

TEST REPORT

Application No.: KSCR2504000687AT
FCC ID: POTCFIZWA3
IC: 4773A-CFIZWA3
Applicant: Inventec Appliances Corp.
Address of Applicant: No.37, Wugong 5th Road, New Taipei industrial Park, Wugu District, New Taipei City, Taiwan, China.
Manufacturer: Inventec Appliances Corp.
Address of Manufacturer: No.37, Wugong 5th Road, New Taipei industrial Park, Wugu District, New Taipei City, Taiwan, China.
Equipment Under Test (EUT):
EUT Name: Wireless Adapter
Model No.: CFI-ZWA3
Trade Mark: SONY
Standard(s) : 47 CFR Part 15, Subpart C 15.247
RSS-247 Issue 3, August 2023
RSS-Gen Issue 5 Amendment 2 (February 2021)
Date of Receipt: 2025-04-11
Date of Test: 2025-04-17 to 2025-04-29
Date of Issue: 2025-04-30

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

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Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

Revision Record			
Version	Description	Date	Remark
00	Original	2025-04-30	/

Authorized for issue by:				
Tested By		Damon Zhou		
		Damon_Zhou/Project Engineer		
Approved By		Terry Hou		
		Terry Hou /Reviewer		

2 Test Summary

Radio Spectrum Technical Requirement				
Item	FCC Requirement	IC Requirement	Method	Result
Antenna Requirement	47 CFR Part 15, Subpart C 15.203 & 15.247(c)	RSS-Gen Clause 6.8	N/A	Pass

N/A: Not applicable

Radio Spectrum Matter Part				
Item	FCC Requirement	IC Requirement	Method	Result
Conducted Emissions at AC Power Line (150kHz-30MHz)	47 CFR Part 15, Subpart C 15.207	RSS-Gen Section 8.8	ANSI C63.10 (2013) Section 6.2	Pass
Minimum 6dB Bandwidth	47 CFR Part 15, Subpart C 15.247a(2)	RSS-247 Clause 5.2(a)	ANSI C63.10 (2013) Section 11.8.1	Pass
Conducted Average Output Power	47 CFR Part 15, Subpart C 15.247(b)(3)	RSS-247 Clause 5.4(d)	ANSI C63.10 (2013) Section 11.9.2	Pass
Power Spectrum Density	47 CFR Part 15, Subpart C 15.247(e)	RSS-247 Clause 5.2(b)	ANSI C63.10 (2013) Section 11.10.2	Pass
Conducted Band Edges Measurement	47 CFR Part 15, Subpart C 15.247(d)	RSS-247 Clause 5.5	ANSI C63.10 (2013) Section 11.13.3.2	Pass
Conducted Spurious Emissions	47 CFR Part 15, Subpart C 15.247(d)	RSS-247 Clause 5.5	ANSI C63.10 (2013) Section 11.11	Pass
Radiated Emissions which fall in the restricted bands	47 CFR Part 15, Subpart C 15.209 & 15.247(d)	RSS-247 Section 3.3 & RSS-Gen Section 8.9	ANSI C63.10 (2013) Section 6.10.5	Pass
Radiated Spurious Emissions	47 CFR Part 15, Subpart C 15.209 & 15.247(d)	RSS-247 Section 3.3 & RSS-Gen Section 8.9	ANSI C63.10 (2013) Section 6.4,6.5,6.6	Pass
99% Bandwidth	-	RSS-Gen Section 6.7	ANSI C63.10 Section 6.9.3	Pass

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4 General Information

4.1 Details of E.U.T.

Power supply:	DC 5V,0.1A
Operation Frequency:	2404.35MHz to 2474.35MHz
Modulation Type:	PI/4-DQPSK
Number of Channels:	36
Channel Spacing:	2MHz
Antenna Type:	PCB Antenna
Antenna Gain:	Ant 1: -1.15dBi(Provided by the manufacturer) Ant 2: -2.56dBi(Provided by the manufacturer)
SN:	SU1253SMBP004P
Firmware Version:	1391

4.2 Power level setting using in test

Frequency (MHz)	PI/4-DQPSK	
	Ant 1	Ant 2
2404.35	default	default
2442.35	default	default
2474.35	default	default

4.3 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Notebook	Lenovo	/	/

4.4 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	8.4×10^{-8}
2	Timeout	2s
3	Duty Cycle	0.37%
4	Occupied Bandwidth	3%
5	RF Conducted Power	0.6dB
6	RF Power Density	2.9dB
7	Conducted Spurious Emissions	0.75dB
8	RF Radiated Power	5.2dB (Below 1GHz)
		5.9dB (Above 1GHz)
9	Radiated Spurious Emission Test	4.2dB (Below 30MHz)
		4.5dB (30MHz-1GHz)
		5.1dB (1GHz-18GHz)
		5.4dB (Above 18GHz)
10	Temperature Test	1°C
11	Humidity Test	3%
12	Supply Voltages	1.5%
13	Time	3%
Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.		

4.5 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc.

No.10 Weiye Rd, Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China.

Tel: +86 512 5735 5888 Fax: +86 512 5737 0818

No tests were sub-contracted.

Note:

1. SGS is not responsible for wrong test results due to incorrect information (e.g., max. internal working frequency, antenna gain, cable loss, etc) is provided by the applicant. (If applicable).
2. SGS is not responsible for the authenticity, integrity and the validity of the conclusion based on results of the data provided by applicant. (If applicable).
3. Sample source: sent by customer.

4.6 Test Facility

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

- **A2LA**

Compliance Certification Services (Kunshan) Inc. is accredited by the American Association for Laboratory Accreditation (A2LA). Certificate No. 2541.01.

- **FCC**

Compliance Certification Services (Kunshan) Inc. has been recognized as an accredited testing laboratory. Designation Number: CN1172.

- **ISED**

Compliance Certification Services (Kunshan) Inc. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory. Company Number: 2324E

- **VCCI**

The 3m and 10m Semi-anechoic chamber and Shielded Room of Compliance Certification Services (Kunshan) Inc. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-20134, R-11600, C-11707, T-11499, G-10216 respectively.

4.7 Deviation from Standards

None

4.8 Abnormalities from Standard Conditions

None

5 Equipment List

Item	Equipment	Manufacturer	Model	Inventory No	Cal Date	Cal. Due Date
RF Conducted Test						
1	Spectrum Analyzer	Keysight	N9020A	KUS1911E004-2	08/01/2024	07/31/2025
2	Spectrum Analyzer	Keysight	N9020A	KUS2001M001-2	08/01/2024	07/31/2025
3	Spectrum Analyzer	Keysight	N9030B	KSEM021-1	01/15/2025	01/14/2026
4	Signal Generator	R&S	SMBV100B	KSEM032	02/19/2025	02/18/2026
5	Signal Generator	R&S	SMW200A	KSEM020-1	08/02/2024	08/01/2025
6	Signal Generator	Agilent	N5182A	KUS2001M001-1	08/01/2024	07/31/2025
7	Radio Communication Test Station	Anritsu	MT8000A	KSEM001-1	08/01/2024	07/31/2025
8	Radio Communication Analyzer	Anritsu	MT8821C	KSEM002-1	02/19/2025	02/18/2026
9	Universal Radio Communication Tester	R&S	CMW500	KUS1911E004-1	08/13/2024	08/12/2025
10	Switcher	TST	FY562	KUS2001M001-4	01/15/2025	01/14/2026
11	AC Power Source	EXTECH	6605	KS301178	N.C.R	N.C.R
12	DC Power Supply	Aglient	E3632A	KS301180	N.C.R	N.C.R
13	Conducted Test Cable	Thermax	RF01-RF04	CZ301111-CZ301120	01/14/2025	01/13/2026
14	Temp. / Humidity Chamber	TERCHY	MHK-120AK	KSES104904	09/02/2024	09/01/2025
15	Temperature & Humidity Recorder	Renke Control	RS-WS-N01-6J	KSEM024-5	02/26/2025	02/25/2026
16	Software	BST	TST-PASS	/	NCR	NCR
RF Radiated Test						
1	Spectrum Analyzer	R&S	FSV40	KUS1806E003	08/06/2024	08/05/2025
2	Universal Radio Communication Tester	R&S	CMW500	KSEM009-1	02/18/2025	02/17/2026
3	Signal Generator	Agilent	E8257C	KS301066	08/06/2024	08/05/2025
4	Loop Antenna	COM-POWER	AL-130R	KUS1806E001	03/01/2025	02/28/2027
5	Bilog Antenna	TESEQ	CBL 6112D	KUS1806E005	06/29/2023	06/28/2025
6	Horn-antenna(1-18GHz)	Schwarzbeck	BBHA9120D	KS301079	03/23/2024	03/22/2026
8	Horn Antenna(18-40GHz)	Schwarzbeck	BBHA9170	CZ301058	01/07/2024	01/06/2026
9	Amplifier(30MHz~18GHz)	PANSHAN TECHNOLOGY	LNA:1~18G	KSEM010-1	01/15/2025	01/14/2026
10	Amplifier(18~40GHz)	PANSHAN TECHNOLOGY	LNA180400G40	KSEM038	08/12/2024	08/11/2025
11	RE Test Cable	REBES MICROWAVE	/	CZ301097	08/23/2024	08/22/2025
12	Temperature & Humidity Recorder	Renke Control	RS-WS-N01-6J	KSEM024-4	02/26/2025	02/25/2026
13	Software	Faratronic	EZ_EMV-v 3A1	/	NCR	NCR
14	Software	ESE	E3_V 6.111221a	/	NCR	NCR

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 PCB antenna and no consideration of replacement. The best case gain of the antenna 1 is -1.15dBi & antenna 2 is -2.56dBi.

Antenna location: Refer to internal photo.

7 Radio Spectrum Matter Test Results

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

Test Requirement 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: 24.6 °C

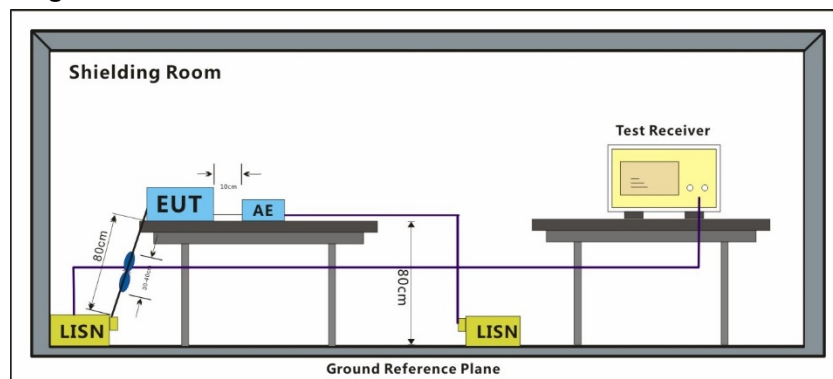
Humidity: 47.1 % RH

Atmospheric Pressure: 1010 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 mode with PI/4-DQPSK modulation.

7.1.3 Test Setup Diagram



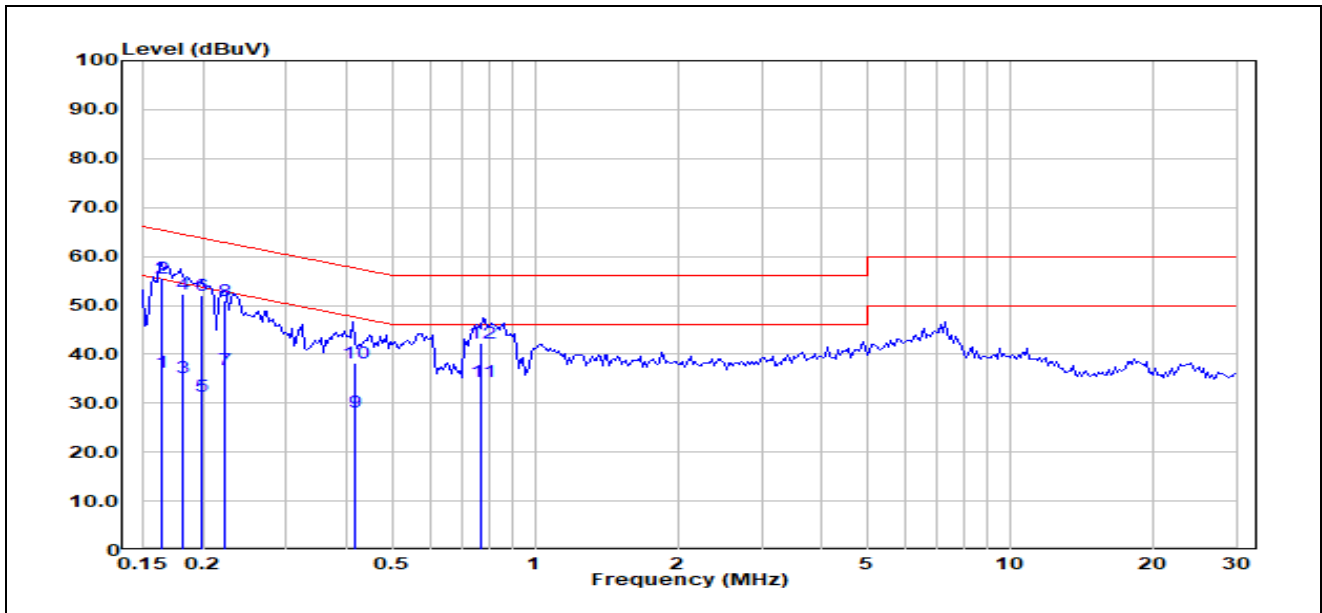
7.1.4 Measurement Procedure and Data

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

Test Mode: 00; Line: Live line

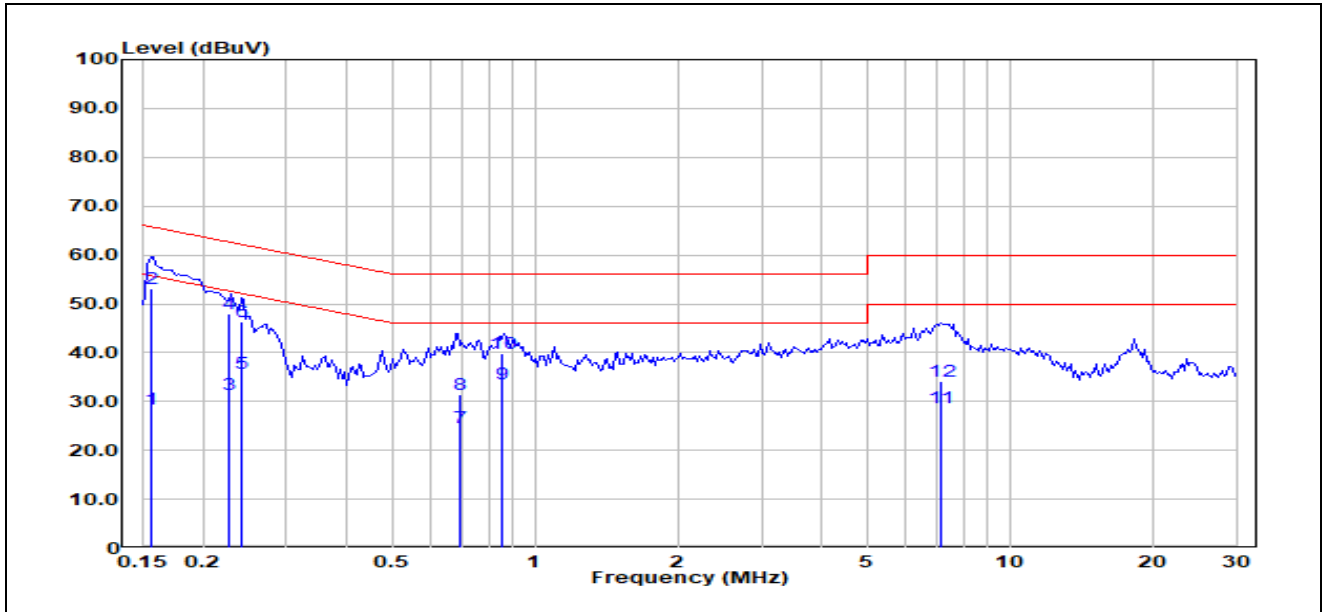
Test Data :



No.	Frequency (MHz)	Reading (dBUV)	Correct Factor(dB)	Result (dBUV)	Limit (dBUV)	Margin (dB)	Remark
1	0.1637	16.25	19.95	36.20	55.27	-19.07	Average
2	0.1637	35.73	19.95	55.68	65.27	-9.59	QP
3	0.1812	15.37	19.84	35.21	54.43	-19.22	Average
4	0.1812	32.42	19.84	52.26	64.43	-12.17	QP
5	0.1987	11.70	19.74	31.44	53.67	-22.23	Average
6	0.1987	32.17	19.74	51.91	63.67	-11.76	QP
7	0.2227	17.01	19.72	36.73	52.72	-15.99	Average
8	0.2227	31.12	19.72	50.84	62.72	-11.88	QP
9	0.4177	8.40	19.67	28.07	47.49	-19.42	Average
10	0.4177	18.53	19.67	38.20	57.49	-19.29	QP
11	0.7722	14.61	19.78	34.39	46.00	-11.61	Average
12	0.7722	22.37	19.78	42.15	56.00	-13.85	QP

Test Mode: 00; Line: Neutral Line

Test Data :



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1551	8.55	19.96	28.51	55.72	-27.21	Average
2	0.1551	33.08	19.96	53.04	65.72	-12.68	QP
3	0.2278	11.62	19.73	31.35	52.53	-21.18	Average
4	0.2278	28.34	19.73	48.07	62.53	-14.46	QP
5	0.2403	16.07	19.71	35.78	52.09	-16.31	Average
6	0.2403	26.75	19.71	46.46	62.09	-15.63	QP
7	0.6960	4.96	19.67	24.63	46.00	-21.37	Average
8	0.6960	11.72	19.67	31.39	56.00	-24.61	QP
9	0.8546	13.95	19.74	33.69	46.00	-12.31	Average
10	0.8546	20.12	19.74	39.86	56.00	-16.14	QP
11	7.1490	9.01	19.59	28.60	50.00	-21.40	Average
12	7.1490	14.54	19.59	34.13	60.00	-25.87	QP

7.2 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.

7.2.1 E.U.T. Operation

Operating Environment:

Temperature: 25.6 °C

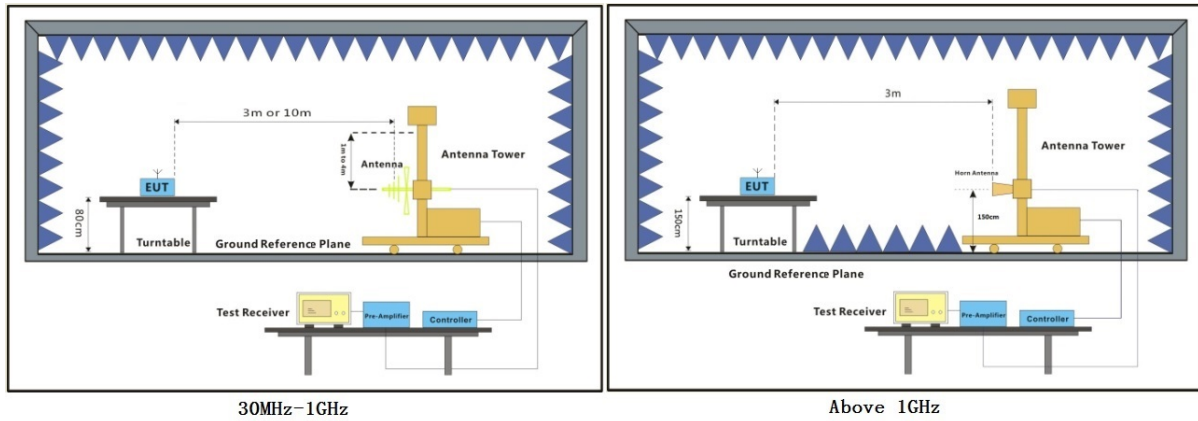
Humidity: 49.3 % RH

Atmospheric Pressure: 1010 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 mode with PI/4-DQPSK modulation.

