TEST REPORT

Application No.:	HKEM2012001277AT
Applicant:	Nacon (HK) Limited
Address of Applicant:	Unit 1505, 148 Electric Road, North Point, Hong Kong.
Equipment Under Test (EUT):	
EUT Name:	MG-X PRO gaming holder
Model No.:	NC7273, NC8559
Additional Model:	Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.
FCC ID:	2AVPR-7273
IC:	25872-7273
HVIN:	7273, 8559
Standard(s) :	RSS-247 Issue 2, February 2017 RSS-Gen Issue 5, Amdt2019 47 CFR Part 15, Subpart C 2020
Date of Receipt:	2021-09-13
Date of Test:	2021-09-13 to 2021-09-16
Date of Issue:	2021-09-16
Test Result:	**Pass***

* In the configuration tested, the EUT complied with the standards specified above.

Law Man Kit
EMC Manager

Revision Record				
Version	**Chapter**	**Date**	**Modifier**	**Remark**
01		*2021-09-16*		*Original*

Authorized for issue by:				
				
		Leo Xu /Project Engineer		Date: 2021-09-16
				
		Law Man Kit /Reviewer		Date: 2021-09-16

2 Test Summary

IC:

Radio Spectrum Technical Requirement				
Item	**Standard**	**Method**	**Requirement**	**Result**
Antenna Requirement	RSS-247 Issue 2, February 2017	N/A	RSS-Gen Section 6.8	Pass

Radio Spectrum Matter Part				
Item	**Standard**	**Method**	**Requirement**	**Result**
Conducted Emissions at AC Power Line (150kHz-30MHz)	RSS-247 Issue 2, February 2017	ANSI C63.10 (2013) Section 6.2	RSS-Gen Section 8.8	Pass
99% Bandwidth	RSS-247 Issue 2, February 2017	ANSI C63.10 (2013) Section 6.9.3	RSS-Gen Section 6.7	Pass
Minimum 6dB Bandwidth	RSS-247 Issue 2, February 2017	ANSI C63.10 (2013) Section 11.8.1	RSS-247 Section 5.2(a)	Pass
Conducted Peak Output Power	RSS-247 Issue 2, February 2017	ANSI C63.10 (2013) Section 11.9.1	RSS-247 Section 5.4(d)	Pass
Power Spectrum Density	RSS-247 Issue 2, February 2017	ANSI C63.10 (2013) Section 11.10.2	RSS-247 Clause 5.2(b)	Pass
Conducted Band Edges Measurement	RSS-247 Issue 2, February 2017	ANSI C63.10 (2013) Section 11.12	RSS-247 Section 5.5	Pass
Conducted Spurious Emissions	RSS-247 Issue 2, February 2017	ANSI C63.10 (2013) Section 11.11	RSS-247 Section 5.5	Pass
Radiated Emissions which fall in the restricted bands	RSS-247 Issue 2, February 2017	ANSI C63.10 (2013) Section 6.10.5	Section 3.3 & RSS-Gen Section 8.10	Pass
Radiated Spurious Emissions	RSS-247 Issue 2, February 2017	ANSI C63.10 (2013) Section 6.4&6.5&6.6	Section 3.3 & RSS-Gen Section 8.9	Pass

Note: Frequency stability requested in RSS GEN Section 8.1.1 has been complied since the result of band edge can demonstrate.

FCC:

Radio Spectrum Technical Requirement				
Item	**Standard**	**Method**	**Requirement**	**Result**
Antenna Requirement	47 CFR Part 15, Subpart C 2020	N/A	47 CFR Part 15, Subpart C 15.203 & 15.247(b)(4)	Pass

Radio Spectrum Matter Part				
Item	**Standard**	**Method**	**Requirement**	**Result**
Conducted Emissions at AC Power Line (150kHz-30MHz)	47 CFR Part 15, Subpart C 2020	ANSI C63.10 (2013) Section 6.2	47 CFR Part 15, Subpart C 15.207	Pass
Minimum 6dB Bandwidth	47 CFR Part 15, Subpart C 2020	ANSI C63.10 (2013) Section 11.8.1	47 CFR Part 15, Subpart C 2020a(2)	Pass
Conducted Peak Output Power	47 CFR Part 15, Subpart C 2020	ANSI C63.10 (2013) Section 11.9.1	47 CFR Part 15, Subpart C 2020(b)(3)	Pass
Power Spectrum Density	47 CFR Part 15, Subpart C 2020	ANSI C63.10 (2013) Section 11.10.2	47 CFR Part 15, Subpart C 2020(e)	Pass
Conducted Band Edges Measurement	47 CFR Part 15, Subpart C 2020	ANSI C63.10 (2013) Section 11.13.3.2	47 CFR Part 15, Subpart C 2020(d)	Pass
Conducted Spurious Emissions	47 CFR Part 15, Subpart C 2020	ANSI C63.10 (2013) Section 11.11	47 CFR Part 15, Subpart C 2020(d)	Pass
Radiated Emissions which fall in the restricted bands	47 CFR Part 15, Subpart C 2020	ANSI C63.10 (2013) Section 6.10.5	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass
Radiated Spurious Emissions	47 CFR Part 15, Subpart C 2020	ANSI C63.10 (2013) Section 6.4,6.5,6.6	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass

Declaration of EUT Family Grouping:

Model No.: NC7273, NC8559

Only the model NC7273 was tested, since according to the declaration from the applicant, the electrical circuit design, layout, components used, internal wiring and functions were identical for all the above models, with only difference on model number for marketing purpose. NC7273 for Xbox platform; NC8559 for Android platform

Abbreviation:

Tx: In this whole report Tx (or tx) means Transmitter.

Rx: In this whole report Rx (or rx) means Receiver.

RF: In this whole report RF means Radiated Frequency.

CH: In this whole report CH means channel.

Volt: In this whole report Volt means Voltage.

Temp: In this whole report Temp means Temperature.

Humid: In this whole report Humid means humidity.

Press: In this whole report Press means Pressure.

N/A: In this whole report not application.

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4 General Information

4.1 Details of E.U.T.

Power supply:	Adaptor Model: IEC 005 Input: AC 100 V - 240 V, 50/60 Hz, 0.75 A Output: DC 5 V, 1 A or Battery Model: 751841 Output: DC 3.7 V
Test voltage:	AC 120 V
Cable:	Power Cable: 90 cm 2-wire shielded USB cable
Antenna Gain:	2 dBi
Antenna Type:	PIFA Antenna
Bluetooth Version:	V4.0 LE
Channel Separation:	2MHz
Modulation Type:	GFSK
Number of Channels:	40
Operation Frequency:	2402MHz to 2480MHz
Series No.:	A1
Firmware Version:	1.1.4
Hardware Version:	LBX-1042A-A-V1.0

Frequency List:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	**2402**	**20**	**2442**
1	2404	21	2444
2	2406	22	2446
3	2408	23	2448
4	2410	24	2450
5	2402	25	2452
6	2414	26	2454
7	2416	27	2456
8	2418	28	2458
9	2420	29	2460
10	2422	30	2462
11	2424	31	2464
12	2426	32	2466
13	2428	33	2468
14	2430	34	2470
15	2432	35	2480
16	2434	36	2474
17	2436	37	2476
18	2438	38	2478
19	2440	**39**	**2480**

The frequencies under test are bolded.

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Laptop	DELL	P75F	H55LXQ2
RTL8762C_RFTestTool	Nacon (HK) Limited	N/A	N/A

The Laptop was for the control of the engineering mode.

4.3 Modulation Configuration

RF software:	RTL8762C_RFTestTool			
Modulation	**Packet**	**Packet Type**	**Packet Size**	**Power**
GFSK	N/A	N/A	N/A	Default
Remark: 1. Default value was set in test software as maximum output power setting.				

4.4 Measurement Uncertainty

RF

No.	Item	Measurement Uncertainty
1	Radio Frequency	± 7.25 x 10^{-8}
2	Duty cycle	± 0.37%
3	Occupied Bandwidth	± 3%
4	RF conducted power (30MHz-40GHz)	1.5dB
5	RF power density	1.5dB
6	Conducted Spurious emissions	1.5dB
7	RF Radiated power & Radiated Spurious emission test	4.9dB (30MHz-1GHz)
		4.6dB (1GHz-6GHz)
		4.7dB (6GHz-18GHz)
		5.6dB (18GHz-40GHz)
8	Temperature test	± 1℃
9	Humidity test	± 3%
10	Supply voltages	± 1.5%
11	Time	± 3%

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors in calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report according 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” and is documented in the test lab quality system according to 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.

4.5 Test Location

All tests were performed at:

SGS Hong Kong Limited

Unit 2 and 3, G/F, Block A, Po Lung Centre,

11 Wang Chiu Road, Kowloon Bay, Kowloon, Hong Kong

Tel: +852 2305 2570 Fax: +852 2756 4480

No tests were sub-contracted.

4.6 Test Facility

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

- **HOKLAS (Lab Code: 009)**

SGS Hong Kong Limited has been accepted by HKAS Executive, on the recommendation of the Accreditation Advisory Board, as a HOKLAS Accredited Laboratory, this laboratory meets the requirements of ISO/IEC 17025:2017 an it has been accredited for performing specific test as listed in the scope of accreditation within the test category of Electrical and Electronic Products.

- **IAS Accreditation (Lab Code: TL-817)**

SGS Hong Kong Limited has met the requirements of AC89, IAS Accreditation Criteria for Testing Laboratories, and has demonstrated compliance with ISO/IEC Standard 17025:2017, General requirements for the competence of testing and calibration laboratories. This organization is accredited to provide the services specified in the scope of accreditation maintained on the IAS website (www.iasonline.org).

The report must not be used by the client to claim product certification, approval, or endorsement by IAS, NIST, or any agency of the Federal Government.

- **FCC Recognized Accredited Test Firm(CAB Registration No.: 514599)**

SGS Hong Kong Limited has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: HK0015, Test Firm Registration Number: 514599.

- **Industry Canada (Site Registration No.: 26103; CAB Identifier No.: HK0015)**

SGS Hong Kong Limited has been recognized by Department of Innovation, Science and Economic Development (ISED) Canada as a wireless testing laboratory. The acceptance letter from the ISED is maintained in our files. CAB Identifier No: HK0015, Site Registration Number: 26103.

4.7 Deviation from Standards

None

4.8 Abnormalities from Standard Conditions

None

5 Equipment List

Conducted Emissions at AC Power Line (150kHz-30MHz)					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
EMI Test Receiver 9kHz to 3.6GHz	Rohde & Schwarz	ESR3 / 102326	E231	2021/08/17	2022/08/16
Artificial Mains Network (LISN)	Schwarzbeck	NSLK 8127 / 8127312	E005	2021/04/13	2022/04/12
Impulse Limiter	Rohde & Schwarz	ESH-3-Z2 / 357881052	E028	2020/09/28	2021/09/27
EMC32 Test software	Rohde & Schwarz	Version 10	N/A	N/A	N/A

99% Bandwidth					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
FSV40 SIGNAL ANALYZER 40GHz	Rohde & Schwarz	FSV40	E235	2021/08/17	2022/08/16
OSP	Rohde & Schwarz	OSP-B157W8	E242	2021/08/17	2022/08/16
Cable	Rohde & Schwarz	J12J103539-00-2	E239	2020/09/21	2021/09/20
WMS32 Test software	Rohde & Schwarz	Version 11	N/A	N/A	N/A

Minimum 6dB Bandwidth					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
FSV40 SIGNAL ANALYZER 40GHz	Rohde & Schwarz	FSV40	E235	2021/08/17	2022/08/16
OSP	Rohde & Schwarz	OSP-B157W8	E242	2021/08/17	2022/08/16
Cable	Rohde & Schwarz	J12J103539-00-2	E239	2020/09/21	2021/09/20
WMS32 Test software	Rohde & Schwarz	Version 11	N/A	N/A	N/A

Conducted Peak Output Power					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
FSV40 SIGNAL ANALYZER 40GHz	Rohde & Schwarz	FSV40	E235	2021/08/17	2022/08/16
OSP	Rohde & Schwarz	OSP-B157W8	E242	2021/08/17	2022/08/16
Cable	Rohde & Schwarz	J12J103539-00-2	E239	2020/09/21	2021/09/20
WMS32 Test software	Rohde & Schwarz	Version 11	N/A	N/A	N/A

Power Spectrum Density					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
FSV40 SIGNAL ANALYZER 40GHz	Rohde & Schwarz	FSV40	E235	2021/08/17	2022/08/16
OSP	Rohde & Schwarz	OSP-B157W8	E242	2021/08/17	2022/08/16
Cable	Rohde & Schwarz	J12J103539-00-2	E239	2020/09/21	2021/09/20
WMS32 Test software	Rohde & Schwarz	Version 11	N/A	N/A	N/A

Conducted Band Edges Measurement					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
FSV40 SIGNAL ANALYZER 40GHz	Rohde & Schwarz	FSV40	E235	2021/08/17	2022/08/16
OSP	Rohde & Schwarz	OSP-B157W8	E242	2021/08/17	2022/08/16
Cable	Rohde & Schwarz	J12J103539-00-2	E239	2020/09/21	2021/09/20
WMS32 Test software	Rohde & Schwarz	Version 11	N/A	N/A	N/A

Conducted Spurious Emissions					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
FSV40 SIGNAL ANALYZER 40GHz	Rohde & Schwarz	FSV40	E235	2021/08/17	2022/08/16
OSP	Rohde & Schwarz	OSP-B157W8	E242	2021/08/17	2022/08/16
Cable	Rohde & Schwarz	J12J103539-00-2	E239	2020/09/21	2021/09/20
WMS32 Test software	Rohde & Schwarz	Version 11	N/A	N/A	N/A

Radiated Emissions which fall in the restricted bands					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
3m Semi-Anechoic Chamber	ChamPro	N/A	E229	2021/08/09	2022/08/08
Coaxial Cable	SGS	N/A	E167	2021/07/15	2022/07/14
EMI Test Receiver 9kHz to 7GHz	Rohde & Schwarz	ESR7 / 102298	E314	2021/04/26	2022/04/25
TRILOG Super Broadb. Test Antenna, (25) 30-1000 MHz	Schwarzbeck	9168-1110	E311	2020/02/13	2022/02/12
EMC32 Test software	Rohde & Schwarz	Version 10	N/A	N/A	N/A
Spectrum Analyzer 9kHz - 30GHz	Rohde & Schwarz	FSP30	E204	2021/04/12	2022/04/11
Horn Antenna 1 - 18GHz	Schwarzbeck	BBHA9120D	E211	2020/03/11	2022/03/10
Horn Antenna 15 - 40GHz	Schwarzbeck	BBHA9170	E212	2020/01/29	2022/01/28
Preamplifier 33dB, 1 - 18GHz	Schwarzbeck	BBV9718	E214	2021/04/09	2022/04/08
Broadband Coaxial Preamplifier typ. 30 dB, 18-40 G	Schwarzbeck	BBV 9721	E266	2020/09/21	2021/09/20
RF cable SMA to SMA 10000mm	HUBER+SUHNER	SF104-26.5/2*11SMA 45	E207	2020/09/21	2021/09/20
Boresight Mast Controller	ChamPro	AM-BS-4500-E	E237	N/A	N/A
Turntable with Controller	ChamPro	EM1000	E238	N/A	N/A
Highpass Filter 7.1 - 26.5GHz	SHW	HP7.1-26.5	E326	2020/09/28	2021/09/27

