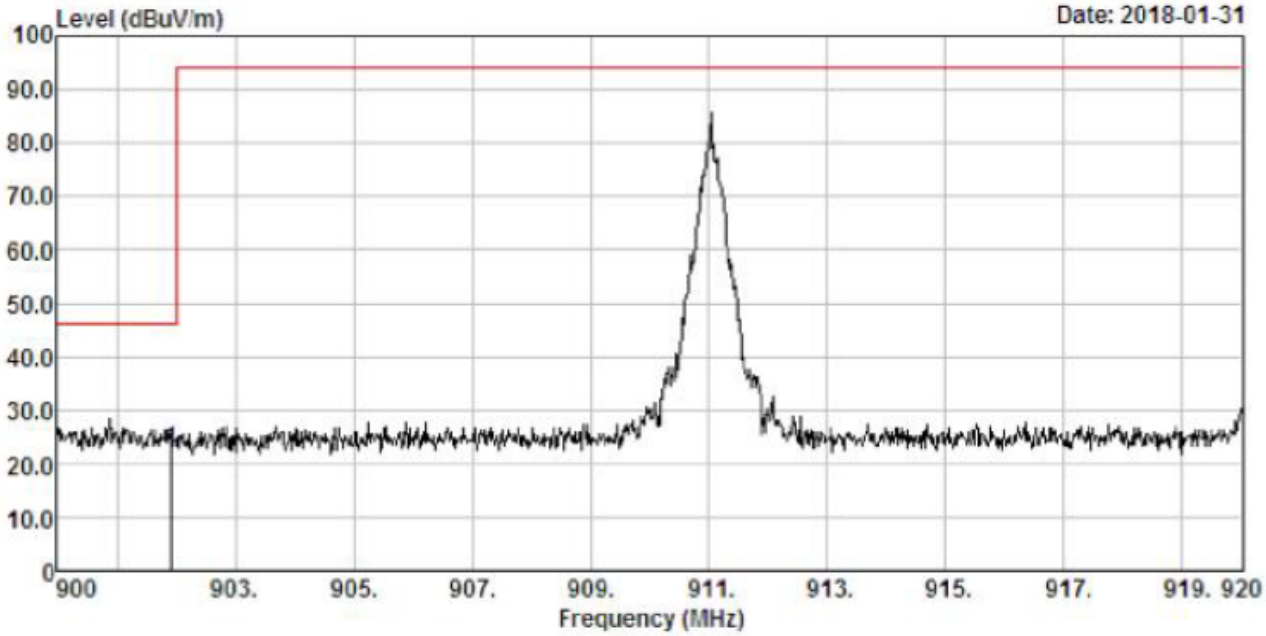
EMI Test Receiver	Setting
Attenuation	Auto
RBW	1MHz
VBW	3MHz
Detector	Peak
Trace	Max hold

