



TEST REPORT

Application No.: GZCR2205000566AT
Applicant: Tele-Radio i Lysekil AB
Address of Applicant: Datavägen 21, SE-436 32 Askim, Sweden
Manufacturer: Tele-Radio i Lysekil AB
Address of Manufacturer: Datavägen 21, SE-436 32 Askim, Sweden
Factory: Tele-Radio i Lysekil AB
Address of Factory: Datavägen 21, SE-436 32 Askim, Sweden
Equipment Under Test (EUT):
EUT Name: Transmitter
Model No.: T21-3, T21-03, T00021-03, PN-T21-3, PN-T21-03,
T21-4, T21-04, T00021-04, PN-T21-4, PN-T21-04,
T21-6, T21-06, T00021-06, PN-T21-6, PN-T21-06,
T21-8, T21-08, T00021-08, PN-T21-8, PN-T21-08,
T21-10, T00021-10, PN-T21-10 ♣
♣ Please refer to section 2 of this report which indicates which item was actually tested and which were electrically identical.
Trade Mark: Tele Radio
Standard(s) : 47 CFR Part 15, Subpart C 15.247
Date of Receipt: 2022-05-07
Date of Test: 2022-05-11 to 2022-06-01
Date of Issue: 2022-06-29

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.

Kobe Jian

Kobe Jian
EMC Laboratory Manager



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Guangzhou Branch Technical Services Co., Ltd. 中国·广州·经济技术开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 f (86-20) 82075058 sgs.china@sgs.com

Revision Record			
Version	Report No.	Date	Remark
01	GZCR220500056601	2022-06-29	Original

Authorized for issue by:				
		Kevin Zhang		
		Kevin Zhang/Project Engineer		
		Ricky Liu		
		Ricky Liu/Reviewer		



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2 Test Summary

Radio Spectrum Technical Requirement				
Item	Standard	Method	Requirement	Result
Antenna Requirement	47 CFR Part 15, Subpart C 15.247	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 Peak Output Power	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2013) Section 11.9.1	47 CFR Part 15, Subpart C 15.247(b)(3)	Pass
Minimum 6dB Bandwidth		ANSI C63.10 (2013) Section 11.8.1	47 CFR Part 15, Subpart C 15.247a(2)	Pass
Power Spectrum Density		ANSI C63.10 (2013) Section 11.10.2	47 CFR Part 15, Subpart C 15.247(e)	Pass
Conducted Band Edges Measurement		ANSI C63.10 (2013) Section 11.13.3.2	47 CFR Part 15, Subpart C 15.247(d)	Pass
Conducted Spurious Emissions		ANSI C63.10 (2013) Section 11.11	47 CFR Part 15, Subpart C 15.247(d)	Pass
Radiated Emissions which fall in the restricted bands		ANSI C63.10 (2013) Section 6.10.5	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass
Radiated Spurious Emissions Below 1GHz		ANSI C63.10 (2013) Section 6.4,6.5	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass
Radiated Spurious Emissions Above 1GHz		ANSI C63.10 (2013) Section 6.6	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass

Note:

E.U.T./EUT means Equipment Under Test.

Pass means the test result passed the test standard requirement, please find the detailed decision rule in the report relative section.



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No.198 Kezhu Road, Sciotech Park, Guangzhou Economic & Technology Development District, Guangzhou, China 510663 t (86-20) 82155555 f (86-20) 82075058 www.sgs.com.cn
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✦ Declaration of EUT Family Grouping:

Model No.:

T21-3, T21-03, T00021-03, PN-T21-3, PN-T21-03,
T21-4, T21-04, T00021-04, PN-T21-4, PN-T21-04,
T21-6, T21-06, T00021-06, PN-T21-6, PN-T21-06,
T21-8, T21-08, T00021-08, PN-T21-8, PN-T21-08,
T21-10, T00021-10, PN-T21-10

According to the declaration from the applicant, the electrical circuit design, layout, components used and internal wiring were identical for all models, with only difference on model number, keypad and faceplate. Details as below:

Model No.:	Difference on:	
T21-3, T21-03, T00021-03, PN-T21-3, PN-T21-03	Model number	keypad and faceplate
T21-4, T21-04, T00021-04, PN-T21-4, PN-T21-04	Model number	
T21-6, T21-06, T00021-06, PN-T21-6, PN-T21-06	Model number	
T21-8, T21-08, T00021-08, PN-T21-8, PN-T21-08	Model number	
T21-10, T00021-10, PN-T21-10	Model number	

Therefore only one model T21-10 was tested in this report.

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4 General Information

4.1 Details of E.U.T.

Power supply:	DC 4.5 V
Cable(s):	None
Test Voltage:	DC 4.5 V
Operation Frequency:	2405MHz to 2480MHz
Modulation Type:	O-QPSK
Number of Channels:	16 as below for details
Channel Spacing:	5MHz
Antenna Type:	Integral Antenna
Antenna Gain:	4 dBi

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
11	2405MHz	15	2425MHz	19	2445MHz	23	2465MHz
12	2410MHz	16	2430MHz	20	2450MHz	24	2470MHz
13	2415MHz	17	2435MHz	21	2455MHz	25	2475MHz
14	2420MHz	18	2440MHz	22	2460MHz	26	2480MHz

Using test software was control EUT work in continuous transmitter mode and select test channel as below:

Channel	Frequency
The lowest channel (CH11)	2405MHz
The middle channel (CH18)	2440MHz
The highest channel (CH26)	2480MHz

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
DC Power Supply	GWINSTEK	GPS-3030DD (Input: AC100-240V, 50/60Hz; Output: DC Max.30V, 3A)	EMC0008
Mouse	LENOVO	MOJU00	00BABF8
Note Book Computer	LENOVO	ThinkPad T490	PF1D1MVJ



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4.3 Measurement Uncertainty

Test Item	Measurement Uncertainty
Conducted Peak Output Power	$\pm 0.75\text{dB}$
Minimum 6dB Bandwidth	$\pm 3\%$
Power Spectrum Density	$\pm 2.84\text{dB}$
Conducted Band Edges Measurement	$\pm 0.75\text{dB}$
Conducted Spurious Emissions	$\pm 0.75\text{dB}$
Radiated Emissions which fall in the restricted bands	$\pm 5.00\text{dB}$ (30MHz-1GHz; 3m); $\pm 4.38\text{dB}$ (30MHz-1GHz; 10m); $\pm 5.12\text{dB}$ (1GHz-6GHz); $\pm 5.38\text{dB}$ (6GHz-18GHz); $\pm 5.61\text{dB}$ (18GHz-40GHz)
Radiated Spurious Emissions Below 1GHz	$\pm 5.00\text{dB}$ (3m); $\pm 4.38\text{dB}$ (10m)
Radiated Spurious Emissions Above 1GHz	$\pm 5.12\text{dB}$ (1GHz-6GHz); $\pm 5.38\text{dB}$ (6GHz-18GHz); $\pm 5.61\text{dB}$ (18GHz-40GHz)

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory,
198 Kezhu Road, Sciencetech Park, Guangzhou Economic & Technology Development District,
Guangzhou, China 510663

Tel: +86 20 82155555

Fax: +86 20 82075059

No tests were sub-contracted.

4.5 Test Facility

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

- **NVLAP (Lab Code: 200611-0)**

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0.

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

- **ACMA**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian/New Zealand Regulatory Compliance Mark (RCM).

- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

- **CNAS (Lab Code: L0167)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAS-CL01:2018 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2017 General Requirements) for the Competence of Testing Laboratories.

- **FCC Recognized Accredited Test Firm(Registration No.: 486818)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory 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: CN5016, Test Firm Registration Number: 486818.

- **ISED (Registration No.: 4620B, CAB identifier: CN0052)**

SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Innovation Science and Economic Development Canada for Wireless Device Testing laboratories to test to Canadian radio equipment requirements. Registration No. 4620B, CAB identifier: CN0052.

- **VCCI (Registration No.: R-12460, C-12584, G-20107 and T-11179)**

The 10m Semi-anechoic chamber, 966 Anechoic Chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-12460, C-12584, G-20107 and T-11179 respectively.

- **CBTL (Lab Code: TL129)**

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2017, the Basic Rules, IECEE 01 and Rules of procedure IECEE 02, and the relevant IECEE CB-Scheme Operational documents.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None



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5 Equipment List

Conducted Peak Output Power					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
MI CABLE	SGS-EMC	0.8M	EMC2136	2021-11-02	2023-11-01
EXA Signal Analyzer	Agilent Technologies	N9010A	EMC2222	2021-06-22	2022-06-21
Power Meter (U2021XA_Ch1)	Agilent Technologies	U2021XA_Ch1	SEM009-01	2022-05-16	2023-05-15
Power Meter (U2021XA_Ch2)	Agilent Technologies	U2021XA_Ch2	SEM009-02	2022-05-16	2023-05-15
Power Meter (U2021XA_Ch3)	Agilent Technologies	U2021XA_Ch3	SEM009-03	2022-05-16	2023-05-15
Power Meter (U2021XA_Ch4)	Agilent Technologies	U2021XA_Ch4	SEM009-04	2022-05-16	2023-05-15
Test Software JS1120-3	JS Tonscend	V2.6	GZE100-69	N/A	N/A

Minimum 6dB Bandwidth					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
MI CABLE	SGS-EMC	0.8M	EMC2136	2021-11-02	2023-11-01
EXA Signal Analyzer	Agilent Technologies	N9010A	EMC2222	2021-06-22	2022-06-21
Power Meter (U2021XA_Ch1)	Agilent Technologies	U2021XA_Ch1	SEM009-01	2022-05-16	2023-05-15
Power Meter (U2021XA_Ch2)	Agilent Technologies	U2021XA_Ch2	SEM009-02	2022-05-16	2023-05-15
Power Meter (U2021XA_Ch3)	Agilent Technologies	U2021XA_Ch3	SEM009-03	2022-05-16	2023-05-15
Power Meter (U2021XA_Ch4)	Agilent Technologies	U2021XA_Ch4	SEM009-04	2022-05-16	2023-05-15
Test Software JS1120-3	JS Tonscend	V2.6	GZE100-69	N/A	N/A

Power Spectrum Density					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
MI CABLE	SGS-EMC	0.8M	EMC2136	2021-11-02	2023-11-01
EXA Signal Analyzer	Agilent Technologies	N9010A	EMC2222	2021-06-22	2022-06-21
Power Meter (U2021XA_Ch1)	Agilent Technologies	U2021XA_Ch1	SEM009-01	2022-05-16	2023-05-15
Power Meter (U2021XA_Ch2)	Agilent Technologies	U2021XA_Ch2	SEM009-02	2022-05-16	2023-05-15
Power Meter (U2021XA_Ch3)	Agilent Technologies	U2021XA_Ch3	SEM009-03	2022-05-16	2023-05-15
Power Meter (U2021XA_Ch4)	Agilent Technologies	U2021XA_Ch4	SEM009-04	2022-05-16	2023-05-15
Test Software JS1120-3	JS Tonscend	V2.6	GZE100-69	N/A	N/A



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Conducted Band Edges Measurement

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
MI CABLE	SGS-EMC	0.8M	EMC2136	2021-11-02	2023-11-01
EXA Signal Analyzer	Agilent Technologies	N9010A	EMC2222	2021-06-22	2022-06-21
Power Meter (U2021XA_Ch1)	Agilent Technologies	U2021XA_Ch1	SEM009-01	2022-05-16	2023-05-15
Power Meter (U2021XA_Ch2)	Agilent Technologies	U2021XA_Ch2	SEM009-02	2022-05-16	2023-05-15
Power Meter (U2021XA_Ch3)	Agilent Technologies	U2021XA_Ch3	SEM009-03	2022-05-16	2023-05-15
Power Meter (U2021XA_Ch4)	Agilent Technologies	U2021XA_Ch4	SEM009-04	2022-05-16	2023-05-15
Test Software JS1120-3	JS Tonscend	V2.6	GZE100-69	N/A	N/A

Conducted Spurious Emissions

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
MI CABLE	SGS-EMC	0.8M	EMC2136	2021-11-02	2023-11-01
EXA Signal Analyzer	Agilent Technologies	N9010A	EMC2222	2021-06-22	2022-06-21
Power Meter (U2021XA_Ch1)	Agilent Technologies	U2021XA_Ch1	SEM009-01	2022-05-16	2023-05-15
Power Meter (U2021XA_Ch2)	Agilent Technologies	U2021XA_Ch2	SEM009-02	2022-05-16	2023-05-15
Power Meter (U2021XA_Ch3)	Agilent Technologies	U2021XA_Ch3	SEM009-03	2022-05-16	2023-05-15
Power Meter (U2021XA_Ch4)	Agilent Technologies	U2021XA_Ch4	SEM009-04	2022-05-16	2023-05-15
Test Software JS1120-3	JS Tonscend	V2.6	GZE100-69	N/A	N/A

Radiated Emissions which fall in the restricted bands

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
1GHz-26.5 GHz Pre-Amplifier	Agilent	8449B	EMC0521	2021-12-17	2022-12-16
EMI Test Receiver (10Hz-26.5GHz)	Rohde & Schwarz	ESIB26	EMC0522	2021-12-17	2022-12-16
Chamber cable (Above 1GHz)	Scoflex	KMKM-8.0m	EMC0545	2020-09-09	2022-09-08
Horn Antenna (1GHz-18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120D	EMC2026	2019-09-25	2022-09-24
Horn Antenna (14-40GHz)	SCHWARZBECK	BBHA 9170	EMC2041	2020-06-28	2023-06-27
EXA Signal Analyzer (10Hz-44GHz)	Keysight	N9010A	EMC2138	2021-09-20	2022-09-19
MXE EMI Receiver (10Hz-8.4GHz)	Keysight	N9038A	EMC2139	2021-11-01	2022-10-31
966 Anechoic Chamber	C.R.T	9m x 6m x 6m	EMC2142	2020-12-20	2023-12-19
Test Software E3	Audix	Ver.6.120110a	GZE100-61	N/A	N/A



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Radiated Spurious Emissions Below 1GHz					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
10m Semi-Anechoic Chamber	ETS	N/A	EMC0530	2019-10-20	2022-10-19
Chamber cable	HangTianXing	N/A	EMC0542	2020-09-09	2022-09-08
Amplifier (9kHz-1.3GHz)	HP	8447F	EMC2065	2022-05-16	2023-05-15
Active Loop Antenna-RED	ETS-Lindgren	6502	EMC2190	2022-04-06	2024-04-05
EMI Test Receiver (1Hz-8GHz)	Rohde & Schwarz	ESW8	EMC2220	2022-05-20	2023-05-19
Test Software E3	Audix	Ver.6.120110a	GZE100-61	N/A	N/A
Trilog Broadband Antenna (25MHz-1GHz)	SCHWARZBECK MESS-ELEKTRONIK	VULB 9168	SEM003-18	2022-03-03	2025-03-02

Radiated Spurious Emissions Above 1GHz					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
1GHz-26.5 GHz Pre-Amplifier	Agilent	8449B	EMC0521	2021-12-17	2022-12-16
EMI Test Receiver (10Hz-26.5GHz)	Rohde & Schwarz	ESIB26	EMC0522	2021-12-17	2022-12-16
Chamber cable (Above 1GHz)	Scoflex	KMKM-8.0m	EMC0545	2020-09-09	2022-09-08
Horn Antenna (1GHz-18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120D	EMC2026	2019-09-25	2022-09-24
Horn Antenna (14-40GHz)	SCHWARZBECK	BBHA 9170	EMC2041	2020-06-28	2023-06-27
2.4GHz Filter	Micro-Tronics	BRM 50702	EMC2069	2021-12-17	2022-12-16
EXA Signal Analyzer (10Hz-44GHz)	Keysight	N9010A	EMC2138	2021-09-20	2022-09-19
MXE EMI Receiver (10Hz-8.4GHz)	Keysight	N9038A	EMC2139	2021-11-01	2022-10-31
966 Anechoic Chamber	C.R.T	9m x 6m x 6m	EMC2142	2020-12-20	2023-12-19
Test Software E3	Audix	Ver.6.120110a	GZE100-61	N/A	N/A

General used equipment					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
DMM	Fluke	73	EMC0006	2021-07-05	2022-07-05



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6 Radio Spectrum Technical Requirement

6.1 Antenna Requirement

6.1.1 Test Requirement:

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 4 dBi.

