



FCC TEST REPORT

FCC ID: 2BVP9-J25

On Behalf of

Jingxi Box(Shenzhen)Intelligent Technology Co., LTD

Smart All-Area Intercom

Model No.: J25

Prepared for : Jingxi Box(Shenzhen)Intelligent Technology Co., LTD
Address : Room 201-D3, No. 283 Taoyuan Road, Nanshan District, Shenzhen,
Guangdong, China

Prepared By : Shenzhen PSI Testing Co., Ltd.
Address : 1-2/F., Building 5, Yudafu Industrial Park, No.10, Xingye West Road,
Shajing Subdistrict, Bao'an District, Shenzhen, Guangdong, China

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TEST REPORT DECLARATION

Applicant : Jingxi Box(Shenzhen)Intelligent Technology Co., LTD
Address : Room 201-D3, No. 283 Taoyuan Road, Nanshan District, Shenzhen, Guangdong, China
Manufacturer : Jingxi Box(Shenzhen)Intelligent Technology Co., LTD
Address : Room 201-D3, No. 283 Taoyuan Road, Nanshan District, Shenzhen, Guangdong, China
EUT Description : Smart All-Area Intercom
(A) Model No. : J25
(B) Trademark : N/A

Measurement Standard Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.247

ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024

Test Result: PASS

The device described above is tested by Shenzhen PSI Testing Co., Ltd. to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The test results are contained in this test report and Shenzhen PSI Testing Co., Ltd. is assumed full responsibility for the accuracy and completeness of test. Also, this report shows that the EUT is technically compliant with the FCC Part 15C requirements.

This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Shenzhen PSI Testing Co., Ltd.

Tested by (name + signature).....:

Felix Pang
Test Engineer


.....

Approved by (name + signature).....:

Simple Guan
Project Manager


.....

Date of issue.....:

April 21, 2026

Revision History

Revision	Issue Date	Revisions	Revised By
V0	April 21, 2026	Initial released Issue	Felix Pang

1. Summary Of Standards And Results

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

Test Item	Standards Paragraph	Result
Conducted Emission	FCC Part 15: 15.207, ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024	P
6dB Bandwidth	FCC PART 15:15.247(a)(2), ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024	P
Output Power	FCC Part 15: 15.247(b)(3), ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024	P
Radiated Spurious Emission	FCC Part 15: 15.209 FCC Part 15: 15.247(d), ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024	P
Conducted Spurious & Band Edge Emission	FCC Part 15: 15.247(d), ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024	P
Power Spectral Density	FCC PART 15:15.247(e), ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024	P
Radiated Band Edge Emission	FCC Part 15: 15.247(d), ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024	P
Antenna Requirement	FCC Part 15: 15.203	P
Note: 1. P is an abbreviation for Pass. 2. F is an abbreviation for Fail. 3. N/A is an abbreviation for Not Applicable. 4. Conclusion determination rules of this report: Unless there are clear provisions on measurement uncertainty in the standard or customer requirements, decision by actual test data without considering measurement uncertainty. 5. Measurement method usage KDB 558074 D01 15.247 Meas Guidance v05r02.		

2. General Information

2.1. Description of Device (EUT)

Product Name : Smart All-Area Intercom
Model : J25
Diff : N/A
Test Voltage : DC 5V from adapter, DC 3.7V from battery, Wireless output: 10W.

Radio Technology	: Lora
Operation frequency	: 903MHz-927.5MHz
Modulation type	: LoRa Chirp Spread Spectrum
Channel No.	: 16 Channels
Configuration	SF7
Antenna Type	: External antenna, Maximum Gain is 3.5dBi.

Software version : N/A
Hardware version/FVIN : N/A

Note : Antenna information is provided by applicant.
Testing lab is not responsible for the accuracy of the information.

2.2. Accessories of Device (EUT)

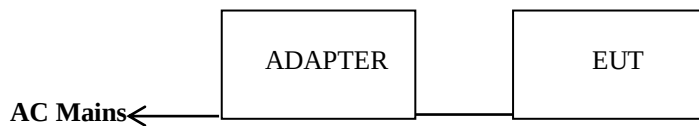
Accessories 1 : N/A
 Manufacturer : N/A
 Model : N/A
 Rating : N/A

2.3. Tested Supporting System Details

No.	Description	Manufacturer	Model	Serial Number
1	Notebook PC	Dell	Latitude 3490	N/A
2	Adapter	Baseus	CCXFK65CC	N/A

2.4. Block Diagram of Connection Between EUT and Simulators

Spurious Emission



Power Line Conducted Emission



RF



2.5. Test Mode Description

The test software was used to control EUT work in Continuous TX mode, and select test channel, wireless mode

Tested mode, channel, and data rate information		
Mode	Channel	Frequency (MHz)
Lora	CH-L	903.0
	CH-M	914.2
	CH-H	927.5

Channel list:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
CH64	903.0	CH72	923.3
CH65	904.6	CH73	923.9
CH66	906.2	CH74	924.5
CH67	907.8	CH75	925.1
CH68	909.4	CH76	925.7
CH69	911.0	CH77	926.3
CH70	912.6	CH78	926.9
CH71	914.2	CH79	927.5

2.6. Software test version and power setting information

Software testing version	hterm.exe		
Mode	The client 's preset testing software is used to control the operation of EUT in continuous transmission mode and select the testing channel, wireless mode:		
Power level setup by client			
Mode	Channel	Frequency (MHz)	Soft Set
Lora	CH-L	903.0	TX level is set as defaults value.
	CH-M	914.2	TX level is set as defaults value.
	CH-H	927.5	TX level is set as defaults value.

2.7. Test Conditions

Items	Required	Actual
Temperature range:	15-35℃	26℃
Humidity range:	25-75%	54%
Pressure range:	86-106kPa	101kPa

2.8. Test Facility

Shenzhen PSI Testing Co., Ltd.

1-2/F., Building 5, Yudafu Industrial Park, No.10, Xingye West Road, Shajing Subdistrict, Bao'an District, Shenzhen, Guangdong, China

September 13, 2023 File on Federal Communication Commission

Registration Number: 916281

2.9. Measurement Uncertainty

(95% confidence levels, k=2)

Item	Uncertainty
Power Line Conducted Emissions Test	2.13dB
Radiation Emission test in 3m chamber(Below 30MHz)	4.07dB
Radiation Emission test in 3m chamber(30MHz to 1GHz)	4.51dB
Radiation Emission test in 3m chamber(1GHz to 18GHz)	5.07dB
Radiation Emission test in 3m chamber(18GHz to 40GHz)	5.21dB
Radio Frequency	48.24KHz
Conducted RF Power	0.41dB
Power Spectral Density	0.39 dB
Occupied-Bandwidth	968Hz
Duty Cycle	1%
Conducted-Spurious Emission	1.26dB

2.10. Test Equipment List

Item	Equipment	Manufacturer	Model No.	Serial No.	Firmware Version	Last Cal.	Cal. Interval
1.	9*6*6 anechoic chamber	SKET	9*6*6	N/A	/	2025.12.18	3 Year
2.	Test Receiver	Rohde&Schwarz	ESCI 7	101032/003	4.42 SP3	2025.12.18	1 Year
3.	L.I.S.N.#1	Rohde&Schwarz	ENV 216	102282	/	2025.12.18	1 Year
4.	L.I.S.N.#2	EMCO	3810-2	00094944	/	2025.12.18	1 Year
5.	Loop Antenna	Schwarz beck	FMZB 1519B	00128	/	2025.01.02	2 Year
6.	Bilog Antenna	Schwarz beck	VULB 9168	01448	/	2025.01.02	2 Year
7.	Spectrum Analyzer	Rohde&Schwarz	FSV40-N	101648	3.70	2025.12.18	1 Year
8.	Horn Antenna	Schwarz beck	BBHA 9120 D	02706	/	2025.01.02	2 Year
9.	Amplifier	SKET	LNPA_0118 G-50	SK20220329 01	/	2025.12.18	1 Year
10.	Horn Antenna	Schwarz beck	BBHA 9170	00946	/	2024.12.31	2 Year
11.	Amplifier	SKET	LNPA_1840 G-50	SK20190403 02	/	2025.12.18	1 Year
12.	RF Power Probe	Rohde&Schwarz	NRP-Z11	1138.3004.0 2-1111533-F Z	/	2025.12.18	1 Year
13.	RF Sensor Unit	Tachoy	TR1029-2	20220428P0 08	/	2025.12.18	1 Year
14.	Spectrum Analyzer	Agilent	N9020A	MY51281067	A.14.03	2025.12.18	1 Year
15.	Temp. & Humid Chamber	Auchno	9606	/	/	2025.12.18	1 Year
16.	Regulated DC Power Supply	Xinouhua	ADC120V10 A	2022112516 38	/	2025.12.18	1 Year
17.	Cable	SKET	Cable-RE-1	#02/#03	/	2025.12.18	1 Year
18.	Cable	SKET	Cable-RE-2	#01	/	2025.12.18	1 Year
19.	Cable	SKET	Cable-RE-3	#04	/	2025.12.18	1 Year
20.	Cable	SKET	Cable-CE-1	A-E-24	/	2025.12.18	1 Year
21.	6dB Attenuator	Schwarzbeck	DGA 9552N 6dB	CK4186	/	2025.12.18	1 Year
22.	Power meter	Agilent	E4419B	GB40202121	/	2025.12.18	1 Year
23.	Comprehensive Test Instrument	Rohde&Schwarz	CMW 500	145266	/	2025.12.18	1 Year
For Test Software Information							
Item	Software Name	Manufacturer		Version			
RE	EZ EMC	Farad		PSI-3A1			
CE	EZ EMC	Farad		PSI-3A1			
RF	RTS	TACHOY		V1.0.0			

3. Spurious Emission

3.1. Test Limits

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

Note: The peak limit is 20 dB higher than the average limit

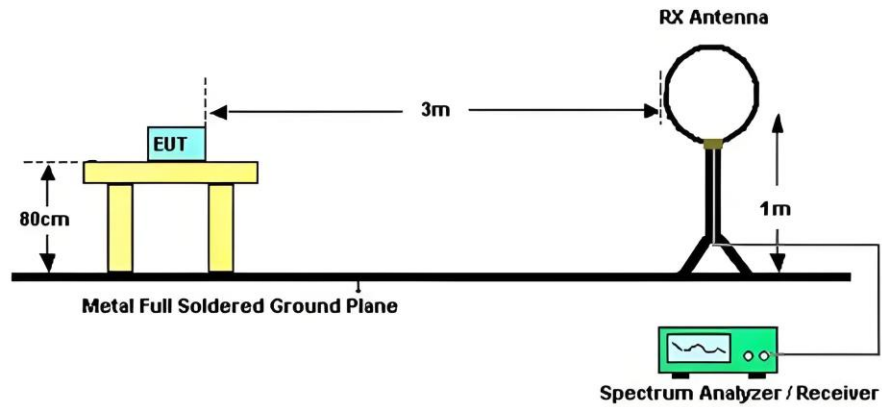
All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