7.2.3 Test Setup Diagram



7.2.4 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: $\text{Level} = \text{Read Level} + \text{Cable Loss} + \text{Antenna Factor} - \text{Preamp Factor}$

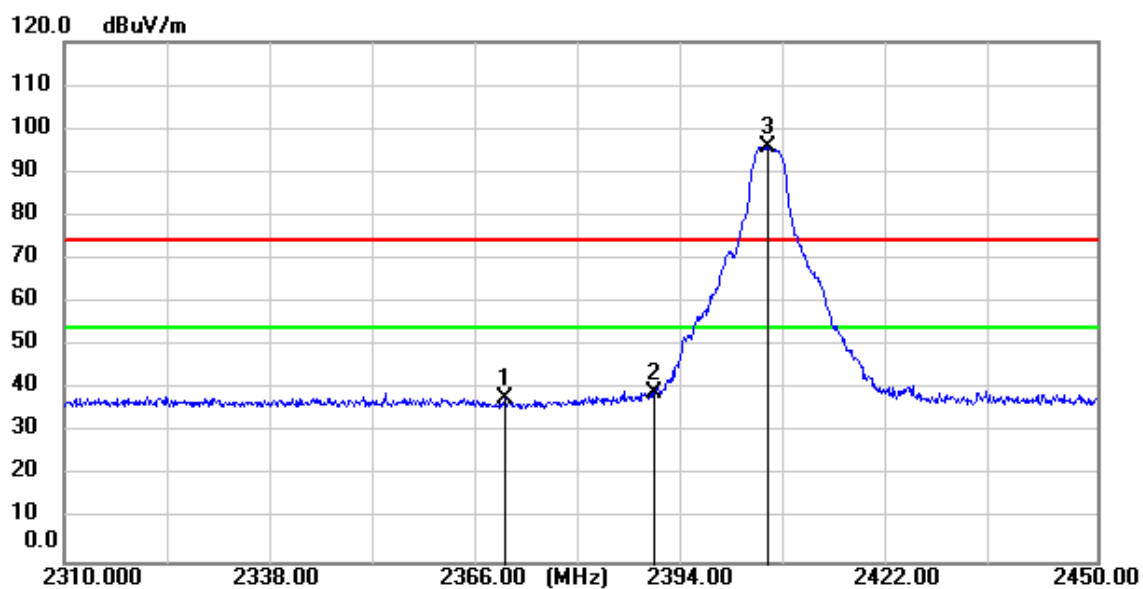
Remark 2: For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level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

Remark 3: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for Peak detection (PK) and Average detection (AV) at frequency above 1GHz.

Remark 4: For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle $< 98\%$) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.

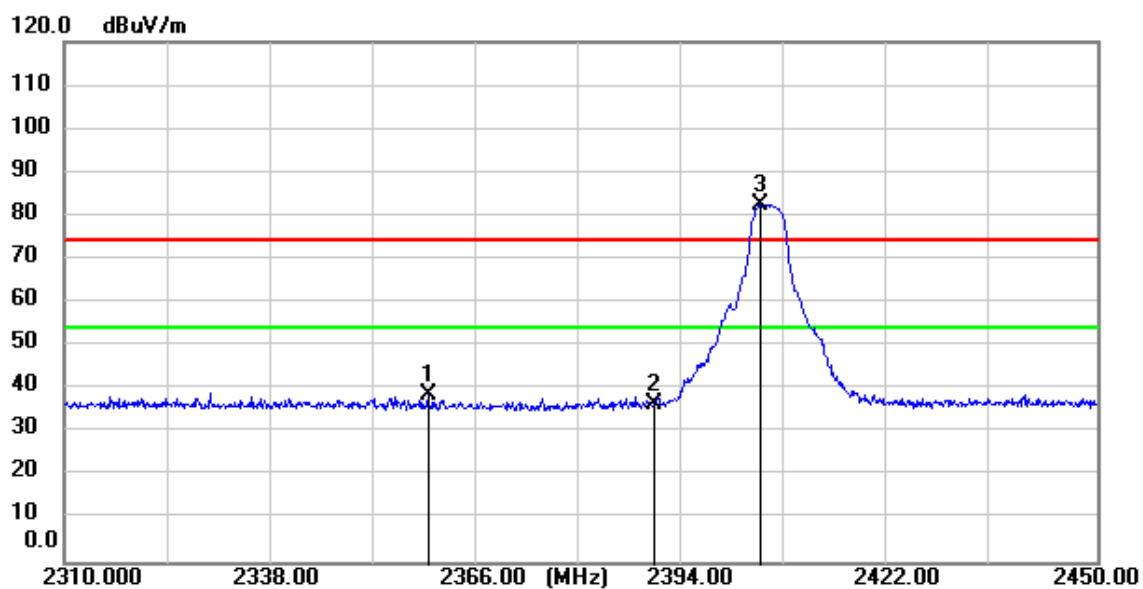
Ant 1:

Test Mode: 00; Polarity: Horizontal; Modulation:PI/4-DQPSK; Channel:Low



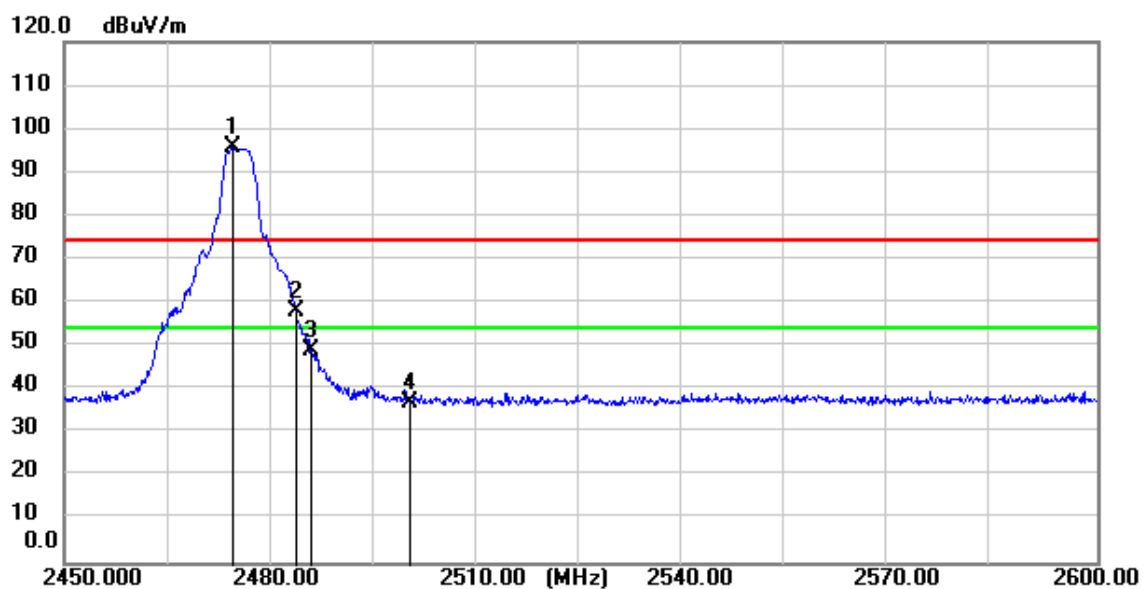
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2369.640	38.91	-0.89	38.02	74.00	-35.98	peak
2	2390.000	40.05	-0.79	39.26	74.00	-34.74	peak
3	2405.340	96.45	-0.71	95.74	74.00	21.74	peak

Test Mode: 00; Polarity: Vertical; Modulation:PI/4-DQPSK; Channel:Low



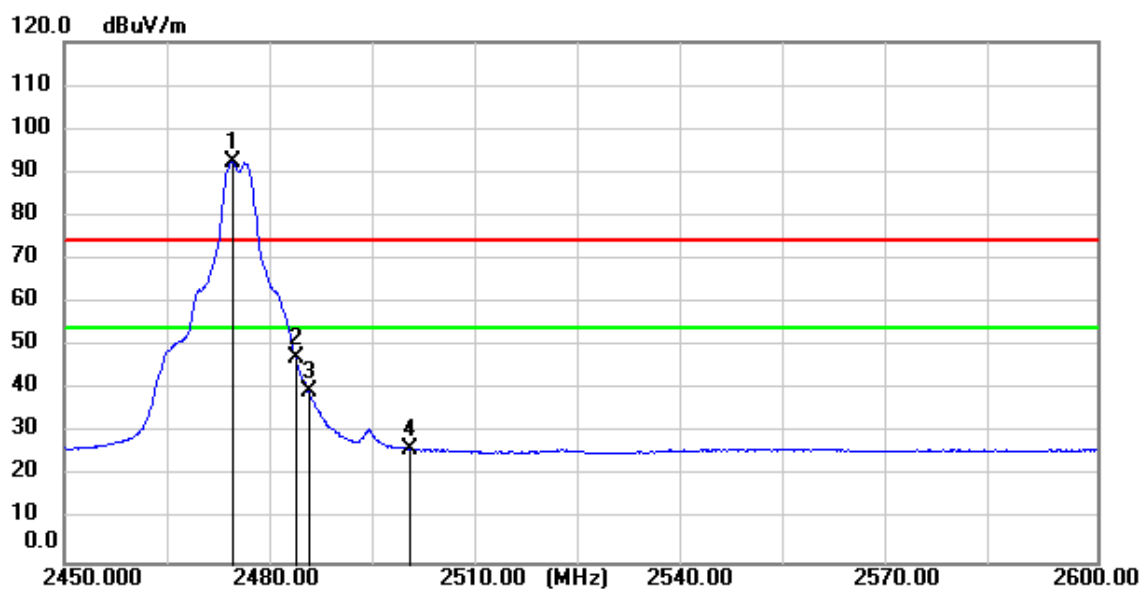
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2359.280	39.53	-0.94	38.59	74.00	-35.41	peak
2	2390.000	37.41	-0.79	36.62	74.00	-37.38	peak
3	2404.360	83.33	-0.72	82.61	74.00	8.61	peak

Test Mode: 00; Polarity: Horizontal; Modulation:PI/4-DQPSK; Channel:High



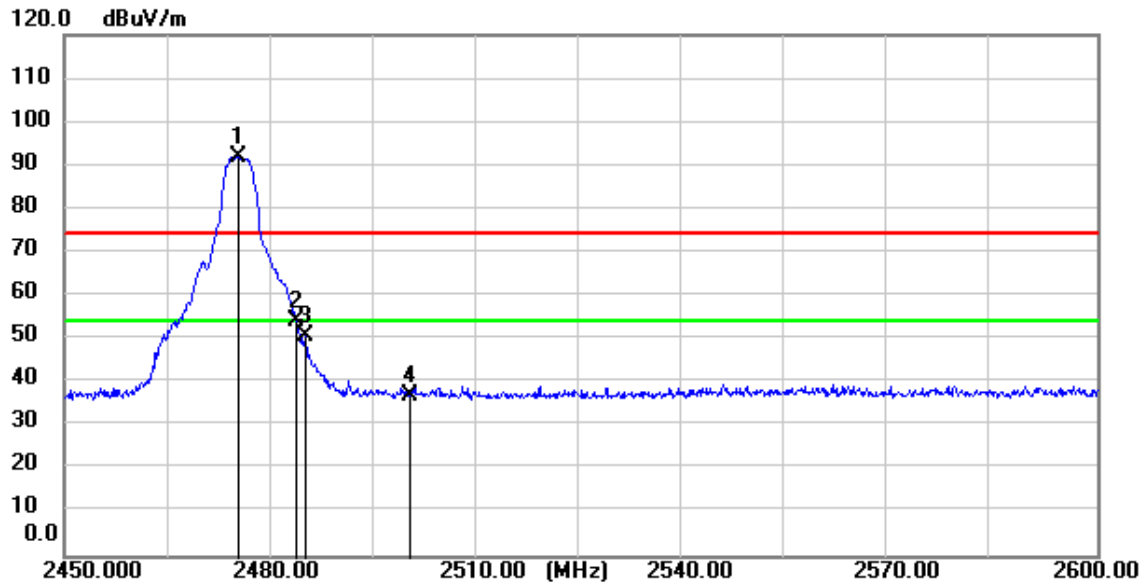
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2474.450	96.03	-0.37	95.66	74.00	21.66	peak
2	2483.500	58.50	-0.33	58.17	74.00	-15.83	peak
3	2485.850	49.17	-0.31	48.86	74.00	-25.14	peak
4	2500.000	37.44	-0.24	37.20	74.00	-36.80	peak

Test Mode: 00; Polarity: Horizontal; Modulation:PI/4-DQPSK; Channel:High



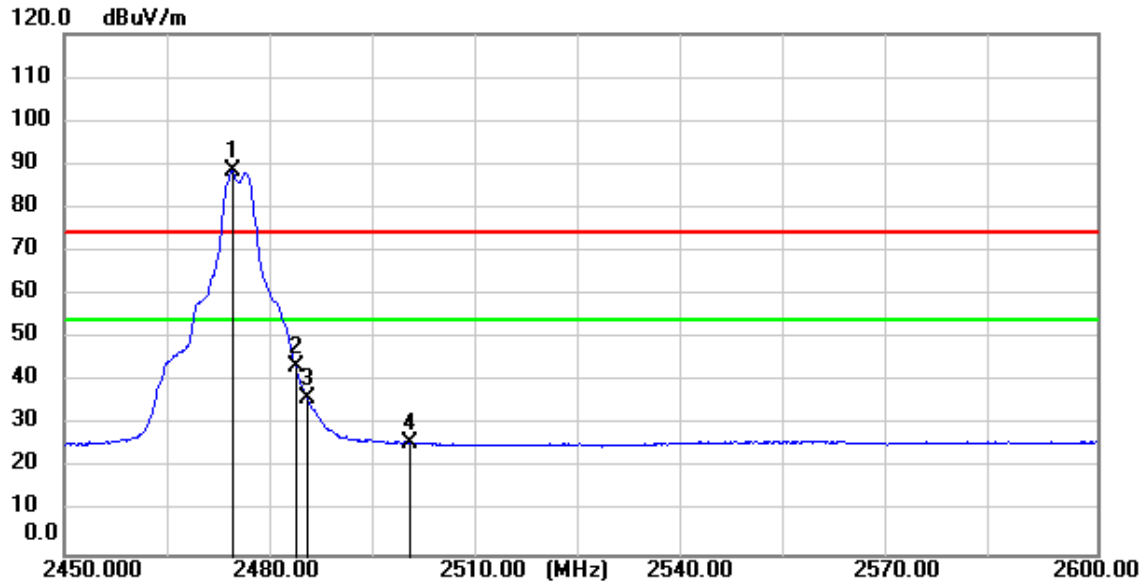
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2474.450	92.79	-0.37	92.42	54.00	38.42	AVG
2	2483.500	47.69	-0.33	47.36	54.00	-6.64	AVG
3	2485.550	39.78	-0.31	39.47	54.00	-14.53	AVG
4	2500.000	26.73	-0.24	26.49	54.00	-27.51	AVG

Test Mode: 00; Polarity: Vertical; Modulation:PI/4-DQPSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2475.200	92.27	-0.36	91.91	74.00	17.91	peak
2	2483.500	54.74	-0.33	54.41	74.00	-19.59	peak
3	2484.950	51.30	-0.32	50.98	74.00	-23.02	peak
4	2500.000	37.49	-0.24	37.25	74.00	-36.75	peak

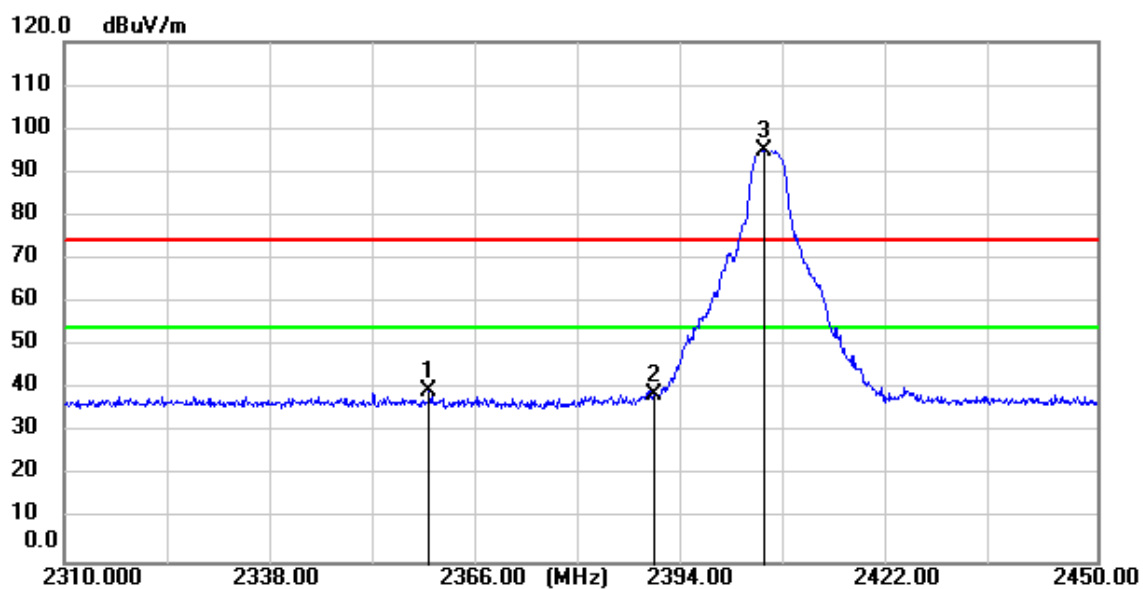
Test Mode: 00; Polarity: Vertical; Modulation:PI/4-DQPSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2474.450	88.67	-0.37	88.30	54.00	34.30	AVG
2	2483.500	43.64	-0.33	43.31	54.00	-10.69	AVG
3	2485.250	36.62	-0.31	36.31	54.00	-17.69	AVG
4	2500.000	26.15	-0.24	25.91	54.00	-28.09	AVG

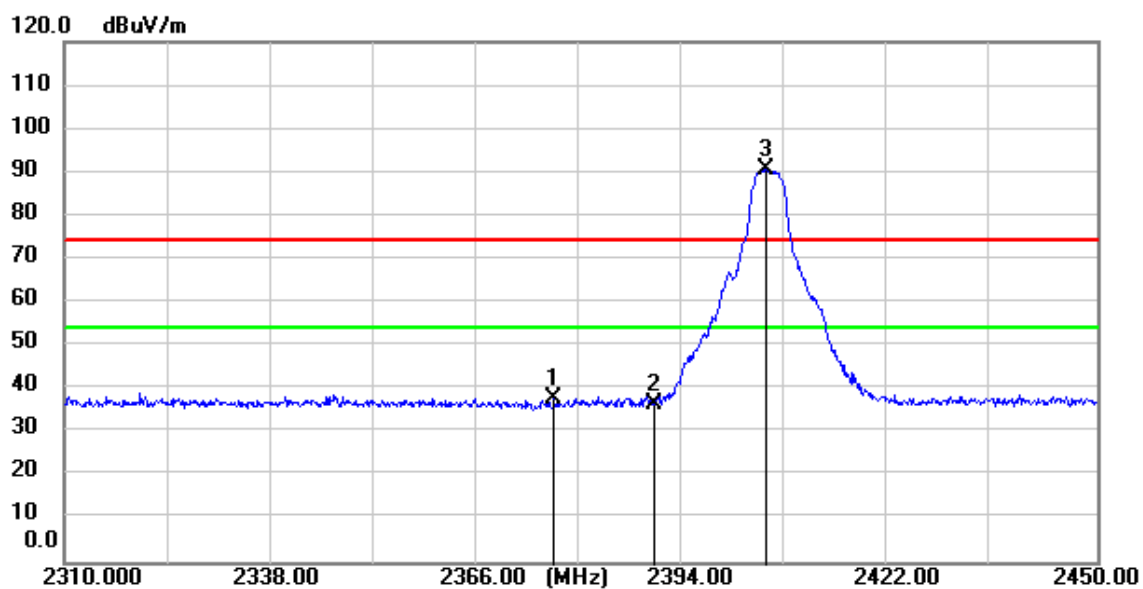
Ant 2:

Test Mode: 00; Polarity: Horizontal; Modulation:PI/4-DQPSK; Channel:Low



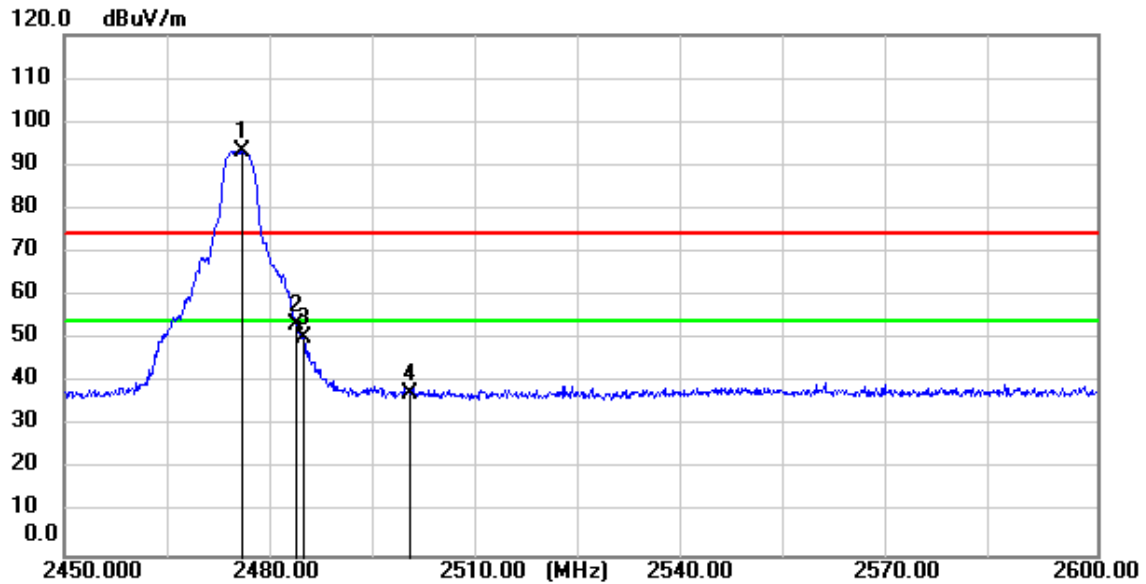
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2359.420	40.61	-0.94	39.67	74.00	-34.33	peak
2	2390.000	39.39	-0.79	38.60	74.00	-35.40	peak
3	2404.920	95.79	-0.72	95.07	74.00	21.07	peak