Radiated Spurious Emissions					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
3m Semi-Anechoic Chamber	ChamPro	N/A	E229	2021/08/09	2022/08/08
Coaxial Cable	SGS	N/A	E167	2021/07/15	2022/07/14
EMI Test Receiver 9kHz to 7GHz	Rohde & Schwarz	ESR7 / 102298	E314	2021/04/26	2022/04/25
TRILOG Super Broadb. Test Antenna, (25) 30-1000 MHz	Schwarzbeck	9168-1110	E311	2020/02/13	2022/02/12
EMC32 Test software	Rohde & Schwarz	Version 10	N/A	N/A	N/A
Spectrum Analyzer 9kHz - 30GHz	Rohde & Schwarz	FSP30	E204	2021/04/12	2022/04/11
Horn Antenna 1 - 18GHz	Schwarzbeck	BBHA9120D	E211	2020/03/11	2022/03/10
Horn Antenna 15 - 40GHz	Schwarzbeck	BBHA9170	E212	2020/01/29	2022/01/28
Preamplifier 33dB, 1 - 18GHz	Schwarzbeck	BBV9718	E214	2021/04/09	2022/04/08
Broadband Coaxial Preamplifier typ. 30 dB, 18-40 G	Schwarzbeck	BBV 9721	E266	2020/09/21	2021/09/20
RF cable SMA to SMA 10000mm	HUBER+SUHNER	SF104-26.5/2*11SMA 45	E207	2020/09/21	2021/09/20
Boresight Mast Controller	ChamPro	AM-BS-4500-E	E237	N/A	N/A
Turntable with Controller	ChamPro	EM1000	E238	N/A	N/A
Band Reject Filter 2.4 -2.5GHz	MICRO-TRONICS	BRM50702	E324	2020/09/28	2021/09/27
Highpass Filter 7.1 - 26.5GHz	SHW	HP7.1-26.5	E326	2020/09/28	2021/09/27

General used equipment					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
Digital temperature & humidity data logger	SATO	SK-L200TH II	E232	2021/08/16	2022/08/15
Electronic Digital Thermometer with Hygrometer	nil	2074/2075	E159	2021/08/16	2022/08/15
Barometer with digital thermometer	SATO	7612-00	E218	2021/03/29	2022/03/28
Conditional Chamber	Zhong Zhi Testing Instruments	CZ-E-608D	E216	2021/08/18	2022/08/17

6 Radio Spectrum Technical Requirement

6.1 Antenna Requirement

6.1.1 Test Requirement:

RSS-Gen Section 6.8

47 CFR Part 15, Subpart C 15.203 & 15.247(b)(4)

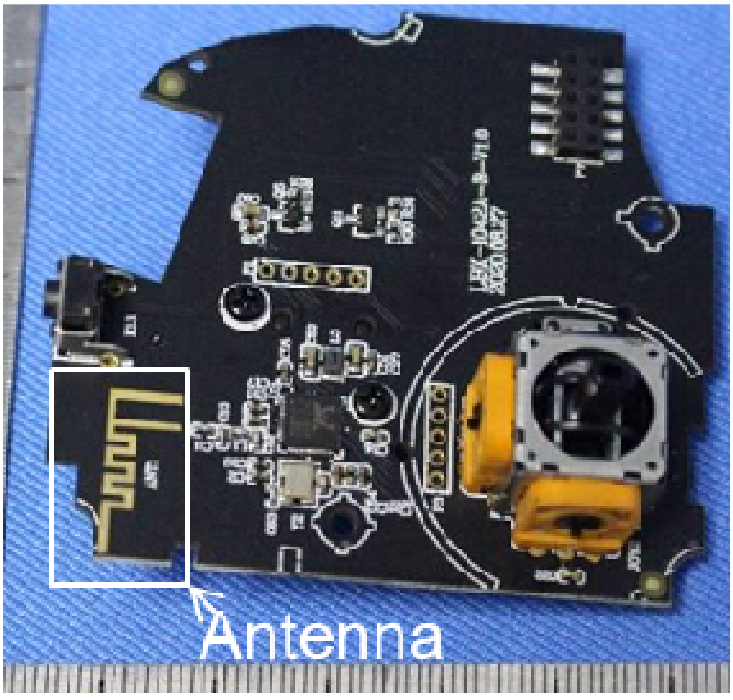
6.1.2 Conclusion

Standard Requirement:

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.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.



EUT Antenna:

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 2 dBi.

Antenna location: Refer to internal photo.

7 Radio Spectrum Matter Test Results

7.1 Conducted Emissions at AC Power Line (150kHz-30MHz)

Test Requirement RSS-Gen Section 8.8
47 CFR Part 15, Subpart C 15.207
Test Method: ANSI C63.10 (2013) Section 6.2
Limit:

Frequency of emission(MHz)	Conducted limit(dBμV)	
	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.		

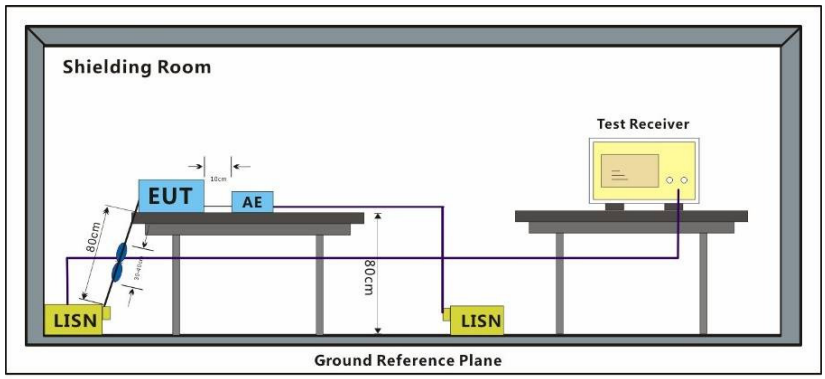
7.1.1 E.U.T. Operation

Operating Environment:

Temperature: 24.7 °C Humidity: 58.4 % RH :

Test mode a: TX mode_Keep the EUT in charging and continuously transmitting mode with GFSK modulation

7.1.2 Test Setup Diagram



7.1.3 Measurement Procedure and Data

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 50ohm/50μH + 5ohm 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.

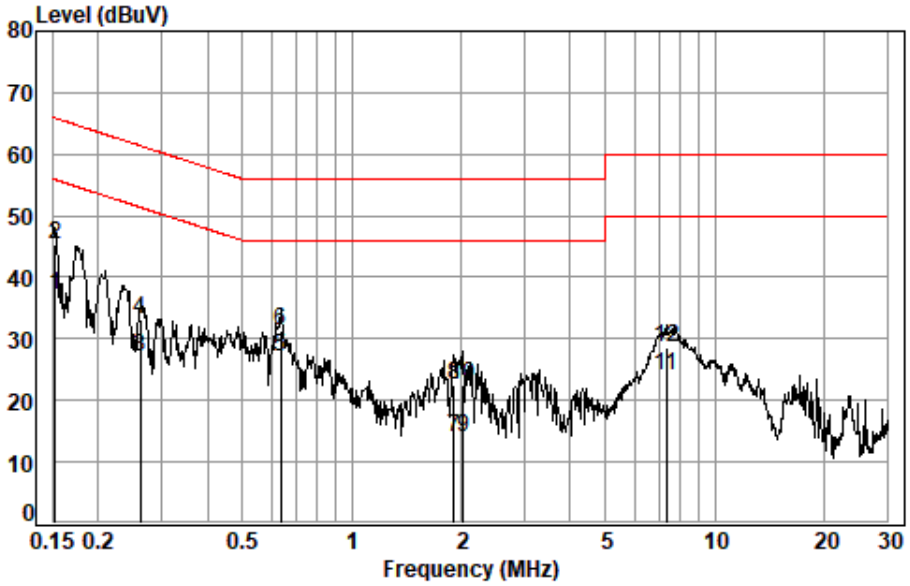
3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,

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 on conducted measurement.

Remark: LISN=Read Level+ Cable Loss+ LISN Factor

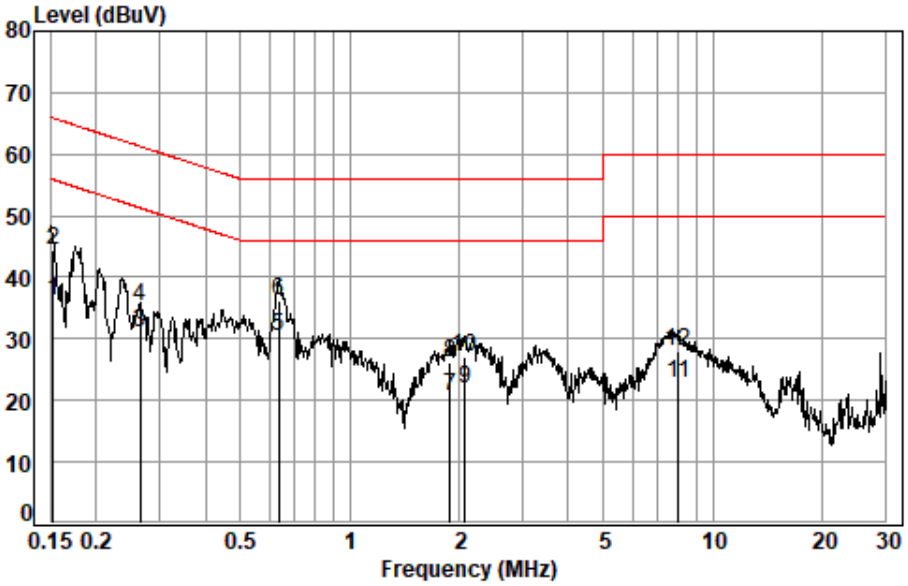
Mode:a; Line:Live Line



Site : Shielding Room
Condition: Line
Job No. : 12429CR
Test mode: 01

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.1524	0.03	9.70	27.48	37.21	55.87	-18.66	Average
2	0.1524	0.03	9.70	35.55	45.28	65.87	-20.59	QP
3	0.2616	0.05	9.74	17.41	27.20	51.38	-24.18	Average
4	0.2616	0.05	9.74	23.46	33.25	61.38	-28.13	QP
5	0.6372	0.08	9.77	17.16	27.01	46.00	-18.99	Average
6	0.6372	0.08	9.77	21.55	31.40	56.00	-24.60	QP
7	1.9080	0.12	9.81	3.95	13.88	46.00	-32.12	Average
8	1.9080	0.12	9.81	12.46	22.39	56.00	-33.61	QP
9	2.0333	0.13	9.81	3.94	13.88	46.00	-32.12	Average
10	2.0333	0.13	9.81	12.67	22.61	56.00	-33.39	QP
11	7.3680	0.16	10.05	13.86	24.07	50.00	-25.93	Average
12	7.3680	0.16	10.05	18.38	28.59	60.00	-31.41	QP

Mode:a; Line:Neutral Line



Site : Shielding Room
Condition: Neutral
Job No. : 12429CR
Test mode: 01

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.1524	0.03	9.71	26.34	36.08	55.87	-19.79	Average
2	0.1524	0.03	9.71	34.80	44.54	65.87	-21.33	QP
3	0.2644	0.05	9.73	21.16	30.94	51.29	-20.35	Average
4	0.2644	0.05	9.73	25.63	35.41	61.29	-25.88	QP
5	0.6372	0.08	9.77	20.63	30.48	46.00	-15.52	Average
6	0.6372	0.08	9.77	26.34	36.19	56.00	-19.81	QP
7	1.8879	0.12	9.81	10.75	20.68	46.00	-25.32	Average
8	1.8879	0.12	9.81	16.36	26.29	56.00	-29.71	QP
9	2.0768	0.13	9.81	12.09	22.03	46.00	-23.97	Average
10	2.0768	0.13	9.81	17.00	26.94	56.00	-29.06	QP
11	8.0624	0.16	10.11	12.49	22.76	50.00	-27.24	Average
12	8.0624	0.16	10.11	17.71	27.98	60.00	-32.02	QP

7.2 99% Bandwidth

Test Requirement RSS-Gen Section 6.7

Test Method: ANSI C63.10 (2013) Section 6.9.3

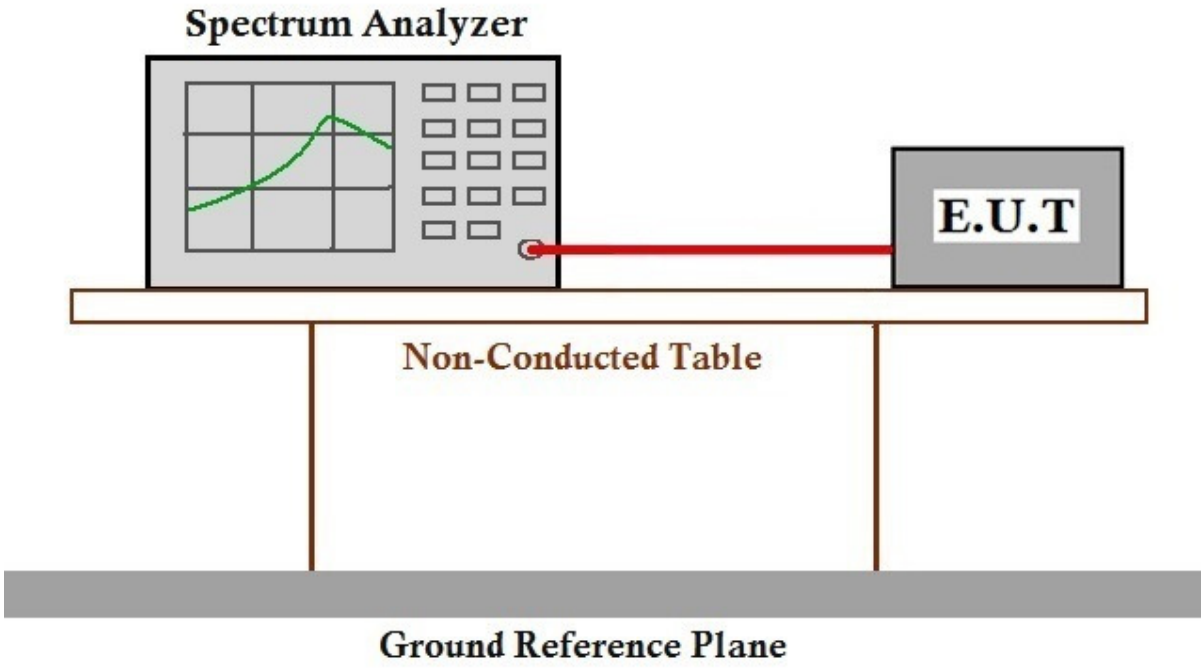
7.2.1 E.U.T. Operation

Operating Environment:

Temperature: 27.6 °C Humidity: 52.8 % RH :

Test mode a: TX mode_Keep the EUT in charging and continuously transmitting mode with GFSK modulation

7.2.2 Test Setup Diagram



7.2.3 Measurement Procedure and Data

The detailed test method see: ANSI C63.10 (2013) Section 6.9.3

The detailed test data see: Appendix 15.247 RSS247

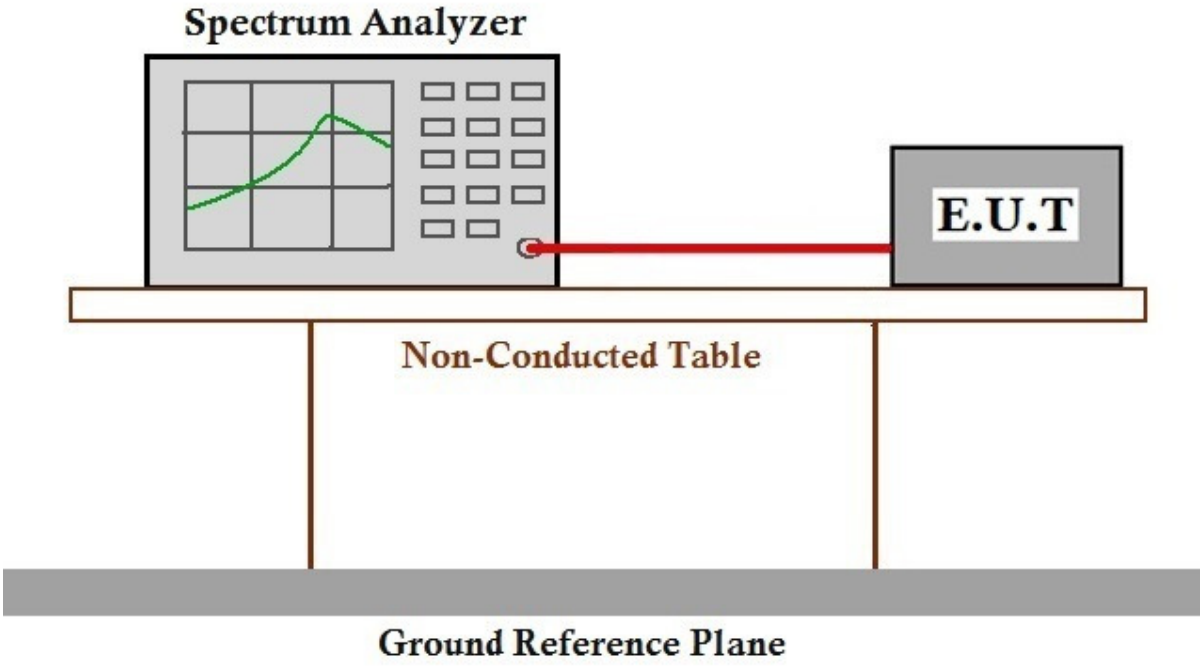
7.3 Minimum 6dB Bandwidth

Test Requirement RSS-247 Section 5.2(a)
47 CFR Part 15, Subpart C 2020a(2)
Test Method: ANSI C63.10 (2013) Section 11.8.1
Limit: ⩾500 kHz

7.3.1 E.U.T. Operation

Operating Environment:
Temperature: 26.8 °C Humidity: 53.8 % RH :
Test mode a: TX mode_Keep the EUT in charging and continuously transmitting mode with GFSK modulation

7.3.2 Test Setup Diagram



7.3.3 Measurement Procedure and Data

The detailed test method see: ANSI C63.10 (2013) Section 11.8.1
The detailed test data see: Appendix 15.247 RSS247

7.4 Conducted Peak Output Power

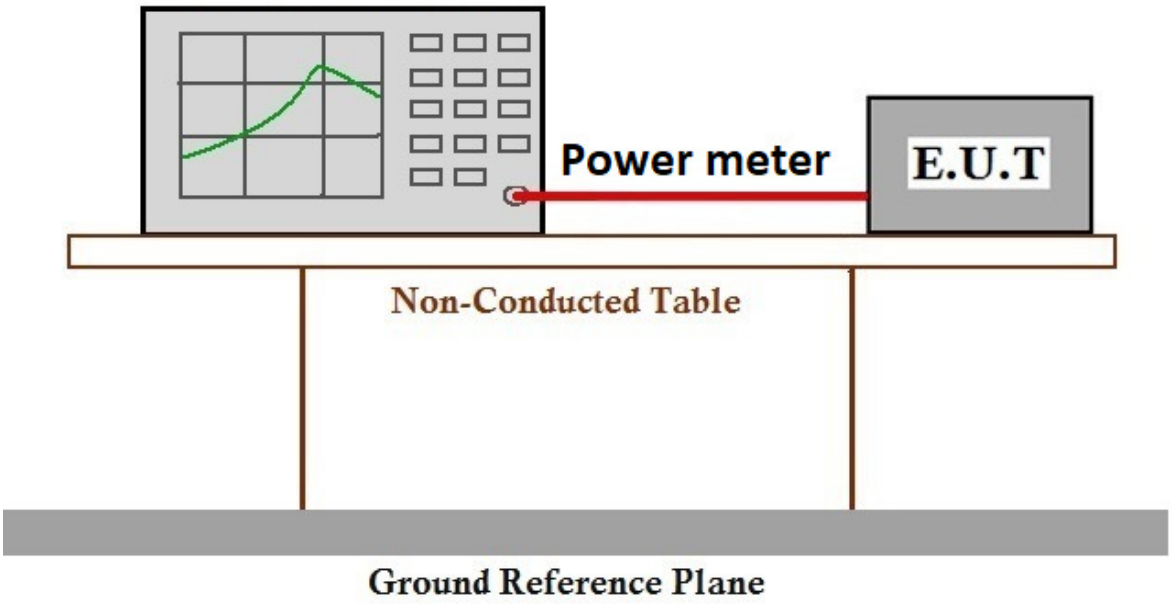
Test Requirement RSS-247 Section 5.4(d)
47 CFR Part 15, Subpart C 2020(b)(3)
Test Method: ANSI C63.10 (2013) Section 11.9.1
Limit:

Frequency range(MHz)	Output power of the intentional radiator(watt)
902-928	1 for ≥50 hopping channels
	0.25 for 25≤ hopping channels <50
	1 for digital modulation
2400-2483.5	1 for ≥75 non-overlapping hopping channels
	0.125 for all other frequency hopping systems
	1 for digital modulation
5725-5850	1 for frequency hopping systems and digital modulation

7.4.1 E.U.T. Operation

Operating Environment:
Temperature: 26.7 °C Humidity: 52.8 % RH :
Test mode a: TX mode_Keep the EUT in charging and continuously transmitting mode with GFSK modulation

7.4.2 Test Setup Diagram



7.4.3 Measurement Procedure and Data

The detailed test method see: ANSI C63.10 (2013) Section 11.9.1
The detailed test data see: Appendix 15.247 RSS247

7.5 Power Spectrum Density

Test Requirement	RSS-247 Clause 5.2(b) 47 CFR Part 15, Subpart C 2020(e)
Test Method:	ANSI C63.10 (2013) Section 11.10.2
Limit:	≤8dBm in any 3 kHz band during any time interval of continuous transmission

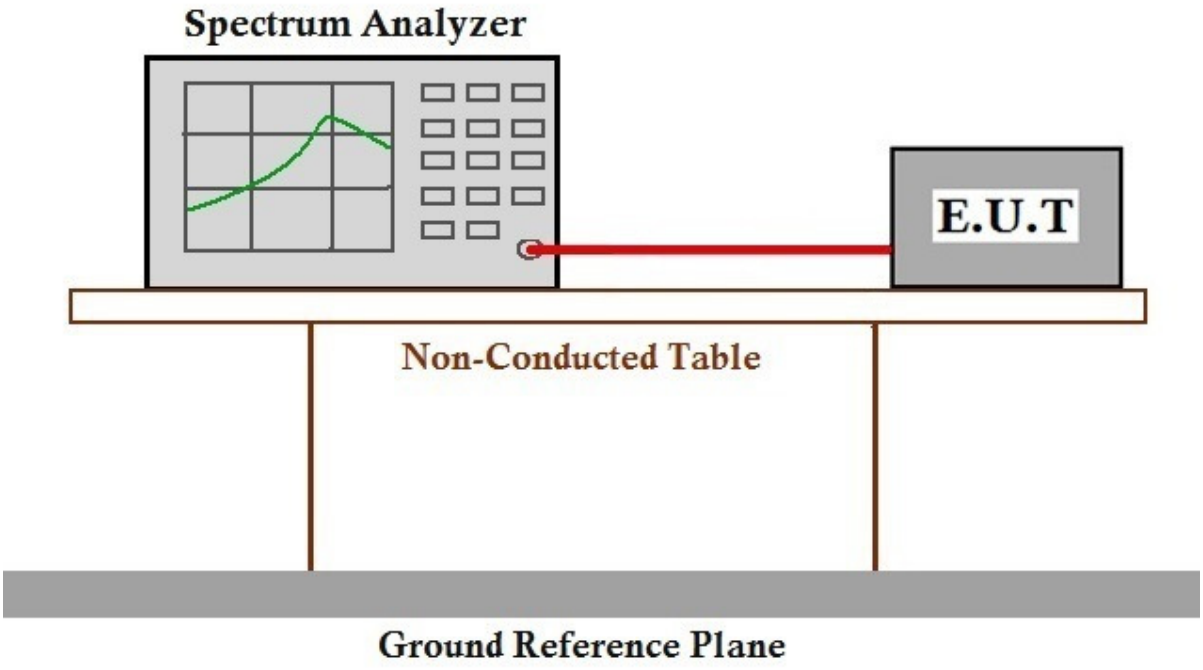
7.5.1 E.U.T. Operation

Operating Environment:

Temperature: 26.7 °C Humidity: 52.7 % RH :

Test mode a: TX mode_Keep the EUT in charging and continuously transmitting mode with GFSK modulation

7.5.2 Test Setup Diagram



7.5.3 Measurement Procedure and Data

The detailed test method see: ANSI C63.10 (2013) Section 11.10.2

The detailed test data see: Appendix 15.247 RSS247

7.6 Conducted Band Edges Measurement

Test Requirement	RSS-247 Section 5.5 47 CFR Part 15, Subpart C 2020(d)
Test Method:	ANSI C63.10 (2013) Section 11.13.3.2
Limit:	In any 100 kHz 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 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)

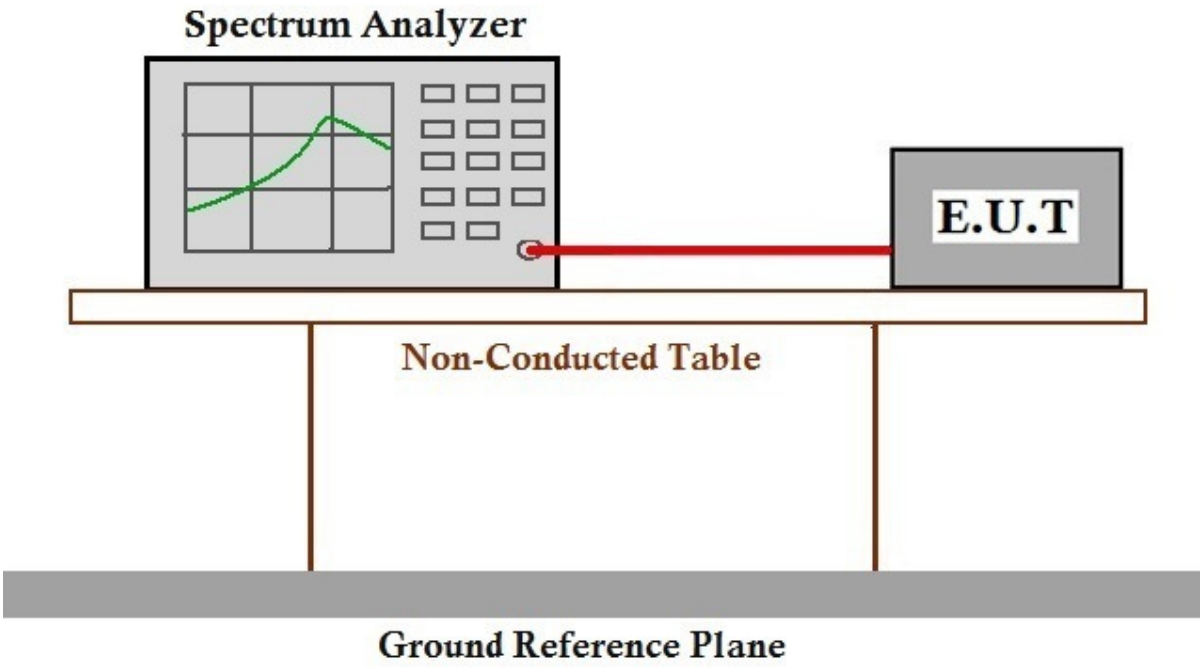
7.6.1 E.U.T. Operation

Operating Environment:

Temperature: 26.7 °C Humidity: 52.8 % RH :

Test mode a: TX mode_Keep the EUT in charging and continuously transmitting mode with GFSK modulation

7.6.2 Test Setup Diagram



7.6.3 Measurement Procedure and Data

The detailed test method see: ANSI C63.10 (2013) Section 11.13.3.2

The detailed test data see: Appendix 15.247 RSS247

7.7 Conducted Spurious Emissions

Test Requirement	RSS-247 Section 5.5 47 CFR Part 15, Subpart C 2020(d)
Test Method:	ANSI C63.10 (2013) Section 11.11
Limit:	In any 100 kHz 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 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)

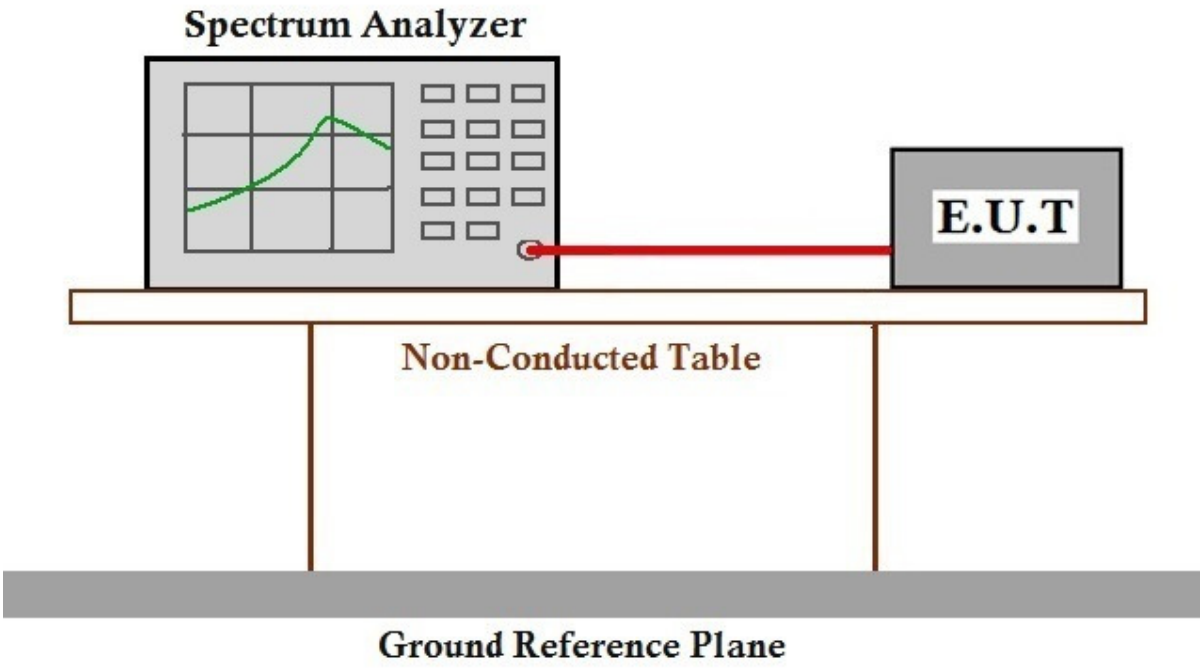
7.7.1 E.U.T. Operation

Operating Environment:

Temperature: 27.7 °C Humidity: 53.8 % RH :

Test mode a: TX mode_Keep the EUT in charging and continuously transmitting mode with GFSK modulation

7.7.2 Test Setup Diagram



7.7.3 Measurement Procedure and Data

The detailed test method see: ANSI C63.10 (2013) Section 11.11

The detailed test data see: Appendix 15.247 RSS247

7.8 Radiated Emissions which fall in the restricted bands

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209
Test Method: ANSI C63.10 (2013) Section 6.10.5
Measurement Distance: 3m
Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3
Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, 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.		

