RF TEST REPORT

Client Information:

Applicant:	Shenzhen Fonkan Technology Co.,Ltd
Applicant add.:	Rm308, No213, Shajing Road, Shajing Street,Baoan District,Shenzhen City,Guangdong province，China
Manufacturer:	Shenzhen Fonkan Technology Co.,Ltd
Manufacturer add.:	Rm308, No213, Shajing Road, Shajing Street,Baoan District,Shenzhen City,Guangdong province，China

Product Information:

Product Name:	Radio frequency identification reader
Model No.:	FM505, FM-501, FM-502, FM-503, FM-504, FM-507, FM-508, FM-509, FM-512
Brand Name:	fonkan/szfonkan
FCC ID :	2BAW3-FM505
Applicable standards:	FCC CFR Title 47 Part 15 Subpart C Section 15.249

Prepared By:

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Date of Receipt:	2023.04.17	Date of Test:	2023.04.17~2023.04.20
Date of Issue:	2023.04.20	Test Result:	Pass

This device described above has been tested by Dongguan Yaxu (AiT) Technology Limited 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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Reviewed by: Simba Huang

Simba Huang

Approved by: Seal-Chen

Seal.chen

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1. TEST SUMMARY

1.1. TEST STANDARDS

The tests were performed according to following standards:

FCC Rules Part 15.249: Operation within the bands 902-928 MHz, 2400-2483.5 MHz, 5725-5875 MHz, and 24.0-24.25 GHz.

ANSI C63.10-2013: American National Standard for Testing Unlicensed Wireless Devices.

1.2. REPORT VERSION

Revised No.	Date of issue	Description
01	2023.04.20	Original

1.3. TEST DESCRIPTION

FCC Rules Part 15.249			
Test Item	Section in CFR 47	Result	Test Engineer
	FCC		
Antenna requirement	15.203	Pass	Simba Huang
AC Power Line Conducted Emissions	15.207	Pass	Simba Huang
20dB Bandwidth	Section 15.215(c)	Pass	Simba Huang
Band edge Emissions	Section 15.249(d)	Pass	Simba Huang
Radiated Spurious Emissions	Section 15.205(a),Section 15.209(a), Section 15.249,Section 15.35	Pass	Simba Huang

Note:

1. The measurement uncertainty is not included in the test result.

1.4. TABLE OF CARRIER FREQUENCY

Channel Number	Frequency MHz	Channel Number	Frequency MHz	Channel Number	Frequency MHz
1	**903.240000**	18	911.400000	35	919.560000
2	903.720000	19	911.880000	36	920.040000
3	904.200000	20	912360000	37	920.520000
4	904.680000	21	912.840000	38	921.000000
5	905.160000	22	913.320000	39	921.480000
6	905.640000	23	913.800000	40	921.960000
7	906.120000	24	914.280000	41	922.440000
8	906.600000	25	914.760000	42	922.920000
9	907.080000	**26**	**915.240000**	43	923.400000
10	907.560000	27	915.720000	44	923880000
11	908.040000	28	916.200000	45	924.360000
12	908.520000	29	916.680000	46	924.840000
13	909.000000	30	917.160000	47	925.320000
14	909.480000	31	917.640000	48	925.800000
15	909.960000	32	918.120000	49	926.280000
16	910.440000	33	918.600000	**50**	**926.760000**
17	910.920000	34	919.080000		

1.5. 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 TR-100028-01" Electromagnetic compatibility and Radio spectrum Matters (ERM);Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM);Uncertainties in the measurement of mobile radio equipment characteristics; Part 2 " . 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. Below is the best Measurement Uncertainty

Test Item	Frequency Range	Measurement Uncertainty	Notes
Radiated Emission	0.009MHz-30MHz	3.10dB	(1)
Radiated Emission	30MHz-1GHz	3.75dB	(1)
Radiated Emission	1GHz-18GHz	3.88dB	(1)
Radiated Emission	18GHz-40GHz	3.88dB	(1)
AC Power Line Conducted Emission	0.15MHz ~ 30MHz	1.20dB	(1)
Note (1): The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.			

1.6. Test Facility

Address of the report laboratory

The test facility is recognized, certified or accredited by the following organizations:

.CNAS- Registration No: L6177

Dongguan Yaxu (AiT) technology Limited is accredited to ISO/IEC 17025:2017 general Requirements for the competence of testing and calibration laboratories (CNAS-CL01 Accreditation Criteria for the competence of testing and calibration laboratories) on Aug.04, 2020

FCC-Registration No.: 703111 Designation Number: CN1313

Dongguan Yaxu (AiT) technology Limited has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

IC —Registration No.: 6819A CAB identifier: CN0122

The 3m Semi-anechoic chamber of Dongguan Yaxu (AiT) technology Limited has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 6819A

A2LA-Lab Cert. No.: 6317.01

Dongguan Yaxu (AiT) technology Limited has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

1.7. ENVIRONMENTAL CONDITIONS

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15~35°C
Relative Humidity:	30~60 %
Air Pressure:	950~1050mba

2. GENERAL INFORMATION

2.1. GENERAL DESCRIPTION OF EUT

Test Sample Number:	AIT22120707-1
Product Name:	Radio frequency identification reader
Trade Mark:	fonkan/szfonkan
Model/Type reference:	FM505
Serial model(s):	FM-501, FM-502, FM-503, FM-504, FM-507, FM-508, FM-509, FM-512
Difference Description	All the series models are the same as the test model except for the model names.
Power supply	DC 5V
Hardware version:	N/A
Software version:	N/A
Specification	
Modulation:	LoRa
Operation frequency :	903.24-926.76MHz
Channel number:	50
Antenna type:	Dielectric Antenna
Antenna gain:	Max. 1.57dBi

2.2. MEASUREMENT INSTRUMENTS LIST

No	Test Equipment	Manufacturer	Model No	Serial No	Cal. Date	Cal. Due Date
1	Spectrum Analyzer	R&S	FSV40	101470	2022.09.02	2023.09.01
2	EMI Measuring Receiver	R&S	ESR	101160	2022.09.02	2023.09.01
3	Low Noise Pre Amplifier	HP	HP8447E	AiT-F0131 9	2022.09.02	2023.09.01
4	Low Noise Pre Amplifier	Tsj	MLA-0120-A02-34	2648A047 38	2022.09.02	2023.09.01
5	Passive Loop	ETS	6512	00165355	2022.09.04	2024.09.03
6	TRILOG Super Broadband test Antenna	SCHWARZBECK	VULB9160	9160-3206	2021.08.29	2024.08.28
7	Broadband Horn Antenna	SCHWARZBECK	BBHA9120D	452	2021.08.29	2024.08.28
8	SHF-EHF Horn Antenna 15-40GHz	SCHWARZBECK	BBHA9170	BBHA9170 367d	2020.11.24	2023.11.23
9	EMI Test Receiver	R&S	ESCI	100124	2022.09.02	2023.09.01
10	LISN	Kyoritsu	KNW-242	8-837-4	2022.09.02	2023.09.01
11	LISN	R&S	ESH3-Z2	0357.8810.54 - 101161-S2	2022.09.02	2023.09.01
12	Pro.Temp&Humi.chamber	MENTEK	MHP-150-1C	MAA08112 501	2022.09.02	2023.09.01
13	RF Automatic Test system	MW	MW100-RFCB	21033016	2022.09.02	2023.09.01
14	Signal Generator	Agilent	N5182A	MY501430 09	2022.09.02	2023.09.01
15	Wideband Radio communication tester	R&S	CMW500	1201.0002 K50	2022.09.02	2023.09.01
16	RF Automatic Test system	MW	MW100-RFCB	21033016	2022.09.02	2023.09.01
17	DC power supply	ZHAOXIN	RXN-305D-2	280700025 59	N/A	N/A
18	RE Software	EZ	EZ-EMC_RE	Ver.AIT-03 A	N/A	N/A
19	CE Software	EZ	EZ-EMC_CE	Ver.AIT-03 A	N/A	N/A
20	RF Software	MW	MTS 8310	2.0.0.0	N/A	N/A

2.3. DESCRIPTION OF TEST MODES

Operation Frequency List: The EUT has been tested under typical operating condition. The Applicant provides communication tools software to control the EUT for staying in continuous transmitting and receiving mode for testing.

Test Frequency: 903.24MHz, 915.24MHz, 926.76MHz

Test mode

For RF test items:
The engineering test program was provided and enabled to make EUT continuous transmit.
For Radiated spurious emissions test item:
The engineering test program was provided and enabled to make EUT continuous transmit. The EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data recorded in the report.