8.2 TEST SETUP



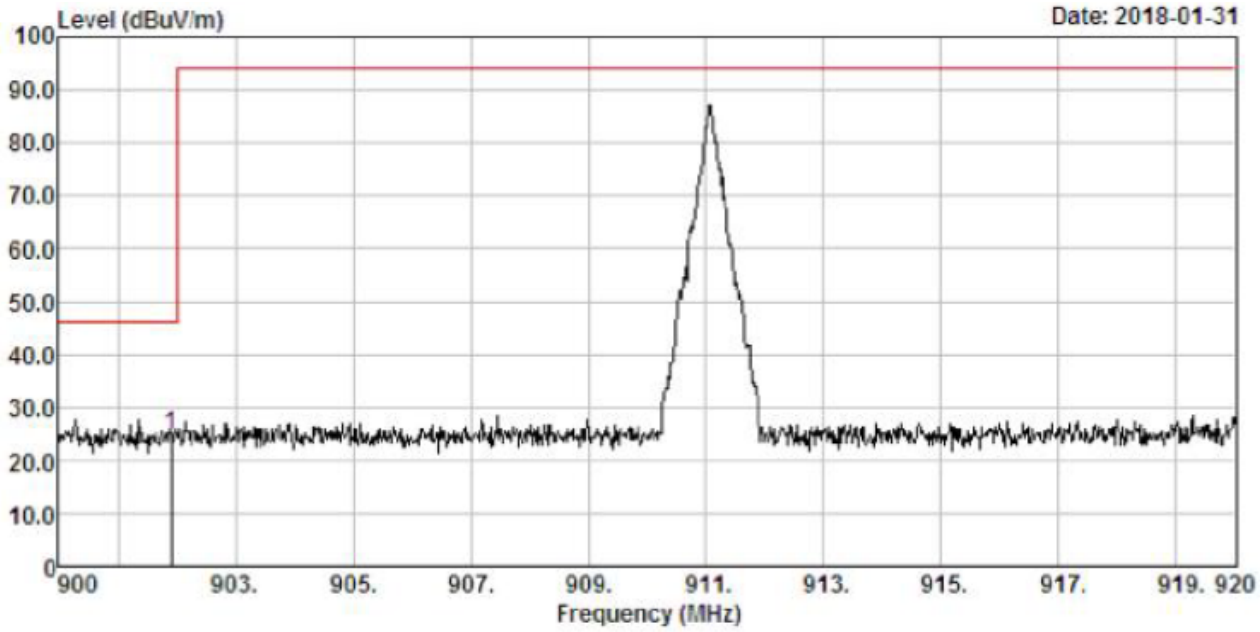
8.3 TEST RESULTS

Horizontal:



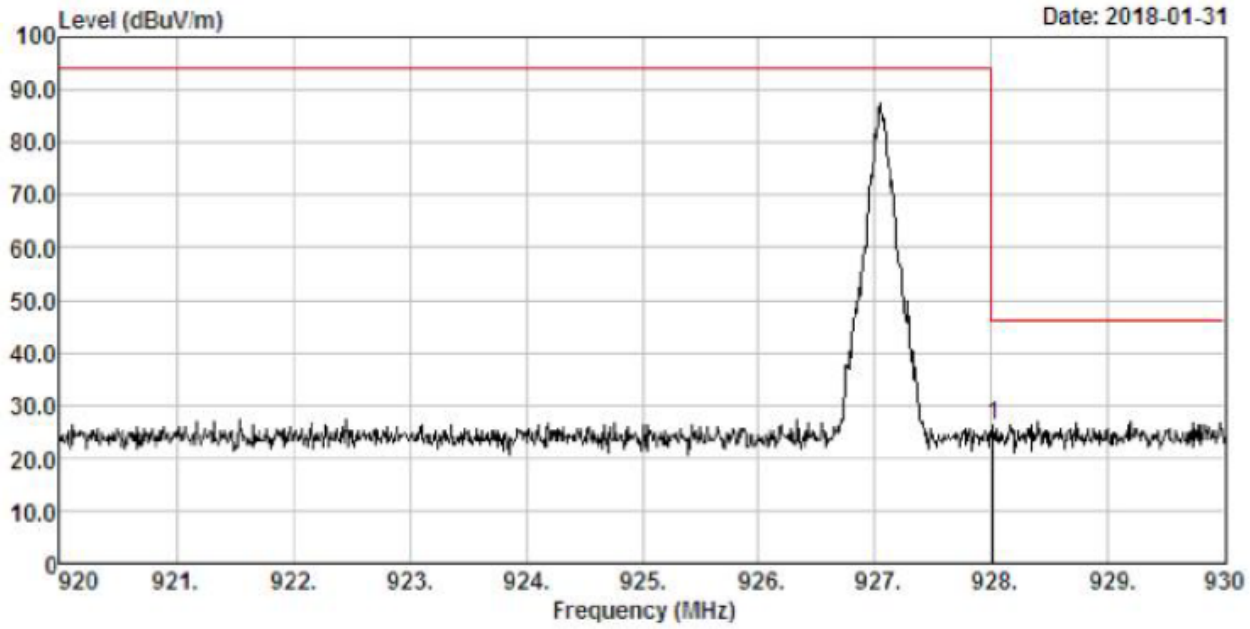
No.	Freq MHz	Cable Loss dB	ANT Factor dB	Receiver Reading dBuV/m	Preamp Factor dB	Emission Level dBuV/m	Limit dBuV/m	Over Limit dB	Remark
1.	901.921	4.14	22.61	26.86	31.15	22.46	46.00	-23.54	Peak

Vertical:



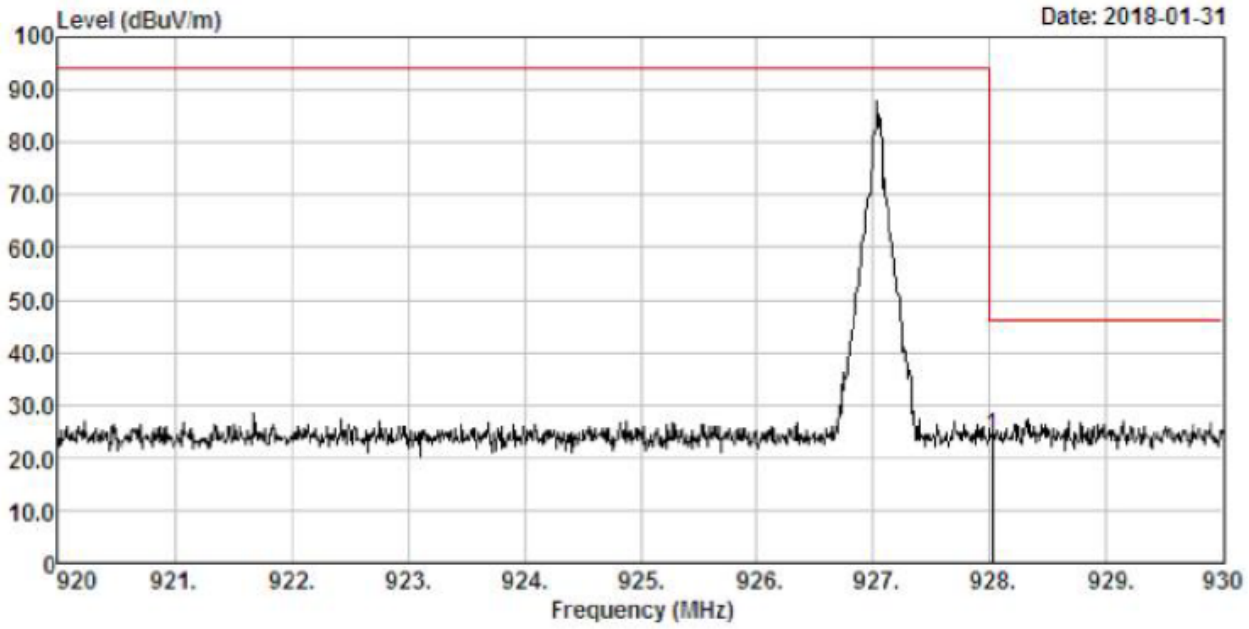
No.	Freq MHz	Cable Loss dB	ANT Factor dB	Receiver Reading dBuV/m	Preamp Factor dB	Emission Level dBuV/m	Limit dBuV/m	Over Limit dB	Remark
1.	901.901	4.14	22.61	29.17	31.15	24.77	46.00	-21.23	Peak

Horizontal:



No.	Freq MHz	Cable Loss dB	ANT Factor dB	Receiver Reading dBuV/m	Preamp Factor dB	Emission Level dBuV/m	Limit dBuV/m	Over Limit dB	Remark
1.	928.010	4.16	23.01	30.02	31.16	26.03	46.00	-19.97	Peak

Vertical:



No.	Freq MHz	Cable Loss dB	ANT Factor dB	Receiver Reading dBuV/m	Preamp Factor dB	Emission Level dBuV/m	Limit dBuV/m	Over Limit dB	Remark
1.	928.020	4.16	23.01	28.14	31.16	24.15	46.00	-21.85	Peak