15.205 Restricted frequency band

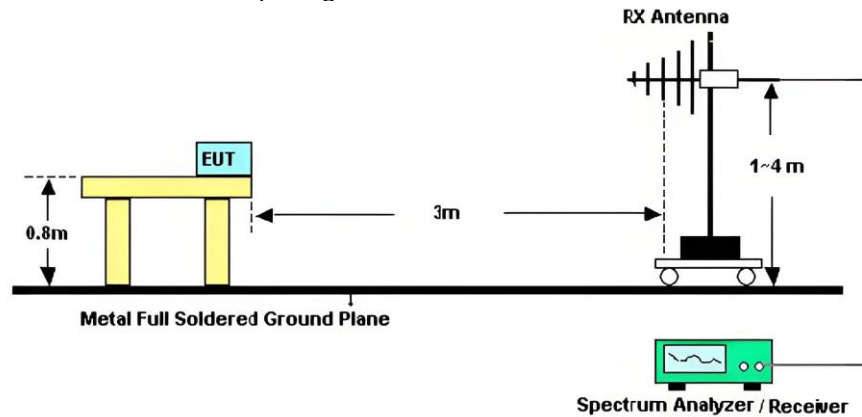
MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)

3.2. Block Diagram of Test setup

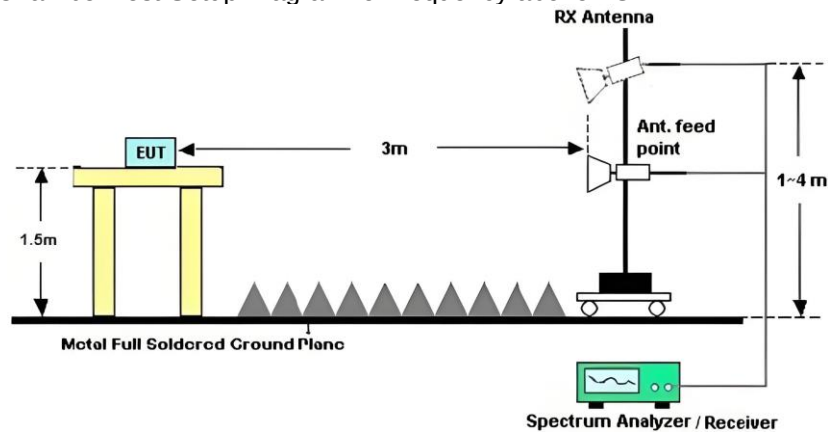
a. In 3m Anechoic Chamber Test Setup Diagram for below 30MHz



b. In 3m Anechoic Chamber Test Setup Diagram for below 1GHz



c. In 3m Anechoic Chamber Test Setup Diagram for frequency above 1GHz



3.3. Test Procedure

(1) EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber.

(2) Setup EUT and simulator

(3) Test antenna was located 3m from the EUT on an adjustable mast. Below pre-scan procedure was first performed in order to find prominent radiated emissions.

(a) Change work frequency or channel of device if practicable.

(b) Change modulation type of device if practicable.

(c) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions

(4) Spectrum frequency from 9KHz to 25GHz (tenth harmonic of fundamental frequency) was investigated

(5) For final emissions measurements at each frequency of interest, the EUT were rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 on Radiated Emission test.

(6) For emissions above 1GHz, both Peak and Average level were measured with Spectrum Analyzer, and the RBW is set at 1MHz, VBW is set at 3MHz for Peak measure; RBW is set at 1MHz, VBW is set at 10Hz for Average measure.

Test setup information:

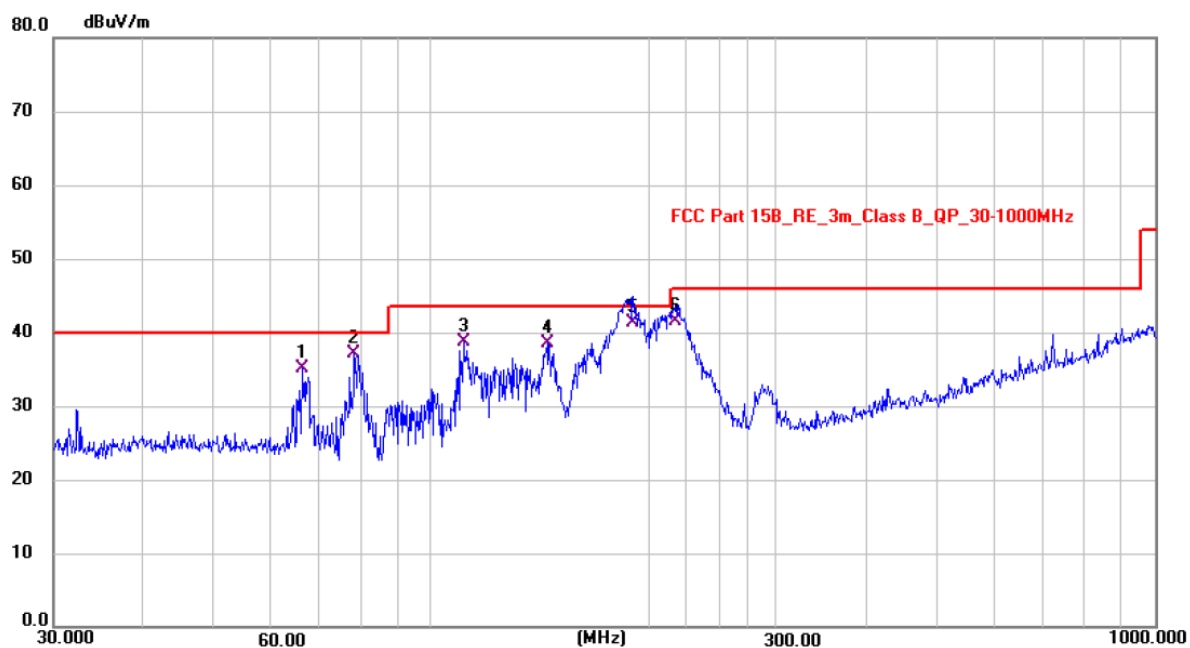
9KHz~150KHz	RBW 200Hz	VBW 1KHz
150KHz~30MHz	RBW 9KHz	VBW 30KHz
30MHz~1GHz	RBW 120KHz	VBW 300KHz
Above1GHz	RBW 1MHz	VBW 3MHz

3.4. Test Results

We have scanned from 9kHz to the 10th harmonic of the EUT's highest frequency.
Detailed information please see the following page.

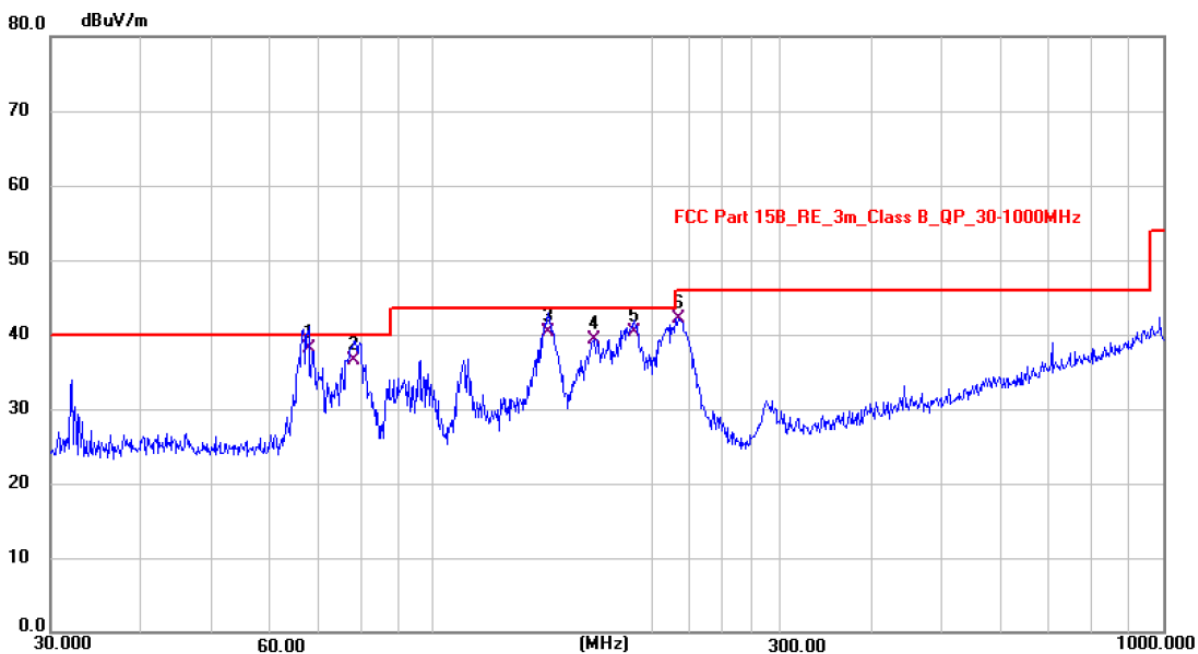
From 9KHz to 30MHz:	
Test Date : 2026.04.17	Temperature : 26℃
Test Engineer : Felix Pang	Humidity : 54%
Test Mode : SF7 Channel L	
Test Voltage : AC 120V/60Hz	
Test Results : PASS	
Note:	The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

From 30MHz to 1000MHz:	
Test Date : 2026.04.17	Temperature : 26℃
Test Engineer : Felix Pang	Humidity : 54%
Test Mode : SF7 Channel L	
Test Voltage : AC 120V/60Hz	
Test Results : PASS	
Note:	1. The test results are listed in next pages. 2. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector and quasi-peak detector need not be carried out. 3. All modes have been tested, and only worst data of TX Mode_SF7 Channel L was listed in this report.

Polarization: Horizontal

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	66.4407	23.15	12.04	35.19	40.00	-4.81	QP
2	78.4133	26.92	10.19	37.11	40.00	-2.89	QP
3	110.8599	26.65	12.11	38.76	43.50	-4.74	QP
4	144.5247	23.73	14.81	38.54	43.50	-4.96	QP
5 *	190.0714	29.42	11.83	41.25	43.50	-2.25	QP
6	217.3537	29.31	12.19	41.50	46.00	-4.50	QP

Level = Reading + Factor Margin = Level - Limit

Polarization: Vertical

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	67.7048	26.32	11.80	38.12	40.00	-1.88	QP
2	78.5509	26.35	10.17	36.52	40.00	-3.48	QP
3	143.9556	25.48	14.77	40.25	43.50	-3.25	QP
4	167.0903	24.65	14.57	39.22	43.50	-4.28	QP
5	188.9915	28.35	11.93	40.28	43.50	-3.22	QP
6	216.7828	29.89	12.17	42.06	46.00	-3.94	QP

Level = Reading + Factor Margin = Level - Limit

From 1GHz to 25GHz:	
Test Date : 2026.04.17	Temperature : 26℃
Test Engineer : Felix Pang	Humidity : 54%
Test Mode : Lora mode	
Test Voltage : AC 120V/60Hz	
Test Results : PASS	
Note:	1. The test results are listed in next pages. 2. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector and quasi-peak detector need not be carried out. 3. If the limits for the measurement with the average detector are met when using a receiver with a quasi-peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.