2.4. TEST SOFTWARE

Software name	Model	Version
Conducted emission Measurement Software	EZ-EMC	EMC-Con 3A1.1
Radiated emission Measurement Software	EZ-EMC	FA-03A.2.RE
Bluetooth and WIFI Test System	MW	2.5.77.0418

3. TEST ITEM AND RESULTS

3.1. ANTENNA REQUIREMENT

Requirement

FCC CFR Title 47 Part 15 Subpart C Section 15.203:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

FCC CFR Title 47 Part 15 Subpart C Section 15.247(c) (1)(i):

(i) Systems operating in the 902~928 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

Test Result

The directional gain of the antenna less than 6dBi, please refer to the EUT internal photographs antenna photo.

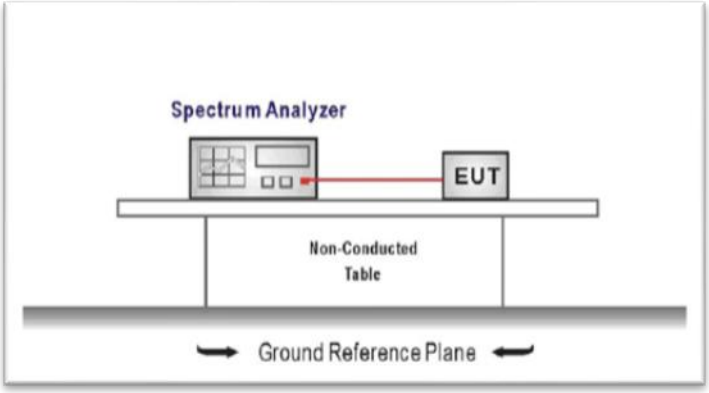
Note: The antenna is permanently fixed to the EUT

3.2. 20DB BANDWIDTH

Limit

Operation Frequency range 902MHz~928MHz.

Test Configuration



Test Procedure

1. The transmitter output was connected to the spectrum analyzer through an attenuator, the path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously
3. Use the following spectrum analyzer settings:

   Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel

   RBW ≥ 1% of the 20 dB bandwidth, VBW ≥ RBW

   Sweep = auto, Detector function = peak, Trace = max hold
4. Measure and record the results in the test report.

Test Mode

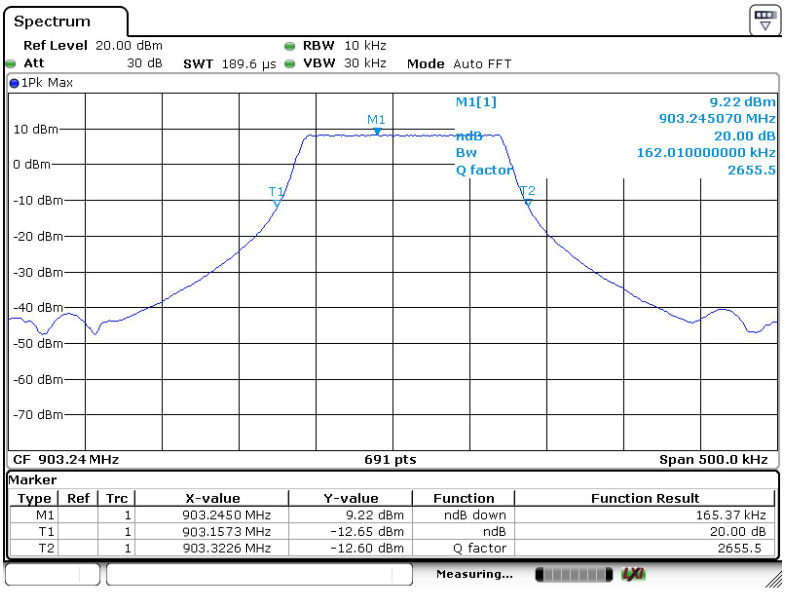
Please refer to the clause 2.2.

Test Results

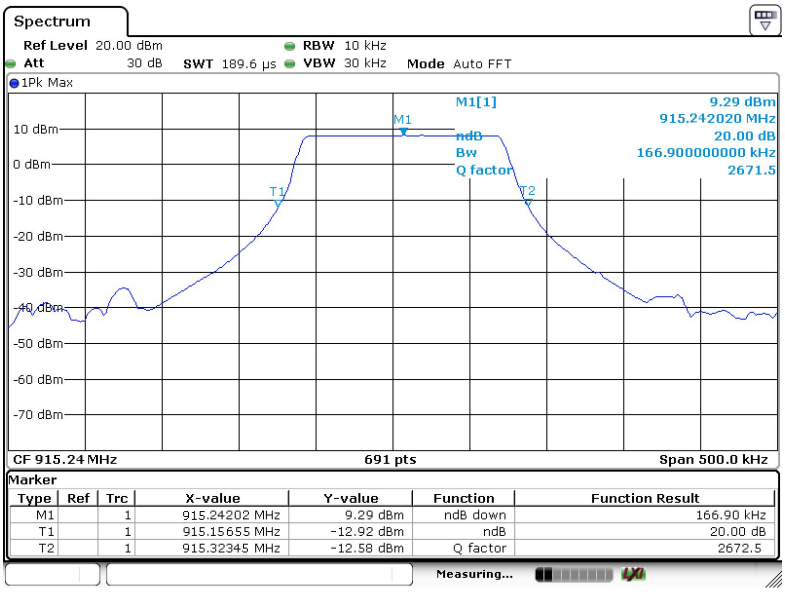
PASS

Channel frequency (MHz)	20dB Bandwidth [KHz]	Verdict
903.24	165.37	PASS
915.24	166.90	PASS
926.76	166.73	PASS

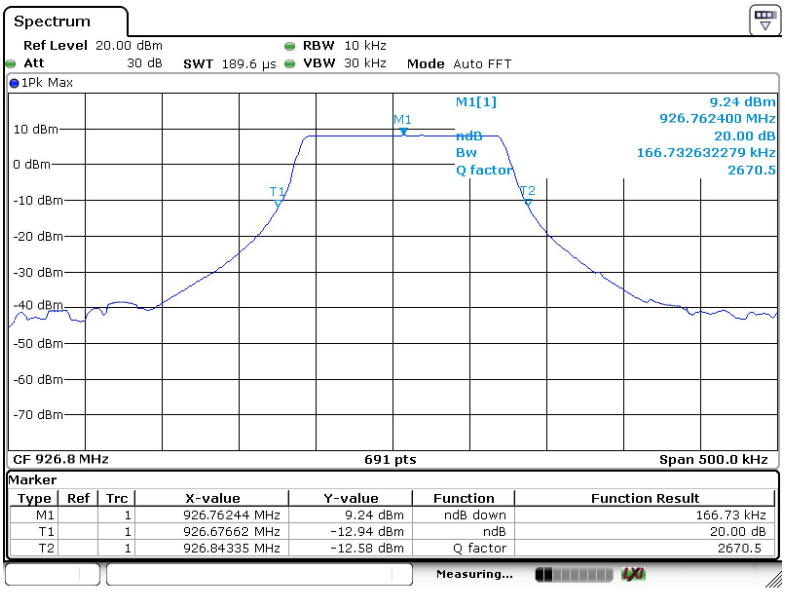
903.24MHz



915.24MHz



926.76MHz


Spectrum
Ref Level 20.00 dBm
RBW 10 kHz
Att 30 dB
SWT 189.6 µs
VBW 30 kHz
Mode Auto FFT
1Pk Max
M1[1]
9.24 dBm
926.762400 MHz
ndB 20.00 dB
Bw 166.732632279 kHz
Q factor 2670.5
M1
T1
T2
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
CF 926.8 MHz
691 pts
Span 500.0 kHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 926.76244 MHz 9.24 dBm ndB down 166.73 kHz
T1 1 926.67662 MHz -12.94 dBm ndB 20.00 dB
T2 1 926.84335 MHz -12.58 dBm Q factor 2670.5
Measuring...

