TEST REPORT

Product	:	Wireless Microphone
Trade mark	:	NORWII / KNORVAY
Model/Type reference	:	S128,S100,S108,S118,S138, S158,S168,S188,S198
Serial Number	:	N/A
Report Number	:	EED32P80565301
FCC ID	:	2AXGRVA2
Date of Issue	:	Jun. 19, 2023
Test Standards	:	47 CFR Part 15 Subpart C Section 15.236
Test result	:	PASS

Prepared for:

Shanghai Norwii Technology Co., Ltd.
2F, Building 3, NO.277, Jinfeng Road, Pudong New Area, Shanghai 201201, China

Prepared by:

Centre Testing International Group Co., Ltd.
Hongwei Industrial Zone, Bao'an 70 District,
Shenzhen, Guangdong, China
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Compiled by:	Frazer Li	Reviewed by:	Tom Chen
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Approved by:	Aaron Ma	Date:	Jun. 19, 2023
	Aaron Ma		

Check No.::4137230423

1 Content

2 Version

Version No.	Date	Description
00	Jun. 19, 2023	Original

3 Test Summary

Test Item	Test Requirement	Test Method	Result
AC Power Line Conducted Emission	47 CFR Part 15 Subpart C Section 15.207 (a)	ANSI C63.10-2013	PASS
99% Occupied Bandwidth	47 CFR Part 15 Subpart C Section 15.236 (f)(2)	ANSI C63.10-2013	PASS
Frequency Tolerance	47 CFR Part 15 Subpart C Section 15.236 (f)(3)	ANSI C63.10-2013	PASS
EIRP	47 CFR Part 15 Subpart C Section 15.236 (d)(2)	ANSI C63.10-2013	PASS
Necessary Bandwidth	47 CFR Part 15 Subpart C Section 15.236 (g) & § 8.3 of ETSI EN 300 422–1 V1.4.2 (2011–08)	ETSI EN 300 422–1 V1.4.2 (2011–08)	PASS
Radiated Spurious Emission	§ 8.4 of ETSI EN 300 422–1 V1.4.2 (2011–08)	ETSI EN 300 422–1 V1.4.2 (2011–08)	PASS
Radiated Spurious Emission	47 CFR Part 15, Subpart C Section 15.209(a)	ANSI C63.10-2013	PASS
Restricted bands of operation	47 CFR Part 15 Subpart C Section 15.205(a)	ANSI C63.10-2013	PASS

Remark:

Company Name and Address shown on Report, the sample(s) and sample Information were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.

Model No.: S128,S100,S108,S118,S138,S158,S168,S188,S198

Only the model S128 was tested, since the electrical circuit design, layout, components used and internal wiring were identical for the above models, with difference being color and model number.

4 General Information

4.1 Client Information

Applicant:	Shanghai Norwii Technology Co., Ltd.
Address of Applicant:	2F, Building 3, NO.277, Jinfeng Road, Pudong New Area, Shanghai 201201, China
Manufacturer:	Shanghai Norwii Technology Co., Ltd.
Address of Manufacturer:	2F, Building 3, NO.277, Jinfeng Road, Pudong New Area, Shanghai 201201, China
Factory:	Shanghai Norwii Technology Co., Ltd.
Address of Factory:	2F, Building 3, NO.277, Jinfeng Road, Pudong New Area, Shanghai 201201, China

4.2 General Description of EUT

Product Name:	Wireless Microphone	
Model No.:	S128,S100,S108,S118,S138,S158,S168,S188,S198	
Test Model No.:	S128	
Trade mark:	NORWII / KNORVAY	
Software Version:	S128_UHF_TX_AB_V1.2.hex	
Hardware Version:	S128 V2.0	
Product Type:	☐ Mobile ☒ Portable ☐ Fix Location	
Operation Frequency:	657.5MHz to 662.5MHz	
Modulation Type:	π/4 DQPSK	
Number of Channel:	11	
Antenna Type:	Monopole antenna	
Antenna Gain:	3.73dBi	
Power Supply:	USB port：	DC 5.0V
	Battery:	DC 3.7V,600mA
Test Voltage:	DC 3.7V	
Sample Received Date:	Apr. 23, 2023	
Sample tested Date:	Apr. 23, 2023 to Jun. 05, 2023	

4.3 Test Environment

Environment Parameter	Selected Values During Tests		
Test condition	Ambient		
	Temperature(℃)	DC Voltage(V)	Relative Humidity%
NT/NV	25	3.70	54
LT/HV	0	4.07	54
LT/LV	0	3.33	54
HT/HV	35	4.07	54
HT/LV	35	3.33	54

Note:

1) The EUT just work in such extreme temperature of 0℃~+35℃, and the voltage of DC 3.33V~DC 4.07V,so here the EUT is tested in the temperature of 0℃~+35℃ and the voltage of DC 3.33V~DC 4.07V.

2) NV: Normal Voltage
NT: Normal Temperature
LT: Low Extreme Test Temperature
HT: High Extreme Test Temperature

6 Test conditions, power sources and ambient conditions

6.1 Normal and extreme test-conditions

Tests shall be made under normal test conditions, and also, where stated, under extreme test conditions.

The test conditions and procedures shall be as specified in clauses 6.2 to 6.4.2.

6.2 Test power source

During tests the power source of the equipment shall be replaced by a test power source, capable of producing normal and extreme test voltages as specified in clauses 6.3.2 and 6.4.2. The internal impedance of the test power source shall be low enough for its effect on the test results to be negligible. For the purpose of the tests, the voltage of the power source shall be measured at the input terminals of the equipment.

For battery operated equipment, the battery shall be removed and the test power source shall be suitably decoupled and applied as close to the equipment battery terminals as practicable. For radiated measurements any external power leads should be arranged so as not to affect the measurements. If necessary (or the EUT fails the test) the external power supply may be replaced with the equipment's own internal batteries at the required voltage, and this shall be stated on the test report.

If the equipment is provided with a power cable or power socket, the test voltage shall be that measured at the point of connection of the power cable to the equipment.

During tests the power source voltages shall be within a tolerance of $< \pm 1$ % relative to the voltage at the beginning of each test. The value of this tolerance can be critical for certain measurements. Using a smaller tolerance provides a better uncertainty value for these measurements. If internal batteries are used, at the end of each test the voltage shall be within a tolerance of $< \pm 1$ % relative to the voltage at the beginning of each test.

6.3 Normal test conditions

6.3.1 Normal temperature and humidity

The normal temperature and humidity conditions for tests shall be any convenient combination of temperature and humidity within the following ranges:

- temperature: +15 °C to +35 °C;
- relative humidity: 20 % to 75 %.

When it is impracticable to carry out the tests under the conditions stated above, a note to this effect, stating the actual temperature and relative humidity during the tests, shall be added to the test report.

6.3.2 Normal test power source voltage

6.3.2.1 Mains voltage

The normal test voltage for equipment to be connected to the mains shall be the nominal mains voltage. For the purpose of the present document, the nominal voltage shall be the declared mains voltage, or any of the declared mains voltages, for which the equipment was designed.

The frequency of the test power source corresponding to the alternating current (ac) mains shall be between 49 Hz and 51 Hz.

6.3.2.2 Other power sources

For operation from other power sources or types of battery (primary or secondary), the normal test voltage shall be that declared by the equipment manufacturer and approved by the test laboratory. The values shall be stated in the test report.

6.4 Extreme test conditions

6.4.1 Extreme temperatures

For tests at extreme temperatures, measurements shall be made in accordance with the procedures specified in clause 6.4.1.1, at -10 °C and +45 °C.

6.4.1.1 Procedures for tests at extreme temperatures

Before measurements are made, the equipment shall have reached thermal balance in the test chamber. The equipment shall be switched off during the temperature stabilizing period. If the thermal balance is not checked by measurements, a temperature stabilizing period of at least one hour shall be allowed.

The sequence of measurements shall be chosen and the humidity content in the test chamber shall be controlled so that excessive condensation does not occur.

Before tests at the higher temperatures, the equipment shall be placed in the test chamber and left until thermal balance is attained. The equipment shall then be switched on for one minute in the transmit condition, after which the equipment shall meet the specified requirements.

For tests at the lower extreme temperature, the equipment shall be left in the test chamber until thermal balance is attained, then switched to the standby or receive condition for one minute after which the equipment shall meet the specified requirements.

6.4.2 Extreme test power source voltages

6.4.2.1 Mains voltage

The extreme test voltages for equipment to be connected to an ac mains source shall be the nominal mains voltage +10 %.

6.4.2.2 Other power sources

For equipment using other power sources, or capable of being operated from a variety of power sources, the extreme test voltages shall be those agreed between the equipment manufacturer and the testing laboratory and shall be recorded with the results.

Operation Frequency each of channel:							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	657.5	4	659.0	7	660.5	10	662.0
2	658.0	5	659.5	8	661.0	11	662.5
3	658.5	6	660.0	9	661.5		

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Channel	Frequency(MHz)
The lowest channel (Channel 1)	657.5
The middle channel (Channel 6)	660.0
The highest channel (Channel 11)	662.5

4.4 Test Configuration

EUT Test Software Settings:			
Software:	RF Test		
EUT Power Grade:	Default (Power level is built-in set parameters and cannot be changed and selected)		
Use test software to set the lowest frequency, the middle frequency and the highest frequency keep transmitting of the EUT.			
Test Mode	Modulation	Channel	Frequency(MHz)
Mode a	π/4 DQPSK	CH1	657.5
Mode b	π/4 DQPSK	CH6	660.0
Mode c	π/4 DQPSK	CH11	662.5

4.5 Test Environment

Operating Environment:	
Radiated Spurious Emissions:	
Temperature:	22~25.0 °C
Humidity:	50~55 % RH
Atmospheric Pressure:	1010mbar
Conducted Emissions:	
Temperature:	22~25.0 °C
Humidity:	50~55 % RH
Atmospheric Pressure:	1010mbar
RF Conducted:	
Temperature:	22~25.0 °C
Humidity:	50~55 % RH
Atmospheric Pressure:	1010mbar

4.6 Description of Support Units

The EUT has been tested independently.

4.7 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd
Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China
Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385
No tests were sub-contracted.
FCC Designation No.: CN1164

4.8 Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Radio Frequency	7.9×10^{-8}
2	RF power, conducted	0.46dB (30MHz-1GHz)
		0.55dB (1GHz-40GHz)
3	Radiated Spurious emission test	3.3dB (9kHz-30MHz)
		4.3dB (30MHz-1GHz)
		4.5dB (1GHz-18GHz)
		3.4dB (18GHz-40GHz)
4	Conduction emission	3.5dB (9kHz to 150kHz)
		3.1dB (150kHz to 30MHz)
5	Temperature test	0.64°C
6	Humidity test	3.8%
7	DC power voltages	0.026%

4.9 Equipment List

RF test system					
Equipment	**Manufacturer**	**Mode No.**	**Serial Number**	**Cal. Date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
Communication test set	R&S	CMW500	107929	07-06-2022	07-05-2023
Signal Generator	R&S	SMBV100A	1407.6004K02-262149-CV	09-09-2022	09-08-2023
Spectrum Analyzer	R&S	FSV40	101200	07-29-2022	07-28-2023
RF control unit(power unit)	MWRF-test	MW100-RFCB	MW220620CTI-42	07-06-2022	07-05-2023
high-low temperature test chamber	Dong Guang Qin Zhuo	LK-80GA	QZ20150611879	12-19-2022	12-18-2023
Temperature/ Humidity Indicator	biaozhi	HM10	1804186	06-16-2022	06-15-2023
BT&WI-FI Automatic test software	MWRF-test	MTS 8310	2.0.0.0	---	---