Test Mode: 00; Polarity: Vertical; Modulation:PI/4-DQPSK; Channel:Low



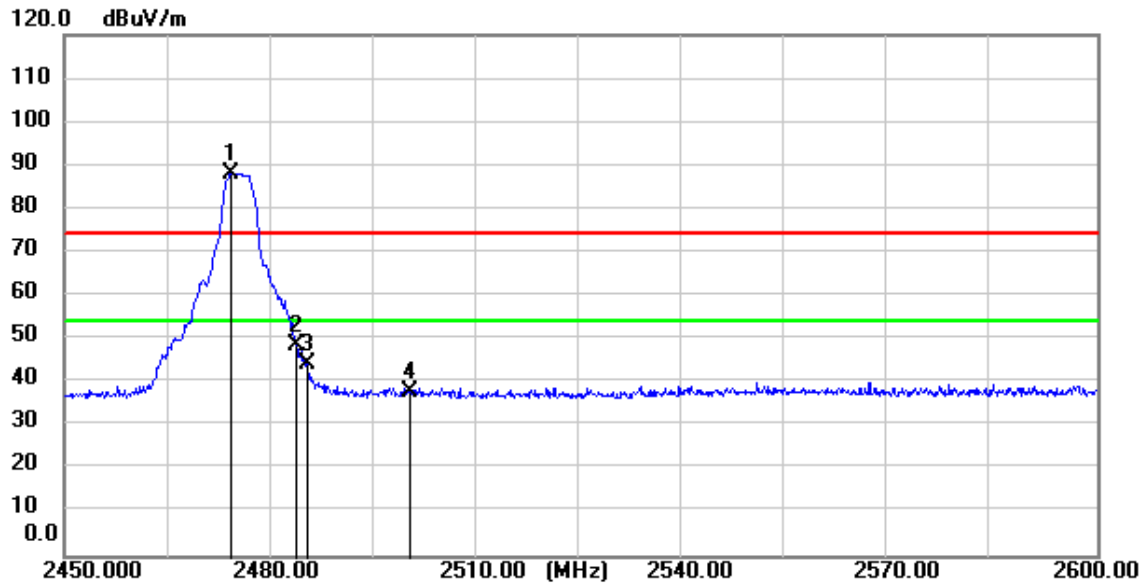
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2376.360	38.84	-0.85	37.99	74.00	-36.01	peak
2	2390.000	37.62	-0.79	36.83	74.00	-37.17	peak
3	2405.200	91.32	-0.71	90.61	74.00	16.61	peak

Test Mode: 00; Polarity: Horizontal; Modulation:PI/4-DQPSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2475.800	93.60	-0.36	93.24	74.00	19.24	peak
2	2483.500	53.82	-0.33	53.49	74.00	-20.51	peak
3	2484.800	50.58	-0.32	50.26	74.00	-23.74	peak
4	2500.000	37.61	-0.24	37.37	74.00	-36.63	peak

Test Mode: 00; Polarity: Vertical; Modulation:PI/4-DQPSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2474.300	88.62	-0.37	88.25	74.00	14.25	peak
2	2483.500	49.04	-0.33	48.71	74.00	-25.29	peak
3	2485.250	44.85	-0.31	44.54	74.00	-29.46	peak
4	2500.000	38.18	-0.24	37.94	74.00	-36.06	peak

7.3 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

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
960-1000	500	3

7.3.1 E.U.T. Operation

Operating Environment:

Temperature: 24.5 °C

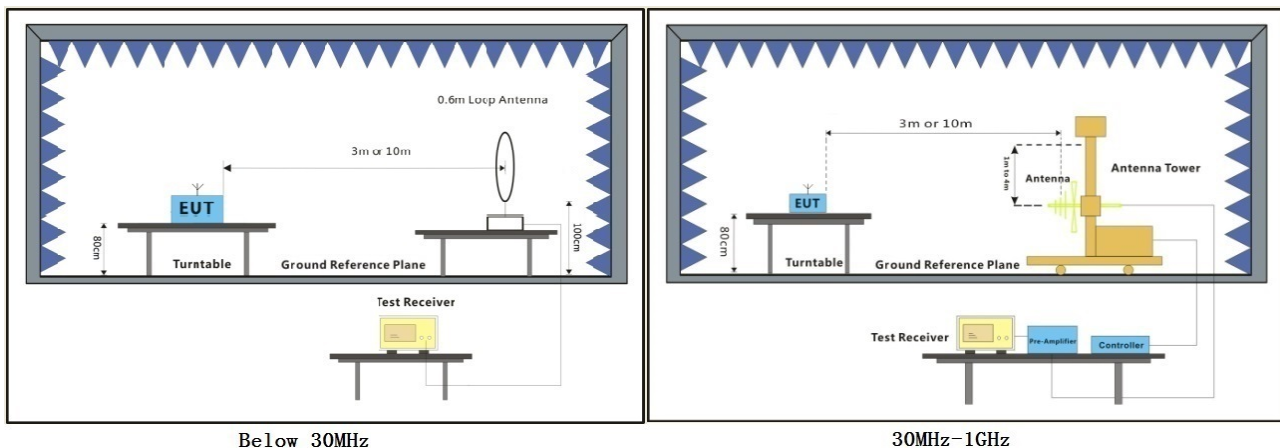
Humidity: 47.5 % RH

Atmospheric Pressure: 1010 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 mode with PI/4-DQPSK modulation.

7.3.3 Test Setup Diagram



7.3.4 Measurement Procedure and Data

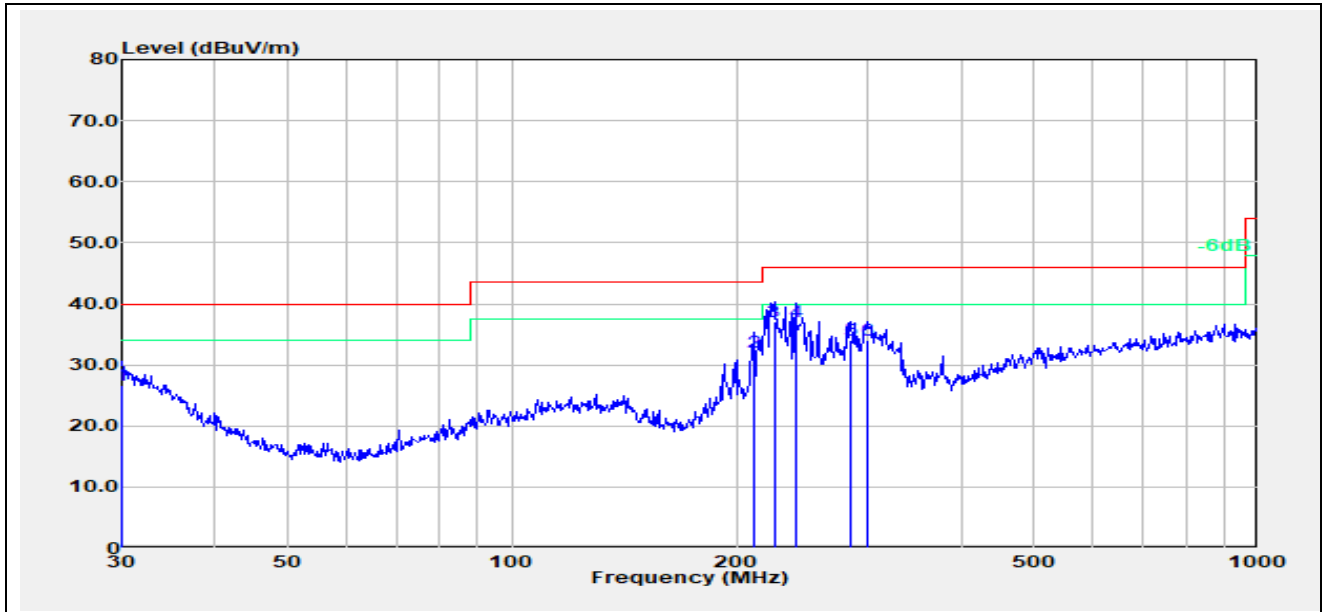
- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 or 10 meters away from the interference-receiving antenna, 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. $\text{Level} = \text{Read Level} + \text{Cable Loss} + \text{Antenna Factor} - \text{Preamp Factor}$
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.

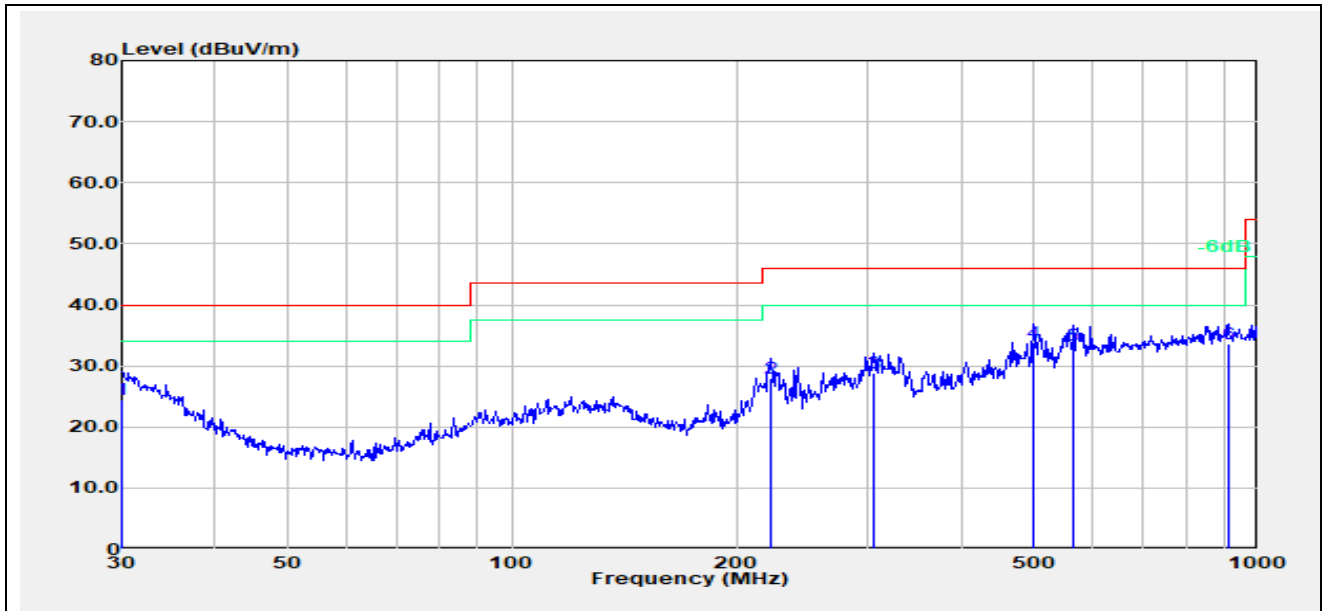
Ant 1:

Test Mode: 00; Polarity: Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	30.0000	1.49	25.12	26.61	40.00	-13.39	100	300	QP
2	210.7860	14.15	18.02	32.17	43.50	-11.33	100	254	QP
3	224.5193	18.47	18.57	37.04	46.00	-8.96	100	292	QP
4	239.9874	17.58	19.42	37.00	46.00	-9.00	100	310	QP
5	283.9792	12.65	21.39	34.04	46.00	-11.96	100	254	QP
6	299.3159	12.27	21.67	33.94	46.00	-12.06	100	117	QP

Test Mode: 00; Polarity: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (deg.)	Remark
1	30.0000	-0.52	25.12	24.60	40.00	-15.40	100	318	QP
2	222.1698	9.62	18.41	28.03	46.00	-17.97	100	128	QP
3	304.6100	7.21	21.61	28.82	46.00	-17.18	100	360	QP
4	501.1790	7.05	26.71	33.76	46.00	-12.24	100	30	QP
5	566.6223	5.49	27.99	33.48	46.00	-12.52	100	360	QP
6	912.8621	2.16	31.44	33.60	46.00	-12.40	100	214	QP

7.4 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

Measurement Distance: 3M

Limit:

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

7.4.1 E.U.T. Operation

Operating Environment:

Temperature: 25.6 °C

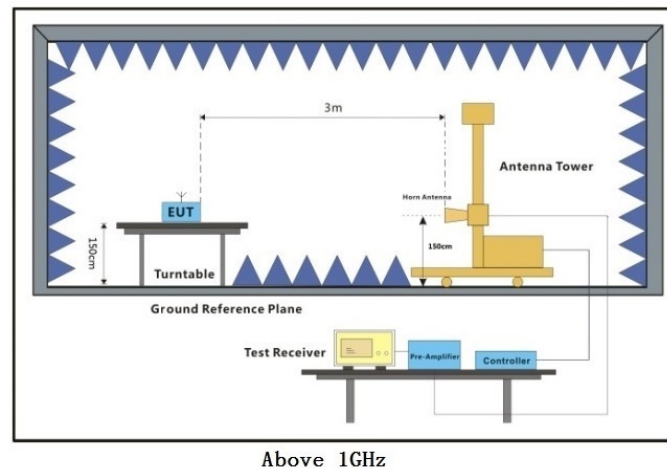
Humidity: 49.3 % RH

Atmospheric Pressure: 1010 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 mode with PI/4-DQPSK modulation.

7.4.3 Test Setup Diagram



7.4.4 Measurement Procedure and Data

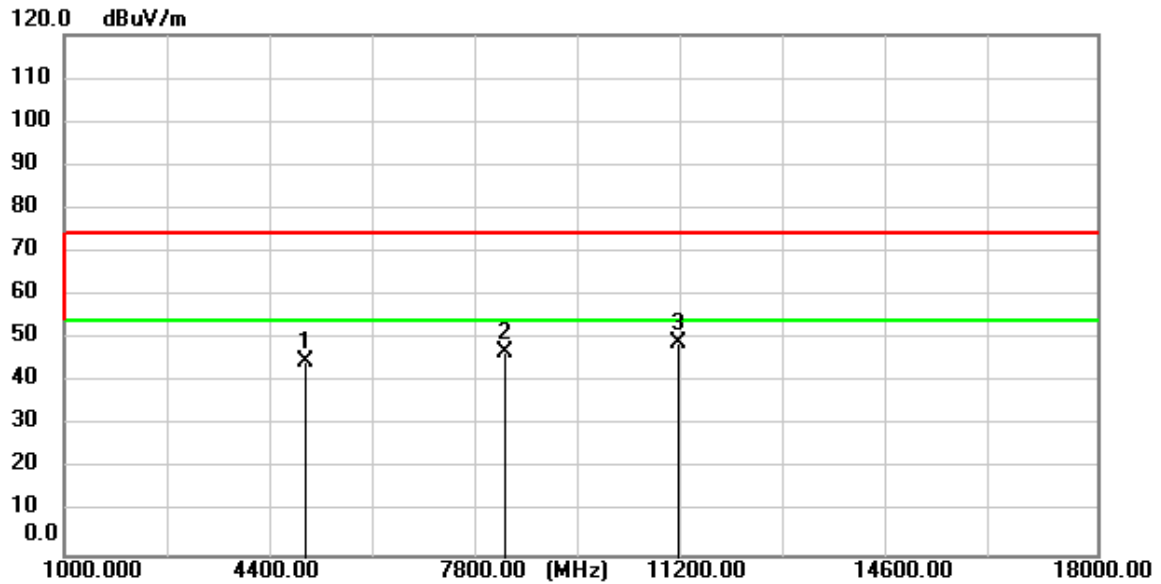
- a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which 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.
- 4: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for Peak detection (PK) and Average detection (AV) at frequency above 1GHz.
- 5:For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle<98%) or 10Hz (Duty cycle $\geq$ 98%) for Average detection (AV) at frequency above 1GHz.

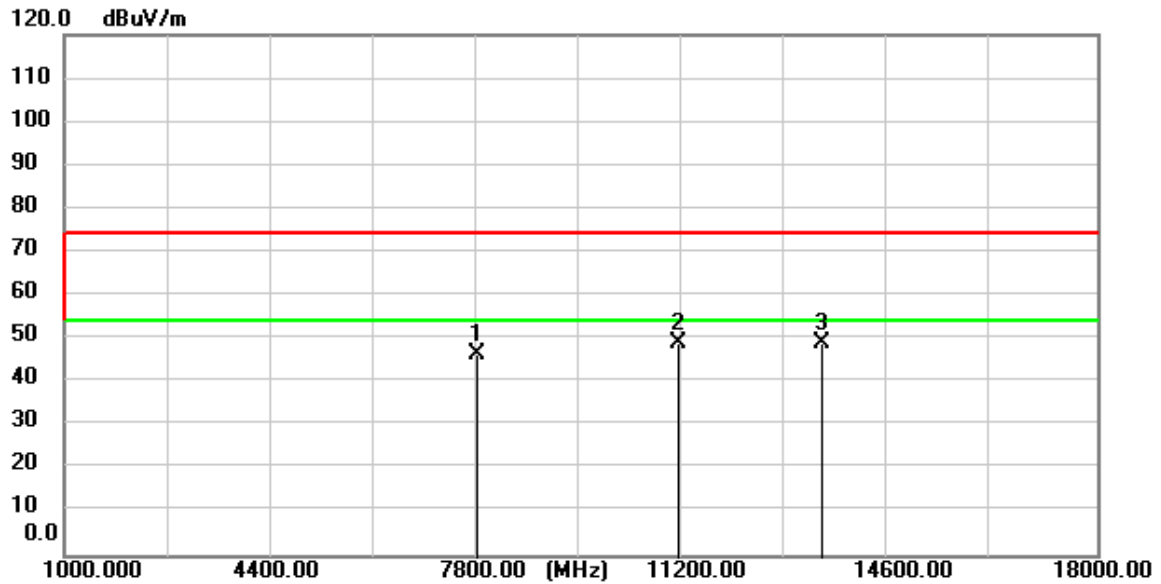
Ant 1:

Test Mode: 00; Polarity: Horizontal; Modulation:PI/4-DQPSK; Channel:Low



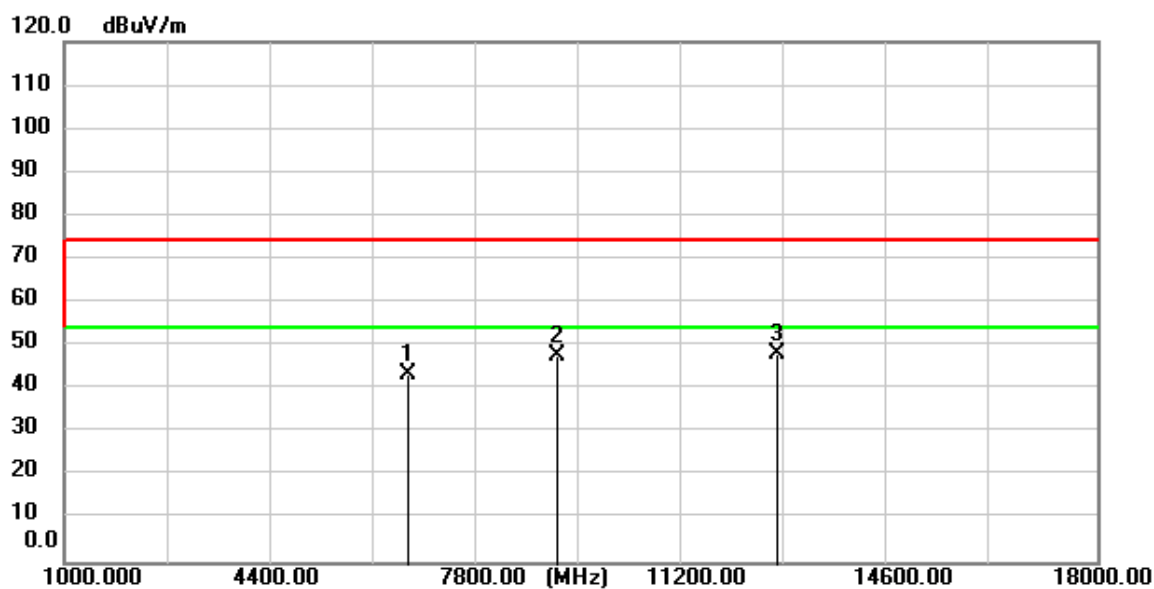
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4945.700	61.49	-16.75	44.74	74.00	-29.26	peak
2	8242.000	55.92	-8.92	47.00	74.00	-27.00	peak
3	11094.600	55.43	-6.43	49.00	74.00	-25.00	peak