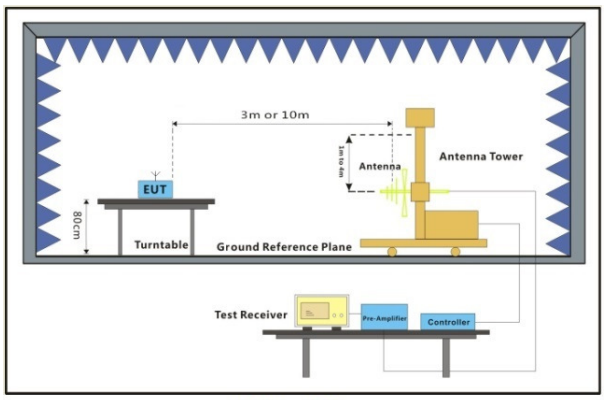
7.8.1 E.U.T. Operation

Operating Environment:

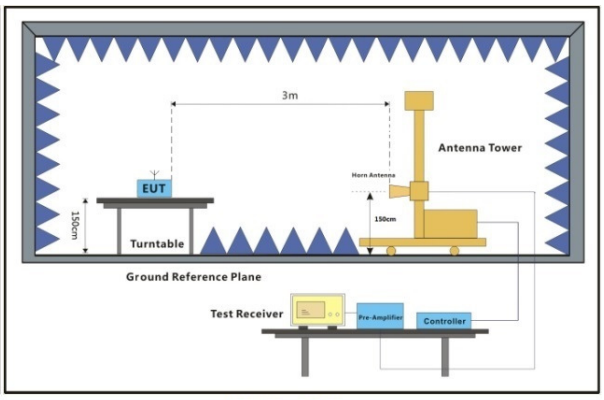
Temperature: 26.6 °C Humidity: 52.8 % RH :

Test mode a: TX mode_Keep the EUT in charging and continuously transmitting mode with GFSK modulation

7.8.2 Test Setup Diagram



30MHz-1GHz



Above 1GHz

7.8.3 Measurement Procedure and Data

a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

d. 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.

e. 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.

f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

g. 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.

h. Test the EUT in the lowest channel, the middle channel, the Highest channel.

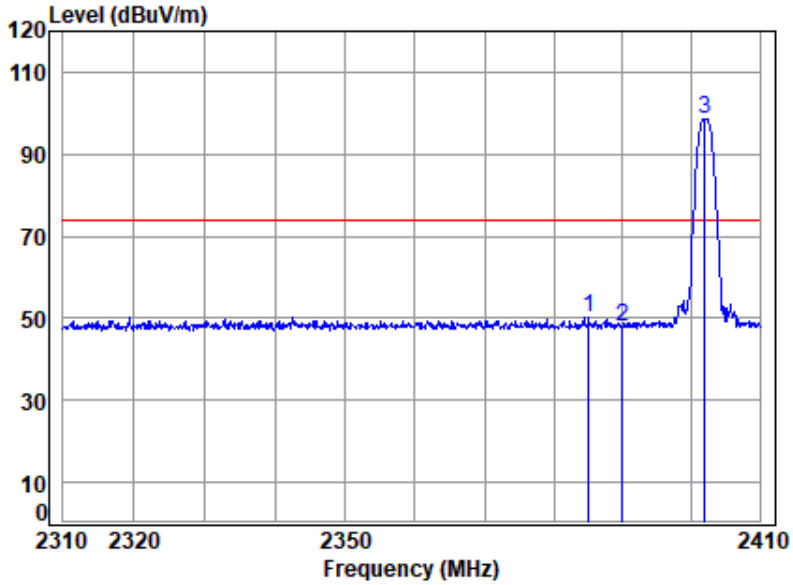
i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

j. Repeat above procedures until all frequencies measured was complete.

Remark 1: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

Remark 2: 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. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

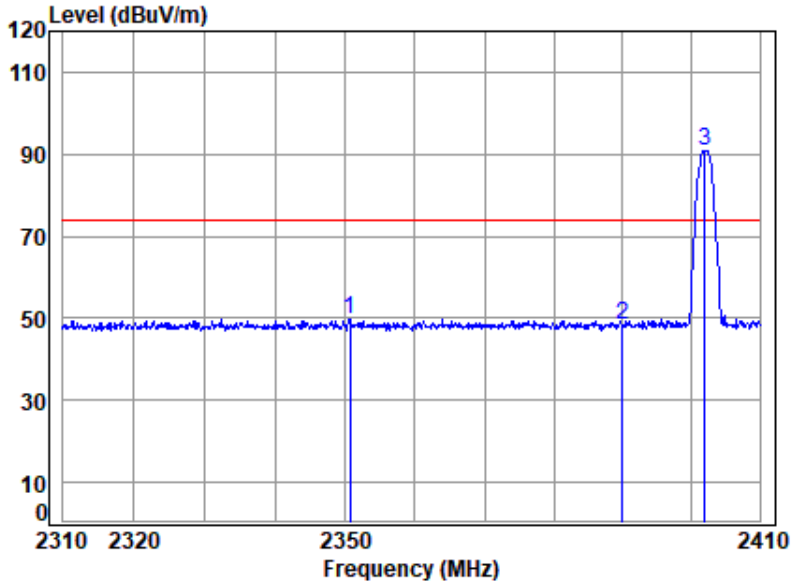
Mode:a; Polarization:Horizontal; Channel:Low



Site : chamber
Condition: 3m HORIZONTAL
Job No : 12429CR/12430CR
Mode : 2402 Band edge
Note : BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	2385.107	4.34	28.51	40.97	58.42	50.30	74.00	-23.70	peak
2	2390.000	4.34	28.52	40.97	56.20	48.09	74.00	-25.91	peak
3 *	2402.000	4.36	28.54	40.98	106.83	98.75	74.00	24.75	peak

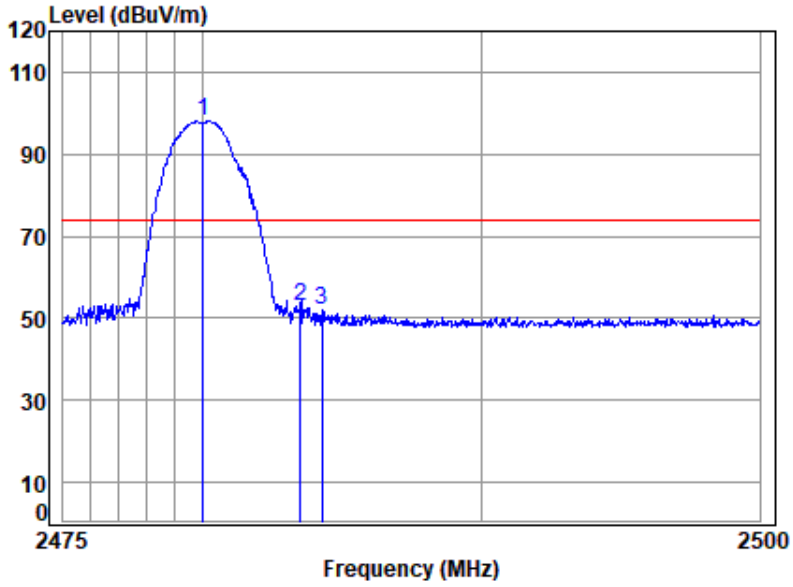
Mode:a; Polarization:Vertical; Channel:Low



Site : chamber
Condition: 3m VERTICAL
Job No : 12429CR/12430CR
Mode : 2402 Band edge
Note : BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	2350.687	4.28	28.45	40.96	57.96	49.73	74.00	-24.27	peak
2	2390.000	4.34	28.52	40.97	56.29	48.18	74.00	-25.82	peak
3 *	2402.000	4.36	28.54	40.98	98.77	90.69	74.00	16.69	peak

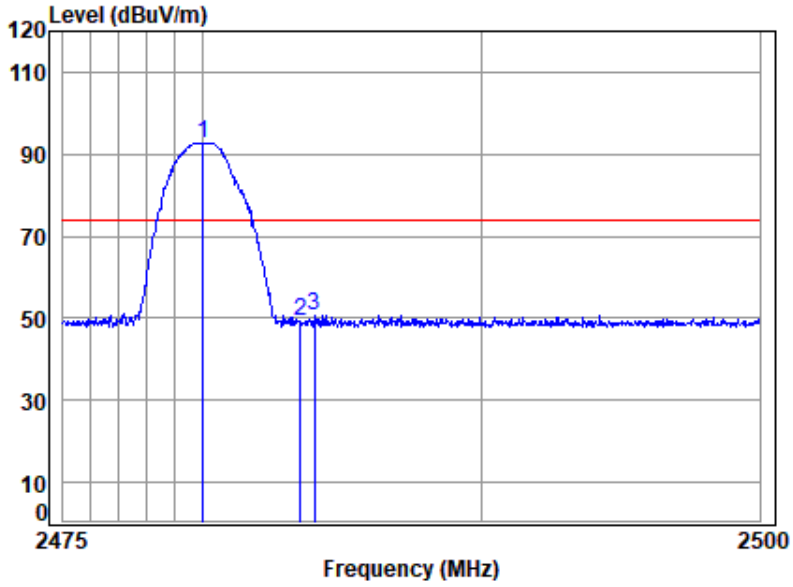
Mode:a; Polarization:Horizontal; Channel:High



Site : chamber
Condition: 3m HORIZONTAL
Job No : 12429CR/12430CR
Mode : 2480 Band edge
Note : BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 *	2480.000	4.49	28.67	41.01	105.78	97.93	74.00	23.93	peak
2	2483.500	4.49	28.67	41.01	61.00	53.15	74.00	-20.85	peak
3	2484.271	4.50	28.67	41.01	59.90	52.06	74.00	-21.94	peak

Mode:a; Polarization:Vertical; Channel:High



Site : chamber
Condition: 3m VERTICAL
Job No : 12429CR/12430CR
Mode : 2480 Band edge
Note : BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1 *	2480.000	4.49	28.67	41.01	100.52	92.67	74.00	18.67	peak
2	2483.500	4.49	28.67	41.01	57.31	49.46	74.00	-24.54	peak
3	2483.996	4.49	28.67	41.01	58.55	50.70	74.00	-23.30	peak

7.9 Radiated Spurious Emissions

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209
Test Method: ANSI C63.10 (2013) Section 6.4,6.5,6.6
Measurement Distance: 3m
Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3
Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, 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.		

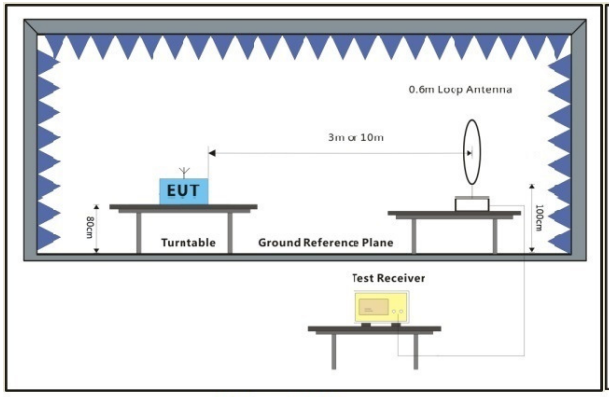
7.9.1 E.U.T. Operation

Operating Environment:

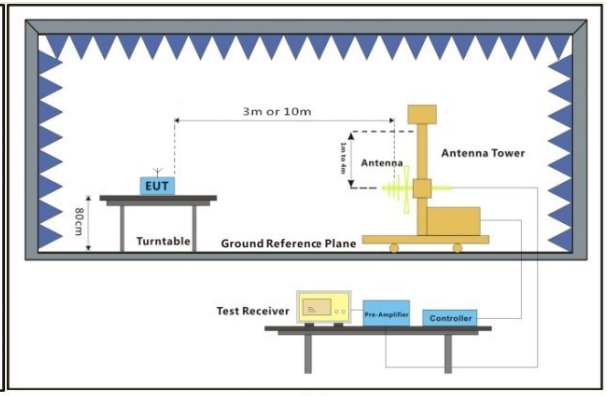
Temperature: 27.7 °C Humidity: 53.8 % RH :

Test mode a: TX mode_Keep the EUT in charging and continuously transmitting mode with GFSK modulation

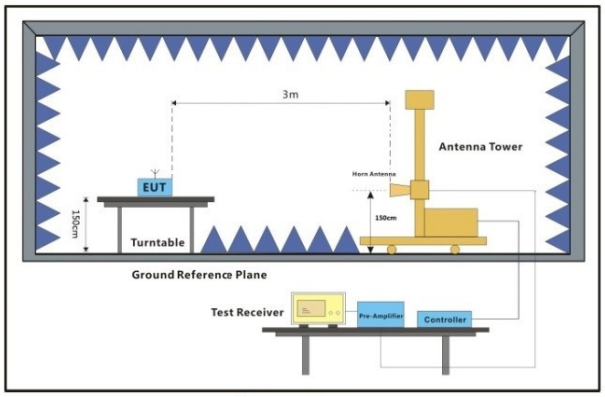
7.9.2 Test Setup Diagram



Below 30MHz



30MHz-1GHz



Above 1GHz

7.9.3 Measurement Procedure and Data

a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

d. 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.

e. 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.

f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

g. 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.

h. Test the EUT in the lowest channel, the middle channel, the Highest channel.

i. 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.

j. Repeat above procedures until all frequencies measured was complete.