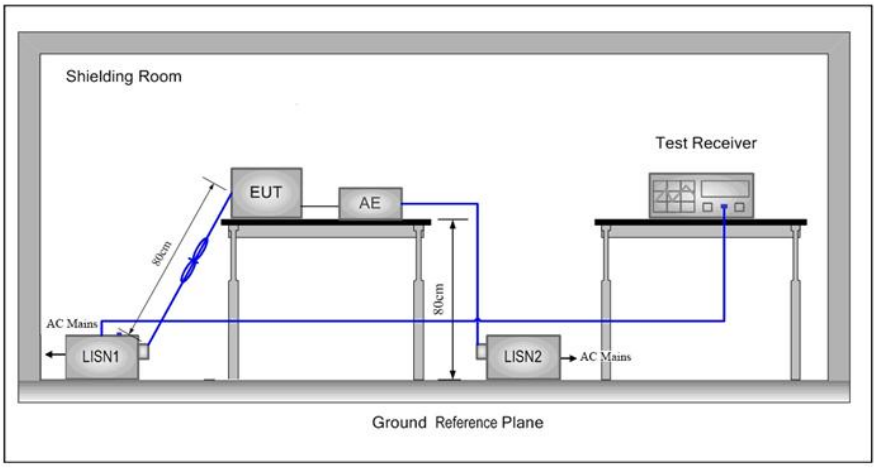
Conducted disturbance Test					
Equipment	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
R&S	ESCI	100435	04-25-2023	04-24-2024	R&S
R&S	ENV216	100098	09-27-2022	09-26-2023	R&S
Schwarzbeck	CVP 9222C	00124	07-13-2022	07-12-2023	Schwarzbeck
TESEQ	ISN T800	30297	12-29-2022	12-28-2023	TESEQ
changchun	DYM3	1188	---	---	changchun
Defu	TH128	/	---	---	Defu
Fara	EZ-EMC	EMC-CON 3A1.1	---	---	Fara

3M Semi-anechoic Chamber (2)- Radiated disturbance Test					
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Cal. Date**	**Due Date**
3M Chamber & Accessory Equipment	TDK	SAC-3	---	05-22-2022	05-21-2025
Receiver	R&S	ESCI7	100938-003	09-28-2022	09-27-2023
Spectrum Analyzer	R&S	FSV40	101200	07-29-2022	07-28-2023
Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-076	04-15-2021	04-14-2024
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	9163-618	05-22-2022 05-21-2023	05-21-2023 05-20-2024
Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-1869	04-17-2021	04-16-2024
Horn Antenna	A.H.SYSTEMS	SAS-574	374	05-29-2021	05-28-2024
Preamplifier	Agilent	11909A	12-1	03-28-2023	03-27-2024
Preamplifier	EMCI	EMC051845SE	980380	12-23-2022	12-22-2023
Preamplifier	CD	PAP-1840-60	6041.6042	07-05-2022	07-04-2023
Cable line	Fulai(7M)	SF106	5219/6A	---	---
Cable line	Fulai(6M)	SF106	5220/6A	---	---
Cable line	Fulai(3M)	SF106	5216/6A	---	---
Cable line	Fulai(3M)	SF106	5217/6A	---	---
Test software	Fara	EZ-EMC	EMEC-3A1-Pre	---	---

3M full-anechoic Chamber					
Equipment	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. Date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
Fully Anechoic Chamber	TDK	FAC-3	---	01-09-2021	01-08-2024
Receiver	Keysight	N9038A	MY57290136	02-27-2023	02-26-2024
Spectrum Analyzer	Keysight	N9020B	MY57111112	02-21-2023	02-20-2024
Spectrum Analyzer	Keysight	N9030B	MY57140871	02-21-2023	02-20-2024
TRILOG Broadband Antenna	Schwarzbeck	VULB 9163	9163-1148	04-30-2021	04-29-2024
Horn Antenna	Schwarzbeck	BBHA 9170	9170-832	04-17-2021	04-16-2024
Horn Antenna	ETS-LINDGREN	3117	57407	07-04-2021	07-03-2024
Preamplifier	EMCI	EMC001330	980563	03-28-2023	03-27-2024
Preamplifier	Tonscend	TAP-011858	AP21B806112	07-29-2022	07-28-2023
Preamplifier	EMCI	EMC184055SE	980597	04-13-2023	04-12-2024
Communication test set	R&S	CMW500	102898	12-23-2022	12-22-2023
Temperature/ Humidity Indicator	biaozhi	GM1360	EE1186631	04-11-2023	04-10-2024
RSE Automatic test software	JS Tonscend	JS36-RSE	10166	---	---
Cable line	Times	SFT205-NMSM-2.50M	394812-0001	---	---
Cable line	Times	SFT205-NMSM-2.50M	394812-0002	---	---
Cable line	Times	SFT205-NMSM-2.50M	394812-0003	---	---
Cable line	Times	SFT205-NMSM-2.50M	393495-0001	---	---
Cable line	Times	EMC104-NMNM-1000	SN160710	---	---
Cable line	Times	SFT205-NMSM-3.00M	394813-0001	---	---
Cable line	Times	SFT205-NMNM-1.50M	381964-0001	---	---
Cable line	Times	SFT205-NMSM-7.00M	394815-0001	---	---
Cable line	Times	HF160-KMKM-3.00M	393493-0001	---	---

5 Test results and Measurement Data

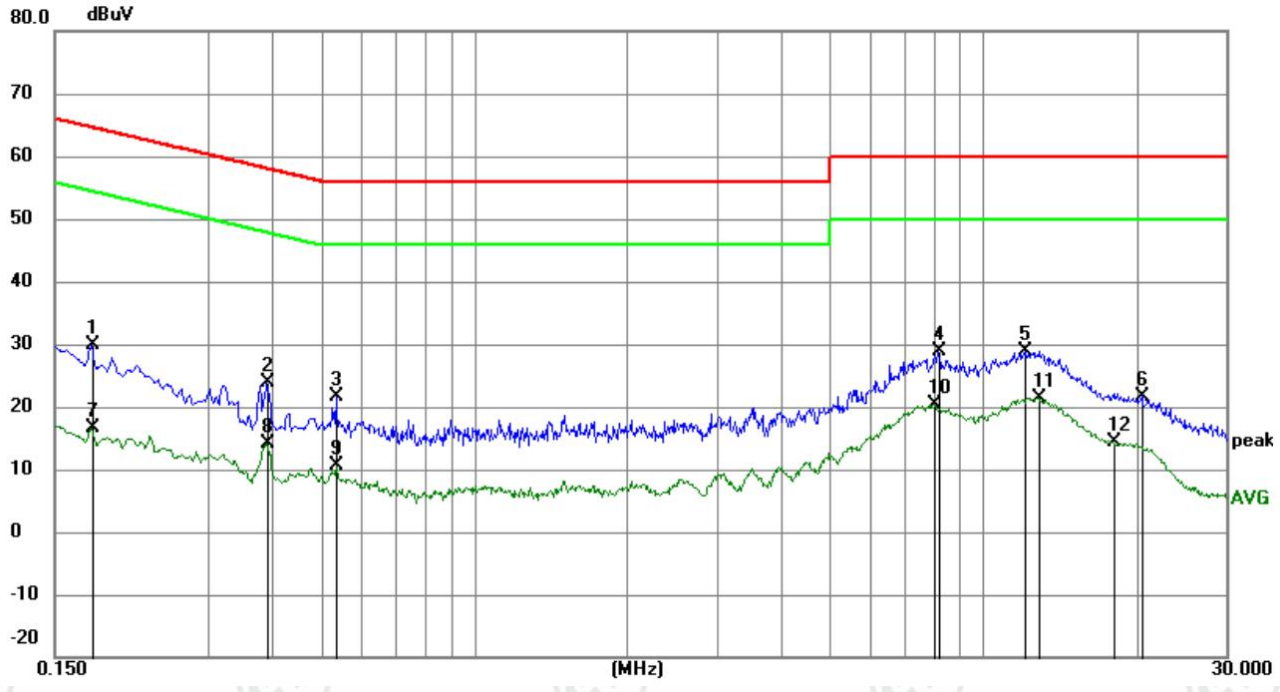
5.1 AC Power Line Conducted Emission

Test Requirement:	47 CFR Part 15 Subpart C Section 15.207 (a)
Test Method:	ANSI C63.10: 2013
Test Frequency Range:	150kHz to 30MHz
Receiver setup:	RBW=9 kHz, VBW=30 kHz, Sweep time=auto
Limit:	Frequency range (MHz) / Limit (dBuV): Quasi-peak / Average 0.15-0.5: 66 to 56* / 56 to 46* 0.5-5: 56 / 46 5-30: 60 / 50 * Decreases with the logarithm of the frequency.
Test Setup:	
Test Procedure:	1) The mains terminal disturbance voltage test was conducted in a shielded room. 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50Ω/50μH + 5Ω linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded. 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane. 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2. 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10: 2013 on conducted measurement.

Test Mode:	All modes were tested, only the worst case mode c was recorded in the report.
Test Results:	Pass

Measurement Data:

Live line:

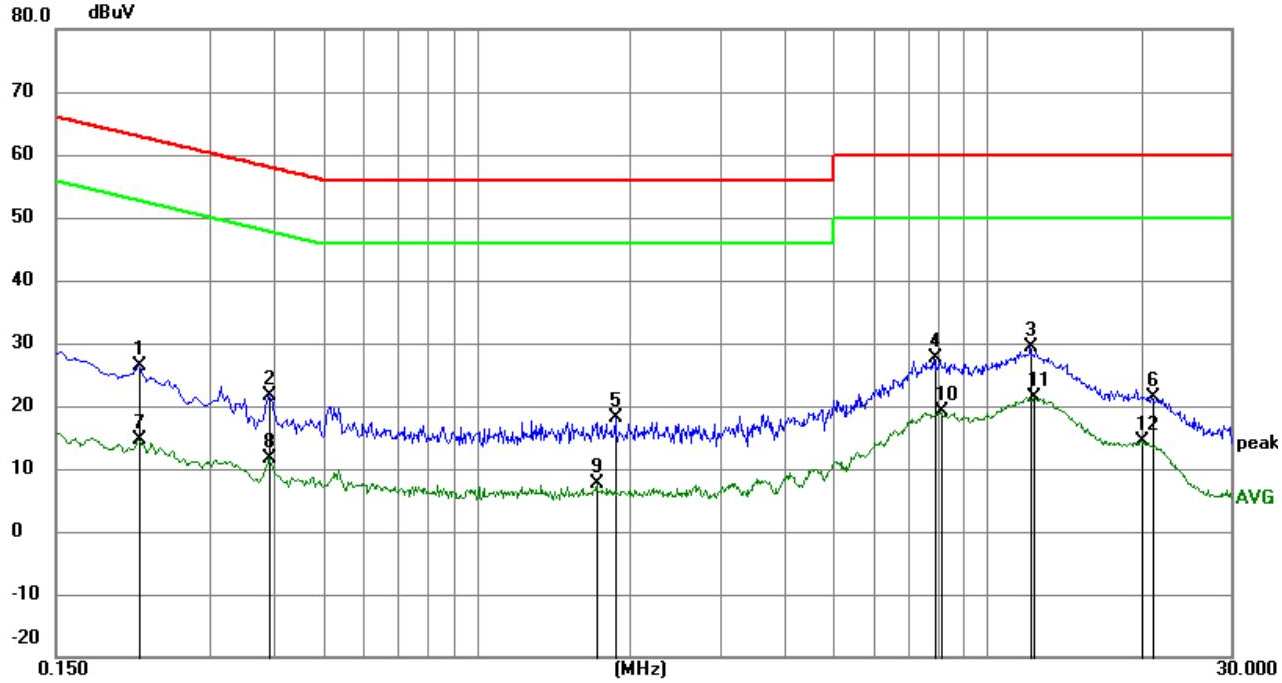


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1770	20.06	9.87	29.93	64.63	-34.70	QP	
2		0.3930	14.00	9.98	23.98	58.00	-34.02	QP	
3		0.5370	11.61	9.99	21.60	56.00	-34.40	QP	
4		8.1870	19.04	9.79	28.83	60.00	-31.17	QP	
5		12.0615	19.15	9.84	28.99	60.00	-31.01	QP	
6		20.5080	11.78	9.97	21.75	60.00	-38.25	QP	
7		0.1770	6.75	9.87	16.62	54.63	-38.01	AVG	
8		0.3930	4.03	9.98	14.01	48.00	-33.99	AVG	
9		0.5370	0.66	9.99	10.65	46.00	-35.35	AVG	
10		7.9890	10.57	9.79	20.36	50.00	-29.64	AVG	
11	*	12.8625	11.57	9.87	21.44	50.00	-28.56	AVG	
12		18.0060	4.49	9.95	14.44	50.00	-35.56	AVG	

Remark:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.
3. If the Peak value under Average limit, the Average value is not recorded in the report.