Test Mode: 00; Polarity: Vertical; Modulation:PI/4-DQPSK; Channel:Low



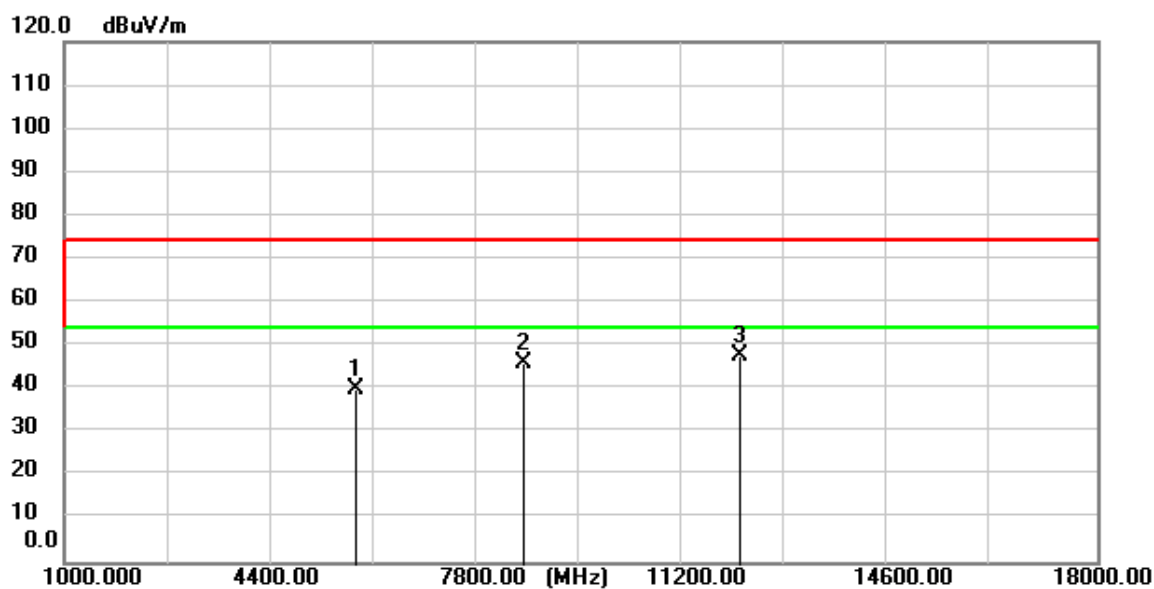
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	7774.500	56.17	-9.56	46.61	74.00	-27.39	peak
2	11094.600	55.43	-6.43	49.00	74.00	-25.00	peak
3	13461.000	54.55	-5.56	48.99	74.00	-25.01	peak

Test Mode: 00; Polarity: Horizontal; Modulation:PI/4-DQPSK; Channel:middle



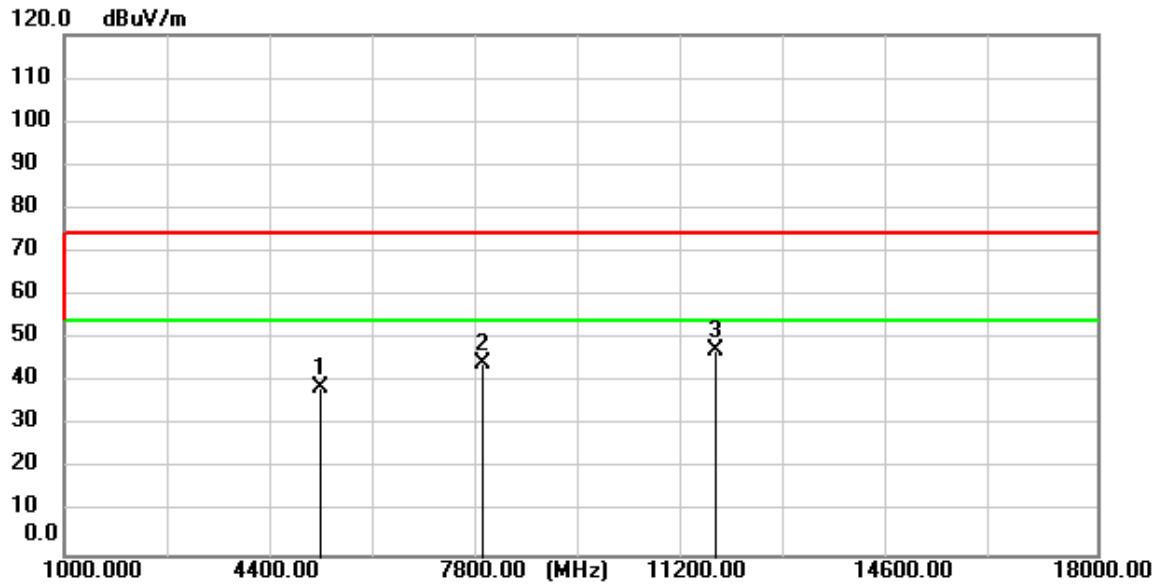
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	6651.650	54.34	-10.78	43.56	74.00	-30.44	peak
2	9119.200	55.10	-7.49	47.61	74.00	-26.39	peak
3	12742.750	54.37	-6.03	48.34	74.00	-25.66	peak

Test Mode: 00; Polarity: Vertical; Modulation:PI/4-DQPSK; Channel:middle



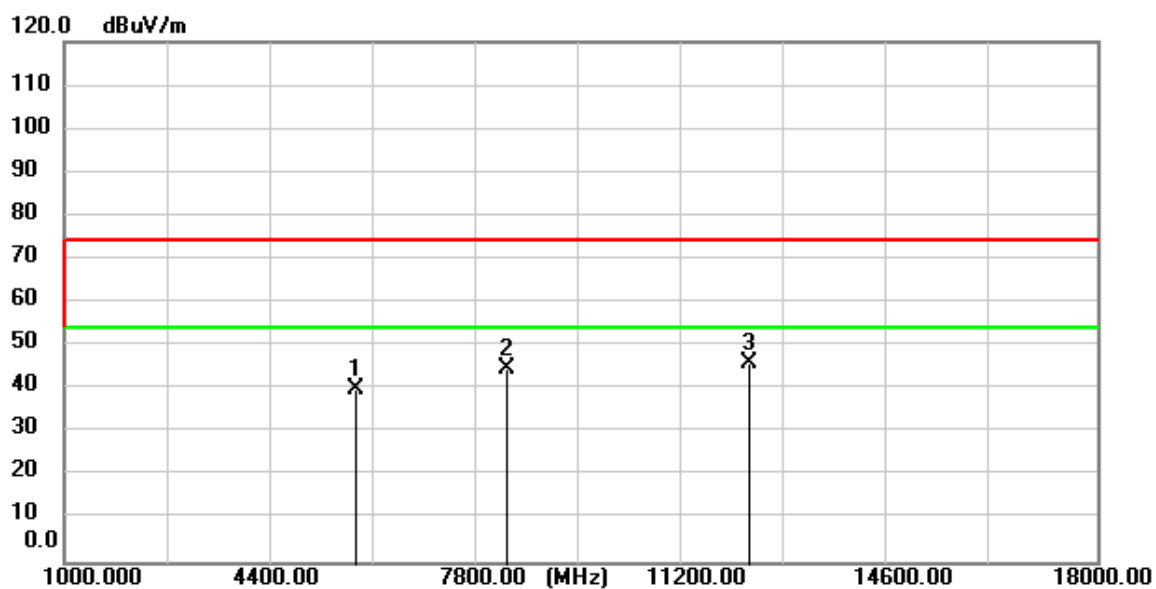
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5781.250	55.00	-14.74	40.26	74.00	-33.74	peak
2	8560.750	54.41	-8.46	45.95	74.00	-28.05	peak
3	12128.200	54.16	-6.35	47.81	74.00	-26.19	peak

Test Mode: 00; Polarity: Horizontal; Modulation:PI/4-DQPSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5216.850	55.12	-16.27	38.85	74.00	-35.15	peak
2	7888.400	53.78	-9.43	44.35	74.00	-29.65	peak
3	11696.400	53.74	-6.47	47.27	74.00	-26.73	peak

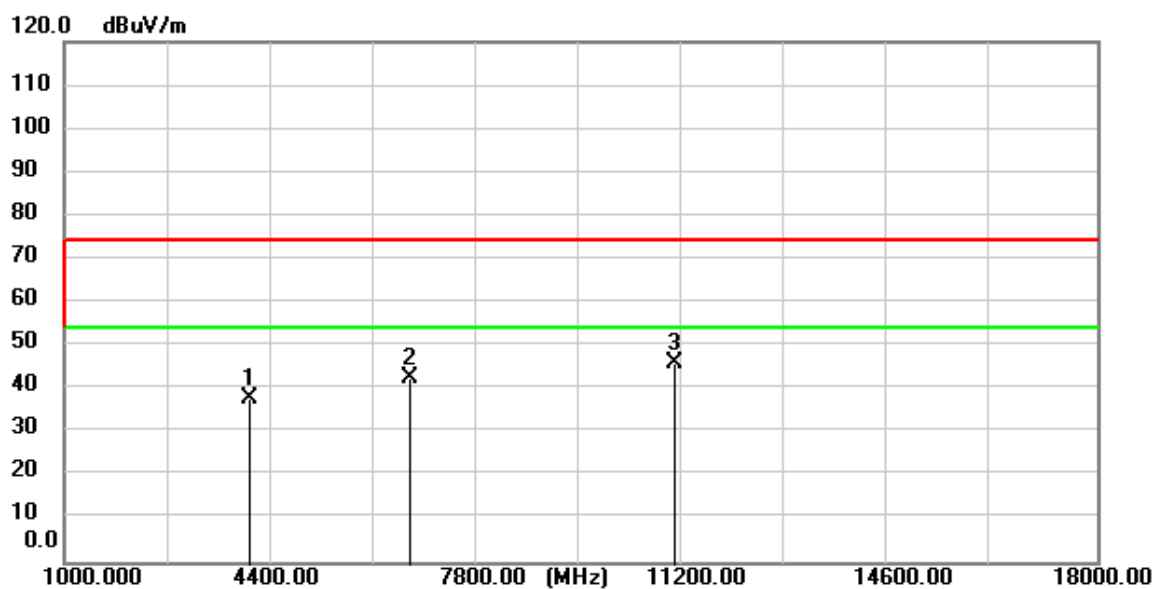
Test Mode: 00; Polarity: Vertical; Modulation:PI/4-DQPSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5781.250	55.00	-14.74	40.26	74.00	-33.74	peak
2	8287.900	53.80	-8.86	44.94	74.00	-29.06	peak
3	12257.400	52.41	-6.28	46.13	74.00	-27.87	peak

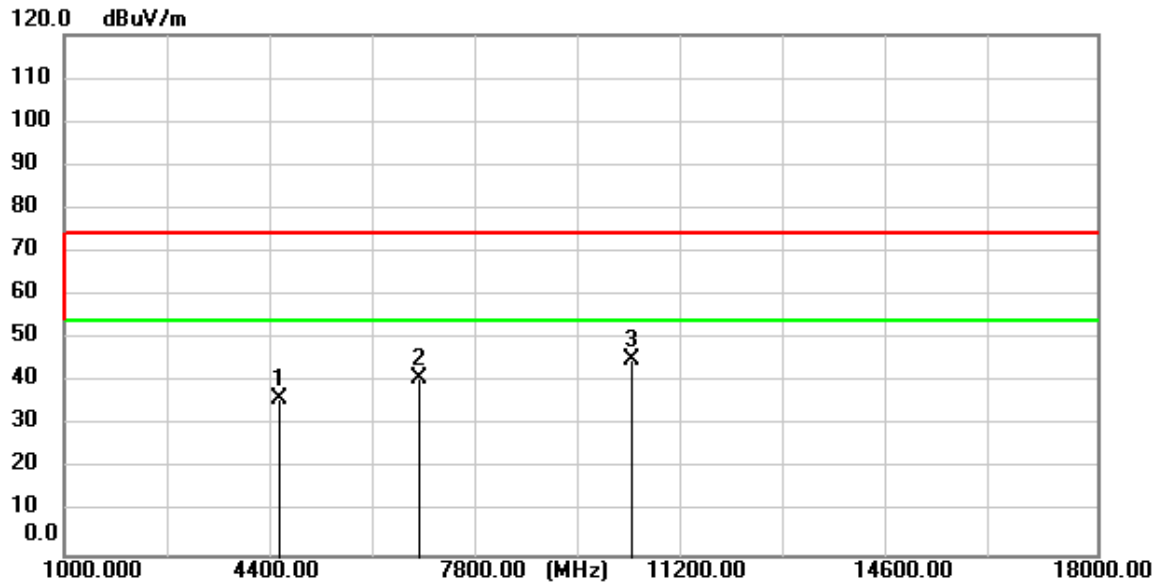
Ant 2:

Test Mode: 00; Polarity: Horizontal; Modulation:PI/4-DQPSK; Channel:Low

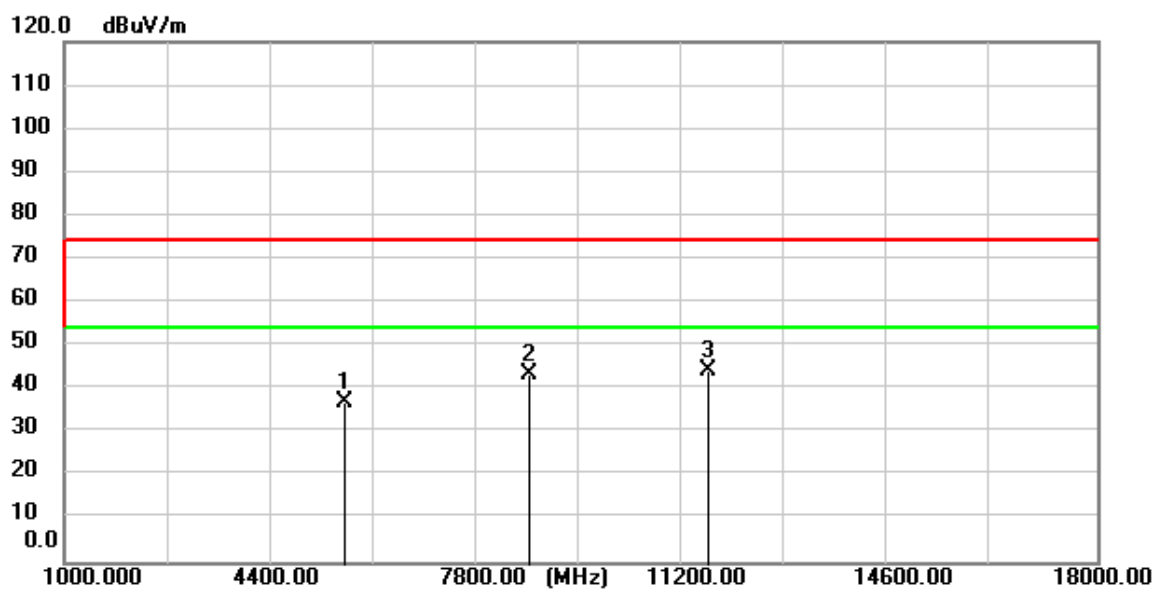


No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4035.350	57.39	-19.59	37.80	74.00	-36.20	peak
2	6689.050	53.46	-10.61	42.85	74.00	-31.15	peak
3	11034.250	52.63	-6.43	46.20	74.00	-27.80	peak

Test Mode: 00; Polarity: Vertical; Modulation:PI/4-DQPSK; Channel:Low

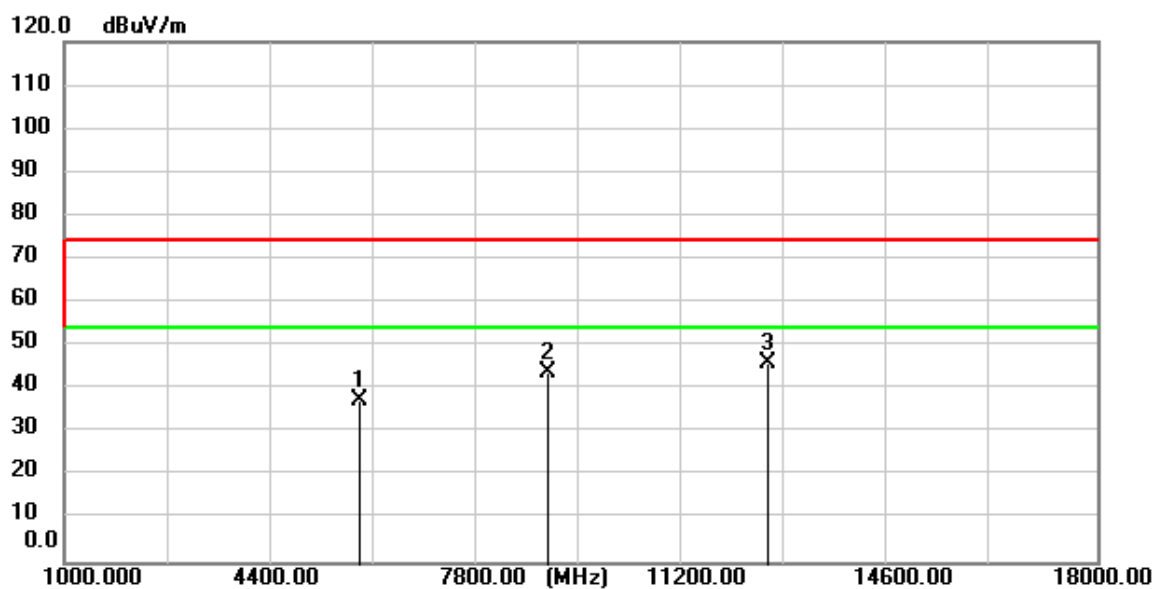


Test Mode: 00; Polarity: Horizontal; Modulation:PI/4-DQPSK; Channel:middle



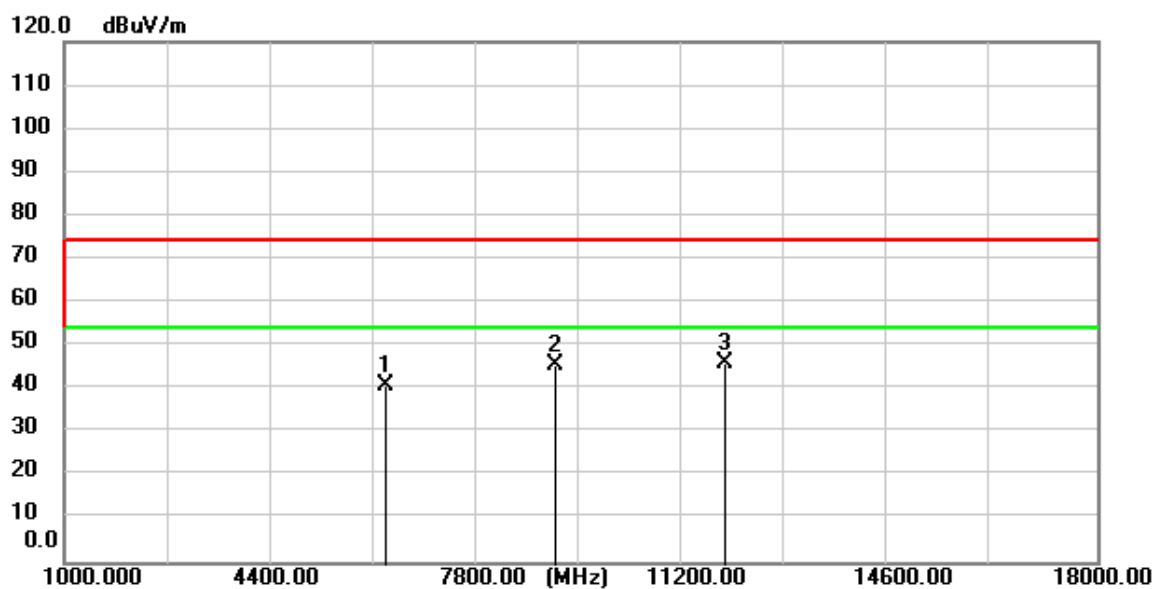
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5601.050	52.78	-15.53	37.25	74.00	-36.75	peak
2	8639.800	52.02	-8.34	43.68	74.00	-30.32	peak
3	11590.150	50.97	-6.46	44.51	74.00	-29.49	peak

Test Mode: 00; Polarity: Vertical; Modulation:PI/4-DQPSK; Channel:middle



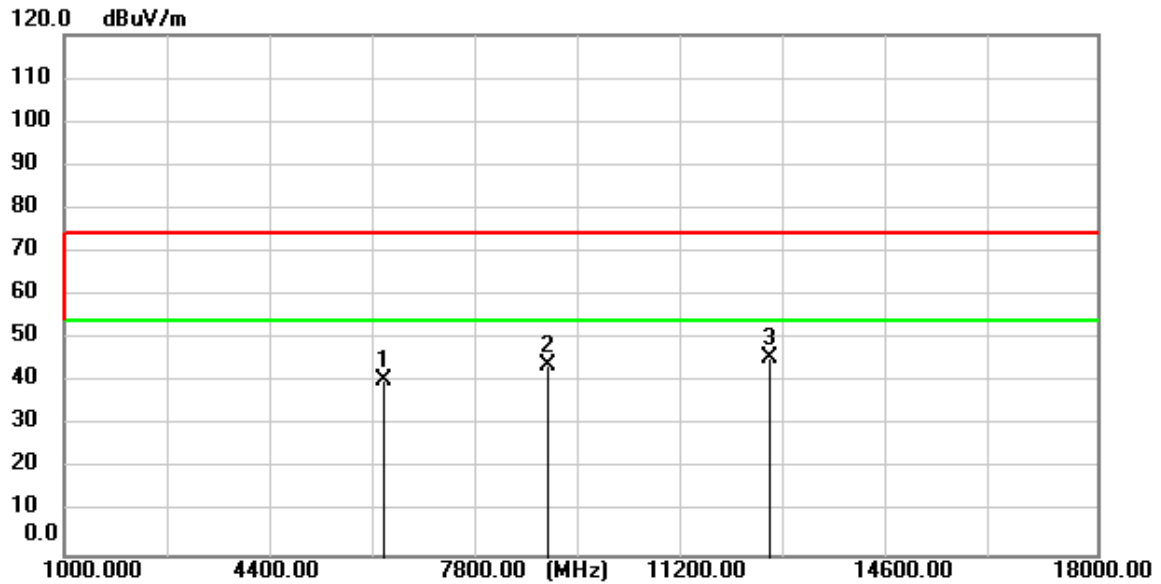
No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5848.400	51.84	-14.44	37.40	74.00	-36.60	peak
2	8952.600	51.76	-7.89	43.87	74.00	-30.13	peak
3	12575.300	52.20	-6.12	46.08	74.00	-27.92	peak

Test Mode: 00; Polarity: Horizontal; Modulation:PI/4-DQPSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	6271.700	53.70	-12.56	41.14	74.00	-32.86	peak
2	9058.850	53.47	-7.64	45.83	74.00	-28.17	peak
3	11874.050	52.36	-6.48	45.88	74.00	-28.12	peak

Test Mode: 00; Polarity: Vertical; Modulation:PI/4-DQPSK; Channel:High



No.	Frequency (MHz)	Reading (dBuV)	Correction factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	6255.550	53.11	-12.64	40.47	74.00	-33.53	peak
2	8952.600	51.76	-7.89	43.87	74.00	-30.13	peak
3	12608.450	51.57	-6.09	45.48	74.00	-28.52	peak

7.5 Conducted Average Output Power

Test Requirement 47 CFR Part 15, Subpart C 15.247(b)(3)

Test Method: ANSI C63.10 (2013) Section 11.9.2

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

7.5.1 E.U.T. Operation

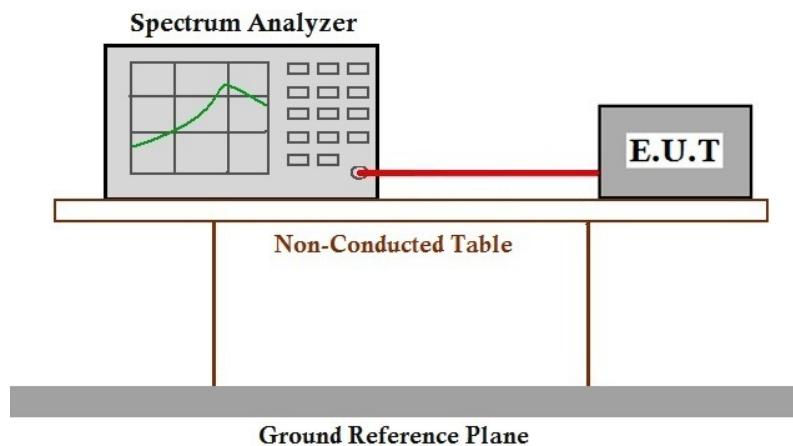
Operating Environment:

Temperature: 20.5 °C

Humidity: 50.5 % RH

Atmospheric Pressure: 1010 mbar

7.5.2 Test Setup Diagram



7.5.3 Measurement Procedure and Data

Note: Since the verify power the same operating range bandwidth and smaller power can be covered by the higher power.