3.3. CONDUCTED EMISSION

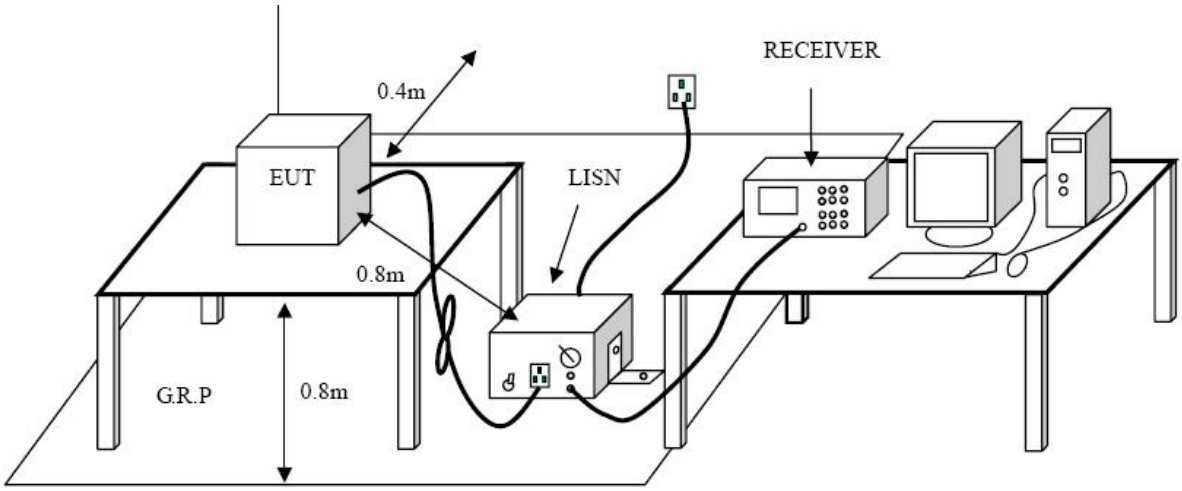
Limit

Conducted Emission Test Limit

Frequency	Maximum RF Line Voltage (dBμV)	
	Quasi-peak Level	Average Level
150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
500kHz~5MHz	56	46
5MHz~30MHz	60	50

Notes:
(1) *Decreasing linearly with logarithm of the frequency.
(2) The lower limit shall apply at the transition frequencies.
(3) The limit decrease in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

Test Configuration

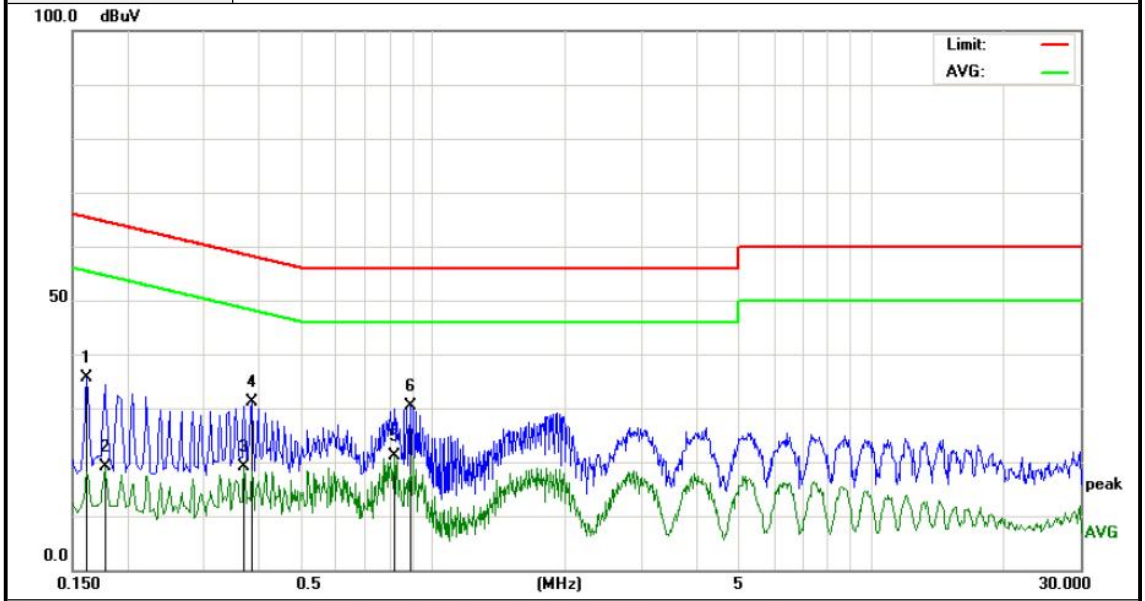


Test Procedure

1. The EUT was setup according to ANSI C63.10:2013 requirements.
2. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface.
3. The EUT and simulators are connected to the main power through a line impedances stabilization network (LISN). The LISN provides a 50ohm /50uH coupling impedance for the measuring equipment.
   The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs)
4. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
5. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
6. Conducted Emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.
7. During the above scans, the emissions were maximized by cable manipulation.

Test Results

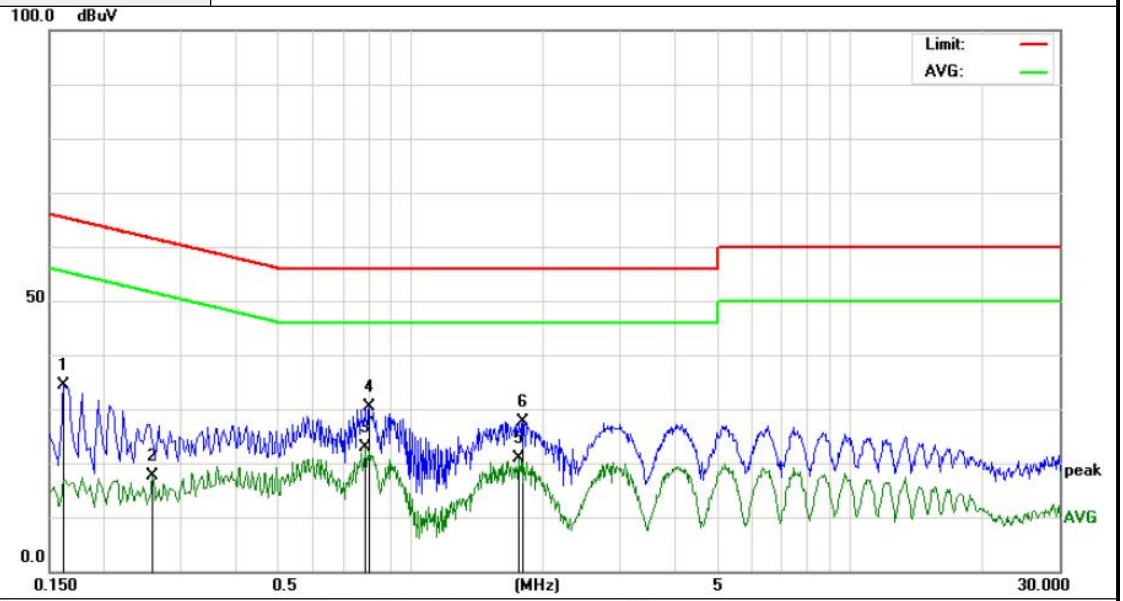
Test Voltage:	AC 120V/60 Hz
Terminal:	Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.1620	23.89	11.68	35.57	65.36	-29.79	QP
2		0.1780	7.69	11.41	19.10	54.57	-35.47	AVG
3		0.3700	8.98	10.16	19.14	48.50	-29.36	AVG
4		0.3860	20.91	10.13	31.04	58.15	-27.11	QP
5	*	0.8139	11.21	9.96	21.17	46.00	-24.83	AVG
6		0.8860	20.42	9.95	30.37	56.00	-25.63	QP

Remarks:
1.Measurement = Reading Level+ Correct Factor
2.Over = Measurement -Limit

Test Voltage:	AC 120V/60 Hz
Terminal:	Neutral



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.1620	22.59	11.68	34.27	65.36	-31.09	QP
2		0.2580	6.77	10.87	17.64	51.49	-33.85	AVG
3	*	0.7900	12.85	9.96	22.81	46.00	-23.19	AVG
4		0.8020	20.51	9.96	30.47	56.00	-25.53	QP
5		1.7580	10.89	9.97	20.86	46.00	-25.14	AVG
6		1.8020	17.74	9.98	27.72	56.00	-28.28	QP

Remarks:
1.Measurement = Reading Level+ Correct Factor
2.Over = Measurement -Limit

Note:
All test modes had been tested. The TX 926.76MHz is the worst case and recorded in the report.