Neutral line:

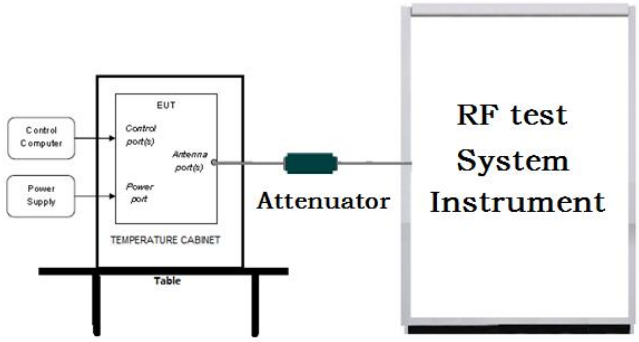


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2175	16.44	9.90	26.34	62.91	-36.57	QP	
2		0.3930	11.74	9.98	21.72	58.00	-36.28	QP	
3		12.1469	19.63	9.84	29.47	60.00	-30.53	QP	
4		7.8855	17.77	9.79	27.56	60.00	-32.44	QP	
5		1.8735	8.37	9.79	18.16	56.00	-37.84	QP	
6		21.1470	11.41	9.98	21.39	60.00	-38.61	QP	
7		0.2175	4.61	9.90	14.51	52.91	-38.40	AVG	
8		0.3930	1.71	9.98	11.69	48.00	-36.31	AVG	
9		1.7205	-2.15	9.80	7.65	46.00	-38.35	AVG	
10		8.1195	9.28	9.79	19.07	50.00	-30.93	AVG	
11	*	12.3450	11.54	9.85	21.39	50.00	-28.61	AVG	
12		20.0085	4.32	9.97	14.29	50.00	-35.71	AVG	

Remark:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.
3. If the Peak value under Average limit, the Average value is not recorded in the report.

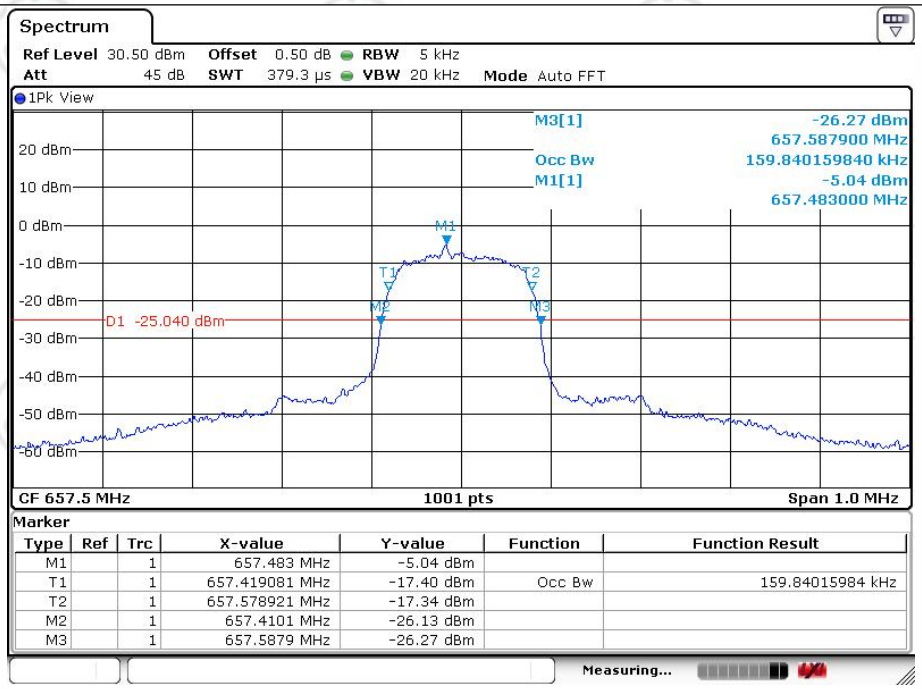
5.2 99% Occupied Bandwidth

Test Requirement:	47 CFR Part 15 Subpart C Section 15.236 (f)(2)
Test Method:	ANSI C63.10 2013
Test Setup:	 Remark: Offset=Cable loss+ attenuation factor.
Test Procedure:	a) The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW. b) Set RBW≥1% to 5% of the OBW. c) VBW = Approximately three times RBW. d) Detector = Peak. e) Trace mode = Max hold. f) Sweep = Auto couple. g) Allow the trace to stabilize. h) Use the 99% power bandwidth function of the instrument and report the measured bandwidth.
Limit:	≤200 kHz
Test Mode:	Refer to clause 5.3
Test Results:	Pass

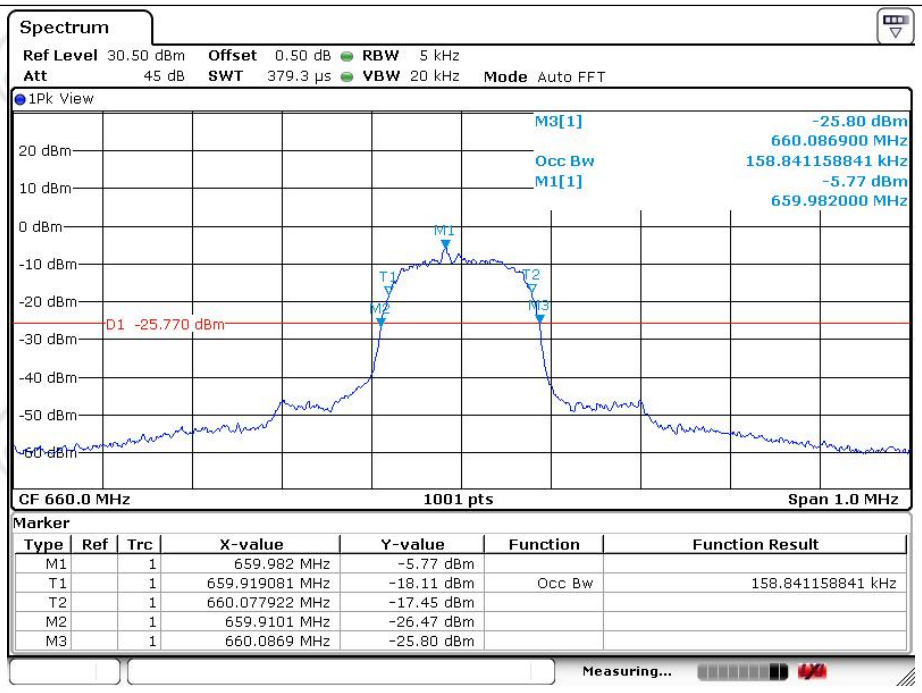
Measurement Data:

Antenna	Frequency [MHz]	99% Occupied Bandwidth [kHz]	Limit [kHz]	Verdict
Ant1	657.5	159.84	200	PASS
Ant1	660.0	158.84	200	PASS
Ant1	662.5	158.84	200	PASS

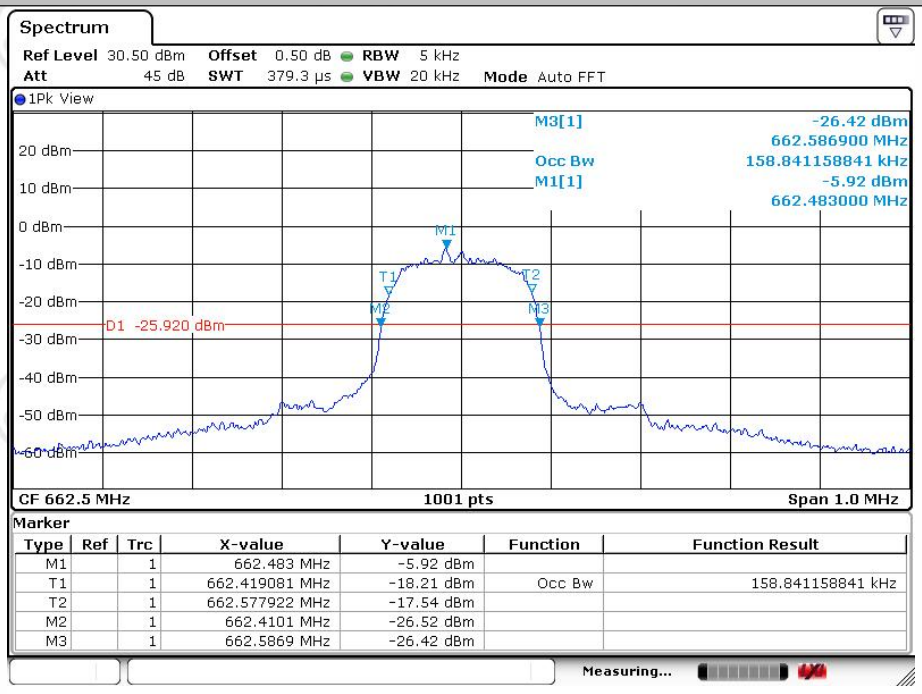
Test Graphs:



Channel 1

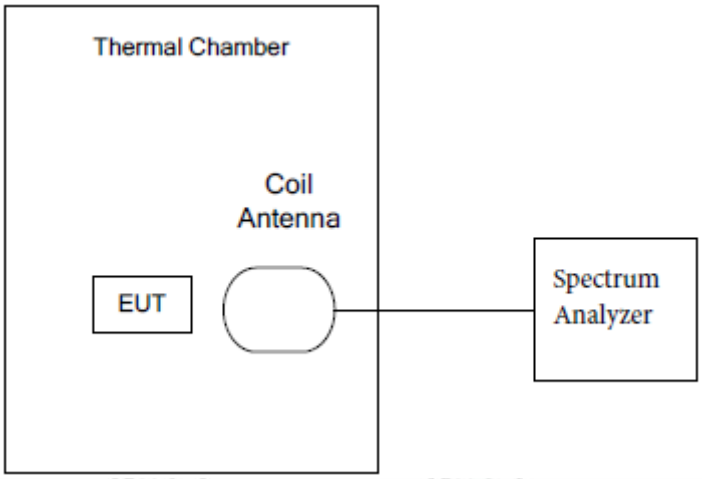


Channel 6



Channel 11

5.3 Frequency Tolerance

Test Requirement:	47 CFR Part 15 C Section 15.236(f)
Test Method:	ANSI C63.10: 2013
Test Setup:	
Requirements:	The frequency tolerance of the carrier signal shall be maintained within ±0.005% of the operating frequency over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage,and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. Battery operated equipment shall be tested using a new battery.
Method of Measurement:	The EUT was placed in an environmental test chamber and powered such that control element received Normal voltage or Extreme voltage and the transmitter provided maximum RF output.
Test Mode:	Refer to clause 5.3
Test Result:	Pass

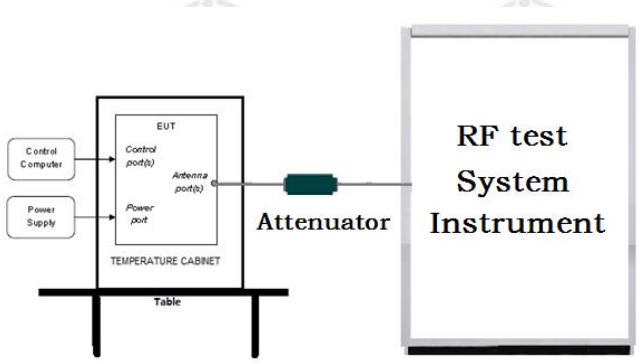
Measurement Data:

Test Mode	Antenna	Frequency [MHz]	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
CW	Ant1	657.5	NV	NT	2000.00	3.041825	20	PASS
CW	Ant1	657.5	LV	NT	2000.00	3.041825	20	PASS
CW	Ant1	657.5	HV	NT	2000.00	3.041825	20	PASS
CW	Ant1	660	NV	NT	2000.00	3.030303	20	PASS
CW	Ant1	660	LV	NT	2000.00	3.030303	20	PASS
CW	Ant1	660	HV	NT	2000.00	3.030303	20	PASS
CW	Ant1	662.5	NV	NT	2000.00	3.018868	20	PASS
CW	Ant1	662.5	LV	NT	2000.00	3.018868	20	PASS
CW	Ant1	662.5	HV	NT	2000.00	3.018868	20	PASS

Test Mode	Antenna	Frequency [MHz]	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
CW	Ant1	657.5	NV	-30	2000.00	3.041825	20	PASS
CW	Ant1	657.5	NV	-20	2000.00	3.041825	20	PASS
CW	Ant1	657.5	NV	-10	2000.00	3.041825	20	PASS
CW	Ant1	657.5	NV	0	2000.00	3.041825	20	PASS
CW	Ant1	657.5	NV	10	2000.00	3.041825	20	PASS
CW	Ant1	657.5	NV	20	2000.00	3.041825	20	PASS
CW	Ant1	657.5	NV	30	2000.00	3.041825	20	PASS
CW	Ant1	657.5	NV	40	2000.00	3.041825	20	PASS
CW	Ant1	657.5	NV	50	2000.00	3.041825	20	PASS
CW	Ant1	660	NV	-30	2000.00	3.030303	20	PASS
CW	Ant1	660	NV	-20	2000.00	3.030303	20	PASS
CW	Ant1	660	NV	-10	2000.00	3.030303	20	PASS
CW	Ant1	660	NV	0	2000.00	3.030303	20	PASS
CW	Ant1	660	NV	10	2000.00	3.030303	20	PASS
CW	Ant1	660	NV	20	2000.00	3.030303	20	PASS
CW	Ant1	660	NV	30	2000.00	3.030303	20	PASS
CW	Ant1	660	NV	40	2000.00	3.030303	20	PASS
CW	Ant1	660	NV	50	2000.00	3.030303	20	PASS
CW	Ant1	662.5	NV	-30	2000.00	3.018868	20	PASS
CW	Ant1	662.5	NV	-20	2000.00	3.018868	20	PASS
CW	Ant1	662.5	NV	-10	2000.00	3.018868	20	PASS
CW	Ant1	662.5	NV	0	2000.00	3.018868	20	PASS

CW	Ant1	662.5	NV	10	2000.00	3.018868	20	PASS
CW	Ant1	662.5	NV	20	2000.00	3.018868	20	PASS
CW	Ant1	662.5	NV	30	2000.00	3.018868	20	PASS
CW	Ant1	662.5	NV	40	2000.00	3.018868	20	PASS
CW	Ant1	662.5	NV	50	2000.00	3.018868	20	PASS

5.4 EIRP

Test Requirement:	47 CFR Part 15C Section 15.236 (d)(2) & KDB 206256 D01 v02r01
Test Method:	ANSI C63.10 2013
Test Setup:	 Remark: Offset=Cable loss+ attenuation factor.
Test Procedure:	a) The output of the EUT was connected to an RF average power meter through fixed attenuation. b) The EUT was set to transmit on the low, middle, and high frequencies in each power level. c) Measure the average power of the transmitter. This EUT's duty cycle is 100%.
Limit:	In the 600 MHz guard band and the 600 MHz duplex gap: 20 mW(*13dBm) EIRP
Test Mode:	Refer to clause 5.3
Test Results:	Pass

Measurement Data:

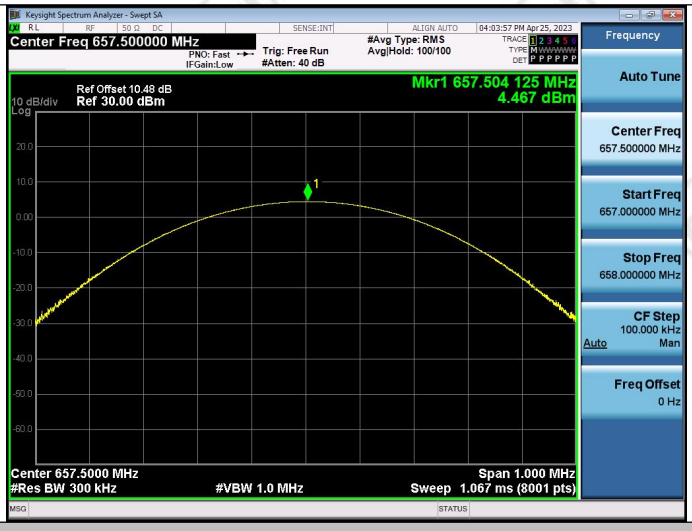
Antenna	Frequency [MHz]	Conducted output power [dBm]	Antenna gain [dBi]	EIRP [dBm]	EIRP Limit [dBm]	ERP [dBm]	Verdict
Ant1	657.5	4.47	3.73	8.20	13.00	6.05	PASS
Ant1	660.0	4.51	3.73	8.24	13.00	6.09	PASS
Ant1	662.5	4.51	3.73	8.24	13.00	6.09	PASS

Note:

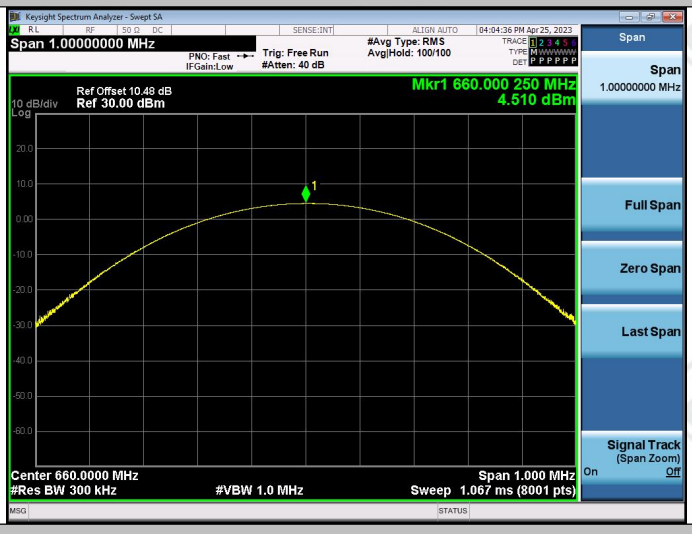
1.EIRP=Conducted output power+Antenna gain;

2.ERP=EIRP-2.15;

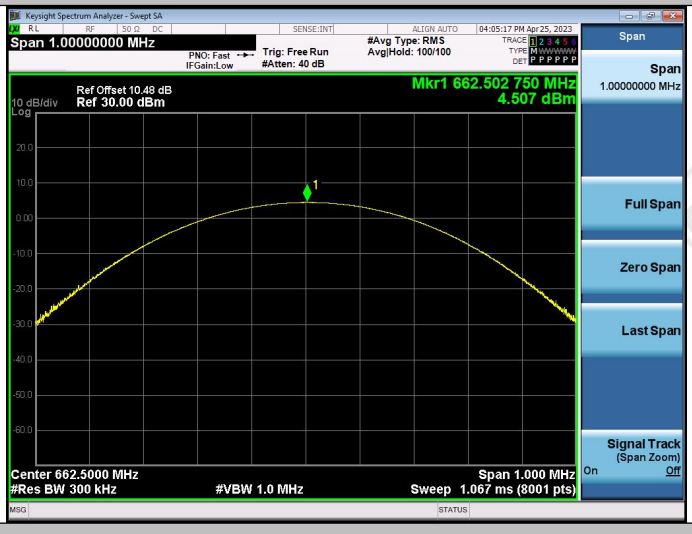
Test Graphs Peak:



Channel 1

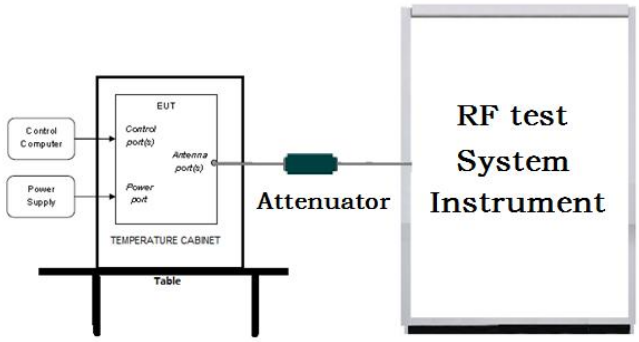
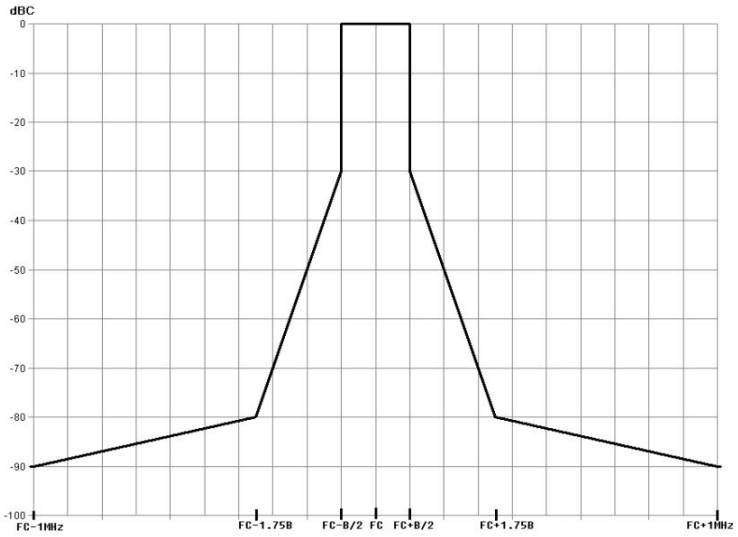


