RADIO TEST REPORT

Report No.:STS2106180W08

Issued for

Chengdu Just Do It Information and Technology Co., Ltd.

Rm 604&605, Unit 1, Building 2, No. 1, Section 1, Huafu Avenue, Huayang Street, Tianfu New District, Chengdu, China.

Product Name:	Bobcat IoT hotspot
Brand Name:	BOBCAT
Model Name:	Bobcat Miner 300
Series Model:	N/A
FCC ID:	2AZCKMINER300
IC:	27477-MINER300
Test Standard:	FCC Part 15.247 RSS-247 Issue 2, February 2017 RSS-Gen Issue 5 ,March 2019

Shenzhen STS Test Services Co., Ltd.
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TEST RESULT CERTIFICATION

Applicant's Name.....:	Chengdu Just Do It Information and Technology Co., Ltd.
Address .....:	Rm 604&605, Unit 1, Building 2, No. 1, Section 1, Huafu Avenue, Huayang Street, Tianfu New District, Chengdu, China.
Manufacturer's Name .....:	Chengdu Just Do It Information and Technology Co., Ltd.
Address .....:	Rm 604&605, Unit 1, Building 2, No. 1, Section 1, Huafu Avenue, Huayang Street, Tianfu New District, Chengdu, China.

Product Description

Product Name.....:	Bobcat IoT hotspot
Brand Name .....:	BOBCAT
Model Name .....:	Bobcat Miner 300
Series Model.....:	N/A
Test Standards.....:	FCC Part15.247 RSS-247 Issue 2, February 2017 RSS-Gen Issue 5 ,March 2019
Test Procedure .....:	ANSI C63.10-2013

This device described above has been tested by STS, the test results show that the equipment under test (EUT) is in compliance with the FCC/IC requirements. And it is applicable only to the tested sample identified in the report.
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Date of Test.....:	
Date of receipt of test item .....:	25 June 2021
Date (s) of performance of tests .....:	25 June 2021 ~ 07 July 2021
Date of Issue.....:	07 July 2021
Test Result.....:	**Pass**

Testing Engineer : Chris Chen

(Chris Chen)

Technical Manager : Sean She

(Sean she)

Authorized Signatory : Vita Li

(Vita Li)

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Revision History

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	07 July 2021	STS2106180W08	ALL	Initial Issue

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:
KDB 558074 D01 15.247 Meas Guidance v05r02.

FCC Part 15.247,Subpart C RSS-247 Issue 2			
Standard Section	Test Item	Judgment	Remark
15.207 RSS-Gen (8.8&7.2)	Conducted Emission	PASS	--
15.247 (a)(2) RSS-Gen 6.7 RSS-247 5.2 (a)	6dB&99% Bandwidth	PASS	--
15.247 (b)(3) RSS-247 5.4 (d)	Output Power	PASS	--
15.209 RSS-Gen 8.9/8.10	Radiated Spurious Emission	PASS	--
15.247 (d) RSS-247 5.5 RSS-Gen 8.9/8.10	Conducted Spurious & Band Edge Emission	PASS	--
15.247 (e) RSS-247 5.2 (b)	Power Spectral Density	PASS	--
15.205 RSS-Gen 8.9/8.10	Restricted bands of operation	PASS	--
Part 15.247(d)/part 15.209(a) RSS-247 5.5 RSS-Gen 8.9/8.10	Band Edge Emission	PASS	--
15.203 RSS-Gen 6.8	Antenna Requirement	PASS	--
RSS-Gen 6.11/8.11	Frequency Stability	PASS	--

NOTE:

(1) 'N/A' denotes test is not applicable in this Test Report.

(2) All tests are according to ANSI C63.10-2013.

1.1 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD
Add. : A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China
FCC test Firm Registration Number: 625569
IC test Firm Registration Number: 12108A
A2LA Certificate No.: 4338.01

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y** ± **U**, where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**, providing a level of confidence of approximately **95** %.

No.	Item	Uncertainty
1	RF output power, conducted	±0.68dB
2	Unwanted Emissions, conducted	±2.988dB
3	All emissions, radiated 9K-30MHz	±2.84dB
4	All emissions, radiated 30M-1GHz	±4.39dB
5	All emissions, radiated 1G-6GHz	±5.10dB
6	All emissions, radiated>6G	±5.48dB
7	Conducted Emission (9KHz-150KHz)	±2.79dB
8	Conducted Emission (150KHz-30MHz)	±2.80dB

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

<table>
<tr><td>Product Name/PMN</td><td>Bobcat IoT hotspot</td></tr>
<tr><td>Trade Name</td><td>BOBCAT</td></tr>
<tr><td>Model Name/HVIN</td><td>Bobcat Miner 300</td></tr>
<tr><td>Series Model</td><td>N/A</td></tr>
<tr><td>Model Difference</td><td>N/A</td></tr>
<tr><td>Product Description</td><td>The EUT is a Bobcat IoT hotspot
<table>
<tr><td>Operation Frequency:</td><td>902-928MHz</td></tr>
<tr><td>Modulation Type:</td><td>GFSK</td></tr>
<tr><td>Radio Technology:</td><td>LongFi</td></tr>
<tr><td>Number Of Channel:</td><td>CH 09</td></tr>
<tr><td>Antenna Designation:</td><td>Please refer to the Note 3.</td></tr>
<tr><td>Antenna Gain (dBi)</td><td>4dBi</td></tr>
</table></td></tr>
<tr><td>Channel List</td><td>Please refer to the Note 2.</td></tr>
<tr><td>Adapter</td><td>Model: AD012A120100UV
Input: 100-240V~ 50/60Hz 0.4A Max
Output: DC 12V 1A
Model: PS120W1000U
Input:100-240V~ 50/60Hz 0.5A Max
Output: DC 12V 1A</td></tr>
<tr><td>Battery</td><td>Rated Voltage: 3V
Capacity: 40mAh</td></tr>
<tr><td>Hardware version number</td><td>G285-V1.0</td></tr>
<tr><td>Software version number/FVIN</td><td>2019.11.06.0</td></tr>
<tr><td>Serial Numbers</td><td>285US915U212800001</td></tr>
<tr><td>Connecting I/O Port(s)</td><td>Please refer to the Note 1.</td></tr>
</table>

Note:

1. For a more detailed features description, please refer to the manufacturer’s specifications or the User Manual.

2.

Channel List					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	904.00	04	905.30	07	923.30
02	904.70	05	905.60	08	924.50
03	905.10	06	915.00	09	926.00

3.

Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	BOBCAT	Bobcat Miner 300	External	N/A	4dBi	LongFi ANT

Note: The antenna information refer the manufacturer provide report, applicable only to the tested sample identified in the report.

2.2 DESCRIPTION OF THE TEST MODES

For conducted test items and radiated spurious emissions
Each of these EUT operation mode(s) or test configuration mode(s) mentioned below was evaluated respectively.

Worst Mode	Description	Data/Modulation
Mode 1	TX CH01(904MHz)	LongFi
Mode 2	TX CH06(915MHz)	LongFi
Mode 3	TX CH09(926MHz)	LongFi

Note:

(1) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported.

(2) We tested for all available U.S. voltage and frequencies (For 120V, 50/60Hz and 240V, 50/60Hz) for which the device is capable of operation, and the worst case of 120V/ 60Hz is shown in the report.

(3) The battery is fully-charged during the radiated and RF conducted test.

For AC Conducted Emission

Test Case	
AC Conducted Emission	Mode 4 : Keeping TX

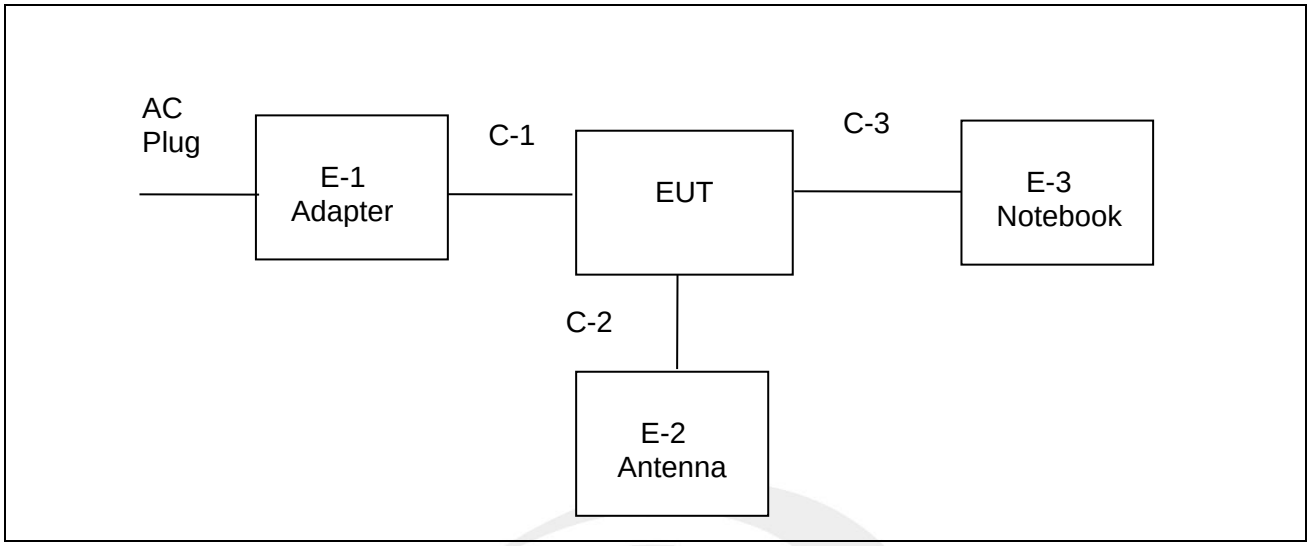
2.3 TEST SOFTWARE AND POWER LEVEL

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level.

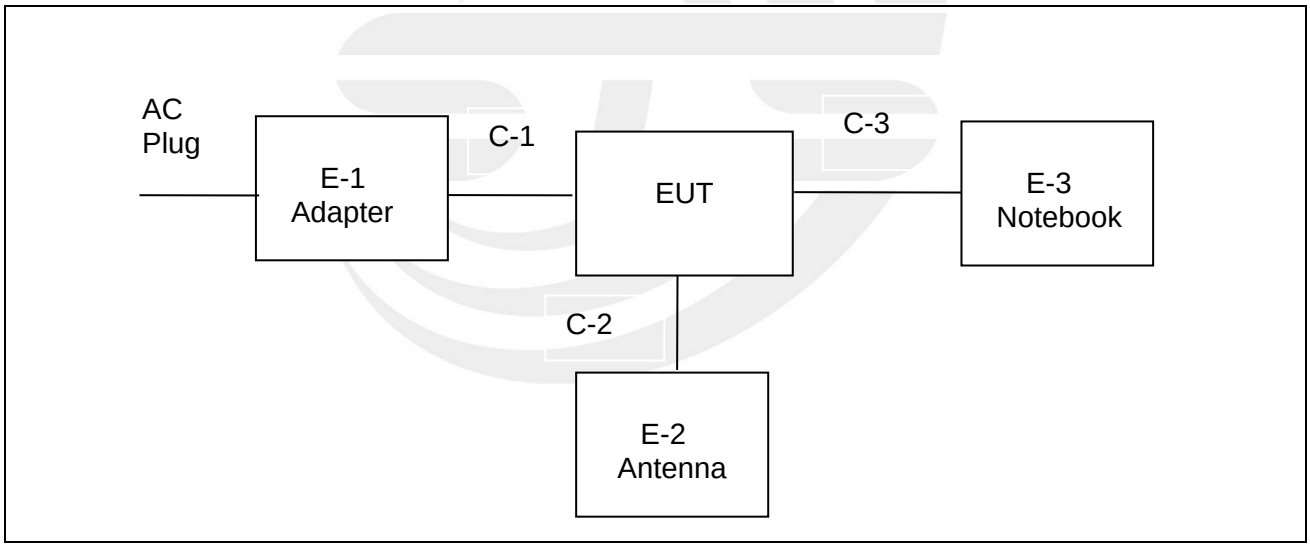
RF Function	Type	Mode Or Modulation type	Ant Gain(dBi)	Power Class	Software For Testing
Other SRD	902—928MHz	LongFi	4	Default	SecureCRTPortable

2.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiated Spurious Emission Test



Conducted Emission Test



2.5 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

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.

Necessary accessories

Item	Equipment	Mfr/Brand	Model/Type No.	Length	Note
E-1	Adapter	N/A	AD012A120100UV	N/A	N/A
E-2	Antenna	N/A	N/A	N/A	N/A
C-1	DC Cable	N/A	N/A	155cm	NO
C-2`	Signal Cable	N/A	N/A	100CM	NO

Support units

Item	Equipment	Mfr/Brand	Model/Type No.	Length	Note
E-3	Notebook	LENOVO	ThinkPad E470	N/A	N/A
C-3	USB Cable	N/A	N/A	80cm	NO

Note:

(1) For detachable type I/O cable should be specified the length in cm in『Length』column.
(2) “YES” is means “with core”; “NO” is means “without core”.