Please Refer to Appendix for Details

7.6 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

7.6.1 E.U.T. Operation

Operating Environment:

Temperature: 20.5 °C

Humidity: 50.5 % RH

Atmospheric Pressure: 1010 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 mode with PI/4-DQPSK modulation.

7.6.3 Measurement Procedure and Data

Please Refer to Appendix for Details

7.7 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

7.7.1 E.U.T. Operation

Operating Environment:

Temperature: 20.5 °C

Humidity: 50.5 % RH

Atmospheric Pressure: 1010 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 mode with PI/4-DQPSK modulation.

7.7.3 Measurement Procedure and Data

Please Refer to Appendix for Details

7.8 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)).

7.8.1 E.U.T. Operation

Operating Environment:

Temperature: 20.5 °C

Humidity: 50.5 % RH

Atmospheric Pressure: 1010 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 mode with PI/4-DQPSK modulation.

7.8.3 Measurement Procedure and Data

Please Refer to Appendix for Details

7.9 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)).

7.9.1 E.U.T. Operation

Operating Environment:

Temperature: 20.5 °C

Humidity: 50.5 % RH

Atmospheric Pressure: 1010 mbar

7.9.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with PI/4-DQPSK modulation.

7.9.3 Measurement Procedure and Data

Please Refer to Appendix for Details

7.10 99% Bandwidth

Test Requirement RSS-Gen Section 6.7
Test Method: ANSI C63.10 (2013) Section 6.9.3

7.10.1 E.U.T. Operation

Operating Environment:
Temperature: 20.5 °C Humidity: 50.5 % RH Atmospheric Pressure: 1010 mbar

7.10.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	TX mode_Keep the EUT in continuously transmitting mode with PI/4-DQPSK modulation.

7.10.3 Measurement Procedure and Data

Please Refer to Appendix for Details

8 Test Setup Photo

Refer to Appendix - Test Setup Photo for KSCR2504000687AT

9 EUT Constructional Details (EUT Photos)

Refer to Appendix_Photographs of EUT Constructional Details for KSCR2504000687AT

10 Appendix

Ant 1:

1. Duty Cycle

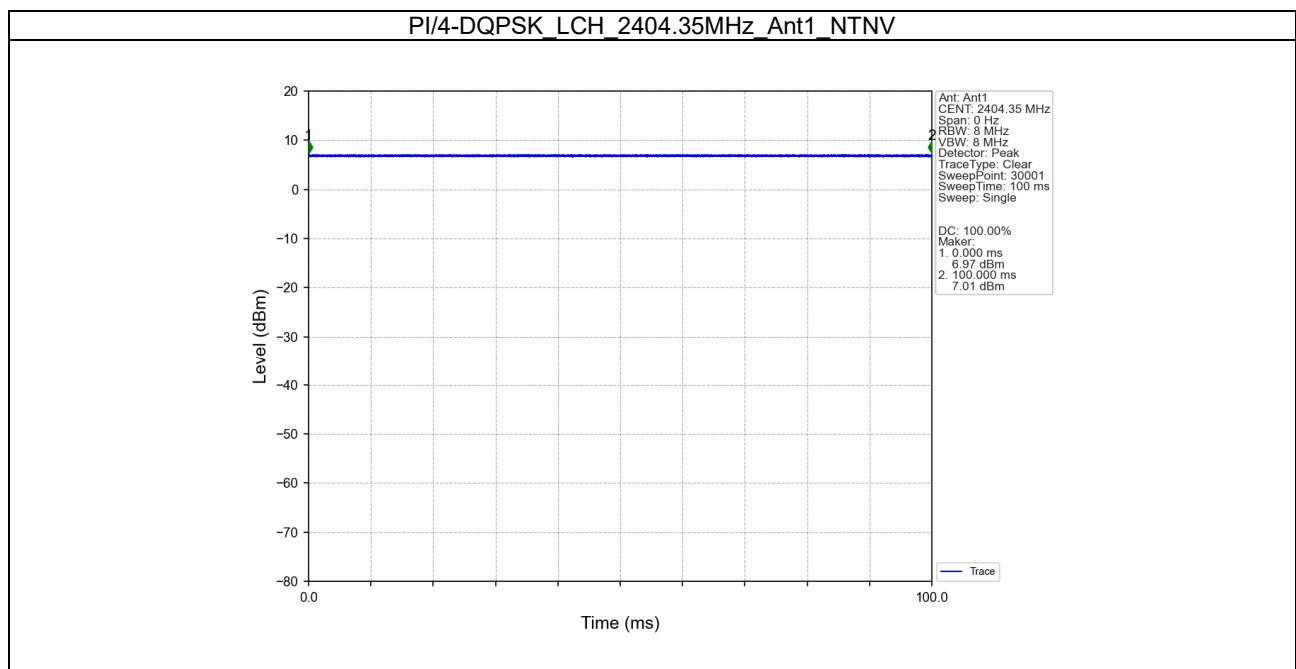
1.1 Test Result

1.1.1 Ant1

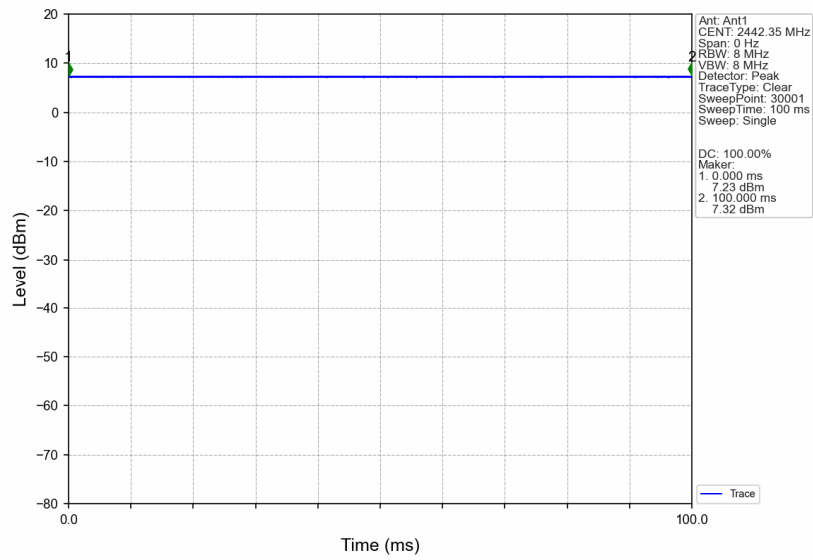
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
PI/4-DQPSK	SISO	2404.35	100.000	100.000	100.00	0.00	0.00
		2442.35	100.000	100.000	100.00	0.00	0.00
		2474.35	100.000	100.000	100.00	0.00	0.00

1.2 Test Graph

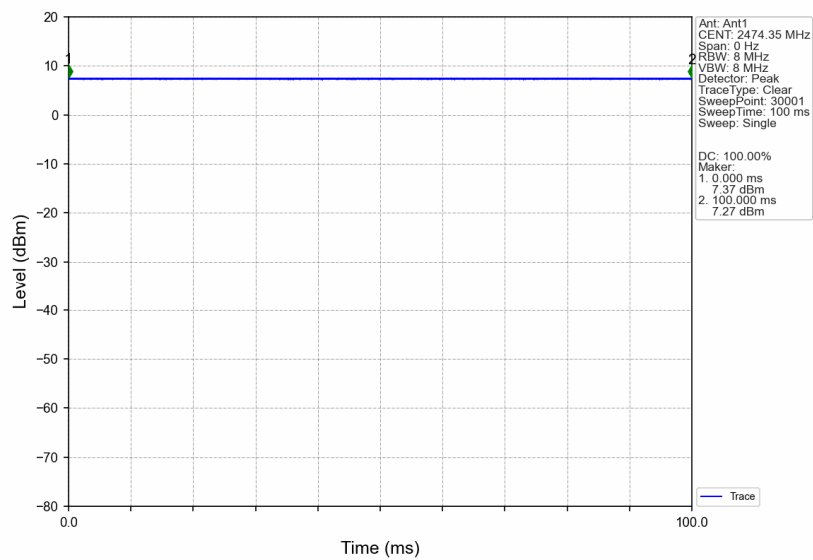
1.2.1 Ant1



PI/4-DQPSK MCH 2442.35MHz Ant1 NTN



PI/4-DQPSK HCH 2474.35MHz Ant1 NTN



2. Bandwidth

2.1 Test Result

2.1.1 OBW

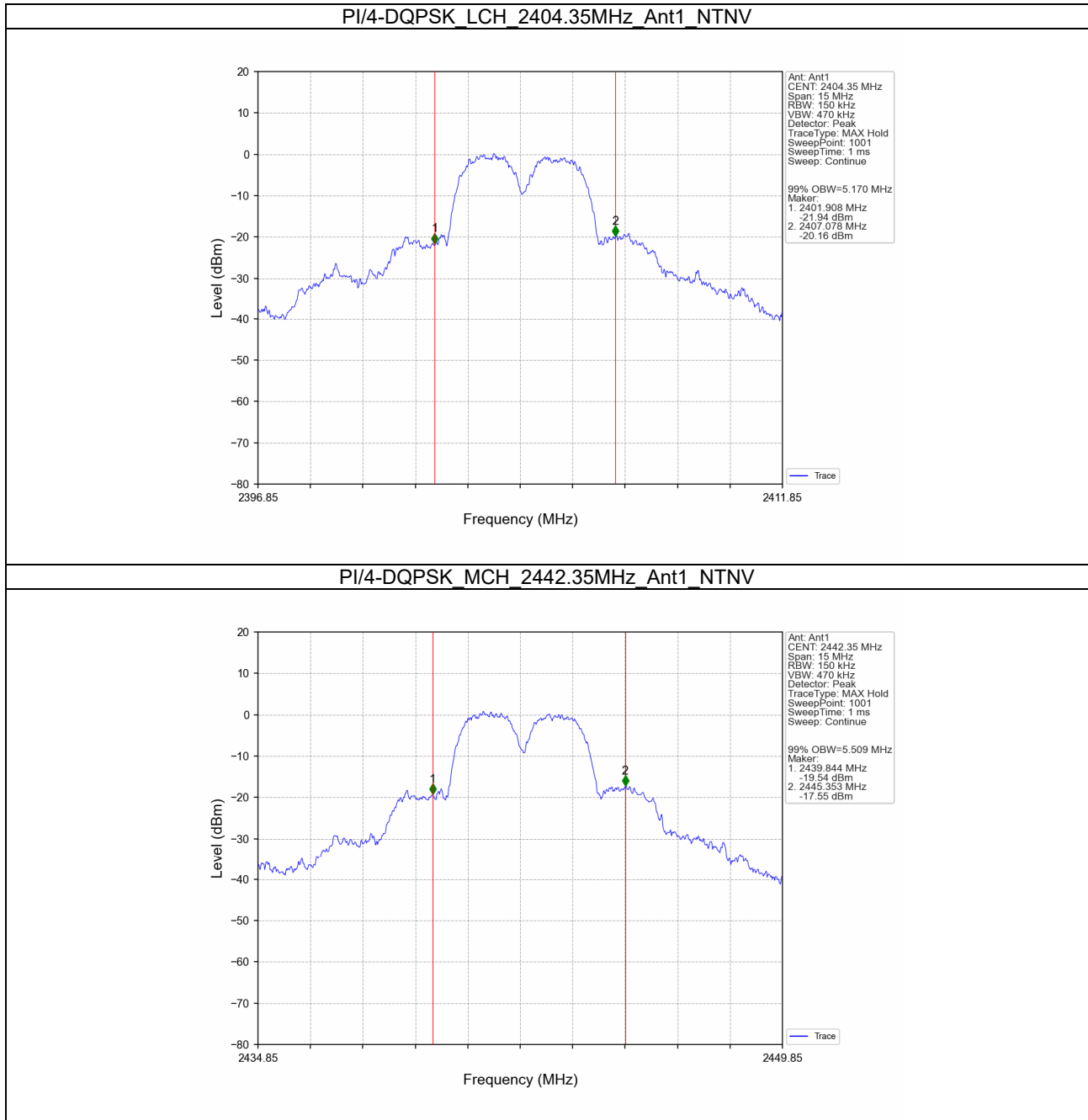
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
PI/4-DQPSK	SISO	2404.35	1	5.170	/	Pass
		2442.35	1	5.509	/	Pass
		2474.35	1	5.227	/	Pass

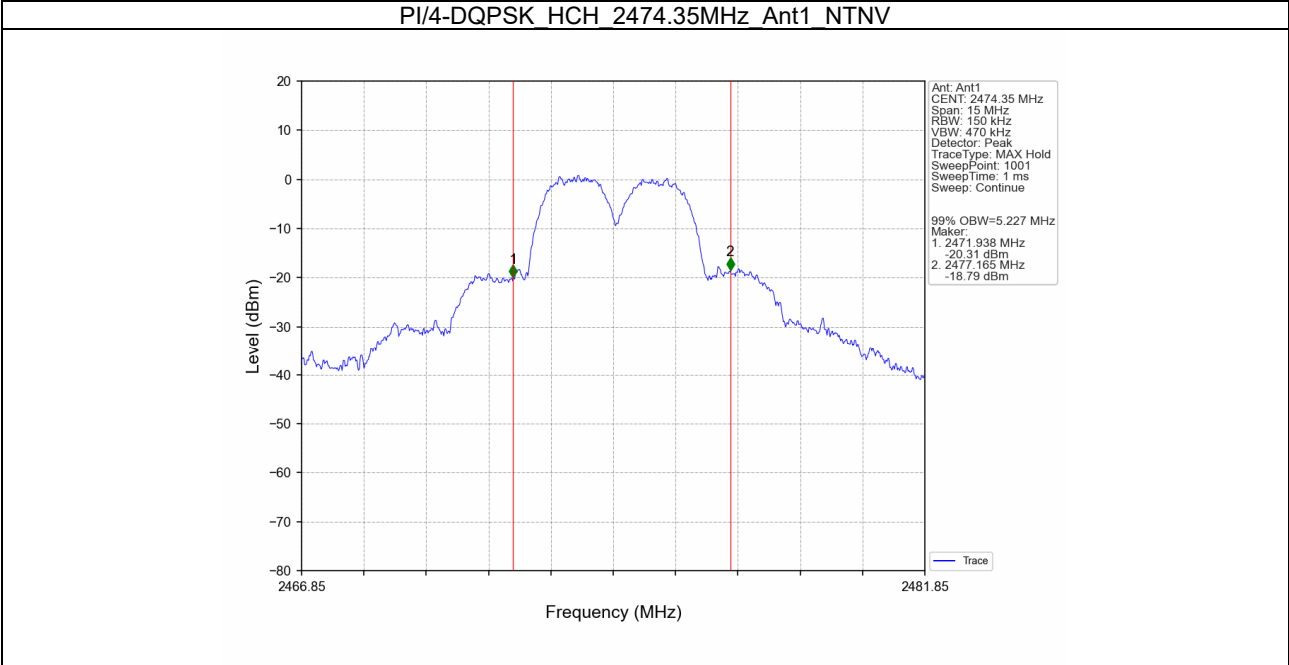
2.1.2 6dB BW

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
PI/4-DQPSK	SISO	2404.35	1	3.552	≥ 0.5	Pass
		2442.35	1	3.578	≥ 0.5	Pass
		2474.35	1	3.560	≥ 0.5	Pass

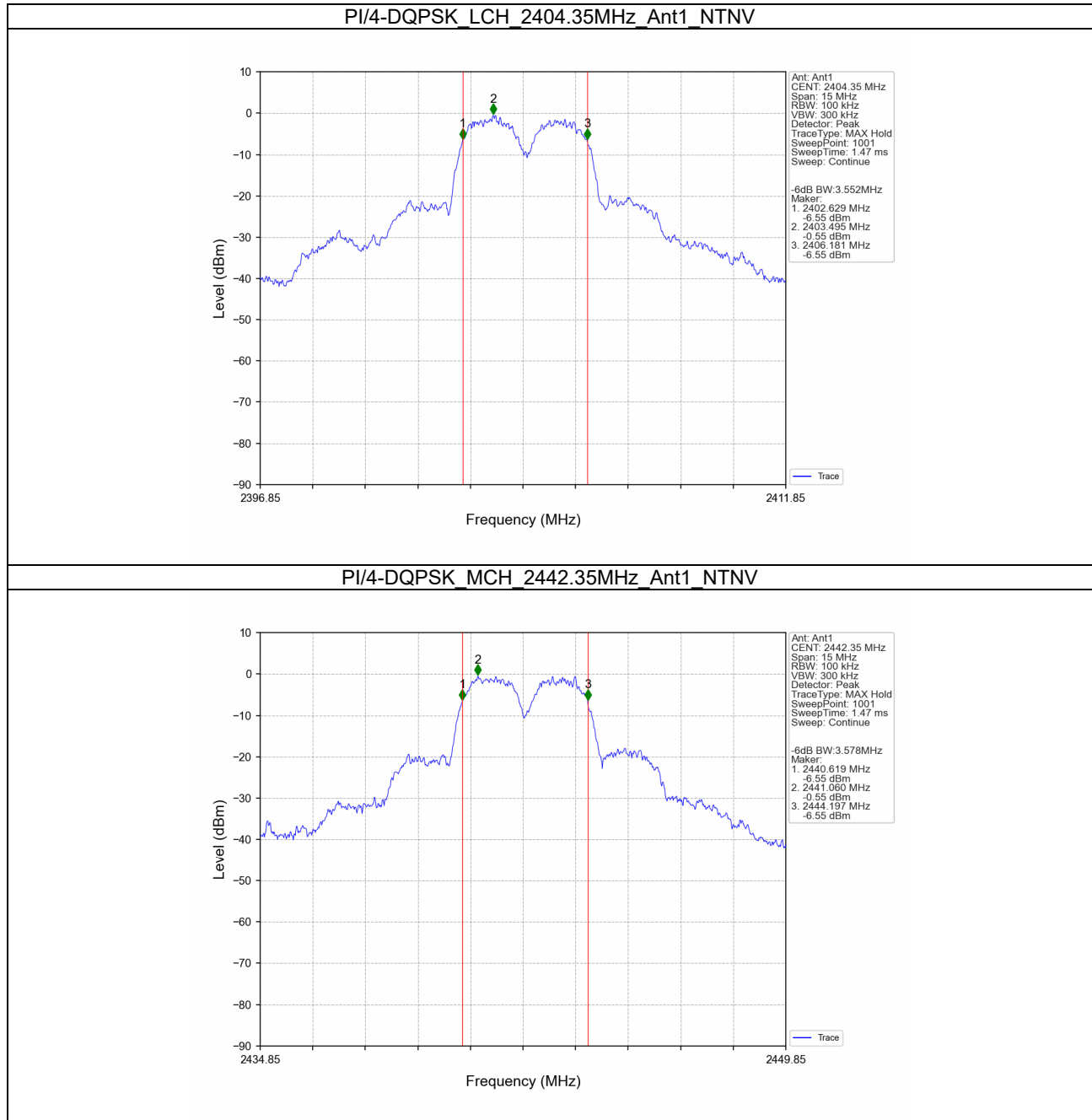
2.2 Test Graph

2.2.1 OBW

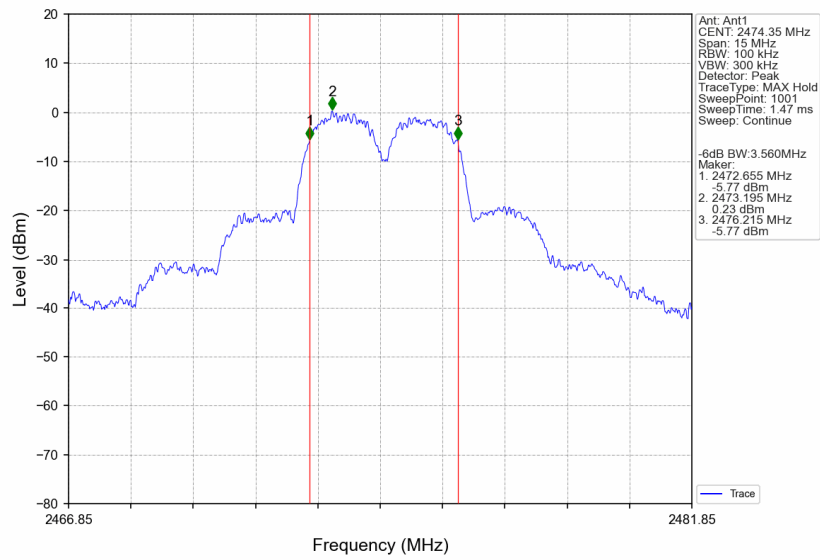




2.2.2 6dB BW



PI/4-DQPSK HCH 2474.35MHz Ant1 NTNV





3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power

Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
PI/4-DQPSK	SISO	2404.35	6.70	<=30	Pass
		2442.35	7.08	<=30	Pass
		2474.35	7.16	<=30	Pass
Note1: Antenna Gain: Ant1: -1.15dBi;					