Remark:

1) For emission below 1GHz, through pre-scan found the worst case is the lowest channel. Only the worst case is recorded in the report.

2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

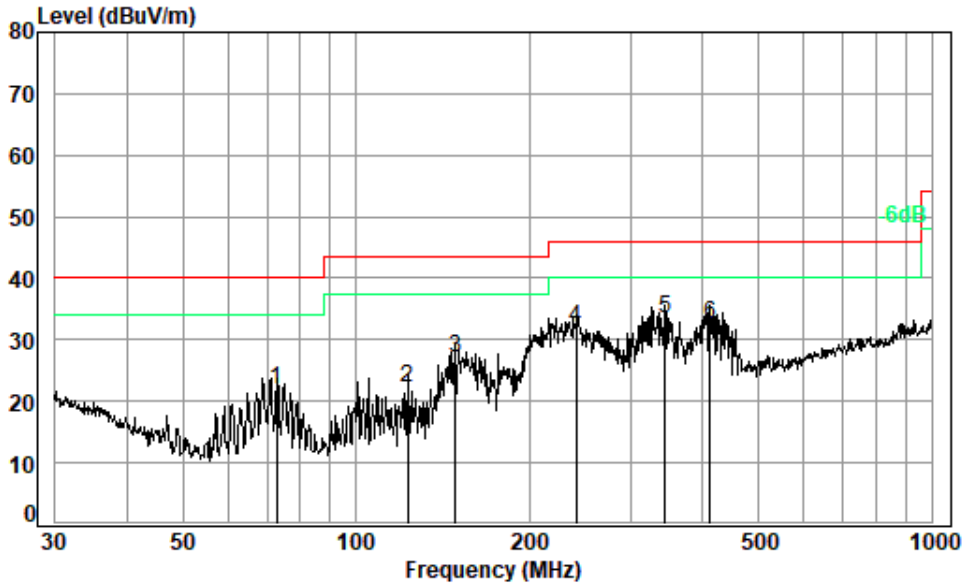
Final Test Level =Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor

3) Scan from 9kHz to 25GHz, the disturbance above 18GHz and below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

4) 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. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

Radiated emission below 1GHz

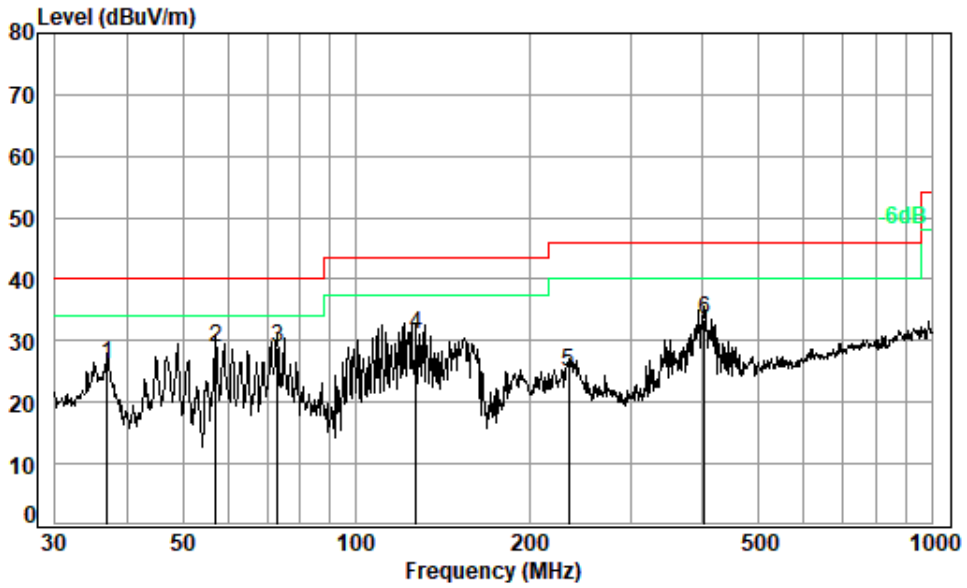
Mode:a; Polarization:Horizontal; Modulation:GFSK;



Condition: 3m HORIZONTAL
Job No. : 12429CR
Mode : 01

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	72.85	0.92	12.46	27.64	36.10	21.84	40.00	-18.16	QP
2	122.83	1.13	12.85	27.47	35.75	22.26	43.50	-21.24	QP
3	148.96	1.16	14.57	27.34	38.80	27.19	43.50	-16.31	QP
4	241.68	1.57	17.87	27.02	39.52	31.94	46.00	-14.06	QP
5 pp	344.39	2.14	20.67	27.12	37.76	33.45	46.00	-12.55	QP
6	411.82	2.33	21.67	27.45	35.95	32.50	46.00	-13.50	QP

Mode:a; Polarization:Vertical; Modulation:GFSK;



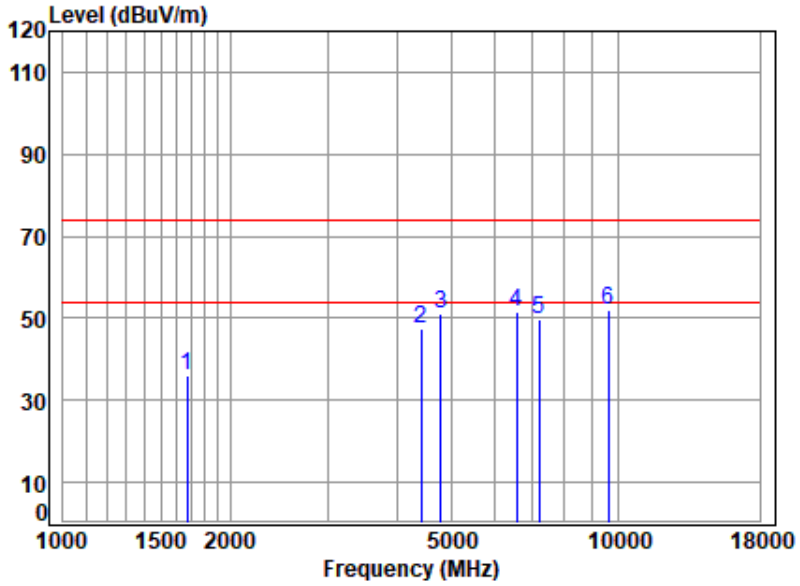
Condition: 3m VERTICAL
Job No. : 12429CR
Mode : 01

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	37.02	0.67	19.44	27.71	33.72	26.12	40.00	-13.88	QP
2	56.99	0.77	13.05	27.67	42.61	28.76	40.00	-11.24	QP
3 pp	73.10	0.93	12.44	27.64	43.21	28.94	40.00	-11.06	QP
4	127.22	1.13	12.64	27.45	44.67	30.99	43.50	-12.51	QP
5	234.17	1.51	17.51	27.04	33.06	25.04	46.00	-20.96	QP
6	403.25	2.31	21.67	27.41	36.98	33.55	46.00	-12.45	QP

Remark: Only the worst case is shown.

Above 1GHz

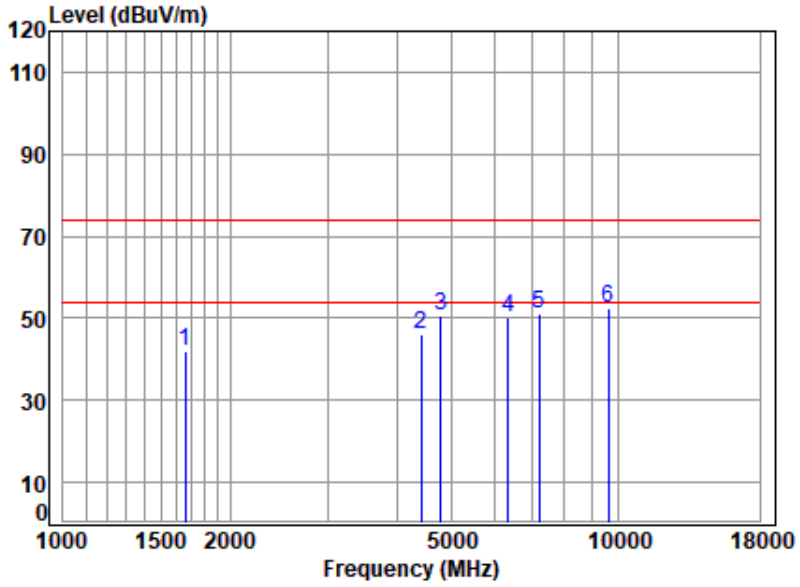
Mode:a; Polarization:Horizontal; Channel:Low



Site : chamber
Condition: 3m HORIZONTAL
Job No : 12429CR/12430CR
Mode : 2402 TX RSE
Note : BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1672.779	3.41	26.56	40.62	46.78	36.13	74.00	-37.87	peak
2	4417.841	6.68	33.46	42.49	49.67	47.32	74.00	-26.68	peak
3	4804.000	7.10	33.97	42.77	52.63	50.93	74.00	-23.07	peak
4	6564.209	8.31	35.64	41.92	49.43	51.46	74.00	-22.54	peak
5	7206.000	8.74	36.07	41.58	46.46	49.69	74.00	-24.31	peak
6	9608.000	10.81	37.67	38.57	41.96	51.87	74.00	-22.13	peak

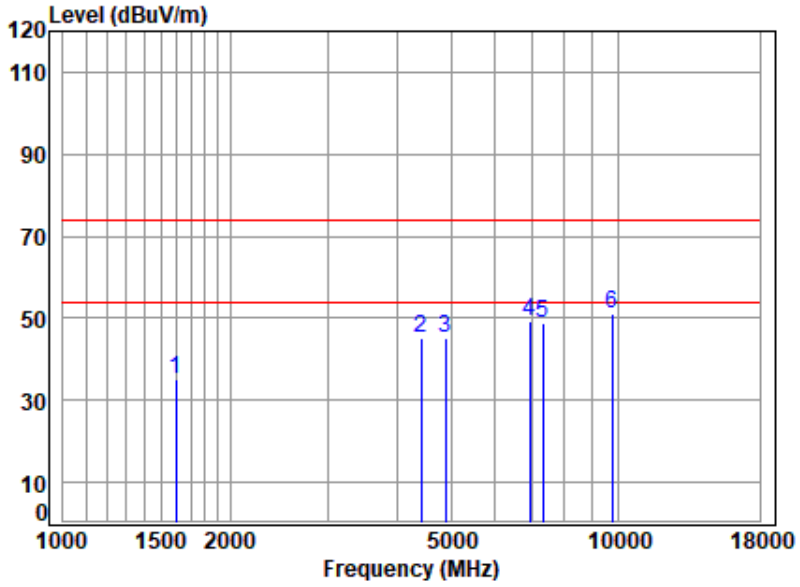
Mode:a; Polarization:Vertical; Channel:Low



Site : chamber
Condition: 3m VERTICAL
Job No : 12429CR/12430CR
Mode : 2402 TX RSE
Note : BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1663.137	3.40	26.52	40.61	52.76	42.07	74.00	-31.93	peak
2	4417.841	6.68	33.46	42.49	48.55	46.20	74.00	-27.80	peak
3	4804.000	7.10	33.97	42.77	52.32	50.62	74.00	-23.38	peak
4	6340.436	8.27	35.44	42.04	48.60	50.27	74.00	-23.73	peak
5	7206.000	8.74	36.07	41.58	48.07	51.30	74.00	-22.70	peak
6	9608.000	10.81	37.67	38.57	42.40	52.31	74.00	-21.69	peak

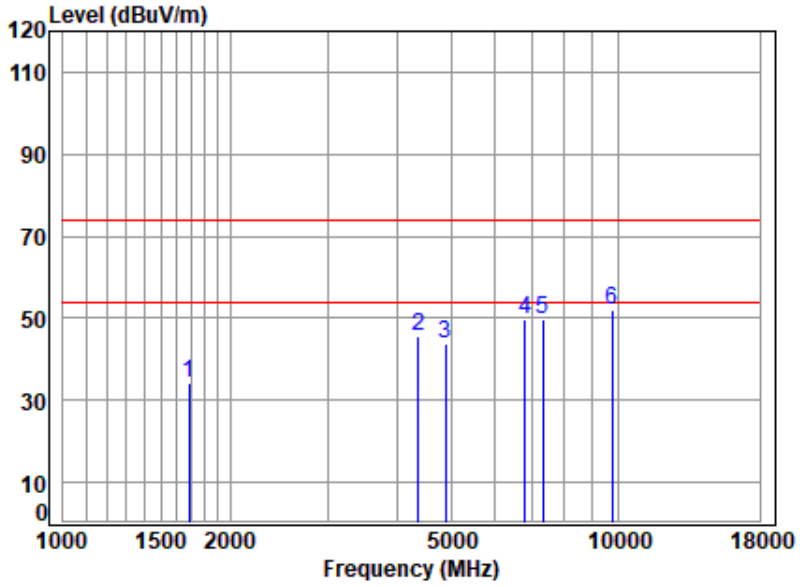
Mode:a; Polarization:Horizontal; Channel:Middle



Site : chamber
Condition: 3m HORIZONTAL
Job No : 12429CR/12430CR
Mode : 2440 TX RSE
Note : BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1597.181	3.35	26.24	40.57	46.03	35.05	74.00	-38.95	peak
2	4417.841	6.68	33.46	42.49	47.37	45.02	74.00	-28.98	peak
3	4882.000	7.18	34.06	42.82	46.61	45.03	74.00	-28.97	peak
4	6934.778	8.51	35.86	41.72	46.66	49.31	74.00	-24.69	peak
5	7323.000	8.85	36.16	41.52	45.47	48.96	74.00	-25.04	peak
6	9764.000	10.76	37.76	38.34	41.04	51.22	74.00	-22.78	peak