2.6 EQUIPMENTS LIST

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2020.10.12	2021.10.11
Signal Analyzer	R&S	FSV 40-N	101823	2020.10.10	2021.10.09
Active loop Antenna	ZHINAN	ZN30900C	16035	2019.07.11	2021.07.10
Bilog Antenna	TESEQ	CBL6111D	34678	2020.10.12	2022.10.11
Horn Antenna	SCHWARZBECK	BBHA 9120D	02014	2019.10.15	2021.10.14
SHF-EHF Horn Antenna (18G-40GHz)	A-INFO	LB-180400-KF	J211020657	2020.10.12	2022.10.11
Pre-Amplifier (0.1M-3GHz)	EM	EM330	060665	2020.10.12	2021.10.11
Pre-Amplifier (1G-18GHz)	SKET	LNPA-01018G-45	SK2018080901	2020.10.12	2021.10.11
Pre-Amplifier (18G-40GHz)	SKET	LNPA-1840-50	SK2018101801	2020.10.10	2021.10.09
Temperature & Humidity	HH660	Mieo	N/A	2020.10.13	2021.10.12
Turn table	EM	SC100_1	60531	N/A	N/A
Antenna mast	EM	SC100	N/A	N/A	N/A
Test SW	FARAD	EZ-EMC(Ver.STSLAB-03A1 RE)			

Conduction Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2020.10.12	2021.10.11
LISN	R&S	ENV216	101242	2020.10.12	2021.10.11
LISN	EMCO	3810/2NM	23625	2020.10.12	2021.10.11
Temperature & Humidity	HH660	Mieo	N/A	2020.10.13	2021.10.12
Test SW	FARAD	EZ-EMC(Ver.STSLAB-03A1 CE)			

RF Connected Test

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Power Sensor	Keysight	U2021XA	MY55520005	2020.10.10	2021.10.09
			MY55520006	2020.10.10	2021.10.09
			MY56120038	2020.10.10	2021.10.09
			MY56280002	2020.10.10	2021.10.09
Signal Analyzer	Agilent	N9020A	MY51110105	2021.03.04	2022.03.03
Temperature & Humidity	HH660	Mieo	N/A	2020.10.13	2021.10.12
Test SW	FARAD	EZ-EMC(Ver.STSLAB-03A1 RE)			

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION LIMITS

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 the limits in the following table.

FREQUENCY (MHz)	Conducted Emission limit (dBuV)	
	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

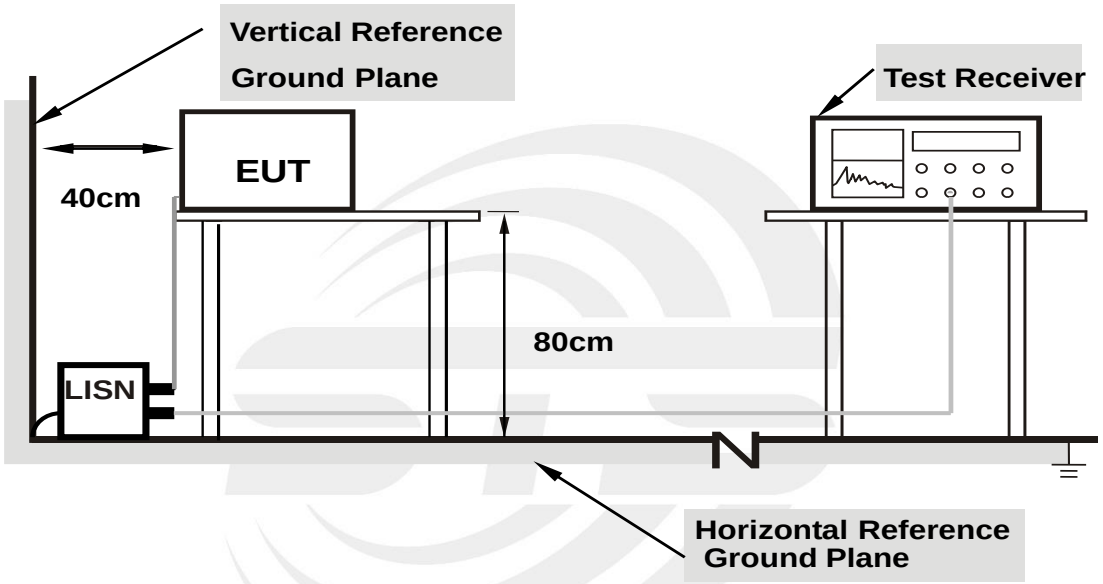
The following table is the setting of the receiver

Receiver Parameters	**Setting**
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

3.2 TEST PROCEDURE

a. The EUT is 0.8 m from the horizontal ground plane and 0.4 m from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments are powered from additional LISN(s). The LISN provides 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN is at least 80 cm from the nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.3 TEST SETUP



Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes support units.

3.4 EUT OPERATING CONDITIONS

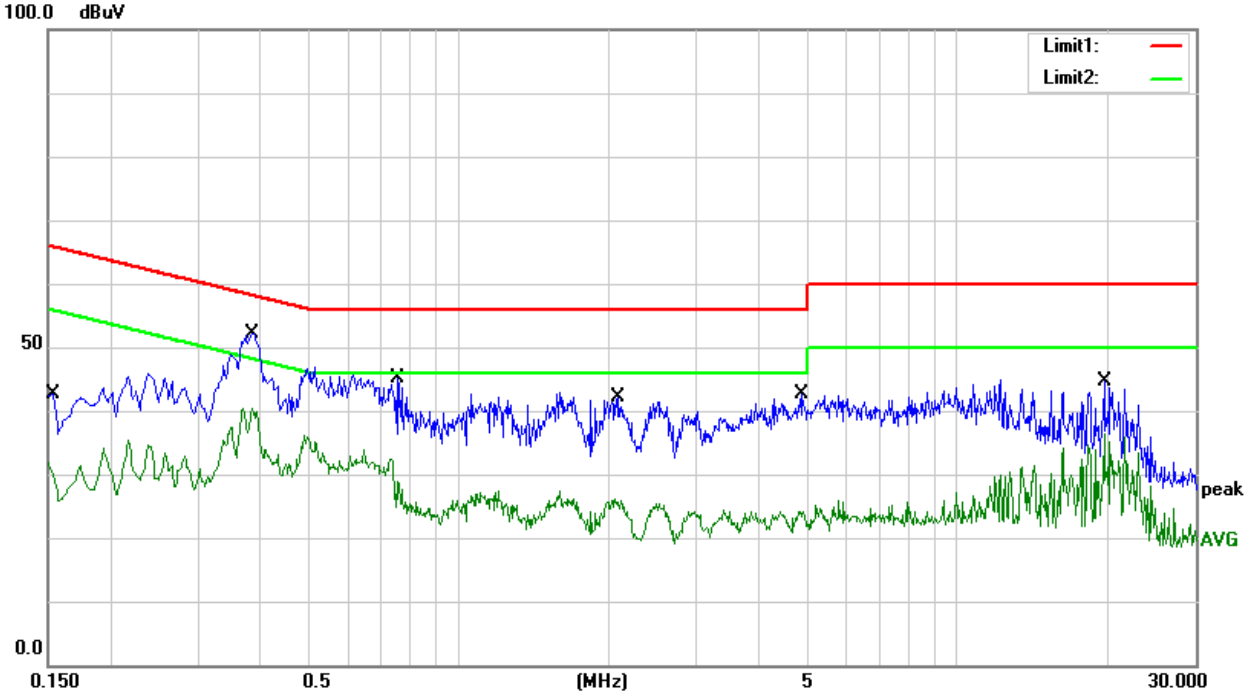
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

3.5 TEST RESULTS

Temperature:	26.2(C)	Relative Humidity:	53%RH
Test Voltage:	AC 120V/60Hz	Phase:	L
Test Mode:	Mode 4		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1516	10.69	20.33	31.02	55.91	-24.89	QP
2	0.1540	22.21	20.33	42.54	65.78	-23.24	AVG
3	0.3860	31.53	20.57	52.10	58.15	-6.05	QP
4	0.3860	19.86	20.57	40.43	48.15	-7.72	AVG
5	0.7540	24.90	20.34	45.24	56.00	-10.76	QP
6	0.7540	8.42	20.34	28.76	46.00	-17.24	AVG
7	2.0940	21.86	20.30	42.16	56.00	-13.84	QP
8	2.0940	5.48	20.30	25.78	46.00	-20.22	AVG
9	4.8980	22.12	20.45	42.57	56.00	-13.43	QP
10	4.8980	3.78	20.45	24.23	46.00	-21.77	AVG
11	19.7100	21.72	22.83	44.55	60.00	-15.45	QP
12	19.7100	12.34	22.83	35.17	50.00	-14.83	AVG

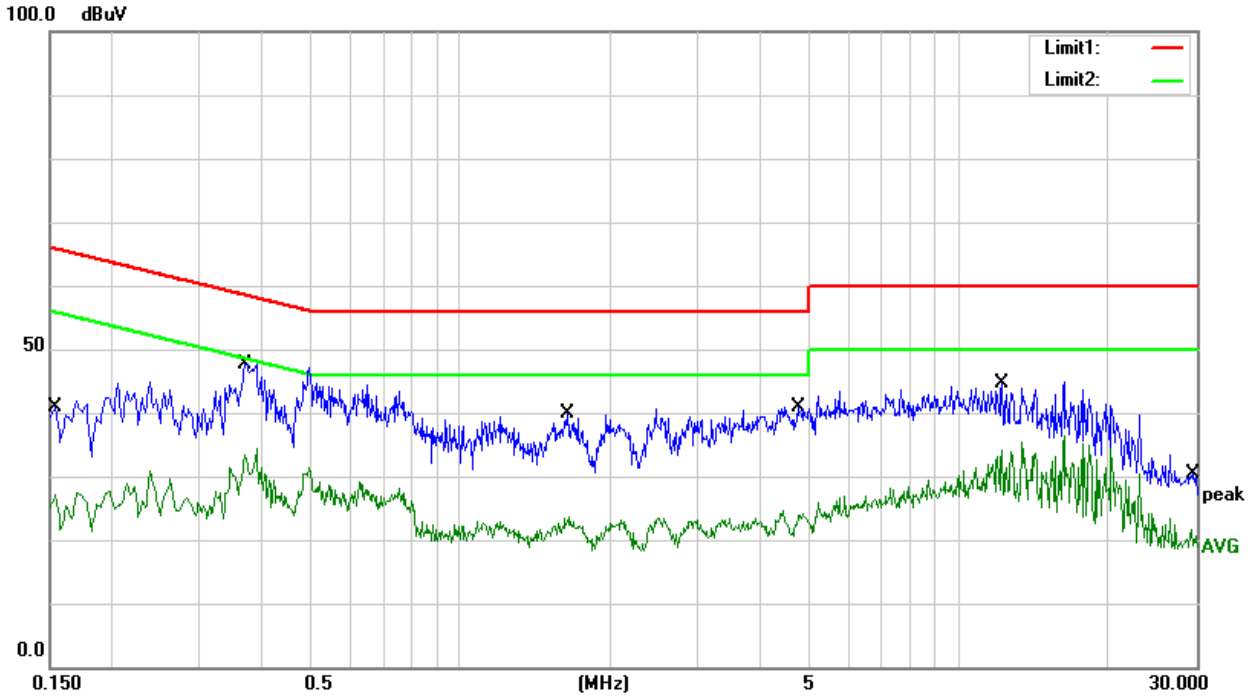
Remark:
1. All readings are Quasi-Peak and Average values
2. Margin = Result (Result =Reading + Factor)–Limit
3. Factor=LISN factor+Cable loss+Limiter (10dB)



Temperature:	26.2(C)	Relative Humidity:	53%RH
Test Voltage:	AC 120V/60Hz	Phase:	N
Test Mode:	Mode 4		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1540	20.52	20.33	40.85	65.78	-24.93	QP
2	0.1540	6.71	20.33	27.04	55.78	-28.74	AVG
3	0.3700	26.94	20.60	47.54	58.50	-10.96	QP
4	0.3700	13.87	20.60	34.47	48.50	-14.03	AVG
5	1.6380	19.53	20.30	39.83	56.00	-16.17	QP
6	1.6380	3.18	20.30	23.48	46.00	-22.52	AVG
7	4.7660	20.43	20.45	40.88	56.00	-15.12	QP
8	4.7660	3.73	20.45	24.18	46.00	-21.82	AVG
9	12.1980	23.18	21.44	44.62	60.00	-15.38	QP
10	12.1980	12.64	21.44	34.08	50.00	-15.92	AVG
11	29.3740	7.53	22.90	30.43	60.00	-29.57	QP
12	29.3740	-2.18	22.90	20.72	50.00	-29.28	AVG

Remark:
1. All readings are Quasi-Peak and Average values
2. Margin = Result (Result =Reading + Factor)–Limit
3. Factor=LISN factor+Cable loss+Limiter (10dB)



4. RADIATED EMISSION MEASUREMENT

4.1 RADIATED EMISSION LIMITS

In any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the Restricted band specified on Part15.205(a)&209(a) , RSS-Gen Issue 5 and RSS-247 Issue 2, February 2017 (5.5) limit in the table and according to ANSI C63.10-2013 below has to be followed.