4. Maximum Power Spectral Density

4.1 Test Result

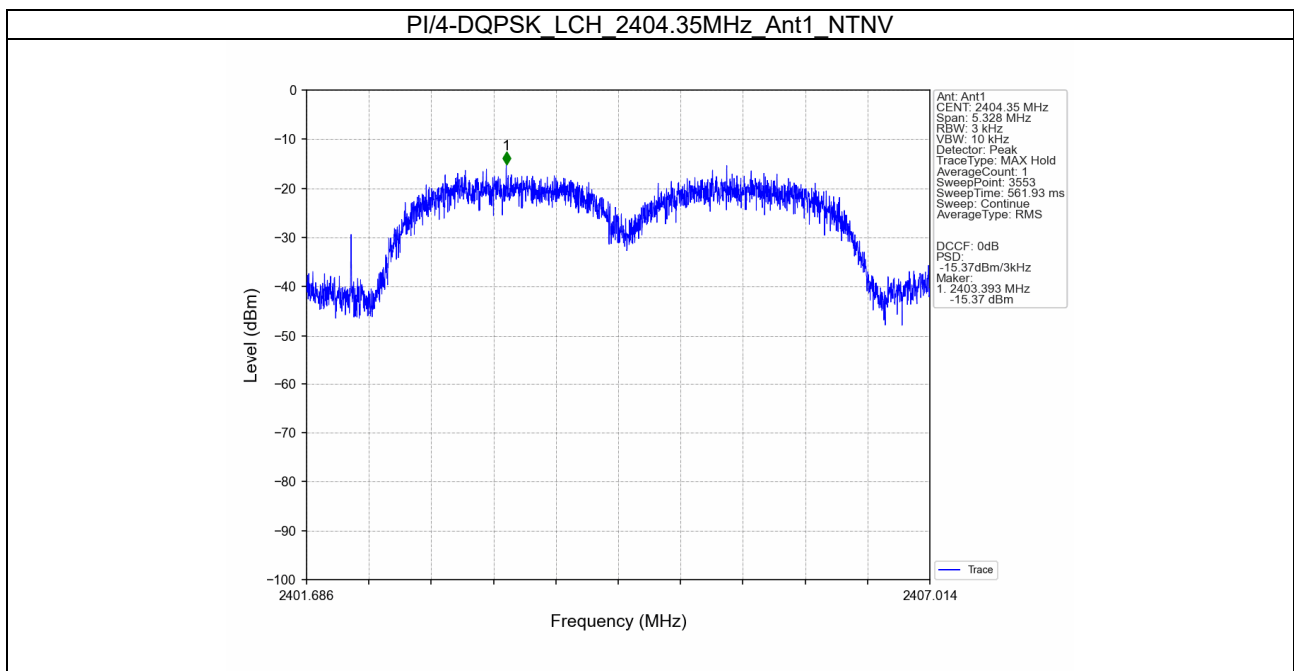
4.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
PI/4-DQPSK	SISO	2404.35	-15.37	<=8	Pass
		2442.35	-14.68	<=8	Pass
		2474.35	-14.58	<=8	Pass

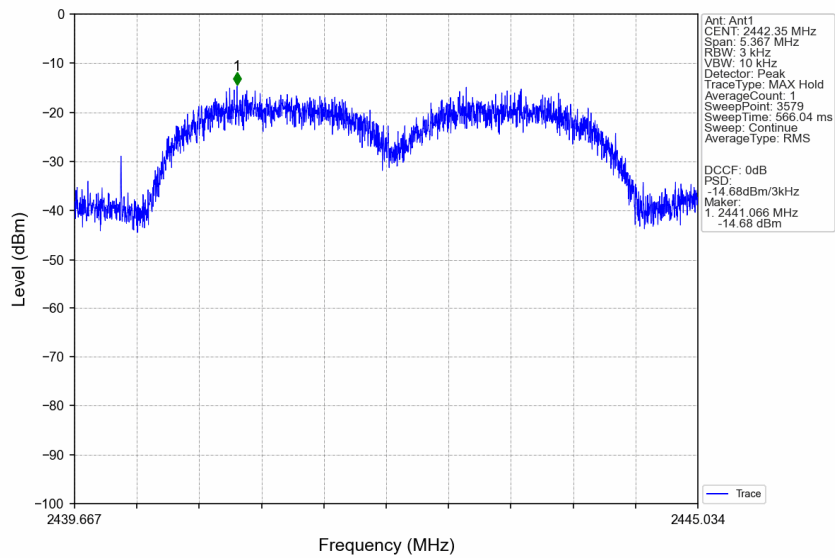
Note1: Antenna Gain: Ant1: -1.15dBi;

4.2 Test Graph

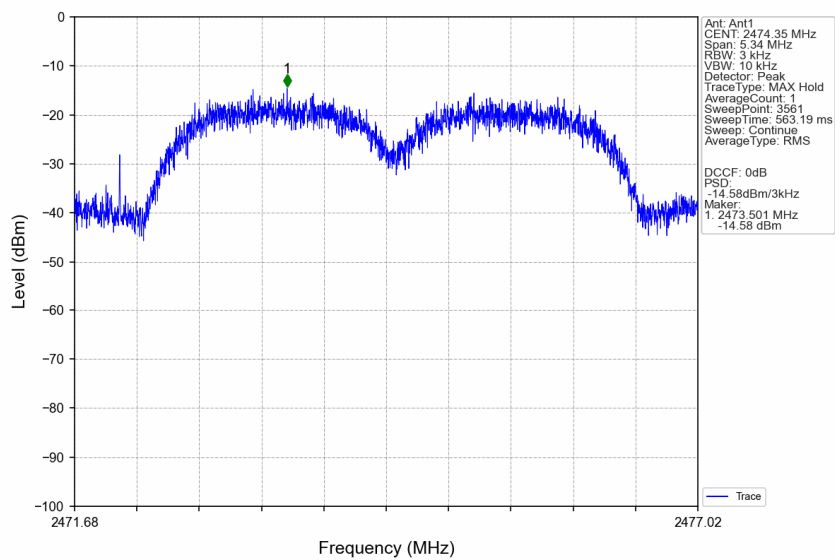
4.2.1 PSD



PI/4-DQPSK MCH 2442.35MHz Ant1 NTN



PI/4-DQPSK HCH 2474.35MHz Ant1 NTN



5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 Test Result

5.1.1 Ref

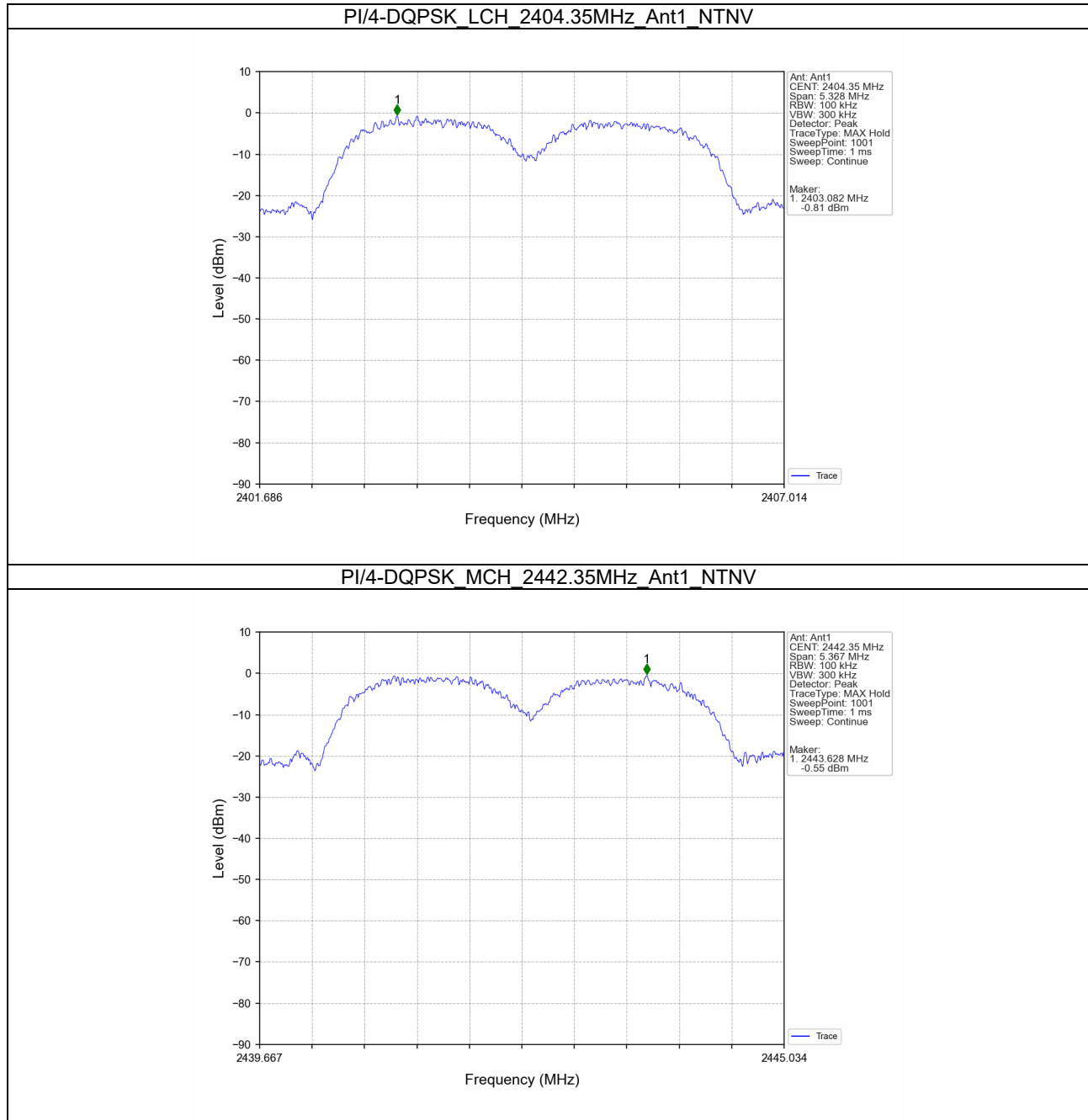
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
PI/4-DQPSK	SISO	2404.35	1	-0.81
		2442.35	1	-0.55
		2474.35	1	-0.15
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.				

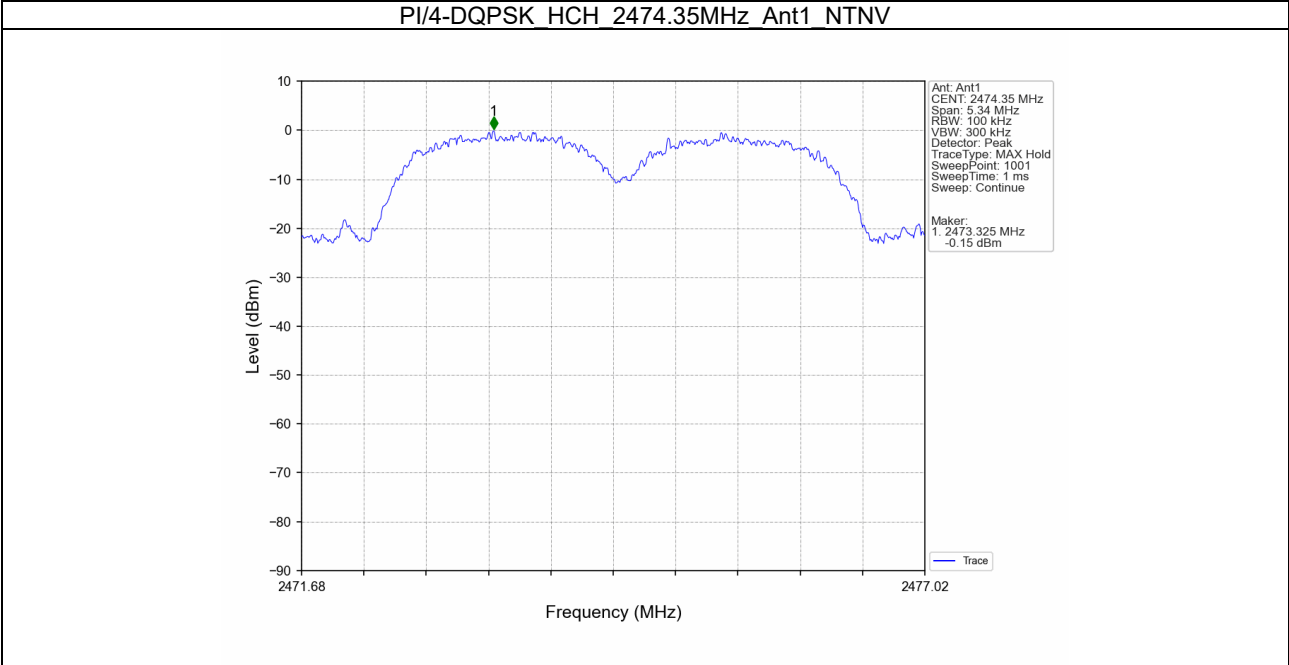
5.1.2 CSE

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
PI/4-DQPSK	SISO	2404.35	1	-0.15	-20.15	Pass
		2442.35	1	-0.15	-20.15	Pass
		2474.35	1	-0.15	-20.15	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.						