Channel 6

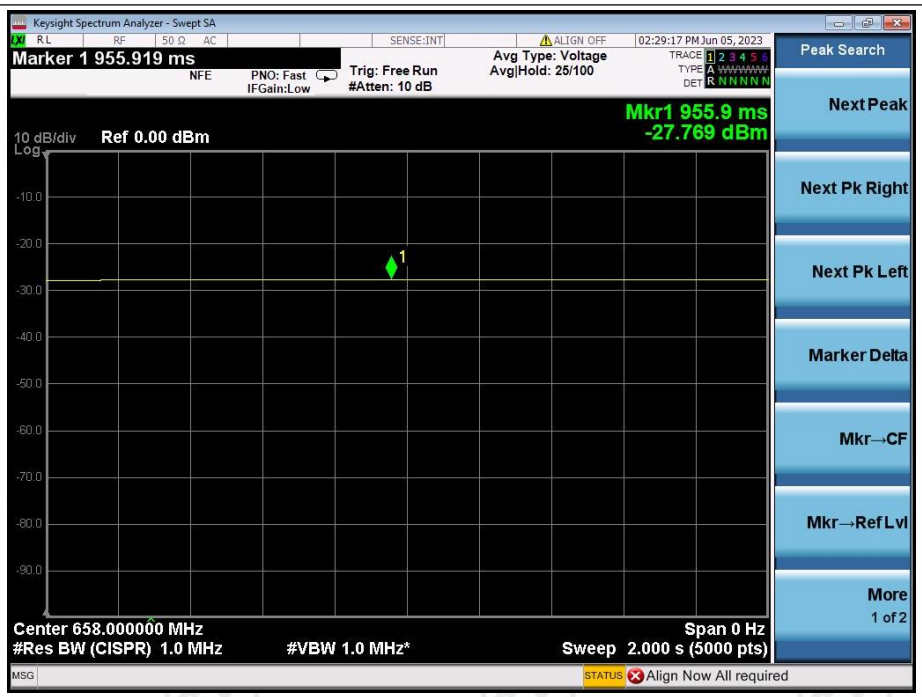
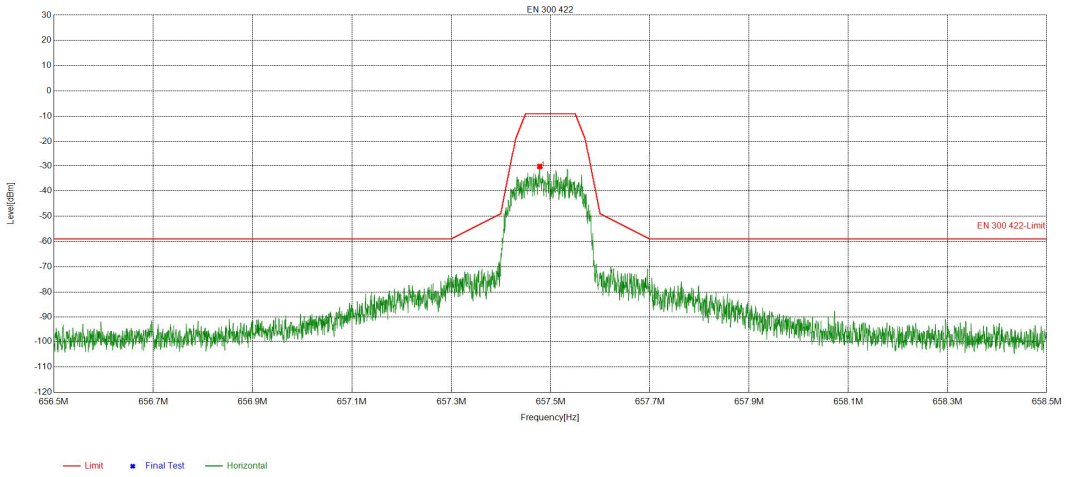


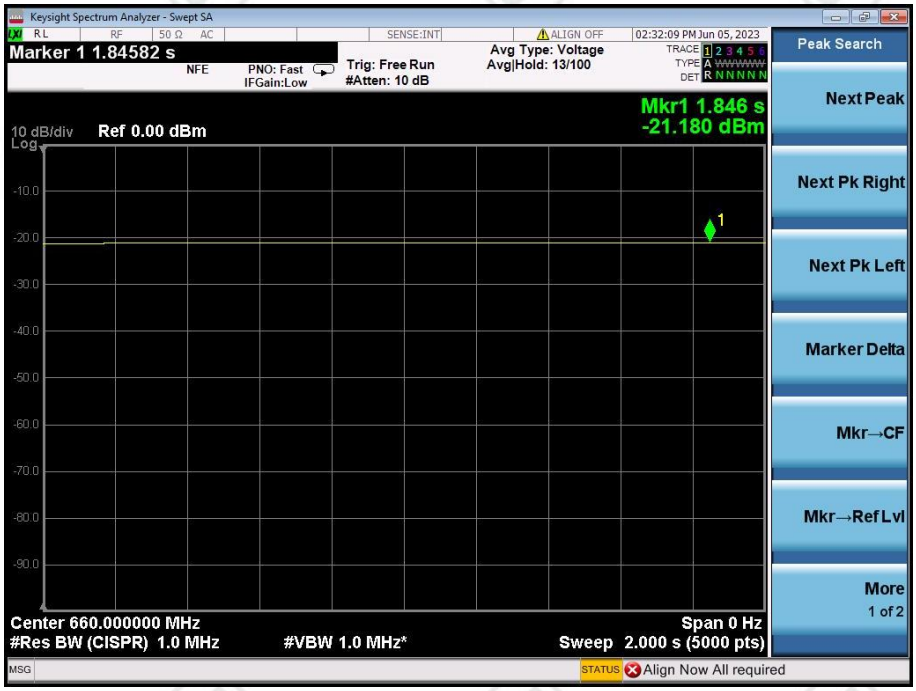
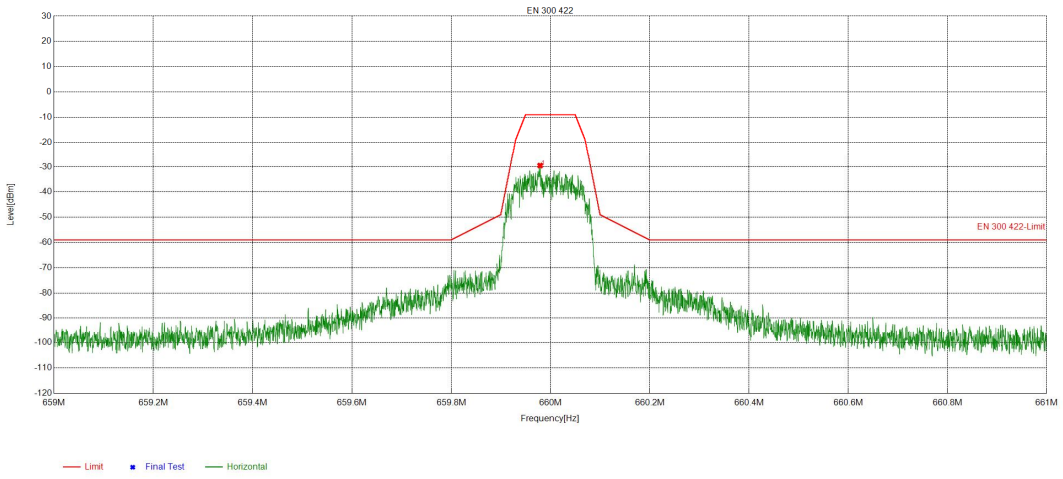
Channel 11

5.5 Necessary Bandwidth Transmitter

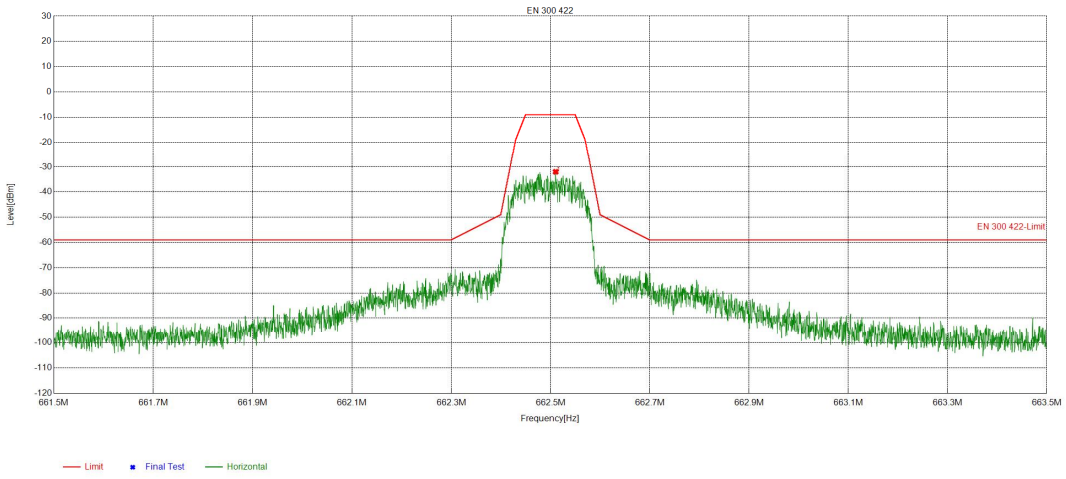
Test Requirement:	47 CFR Part 15 Subpart C Section 15.236 (g) & KDB 206256 D01 v02r01
Test Method:	ETSI EN 300 422-1 V1.4.2 clause 8.3.2.1.
Test Setup:	 Remark: Offset=Cable loss+ attenuation factor.
Test Procedure:	The EUT was powered up and the transmit frequency & power output of the EUT were selected. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency.
Limit:	According to EN 300 422-1 V1.4.2 clause 8.3.2.2, the transmitter output spectrum shall be within the mask defined as below figure. 8.3.2.2 Limits The transmitter output spectrum shall be within the mask defined in figure 4. This mask may also be used for analogue.  **Figure 4: Spectrum mask for digital systems below 1 GHz** For the measurement uncertainty, see clause 10. The -90 dBc point shall be ±1 MHz from fc measured with an average detector.
Test Mode:	All modes were tested, only the worst case data was recorded in the report.
Test Results:	Pass

Test data:

Necessary Bandwidth - Channel 1
Step 1

Step 2


Necessary Bandwidth - Channel 6
Step 1

Step 2


Necessary Bandwidth - Channel 11
Step 1

Step 2


5.6 Radiated Emissions

Test Requirement:	47 CFR Part 15 Subpart C Section 15.236 (g) & KDB 206256 D01 v02r01
Test Method:	ETSI EN 300 422-1 V1.4.2 (2011-08) clause 8.4.2
Test Setup:	

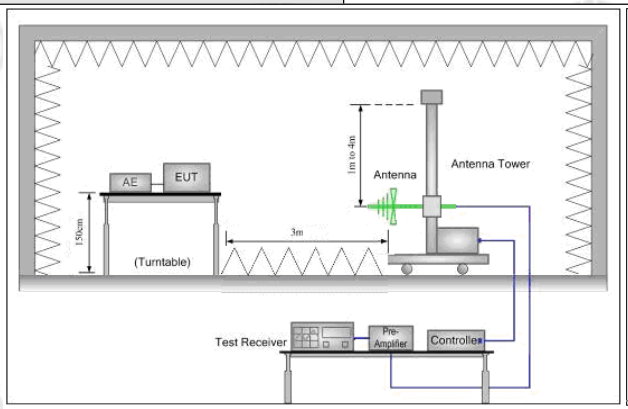


Figure 1. 30MHz to 1GHz

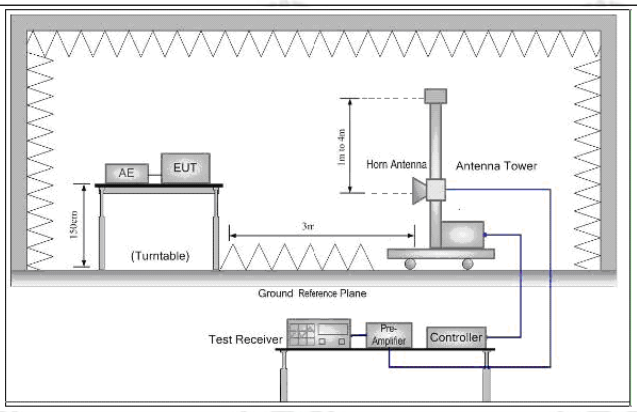


Figure 2. Above 1GHz

Test Procedure:	1) Scan from 30MHz to 18GHz, find the maximum radiation frequency to measure. 2 The technique used to find the Spurious Emissions of the transmitter was the antenna substitution method. Substitution method was performed to determine the actual ERP/EIRP emission levels of the EUT. Test procedure as below: 1) The EUT was powered ON and placed on a 1.5m hight table at a 3 meter fully Anechoic Chamber. The antenna of the transmitter was extended to its maximum length. Modulation mode and the measuring receiver shall be tuned to the frequency of the transmitter under test. 2) The EUT was set 3 meters (above 18GHz the distance is 1 meter) away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3) The disturbance of the transmitter was maximized on the test receiver display by raising and lowering from 1m to 4m the receive antenna and by rotating through 360° the turntable. After the fundamental emission was maximized, a field strength measurement was made. 4) Steps 1) to 3) were performed with the EUT and the receive antenna in both vertical and horizontal polarization. 5) The transmitter was then removed and replaced with another antenna. The center of the antenna was approximately at the same location as the center of the transmitter. 6) A signal at the disturbance was fed to the substitution antenna by means of a non-radiating cable. With both the substitution and the receive antennas horizontally polarized, the receive antenna was raised and lowered to obtain a maximum reading at the test receiver. The level of the signal generator was adjusted until the measured field strength level in step 3) is obtained for this set of conditions. 7) The output power into the substitution antenna was then measured. 8) Steps 6) and 7) were repeated with both antennas polarized. 9) Calculate power in dBm by the following formula: ERP(dBm) = Pg(dBm) – cable loss (dB) + antenna gain (dBd) EIRP(dBm) = Pg(dBm) – cable loss (dB) + antenna gain (dBi) EIRP=ERP+2.15dB where: Pg is the generator output power into the substitution antenna.