9 20 dB Bandwidth Measurement

Test Requirement : FCC Part 15C Section 15.215(c)/Part 2 J Section 2.1049

Test Method : ANSI C63.10:2013

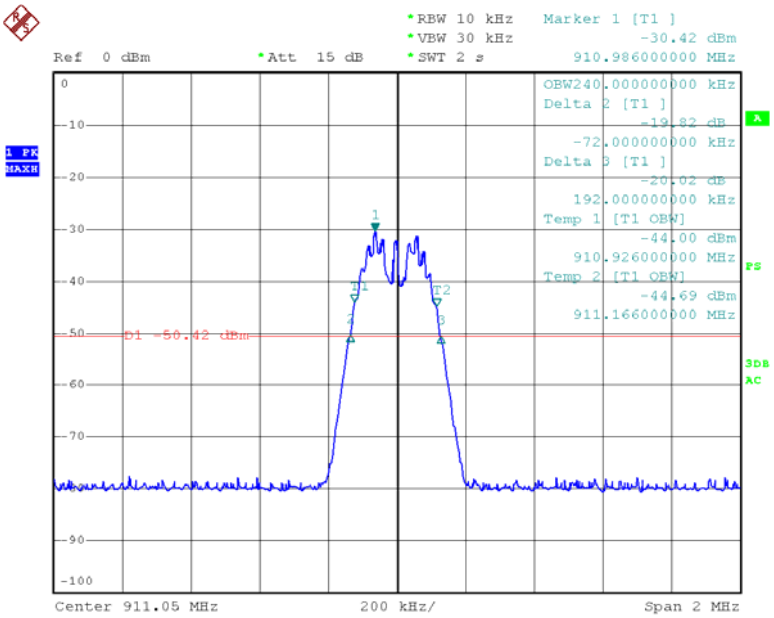
9.1 Test Procedure

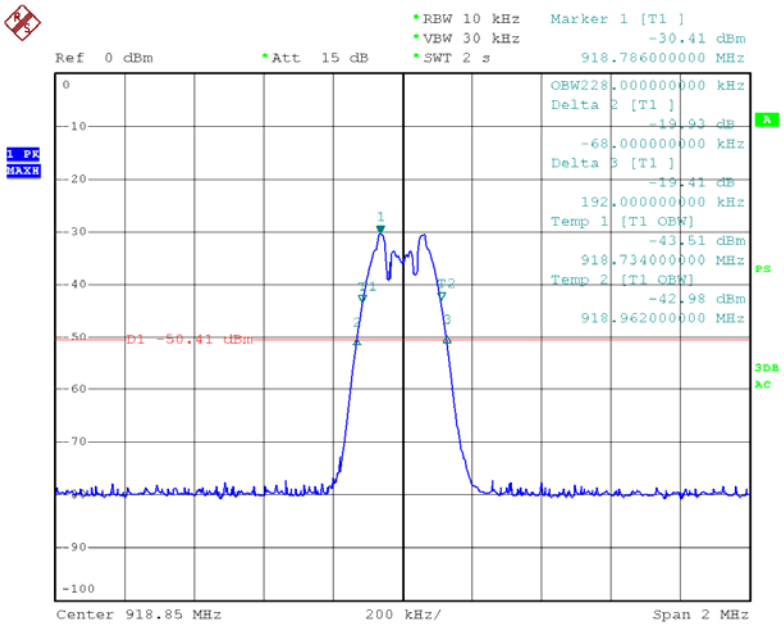
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;

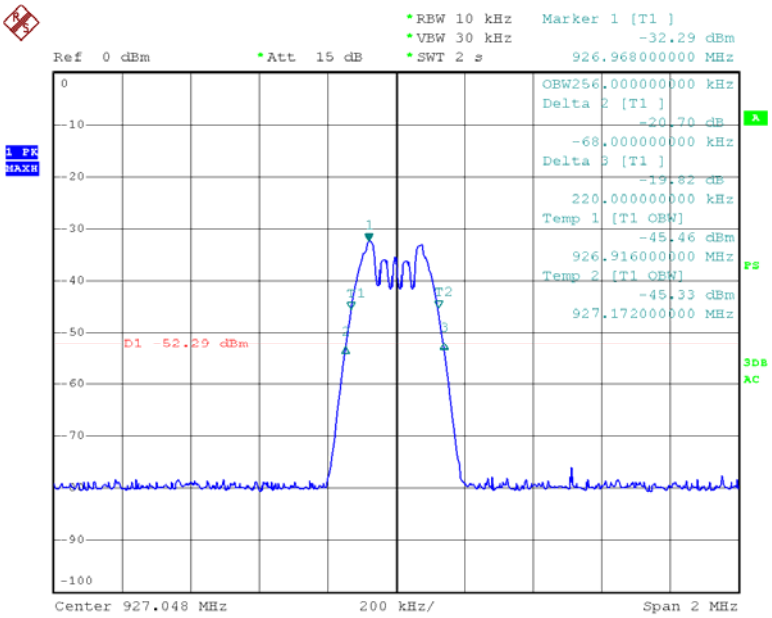
2. Set the spectrum analyzer: RBW = 10kHz, VBW = 30kHz

9.2 Test Result

Channel number	Channel frequency (MHz)	20dB Down BW(kHz)
01	911.05	264
02	918.85	260
04	927.05	288