3.4. RADIATED SPURIOUS EMISSIONS

LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.209(a) and 15.205(a)

Standard FCC15.249

Fundamental Frequency	Field Strength of Fundamental (millivolts/meter)	Field Strength of Harmonics (microvolts/meter)
900-928MHz	50 (94dBuV/m @3m)	500 (54dBuV/m @3m)
2400-2483.5MHz	50 (94dBuV/m @3m)	500 (54dBuV/m @3m)
5725-5875MHz	50 (94dBuV/m @3m)	500 (54dBuV/m @3m)
24.0-24.25GHz	250 (108dBuV/m @3m)	2500 (68dBuV/m @3m)

Standard FCC 15.209

Frequency (MHz)	Distance Meters	Field Strengths Limit	
		μ V/m	dB(μV)/m
0.009 ~ 0.490	300	2400/F(kHz)	---
0.490 ~ 1.705	30	24000/F(kHz)	---
1.705 ~ 30	30	30	---
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	Other:74.0dB(μV)/m(Peak) 54.0dB(μV)/m (Average)	

Remark: (1) Emission level dB μ V = 20 log Emission level μ V/m

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

(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

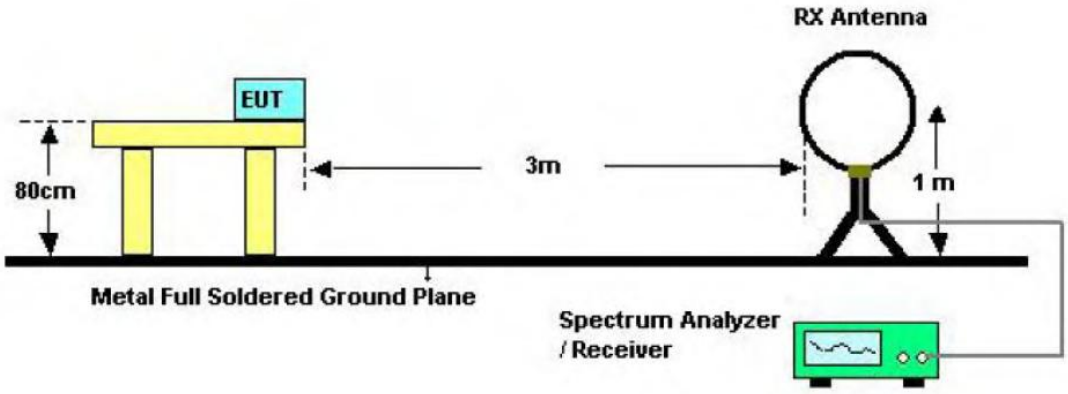
FREQUENCY RANGE OF RADIATED MEASUREMENT

Spectrum Parameter	Setting
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
Start ~Stop Frequency	1GHz~26.5GHz RBW 1MHz/ VBW 1MHz for Peak, RBW 1MHz/ VBW 10Hz for Average

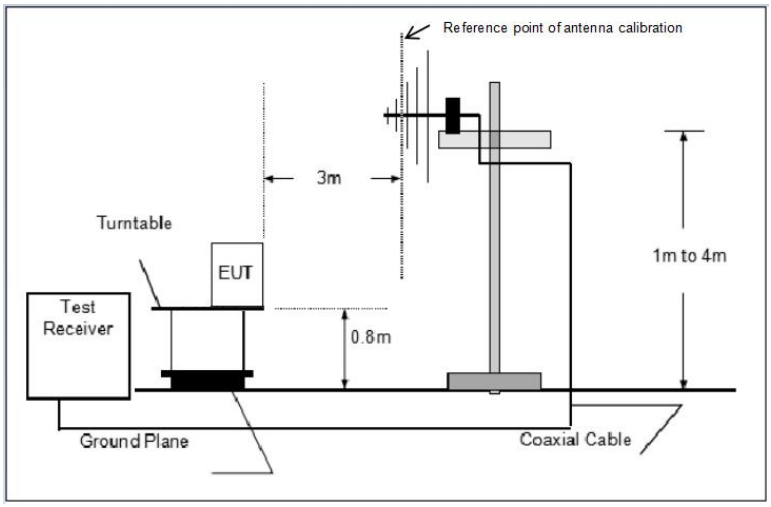
Receiver Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RB 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RB 9KHz for QP

Start ~Stop Frequency	30MHz~1000MHz/RB 120KHz for QP

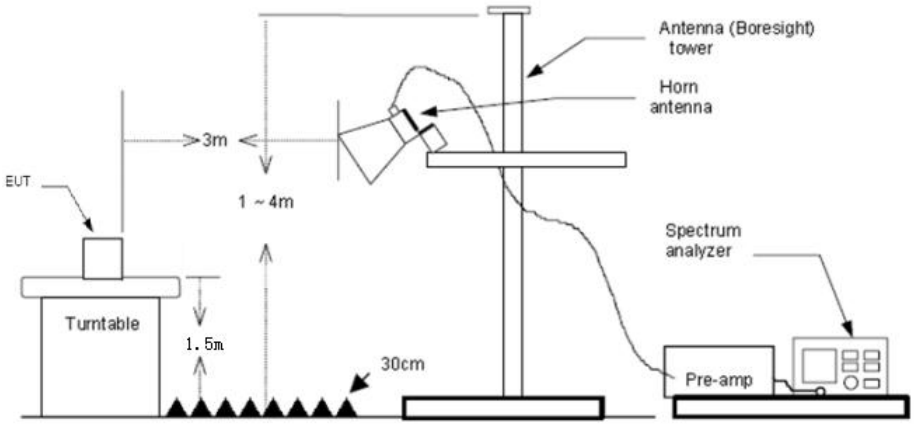
Test Configuration



Below 30MHz Test Setup



Below 1000MHz Test Setup



Above 1GHz Test Setup

Test Procedure

1. The EUT was setup and tested according to ANSI C63.10:2013
2. The EUT is placed on a turn table which is 0.8 meter above ground for below 1 GHz, and 1.5 m for above 1 GHz. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was set 3 meters from the 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 1 m to 4 m) and turntable (from 0 degree to 360 degrees) 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. Use the following spectrum analyzer settings

   (1) Span shall wide enough to fully capture the emission being measured;

   (2) Below 1 GHz:

   RBW=120 kHz, VBW=300 kHz, Sweep=auto, Detector function=peak, Trace=max hold;

   If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

   (3) From 1 GHz to 10th harmonic:

   RBW=1MHz, VBW=3MHz Peak detector for Peak value.

   RBW=1MHz, VBW=10HzPeak detector for Average value.

TEST MODE:

Please refer to the clause 2.2.

TEST RESULTS

☒ **Passed** ☐ **Not Applicable**

9 KHz~30 MHz and 18GHz~25GHz

From 9 KHz~30 MHz and 18GHz~25GHz: Conclusion: PASS

Note:

1) Final level = Reading level + Correct Factor

   Correct Factor=Antenna Factor + Cable Loss -Preamplifier Factor

2) The emission levels of other frequencies are very lower than the limit and not show in test report.

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

4) 18GHz ~ 25GHz

   The EUT was pre-scanned the frequency band (18GHz~25GHz), found the radiated level(Background noise) lower than the limit, so don't show on the report. 3

Radiated field strength of the fundamental signal

Frequency (MHz)	Read Level (dBuV)	Correct Factor (dB/m)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dBuV/m)	Polarization	Test value
903.24	80.49	6.32	86.81	94	-7.19	Vertical	QP
903.24	80.56	5.80	86.36	94	-7.64	Horizontal	QP
915.24	81.80	5.73	87.53	94	-6.47	Vertical	QP
915.24	85.96	6.02	91.98	94	-2.02	Horizontal	QP
926.76	87.76	5.15	92.91	94	-1.09	Vertical	QP
926.76	82.01	4.94	86.95	94	-7.05	Horizontal	QP

Note:

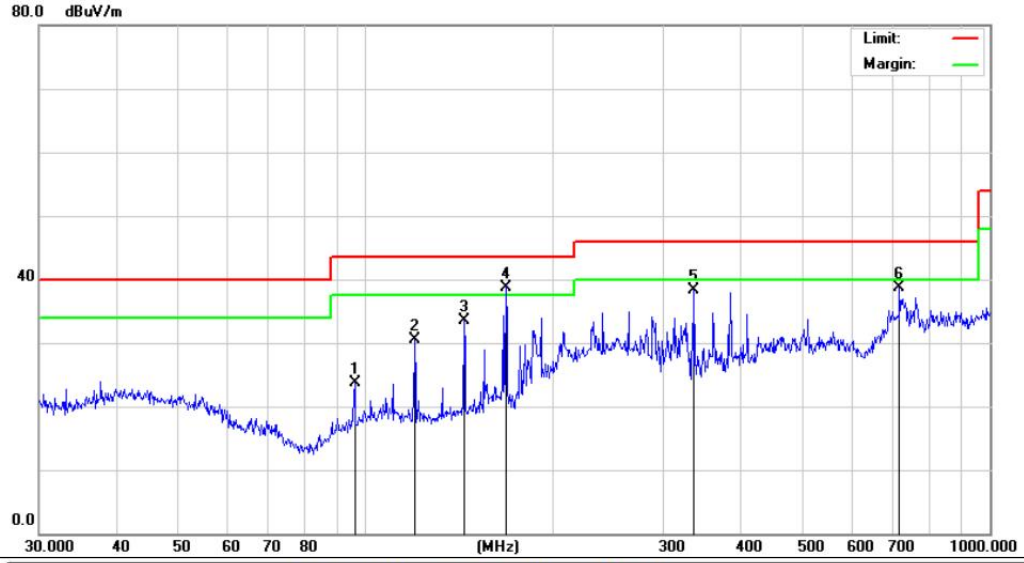
1. Correct Factor=Antenna Factor + Cable Loss -Preamplifier Factor
2. Level = Read Level +Correct Factor

RADIATED EMISSION BELOW 30MHZ

No emission found between lowest internal used/generated frequencies to 30MHz.