LIMITS OF RADIATED EMISSION MEASUREMENT (Frequency Range 9kHz-1000MHz)

Frequencies (MHz)	Field Strength (micorvolts/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

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	(dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

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

LIMITS OF RESTRICTED FREQUENCY BANDS

FCC:

FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (GHz)
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41			

IC:

FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (GHz)
0.090 - 0.110	149.9 - 150.05	9.0 - 9.2
0.495 - 0.505	156.52475 - 156.52525	9.3 - 9.5
2.1735 - 2.1905	156.7 - 156.9	10.6 - 12.7
3.020 - 3.026	162.0125 - 167.17	13.25 - 13.4
4.125 - 4.128	167.72 - 173.2	14.47 - 14.5
4.17725 - 4.17775	240 – 285	15.35 - 16.2
4.20725 - 4.20775	322 - 335.4	17.7 - 21.4
5.677 - 5.683	399.9 - 410	22.01 - 23.12
6.215 - 6.218	608 - 614	23.6 - 24.0
6.26775 - 6.26825	960 - 1427	31.2 - 31.8
6.31175 - 6.31225	1435 - 1626.5	36.43 - 36.5
8.291 - 8.294	1645.5 - 1646.5	Above 38.6
8.362 - 8.366	1660 - 1710	
8.37625 - 8.38675	1718.8 - 1722.2	
8.41425 - 8.41475	2200 - 2300	
12.29 - 12.293	2310 - 2390	
12.51975 - 12.52025	2483.5 - 2500	
12.57675 - 12.57725	2655 - 2900	
13.36 - 13.41	3260 – 3267	
16.42 - 16.423	3332 - 3339	
16.69475 - 16.69525	3345.8 - 3358	
16.80425 - 16.80475	3500 - 4400	
25.5 - 25.67	4500 - 5150	
37.5 - 38.25	5350 - 5460	
73 - 74.6	7250 - 7750	
74.8 - 75.2	8025 – 8500	
108 – 138		

For Radiated Emission

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak/QP/AV
Start Frequency	9 KHz/150KHz(Peak/QP/AV)
Stop Frequency	150KHz/30MHz(Peak/QP/AV)
RB / VB (emission in restricted band)	200Hz (From 9kHz to 0.15MHz)/ 9KHz (From 0.15MHz to 30MHz); 200Hz (From 9kHz to 0.15MHz)/ 9KHz (From 0.15MHz to 30MHz)

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak/QP
Start Frequency	30 MHz(Peak/QP)
Stop Frequency	1000 MHz (Peak/QP)
RB / VB (emission in restricted band)	120 KHz / 300 KHz

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak/AV
Start Frequency	1000 MHz(Peak/AV)
Stop Frequency	10th carrier hamonic(Peak/AV)
RB / VB (emission in restricted band)	1 MHz / 3 MHz(Peak) 1 MHz/1/T MHz(AVG)

For Radited Band edge

Spectrum Parameter	Setting
Detector	Peak/AV
Start/Stop Frequency	Lower Band Edge: 890 to 920 MHz Upper Band Edge: 924 to 940 MHz
RB / VB	1 MHz / 3 MHz(Peak) 1 MHz/1/T MHz(AVG)

Receiver Parameter	Setting
Start ~ Stop Frequency	9kHz~90kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	90kHz~110kHz / RB 200Hz for QP
Start ~ Stop Frequency	110kHz~490kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	490kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

4.2 TEST PROCEDURE

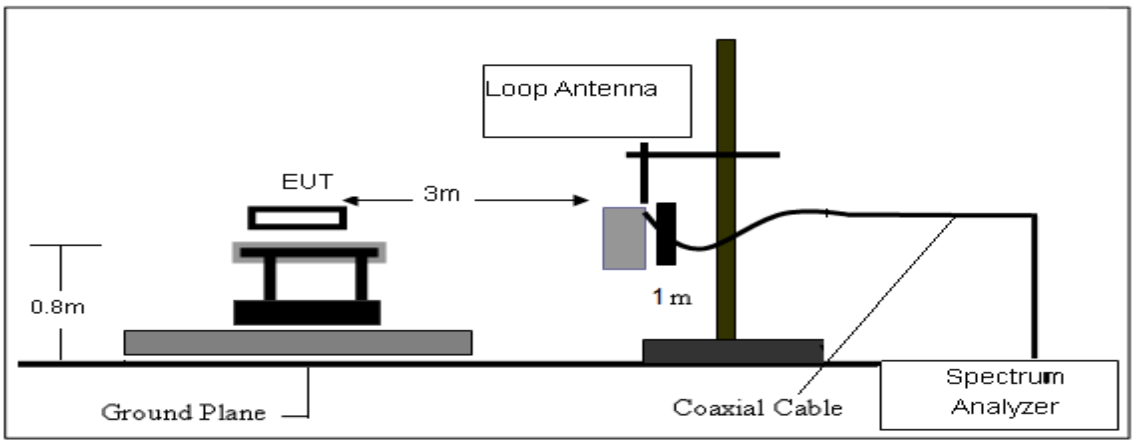
a. The measuring distance at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz, and above 1GHz.
b. The EUT was placed on the top of a rotating table 0.8 m (above 1GHz is 1.5 m) above the ground at a 3 m anechoic chamber test site. The table was rotated 360 degree to determine the position of the highest radiation.
c. The height of the equipment shall be 0.8 m (above 1GHz is 1.5 m); the height of the test antenna shall vary between 1 m to 4 m. Horizontal and vertical polarization of the antenna are set to make the measurement.
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and QuasiPeak detector mode will be re-measured.
e. If the Peak Mode measured value is compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and no additional QP Mode measurement was performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

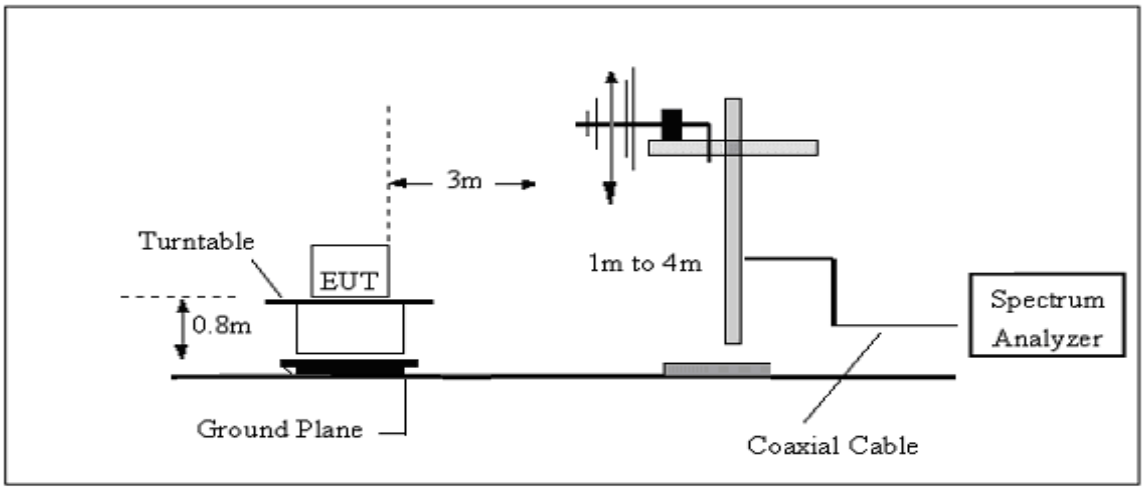
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

4.3 TEST SETUP

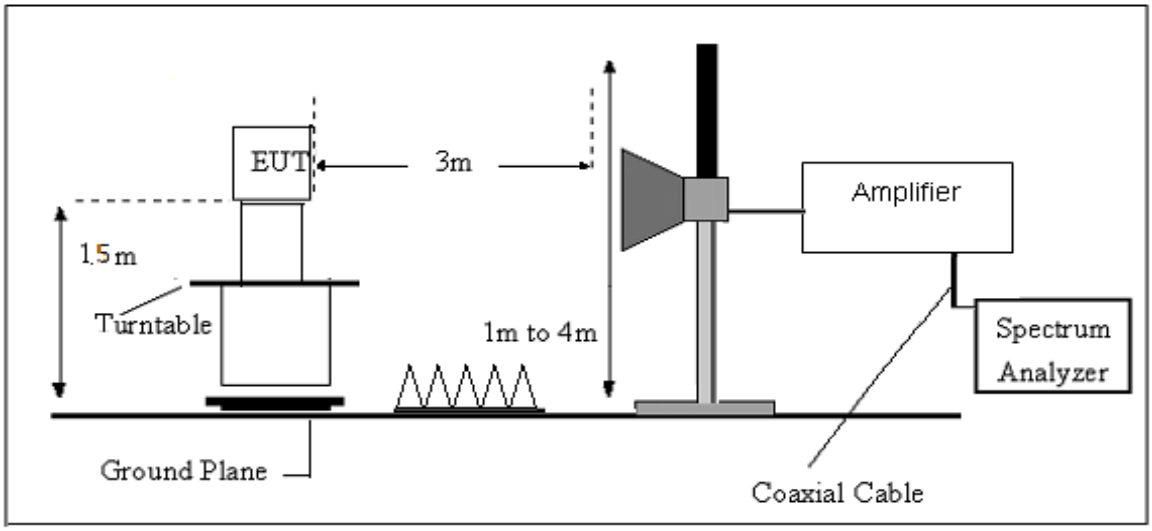
(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz



4.4 EUT OPERATING CONDITIONS

Please refer to section 3.4 of this report.

4.5 FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CL - AG

Where

FS = Field Strength

CL = Cable Attenuation Factor (Cable Loss)

RA = Reading Amplitude

AG = Amplifier Gain

AF = Antenna Factor

For example

Frequency	FS	RA	AF	CL	AG	Factor
(MHz)	(dBμV/m)	(dBμV/m)	(dB)	(dB)	(dB)	(dB)
300	40	58.1	12.2	1.6	31.9	-18.1

Factor=AF+CL-AG

4.6 TEST RESULTS

(Between 9KHz – 30 MHz)

Temperature:	23.1(C)	Relative Humidtity:	60%RH
Test Voltage:	DC 12V	Polarization:	--
Test Mode:	TX Mode		

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

Note:

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

Distance extrapolation factor =40 log (specific distance/test distance)(dB);

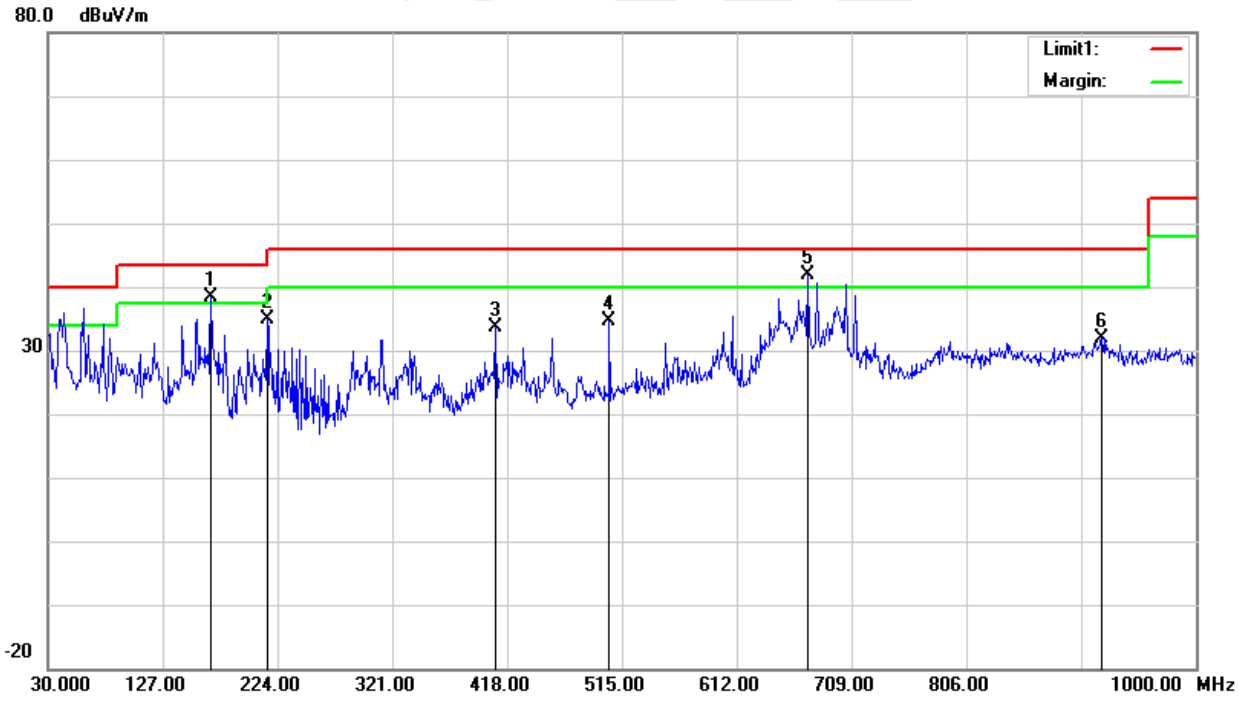
Limit line = specific limits(dBuv) + distance extrapolation factor.