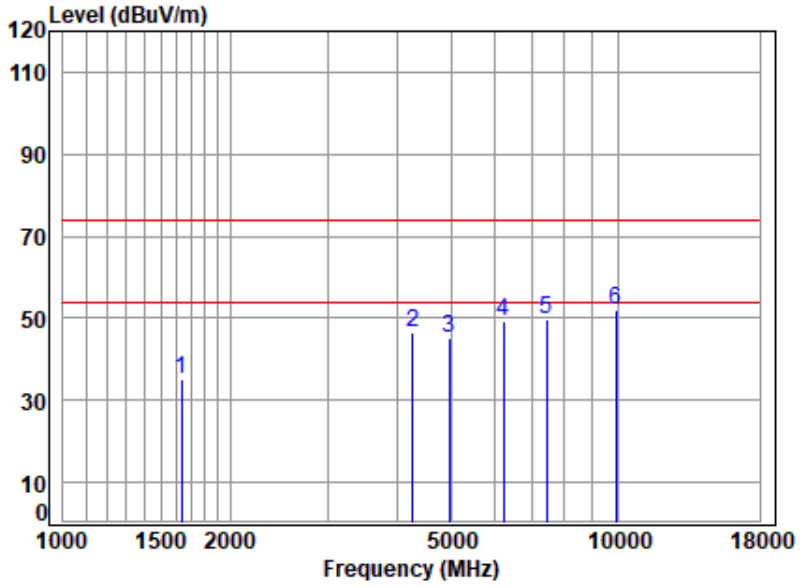
Mode:a; Polarization:Vertical; Channel:Middle



Site : chamber
Condition: 3m VERTICAL
Job No : 12429CR/12430CR
Mode : 2440 TX RSE
Note : BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1687.347	3.42	26.62	40.62	45.02	34.44	74.00	-39.56	peak
2	4367.058	6.64	33.37	42.45	47.98	45.54	74.00	-28.46	peak
3	4882.000	7.18	34.06	42.82	45.44	43.86	74.00	-30.14	peak
4	6795.879	8.44	35.78	41.79	47.44	49.87	74.00	-24.13	peak
5	7323.000	8.85	36.16	41.52	46.36	49.85	74.00	-24.15	peak
6	9764.000	10.76	37.76	38.34	42.01	52.19	74.00	-21.81	peak

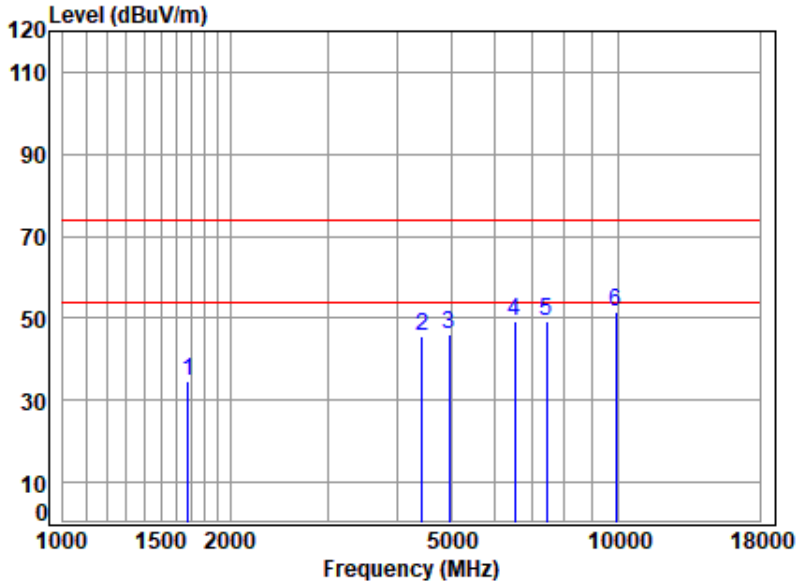
Mode:a; Polarization:Horizontal; Channel:High



Site : chamber
Condition: 3m HORIZONTAL
Job No : 12429CR/12430CR
Mode : 2480 TX RSE
Note : BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1634.543	3.38	26.40	40.59	46.12	35.31	74.00	-38.69	peak
2	4267.237	6.54	33.19	42.37	48.98	46.34	74.00	-27.66	peak
3	4960.000	7.26	34.15	42.87	46.42	44.96	74.00	-29.04	peak
4	6231.427	8.27	35.34	42.10	47.82	49.33	74.00	-24.67	peak
5	7440.000	8.96	36.25	41.46	45.82	49.57	74.00	-24.43	peak
6	9920.000	10.71	37.85	38.12	41.56	52.00	74.00	-22.00	peak

Mode:a; Polarization:Vertical; Channel:High



Site : chamber
Condition: 3m VERTICAL
Job No : 12429CR/12430CR
Mode : 2480 TX RSE
Note : BLE

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1682.477	3.42	26.60	40.62	45.50	34.90	74.00	-39.10	peak
2	4430.628	6.70	33.48	42.50	48.01	45.69	74.00	-28.31	peak
3	4960.000	7.26	34.15	42.87	47.32	45.86	74.00	-28.14	peak
4	6526.373	8.29	35.62	41.94	47.24	49.21	74.00	-24.79	peak
5	7440.000	8.96	36.25	41.46	45.74	49.49	74.00	-24.51	peak
6	9920.000	10.71	37.85	38.12	41.24	51.68	74.00	-22.32	peak

8 Photographs

8.1 EUT Constructional Details (EUT Photos)

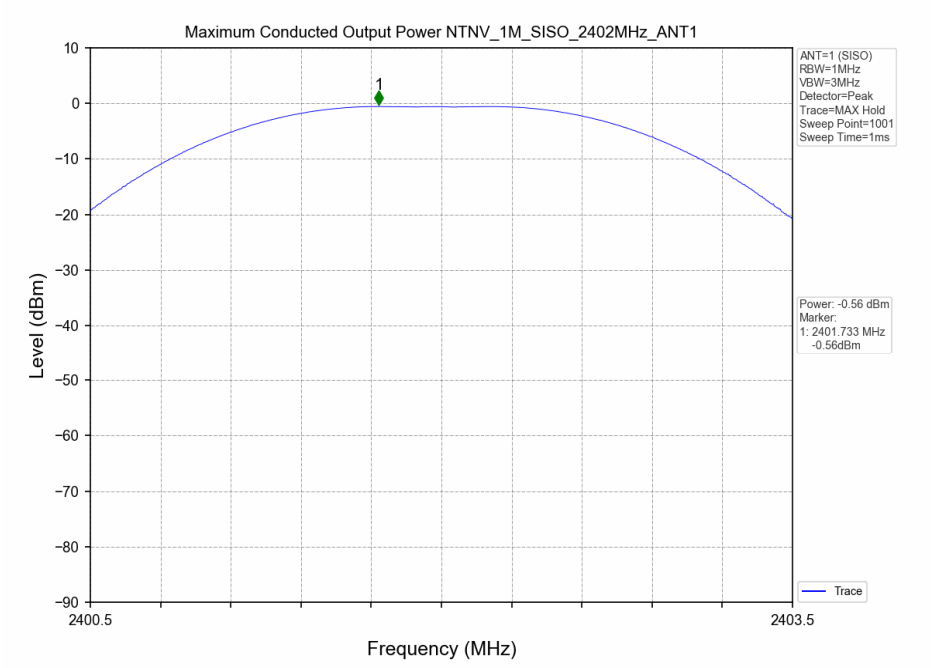
Refer to the appendices external, internal and setup photos.

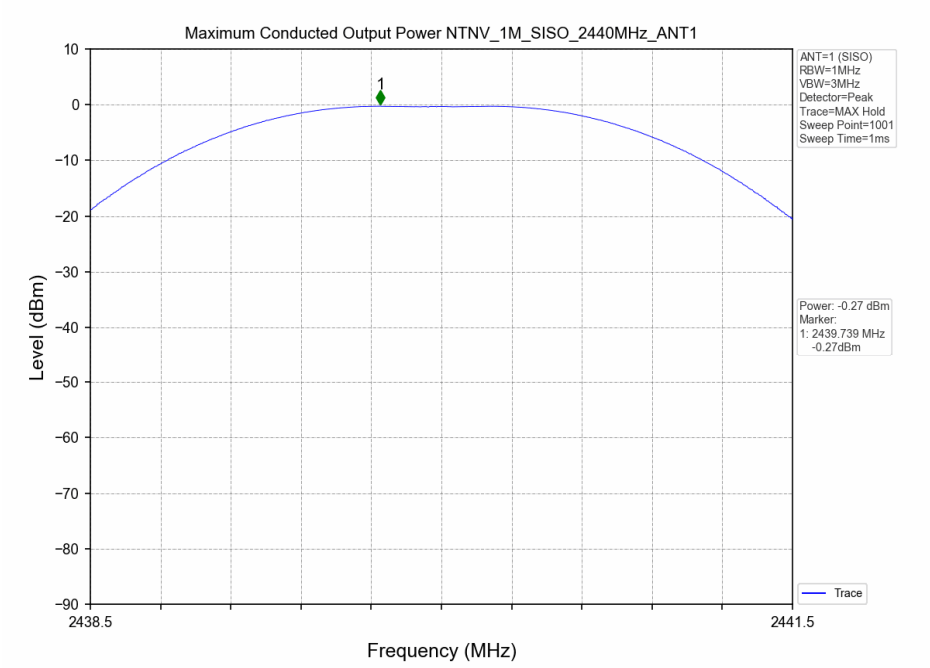
9 Appendix 15.247 RSS247

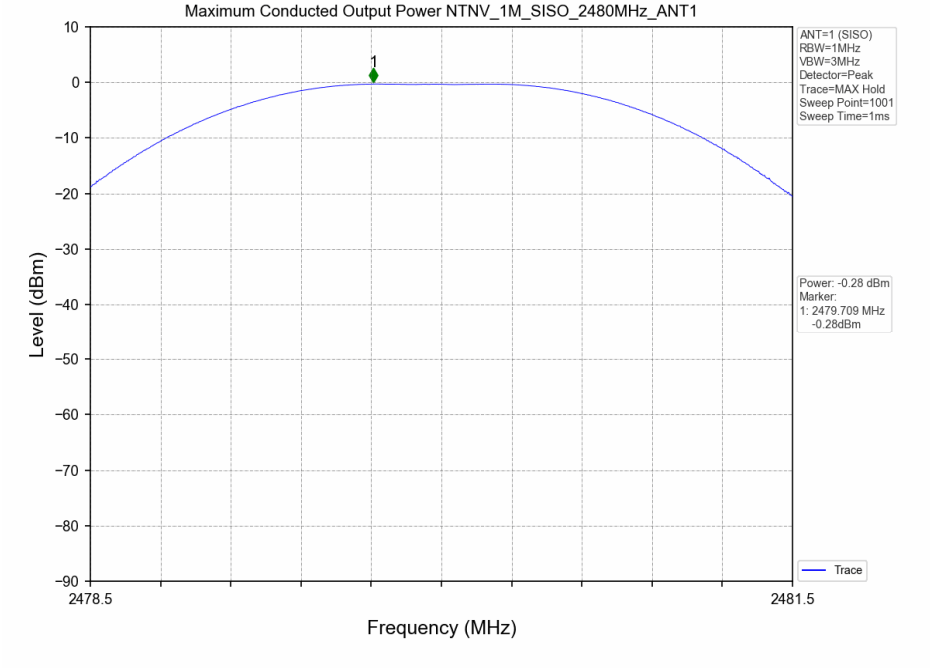
9.1 Peak conducted output power

Test Mode	Frequency (MHz)	Tx Type	Measured Peak Output Power (dBm)	Limits (dBm)	Verdict
			Ant 1		
1M	2402	SISO	-0.56	30	PASS
	2440	SISO	-0.27	30	PASS
	2480	SISO	-0.28	30	PASS