Modulation Type : LoRa Chirp Spread Spectrum								
Test Mode : TX Low								
No.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	1806.0	V	60.25	-13.25	47.00	74.00	-27.00	Peak
2	1806.0	V	47.75	-13.25	34.50	54.00	-19.50	Avg
3	2709.0	--	--	--	--	--	--	--
4	3612.0	--	--	--	--	--	--	--
5	1806.0	H	54.38	-13.25	41.13	74.00	-32.87	Peak
6	1806.0	H	47.61	-13.25	34.36	54.00	-19.64	Avg
7	2709.0	--	--	--	--	--	--	--
8	3612.0	--	--	--	--	--	--	--
Test Mode : TX Mid								
1	1828.4	V	56.56	-12.98	43.58	74.00	-30.42	Peak
2	1828.4	V	49.83	-12.98	36.85	54.00	-17.15	Avg
3	2742.6	--	--	--	--	--	--	--
4	3656.8	--	--	--	--	--	--	--
5	1828.4	H	57.02	-12.98	44.04	74.00	-29.96	Peak
6	1828.4	H	48.04	-12.98	35.06	54.00	-18.94	Avg
7	2742.6	--	--	--	--	--	--	--
8	3656.8	--	--	--	--	--	--	--
Test Mode : TX High								
1	1855.0	V	58.71	-12.70	46.01	74.00	-27.99	Peak
2	1855.0	V	48.29	-12.70	35.59	54.00	-18.41	Avg
3	2782.5	--	--	--	--	--	--	--
4	3710.0	--	--	--	--	--	--	--
5	1855.0	H	56.19	-12.70	43.49	74.00	-30.51	Peak
6	1855.0	H	45.55	-12.70	32.85	54.00	-21.15	Avg
7	2782.5	--	--	--	--	--	--	--
8	3710.0	--	--	--	--	--	--	--
Note:	1. Means other frequency and mode comply with standard requirements and at least have 20dB margin. 2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain. Result=Reading + Correct Factor. Margin= Result-Limit.							

4. Power Line Conducted Emission

4.1. Test Limits

Frequency (MHz)	Limits dB(μV)	
	Quasi-peak Level	Average Level
0.15 -0.50	66 -56*	56 - 46*
0.50 -5.00	56	46
5.00 -30.00	60	50

Notes: 1. *Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

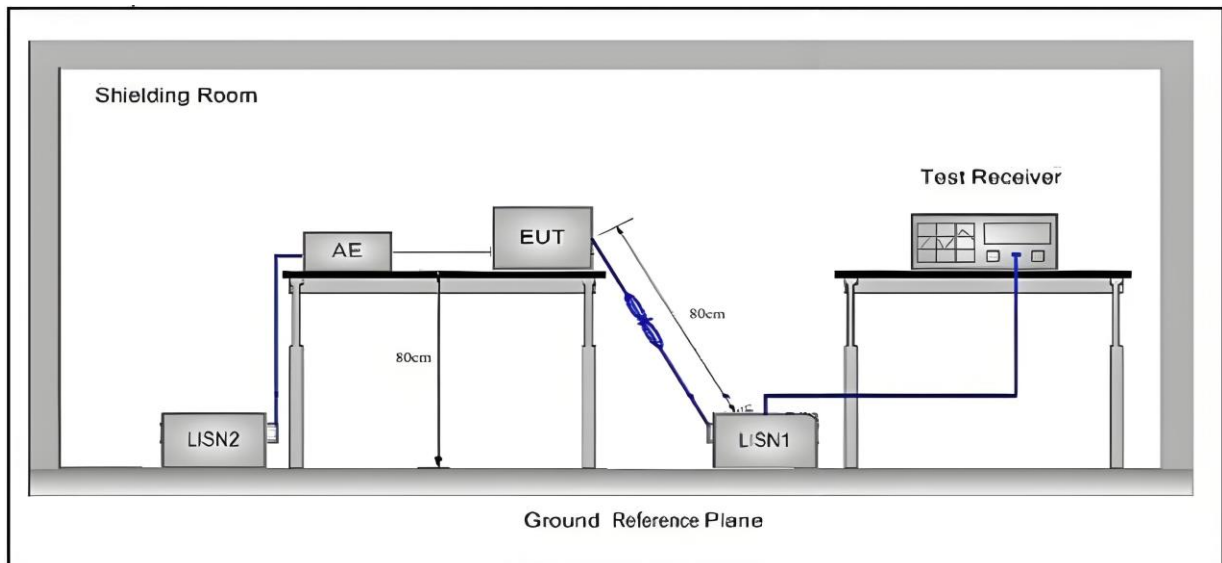
3. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2. Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 on Conducted Emission Measurement.

The bandwidth of test receiver is set at 9 kHz.

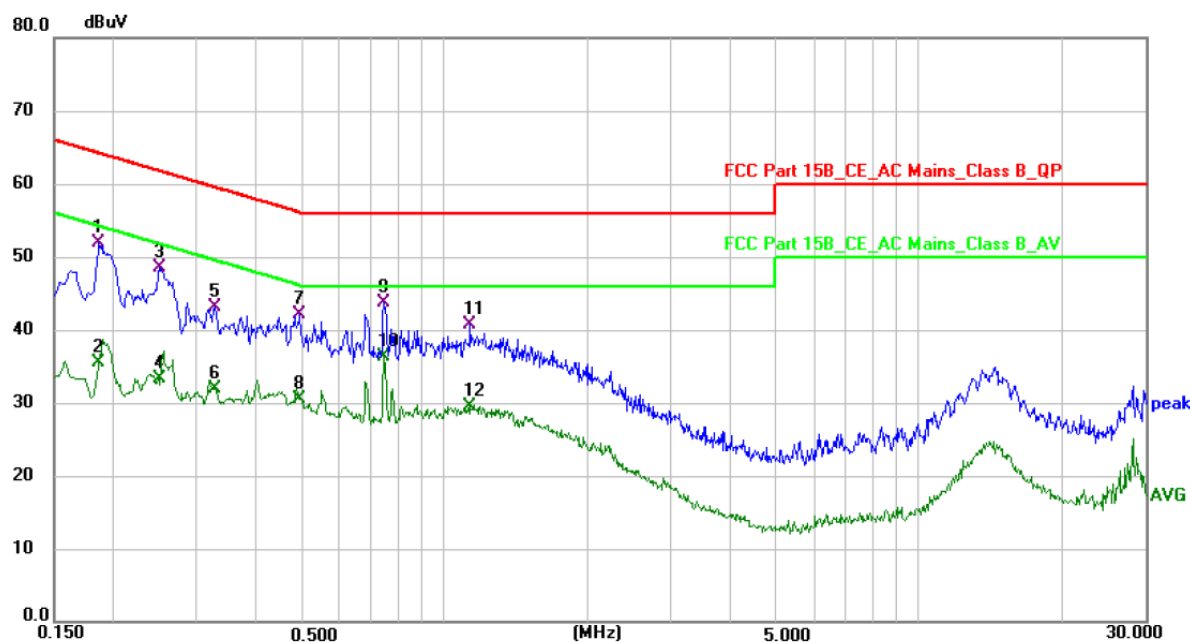
4.3. Test Setup



4.4. Test Results

Test Date	: 2026.03.18	Temperature	: 26℃
Test Engineer	: Felix Pang	Humidity	: 54%
Test Mode	: SF7 Channel L		
Test Results	: PASS		
Note:	1. The test results are listed in next pages.		
	2. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector and quasi-peak detector need not be carried out.		
	3. If the limits for the measurement with the average detector are met when using a receiver with a quasi-peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.		
	4. All modes have been tested, and only worst data of SF7 mode Channel L (AC 120V/ 60Hz) was listed in this report.		

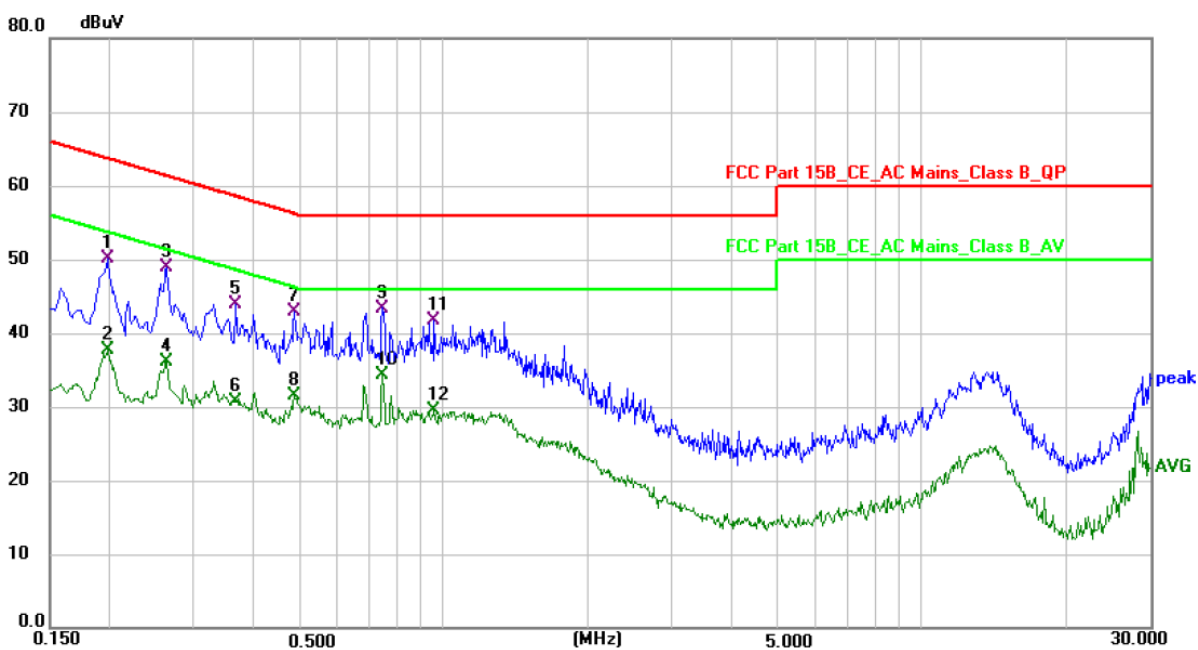
Polarization: L



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1860	42.50	9.48	51.98	64.21	-12.23	QP
2	0.1860	25.96	9.48	35.44	54.21	-18.77	AVG
3	0.2494	39.12	9.40	48.52	61.78	-13.26	QP
4	0.2494	23.95	9.40	33.35	51.78	-18.43	AVG
5	0.3260	33.65	9.40	43.05	59.55	-16.50	QP
6	0.3260	22.42	9.40	31.82	49.55	-17.73	AVG
7	0.4940	32.41	9.68	42.09	56.10	-14.01	QP
8	0.4940	20.81	9.68	30.49	46.10	-15.61	AVG
9	0.7460	34.23	9.46	43.69	56.00	-12.31	QP
10 *	0.7460	26.80	9.46	36.26	46.00	-9.74	AVG
11	1.1340	30.90	9.81	40.71	56.00	-15.29	QP
12	1.1340	19.68	9.81	29.49	46.00	-16.51	AVG