(30MHz -1000MHz)

Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 12V	Phase:	Horizontal
Test Mode:	Mode 1/2/3 (Mode 1 worst mode)		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	167.7400	57.97	-19.58	38.39	43.50	-5.11	QP
2	215.2700	55.12	-20.17	34.95	43.50	-8.55	QP
3	408.3000	44.38	-10.66	33.72	46.00	-12.28	QP
4	504.3300	42.49	-7.98	34.51	46.00	-11.49	QP
5	672.1400	46.40	-4.52	41.88	46.00	-4.12	QP
6	920.4600	31.91	0.00	31.91	46.00	-14.09	QP

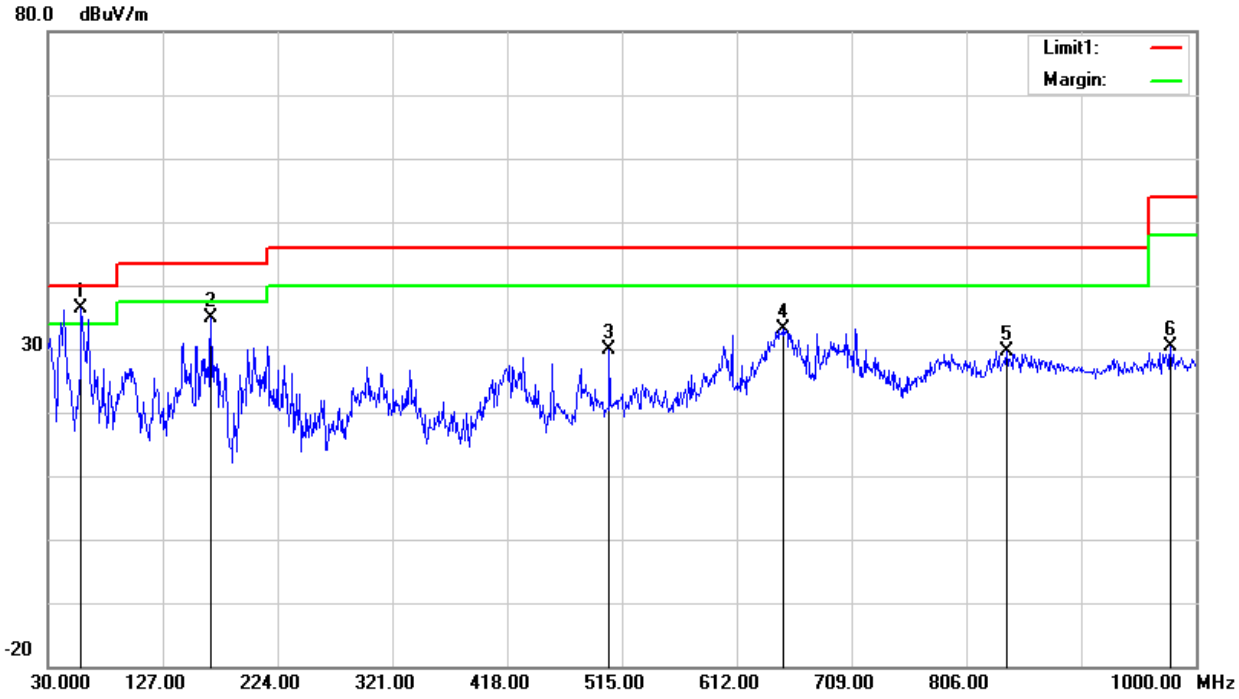
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit
2. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain



Temperature:	23.1(C)	Relative Humidity:	60%RH
Test Voltage:	DC 12V	Phase:	Vertical
Test Mode:	Mode 1/2/3 (Mode 1 worst mode)		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	58.1300	62.00	-25.58	36.42	40.00	-3.58	QP
2	167.7400	54.36	-19.58	34.78	43.50	-8.72	QP
3	504.3300	37.84	-7.98	29.86	46.00	-16.14	QP
4	650.8000	37.93	-4.90	33.03	46.00	-12.97	QP
5	839.9500	29.93	-0.34	29.59	46.00	-16.41	QP
6	978.6600	27.80	2.58	30.38	54.00	-23.62	QP

Remark:
1. Margin = Result (Result =Reading + Factor)–Limit
2. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain



(1GHz-25GHz) Spurious emission Requirements

GFSK

Frequency	Meter Reading	Amplifier	Loss	Antenna Factor	Orrected Factor	Emission Level	Limits	Margin	Detector	Comment
(MHz)	(dBμV)	（dB）	（dB）	（dB/m）	（dB）	(dBμV/m)	(dBμV/m)	(dB)	Type	
Low Channel (LongFi/904 MHz)										
3264.73	62.11	44.70	6.70	28.20	-9.80	52.31	74.00	-21.69	Pk	Vertical
3264.73	49.86	44.70	6.70	28.20	-9.80	40.06	54.00	-13.94	AV	Vertical
3264.80	61.47	44.70	6.70	28.20	-9.80	51.67	74.00	-22.33	Pk	Horizontal
3264.80	50.09	44.70	6.70	28.20	-9.80	40.29	54.00	-13.71	AV	Horizontal
4804.58	59.18	44.20	9.04	31.60	-3.56	55.62	74.00	-18.38	Pk	Vertical
4804.58	50.43	44.20	9.04	31.60	-3.56	46.87	54.00	-7.13	AV	Vertical
4804.48	58.70	44.20	9.04	31.60	-3.56	55.14	74.00	-18.86	Pk	Horizontal
4804.48	49.85	44.20	9.04	31.60	-3.56	46.29	54.00	-7.71	AV	Horizontal
5359.68	49.09	44.20	9.86	32.00	-2.34	46.75	74.00	-27.25	Pk	Vertical
5359.68	40.30	44.20	9.86	32.00	-2.34	37.96	54.00	-16.04	AV	Vertical
5359.76	47.83	44.20	9.86	32.00	-2.34	45.49	74.00	-28.51	Pk	Horizontal
5359.76	39.23	44.20	9.86	32.00	-2.34	36.89	54.00	-17.11	AV	Horizontal
7205.69	54.41	43.50	11.40	35.50	3.40	57.81	74.00	-16.19	Pk	Vertical
7205.69	44.27	43.50	11.40	35.50	3.40	47.67	54.00	-6.33	AV	Vertical
7205.80	53.87	43.50	11.40	35.50	3.40	57.27	74.00	-16.73	Pk	Horizontal
7205.80	44.98	43.50	11.40	35.50	3.40	48.38	54.00	-5.62	AV	Horizontal
Middle Channel (LongFi/915 MHz)										
3263.22	61.62	44.70	6.70	28.20	-9.80	51.82	74.00	-22.18	Pk	Vertical
3263.22	49.93	44.70	6.70	28.20	-9.80	40.13	54.00	-13.87	AV	Vertical
3263.17	61.37	44.70	6.70	28.20	-9.80	51.57	74.00	-22.43	Pk	Horizontal
3263.17	50.26	44.70	6.70	28.20	-9.80	40.46	54.00	-13.54	AV	Horizontal
4880.08	58.37	44.20	9.04	31.60	-3.56	54.81	74.00	-19.19	Pk	Vertical
4880.08	49.85	44.20	9.04	31.60	-3.56	46.29	54.00	-7.71	AV	Vertical
4879.94	59.51	44.20	9.04	31.60	-3.56	55.95	74.00	-18.05	Pk	Horizontal
4879.94	49.43	44.20	9.04	31.60	-3.56	45.87	54.00	-8.13	AV	Horizontal
5357.20	49.44	44.20	9.86	32.00	-2.34	47.10	74.00	-26.90	Pk	Vertical
5357.20	40.17	44.20	9.86	32.00	-2.34	37.83	54.00	-16.17	AV	Vertical
5357.39	47.08	44.20	9.86	32.00	-2.34	44.74	74.00	-29.26	Pk	Horizontal
5357.13	38.25	44.20	9.86	32.00	-2.34	35.91	54.00	-18.09	AV	Horizontal
7320.85	54.19	43.50	11.40	35.50	3.40	57.59	74.00	-16.41	Pk	Vertical
7320.85	43.86	43.50	11.40	35.50	3.40	47.26	54.00	-6.74	AV	Vertical
7320.34	54.58	43.50	11.40	35.50	3.40	57.98	74.00	-16.02	Pk	Horizontal
7320.34	44.31	43.50	11.40	35.50	3.40	47.71	54.00	-6.29	AV	Horizontal

High Channel (LongFi/926 MHz)										
3264.73	62.11	44.70	6.70	28.20	-9.80	52.31	74.00	-21.69	Pk	Vertical
3264.73	51.77	44.70	6.70	28.20	-9.80	41.97	54.00	-12.03	AV	Vertical
3264.85	61.49	44.70	6.70	28.20	-9.80	51.69	74.00	-22.31	Pk	Horizontal
3264.85	49.86	44.70	6.70	28.20	-9.80	40.06	54.00	-13.94	AV	Horizontal
4960.37	58.73	44.20	9.04	31.60	-3.56	55.17	74.00	-18.83	Pk	Vertical
4960.37	50.34	44.20	9.04	31.60	-3.56	46.78	54.00	-7.22	AV	Vertical
4960.33	58.88	44.20	9.04	31.60	-3.56	55.32	74.00	-18.68	Pk	Horizontal
4960.33	50.46	44.20	9.04	31.60	-3.56	46.90	54.00	-7.10	AV	Horizontal
5359.64	49.24	44.20	9.86	32.00	-2.34	46.90	74.00	-27.10	Pk	Vertical
5359.64	39.49	44.20	9.86	32.00	-2.34	37.15	54.00	-16.85	AV	Vertical
5359.61	48.15	44.20	9.86	32.00	-2.34	45.81	74.00	-28.19	Pk	Horizontal
5359.61	39.35	44.20	9.86	32.00	-2.34	37.01	54.00	-16.99	AV	Horizontal
7439.93	53.60	43.50	11.40	35.50	3.40	57.00	74.00	-17.00	Pk	Vertical
7439.93	44.63	43.50	11.40	35.50	3.40	48.03	54.00	-5.97	AV	Vertical
7439.70	54.82	43.50	11.40	35.50	3.40	58.22	74.00	-15.78	Pk	Horizontal
7439.70	44.09	43.50	11.40	35.50	3.40	47.49	54.00	-6.51	AV	Horizontal
9929.95	36.51	43.60	14.33	39.50	10.20	46.71	54.00	-7.29	AV	Horizontal

Note:

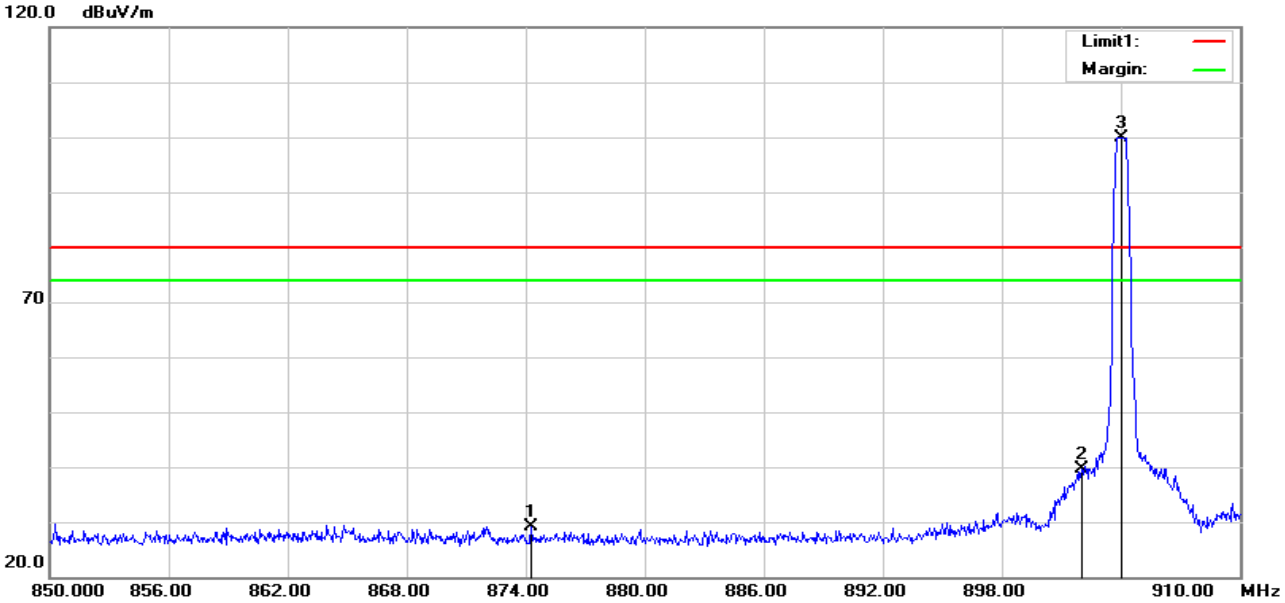
1) Factor = Antenna Factor + Cable Loss – Pre-amplifier.
   Emission Level = Reading + Factor

2) The frequency emission of peak points that did not show above the forms are at least 20dB below the limit, the frequency emission is mainly from the environment noise.