Antenna location: Refer to internal photo.

7 Radio Spectrum Matter Test Results

7.1 Conducted Peak Output Power

Test Requirement 47 CFR Part 15, Subpart C 15.247(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 $25 \leq$ 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

7.1.1 E.U.T. Operation

Operating Environment:

Temperature: 22.5 °C

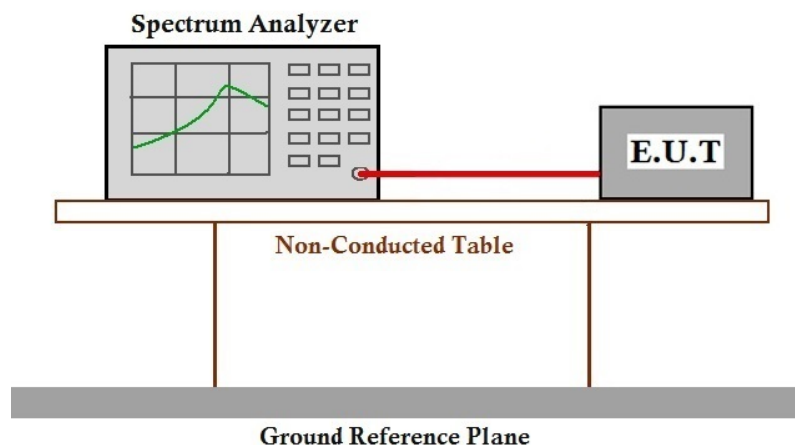
Humidity: 61.1 % RH

Atmospheric Pressure: 1005 mbar

7.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting with O-QPSK modulation mode.

7.1.3 Test Setup Diagram



7.1.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.2 Minimum 6dB Bandwidth

Test Requirement	47 CFR Part 15, Subpart C 15.247a(2)
Test Method:	ANSI C63.10 (2013) Section 11.8.1
Limit:	≥500 kHz

7.2.1 E.U.T. Operation

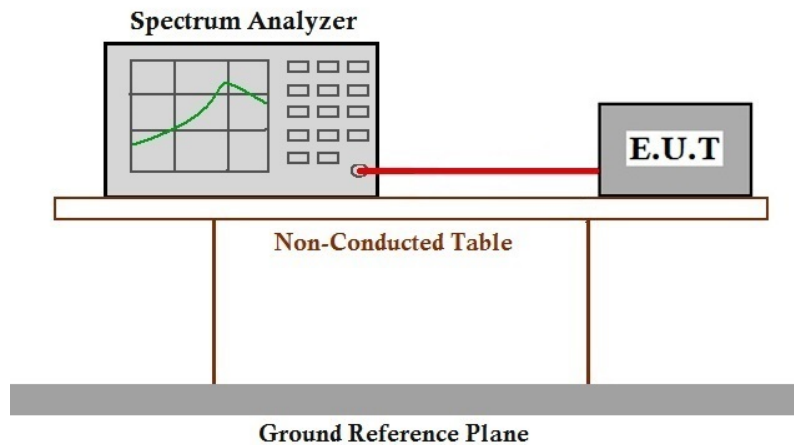
Operating Environment:

Temperature: 22.5 °C Humidity: 61.1 % RH Atmospheric Pressure: 1005 mbar

7.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting with O-QPSK modulation mode.

7.2.3 Test Setup Diagram



7.2.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.3 Power Spectrum Density

Test Requirement	47 CFR Part 15, Subpart C 15.247(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

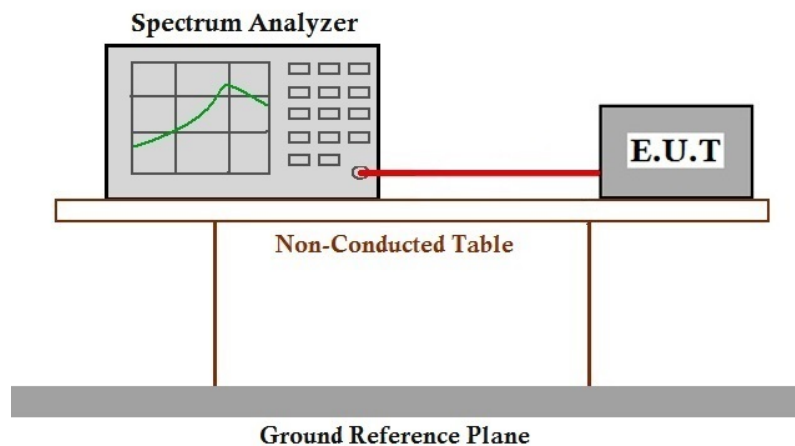
7.3.1 E.U.T. Operation

Operating Environment:					
Temperature:	22.5 °C	Humidity:	61.1 % RH	Atmospheric Pressure:	1005 mbar

7.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting with O-QPSK modulation mode.

7.3.3 Test Setup Diagram



7.3.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.4 Conducted Band Edges Measurement

Test Requirement 47 CFR Part 15, Subpart C 15.247(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)).

7.4.1 E.U.T. Operation

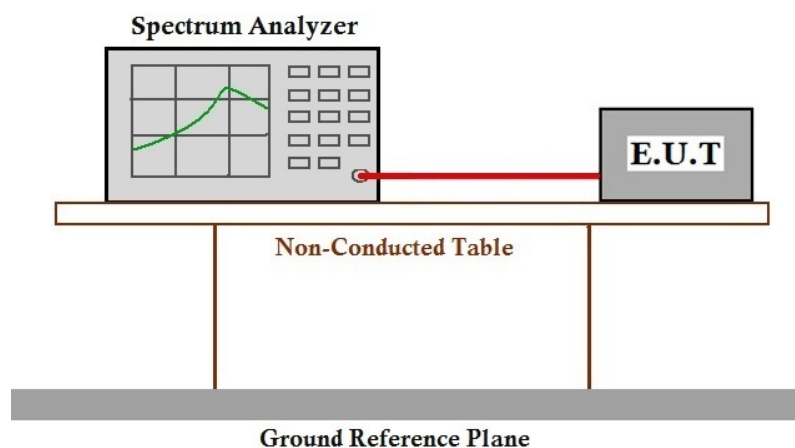
Operating Environment:

Temperature: 22.5 °C Humidity: 61.1 % RH Atmospheric Pressure: 1005 mbar

7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting with O-QPSK modulation mode.

7.4.3 Test Setup Diagram



7.4.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.5 Conducted Spurious Emissions

Test Requirement 47 CFR Part 15, Subpart C 15.247(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)).

7.5.1 E.U.T. Operation

Operating Environment:

Temperature: 22.5 °C

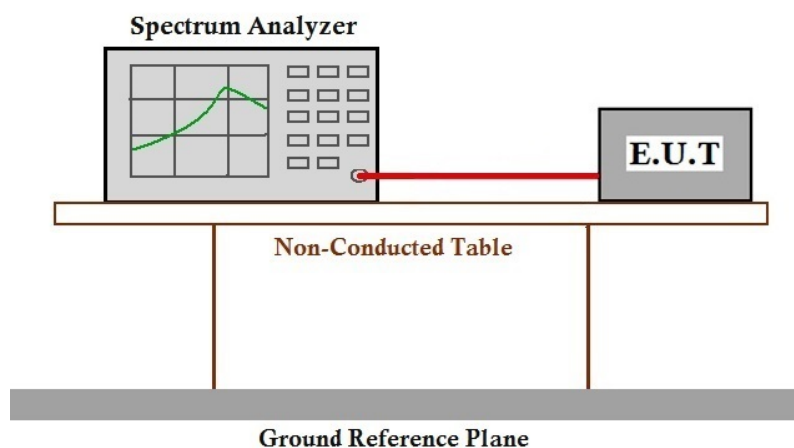
Humidity: 61.1 % RH

Atmospheric Pressure: 1005 mbar

7.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting with O-QPSK modulation mode.

7.5.3 Test Setup Diagram



7.5.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.6 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 & 6.10.6

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.

7.6.1 E.U.T. Operation

Operating Environment:

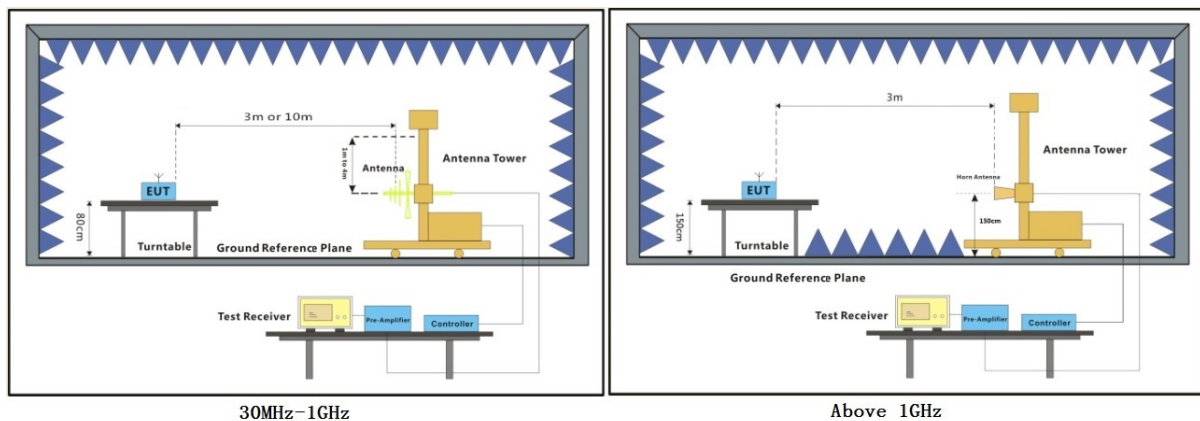
Temperature: 24.8 °C

Humidity: 59.7 % RH

Atmospheric Pressure: 1005 mbar

7.6.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting with O-QPSK modulation mode.

7.6.3 Test Setup Diagram

7.6.4 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

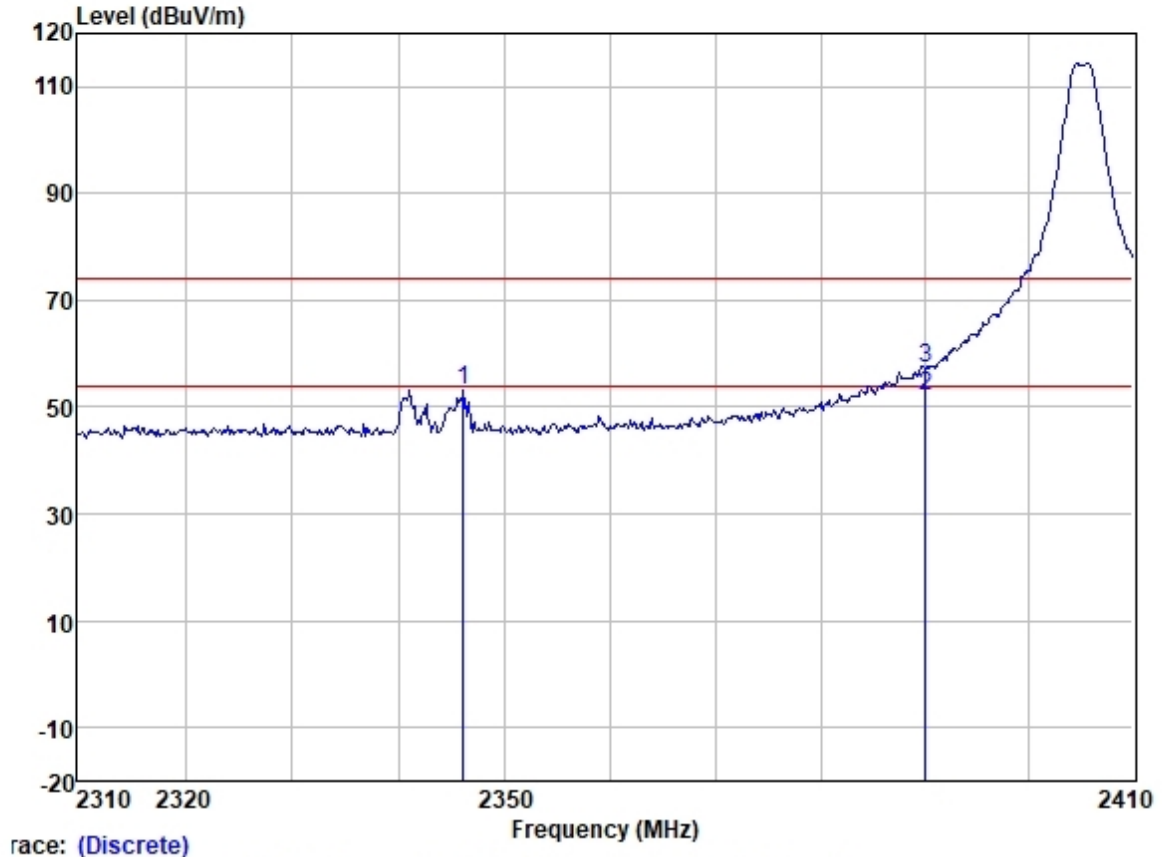
Remark 2: For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.