Note: Level = Reading + Factor Margin = Level - Limit

Polarization: N



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1980	40.72	9.41	50.13	63.69	-13.56	QP
2	0.1980	28.35	9.41	37.76	53.69	-15.93	AVG
3	0.2620	39.45	9.40	48.85	61.37	-12.52	QP
4	0.2620	26.76	9.40	36.16	51.37	-15.21	AVG
5	0.3660	34.58	9.40	43.98	58.59	-14.61	QP
6	0.3660	21.25	9.40	30.65	48.59	-17.94	AVG
7	0.4860	33.31	9.66	42.97	56.24	-13.27	QP
8	0.4860	21.76	9.66	31.42	46.24	-14.82	AVG
9	0.7460	33.55	9.85	43.40	56.00	-12.60	QP
10 *	0.7460	24.41	9.85	34.26	46.00	-11.74	AVG
11	0.9540	31.96	9.65	41.61	56.00	-14.39	QP
12	0.9540	19.95	9.65	29.60	46.00	-16.40	AVG

Note: Level = Reading + Factor Margin = Level - Limit

5. Out-of-band Emissions

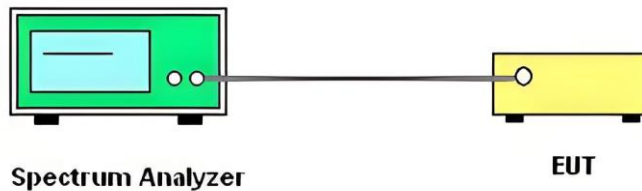
5.1. Test Limits

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.

5.2. Test Procedure

ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024 Section 11.11.1, Section 11.11.2, Section 11.11.3 Connect the transmitter output to spectrum analyzer using a low loss RF cable, and set the spectrum analyzer to RBW=100 kHz, VBW= 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge and out-of-band emissions.

5.3. Test Setup



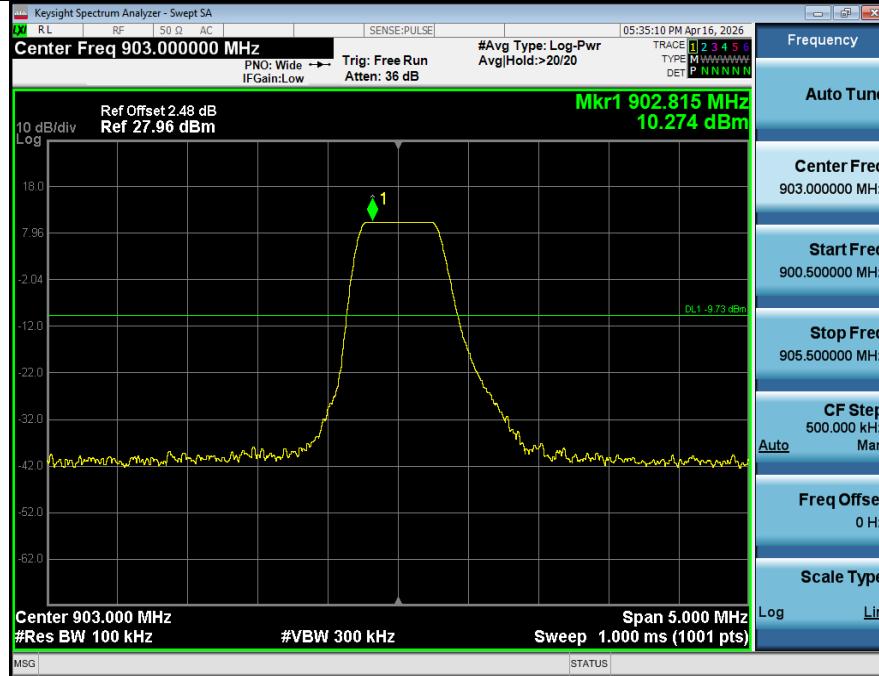
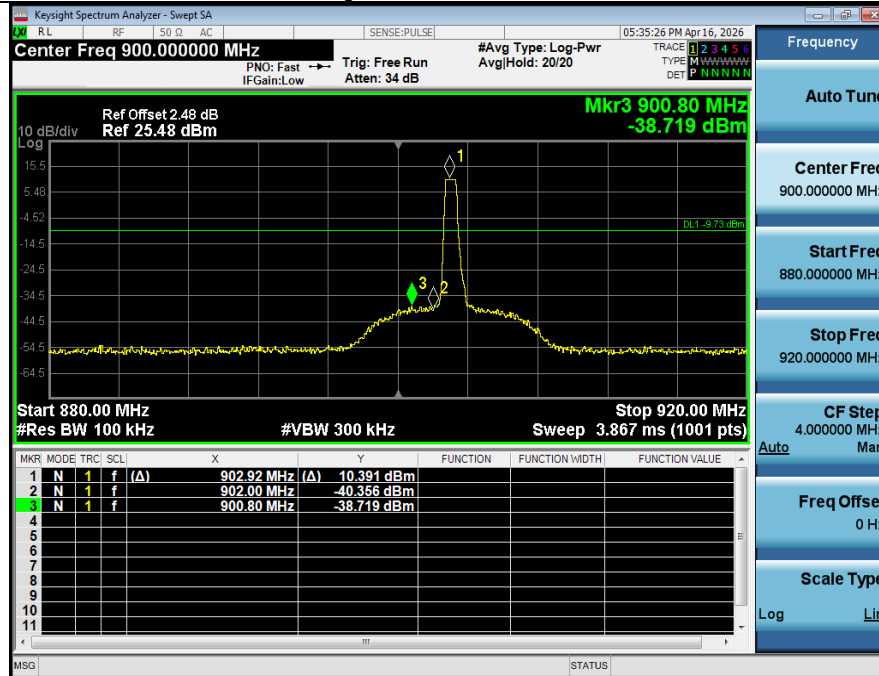
5.4. Test Results

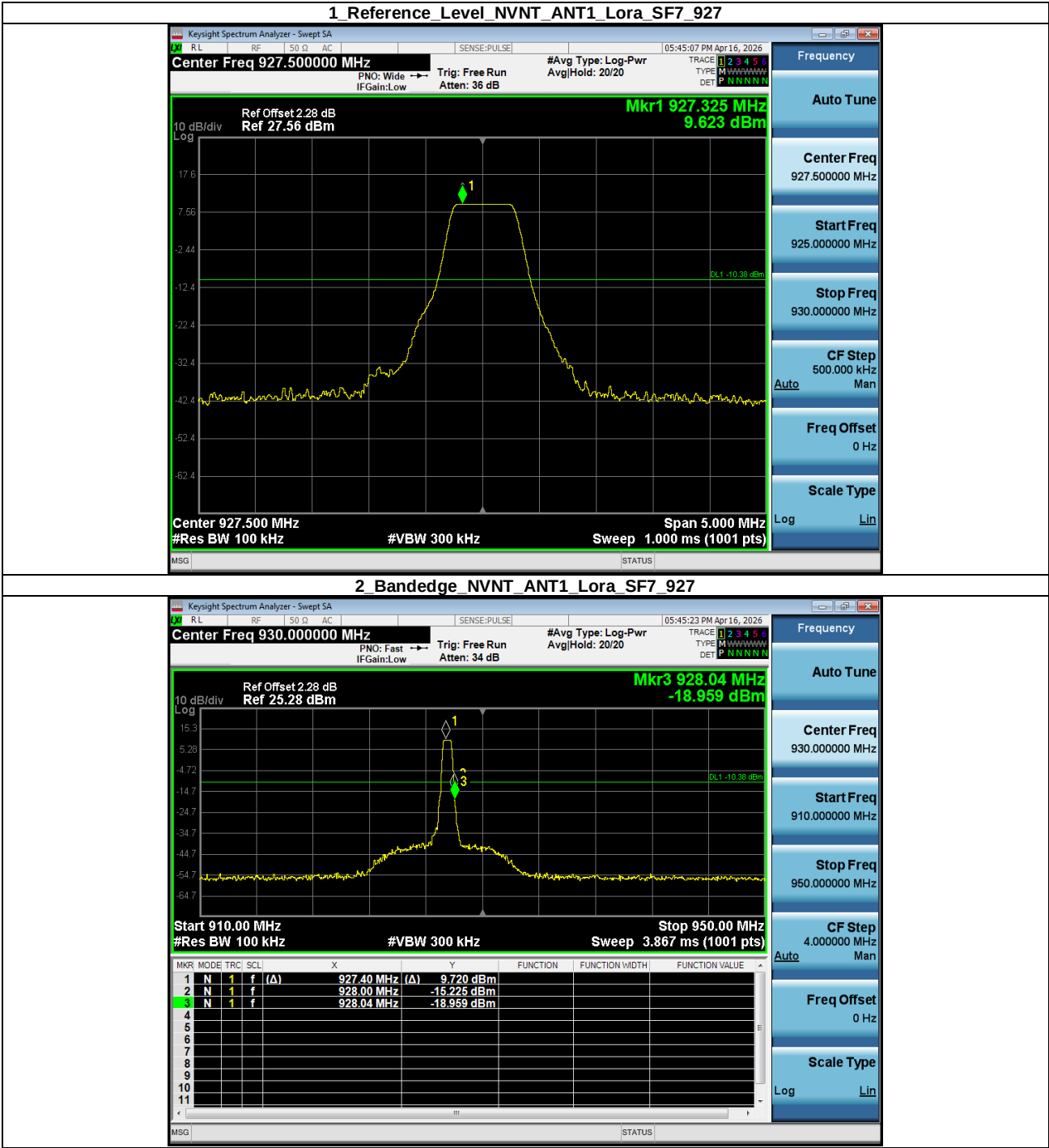
PASS.

The test results are listed in next pages.