4.6 TEST RESULTS (Radited Band edge Requirements)

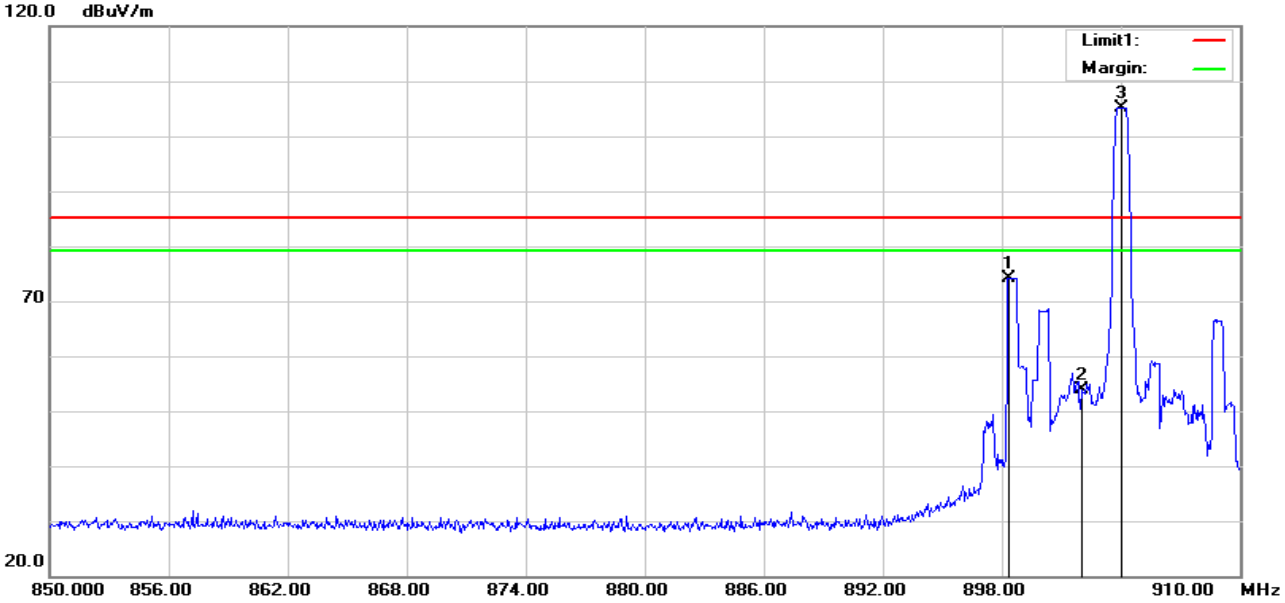
GFSK-Low

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	874.3000	29.74	-0.58	29.16	79.77	-50.61	peak
2	902.0000	39.99	-0.40	39.59	79.77	-40.18	peak
3	904.0000	100.11	-0.34	99.77	/	/	peak

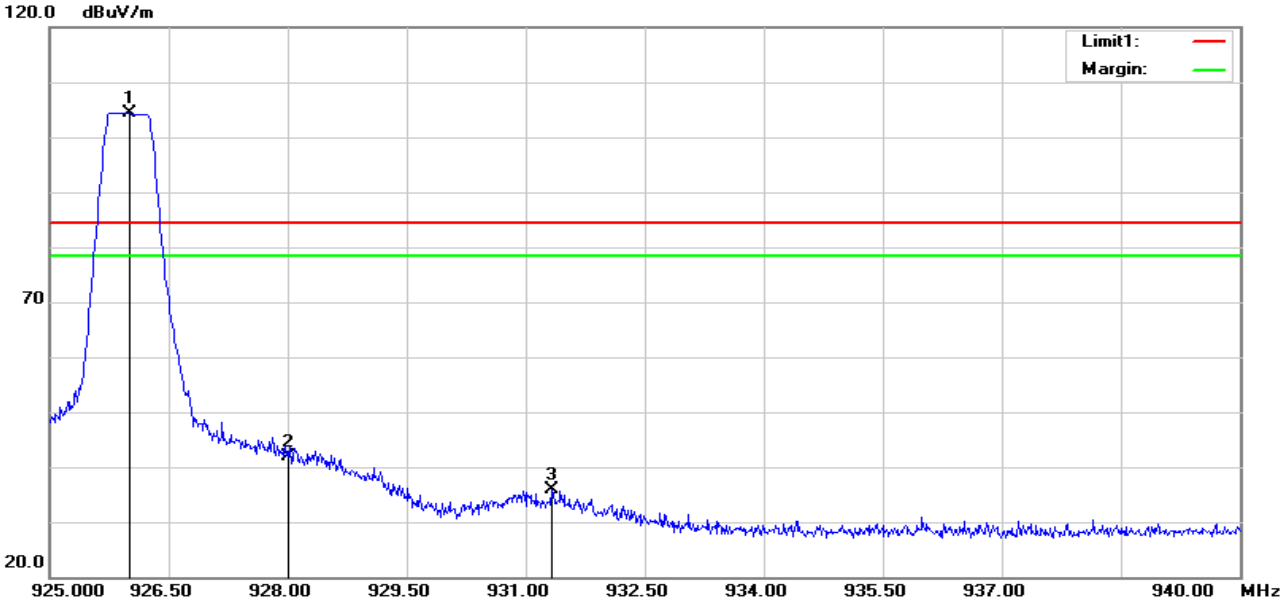
Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	898.3600	74.67	-0.49	74.18	85.10	-10.92	peak
2	902.0000	54.29	-0.40	53.89	85.10	-31.21	peak
3	904.0000	105.44	-0.34	105.10	/	/	peak

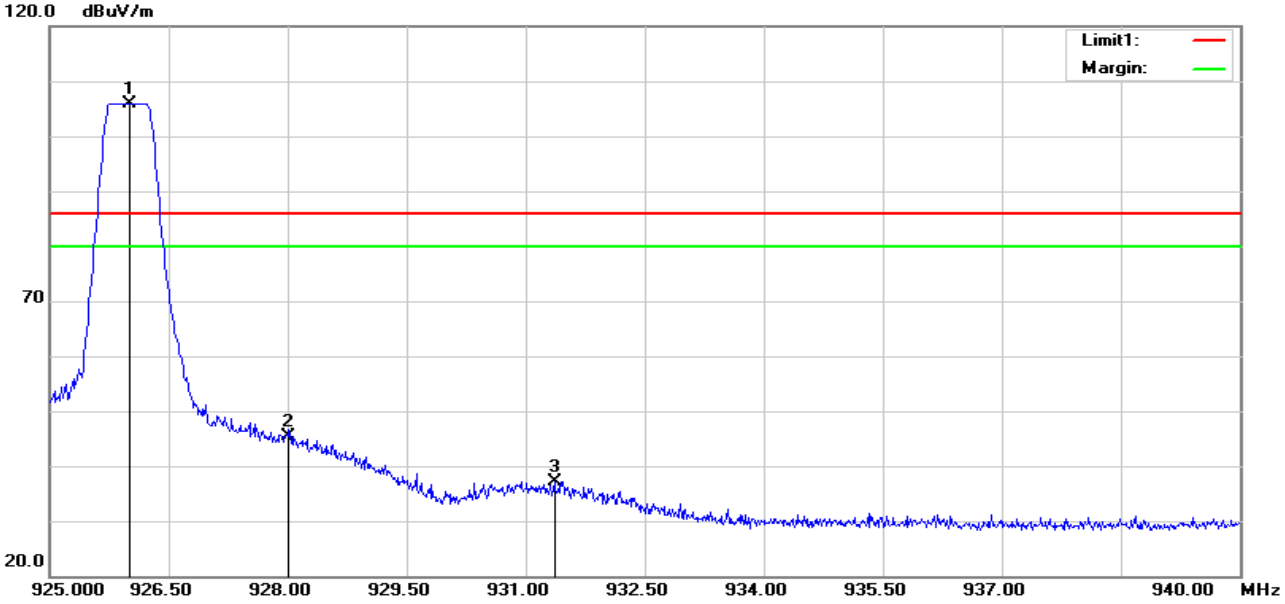
GFSK-High

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	926.0000	103.95	0.32	104.27	/	/	peak
2	928.0000	41.55	0.43	41.98	84.27	-42.29	peak
3	931.3300	35.30	0.65	35.95	84.27	-48.32	peak

Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	926.0000	105.52	0.32	105.84	/	/	peak
2	928.0000	44.98	0.43	45.41	85.84	-40.43	peak
3	931.3600	36.50	0.66	37.16	85.84	-48.68	peak

5. CONDUCTED SPURIOUS & BAND EDGE EMISSION

5.1 LIMIT

According to FCC section 15.247(d)&RSS-247 Issue 2, in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

5.2 TEST PROCEDURE

Spectrum Parameter	Setting
Detector	Peak
Start/Stop Frequency	30 MHz to 10th carrier harmonic
RB / VB (emission in restricted band)	100 KHz/300 KHz
Trace-Mode:	Max hold

For Band edge

Spectrum Parameter	Setting
Detector	Peak
Start/Stop Frequency	Lower Band Edge: 850-922 MHz Upper Band Edge: 924-950 MHz
RB / VB (emission in restricted band)	100 KHz/300 KHz
Trace-Mode:	Max hold

5.3 TEST SETUP

The EUT which is powered by the Battery, is connected to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50 Ohm; the path loss as the factor is calibrated to correct the reading. Make the measurement with the spectrum analyzer's resolution bandwidth(RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW.

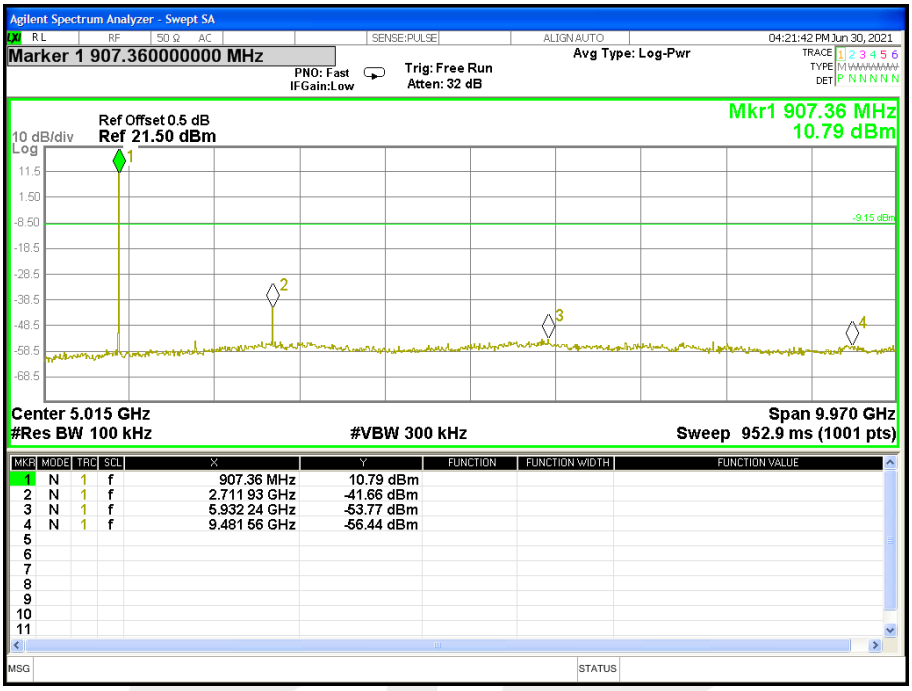
5.4 EUT OPERATION CONDITIONS

Please refer to section 3.4 of this report.