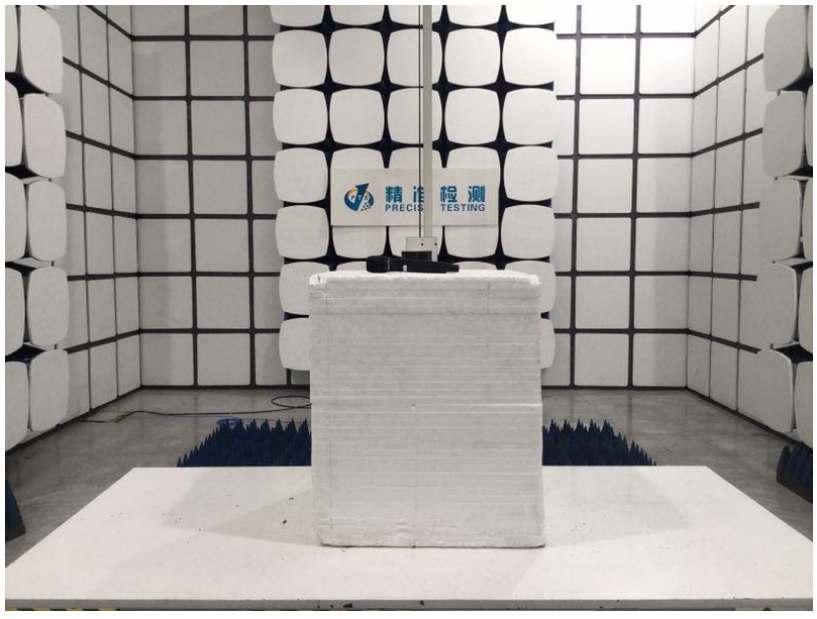

RBW 10 kHz
VBW 30 kHz
SWT 2 s
Marker 1 [T1]
-30.41 dBm
918.786000000 MHz
Ref 0 dBm
Att 15 dB
OBW228.000000000 kHz
Delta 2 [T1]
-19.93 dB
-68.000000000 kHz
Delta 3 [T1]
-19.41 dB
192.000000000 kHz
Temp 1 [T1 OBW]
-43.51 dBm
918.734000000 MHz
Temp 2 [T1 OBW]
-42.98 dBm
918.962000000 MHz
D1 -50.41 dBm
Center 918.85 MHz
200 kHz/
Span 2 MHz


RBW 10 kHz
VBW 30 kHz
SWT 2 s
Marker 1 [T1]
-32.29 dBm
926.968000000 MHz
Ref 0 dBm
Att 15 dB
OBW256.000000000 kHz
Delta 2 [T1]
-20.70 dB
-68.000000000 kHz
Delta 3 [T1]
-19.82 dB
220.000000000 kHz
Temp 1 [T1 OBW]
-45.46 dBm
926.916000000 MHz
Temp 2 [T1 OBW]
-45.33 dBm
927.172000000 MHz
D1 -52.29 dBm
Center 927.048 MHz
200 kHz/
Span 2 MHz

10 Antenna Requirement

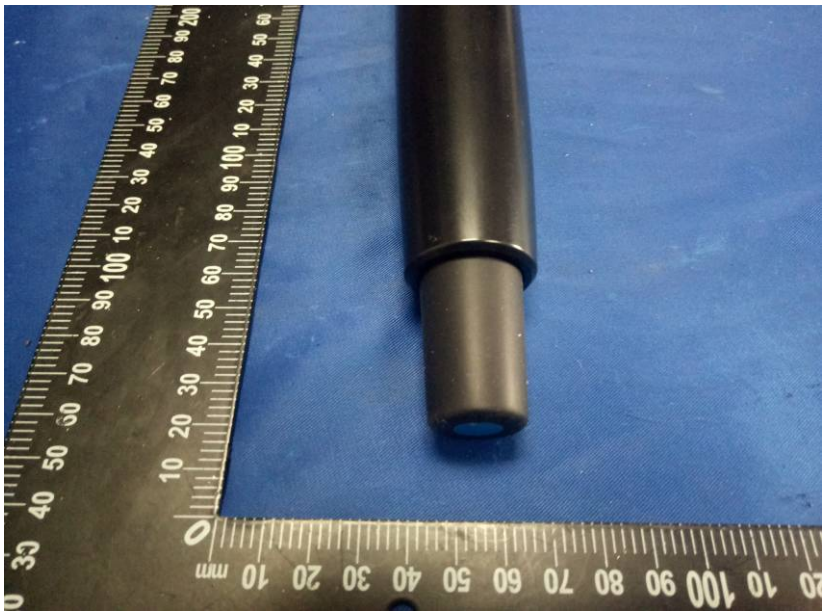
According to the FCC part15.203, a transmitter can only be sold or operated with antennas with which it was approved. This product has an internal PCB Antenna, it meet the requirement of this section.