Band Edge: Pass

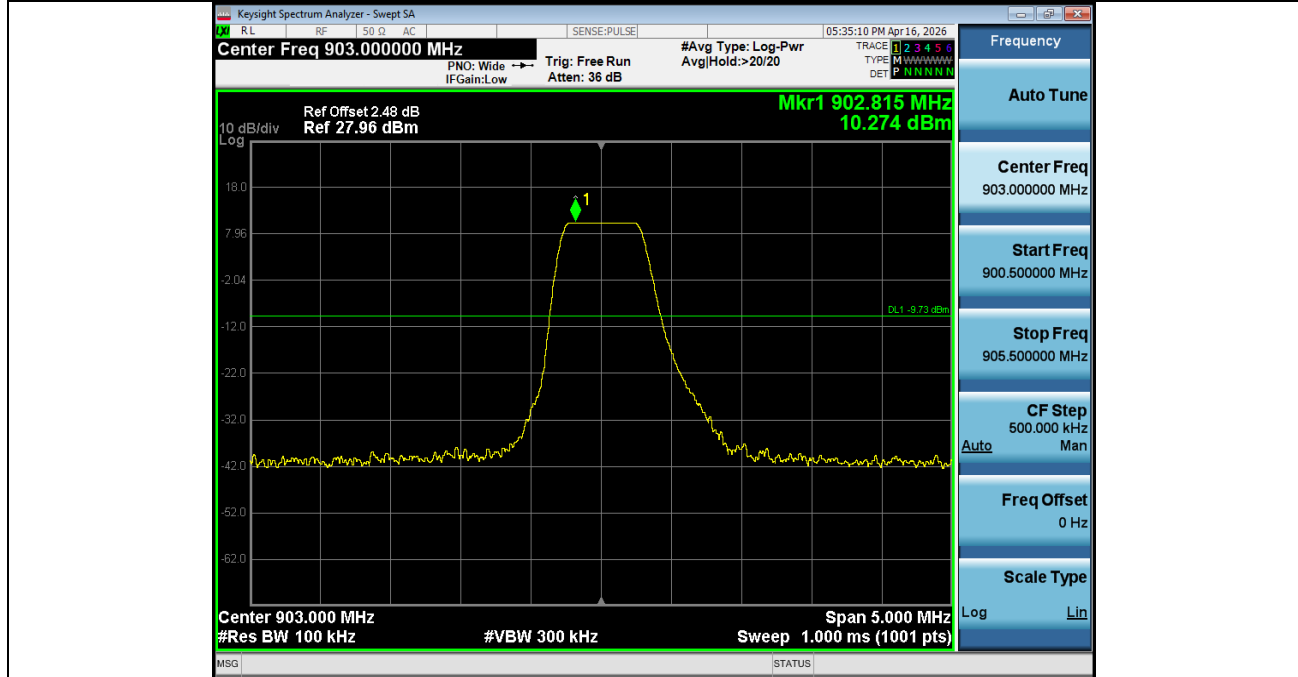
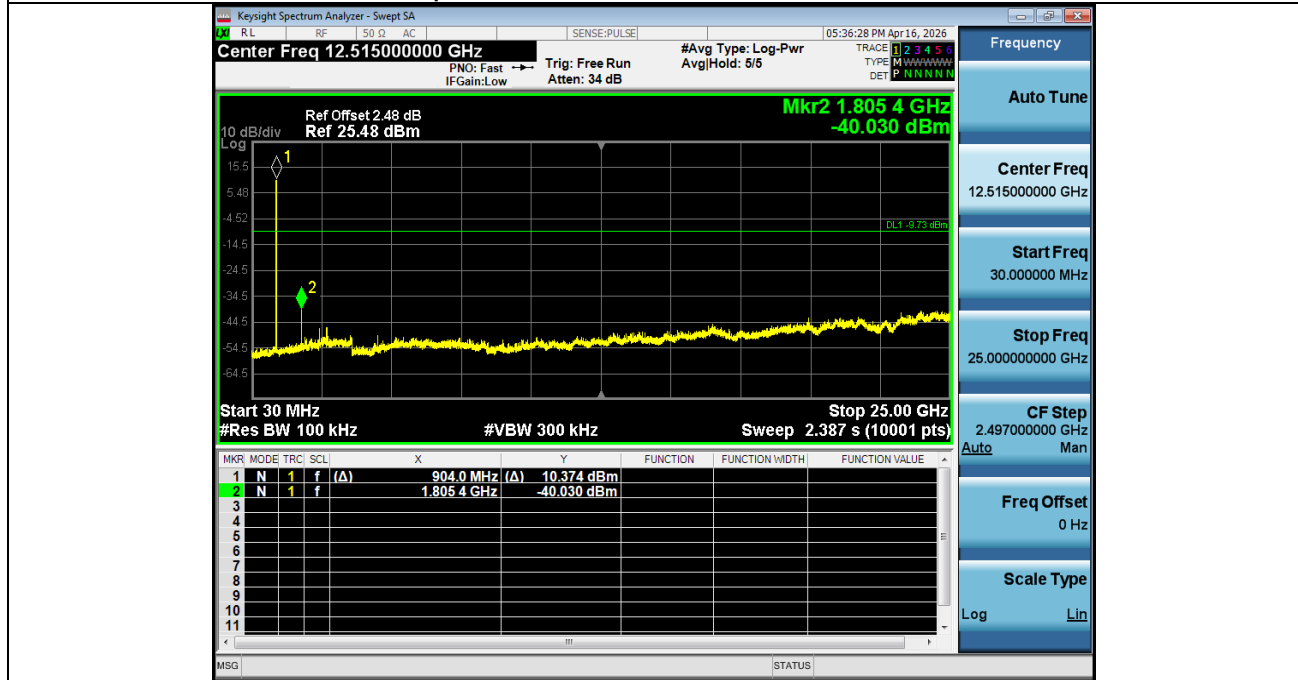
Condition	Antenna	Test Mode	TX_Frequency (MHz)	Max. Mark_freq(MHz)	Ref_level(dBm)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	Lora_SF7	903.00	901.600	10.274	-38.719	-9.726	Pass
NVNT	ANT1	Lora_SF7	927.50	928.020	9.623	-18.959	-10.377	Pass

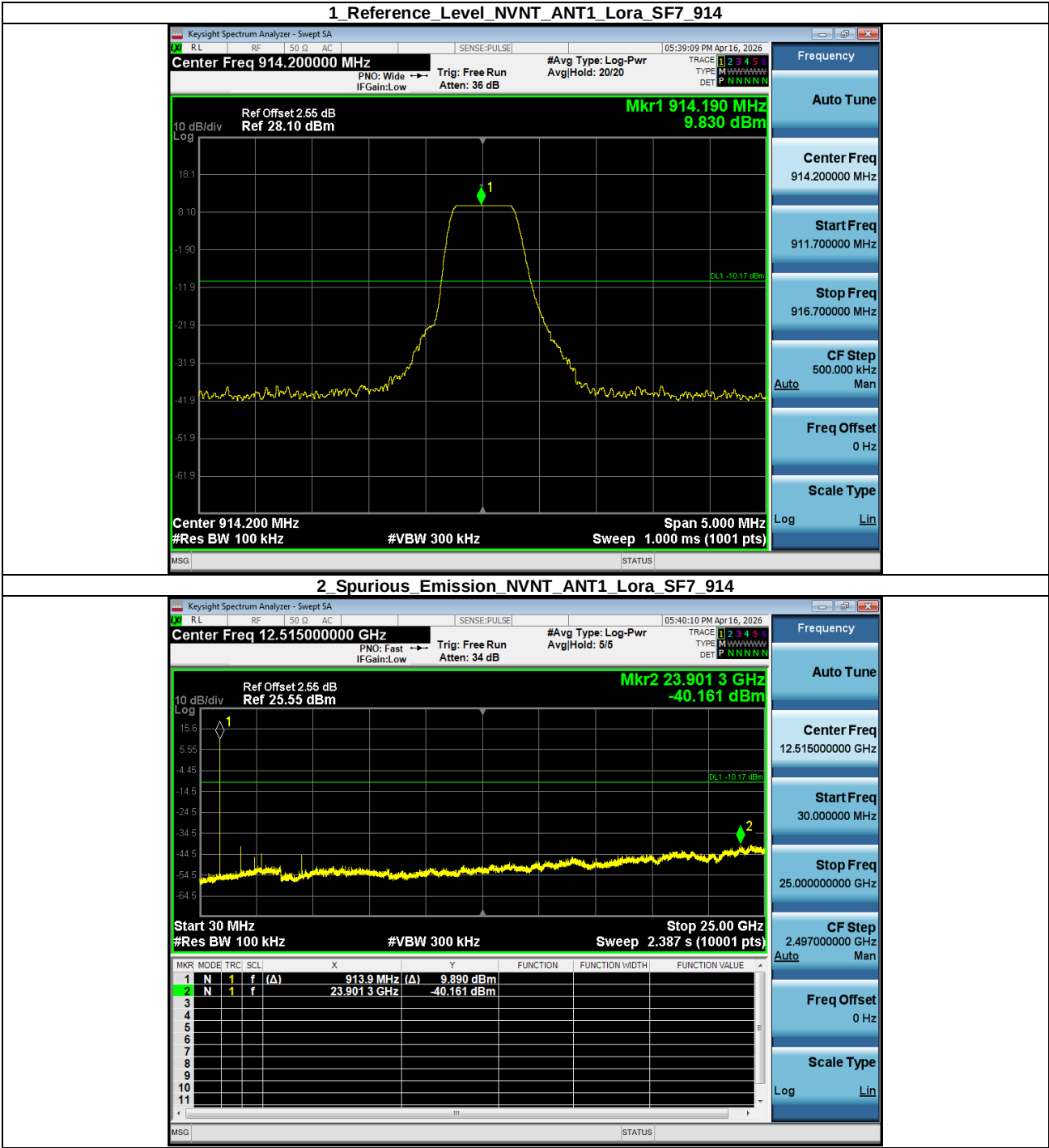
1 Reference Level NVNT ANT1 Lora SF7 903**2 Bandedge NVNT ANT1 Lora SF7 903**