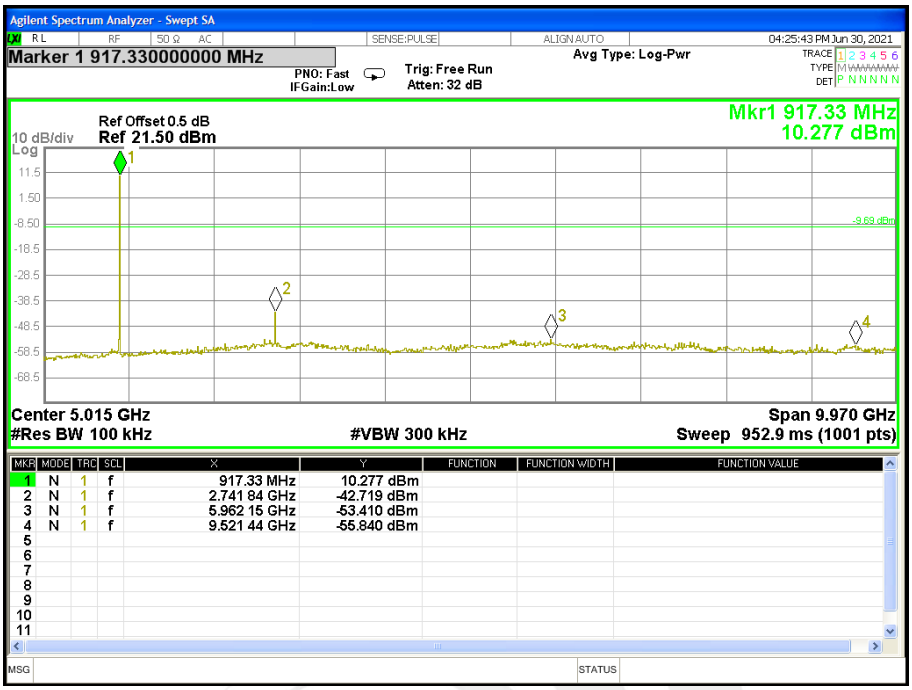
5.5 TEST RESULTS

Temperature:	25 ℃	Relative Humidity:	50%
Test Voltage:	DC 12V	Test Mode:	TX Mode /CH01, CH06, CH09

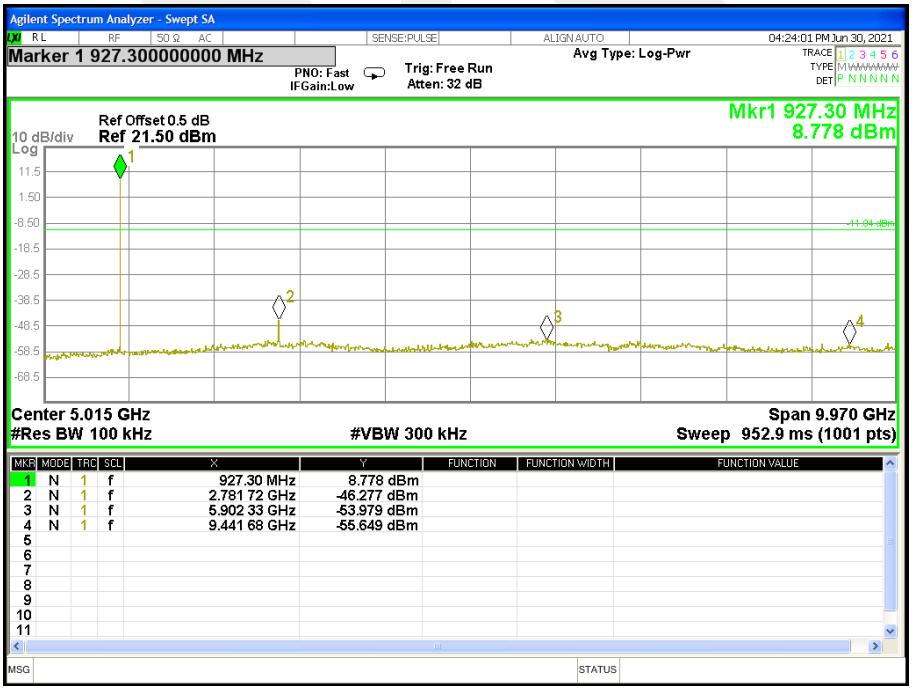
01 CH



06 CH

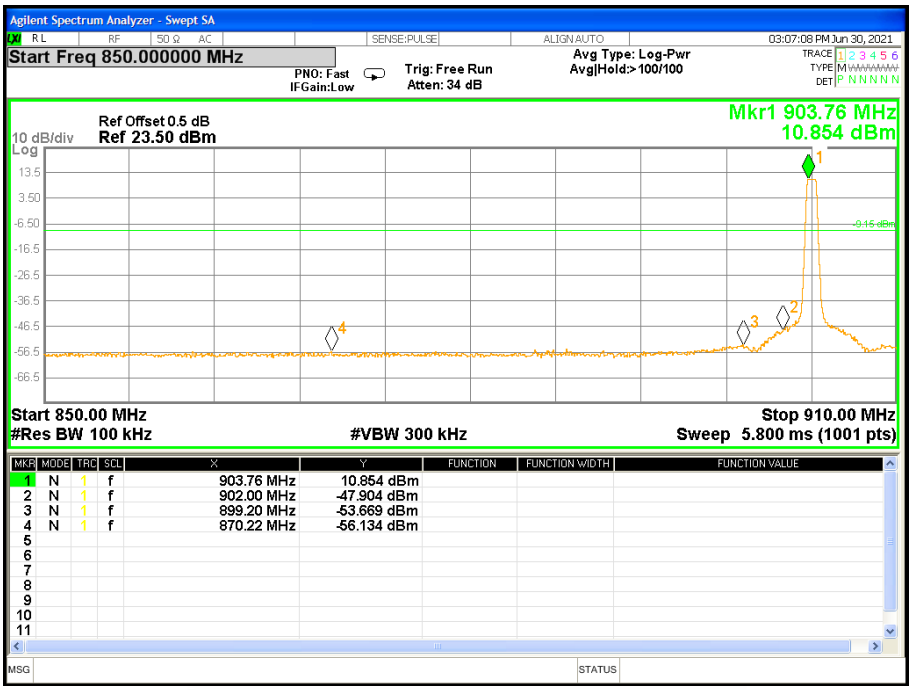

Agilent Spectrum Analyzer - Swept SA
Marker 1 917.330000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 32 dB
Avg Type: Log-Pwr
04:25:43 PM Jun 30, 2021
Ref Offset 0.5 dB
10 dB/div
Ref 21.50 dBm
Mkr1 917.33 MHz
10.277 dBm
-9.69 dBm
Center 5.015 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 9.970 GHz
Sweep 952.9 ms (1001 pts)
1 N 1 f 917.33 MHz 10.277 dBm
2 N 1 f 2.741 84 GHz -42.719 dBm
3 N 1 f 5.962 15 GHz -53.410 dBm
4 N 1 f 9.521 44 GHz -55.840 dBm

09 CH

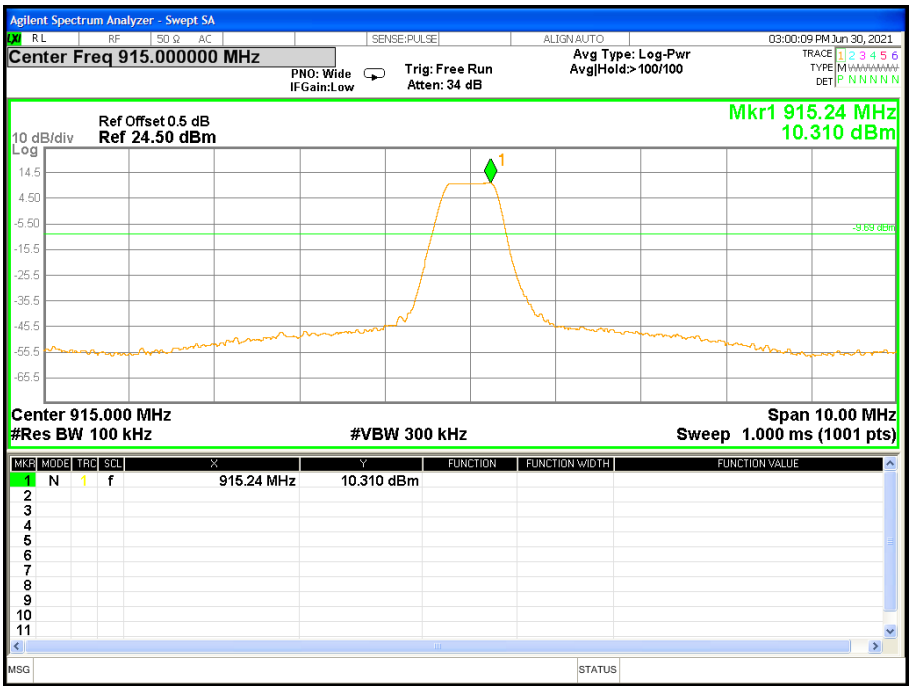

Agilent Spectrum Analyzer - Swept SA
Marker 1 927.300000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 32 dB
Avg Type: Log-Pwr
04:24:01 PM Jun 30, 2021
Ref Offset 0.5 dB
10 dB/div
Ref 21.50 dBm
Mkr1 927.30 MHz
8.778 dBm
-11.04 dBm
Center 5.015 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 9.970 GHz
Sweep 952.9 ms (1001 pts)
1 N 1 f 927.30 MHz 8.778 dBm
2 N 1 f 2.781 72 GHz -46.277 dBm
3 N 1 f 5.902 33 GHz -53.979 dBm
4 N 1 f 9.441 68 GHz -55.649 dBm

For Band edge(it's also the reference level for conducted spurious emission)

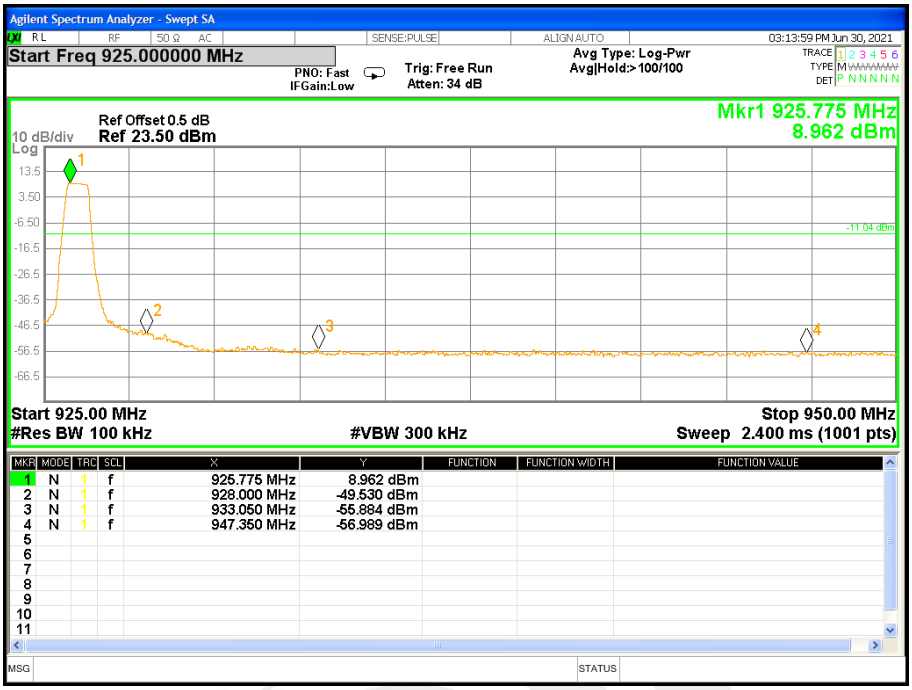
01 CH



06 CH



09 CH


Agilent Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:PULSE
ALIGN AUTO
03:13:59 PM Jun 30, 2021
Start Freq 925.000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 34 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 0.5 dB
10 dB/div
Log
Ref 23.50 dBm
Mkr1 925.775 MHz
8.962 dBm
13.5
3.50
-6.50
-16.5
-26.5
-36.5
-46.5
-56.5
-66.5
-11.04 dBm
Start 925.00 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 950.00 MHz
Sweep 2.400 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 925.775 MHz 8.962 dBm
2 N 1 f 928.000 MHz -49.530 dBm
3 N 1 f 933.050 MHz -55.884 dBm
4 N 1 f 947.350 MHz -56.989 dBm
MSG
STATUS

6. POWER SPECTRAL DENSITY TEST

6.1 LIMIT

FCC Part 15.247,Subpart C RSS-247 Issue 2				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(e) RSS-247 Issue 2	Power Spectral Density	≤8 dBm (RBW≥3KHz)	902-928	PASS

6.2 TEST PROCEDURE

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS channel bandwidth.
3. Set the RBW to: 100 kHz ≥ RBW ≥ 3 kHz.
4. Set the VBW ≥ 3 x RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

6.3 TEST SETUP

6.4 EUT OPERATION CONDITIONS

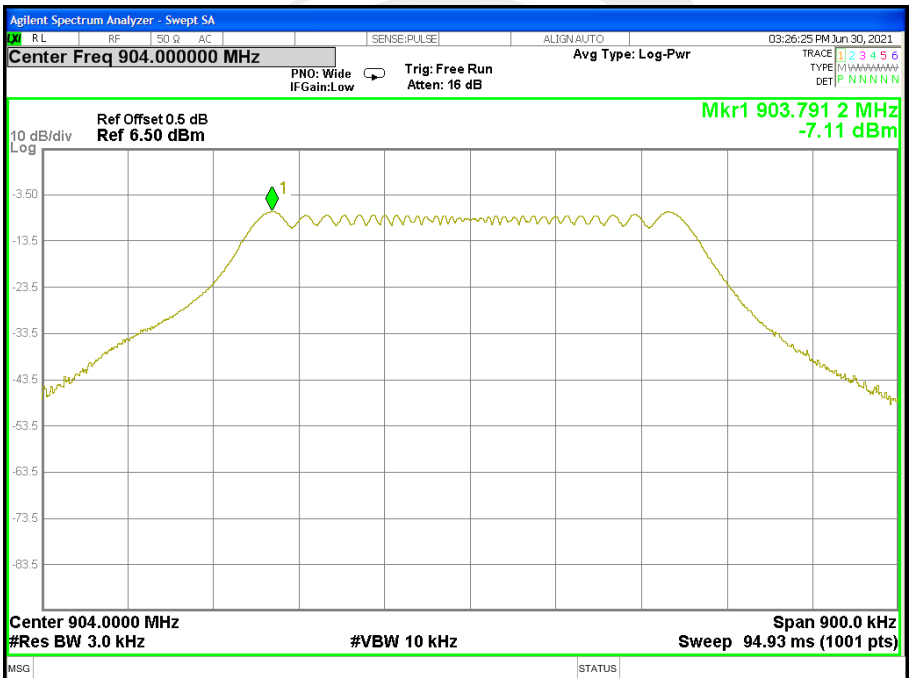
Please refer to section 3.4 of this report.