<table>
<tr><td></td><td>10) Test the EUT in the lowest channel ,middle channel, the Highest channel and the transmitter in standby mode
11) Repeat above procedures until all frequencies measured was complete.
If the transmitter allows for standby operation, the tests shall be repeated with the transmitter in standby mode.</td></tr>
<tr><td>Limit:</td><td>The power of the transmitter spurious emissions shall not exceed the limits as below.
<table>
<tr><th rowspan="2">State</th><th colspan="3">Frequency</th></tr>
<tr><th>47MHz to 74MHz
87.5MHz to 137MHz
174MHz to 230MHz
470MHz to 862MHz</th><th>Other frequencies below 1000MHz</th><th>Frequencies above 1000MHz</th></tr>
<tr><td>Operation</td><td>4nW</td><td>250nW</td><td>1μW</td></tr>
<tr><td>Standby</td><td>2nW</td><td>2nW</td><td>20nW</td></tr>
</table>
Note:The product has no standby mode.</td></tr>
<tr><td>Test Mode:</td><td>Refer to clause 5.3</td></tr>
<tr><td>Test Results:</td><td>Refer to Appendix A</td></tr>
</table>

Test data:

Band		Channel	657.5MHz

NO.	Freq. [MHz]	Height [cm]	Azimuth [deg]	Level [dBm]	Limit [dBm]	Margin [dB]	Result	Polarity
1	52.1204	150	191	-74.97	-54.00	20.97	PASS	Horizontal
2	120.034	150	324	-67.77	-54.00	13.77	PASS	Horizontal
3	208.9038	150	291	-71.53	-54.00	17.53	PASS	Horizontal
4	1314.9157	150	131	-51.91	-30.00	21.91	PASS	Horizontal
5	1972.3611	150	288	-54.89	-30.00	24.89	PASS	Horizontal
6	9663.1207	150	29	-49.06	-30.00	19.06	PASS	Horizontal
7	50.5681	150	308	-66.72	-54.00	12.72	PASS	Vertical
8	120.034	150	166	-66.95	-54.00	12.95	PASS	Vertical
9	184.2609	150	8	-66.17	-54.00	12.17	PASS	Vertical
10	1314.9157	150	323	-48.47	-30.00	18.47	PASS	Vertical
11	1972.9486	150	220	-57.71	-30.00	27.71	PASS	Vertical
12	6969.886	150	90	-53.64	-30.00	23.64	PASS	Vertical

Band		Channel	660.0MHz

NO.	Freq. [MHz]	Height [cm]	Azimuth [deg]	Level [dBm]	Limit [dBm]	Margin [dB]	Result	Polarity
1	120.034	150	0	-68.07	-54.00	14.07	PASS	Horizontal
2	208.9038	150	275	-71.13	-54.00	17.13	PASS	Horizontal
3	830.4101	150	333	-65.72	-54.00	11.72	PASS	Horizontal
4	1319.616	150	107	-52.46	-30.00	22.46	PASS	Horizontal
5	1979.999	150	307	-55.22	-30.00	25.22	PASS	Horizontal
6	5007.5379	150	204	-55.20	-30.00	25.20	PASS	Horizontal
7	50.7622	150	140	-64.81	-54.00	10.81	PASS	Vertical
8	120.034	150	157	-66.27	-54.00	12.27	PASS	Vertical
9	184.2609	150	8	-66.59	-54.00	12.59	PASS	Vertical
10	1320.2035	150	313	-50.30	-30.00	20.30	PASS	Vertical
11	1979.4115	150	226	-58.00	-30.00	28.00	PASS	Vertical
12	7582.0916	150	37	-53.17	-30.00	23.17	PASS	Vertical

Band		Channel	662.5MHz

NO.	Freq. [MHz]	Height [cm]	Azimuth [deg]	Level [dBm]	Limit [dBm]	Margin [dB]	Result	Polarity
1	120.034	150	349	-68.30	-54.00	14.30	PASS	Horizontal
2	208.9038	150	166	-71.17	-54.00	17.17	PASS	Horizontal
3	829.4399	150	182	-62.41	-54.00	8.41	PASS	Horizontal
4	1324.9037	150	153	-52.21	-30.00	22.21	PASS	Horizontal
5	1987.6369	150	319	-54.43	-30.00	24.43	PASS	Horizontal
6	5028.1014	150	135	-55.08	-30.00	25.08	PASS	Horizontal
7	120.034	150	167	-66.58	-54.00	12.58	PASS	Vertical
8	184.2609	150	357	-66.41	-54.00	12.41	PASS	Vertical
9	831.3803	150	59	-61.39	-54.00	7.39	PASS	Vertical
10	1324.9037	150	311	-50.13	-30.00	20.13	PASS	Vertical
11	3197.9474	150	347	-57.95	-30.00	27.95	PASS	Vertical
12	7398.1949	150	328	-52.77	-30.00	22.77	PASS	Vertical

Remark:

The disturbance above 1GHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

5.7 Radiated Spurious Emissions & Restricted bands

Test Requirement:	47 CFR Part 15C Section 15.209(a) and 15.205
Test Method:	ANSI C63.10 2013
Test Site:	Measurement Distance: 3m (Semi-Anechoic Chamber)

Receiver Setup:

Frequency	Detector	RBW	VBW	Remark
0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak
0.009MHz-0.090MHz	Average	10kHz	30kHz	Average
0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak
0.110MHz-0.490MHz	Average	10kHz	30kHz	Average
0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
30MHz-1GHz	Quasi-peak	100 kHz	300kHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10kHz	Average

Limit:

Frequency	Field strength (microvolt/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)
0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
1.705MHz-30MHz	30	-	-	30
30MHz-88MHz	100	40.0	Quasi-peak	3
88MHz-216MHz	150	43.5	Quasi-peak	3
216MHz-960MHz	200	46.0	Quasi-peak	3
960MHz-1GHz	500	54.0	Quasi-peak	3
Above 1GHz	500	54.0	Average	3

Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

Test Setup:	

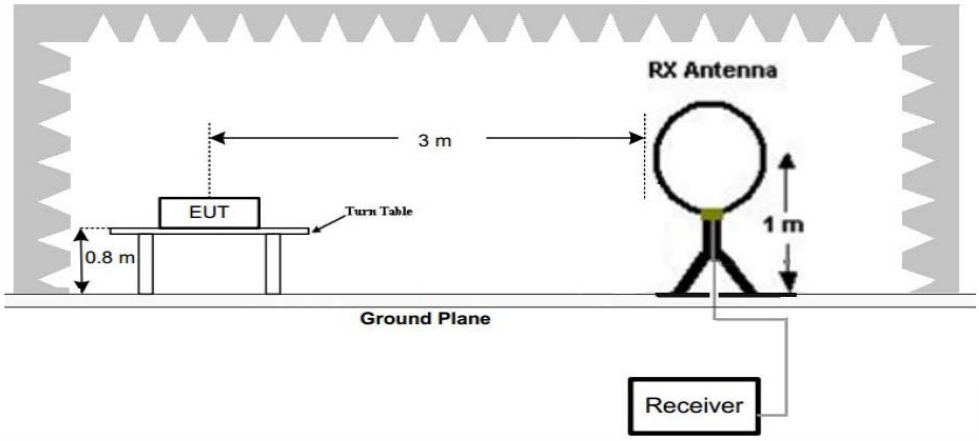


Figure 1. Below 30MHz

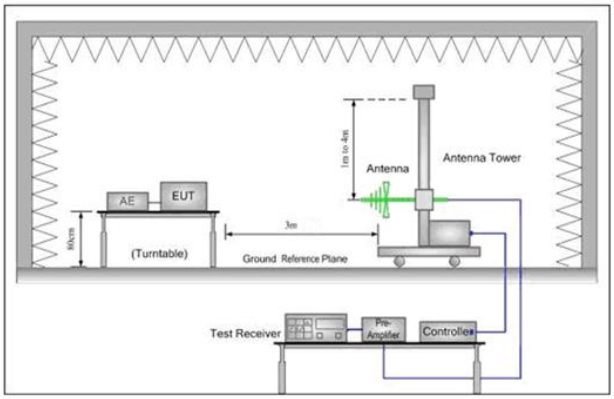


Figure 2. 30MHz to 1GHz

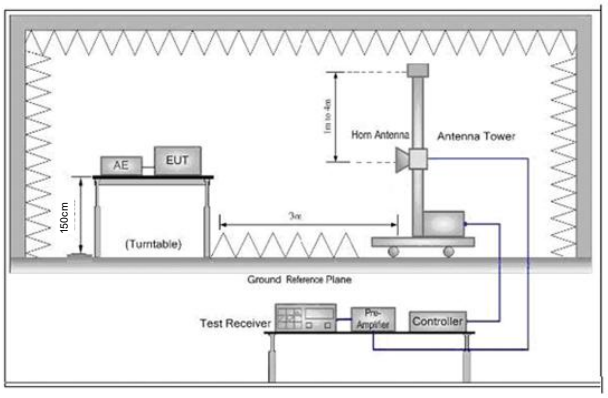


Figure 3. Above 1 GHz

Test Procedure:	a. 1) Below 1G: The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2) Above 1G: The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation. Note: For the radiated emission test above 1GHz: Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both

	horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. g. Test the EUT in the lowest channel,the middle channel,the Highest channel. h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case. i. Repeat above procedures until all frequencies measured was complete.
Test Mode:	Refer to clause 5.3
Test Results:	Pass

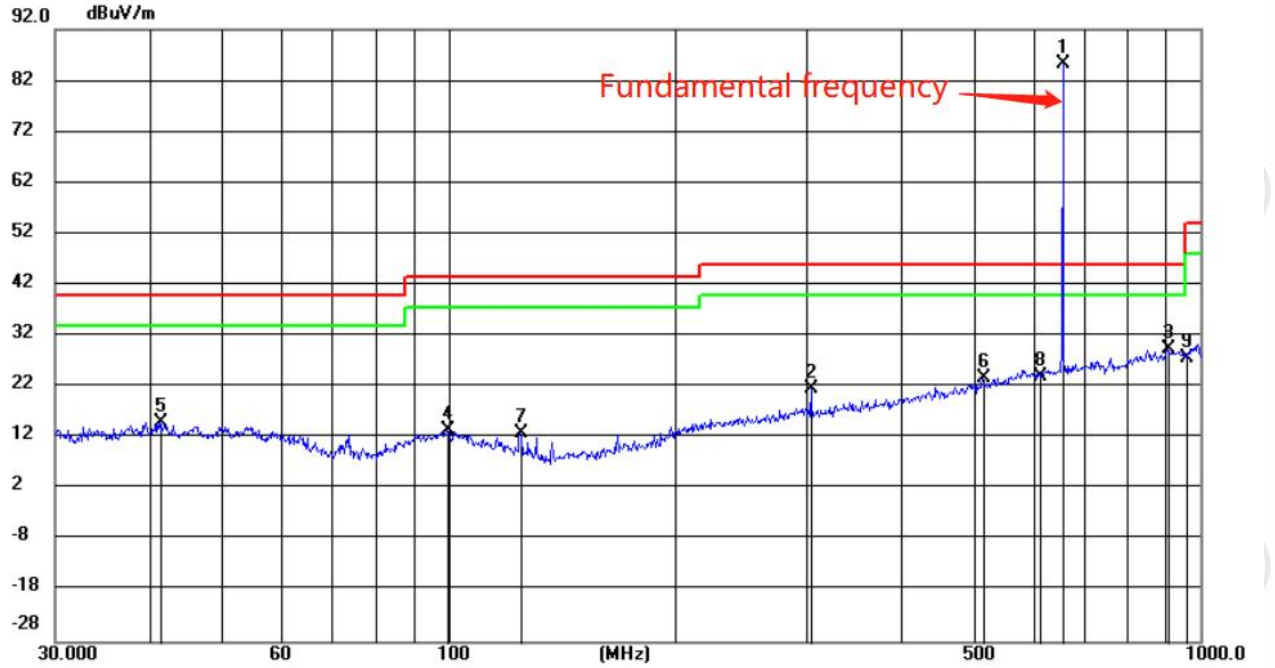
Radiated Emission below 1GHz & Restricted bands:

Band		Channel	657.5MHz

Test Graph

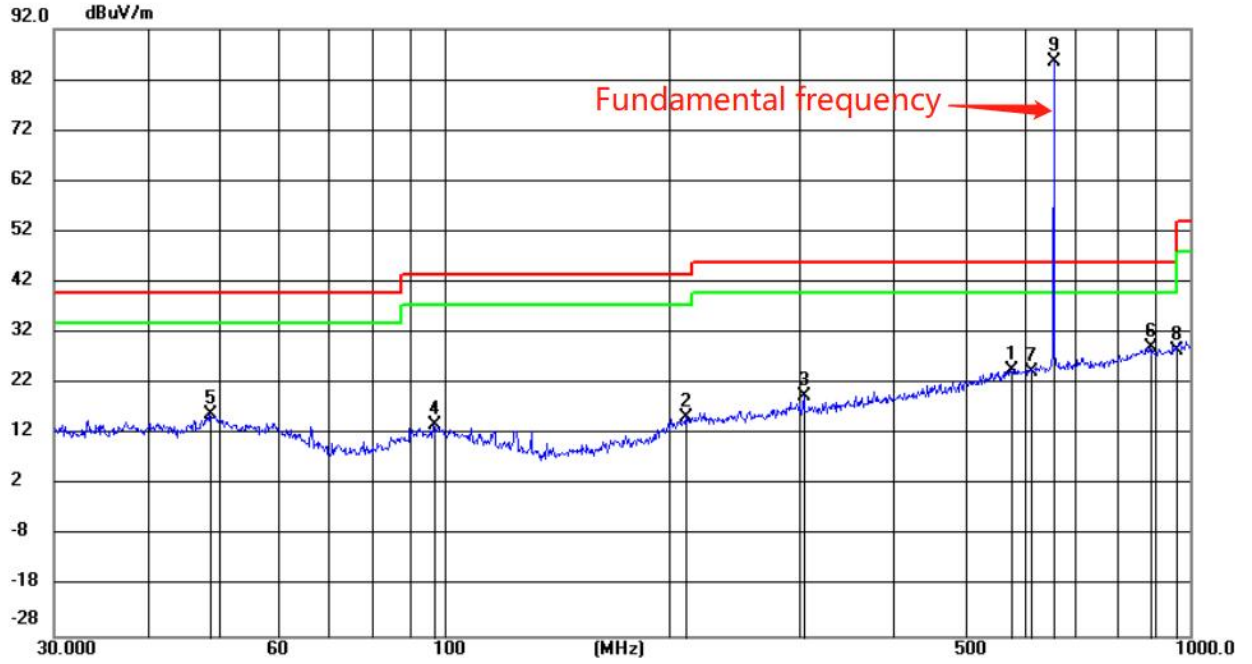
Measurement Data:

Horizontal:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	657.5667	60.78	24.44	85.22	46.00	39.22	peak	100	148	
2		304.2363	4.43	17.34	21.77	46.00	-24.23	peak	100	340	
3		904.5772	0.91	28.44	29.35	46.00	-16.65	peak	199	26	
4		99.5455	-0.31	13.99	13.68	43.50	-29.82	peak	100	289	
5		41.3779	0.68	14.49	15.17	40.00	-24.83	peak	199	352	
6		514.7149	1.79	21.91	23.70	46.00	-22.30	peak	199	0	
7		125.0065	2.44	10.43	12.87	43.50	-30.63	peak	100	299	
8		614.0000	-0.10	24.13	24.03	46.00	-21.97	peak	199	352	
9		960.0000	-1.06	28.71	27.65	46.00	-18.35	peak	199	118	

Vertical:



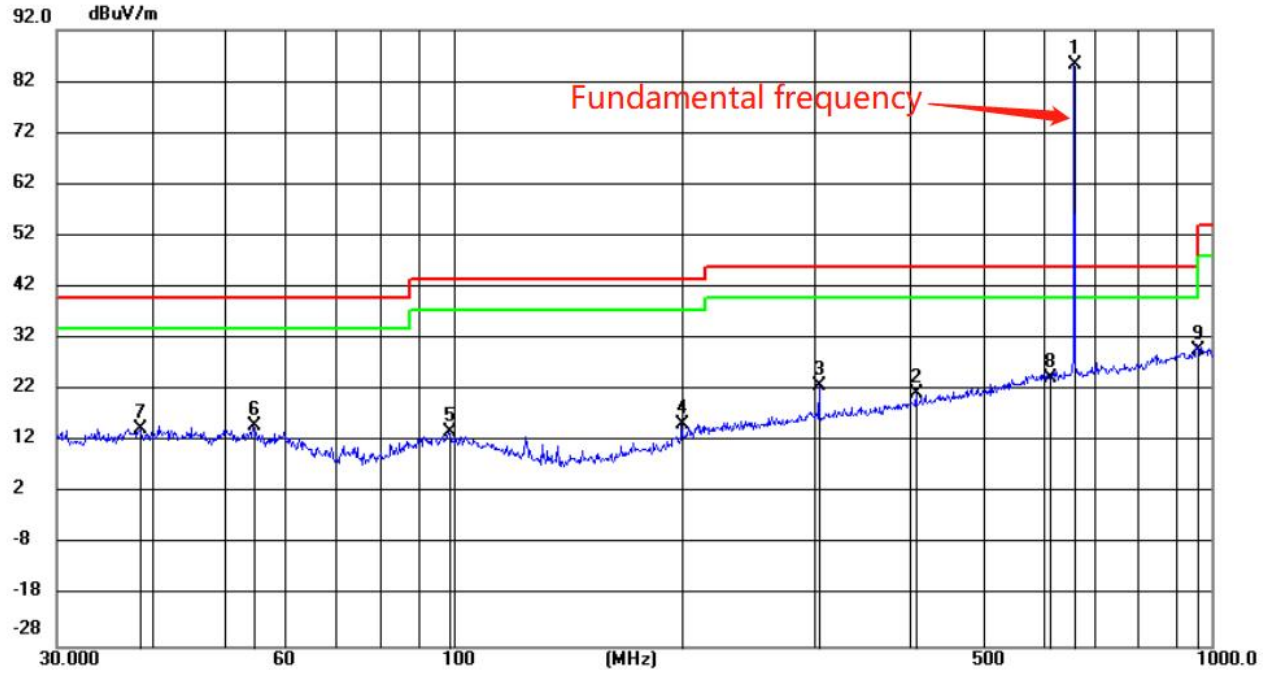
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		575.0290	1.14	23.41	24.55	46.00	-21.45	peak	100	291	
2		211.4894	1.32	14.18	15.50	43.50	-28.00	peak	200	207	
3		304.2363	2.23	17.34	19.57	46.00	-26.43	peak	200	337	
4		96.8088	0.24	13.61	13.85	43.50	-29.65	peak	200	267	
5		48.6208	1.58	14.31	15.89	40.00	-24.11	peak	100	180	
6		885.4338	1.13	28.12	29.25	46.00	-16.75	peak	200	207	
7		614.0000	0.14	24.13	24.27	46.00	-21.73	peak	100	352	
8		960.0000	-0.09	28.71	28.62	46.00	-17.38	peak	100	352	
9	*	657.5668	61.00	24.44	85.44	46.00	39.44	peak	100	352	

Band		Channel	660.0MHz

Test Graph

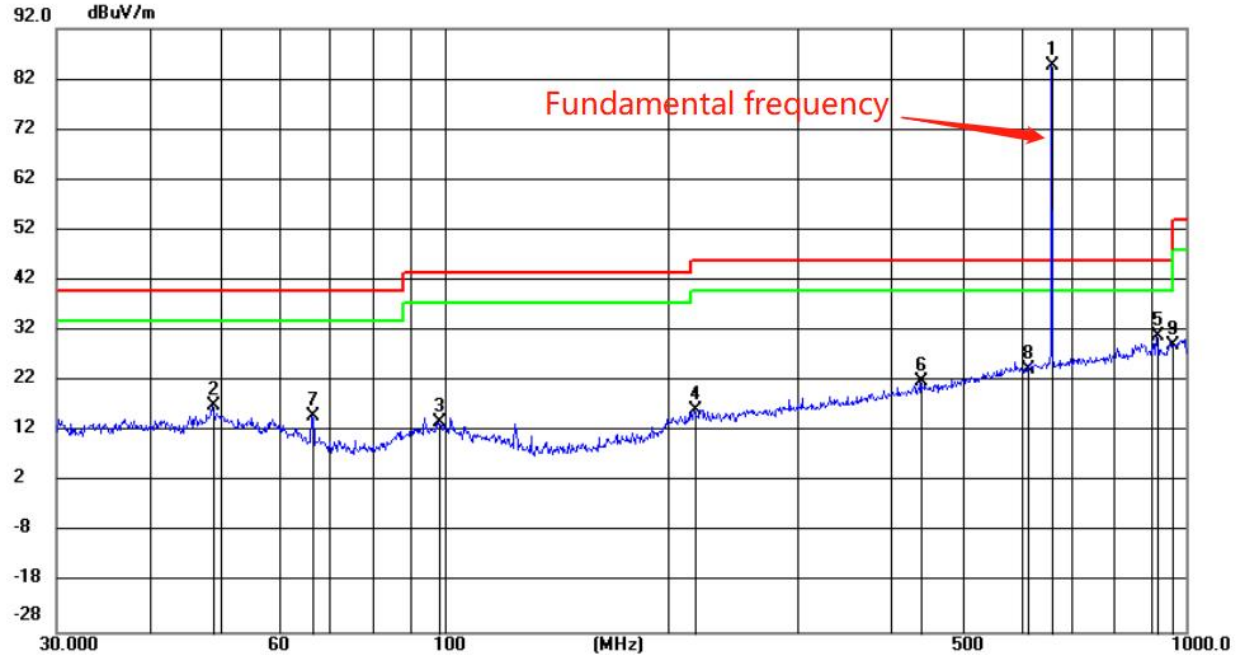
Measurement Data:

Horizontal:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	660.1080	60.69	24.46	85.15	46.00	39.15	peak	100	158	
2		407.8003	1.70	19.55	21.25	46.00	-24.75	peak	200	29	
3		304.2363	5.41	17.34	22.75	46.00	-23.25	peak	100	87	
4		200.1609	1.50	13.78	15.28	43.50	-28.22	peak	100	37	
5		98.8152	-0.15	13.89	13.74	43.50	-29.76	peak	200	271	
6		54.4802	1.04	13.95	14.99	40.00	-25.01	peak	100	27	
7		38.7110	0.27	14.30	14.57	40.00	-25.43	peak	200	261	
8		614.0000	0.29	24.13	24.42	46.00	-21.58	peak	200	261	
9		960.0000	1.07	28.71	29.78	46.00	-16.22	peak	200	191	