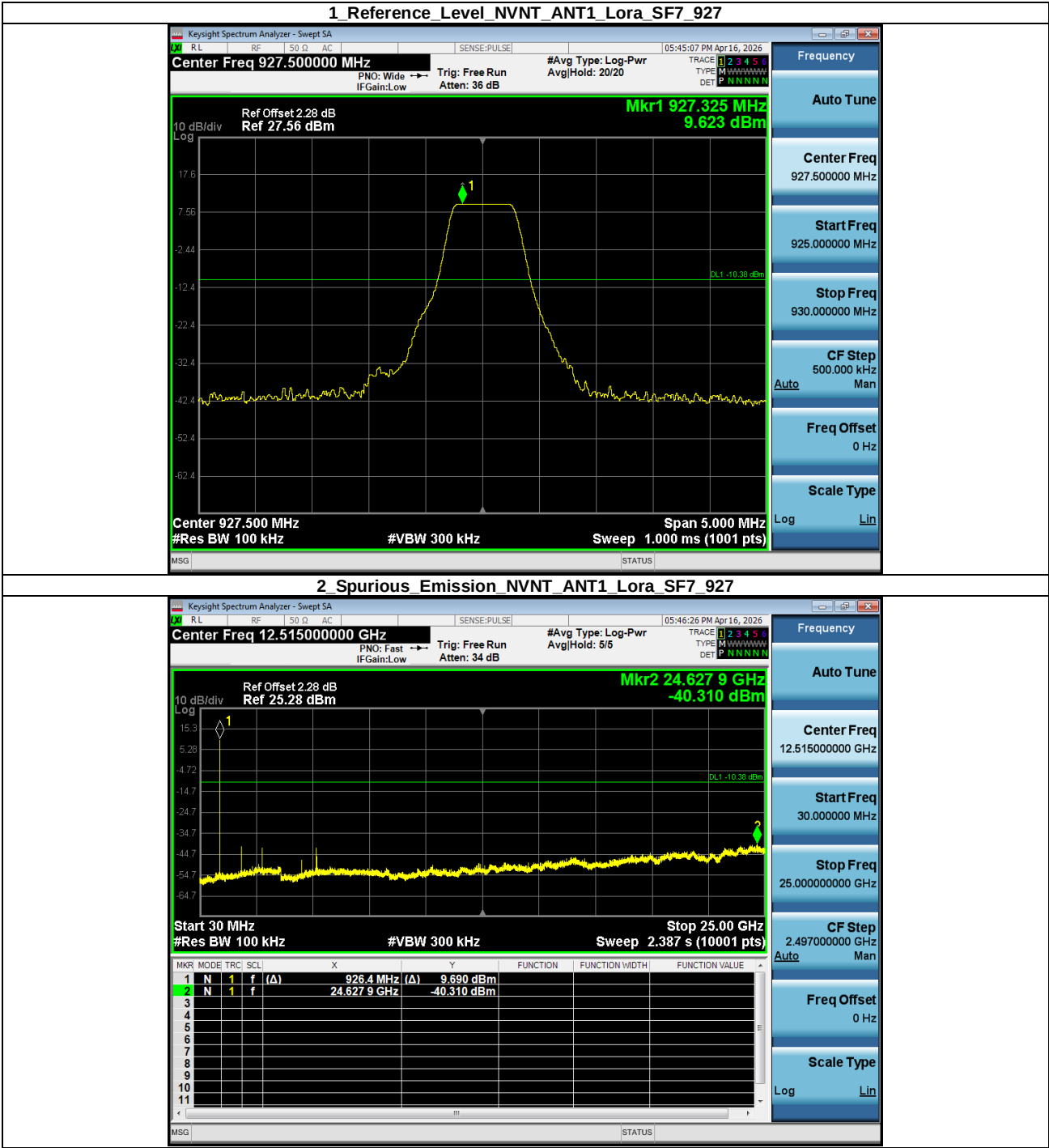


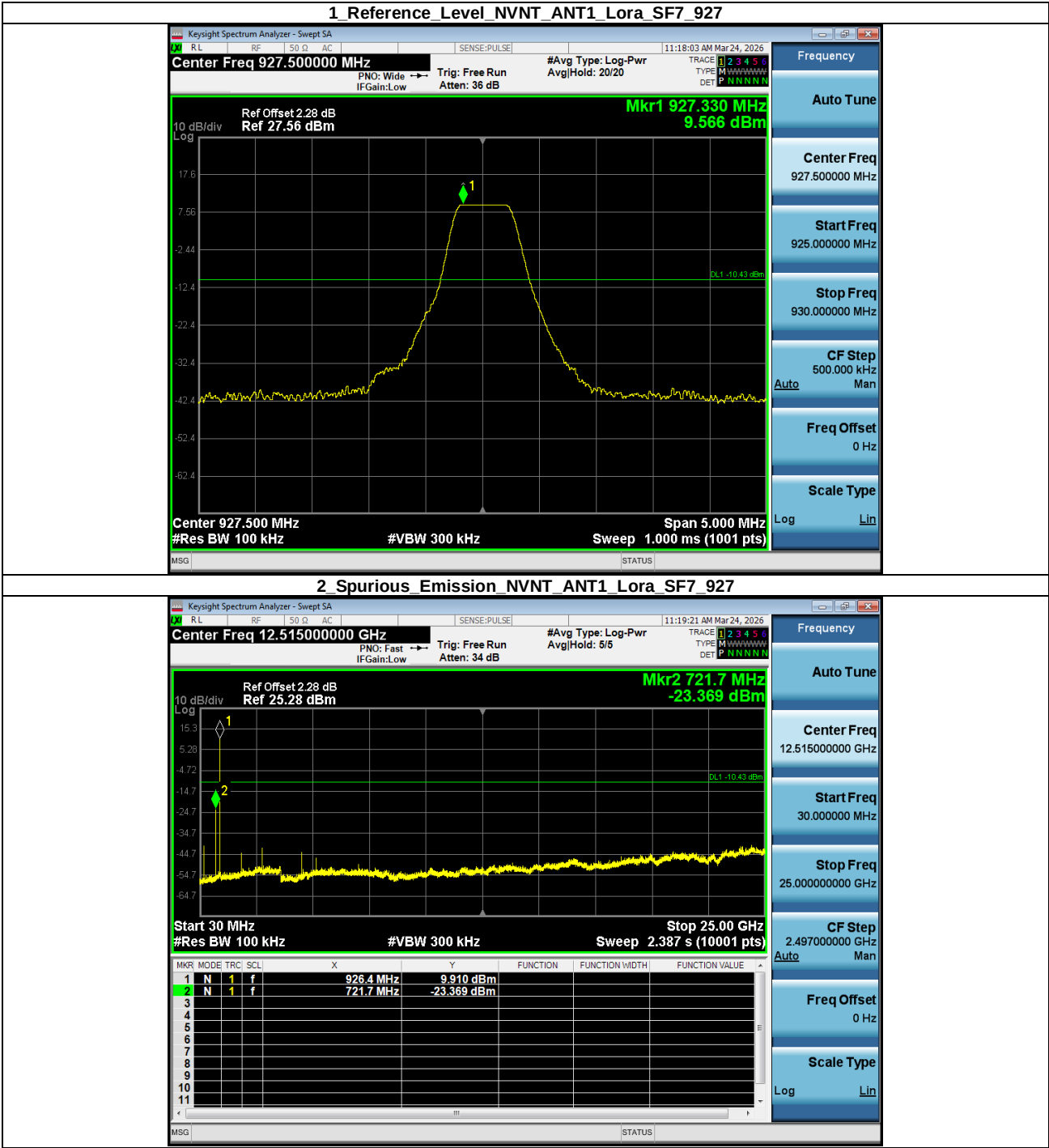
Spurious Emission: Pass

Condition	Antenna	Test Mode	TX_Frequency (MHz)	Ref_level(dBm)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	Lora_SF7	903.00	10.274	-40.030	-9.726	Pass
NVNT	ANT1	Lora_SF7	914.20	9.830	-40.161	-10.170	Pass
NVNT	ANT1	Lora_SF7	927.50	9.623	-40.310	-10.377	Pass

1 Reference Level_NVNT_ANT1_Lora_SF7_903**2 Spurious Emission_NVNT_ANT1_Lora_SF7_903**







6. Conducted Maximum Output Power

6.1. Test limits

Please refer FCC PART 15.247.

Regulation 15.247(b) The limit of Maximum Peak Output Power Measurement is 1 W(30dBm)

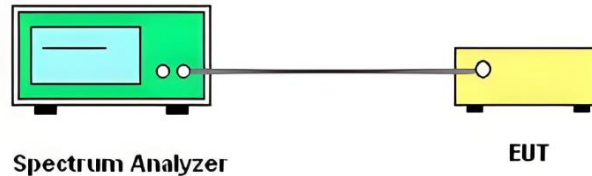
6.2. Test Procedure

ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024, section 11.9.1 Maximum peak conducted output power.

The following procedure shall be used when an instrument with a resolution bandwidth that is greater than the DTS bandwidth is available to perform the measurement:

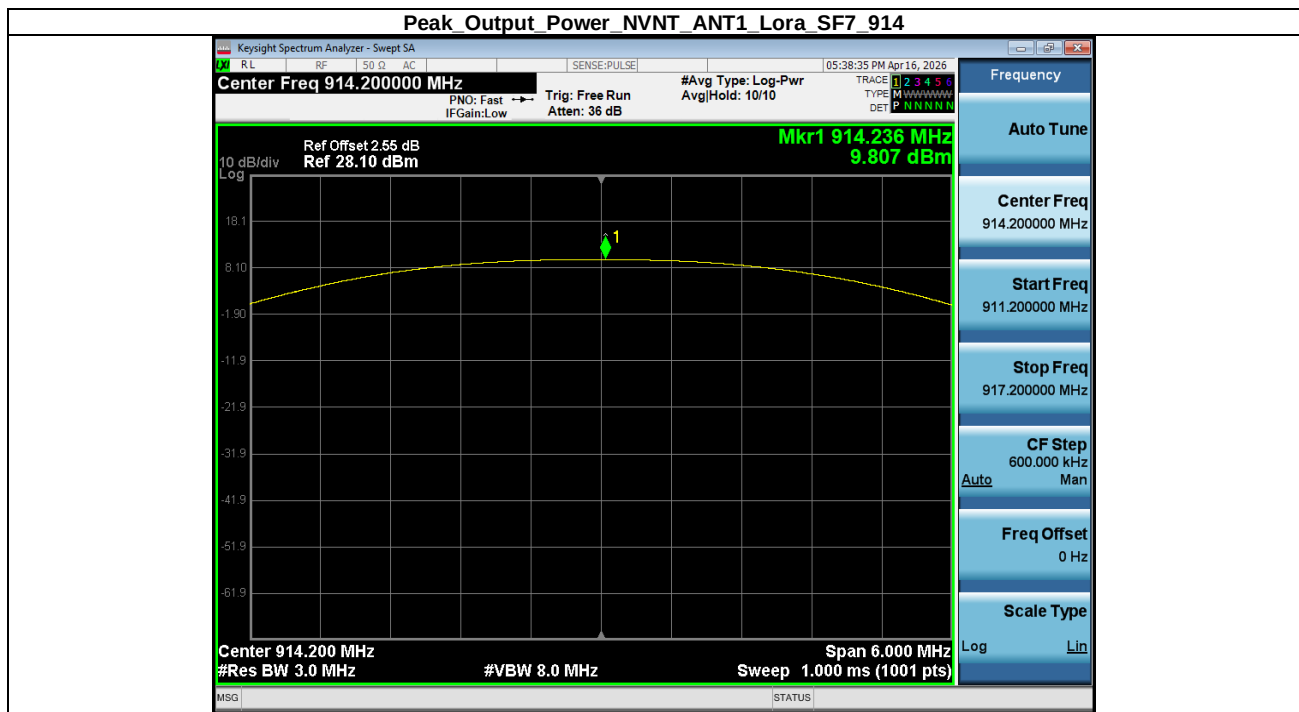
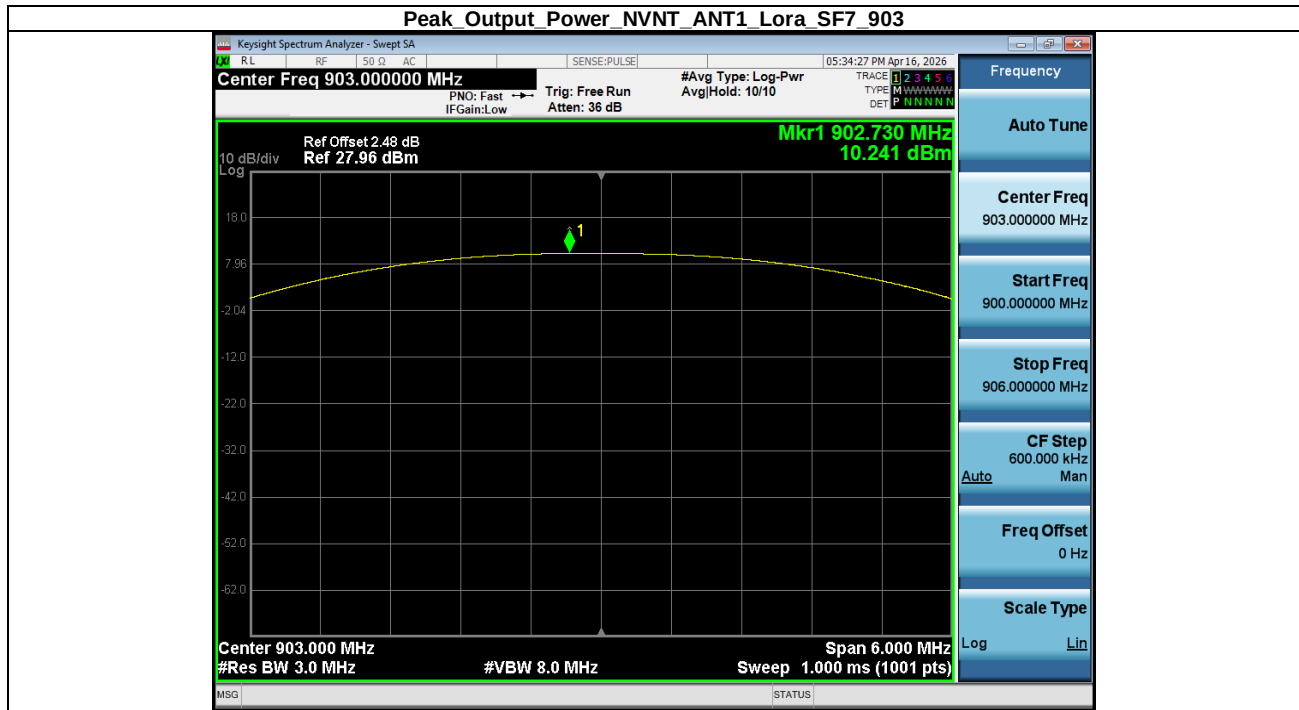
- a) Set the RBW $\geq$ DTS bandwidth.
- b) Set VBW $\geq [3 \times \text{RBW}]$.
- c) Set span $\geq [3 \times \text{RBW}]$.
- d) Sweep time = auto couple.
- e) Detector = peak.
- f) Trace mode = max hold.
- g) Allow trace to fully stabilize.
- h) Use peak marker function to determine the peak amplitude level.