11 TEST PHOTOS

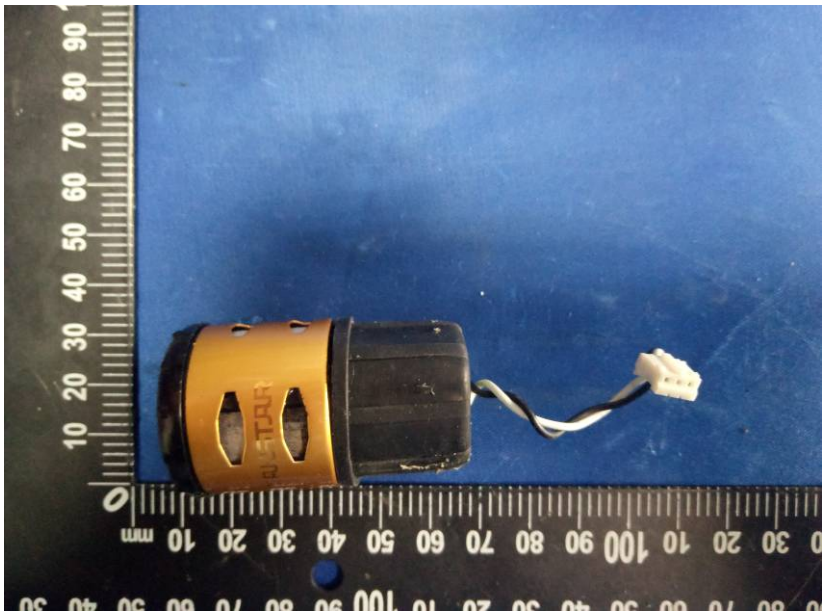


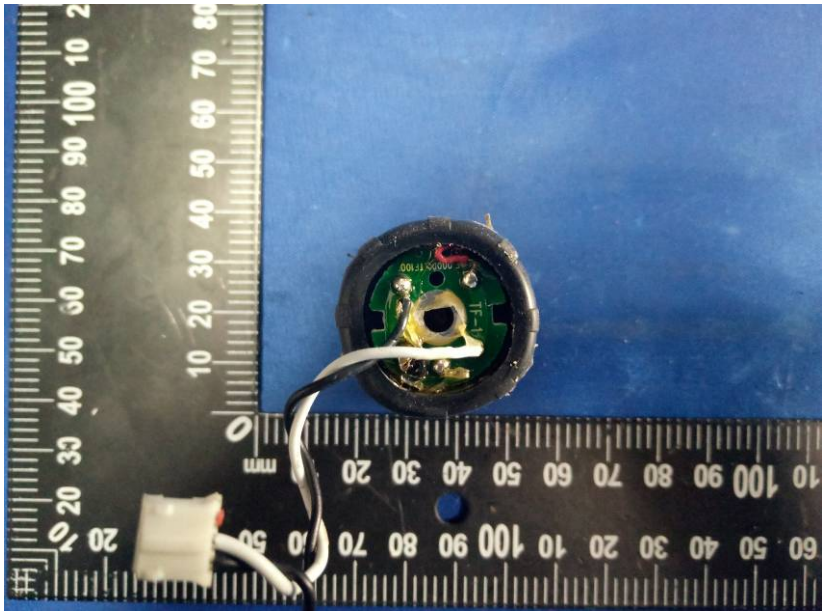
12 EUT PHOTOS

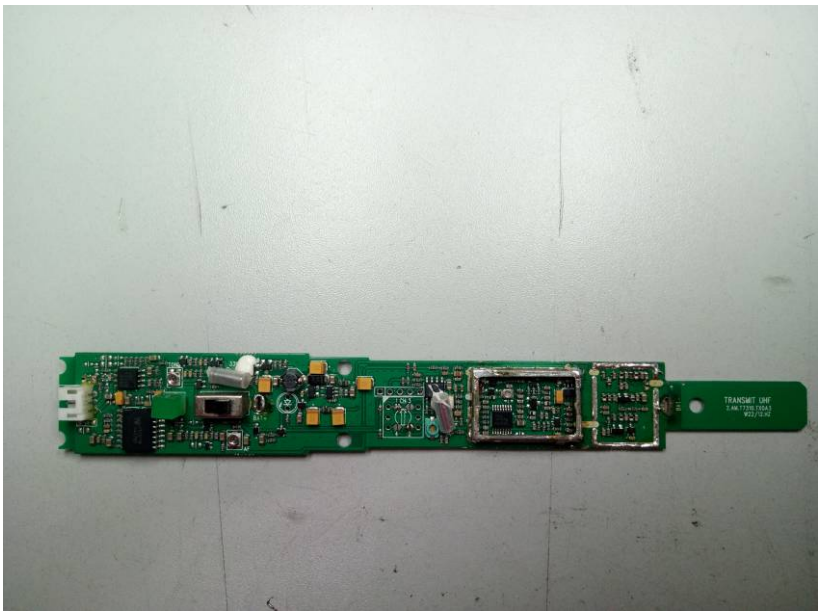

KARAOKE