30MHz-1GHz

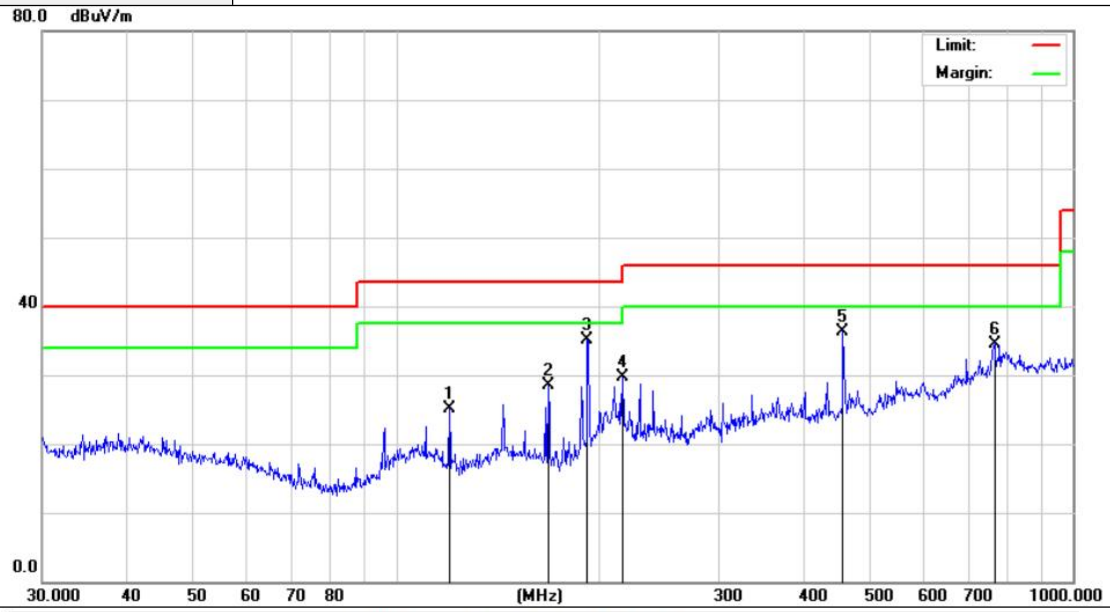
Test Voltage:	DC 5V
Ant. Pol.	Horizontal
Test Mode:	TX 926.76MHz(Worst)



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		96.0986	26.10	-2.40	23.70	43.50	-19.80	QP
2		119.8556	32.41	-1.82	30.59	43.50	-12.91	QP
3		143.8295	34.43	-0.88	33.55	43.50	-9.95	QP
4	*	167.8243	40.34	-1.54	38.80	43.50	-4.70	QP
5		336.0352	36.18	2.11	38.29	46.00	-7.71	QP
6		716.6820	26.21	12.49	38.70	46.00	-7.30	QP

Emission Level= Read Level+ Correct Factor

Test Voltage:	DC 5V
Ant. Pol.	Vertical
Test Mode:	TX 926.76MHz(Worst)



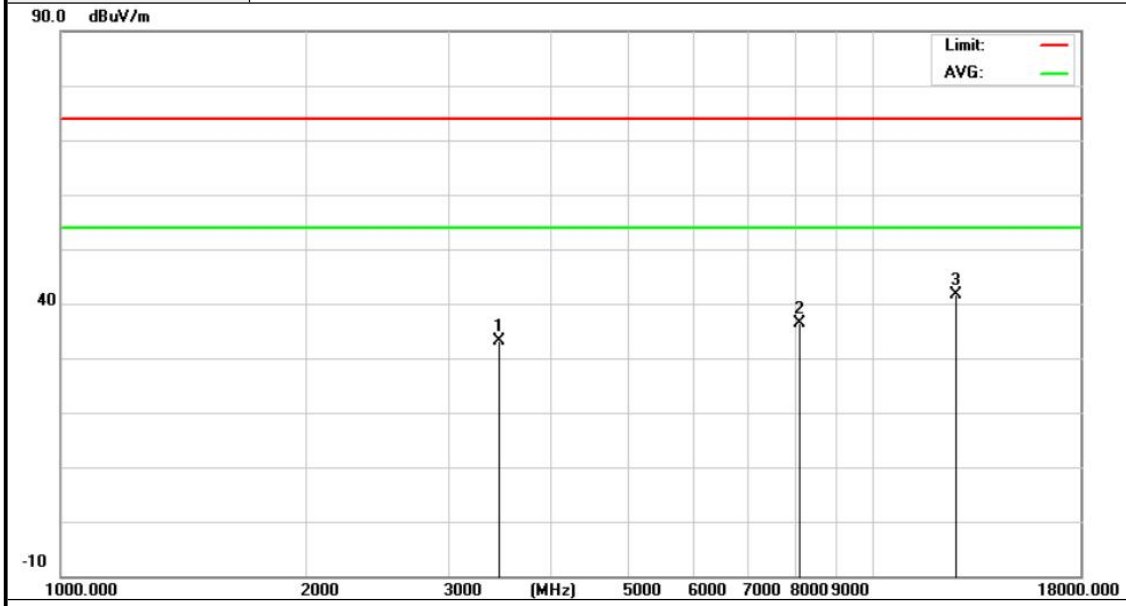
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		119.8556	28.16	-3.11	25.05	43.50	-18.45	QP
2		167.8243	31.68	-3.16	28.52	43.50	-14.98	QP
3	*	191.7450	36.88	-1.86	35.02	43.50	-8.48	QP
4		216.0240	29.21	0.49	29.70	46.00	-16.30	QP
5		457.5073	31.87	4.51	36.38	46.00	-9.62	QP
6		766.0571	23.49	11.11	34.60	46.00	-11.40	QP

Emission Level= Read Level+ Correct Factor

Note:
All test modes had been tested. The TX 926.76MHz is the worst case and recorded in the report.