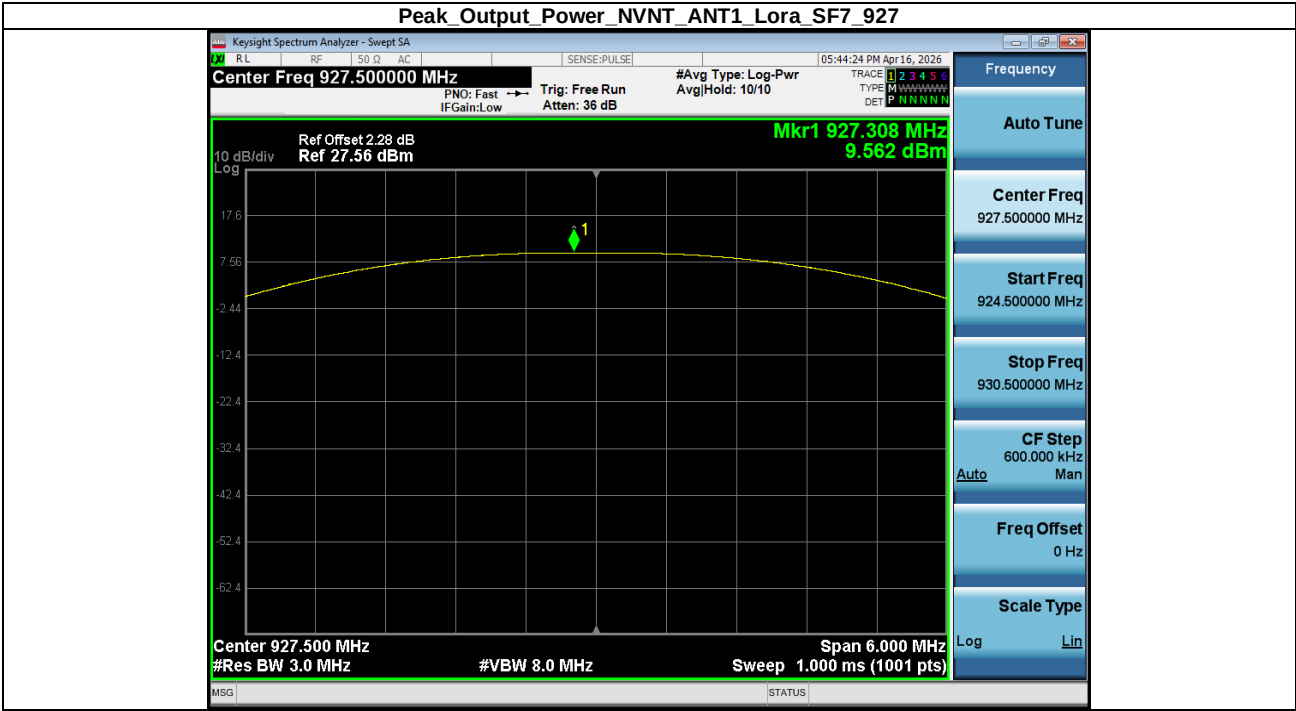
6.3. Test Setup



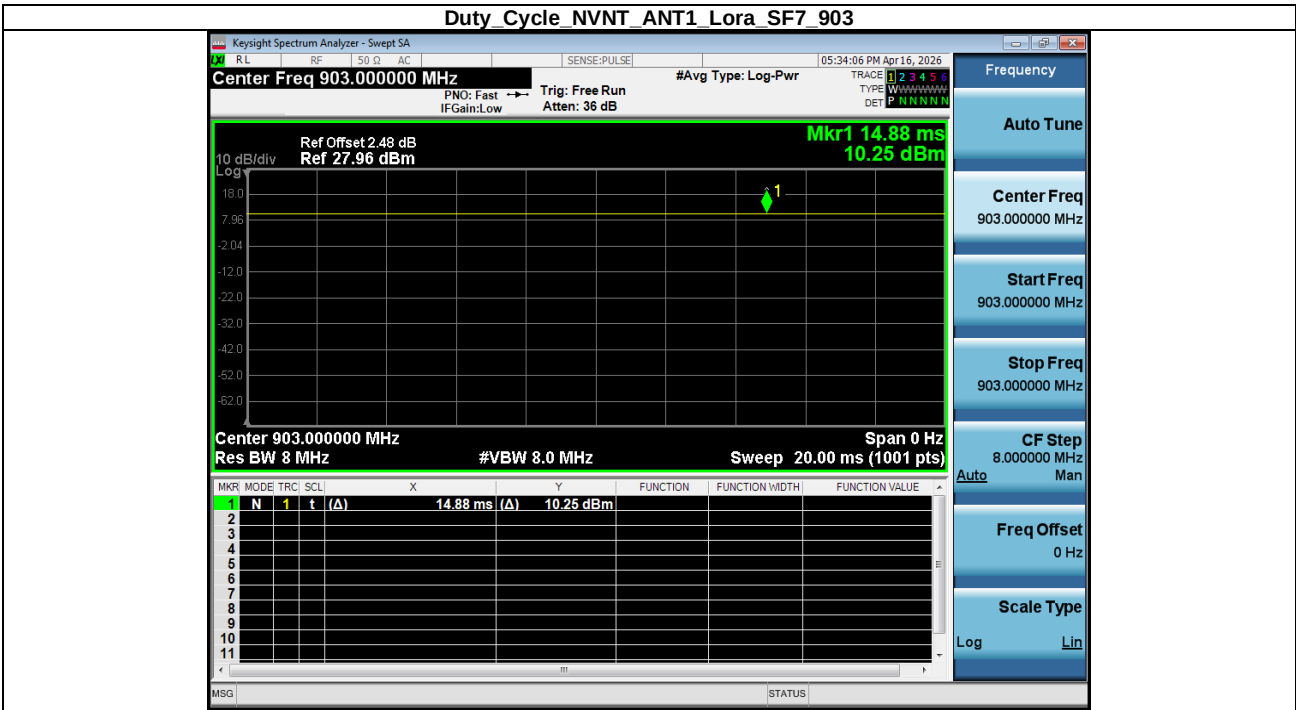
6.4. Test Results

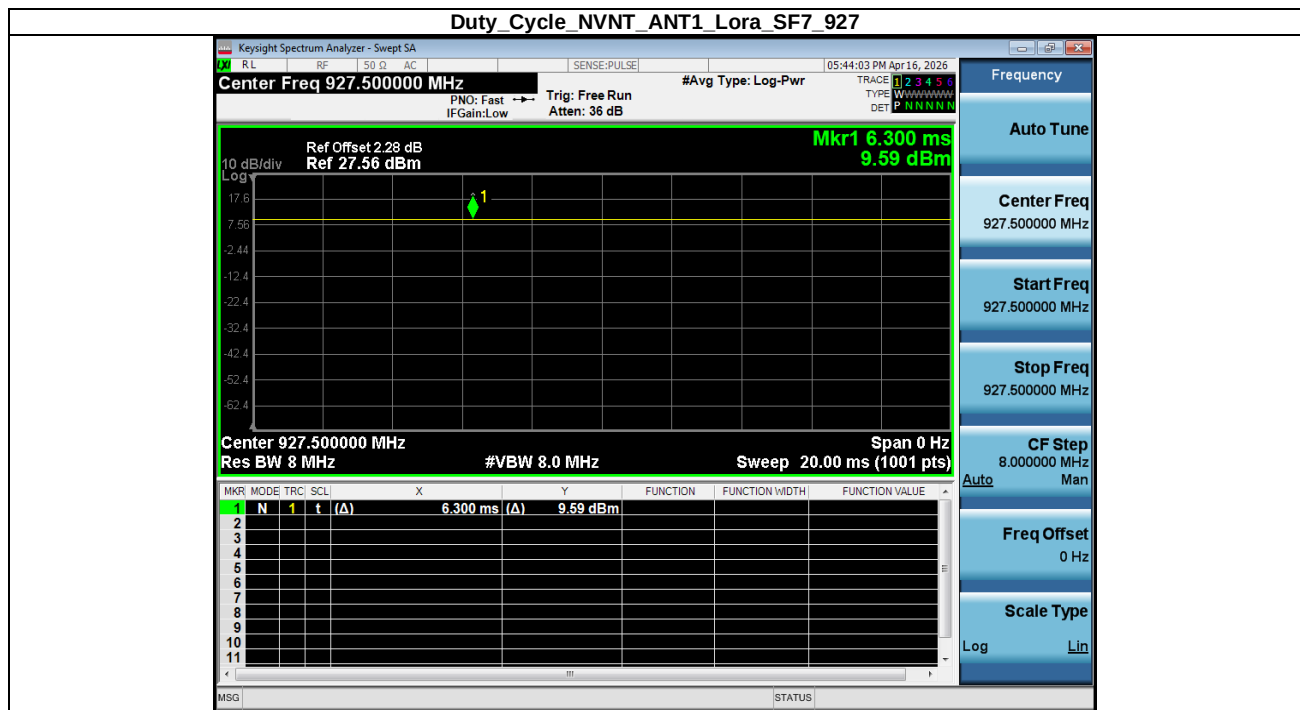
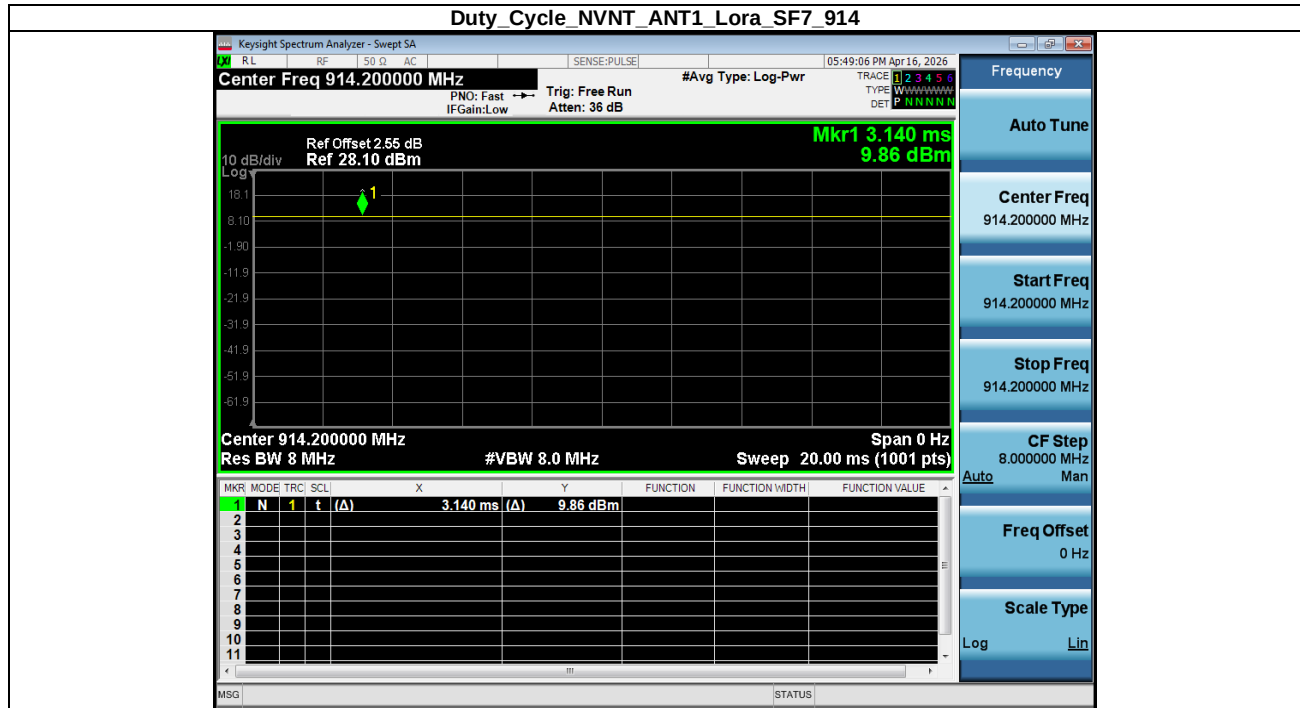
Condition	Antenna	Test Mode	Frequency (MHz)	Max. Conducted Power(dBm)	Max. Conducted Power(mW)	Limit(mW)	Result
NVNT	ANT1	Lora_SF7	903.00	10.24	10.57	1000	Pass
NVNT	ANT1	Lora_SF7	914.20	9.81	9.57	1000	Pass
NVNT	ANT1	Lora_SF7	927.50	9.56	9.04	1000	Pass





Condition	Antenna	Rate	Frequency (MHz)	Dutycycle(%)	Duty_factor
NVNT	ANT1	Lora_SF7	903.00	100	0.00
NVNT	ANT1	Lora_SF7	914.20	100	0.00
NVNT	ANT1	Lora_SF7	927.50	100	0.00





7. Peak Power Spectral Density