Remark: Antenna gain is 2 dBi



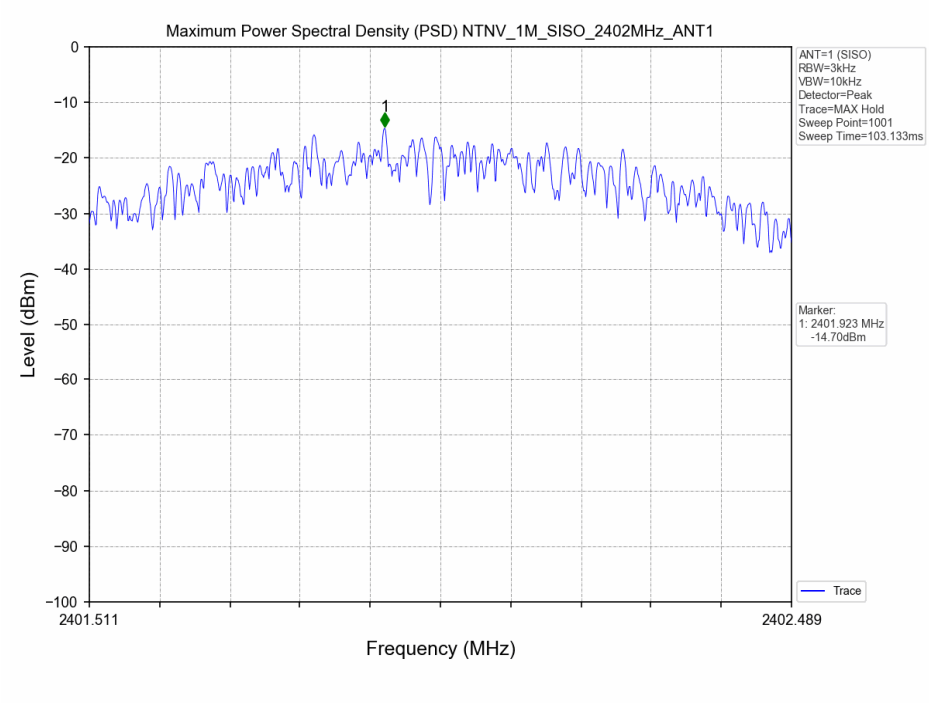


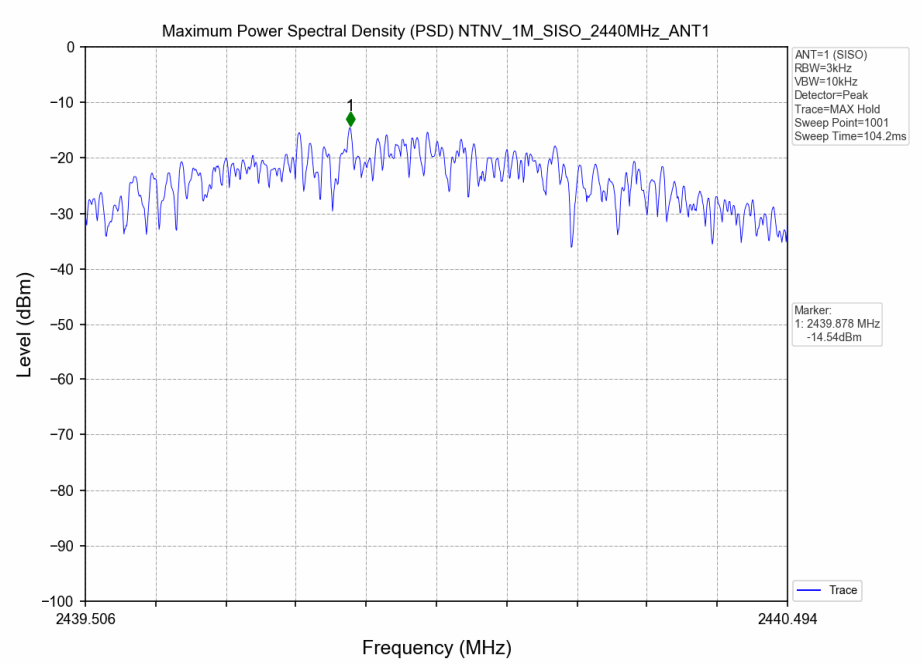


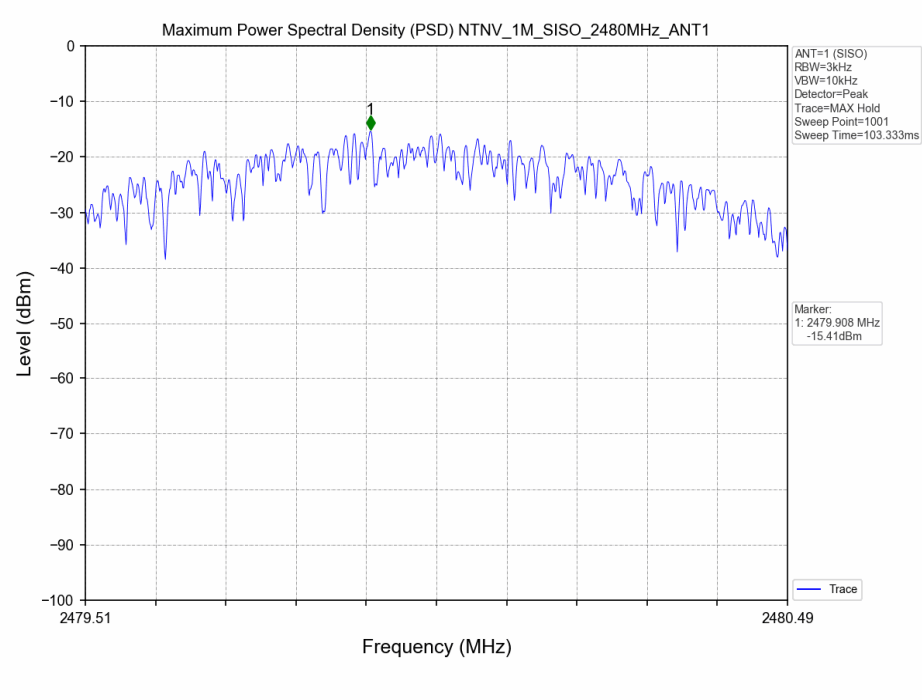
Remark: Cable loss 0.8dB was considered and set in system configuration.

9.2 Power Spectrum Density

Test Mode	Frequency (MHz)	Tx Type	Maximum Power Spectral Density (dBm/3KHz)	Limits (dBm/3kHz)	Verdict
			Ant 1		
1M	2402	SISO	-14.70	≤8	PASS
	2440	SISO	-14.54	≤8	PASS
	2480	SISO	-15.41	≤8	PASS



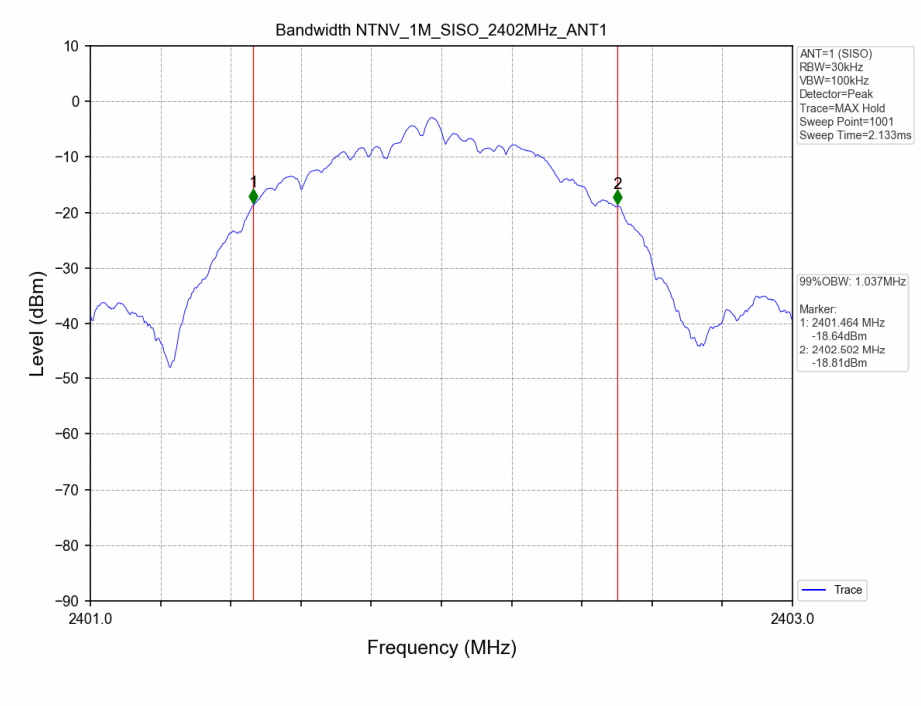


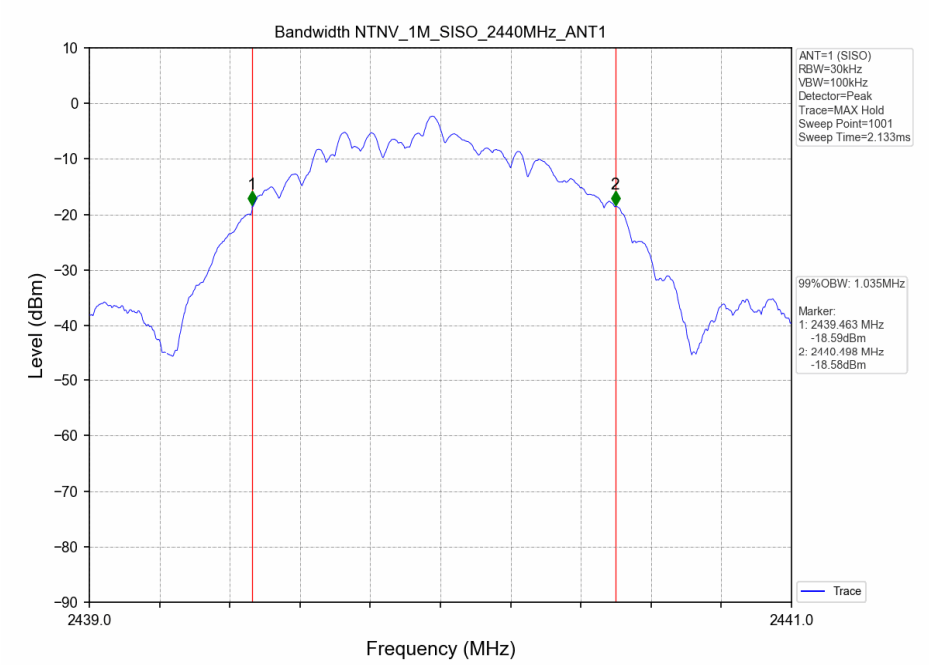


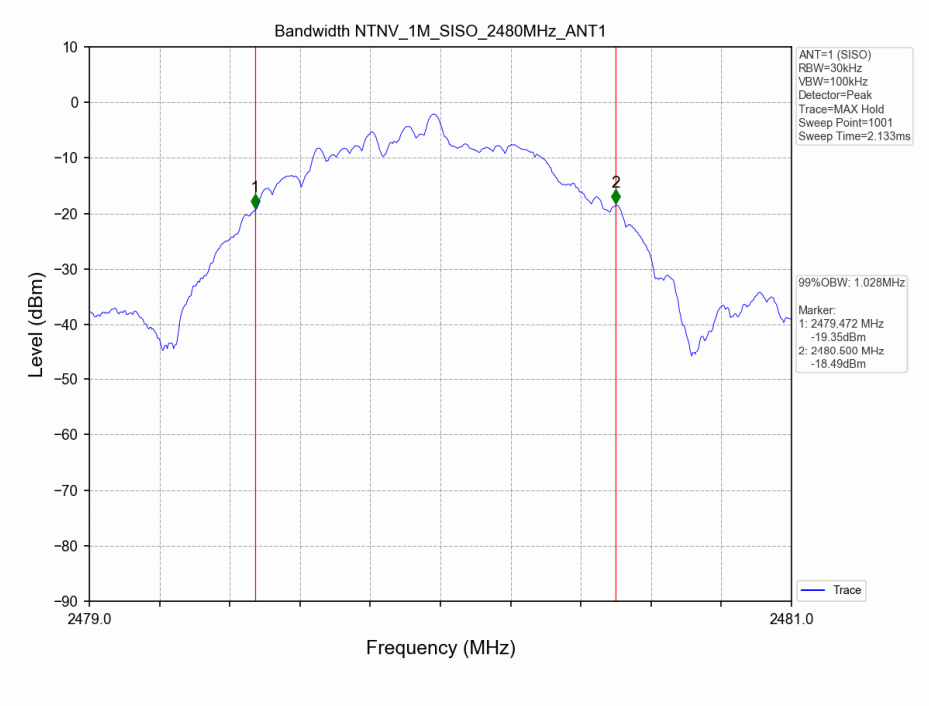
Remark: Cable loss 0.8dB was considered and set in system configuration.

9.3 99% Bandwidth

Test Mode	Frequency (MHz)	TX Type	ANT No.	99% Occupied Bandwidth	
				Test Result (MHz)	
1M	2402	SISO	1	1.037	Only for Report Use
	2440	SISO	1	1.035	Only for Report Use
	2480	SISO	1	1.028	Only for Report Use



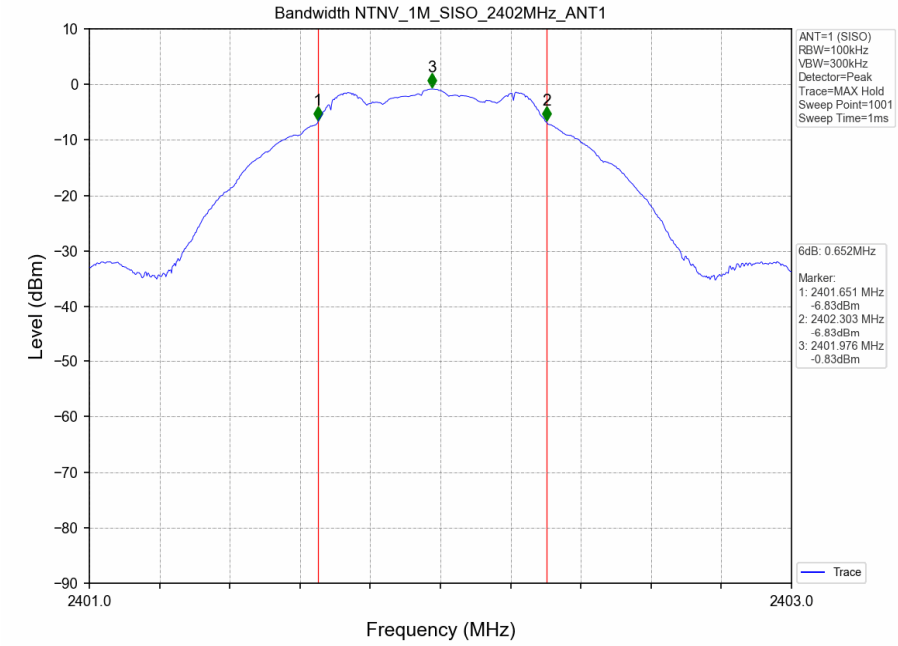


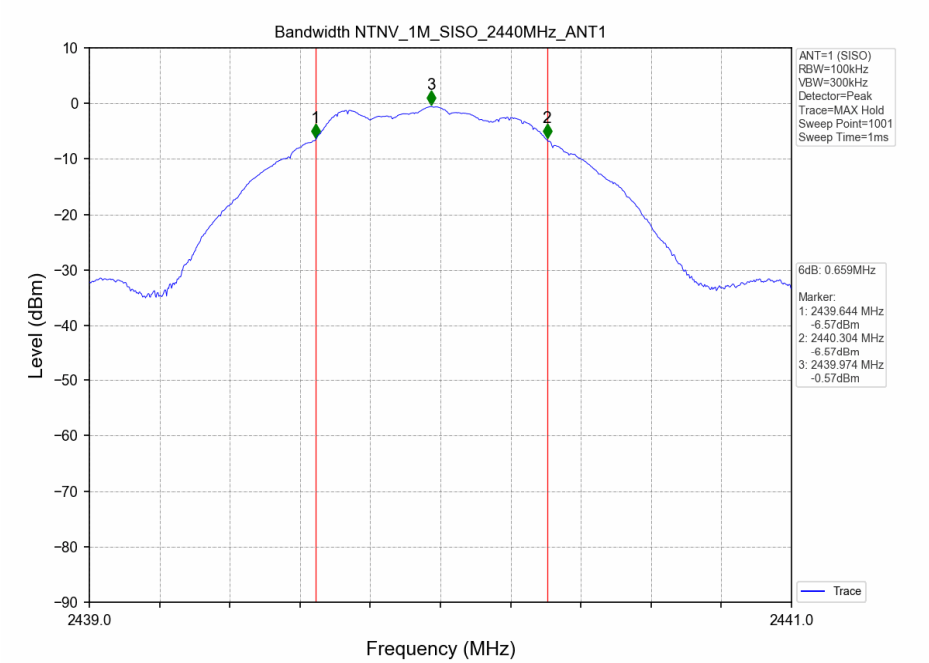


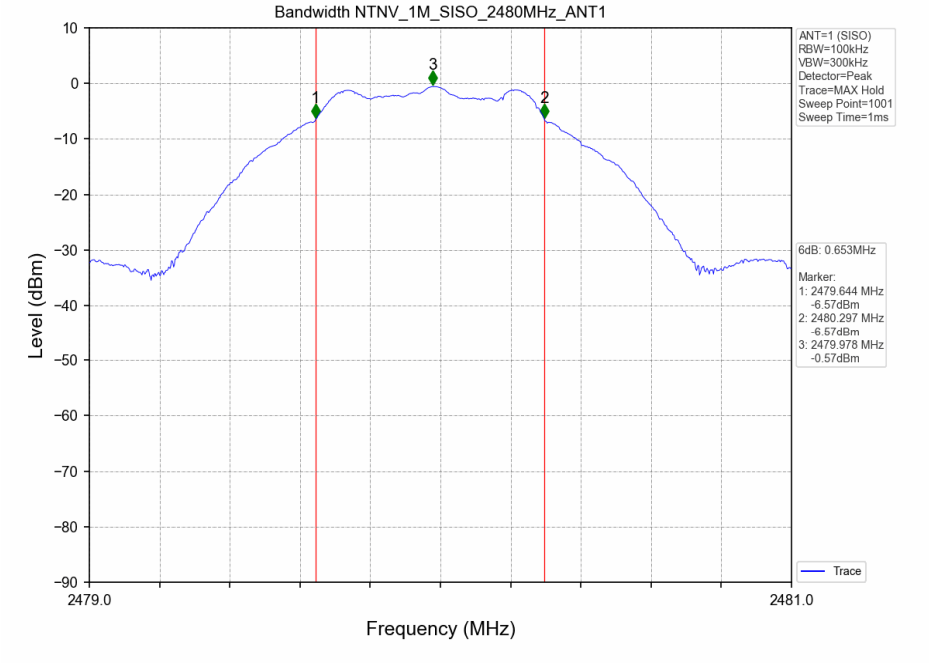
Remark: Cable loss 0.8dB was considered and set in system configuration.