Vertical:



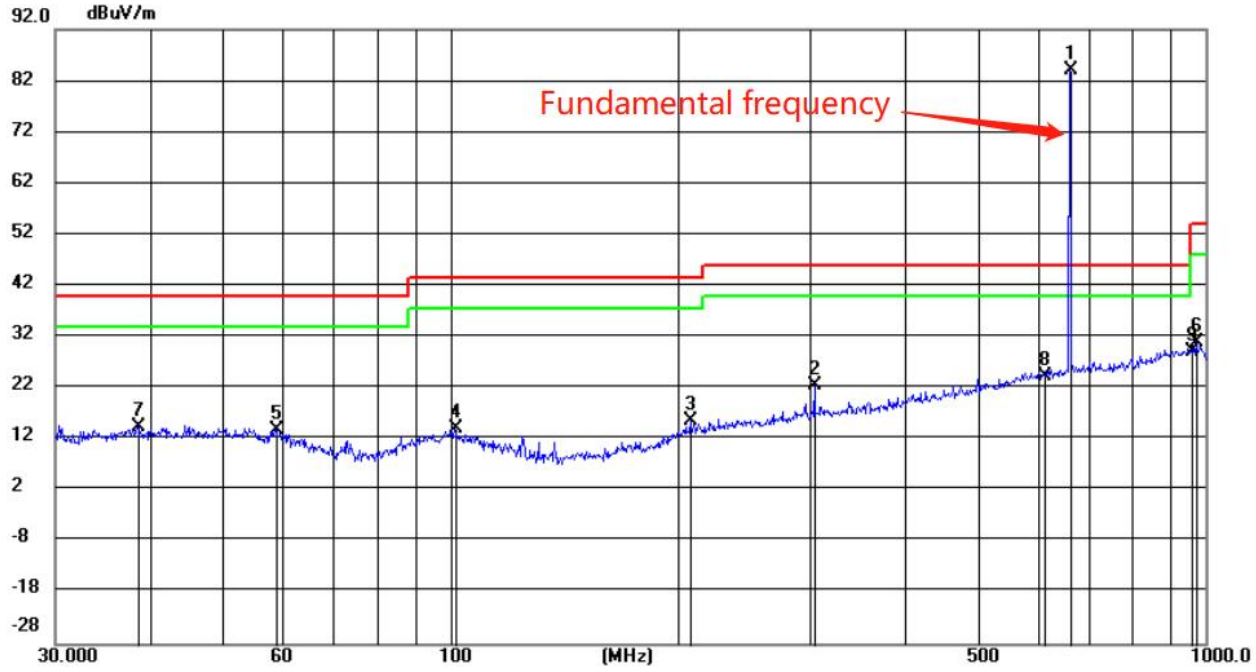
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	659.9923	60.12	24.46	84.58	46.00	38.58	peak	100	352	
2		48.8343	2.89	14.30	17.19	40.00	-22.81	peak	100	262	
3		98.1591	-0.08	13.80	13.72	43.50	-29.78	peak	100	140	
4		217.9643	1.78	14.40	16.18	46.00	-29.82	peak	200	27	
5		913.5025	2.33	28.48	30.81	46.00	-15.19	peak	100	352	
6		439.7335	1.82	20.25	22.07	46.00	-23.93	peak	200	67	
7		66.3941	3.76	11.33	15.09	40.00	-24.91	peak	100	201	
8		614.0000	0.35	24.13	24.48	46.00	-21.52	peak	200	207	
9		960.0000	0.46	28.71	29.17	46.00	-16.83	peak	100	352	

Band		Channel	662.5MHz

Test Graph

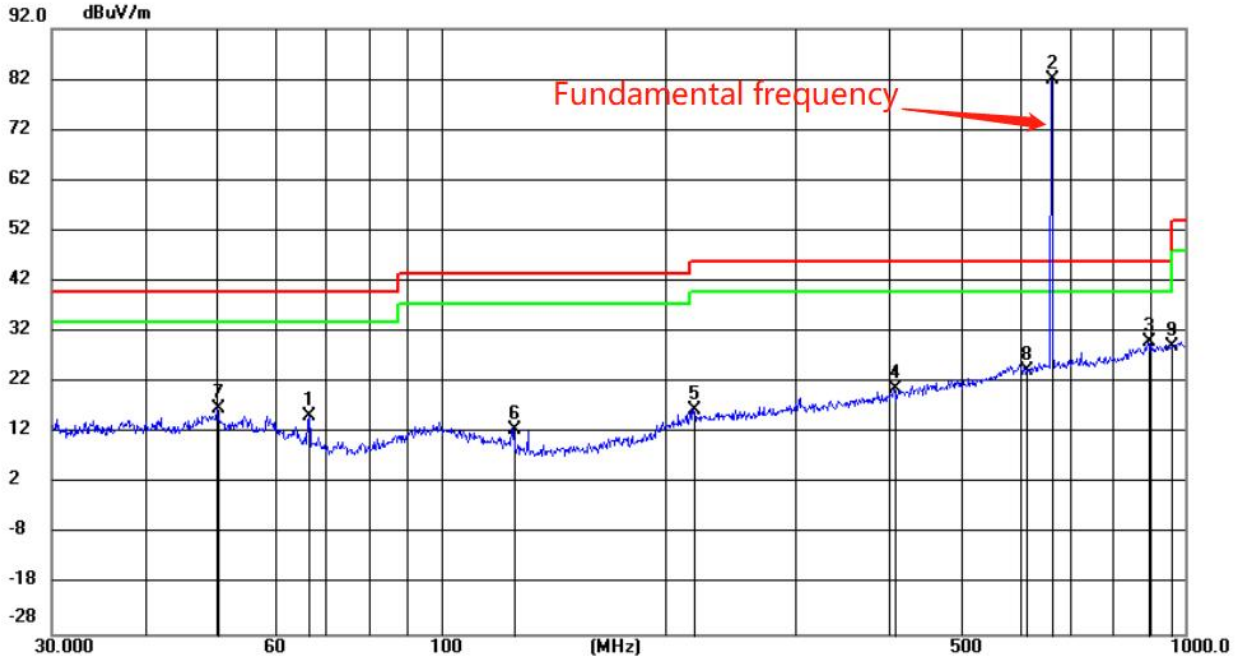
Measurement Data:

Horizontal:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	662.5429	59.54	24.48	84.02	46.00	38.02	peak	100	147	
2		304.1830	5.31	17.34	22.65	46.00	-23.35	peak	199	352	
3		208.2513	1.63	14.07	15.70	43.50	-27.80	peak	199	241	
4		101.4484	0.17	13.84	14.01	43.50	-29.49	peak	199	220	
5		58.8288	0.23	13.65	13.88	40.00	-26.12	peak	100	127	
6		973.8728	2.22	28.78	31.00	54.00	-23.00	peak	100	360	
7		38.6093	0.27	14.29	14.56	40.00	-25.44	peak	199	67	
8		614.0000	0.14	24.13	24.27	46.00	-21.73	peak	199	302	
9		960.0000	0.51	28.71	29.22	46.00	-16.78	peak	199	57	

Vertical:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		66.4989	4.09	11.29	15.38	40.00	-24.62	peak	100	149	
2	*	662.5429	57.35	24.48	81.83	46.00	35.83	peak	100	352	
3		893.7000	1.62	28.29	29.91	46.00	-16.09	peak	200	177	
4		406.7293	1.33	19.54	20.87	46.00	-25.13	peak	100	200	
5		218.8834	2.09	14.44	16.53	46.00	-29.47	peak	200	137	
6		125.0285	2.12	10.43	12.55	43.50	-30.95	peak	100	291	
7		50.1533	2.46	14.26	16.72	40.00	-23.28	peak	100	352	
8		614.0000	0.14	24.13	24.27	46.00	-21.73	peak	100	352	
9		960.0000	0.52	28.71	29.23	46.00	-16.77	peak	100	89	

Radiated Spurious Emission above 1GHz:

Mode:		π/4 DQPSK Transmitting				Channel:		657.5MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1314.5543	-26.70	64.73	38.03	74.00	35.97	Pass	H	PK
2	1972.5982	-23.77	63.28	39.51	74.00	34.49	Pass	H	PK
3	2629.7086	-22.60	57.86	35.26	74.00	38.74	Pass	H	PK
4	4851.1901	-16.28	52.37	36.09	74.00	37.91	Pass	H	PK
5	7159.4773	-12.01	50.58	38.57	74.00	35.43	Pass	H	PK
6	13290.0193	-3.60	47.64	44.04	74.00	29.96	Pass	H	PK
7	1315.4877	-26.70	61.60	34.90	74.00	39.10	Pass	V	PK
8	1972.5982	-23.77	62.47	38.70	74.00	35.30	Pass	V	PK
9	2630.642	-22.60	57.18	34.58	74.00	39.42	Pass	V	PK
10	4223.9483	-17.90	53.22	35.32	74.00	38.68	Pass	V	PK
11	7356.4238	-11.60	50.93	39.33	74.00	34.67	Pass	V	PK
12	10829.5886	-6.29	48.84	42.55	74.00	31.45	Pass	V	PK

Mode:		π/4 DQPSK Transmitting				Channel:		660.0MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1320.1547	-26.71	63.49	36.78	74.00	37.22	Pass	H	PK
2	1980.0653	-23.72	64.85	41.13	74.00	32.87	Pass	H	PK
3	2639.976	-22.56	58.39	35.83	74.00	38.17	Pass	H	PK
4	3669.5113	-20.29	55.54	35.25	74.00	38.75	Pass	H	PK
5	6967.1978	-12.16	50.89	38.73	74.00	35.27	Pass	H	PK
6	11383.0922	-6.52	48.72	42.20	74.00	31.80	Pass	H	PK
7	1320.1547	-26.71	64.67	37.96	74.00	36.04	Pass	V	PK
8	1980.0653	-23.72	61.64	37.92	74.00	36.08	Pass	V	PK
9	2639.976	-22.56	57.88	35.32	74.00	38.68	Pass	V	PK
10	3805.7871	-19.47	55.36	35.89	74.00	38.11	Pass	V	PK
11	6867.3245	-12.18	51.11	38.93	74.00	35.07	Pass	V	PK
12	10874.3916	-6.24	48.92	42.68	74.00	31.32	Pass	V	PK

Mode:		π/4 DQPSK Transmitting				Channel:		662.5MHz	
NO	Freq. [MHz]	Factor [dB]	Reading [dBμV]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Result	Polarity	Remark
1	1324.8217	-26.72	64.19	37.47	74.00	36.53	Pass	H	PK
2	1987.5325	-23.68	63.22	39.54	74.00	34.46	Pass	H	PK
3	3079.6053	-21.24	56.67	35.43	74.00	38.57	Pass	H	PK
4	5637.1091	-14.00	51.41	37.41	74.00	36.59	Pass	H	PK
5	10795.9864	-6.35	49.03	42.68	74.00	31.32	Pass	H	PK
6	11257.9850	-6.49	46.34	39.85	74.00	34.15	Pass	H	PK
7	1324.8217	-26.72	65.99	39.27	74.00	34.73	Pass	V	PK
8	1987.5325	-23.68	61.50	37.82	74.00	36.18	Pass	V	PK
9	2650.2434	-22.50	57.82	35.32	74.00	38.68	Pass	V	PK
10	4525.435	-17.12	52.70	35.58	74.00	38.42	Pass	V	PK
11	7689.646	-10.95	49.52	38.57	74.00	35.43	Pass	V	PK
12	11283.2189	-6.50	48.92	42.42	74.00	31.58	Pass	V	PK

Remark:

1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:
   Final Test Level =Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor
2) Scan from 9kHz to 15GHz, the disturbance above 10GHz and below 30MHz was very low. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. So, only the peak measurements were shown in the report.