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Test Mode: 00; Polarity: Vertical; Channel: Low



		ReadAntenna	Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	Remark
1	2346.109	58.62	27.24	4.60	37.15	53.31	74.00	-20.69	HORIZONTAL Peak
2	2390.000	57.55	27.33	4.22	37.14	51.96	54.00	-2.04	HORIZONTAL Average
3	2390.000	62.88	27.33	4.22	37.14	57.29	74.00	-16.71	HORIZONTAL Peak

Frequency (MHz)	Level (dBuV/m)	Factor (dB)	Limit Line (dBuV/m)	Over limit (dB)	Remark
2390.000	57.29	None	74.00	-16.71	PK
2390.000	20.70	-36.59	54.00	-33.30	AV

Remark: AV level=PK level+Factor (dB)

Factor (dB)=20*log(Duty cycle)

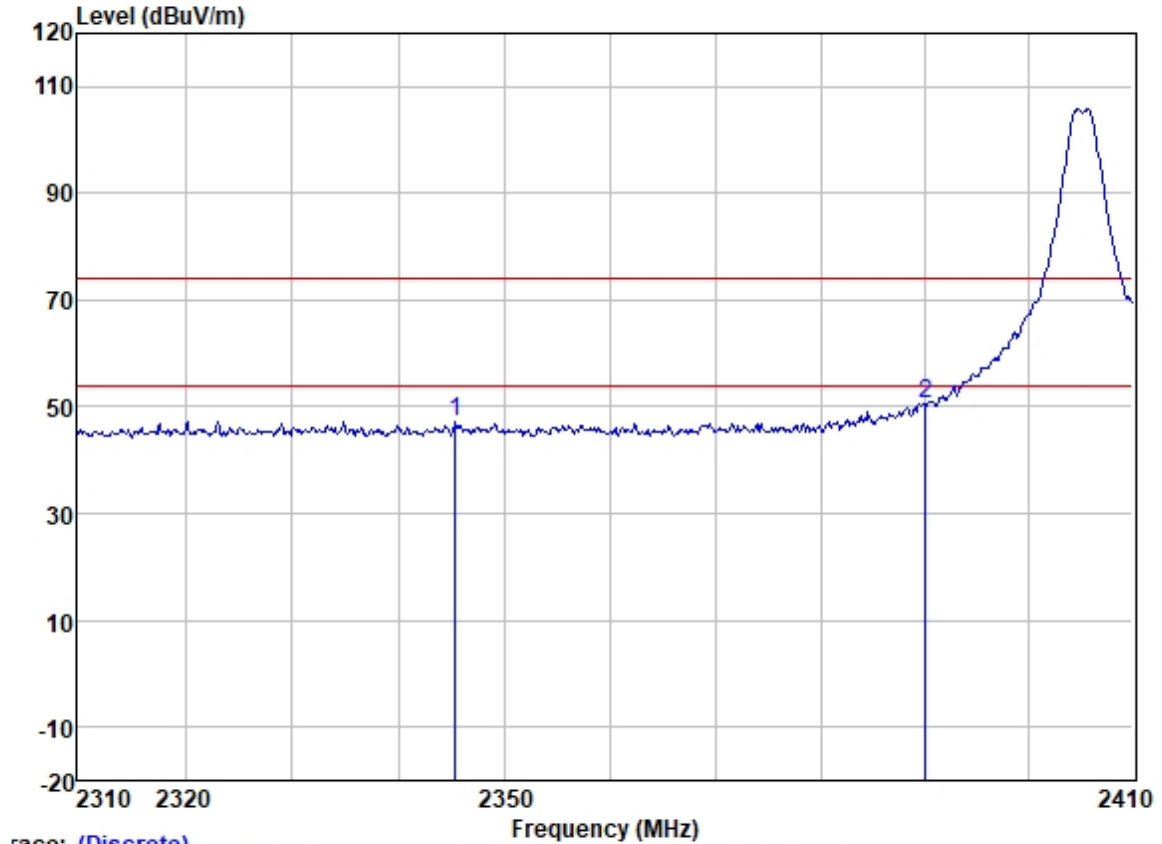
Duty cycle= 0.0148



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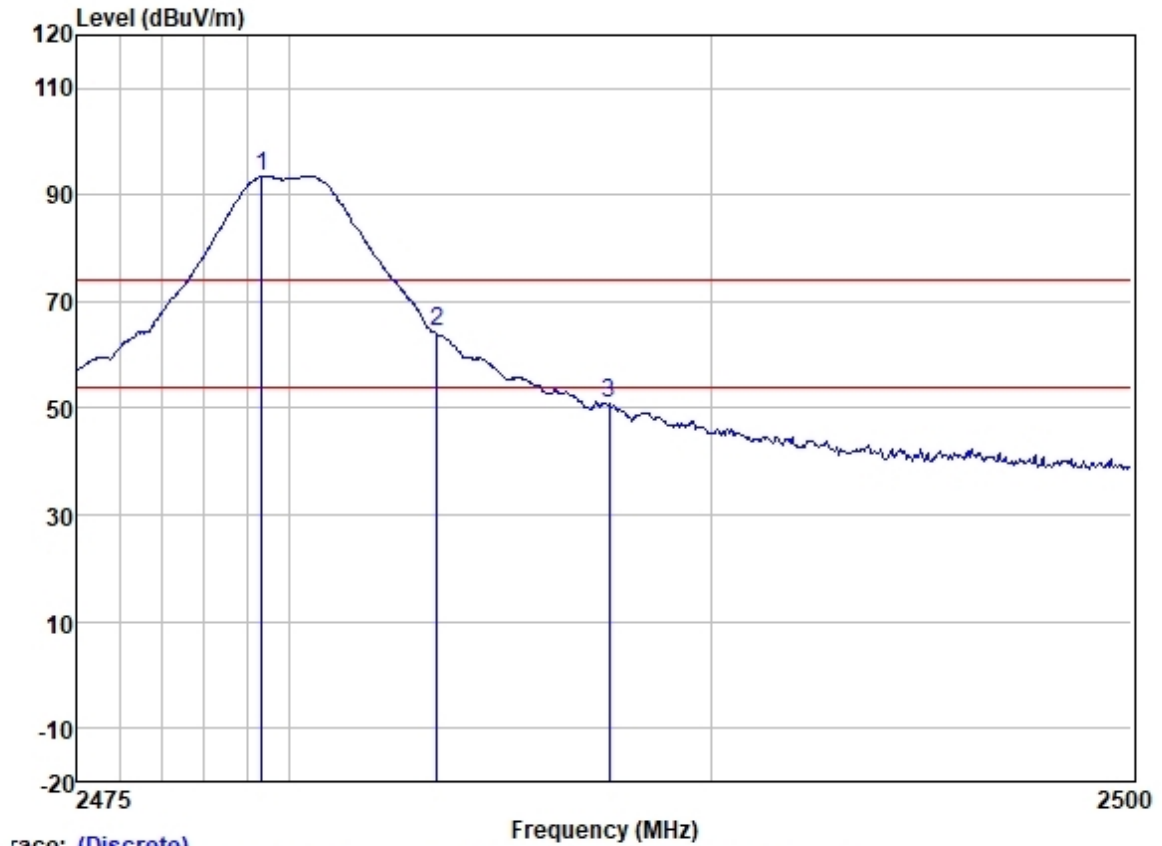
Test Mode: 00; Polarity: Horizontal; Channel: Low



Trace: (Discrete)

	Read	Antenna	Cable	Preamp		Limit	Over		
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	2345.314	52.35	27.24	4.60	37.15	47.04	74.00	-26.96	VERTICAL Peak
2	2390.000	56.03	27.33	4.22	37.14	50.44	74.00	-23.56	VERTICAL Peak

Test Mode: 00; Polarity: Vertical; Channel: High



Trace: (Discrete)

		ReadAntenna		Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1 *	2479.357	99.75	27.47	3.50	37.13	93.59	74.00	19.59	VERTICAL	Peak
2	2483.500	70.60	27.48	3.42	37.13	64.37	74.00	-9.63	VERTICAL	Peak
3	2487.569	57.02	27.48	3.42	37.12	50.80	74.00	-23.20	VERTICAL	Peak

Frequency (MHz)	Level (dBuV/m)	Factor (dB)	Limit Line (dBuV/m)	Over limit (dB)	Remark
2483.5	64.37	None	74.00	-9.63	PK
2483.5	26.17	-38.20	54.00	-27.83	AV

Remark: AV level=PK level+Factor (dB)

Factor (dB)=20*log(Duty cycle)

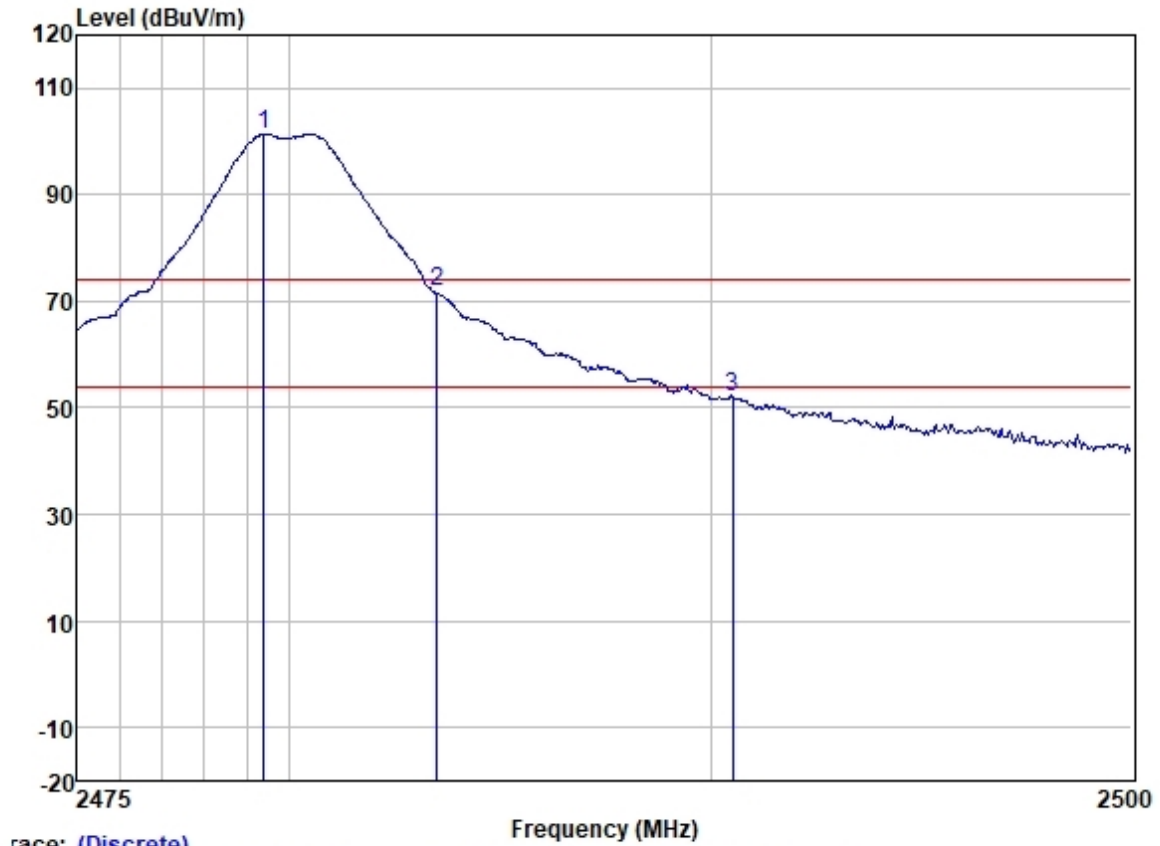
Duty cycle= 0.0123



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Test Mode: 00; Polarity: Horizontal; Channel: High



Trace: (Discrete)

	Read	Antenna	Cable	Preamp		Limit	Over		
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1 *	2479.407	107.53	27.47	3.50	37.13	101.37	74.00	27.37	HORIZONTAL Peak
2	2483.500	77.89	27.48	3.42	37.13	71.66	74.00	-2.34	HORIZONTAL Peak
3	2490.495	58.23	27.49	3.33	37.12	51.93	74.00	-22.07	HORIZONTAL Peak

Frequency (MHz)	Level (dBuV/m)	Factor (dB)	Limit Line (dBuV/m)	Over limit (dB)	Remark
2483.5	71.66	None	74.00	-2.34	PK
2483.5	33.46	-38.20	54.00	-20.54	AV

Remark: AV level=PK level+Factor (dB)

Factor (dB)=20*log(Duty cycle)

Duty cycle= 0.0123



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7.7 Radiated Spurious Emissions Below 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209

Test Method: ANSI C63.10 (2013) Section 6.4,6.5

Limit:

Test Distance: 3 m

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
960-1000	500	3

7.7.1 E.U.T. Operation

Operating Environment:

Temperature: 23.2 °C

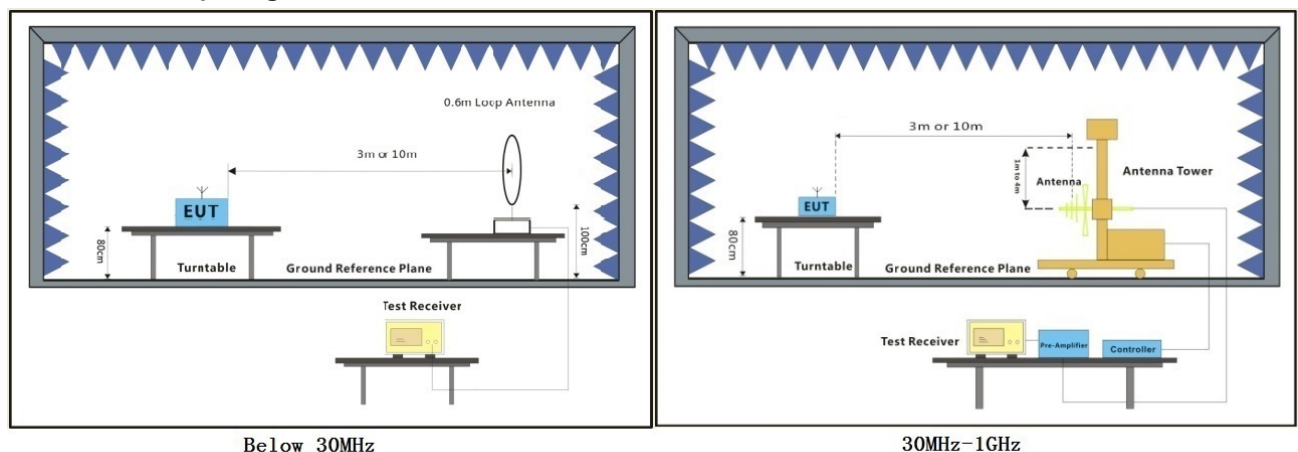
Humidity: 57.4 % RH

Atmospheric Pressure: 1005 mbar

7.7.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting with O-QPSK modulation mode.

7.7.3 Test Setup Diagram



Below 30MHz

30MHz-1GHz



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7.7.4 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. 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.
- 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 quasi-peak 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.

Remark:

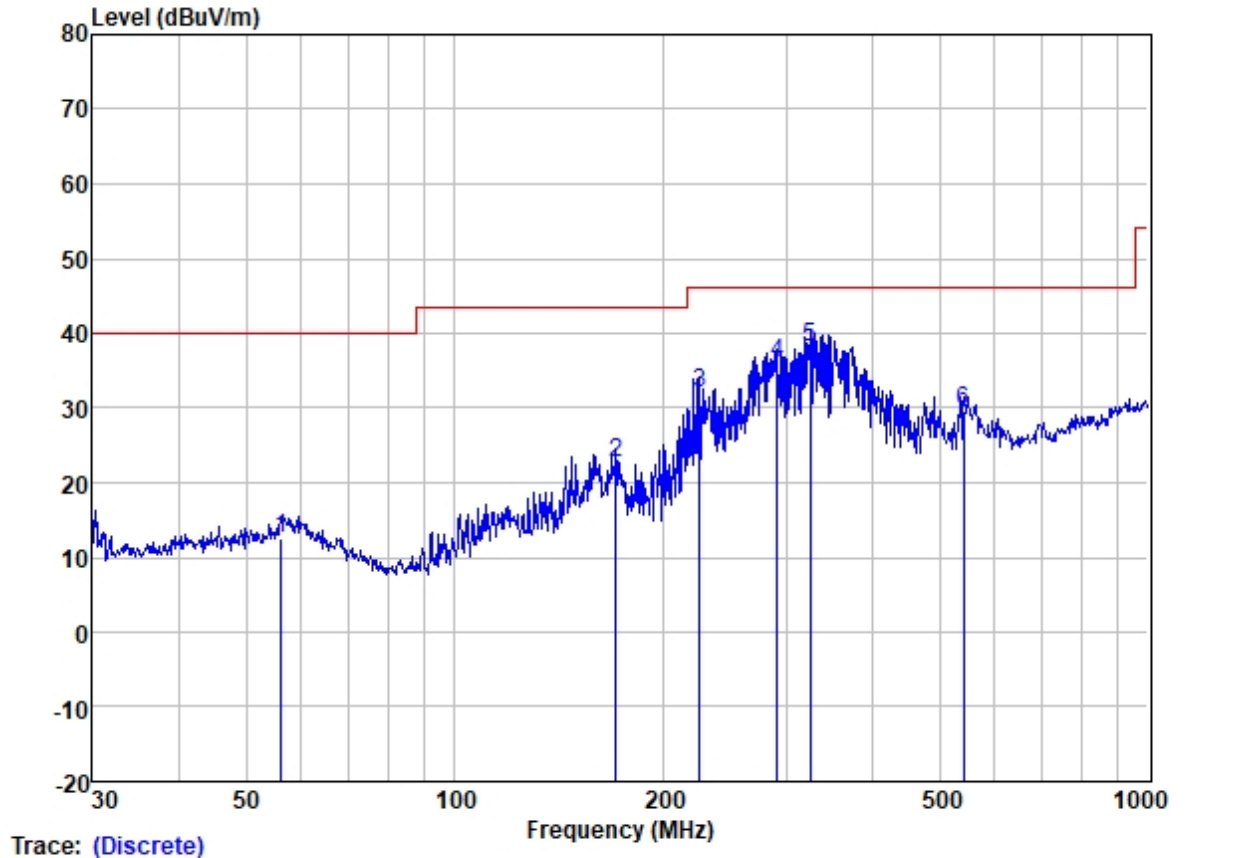
1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
2. Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.
3. The disturbance below 1GHz was very low and the harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.