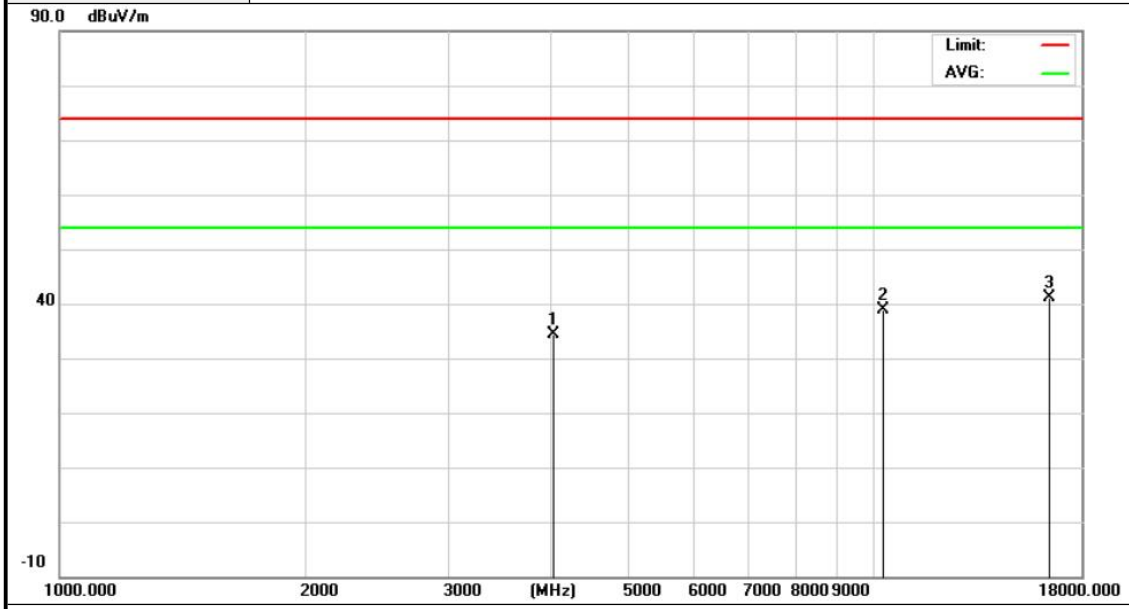
Adobe 1GHz

Test Voltage:	DC 5V
Ant. Pol.	Horizontal
Test Mode:	TX Mode 903.24MHz



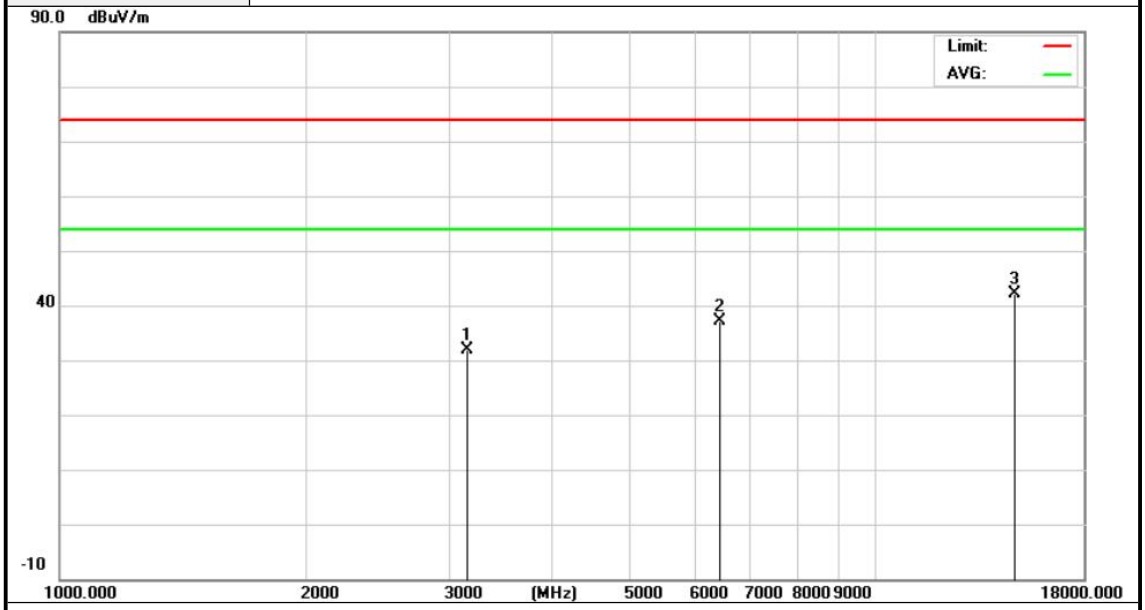
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		3455.508	53.35	-20.30	33.05	74.00	-40.95	peak
2		8129.663	49.13	-12.63	36.50	74.00	-37.50	peak
3	*	12651.12	55.48	-13.93	41.55	74.00	-32.45	peak

Test Voltage:	DC 5V
Ant. Pol.	Vertical
Test Mode:	TX Mode 903.24MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		4027.554	52.56	-18.06	34.50	74.00	-39.50	peak
2		10244.58	50.61	-11.61	39.00	74.00	-35.00	peak
3	*	16362.45	56.85	-15.60	41.25	74.00	-32.75	peak

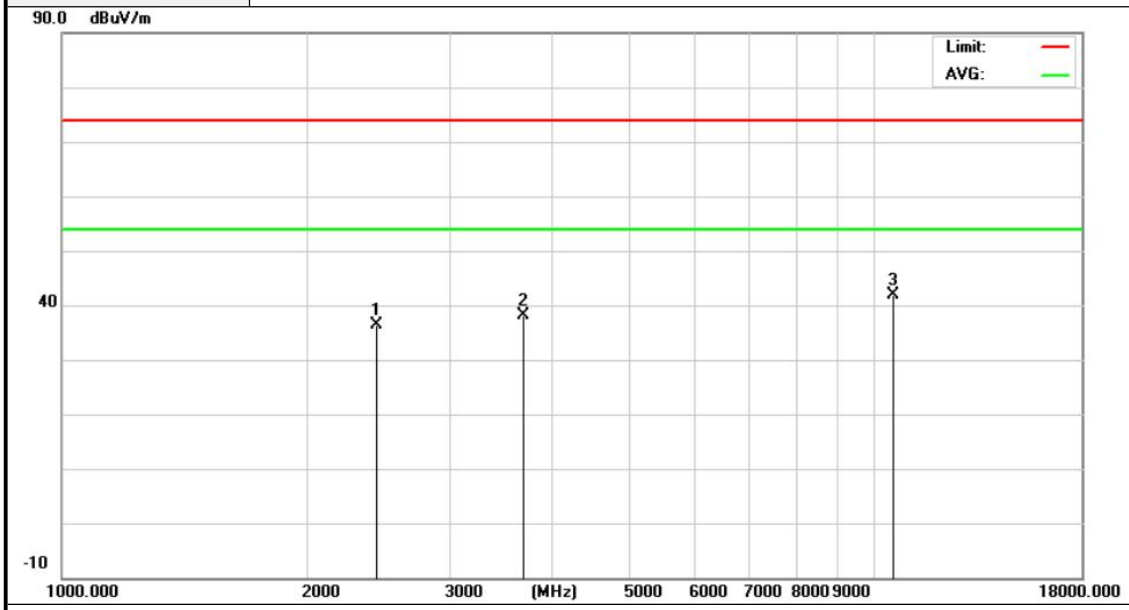
Test Voltage:	DC 5V
Ant. Pol.	Horizontal
Test Mode:	TX Mode 915.24MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		3150.237	52.91	-20.91	32.00	74.00	-42.00	peak
2		6432.733	51.33	-14.28	37.05	74.00	-36.95	peak
3	*	14788.15	57.51	-15.26	42.25	74.00	-31.75	peak

Emission Level= Read Level+ Correct Factor

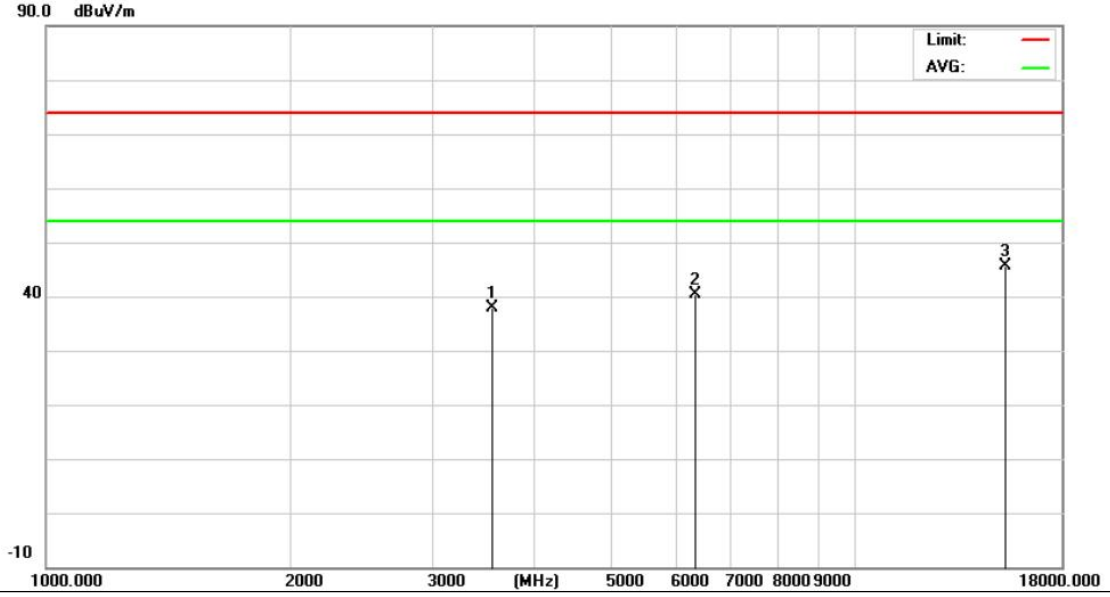
Test Voltage:	DC 5V
Ant. Pol.	Vertical
Test Mode:	TX Mode 915.24MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		2435.701	56.37	-20.02	36.35	74.00	-37.65	peak
2		3693.033	56.55	-18.45	38.10	74.00	-35.90	peak
3	*	10545.01	53.52	-11.52	42.00	74.00	-32.00	peak