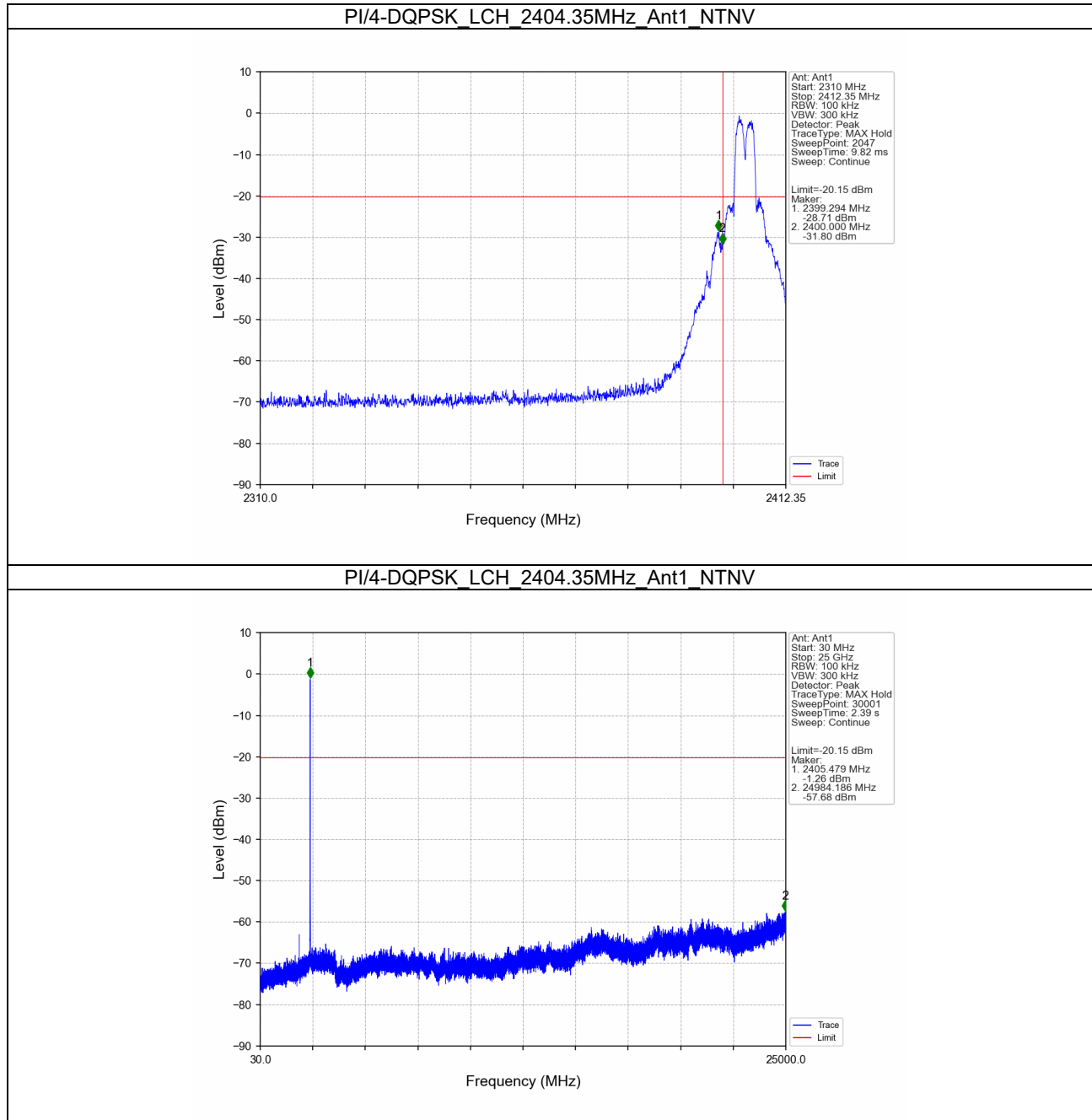
5.2 Test Graph

5.2.1 Ref

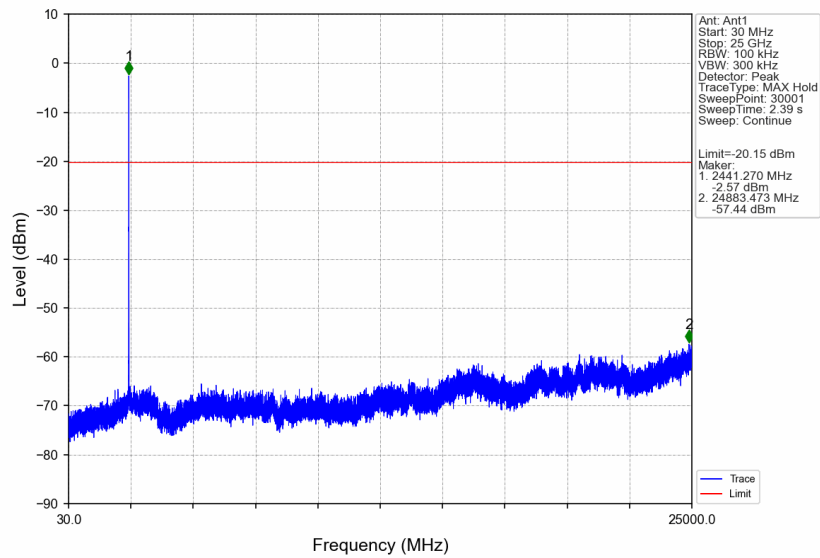




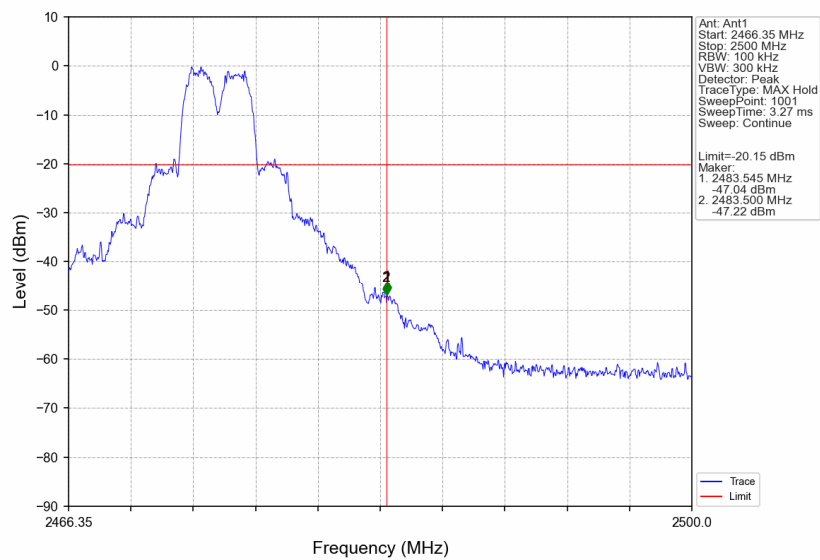
5.2.2 CSE



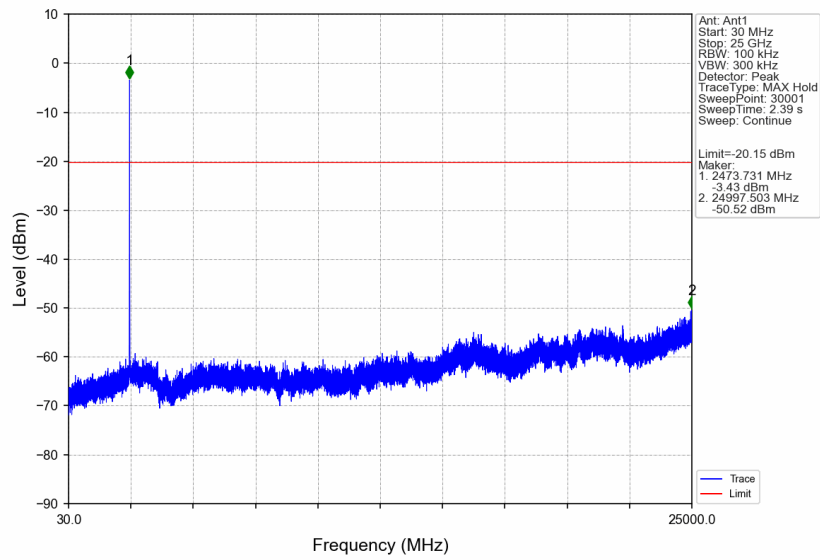
PI/4-DQPSK MCH 2442.35MHz Ant1 NTN



PI/4-DQPSK HCH 2474.35MHz Ant1 NTN



PI/4-DQPSK HCH 2474.35MHz Ant1 NTNV





Ant 2

1. Duty Cycle

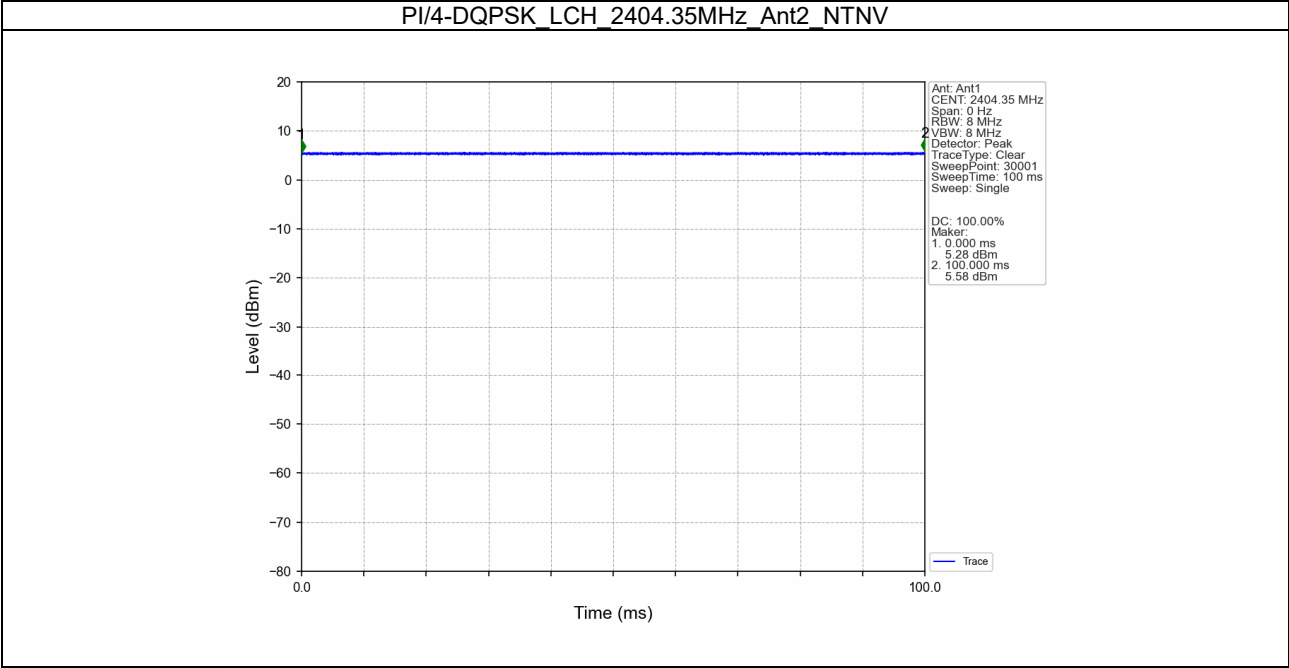
1.1 Test Result

1.1.1 Ant2

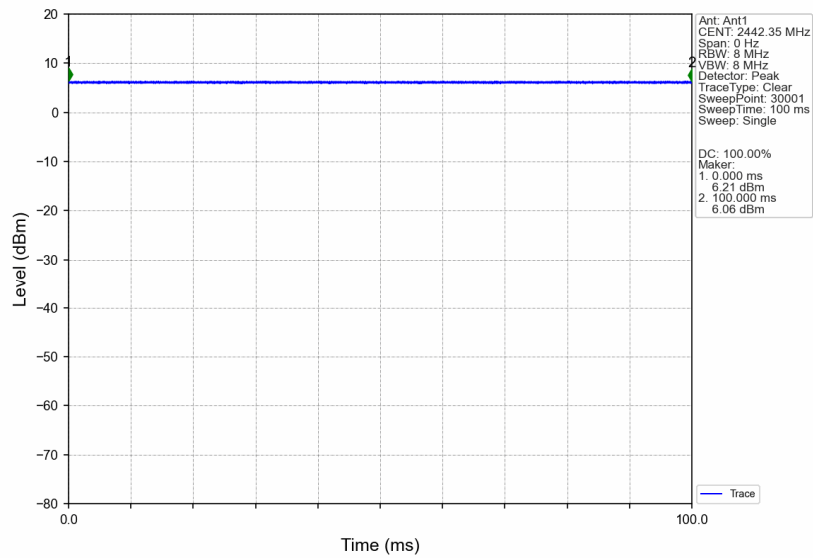
Ant2							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
PI/4-DQPSK	SISO	2404.35	100.000	100.000	100.00	0.00	0.00
		2442.35	100.000	100.000	100.00	0.00	0.00
		2474.35	100.000	100.000	100.00	0.00	0.00

1.2 Test Graph

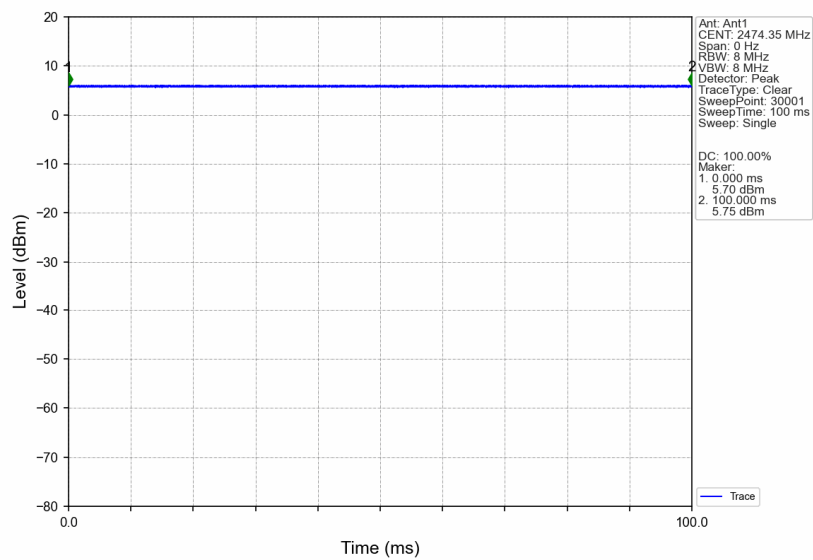
1.2.1 Ant2



PI/4-DQPSK MCH 2442.35MHz Ant2 NTN



PI/4-DQPSK HCH 2474.35MHz Ant2 NTN



2. Bandwidth

2.1 Test Result

2.1.1 OBW

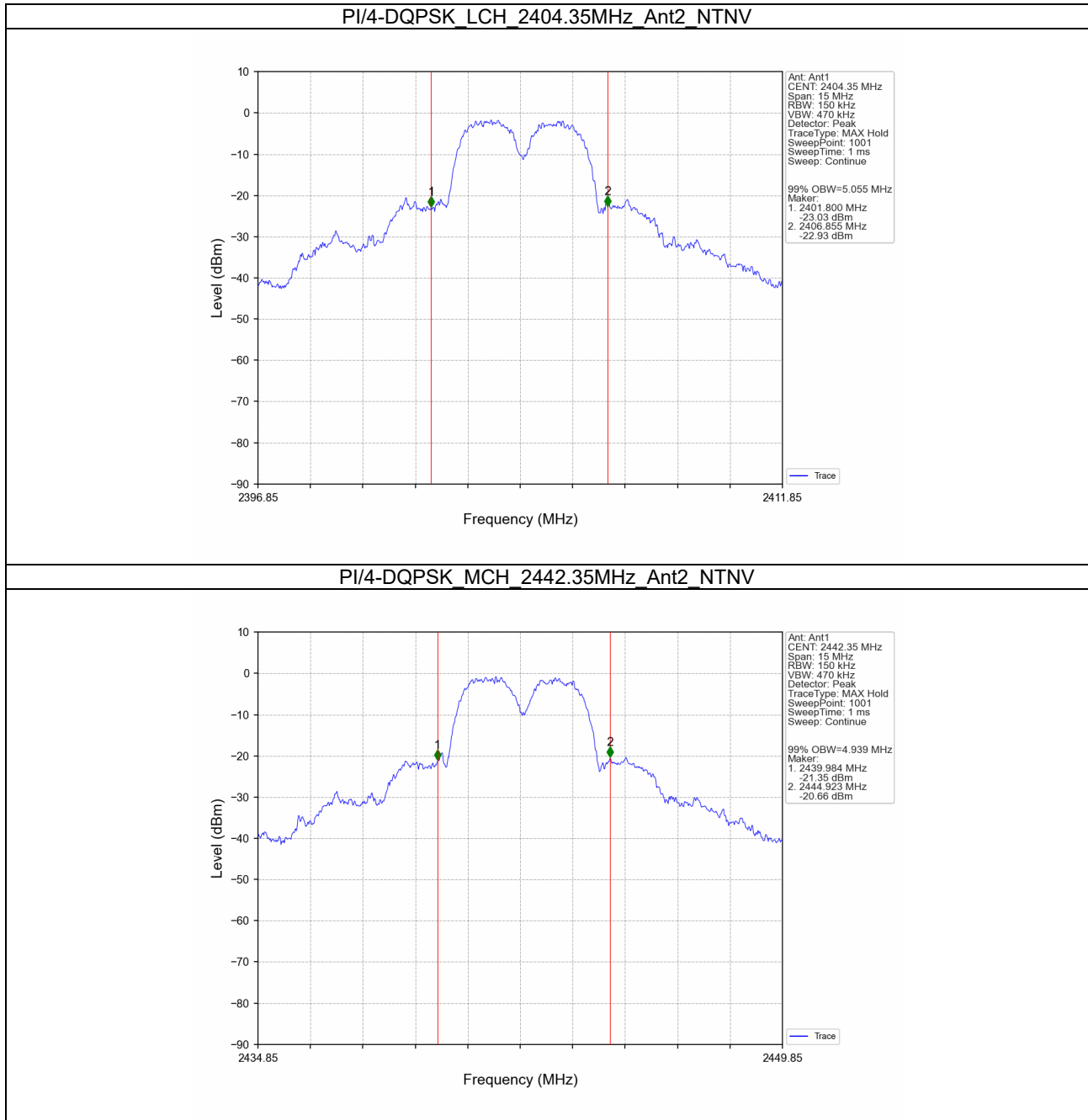
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
PI/4-DQPSK	SISO	2404.35	2	5.055	/	Pass
		2442.35	2	4.939	/	Pass
		2474.35	2	4.725	/	Pass

2.1.2 6dB BW

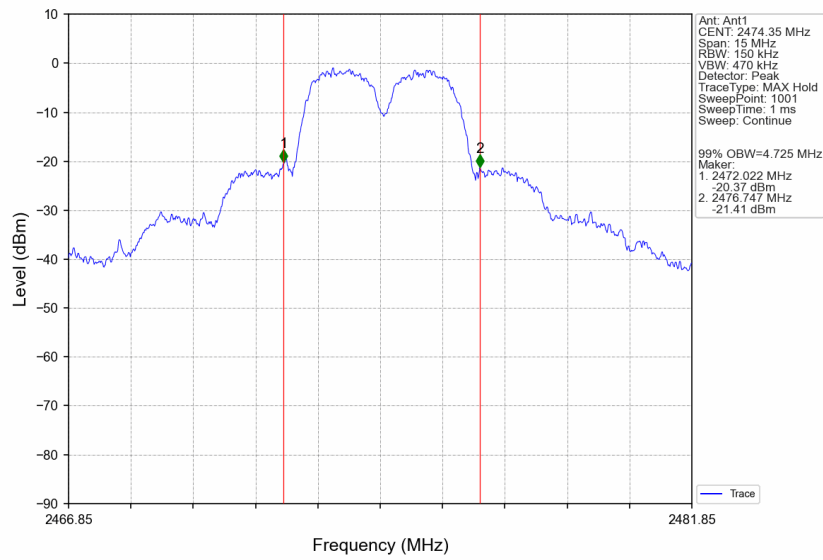
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
PI/4-DQPSK	SISO	2404.35	2	3.489	≥ 0.5	Pass
		2442.35	2	3.492	≥ 0.5	Pass
		2474.35	2	3.597	≥ 0.5	Pass

2.2 Test Graph

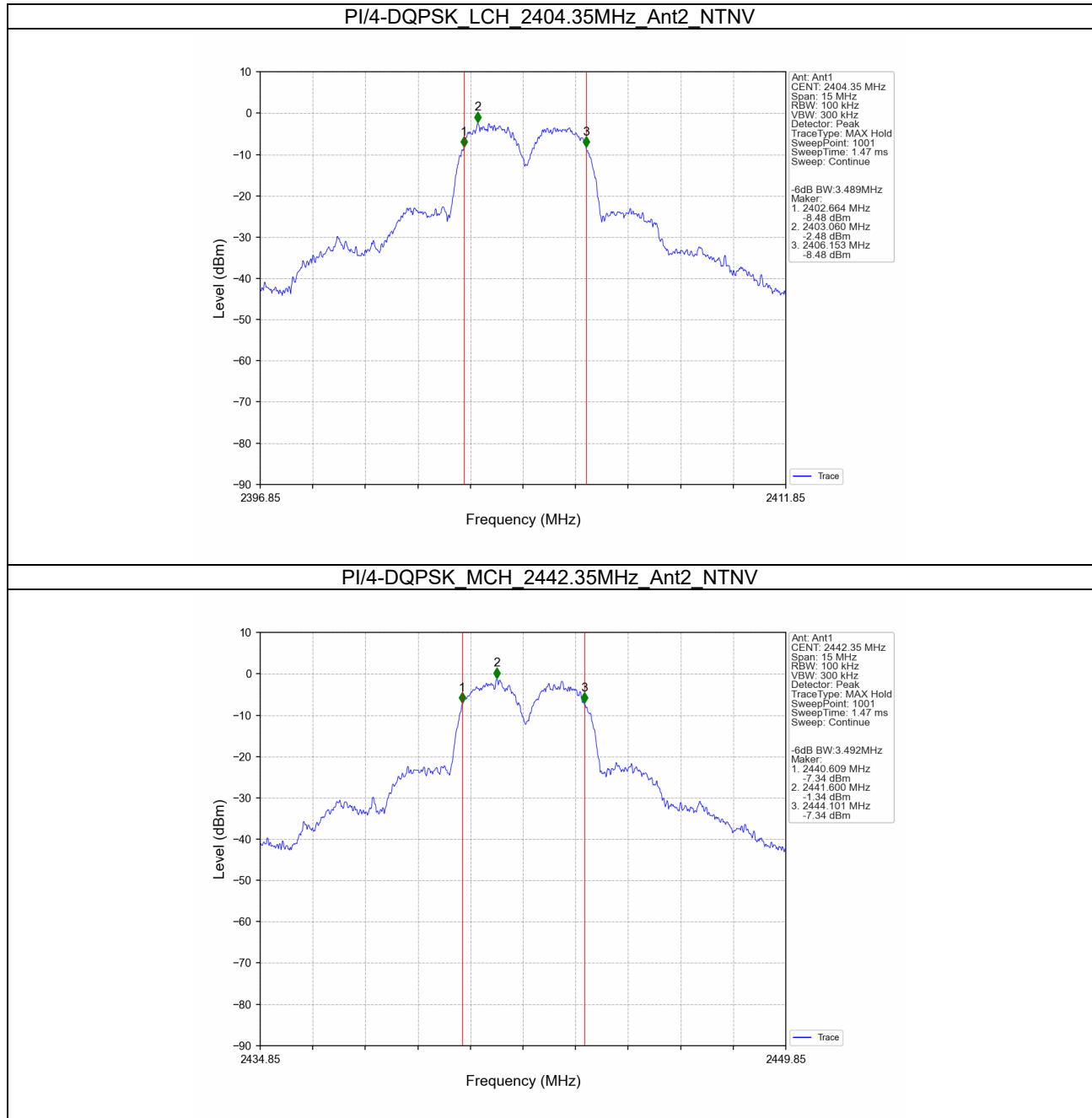
2.2.1 OBW



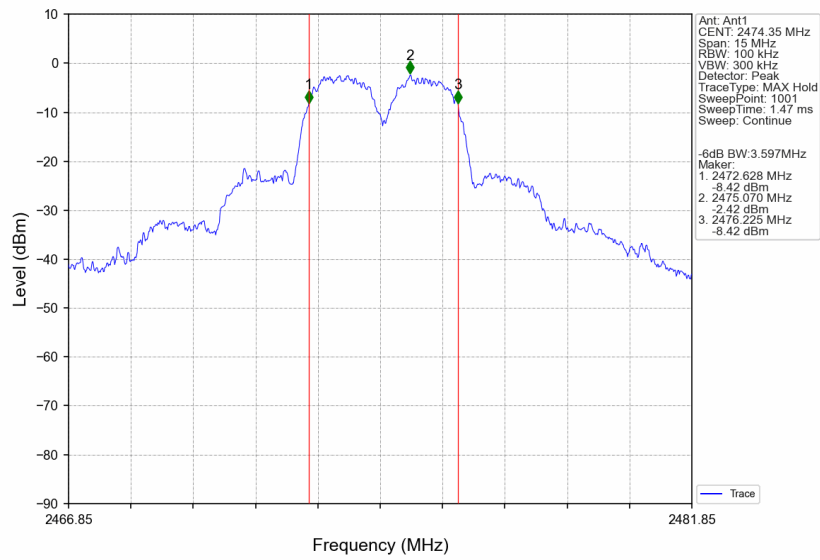
PI/4-DQPSK HCH 2474.35MHz Ant2 NTN



2.2.2 6dB BW



PI/4-DQPSK HCH 2474.35MHz Ant2 NTN



3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power

Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT2	Limit	
PI/4-DQPSK	SISO	2404.35	5.16	<=30	Pass
		2442.35	5.90	<=30	Pass
		2474.35	5.63	<=30	Pass
Note1: Antenna Gain: Ant2: -2.56dBi;					