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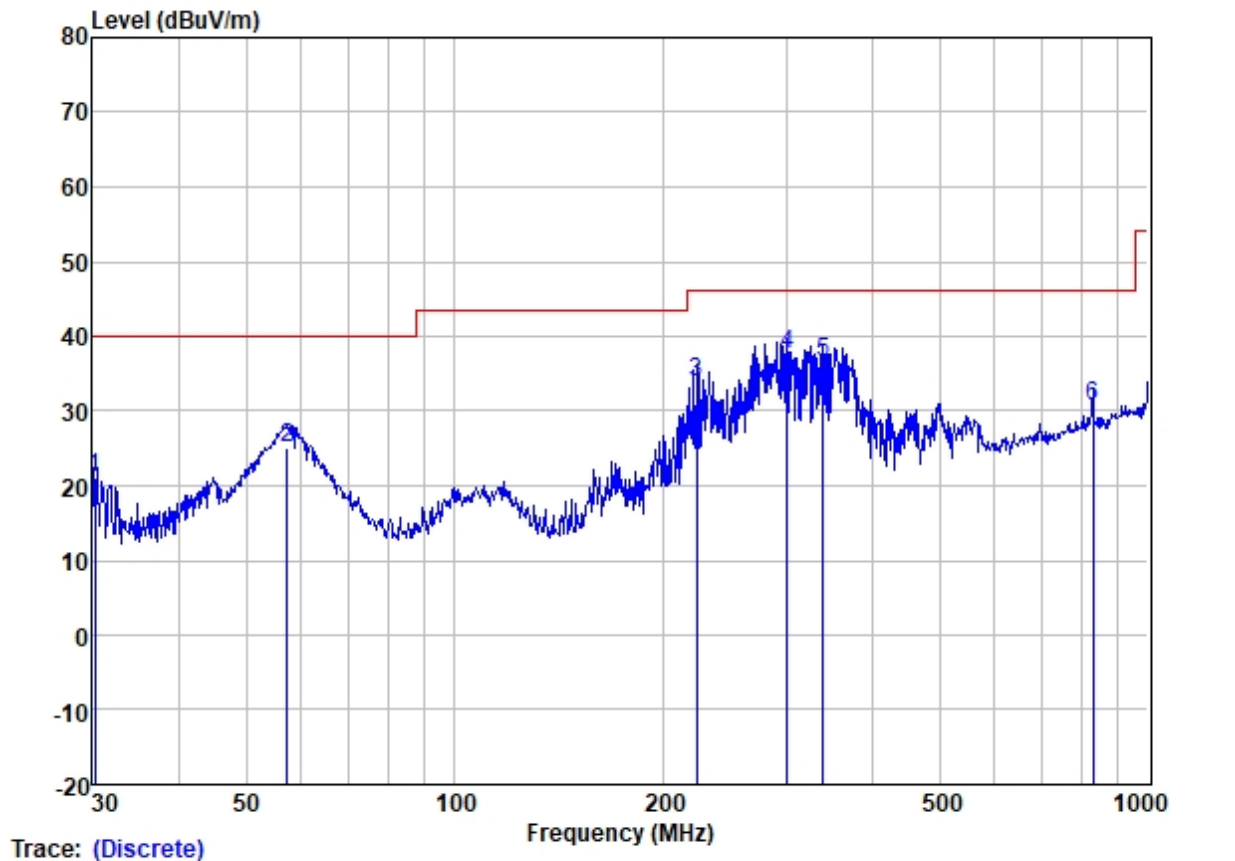
Test Mode: 00; Polarity: Horizontal; Channel: Low



Site : SGS
Job :
Model :
Power :
Test Mode :

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Measured Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	56.197	25.25	13.26	1.20	27.16	12.55	40.00	-27.45	HORIZONTAL	QP
2	170.793	34.27	12.67	2.40	26.77	22.57	43.50	-20.93	HORIZONTAL	QP
3	225.308	46.23	9.89	2.69	26.70	32.11	46.00	-13.89	HORIZONTAL	QP
4	292.058	46.40	13.02	3.14	26.56	36.00	46.00	-10.00	HORIZONTAL	QP
5	325.596	47.65	13.94	3.35	26.70	38.24	46.00	-7.76	HORIZONTAL	QP
6	541.373	34.62	18.31	4.70	28.07	29.56	46.00	-16.44	HORIZONTAL	QP

Test Mode: 00; Polarity: Vertical; Channel: Low



Site : SGS
Job :
Model :
Power :
Test Mode :

	Freq	Read Level	Antenna Factor	Cable Loss	Preamplifier Factor	Measured Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	30.211	35.73	11.57	1.02	27.20	21.12	40.00	-18.88	VERTICAL	QP
2	57.191	37.76	13.19	1.22	27.16	25.01	40.00	-14.99	VERTICAL	QP
3	222.916	48.10	9.74	2.67	26.70	33.81	46.00	-12.19	VERTICAL	QP
4	301.422	47.83	13.27	3.18	26.56	37.72	46.00	-8.28	VERTICAL	QP
5	339.589	45.75	14.21	3.50	26.84	36.62	46.00	-9.38	VERTICAL	QP
6	833.317	29.65	22.63	6.38	27.98	30.68	46.00	-15.32	VERTICAL	QP

7.8 Radiated Spurious Emissions Above 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209

Test Method: ANSI C63.10 (2013) Section 6.6

Limit:

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance(meters)
Above 1000	500	3

7.8.1 E.U.T. Operation

Operating Environment:

Temperature: 23.6 °C

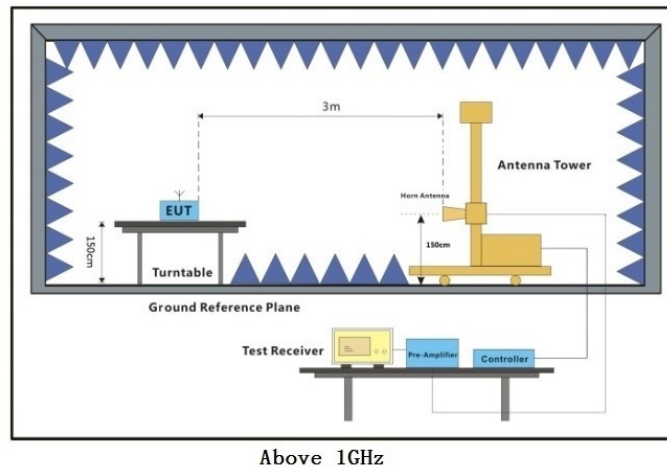
Humidity: 57.4 % RH

Atmospheric Pressure: 1005 mbar

7.8.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting with O-QPSK modulation mode.

7.8.3 Test Setup Diagram



7.8.4 Measurement Procedure and Data

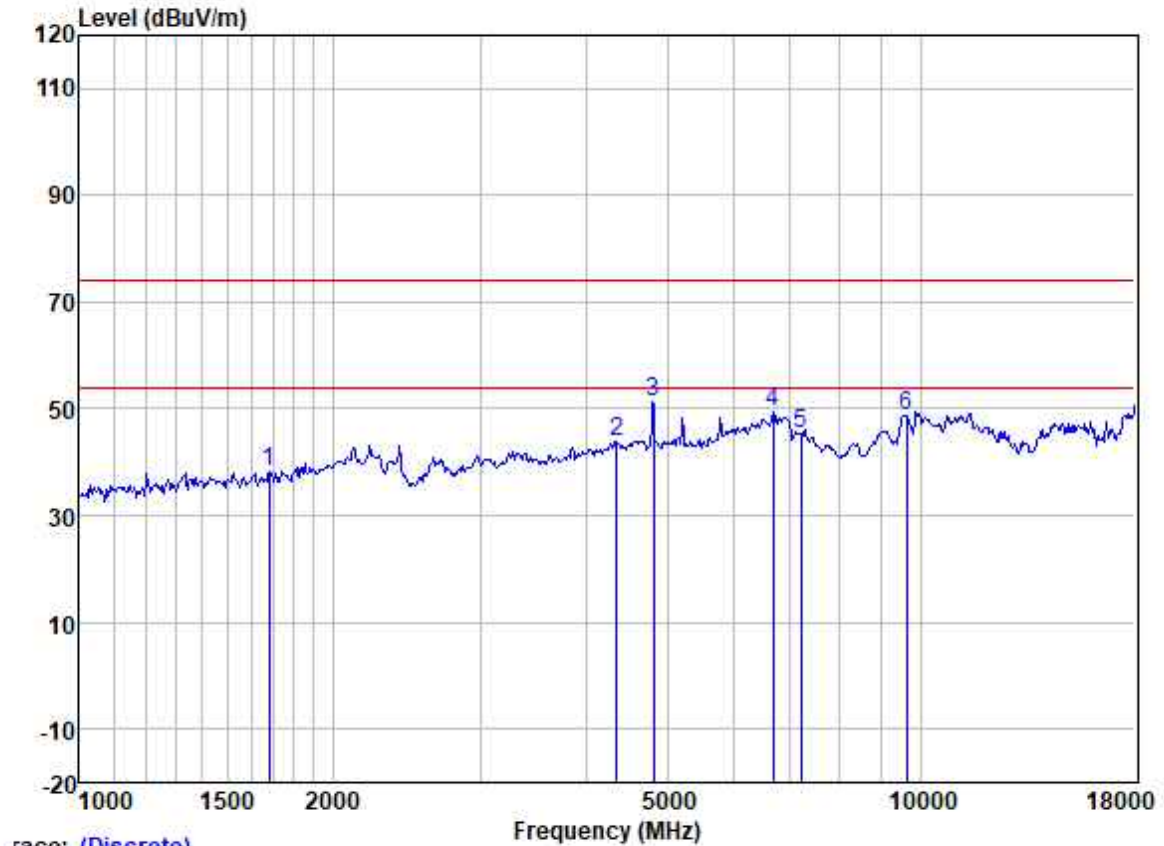
- a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which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

Remark:

1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
2. Scan from 1GHz to 25GHz, the disturbance above 18GHz 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.
3. 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. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.



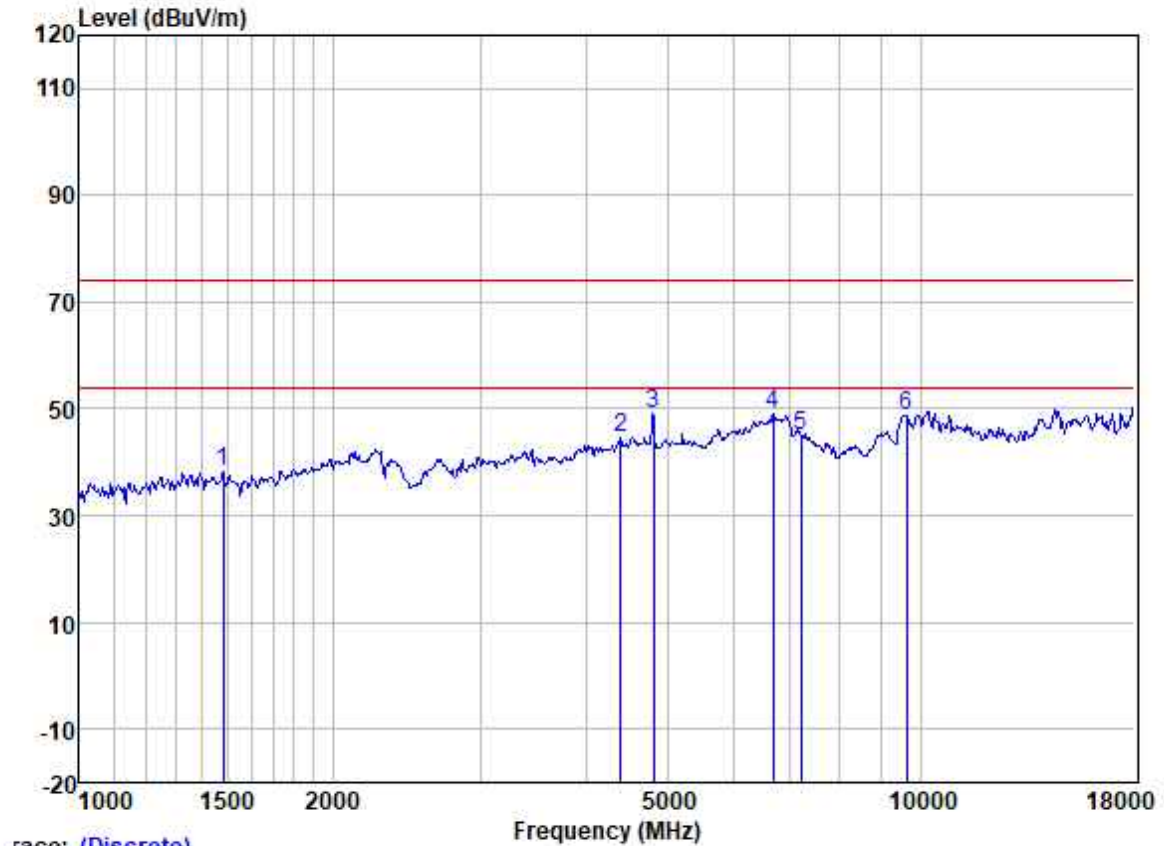
Test Mode: 00; Polarity: Vertical; Channel: Low



Trace: (Discrete)

	Freq	ReadAntenna	Cable	Preamp		Limit	Over			
	MHz	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1682.477	46.92	25.68	3.25	37.48	38.37	74.00	-35.63	HORIZONTAL	peak
2	4354.454	44.55	30.59	5.34	36.64	43.84	74.00	-30.16	HORIZONTAL	peak
3	4810.000	50.87	31.42	5.46	36.51	51.24	74.00	-22.76	HORIZONTAL	peak
4	6679.040	45.09	34.33	6.27	36.39	49.30	74.00	-24.70	HORIZONTAL	peak
5	7215.000	40.14	35.62	6.35	36.94	45.17	74.00	-28.83	HORIZONTAL	peak
6	9620.000	39.09	38.37	7.99	36.86	48.59	74.00	-25.41	HORIZONTAL	peak