6.5 TEST RESULTS

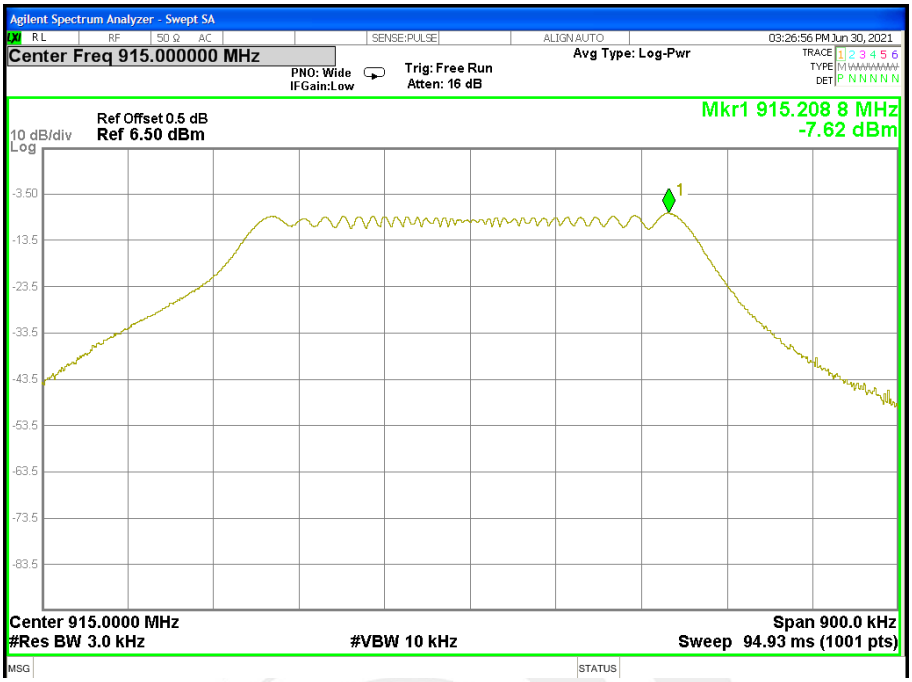
Temperature:	25 ℃	Relative Humidity:	60%
Test Voltage:	DC 12V	Test Mode:	TX Mode /CH01, CH06, CH09

Frequency (MHz)	Power Density (dBm/3kHz)	Limit (dBm/3KHz)	Result
904	-7.110	≤8	PASS
915	-7.620	≤8	PASS
926	-9.320	≤8	PASS

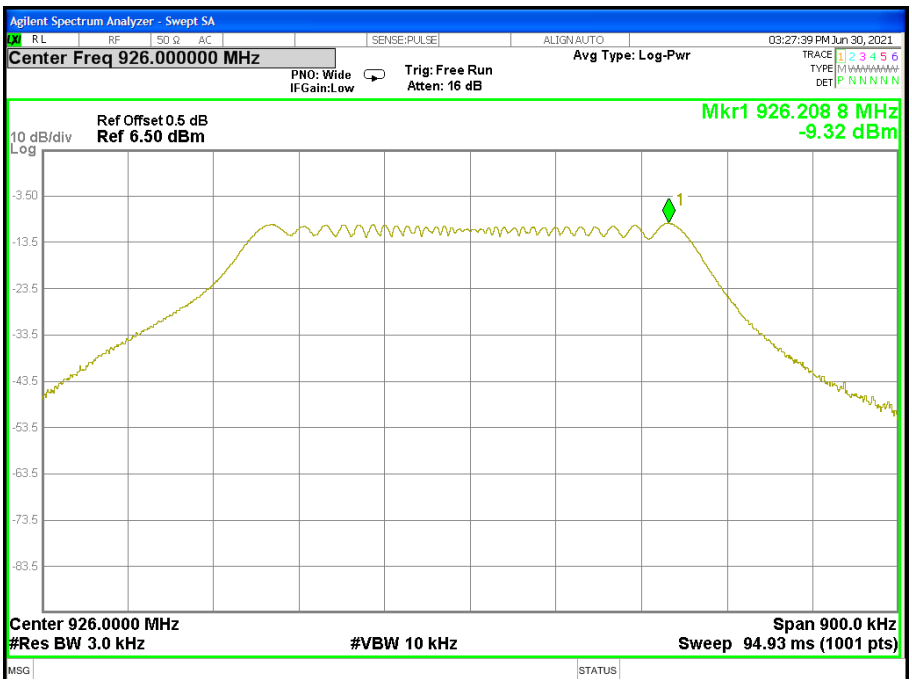
TX CH01



TX CH06



TX CH09



7. BANDWIDTH TEST

7.1 LIMIT

FCC Part 15.247,Subpart C RSS-Gen Clause 6.7				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(a)(2) RSS-247 5.2 (a)	Bandwidth	>= 500KHz (6dB bandwidth)	902-928	PASS
RSS-Gen Clause 6.7	99% Bandwidth	For reporting purposes only.	902-928	PASS

7.2 TEST PROCEDURE

The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described above (i.e., RBW = 100 kHz, VBW≥3RBW, peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be≥6 dB.

7.3 TEST SETUP

7.4 EUT OPERATION CONDITIONS

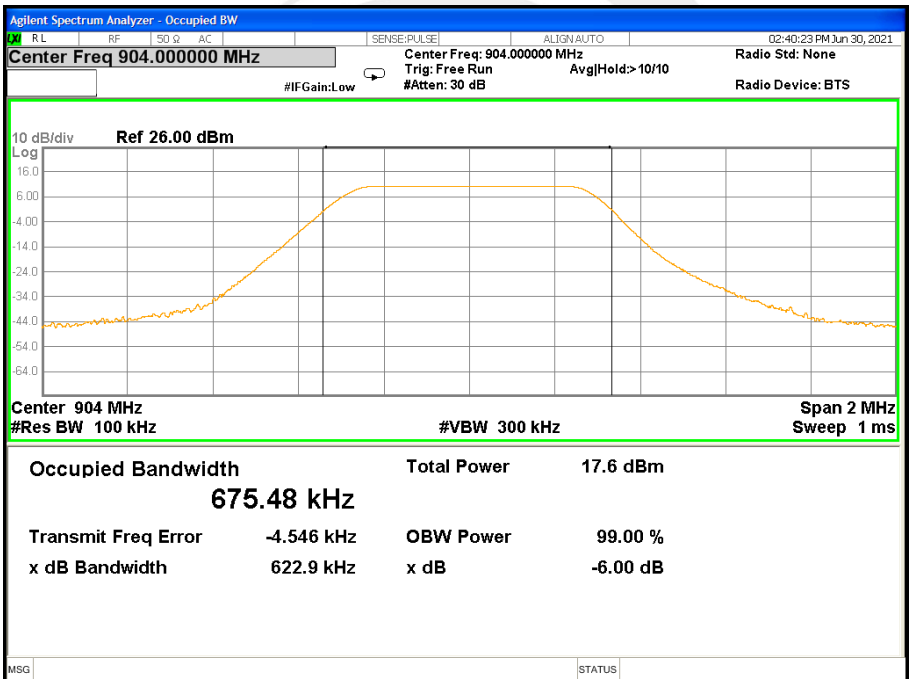
Please refer to section 3.4 of this report.

7.5 TEST RESULTS

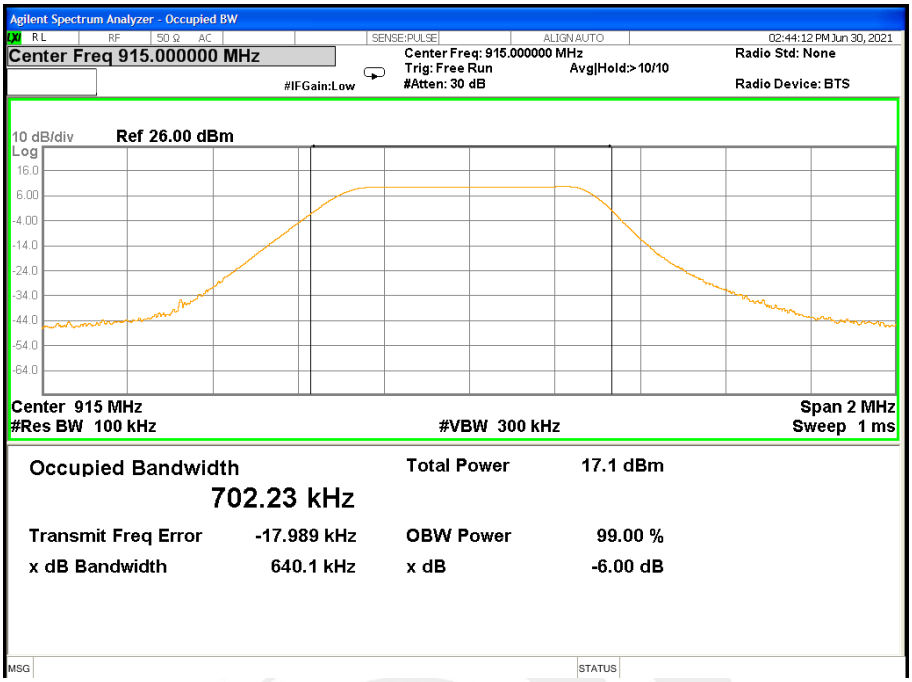
Temperature:	25 ℃	Relative Humidity:	60%
Test Voltage:	DC 12V	Test Mode:	TX Mode /CH01, CH06, CH09

Frequency (MHz)	6dB Bandwidth (KHz)	99% Bandwidth (KHz)	Limit (KHz)	Result
904	622.900	506.870	≥500KHz	PASS
915	640.100	517.440	≥500KHz	PASS
926	637.400	516.680	≥500KHz	PASS