4. Maximum Power Spectral Density

4.1 Test Result

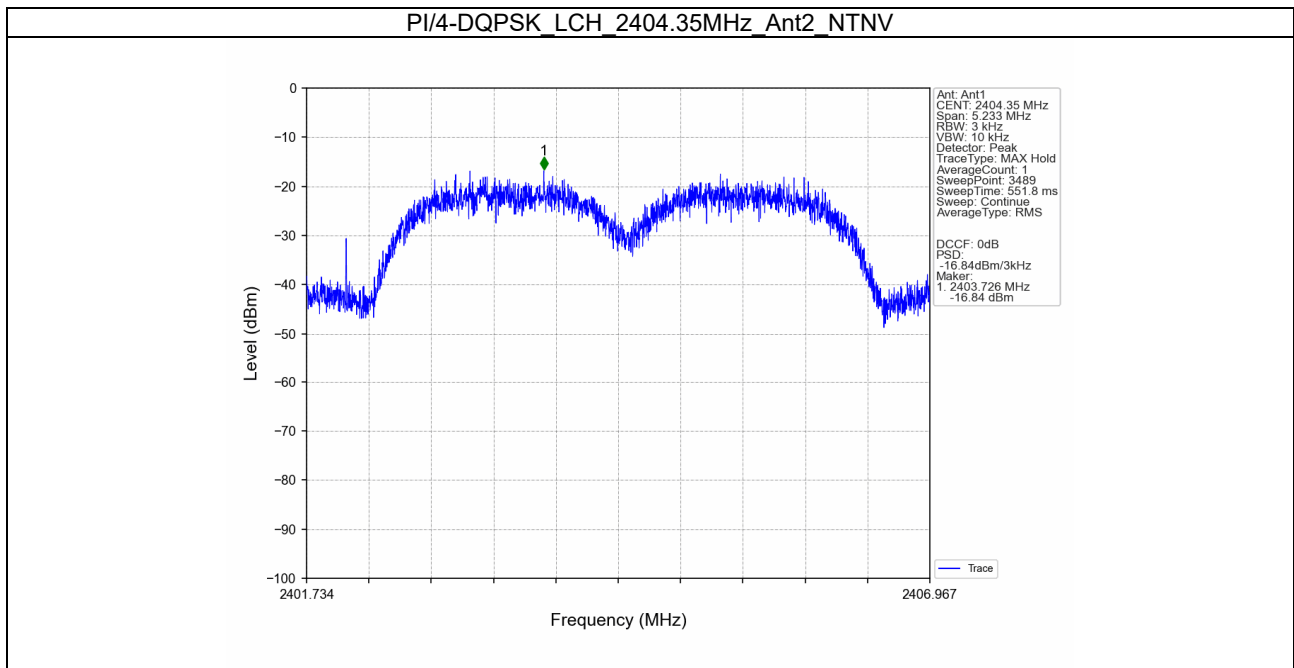
4.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT2	Limit	
PI/4-DQPSK	SISO	2404.35	-16.84	<=8	Pass
		2442.35	-16.41	<=8	Pass
		2474.35	-16.18	<=8	Pass

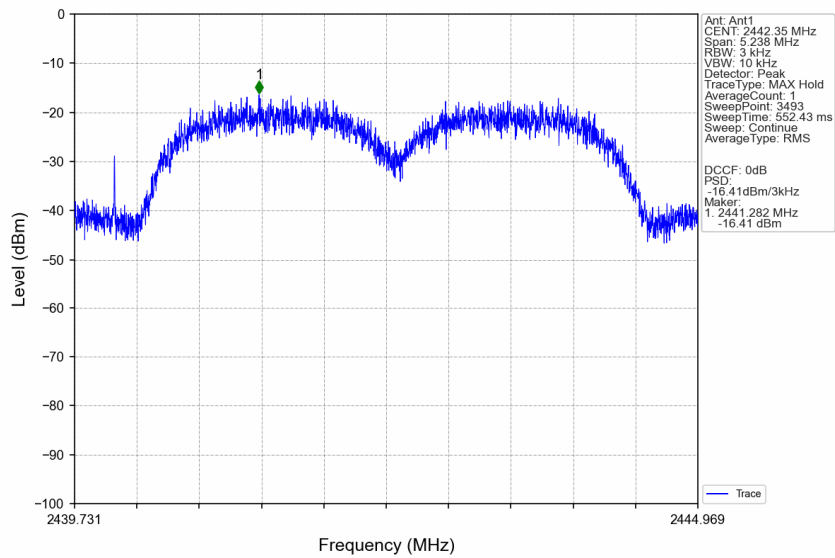
Note1: Antenna Gain: Ant2: -2.56dBi;

4.2 Test Graph

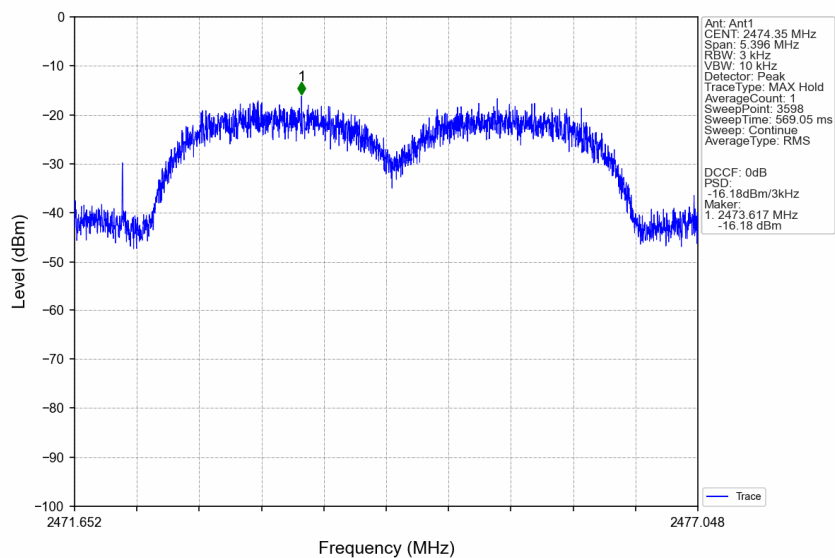
4.2.1 PSD



PI/4-DQPSK MCH 2442.35MHz Ant2 NTN



PI/4-DQPSK HCH 2474.35MHz Ant2 NTN



5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 Test Result

5.1.1 Ref

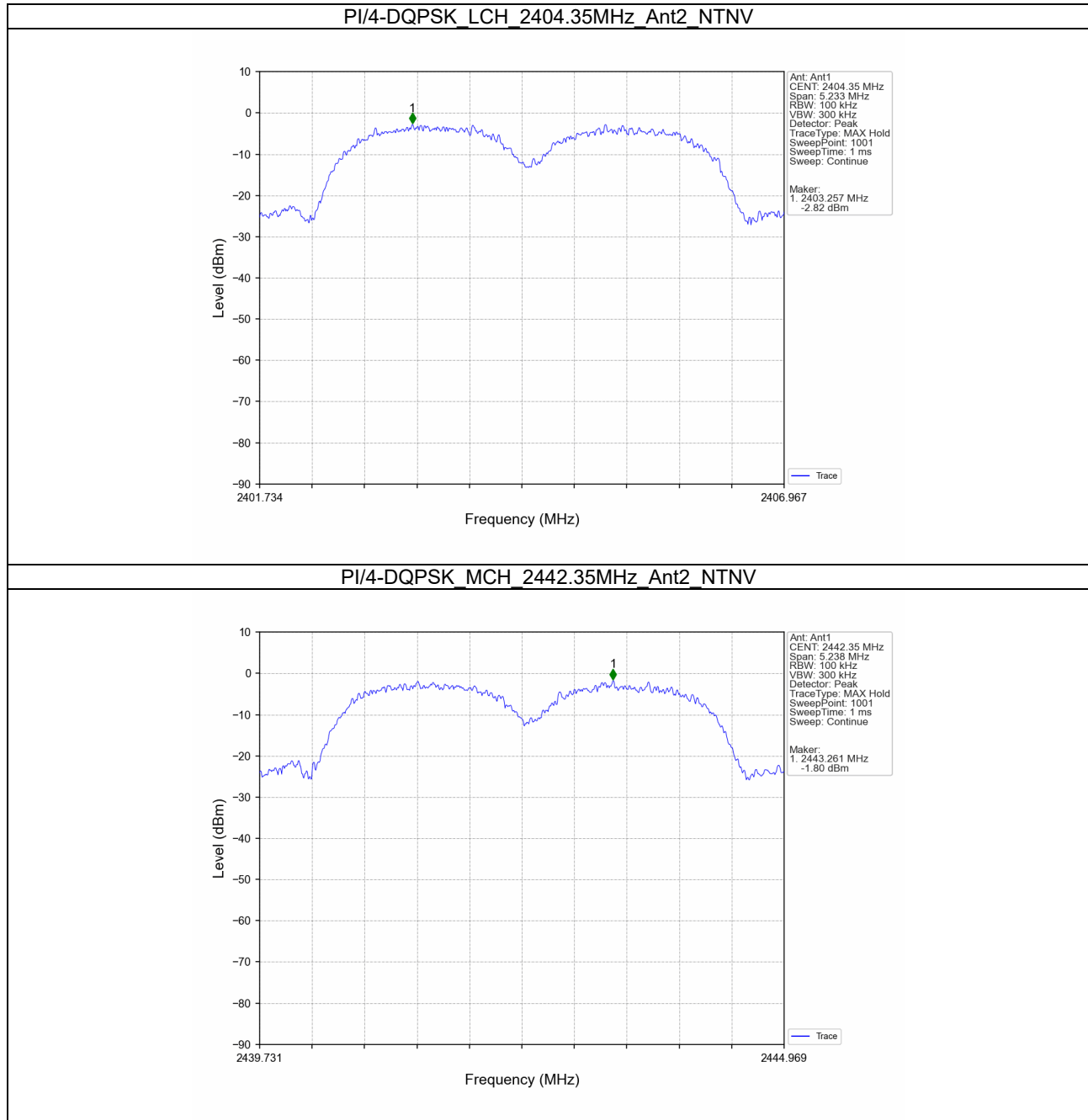
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
PI/4-DQPSK	SISO	2404.35	2	-2.82
		2442.35	2	-1.80
		2474.35	2	-2.27
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.				

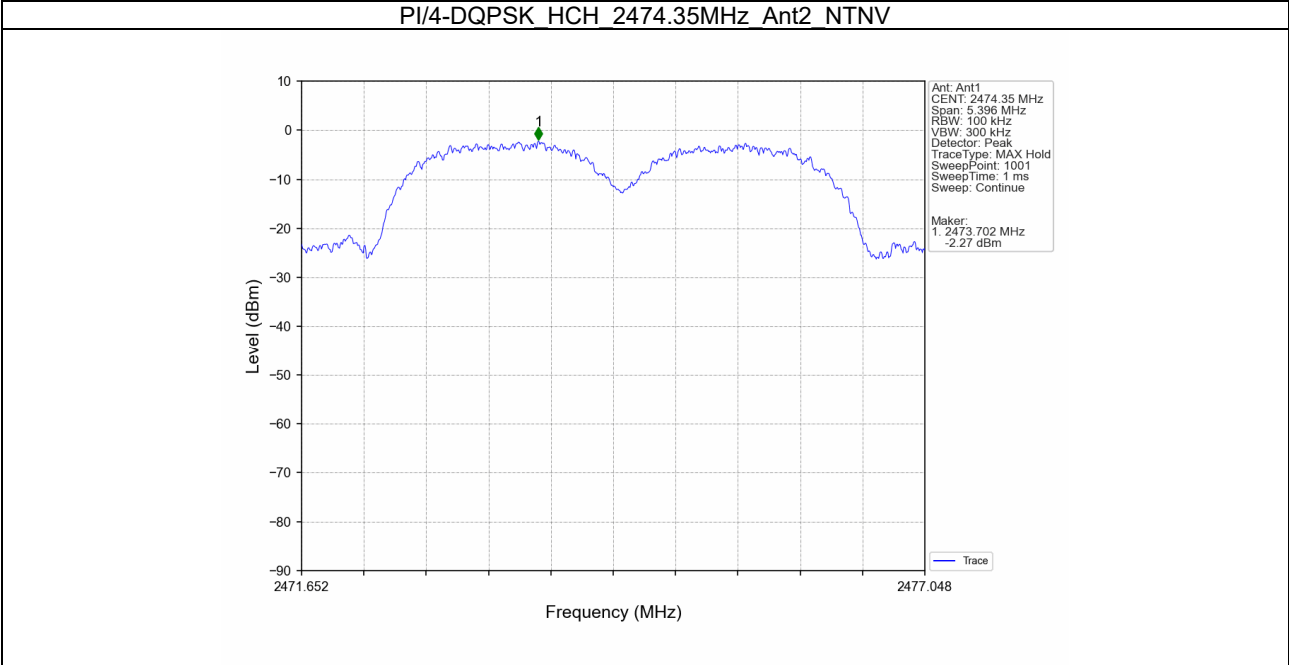
5.1.2 CSE

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
PI/4-DQPSK	SISO	2404.35	2	-1.80	-21.80	Pass
		2442.35	2	-1.80	-21.80	Pass
		2474.35	2	-1.80	-21.80	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.						

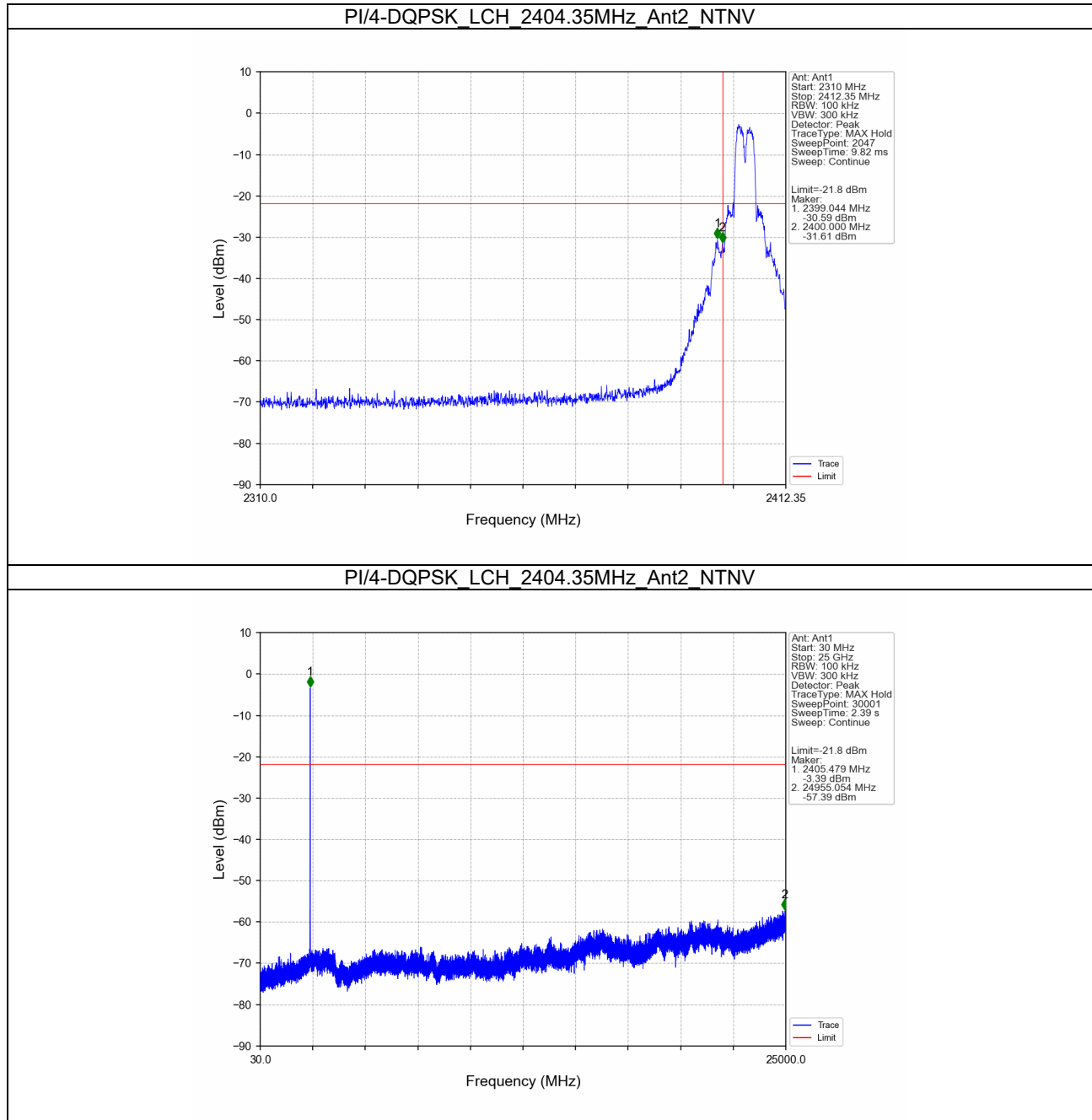
5.2 Test Graph

5.2.1 Ref

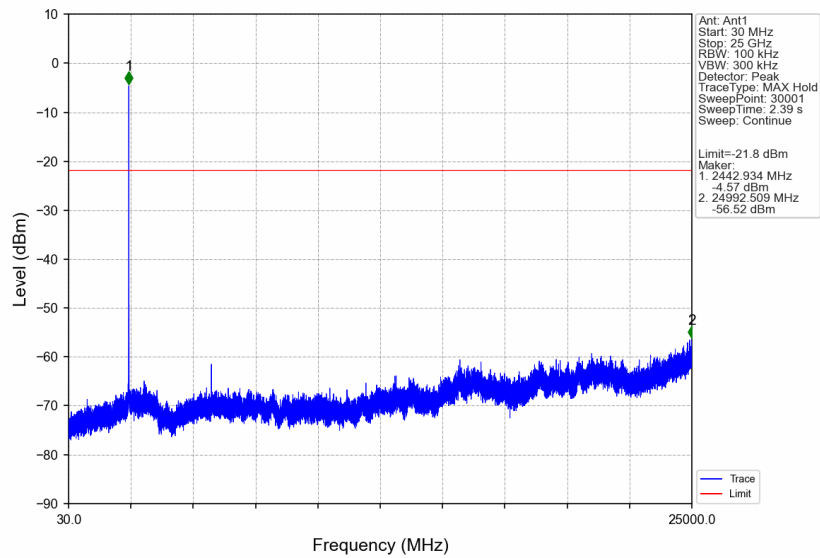




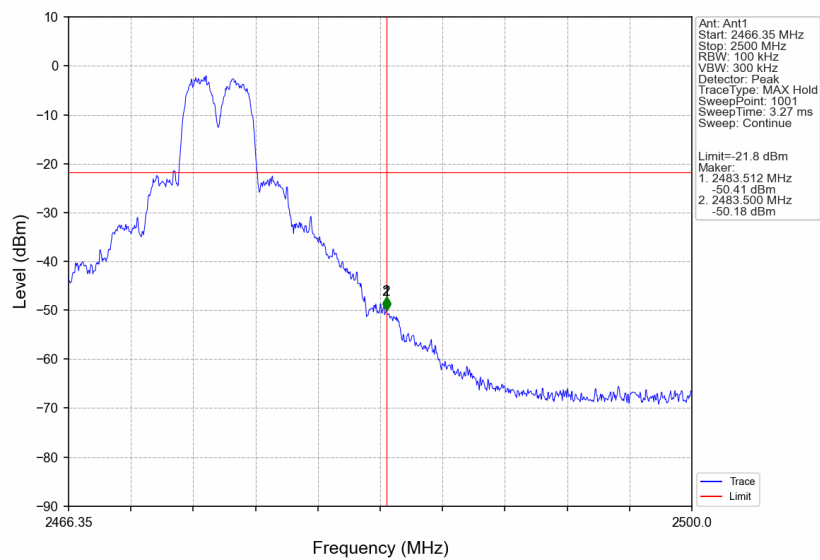
5.2.2 CSE



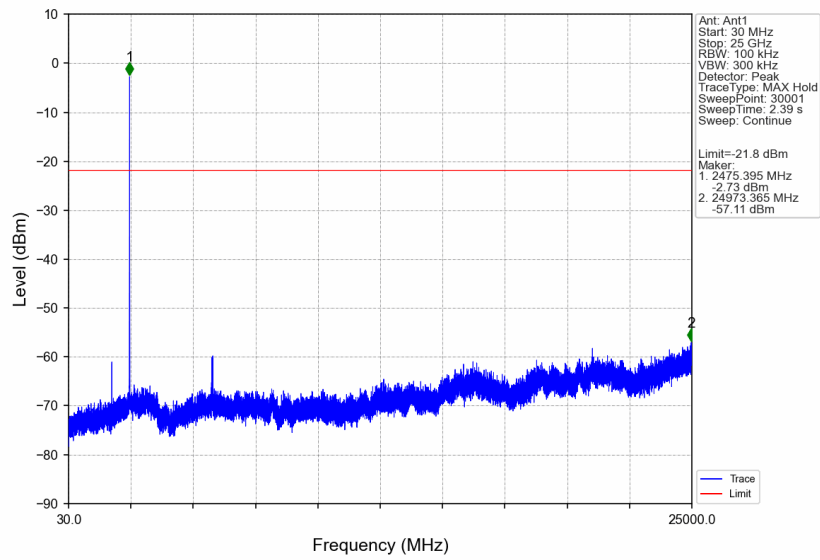
PI/4-DQPSK MCH 2442.35MHz Ant2 NTN



PI/4-DQPSK HCH 2474.35MHz Ant2 NTN



PI/4-DQPSK HCH 2474.35MHz Ant2 NTN



- End of the Report -