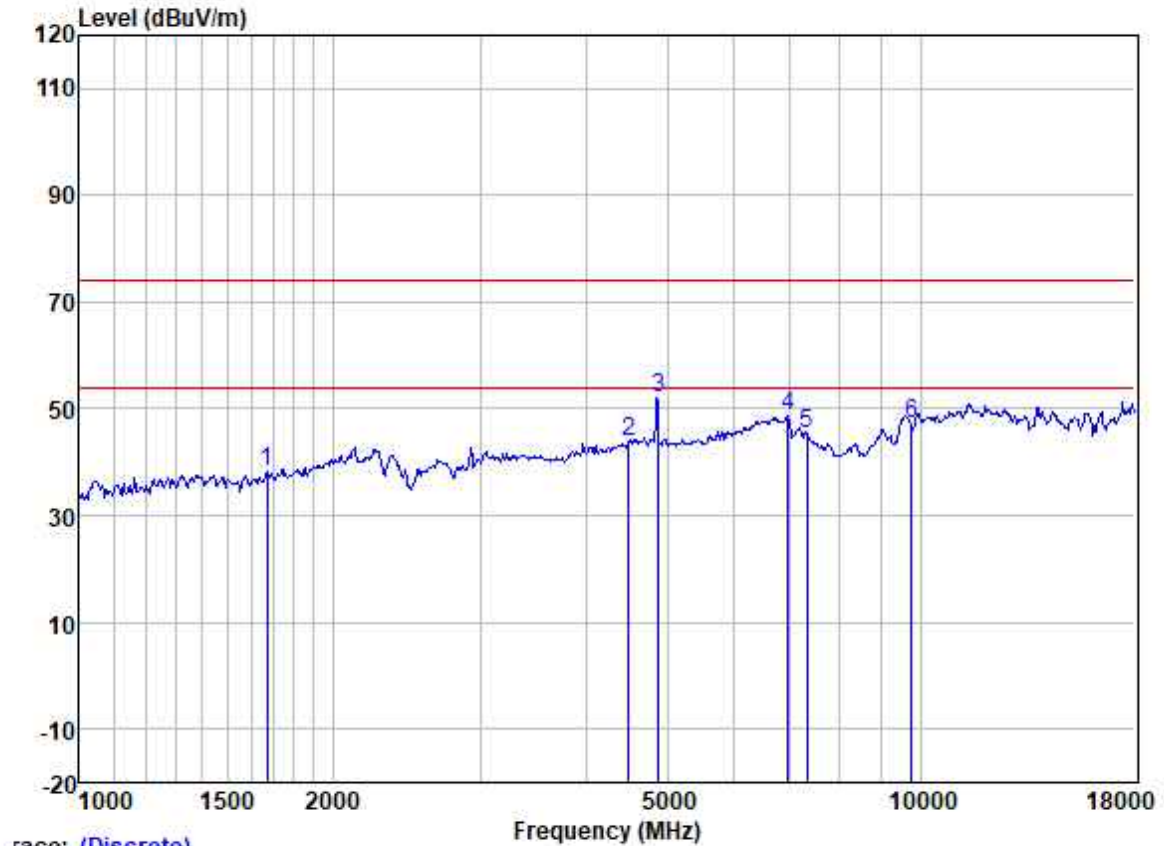
Test Mode: 00; Polarity: Horizontal; Channel: Low



Trace: (Discrete)

	Freq	ReadAntenna	Cable	Preamp		Limit	Over			
	MHz	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1481.553	47.60	25.48	2.86	37.80	38.14	74.00	-35.86	VERTICAL	peak
2	4405.090	45.15	30.68	5.37	36.63	44.57	74.00	-29.43	VERTICAL	peak
3	4810.000	48.83	31.42	5.46	36.51	49.20	74.00	-24.80	VERTICAL	peak
4	6679.040	44.74	34.33	6.27	36.39	48.95	74.00	-25.05	VERTICAL	peak
5	7215.000	39.92	35.62	6.35	36.94	44.95	74.00	-29.05	VERTICAL	peak
6	9620.000	39.35	38.37	7.99	36.86	48.85	74.00	-25.15	VERTICAL	peak

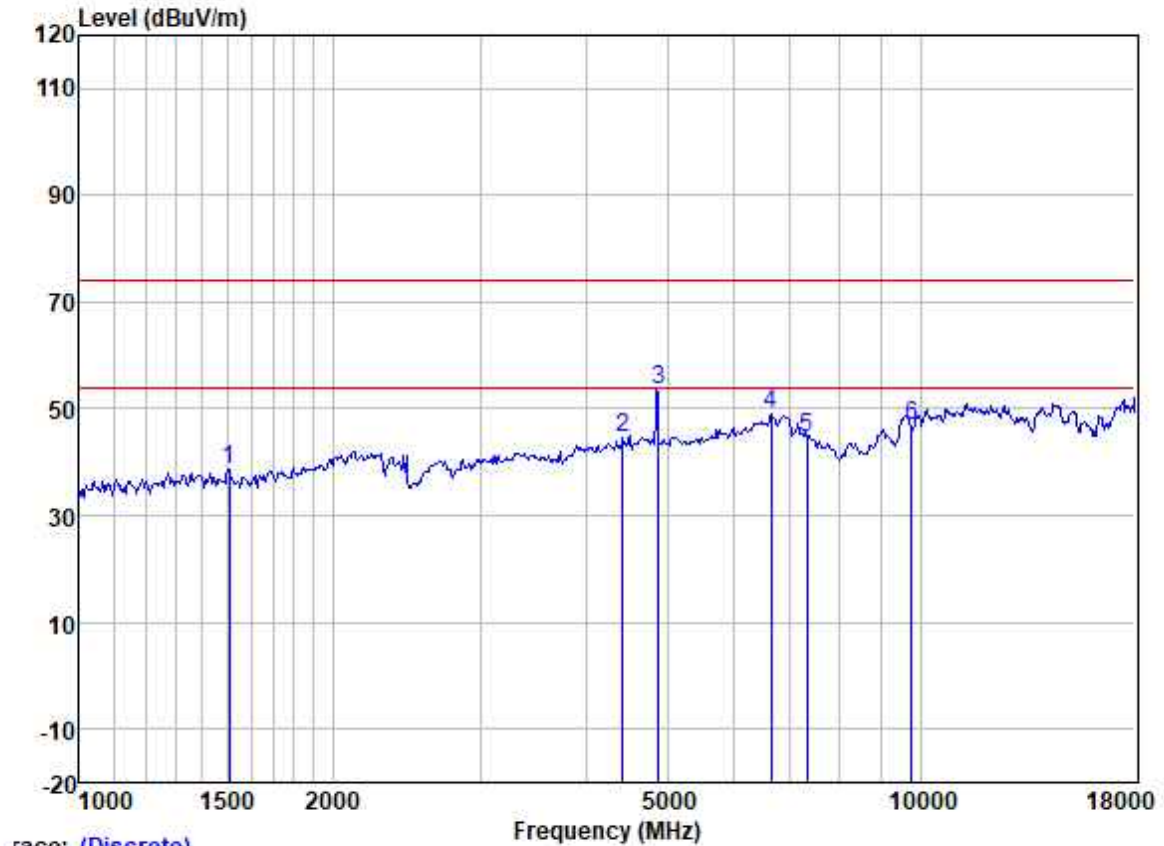
Test Mode: 00; Polarity: Vertical; Channel:middle



Trace: (Discrete)

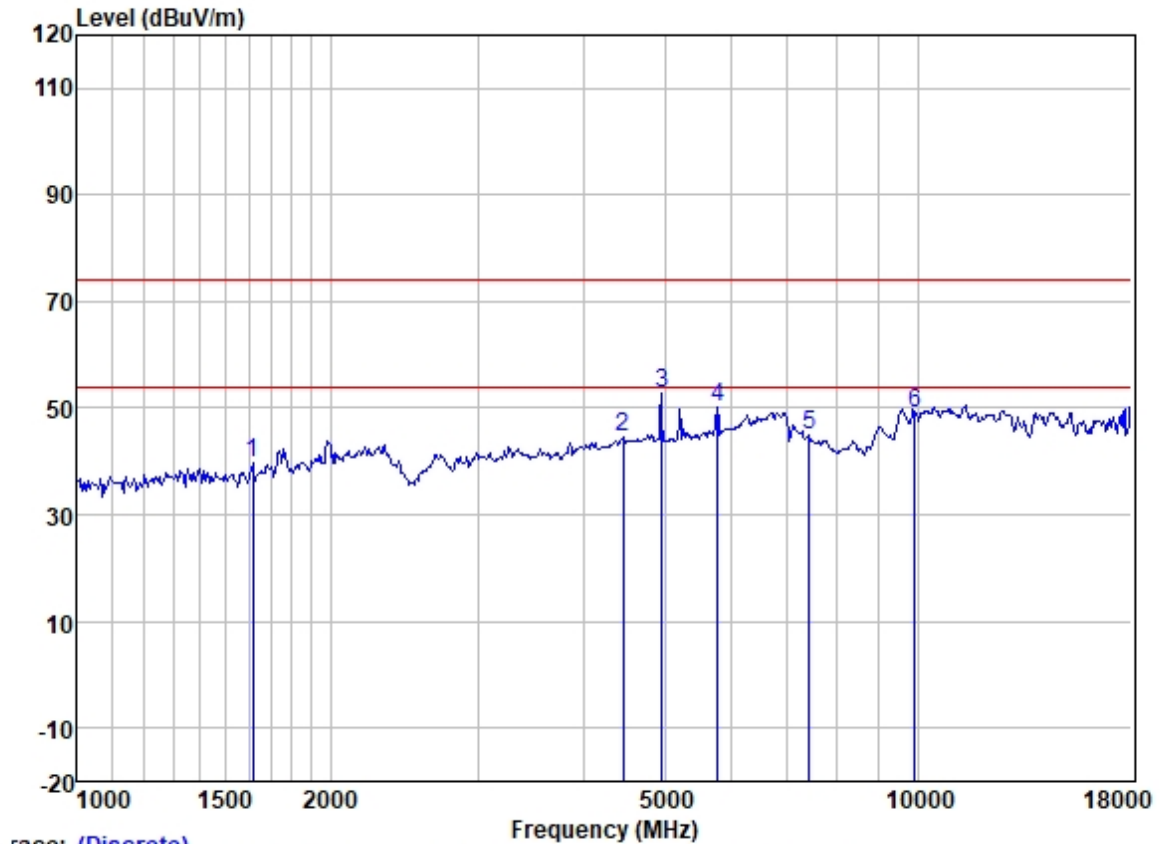
	Freq	ReadAntenna	Cable	Preamp		Limit	Over			
		Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1672.779	46.90	25.67	3.21	37.48	38.30	74.00	-35.70	VERTICAL	peak
2	4495.125	44.21	30.80	5.33	36.60	43.74	74.00	-30.26	VERTICAL	peak
3	4880.000	51.58	31.54	5.49	36.48	52.13	74.00	-21.87	VERTICAL	peak
4	6954.852	43.94	34.95	6.40	36.63	48.66	74.00	-25.34	VERTICAL	peak
5	7320.000	39.85	36.00	6.32	37.01	45.16	74.00	-28.84	VERTICAL	peak
6	9760.000	38.08	38.50	7.43	36.83	47.18	74.00	-26.82	VERTICAL	peak

Test Mode: 00; Polarity: Horizontal; Channel:middle



	Freq	ReadAntenna	Cable	Preamp	Limit	Over		
		Level	Loss	Factor	Level	Line	Limit	Pol/Phase
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	1507.470	47.94	25.51	2.91	37.75	38.61	74.00	-35.39
2	4430.628	45.31	30.72	5.36	36.62	44.77	74.00	-29.23
3	4880.000	52.98	31.54	5.49	36.48	53.53	74.00	-20.47
4	6640.542	44.77	34.24	6.25	36.37	48.89	74.00	-25.11
5	7320.000	39.20	36.00	6.32	37.01	44.51	74.00	-29.49
6	9760.000	37.65	38.50	7.43	36.83	46.75	74.00	-27.25

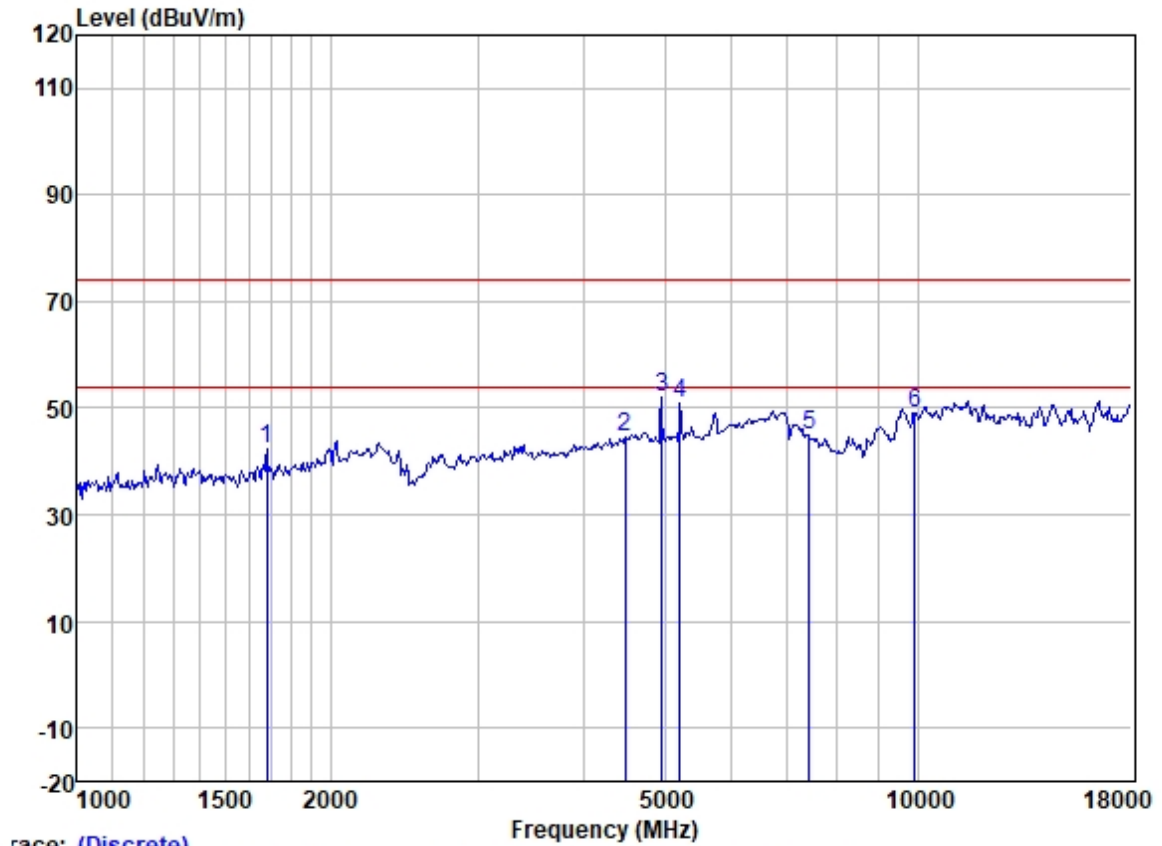
Test Mode: 00; Polarity: Vertical; Channel: High



Trace: (Discrete)

		ReadAntenna		Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1615.754	48.47	25.60	3.04	37.55	39.56	74.00	-34.44	VERTICAL	peak
2	4456.315	45.03	30.75	5.35	36.62	44.51	74.00	-29.49	VERTICAL	peak
3	4960.000	51.97	31.65	5.53	36.43	52.72	74.00	-21.28	VERTICAL	peak
4	5780.300	48.41	32.16	5.68	36.14	50.11	74.00	-23.89	VERTICAL	peak
5	7440.000	39.42	36.27	6.29	37.08	44.90	74.00	-29.10	VERTICAL	peak
6	9920.000	40.34	38.65	6.77	36.81	48.95	74.00	-25.05	VERTICAL	peak

Test Mode: 00; Polarity: Horizontal; Channel: High



		ReadAntenna		Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1682.477	50.97	25.68	3.25	37.48	42.42	74.00	-31.58	HORIZONTAL	peak
2	4482.150	45.21	30.78	5.34	36.61	44.72	74.00	-29.28	HORIZONTAL	peak
3	4960.000	51.22	31.65	5.53	36.43	51.97	74.00	-22.03	HORIZONTAL	peak
4	5209.075	49.98	31.74	5.33	36.29	50.76	74.00	-23.24	HORIZONTAL	peak
5	7440.000	39.53	36.27	6.29	37.08	45.01	74.00	-28.99	HORIZONTAL	peak
6	9920.000	40.41	38.65	6.77	36.81	49.02	74.00	-24.98	HORIZONTAL	peak