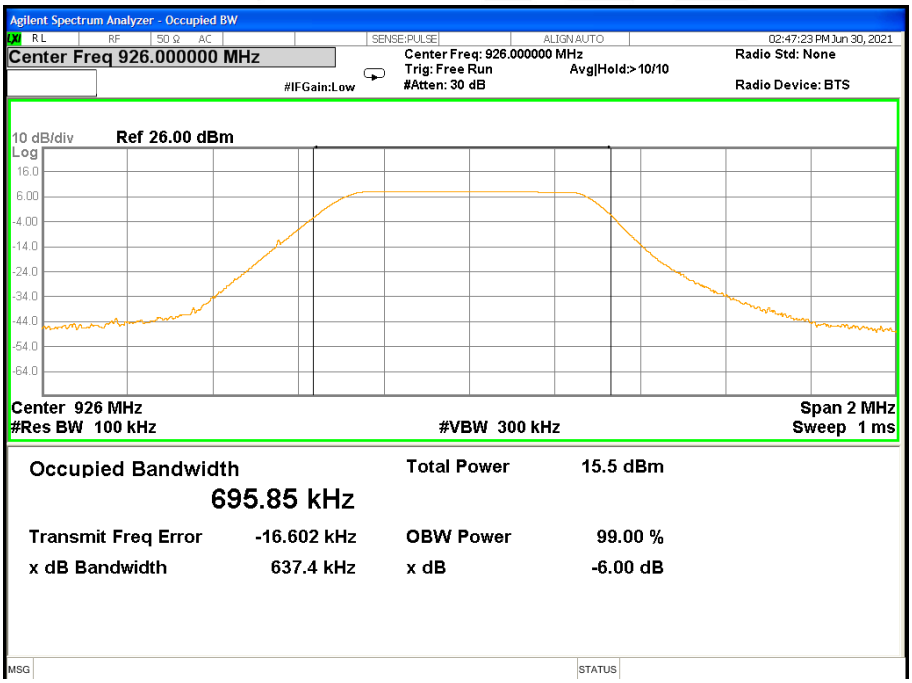
6dB Bandwidth TX CH 01



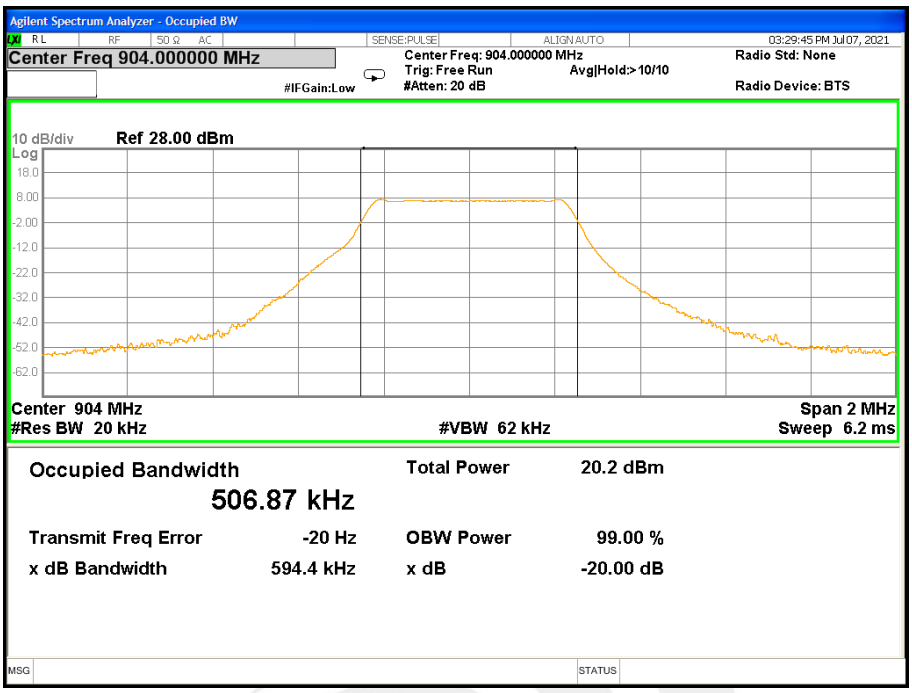
6dB Bandwidth TX CH 01



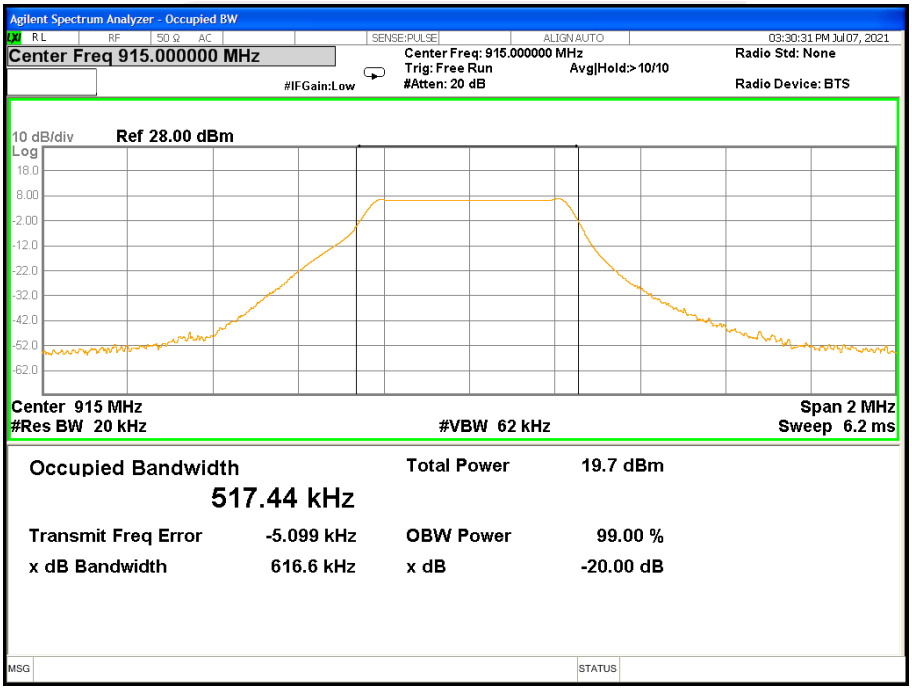
6dB Bandwidth TX CH 09



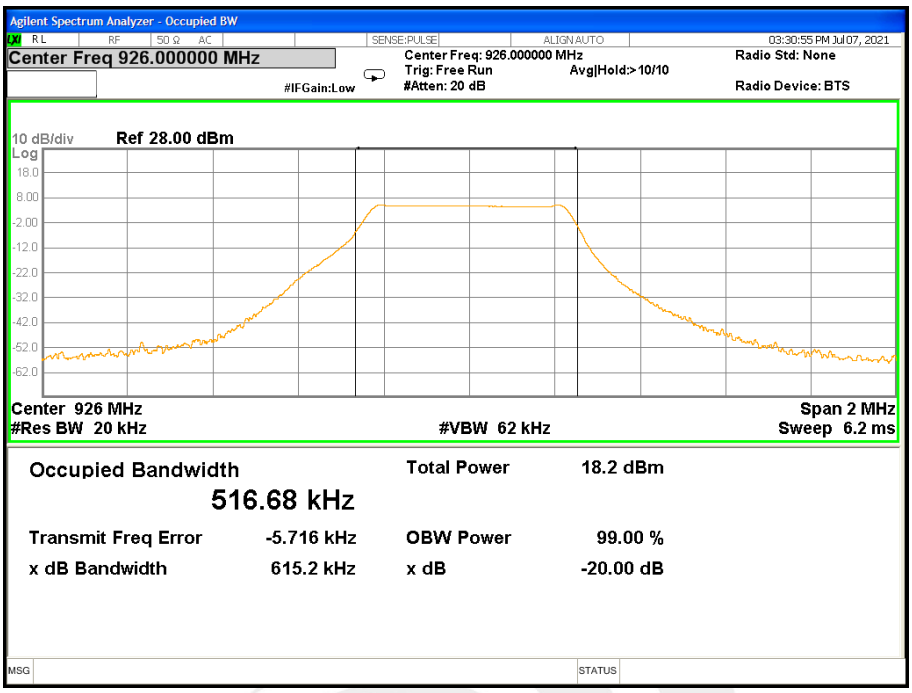
99% Bandwidth TX CH 01



99% Bandwidth TX CH 06



99% Bandwidth TX CH 09



8. PEAK OUTPUT POWER TEST

8.1 LIMIT

FCC Part 15.247,Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3) RSS 247 Issue 2	Output Power	1 watt or 30dBm	902-928	PASS
RSS-247	EIRP	4W	902-928	PASS

8.2 TEST PROCEDURE

One of the following procedures may be used to determine the maximum peak conducted output power of a DTS EUT.

RBW ≥ DTS bandwidth

The following procedure shall be used when an instrument with a resolution bandwidth that is greater than the DTS bandwidth is available to perform the measurement:

a) Set the RBW ≥ DTS bandwidth.
b) Set VBW ≥ [3 × RBW].
c) Set span ≥ [3 × RBW].
d) Sweep time = auto couple.
e) Detector = peak.
f) Trace mode = max hold.
g) Allow trace to fully stabilize.
h) Use peak marker function to determine the peak amplitude level.

Integrated band power method:

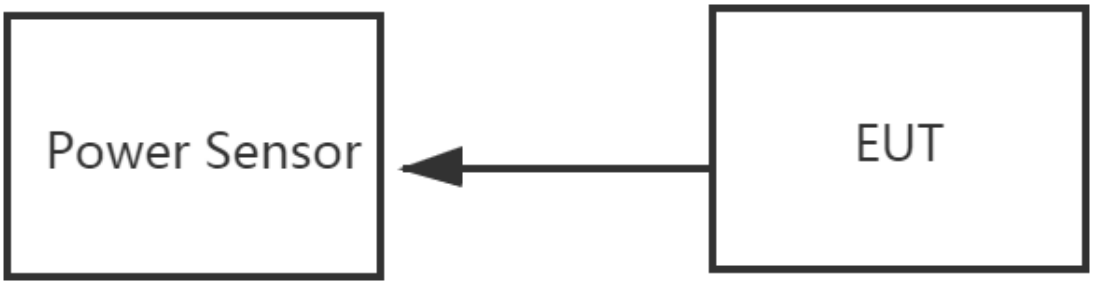
The following procedure can be used when the maximum available RBW of the instrument is less than the
DTS bandwidth:

a) Set the RBW = 1 MHz.
b) Set the VBW ≥ [3 × RBW].
c) Set the span ≥ [1.5 × DTS bandwidth].
d) Detector = peak.
e) Sweep time = auto couple.
f) Trace mode = max hold.
g) Allow trace to fully stabilize.
h) Use the instrument's band/channel power measurement function with the band limits set equal to the DTS bandwidth edges (for some instruments, this may require a manual override to select the peak detector). If the instrument does not have a band power function, then sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the DTS channel bandwidth.

PKPM1 Peak power meter method:

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast-responding diode detector.

8.3 TEST SETUP



8.4 EUT OPERATION CONDITIONS

Please refer to section 3.4 of this report.

8.5 TEST RESULTS

Temperature:	25 ℃	Relative Humidity:	60%
Test Voltage:	DC 12V	Test Mode:	TX Mode /CH01, CH06, CH09

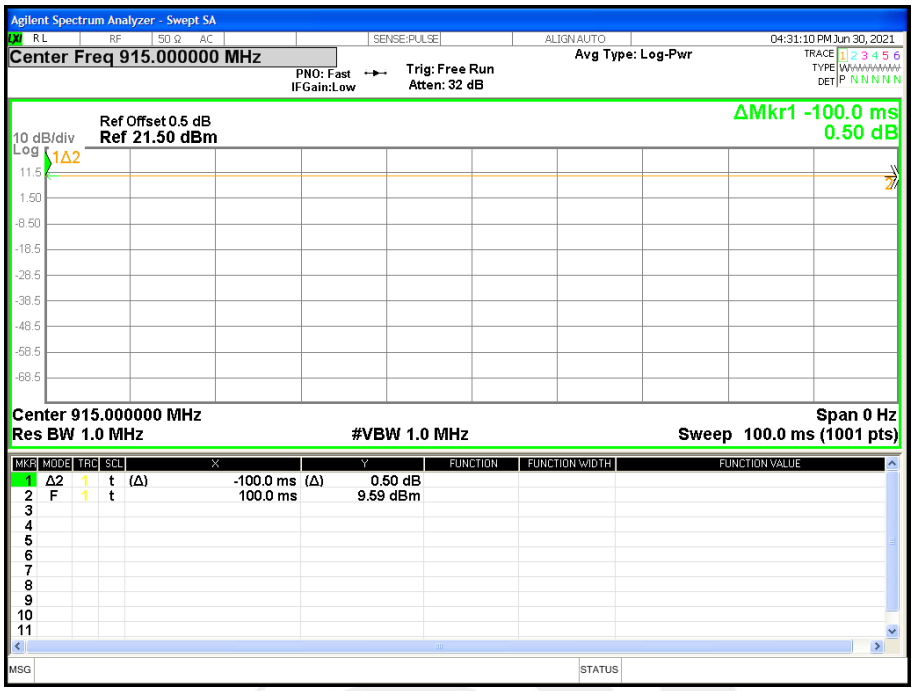
Test Channe	Frequency	Peak Conducted Output Power	Average Conducted Output Power	LIMIT
	(MHz)	(dBm)	(dBm)	dBm
CH01	904	11.28	11.24	30
CH06	915	10.95	10.82	30
CH09	926	9.66	9.46	30

Note: Our power sensor test AVG power has no duty cycle display. The power sensor measures AVG power is Burst power. The software has considered the factor of the duty cycle factor, so it is unnecessary to add it again.

EIRP

Test Channe	Frequency	Peak Conducted Output Power	Antenna Gain	EIRP Power	LIMIT
	(MHz)	(dBm)	(dBi)	(dBm)	dBm
CH0	904	11.28	4.00	15.28	36.02
CH19	915	10.95	4.00	14.95	36.02
CH39	926	9.66	4.00	13.66	36.02

Duty cycle



Ton	Tp	Duty cycle(%)	Duty factor(dB)
100.000	100.000	100.00%	0.00

9. ANTENNA REQUIREMENT

9.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, 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.

9.2 EUT ANTENNA

The EUT antenna is External Antenna. It comply with the standard requirement. The antenna is a non-standard SMA interface antenna, refer to below photo.

Antenna Photo

10. FREQUENCY STABILITY

10.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency tolerance of the carrier signal shall be maintained within +/-0.02% of the operating frequency over a temperature variation of -30 degrees to 50 degrees C at normal supply voltage,and for a variation in primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees.

10.2 TEST PROCEDURE

1. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
2. Turn the EUT on and couple its output to spectrum analyzer.
3. Turn the EUT off and set the chamber to the highest temperature specified.
4. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize,turn the EUT on and measure the operating frequency after 2,5,and 10 minutes.
5. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
6. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes.The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

10.3 TEST RESULT

Channel 06 (915MHz)

Voltage vs. Frequency Stability

Voltage(V)	Measurement Frequency(MHz)
13.8	915.0024
12	915.0022
10.2	915.0017
Max.Deviation(MHz)	0.0024
Max.Deviation(ppm)	2.62

Rated working voltage: DC 12V

Temperature vs. Frequency Stability

Temperature(℃)	Measurement Frequency(MHz)
-30	915.0026
-20	915.0021
-10	915.0020
0	915.0017
10	915.0019
20	915.0019
30	915.0021
40	915.0025
50	915.0026
Max.Deviation(MHz)	0.0026
Max.Deviation(ppm)	2.84

11. EUT TEST PHOTO

Note: See test photos in setup photo document for the actual connections between Product and support equipment.

※※※※※END OF THE REPORT※※※※※