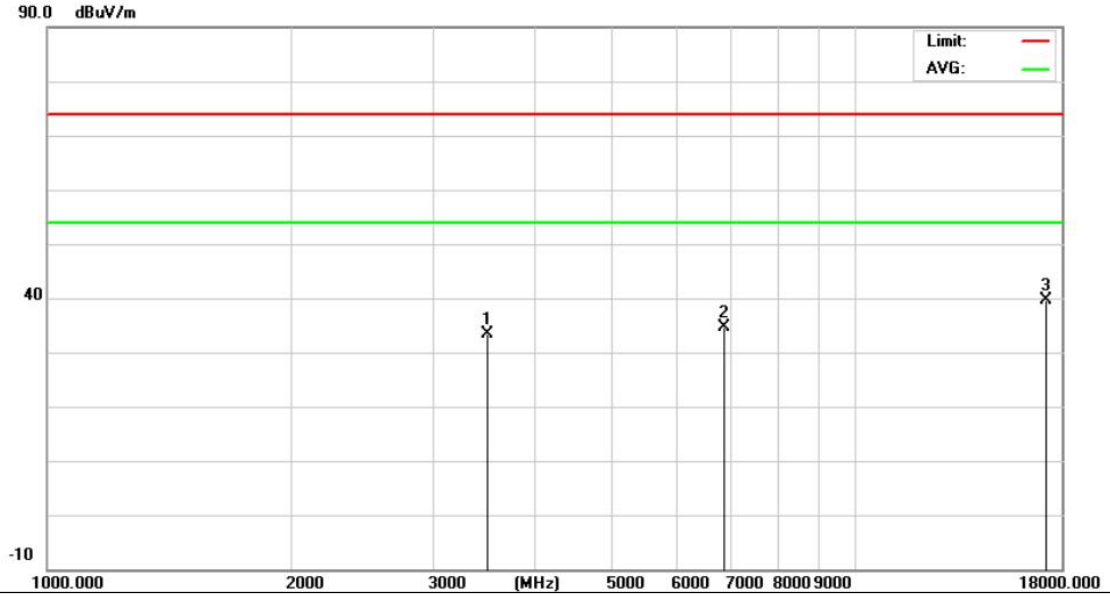
Emission Level= Read Level+ Correct Factor

Test Voltage:	DC 5V
Ant. Pol.	Horizontal
Test Mode:	TX Mode 926.76MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		3546.577	56.92	-18.97	37.95	74.00	-36.05	peak
2		6340.436	54.66	-14.26	40.40	74.00	-33.60	peak
3	*	15265.88	61.02	-15.47	45.55	74.00	-28.45	peak

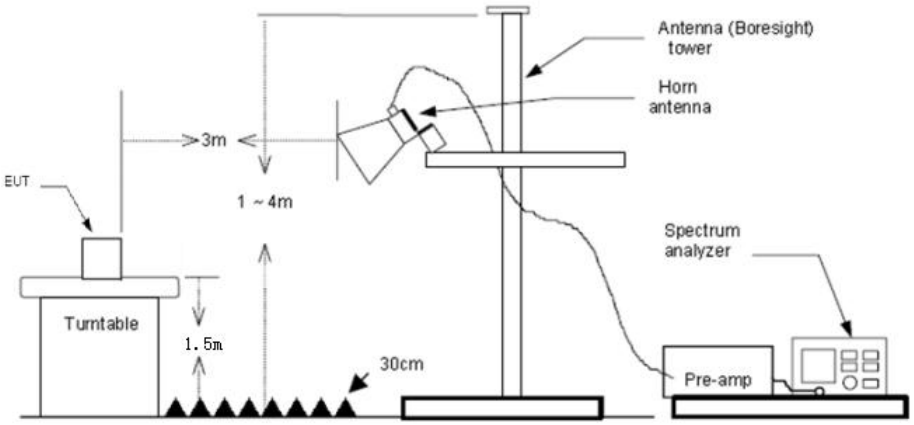
Test Voltage:	DC 5V
Ant. Pol.	Vertical
Test Mode:	TX Mode 926.76MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		3495.691	52.58	-19.18	33.40	74.00	-40.60	peak
2		6855.064	48.53	-13.78	34.75	74.00	-39.25	peak
3	*	17186.52	52.56	-13.01	39.55	74.00	-34.45	peak

3.5. BAND EDGE EMISSIONS(RADIATED)

Test Configuration



Test Procedure

1. The EUT was setup and tested according to ANSI C63.10:2013
2. The EUT is placed on a turn table which is 0.8 meter above ground for below 1 GHz, and 1.5 m for above 1 GHz. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was set 3 meters from the 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 1 m to 4 m) and turntable (from 0 degree to 360 degrees) 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. Use the following spectrum analyzer settings

   (1) Span shall wide enough to fully capture the emission being measured;

   RBW=1MHz, VBW=3MHz PEAK detector for Peak value.

   RBW=1MHz, VBW=10Hz with PEAK Detector for Average Value.

Test Mode

Please refer to the clause 2.2.

Test Results

☒ **Passed** ☐ **Not Applicable**

Note:

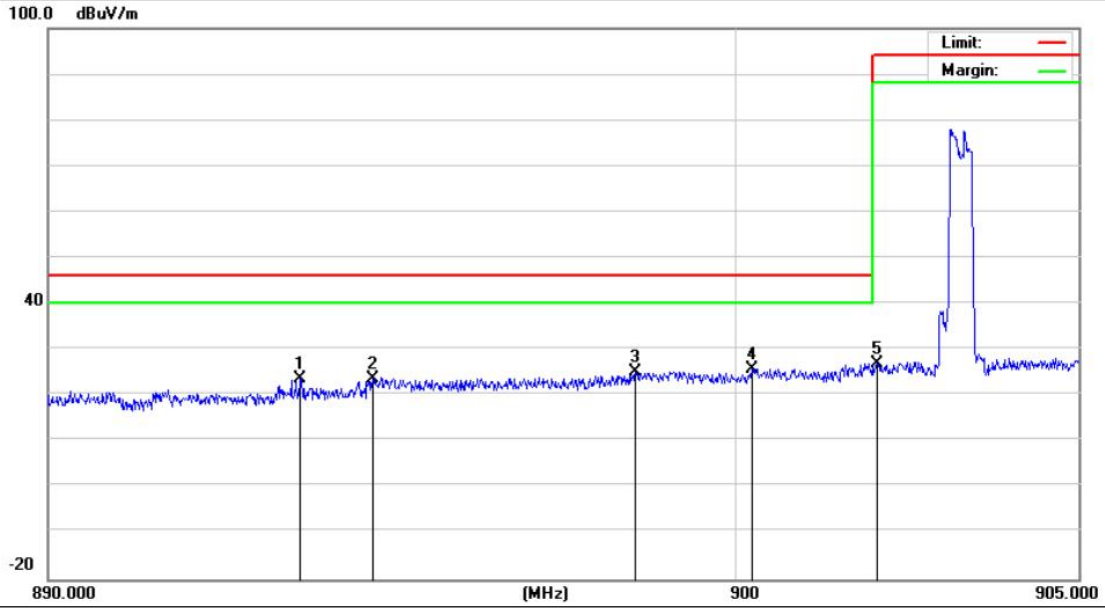
1) Final level= Read level + Antenna Factor + Cable Loss - Preamp Factor

2) Correction Factor = Antenna factor + cable loss

3) The peak level is lower than average limit(54dBuV/m), this data is the too weak instrument of signal is unable to test.

4) The emission levels of other frequencies are very lower than the limit and not show in test report.