8 Test Setup Photo

Refer to Appendix - Test Setup Photo for GZCR220500056601

9 EUT Constructional Details (EUT Photos)

Refer to External and Internal Photos for GZCR2205000566AT



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10 Appendix

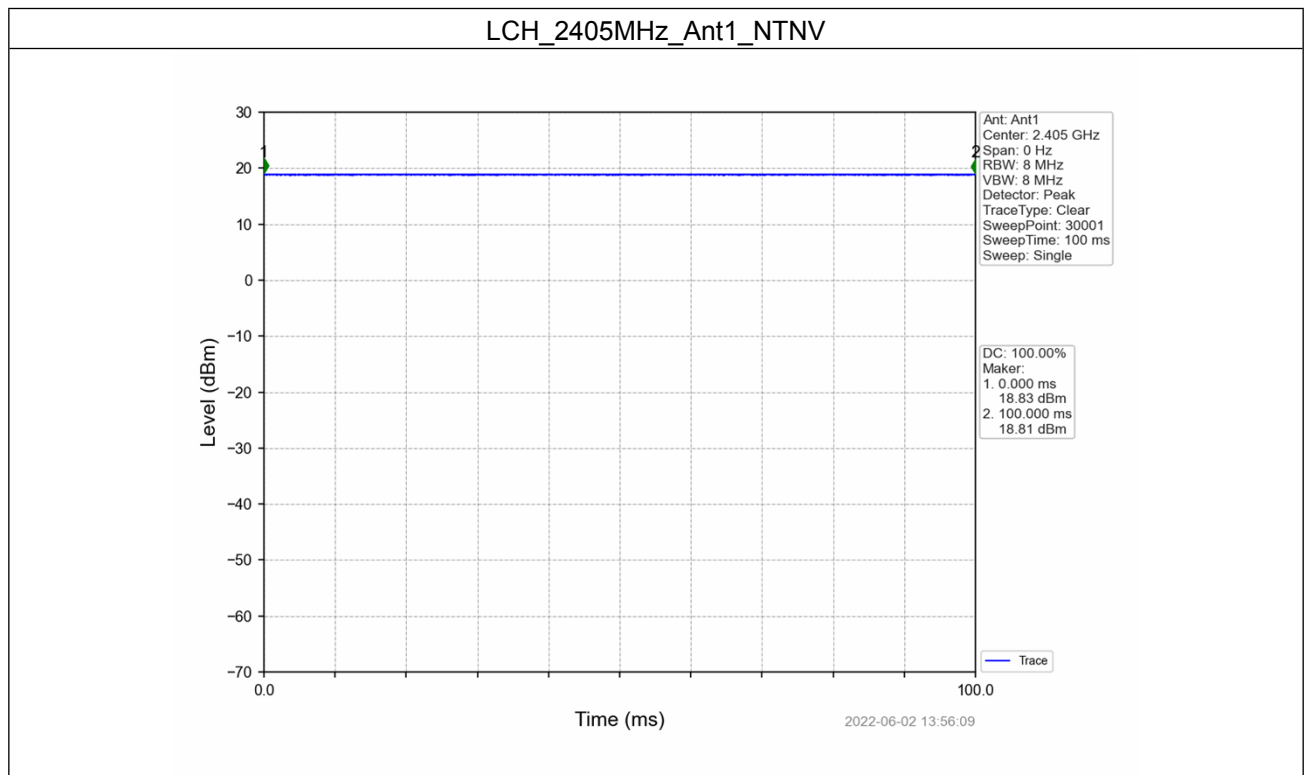
1. Duty Cycle

1.1 Ant1

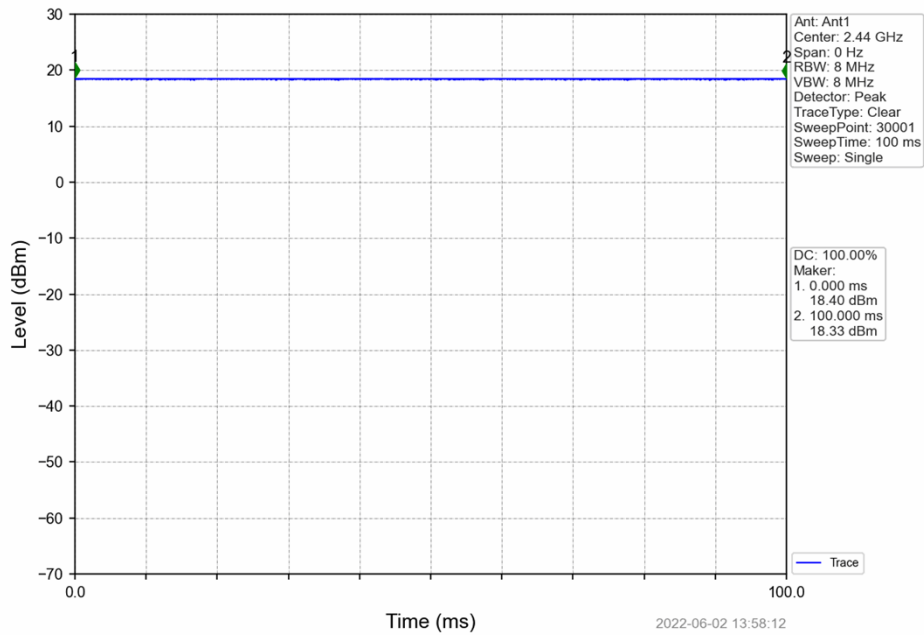
1.1.1 Test Result

Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
Modulating	SISO	2405	100.000	100.000	100.00	0.00	0.00
		2440	100.000	100.000	100.00	0.00	0.00
		2480	100.000	100.000	100.00	0.00	0.00
Normal		2405	0.740	49.983	1.48	36.59	0.00
		2440	0.740	59.977	1.23	38.20	0.00
		2480	0.740	59.986	1.23	38.20	1.24

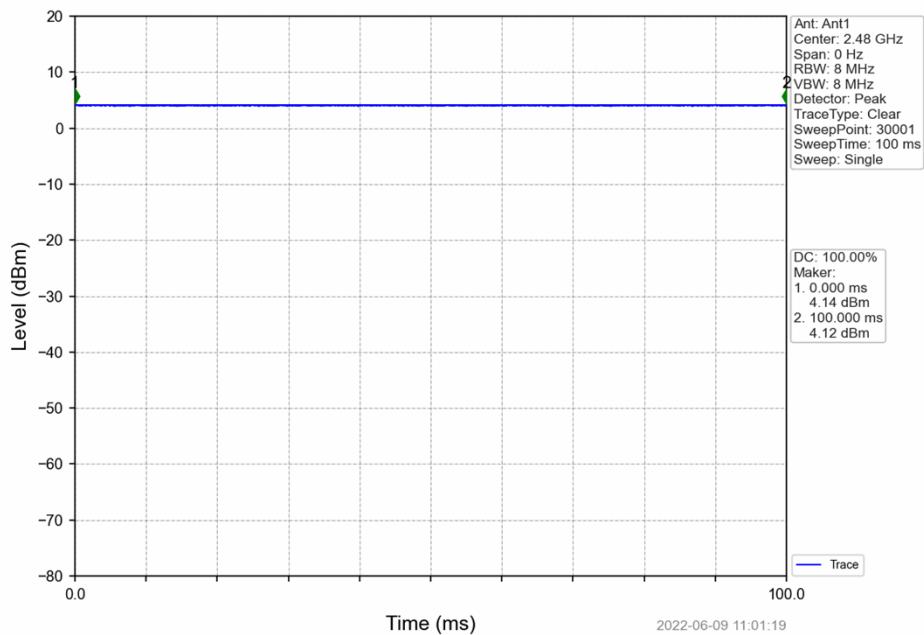
1.1.2 Test Graph



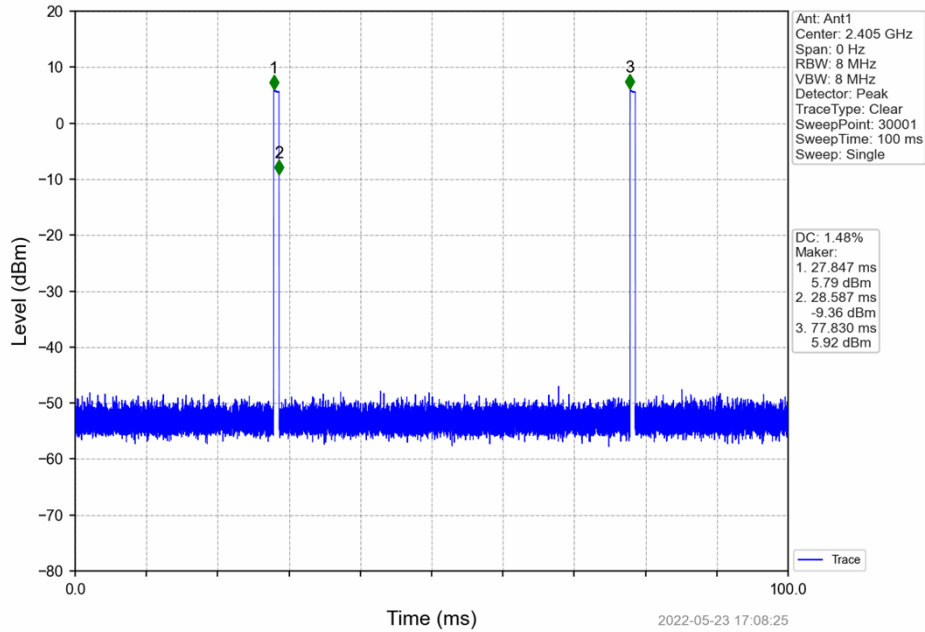
MCH_2440MHz_Ant1_NTNV



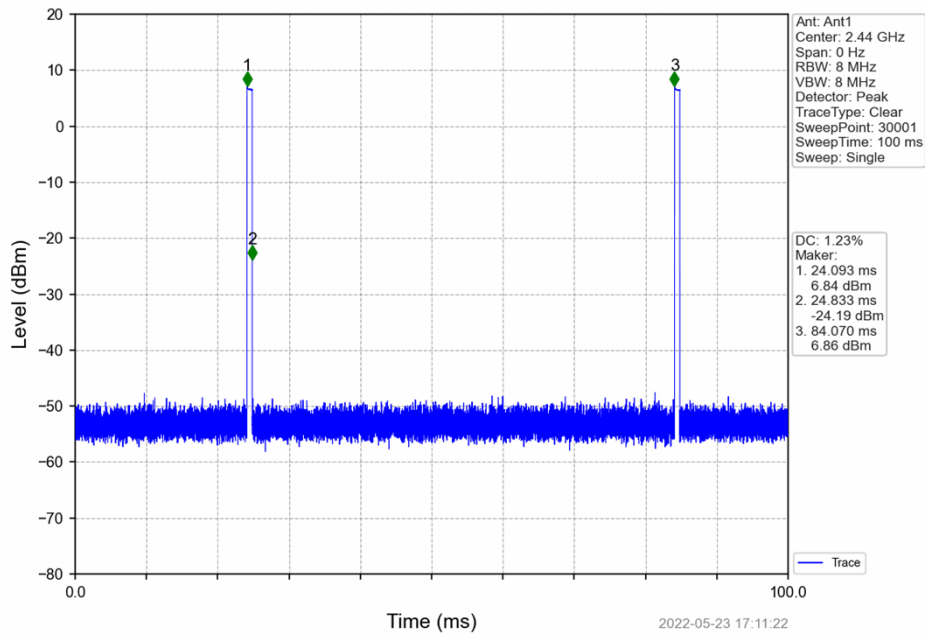
HCH_2480MHz_Ant1_NTNV



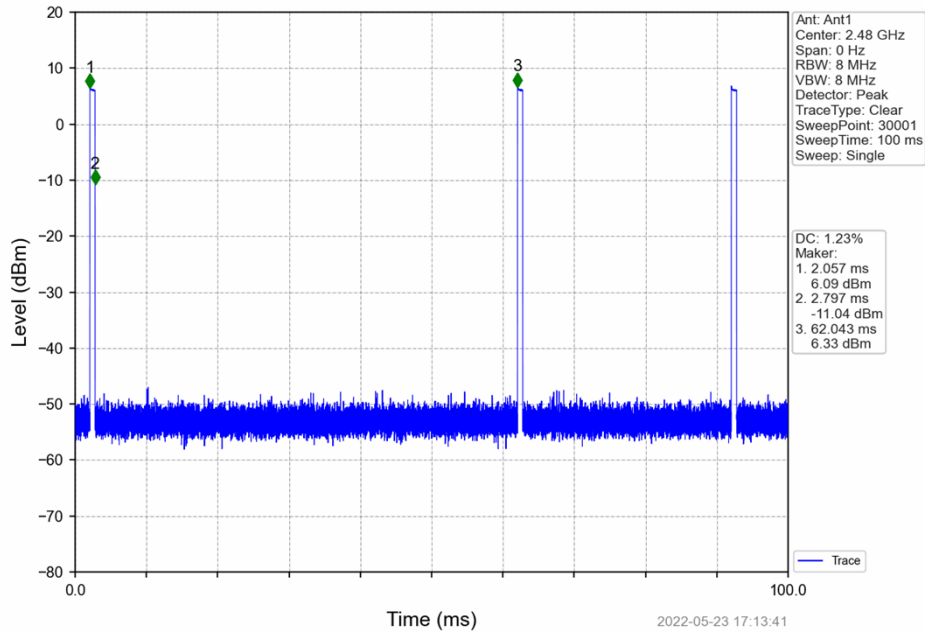
LCH_2405MHz_Ant1_NTNV



MCH_2440MHz_Ant1_NTNV



HCH_2480MHz_Ant1_NTNV



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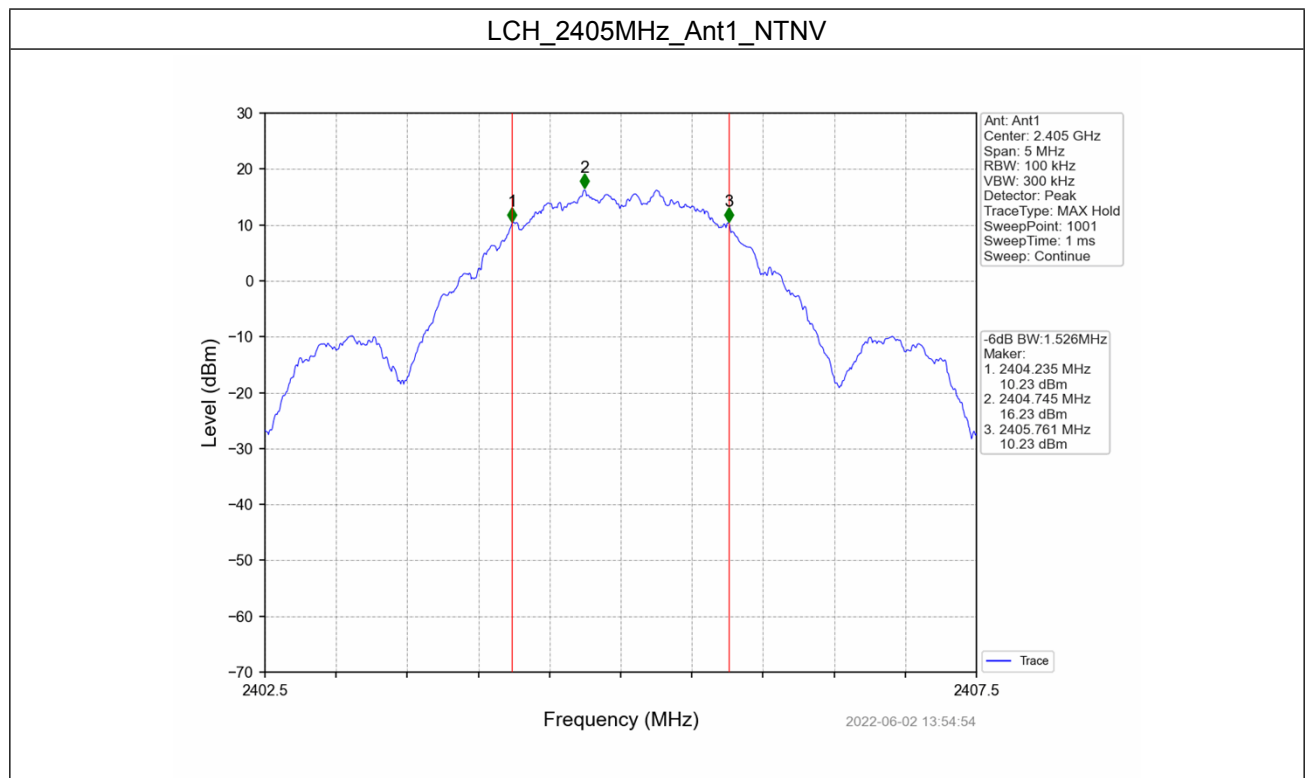
2. Bandwidth