9.4 Minimum 6dB Bandwidth

Test Mode	Frequency (MHz)	TX Type	ANT No.	6dB Bandwidth	Verdict
				Test Result (MHz)	
1M	2402	SISO	1	0.652	PASS
	2440	SISO	1	0.659	PASS
	2480	SISO	1	0.653	PASS





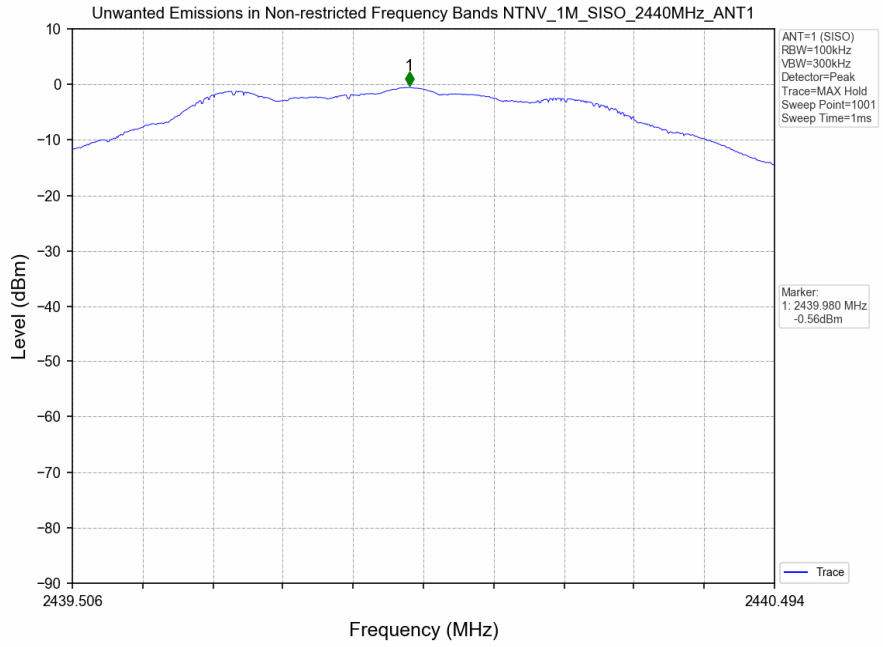


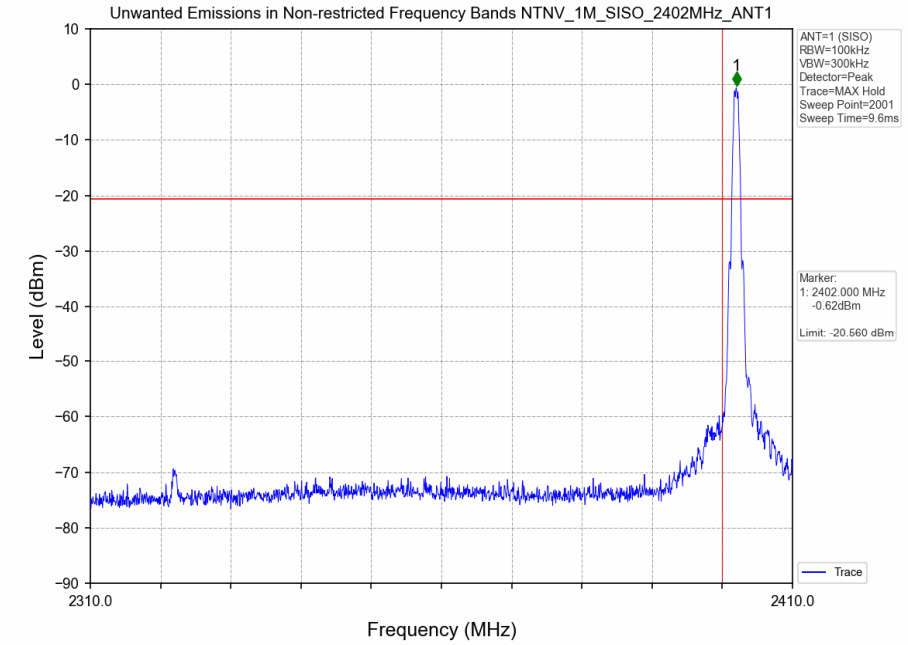
Remark: Cable loss 0.8dB was considered and set in system configuration.

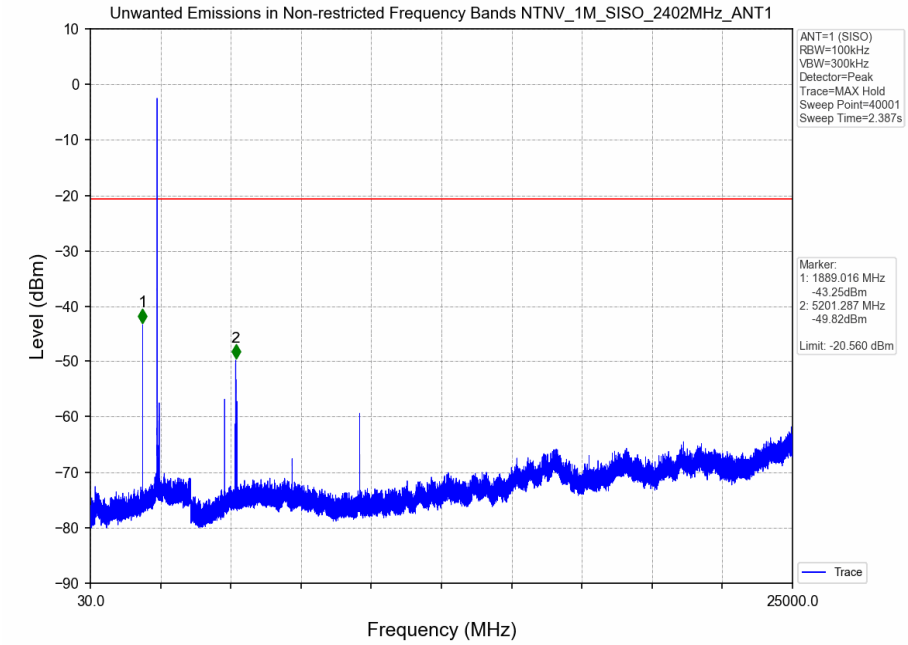
9.5 Conducted Band Edge Measurement and Conducted spurious emission

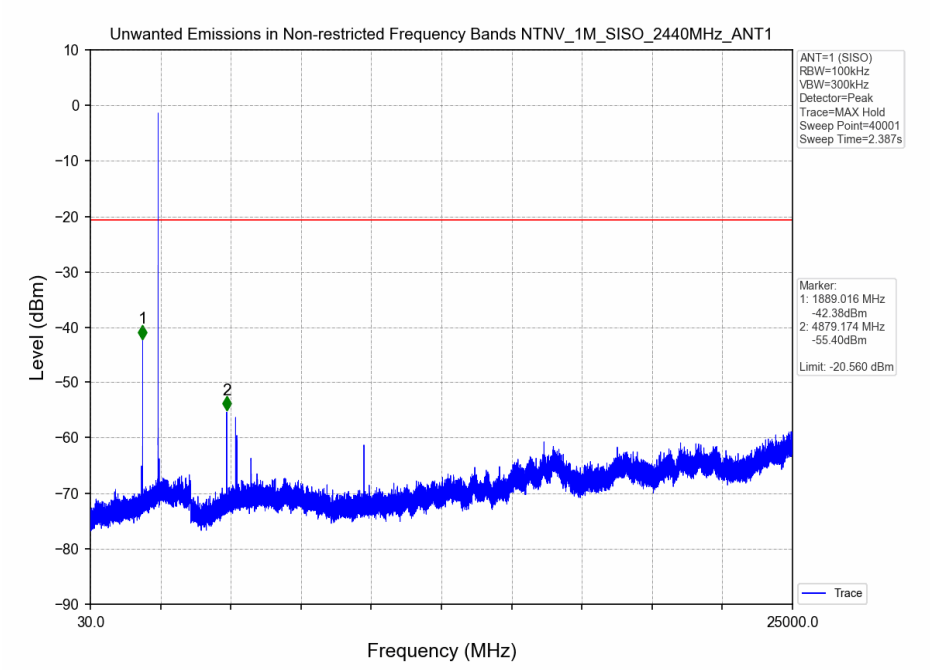
Test Mode	Frequency (MHz)	TX Type	ANT No.	Spurious Conducted Emission (dBm)	Limits (dBm)	Verdict
1M	2402	SISO	1	Refer to test graph	-20.56	PASS
	2440	SISO	1	Refer to test graph	-20.56	PASS
	2480	SISO	1	Refer to test graph	-20.56	PASS

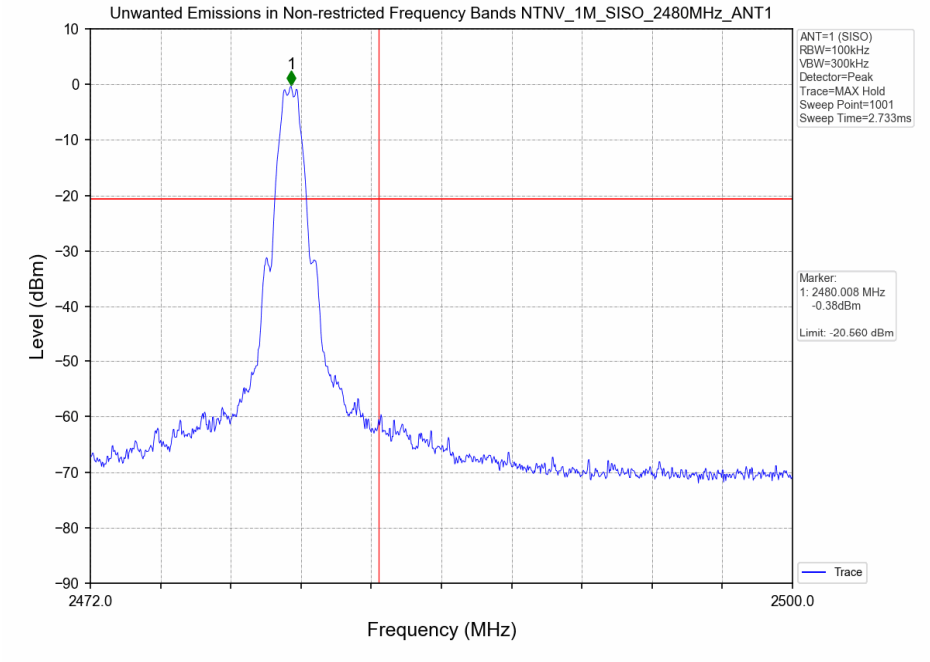
Remark: Limit = Inband peak – 20dB

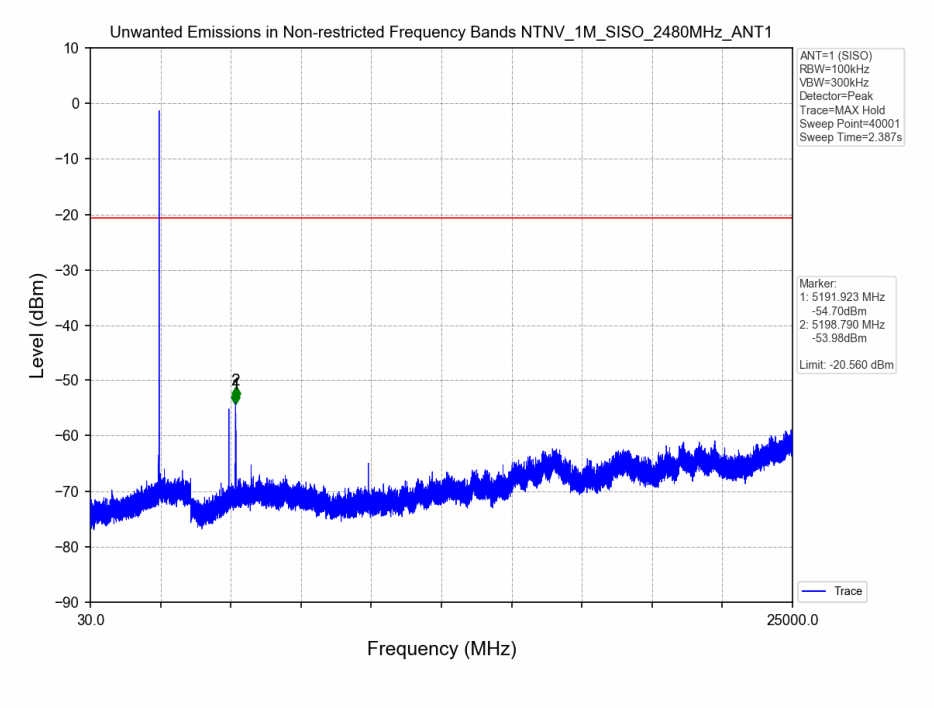



Unwanted Emissions in Non-restricted Frequency Bands NTNV_1M_SISO_2402MHz_ANT1
ANT=1 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=2001
Sweep Time=9.6ms
Marker:
1: 2402.000 MHz
-0.62dBm
Limit: -20.560 dBm
Trace
Level (dBm)
Frequency (MHz)
2310.0
2410.0


Unwanted Emissions in Non-restricted Frequency Bands NTNV_1M_SISO_2402MHz_ANT1
ANT=1 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=40001
Sweep Time=2.387s
Marker:
1: 1889.016 MHz
-43.25dBm
2: 5201.287 MHz
-49.82dBm
Limit: -20.560 dBm
Trace
Level (dBm)
Frequency (MHz)
30.0
25000.0


Unwanted Emissions in Non-restricted Frequency Bands NTNV_1M_SISO_2440MHz_ANT1
ANT=1 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=40001
Sweep Time=2.387s
Marker:
1: 1889.016 MHz
-42.38dBm
2: 4879.174 MHz
-55.40dBm
Limit: -20.560 dBm
Trace
Level (dBm)
Frequency (MHz)
30.0
25000.0


Unwanted Emissions in Non-restricted Frequency Bands NTNV_1M_SISO_2480MHz_ANT1
ANT=1 (SISO)
RBW=100kHz
VBW=300kHz
Detector=Peak
Trace=MAX Hold
Sweep Point=1001
Sweep Time=2.733ms
Marker:
1: 2480.008 MHz
-0.38dBm
Limit: -20.560 dBm
Trace
Level (dBm)
Frequency (MHz)
2472.0
2500.0



Remark: Cable loss 0.8dB was considered and set in system configuration.

- End of the Report -