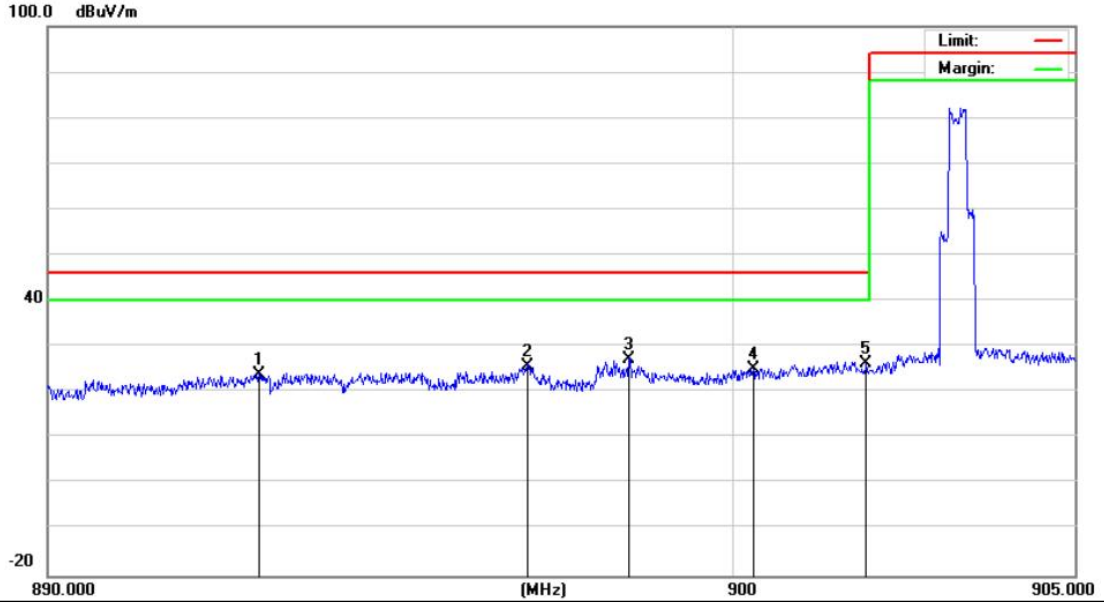
Test Voltage:	DC 5V
Ant. Pol.:	Horizontal
Test Mode:	TX Mode 903.24MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		893.6598	17.05	6.75	23.80	46.00	-22.20	peak
2		894.7100	17.05	6.75	23.80	46.00	-22.20	peak
3		898.5199	18.47	6.73	25.20	46.00	-20.80	peak
4	*	900.2300	19.17	6.73	25.90	46.00	-20.10	peak
5		902.0599	20.40	6.70	27.10	94.00	-66.90	peak

Emission Level= Read Level+ Correct Factor

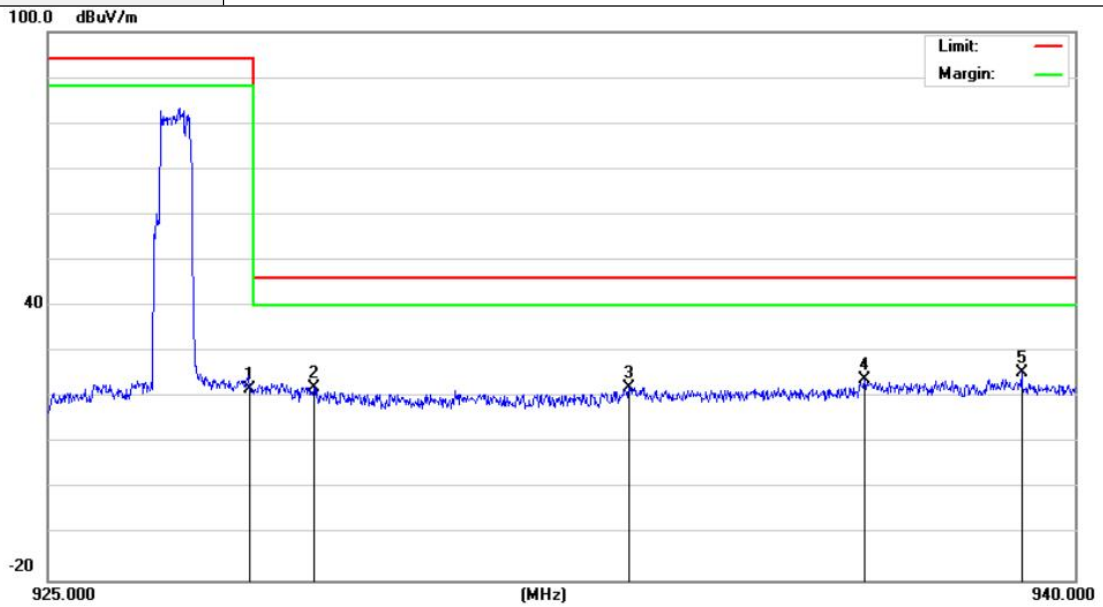
Test Voltage:	DC 5V
Ant. Pol.:	Vertical
Test Mode:	TX Mode 903.24MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		893.0750	17.34	6.76	24.10	46.00	-21.90	peak
2		896.9750	19.16	6.74	25.90	46.00	-20.10	peak
3	*	898.4600	20.67	6.73	27.40	46.00	-18.60	peak
4		900.2898	18.57	6.73	25.30	46.00	-20.70	peak
5		901.9400	19.70	6.70	26.40	46.00	-19.60	peak

Emission Level= Read Level+ Correct Factor

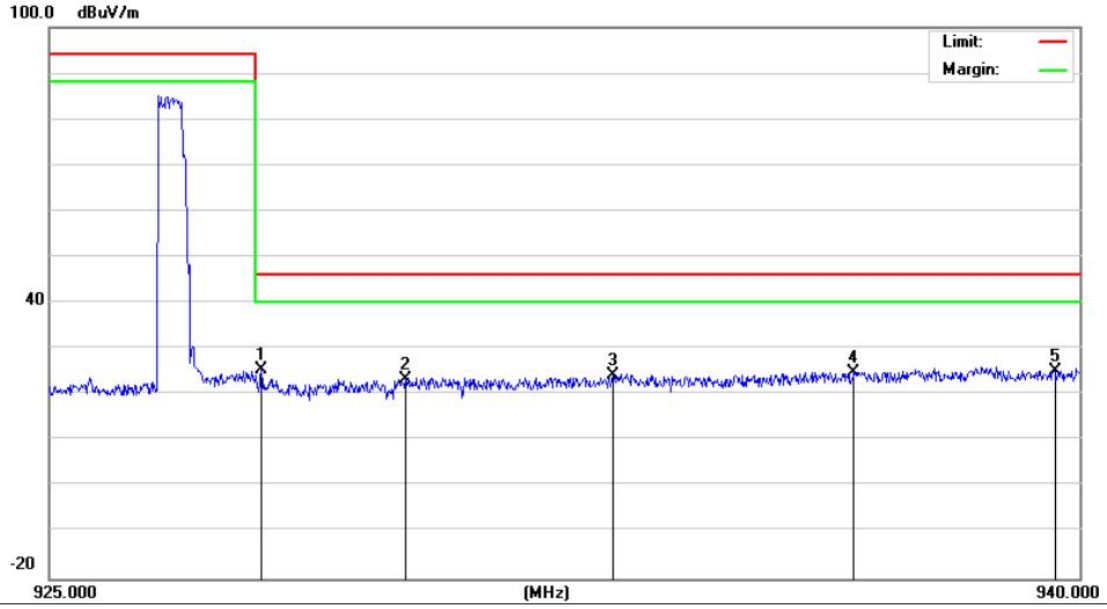
Test Voltage:	DC 5V
Ant. Pol.:	Horizontal
Test Mode:	TX Mode 926.76MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		927.9400	16.85	5.15	22.00	94.00	-72.00	peak
2		928.8700	17.16	5.14	22.30	46.00	-23.70	peak
3		933.4750	17.23	5.07	22.30	46.00	-23.70	peak
4		936.9098	18.98	5.02	24.00	46.00	-22.00	peak
5	*	939.2200	20.61	4.99	25.60	46.00	-20.40	peak

Emission Level= Read Level+ Correct Factor

Test Voltage:	DC 5V
Ant. Pol.	Vertical
Test Mode:	TX Mode 926.76MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1	*	928.0750	20.45	5.15	25.60	46.00	-20.40	peak
2		930.1749	18.38	5.12	23.50	46.00	-22.50	peak
3		933.1900	19.32	5.08	24.40	46.00	-21.60	peak
4		936.7000	19.97	5.03	25.00	46.00	-21.00	peak
5		939.6399	20.31	4.99	25.30	46.00	-20.70	peak

Emission Level= Read Level+ Correct Factor

4.EUT TEST PHOTOS

Reference attachment Test Setup Photos

**************************THE END**************************