2.1 6dB BW

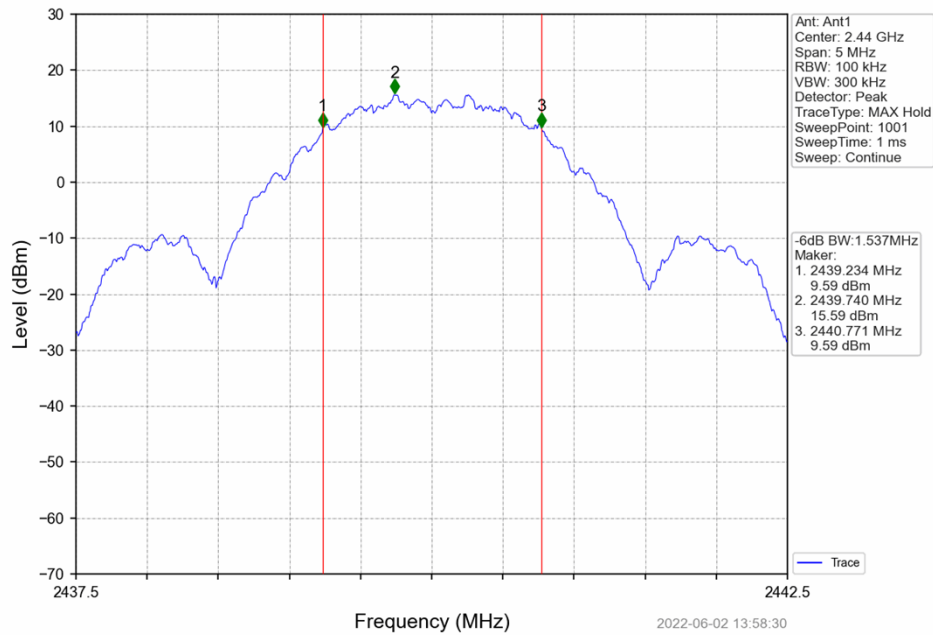
2.1.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
Modulating	SISO	2405	1	1.526	≥ 0.5	Pass
		2440	1	1.537	≥ 0.5	Pass
		2480	1	1.539	≥ 0.5	Pass

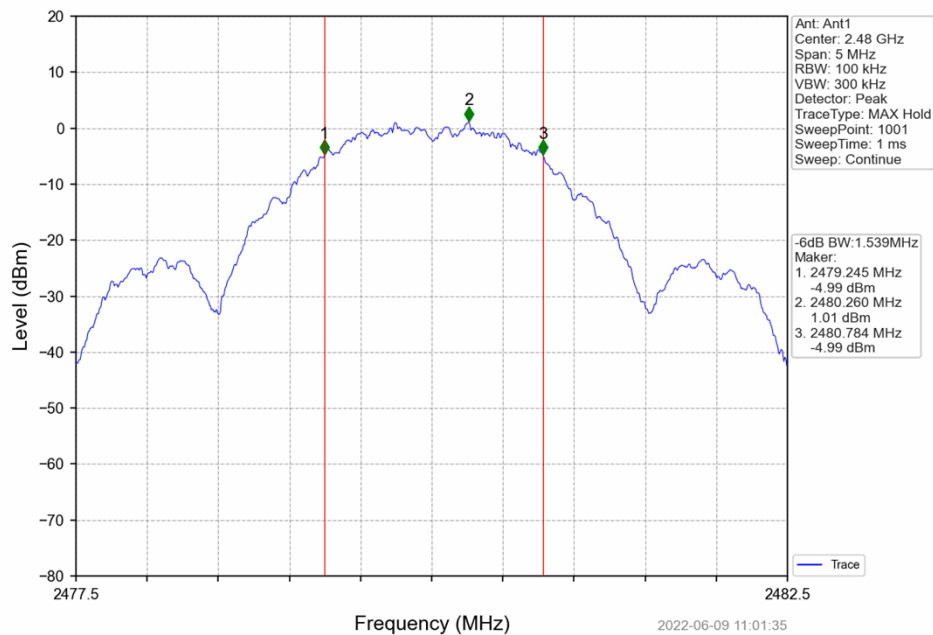
2.1.2 Test Graph



MCH_2440MHz_Ant1_NTNV



HCH_2480MHz_Ant1_NTNV



3. Maximum Conducted Output Power

3.1 Power

3.1.1 Test Result

Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
Modulating	SISO	2405	18.85	<=30	Pass
		2440	18.32	<=30	Pass
		2480	4.13	<=30	Pass

Note1: Antenna Gain: Ant1: 4.00dBi;

4. Maximum Power Spectral Density

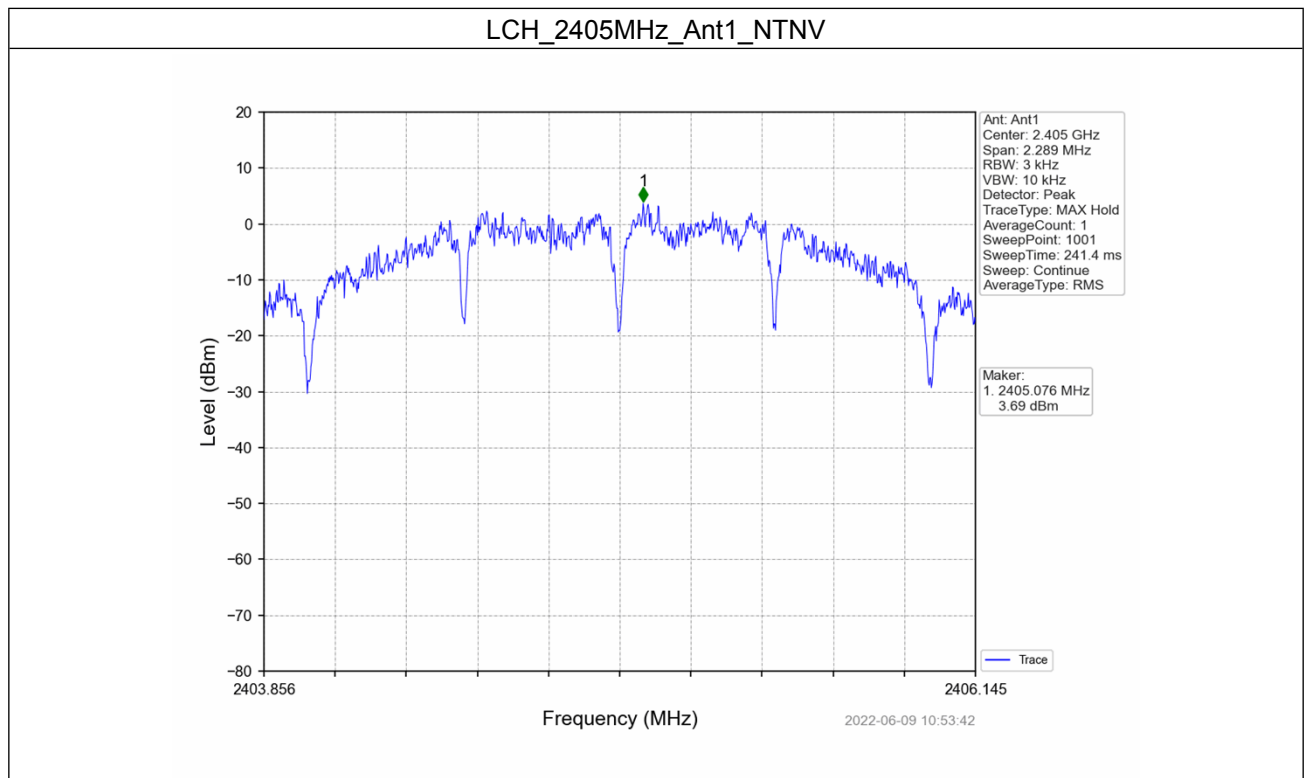
4.1 PSD

4.1.1 Test Result

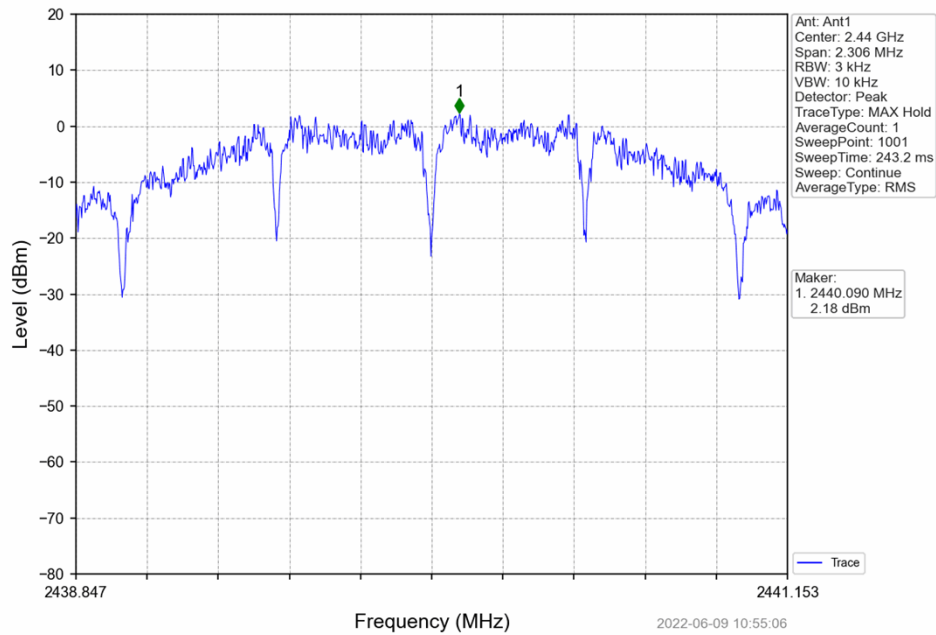
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
Modulating	SISO	2405	3.69	<=8	Pass
		2440	2.18	<=8	Pass
		2480	-11.83	<=8	Pass

Note1: Antenna Gain: Ant1: 4.00dBi;

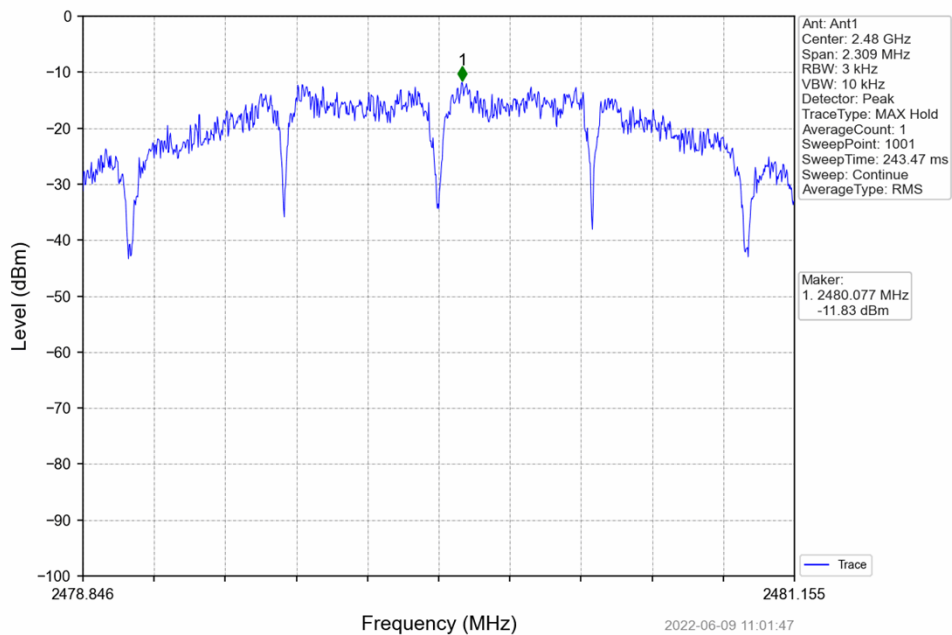
4.1.2 Test Graph



MCH_2440MHz_Ant1_NTNV



HCH_2480MHz_Ant1_NTNV



5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 Ref

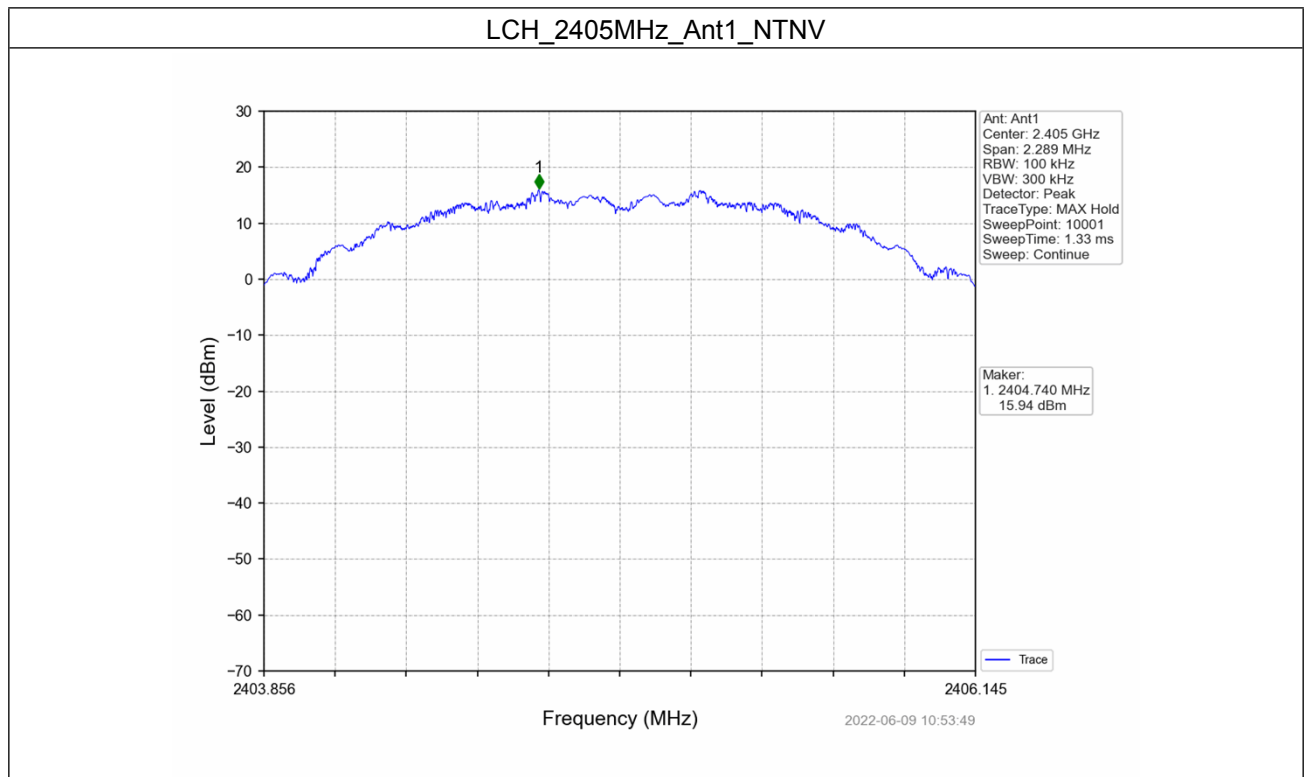
5.1.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
Modulating	SISO	2405	1	15.94
		2440	1	15.25
		2480	1	1.10

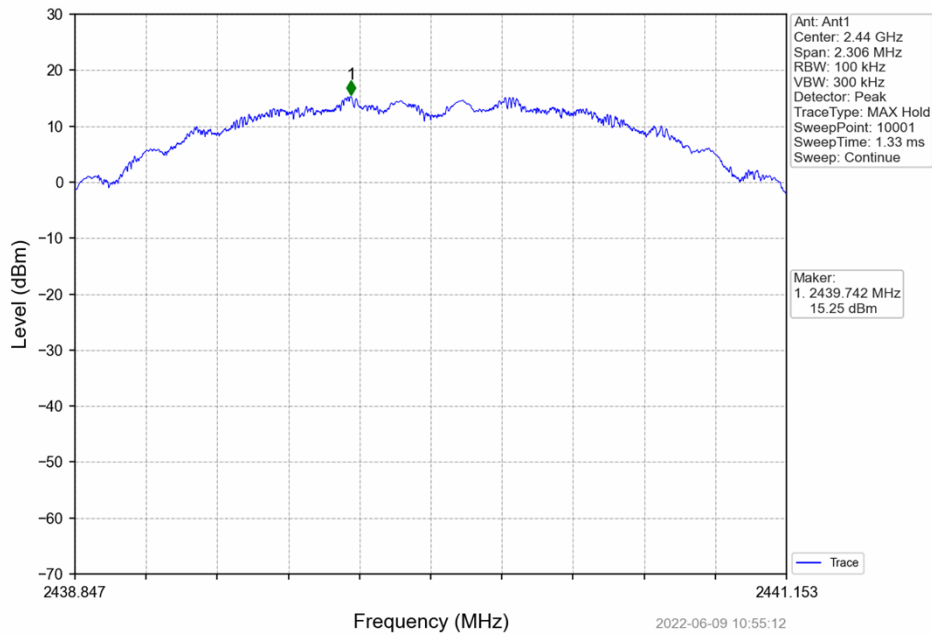
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

Note2: RBW = 1MHz was used during the pre-test. The final test will be performed at RBW=100kHz while the margin is less than 3dB.