TT-7220
OFF

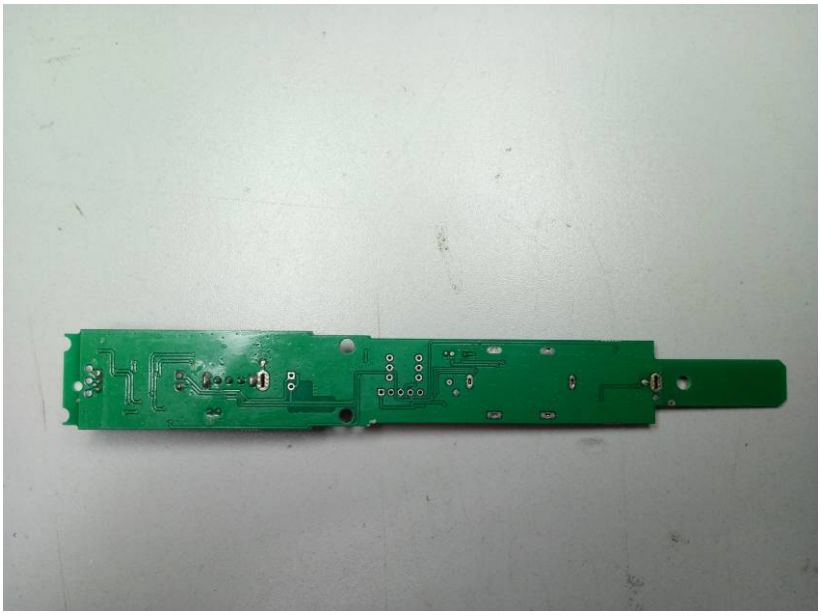


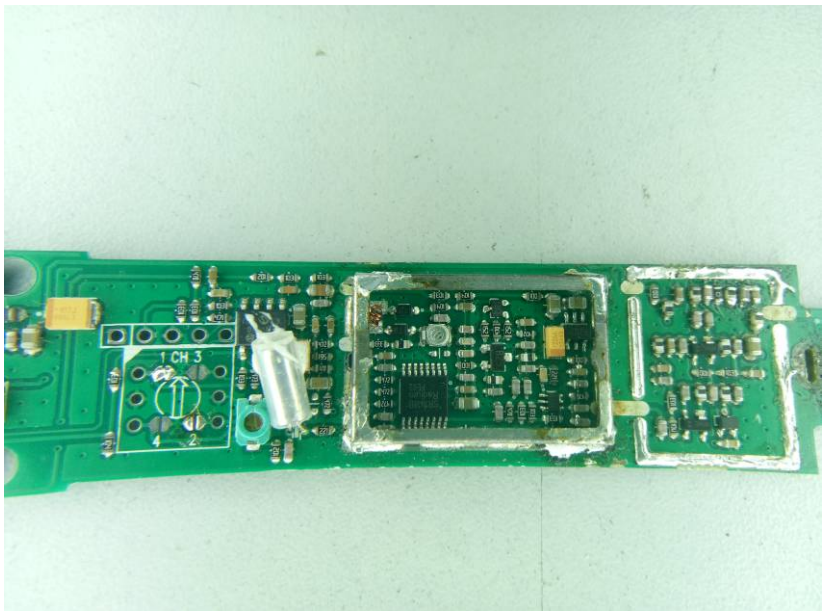

KARAOKE
TT-7220
OFF











********THE END REPORT********