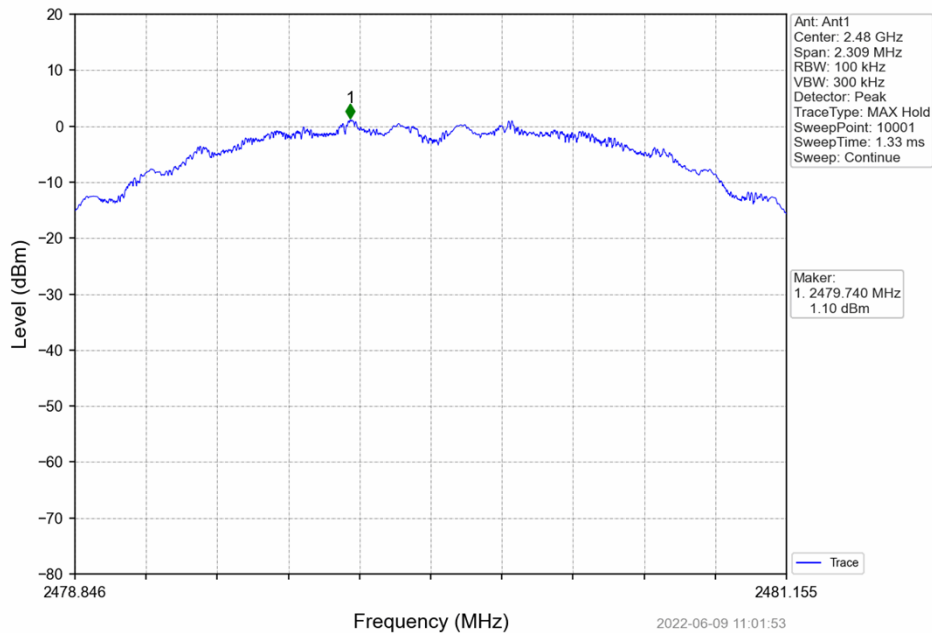
5.1.2 Test Graph



MCH_2440MHz_Ant1_NTNV



HCH_2480MHz_Ant1_NTNV



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5.2 CSE

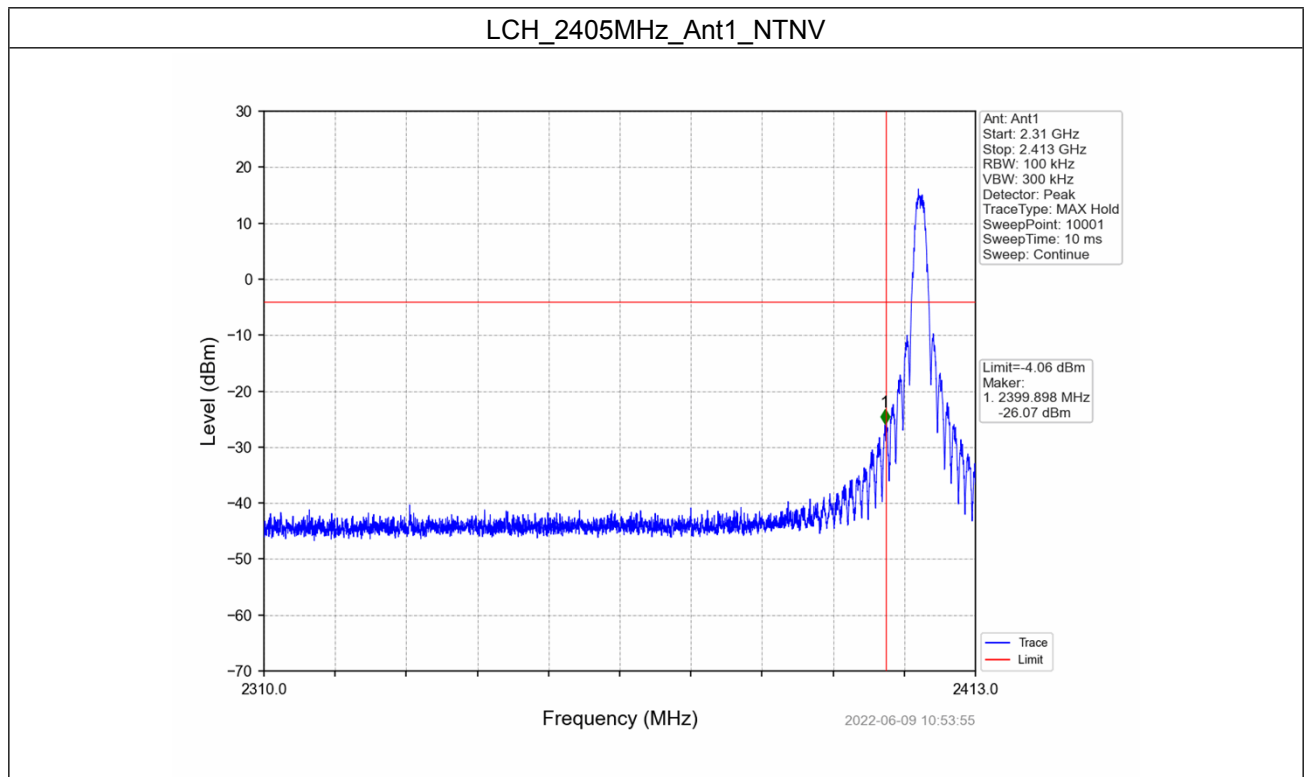
5.2.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
Modulating	SISO	2405	1	15.94	-4.06	Pass
		2440	1	15.94	-4.06	Pass
		2480	1	15.94	-4.06	Pass

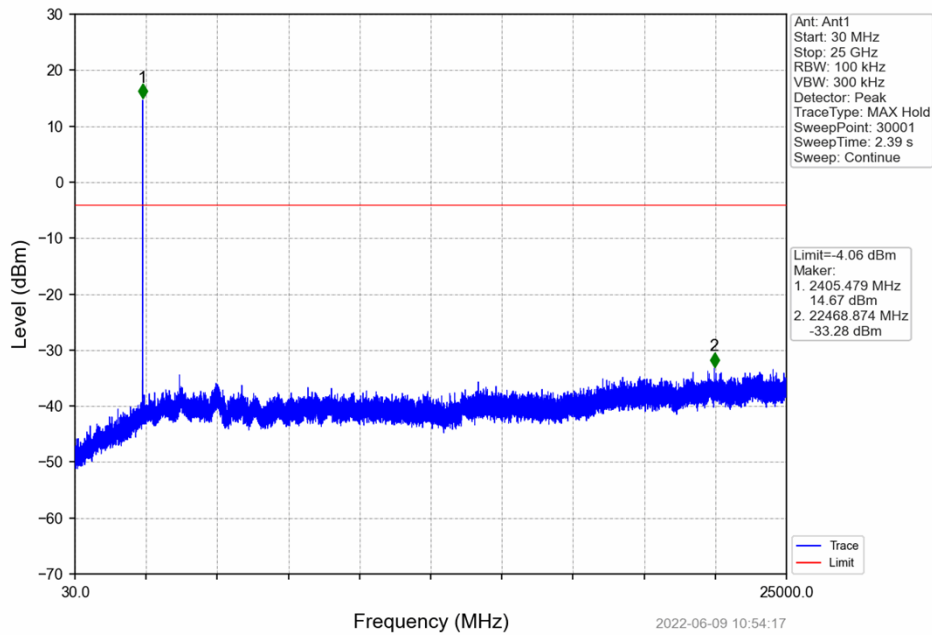
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

Note2: RBW = 1MHz was used during the pre-test. The final test will be performed at RBW=100kHz while the margin is less than 3dB.

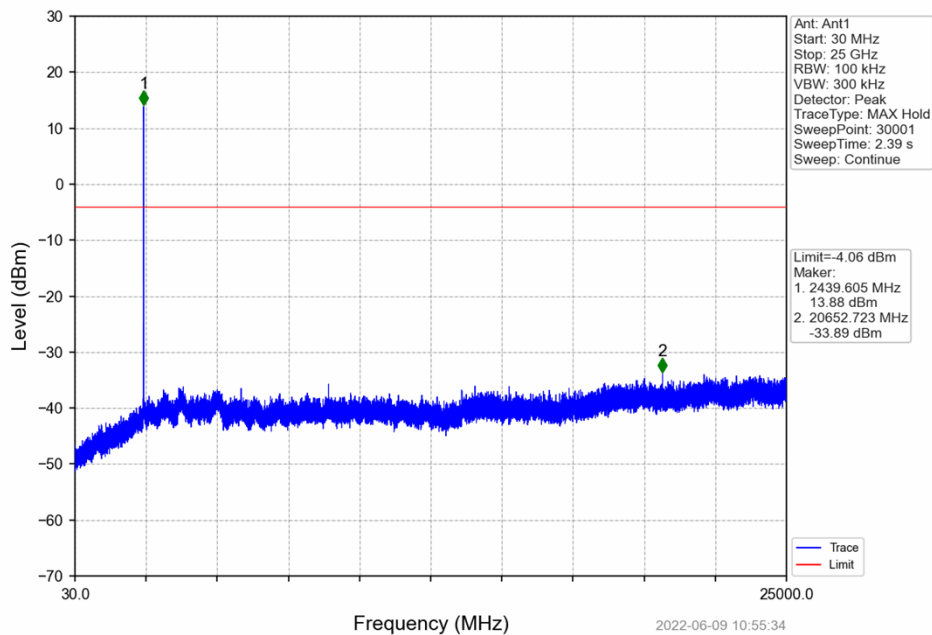
5.2.2 Test Graph



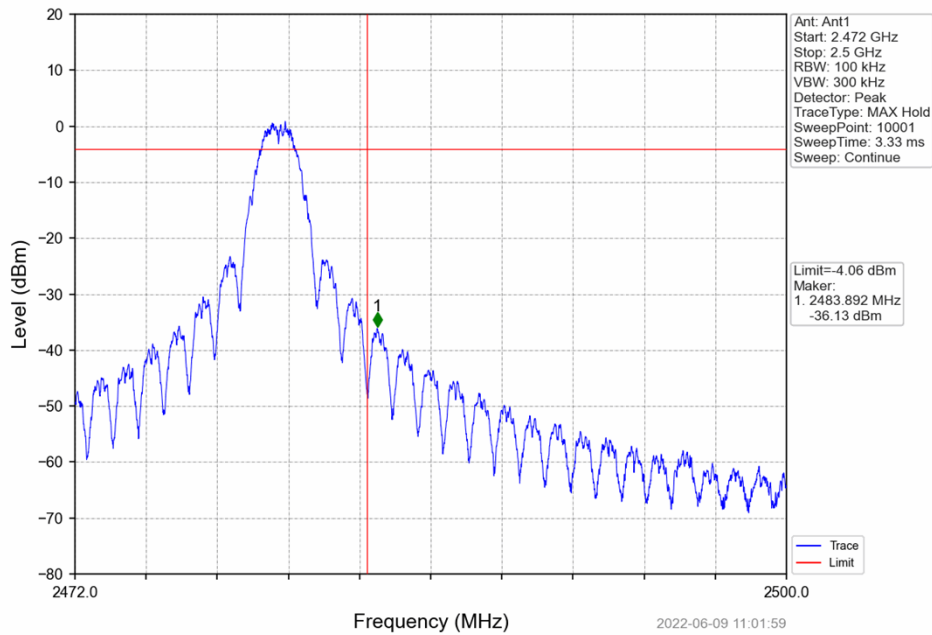
LCH_2405MHz_Ant1_NTNV



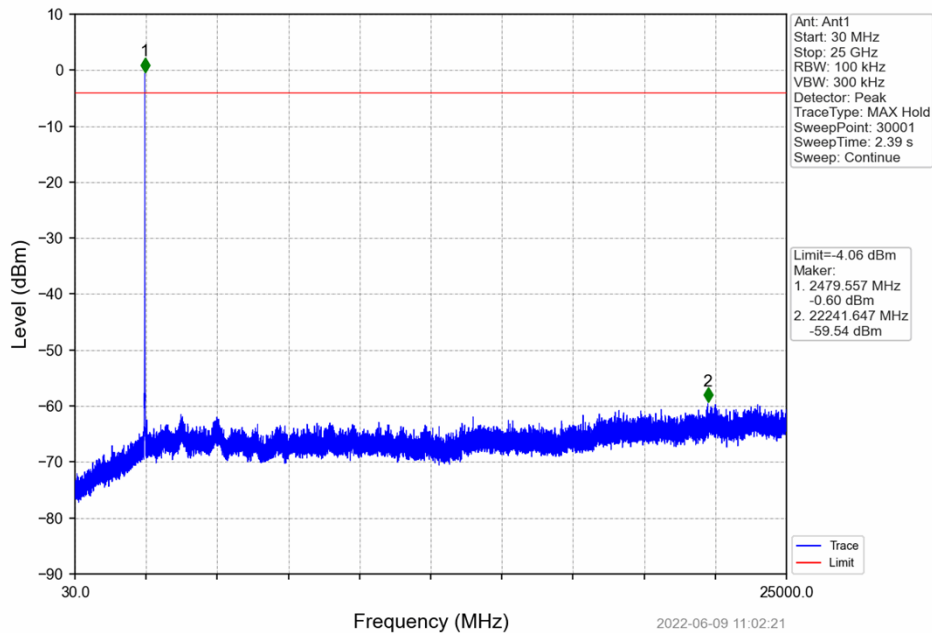
MCH_2440MHz_Ant1_NTNV



HCH_2480MHz_Ant1_NTNV



HCH_2480MHz_Ant1_NTNV



- End of the Report -



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