7.1. Test limits

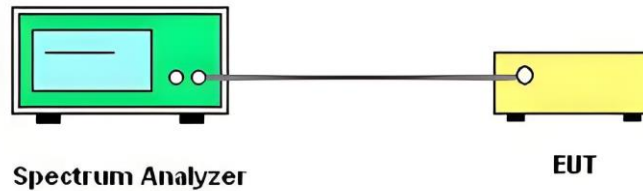
For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

7.2. Test Procedure

Details see the KDB558074 D01 Meas Guidance v05r02

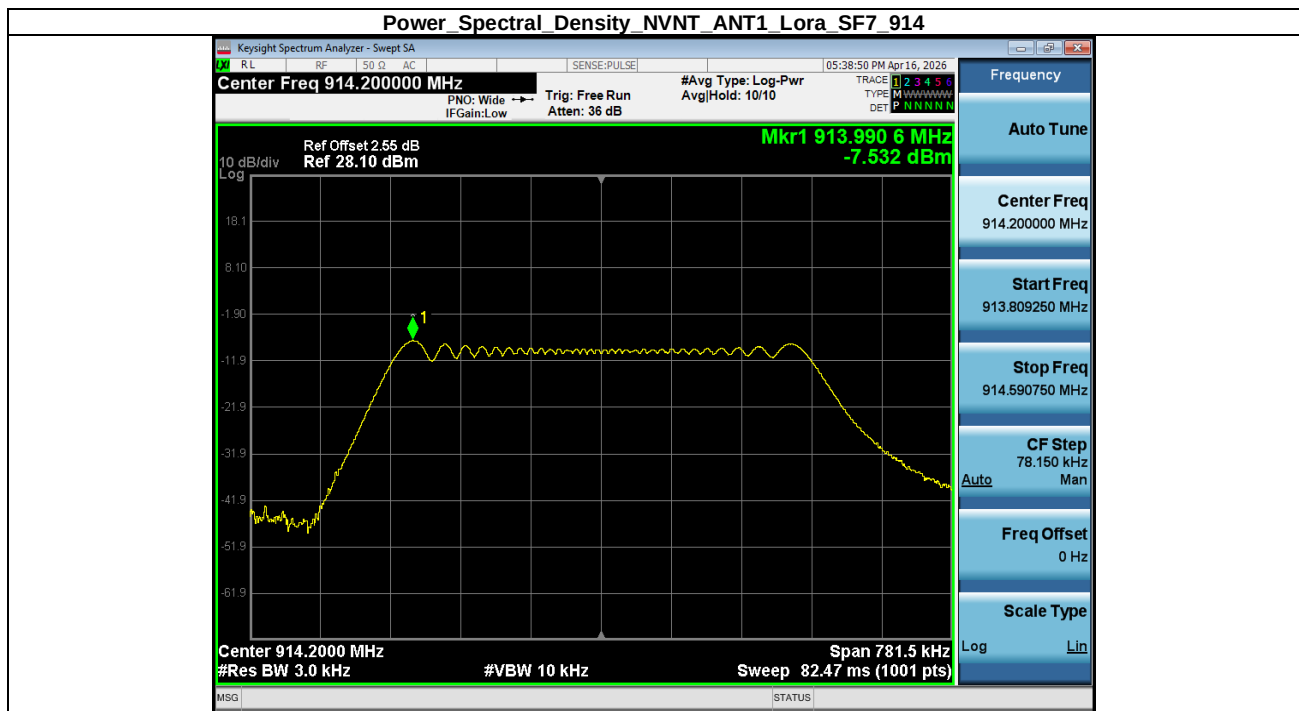
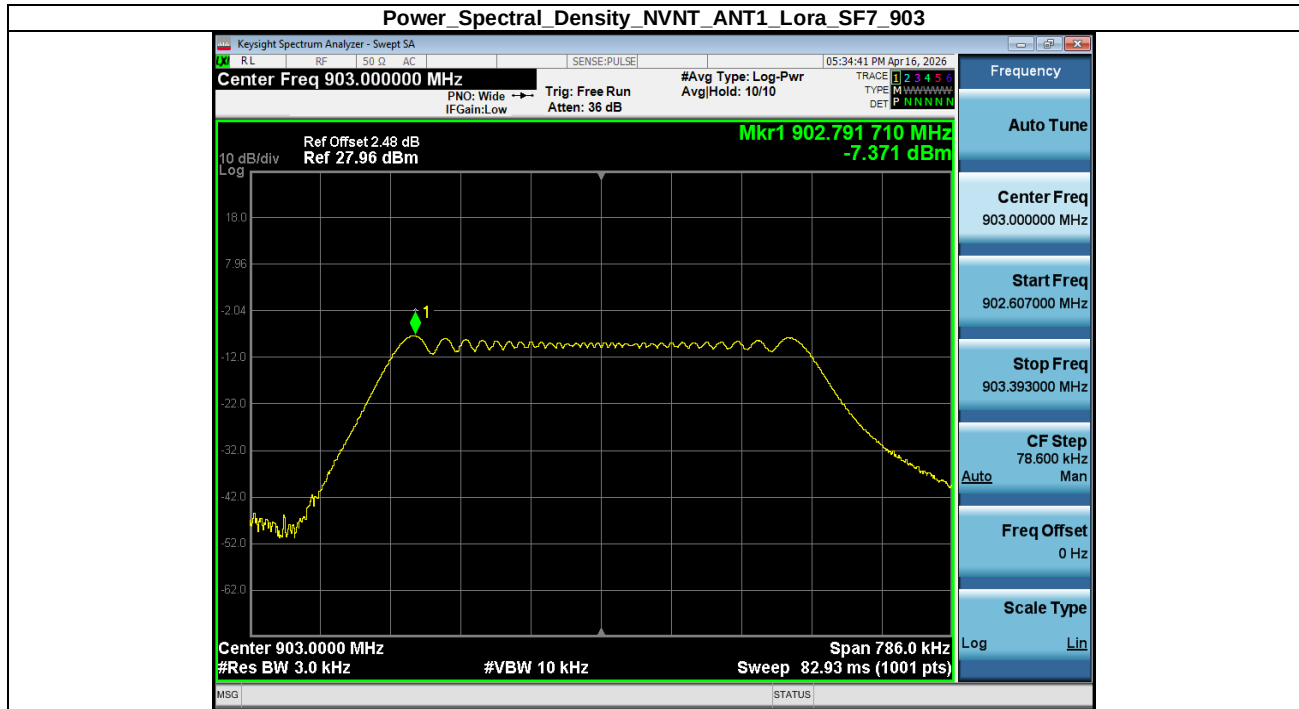
1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as RBW = 3kHz(Set the RBW to: $3\text{ kHz} \leq \text{RBW} \leq 100\text{ kHz}$), VBW = 10kHz(Set the $\text{VBW} \geq 3 \times \text{RBW}$), $\text{span} \geq 1.5 \times \text{DTS bandwidth}$., detail see the test plot.
4. Record the max reading.
5. Repeat the above procedure until the measurements for all frequencies are completed.

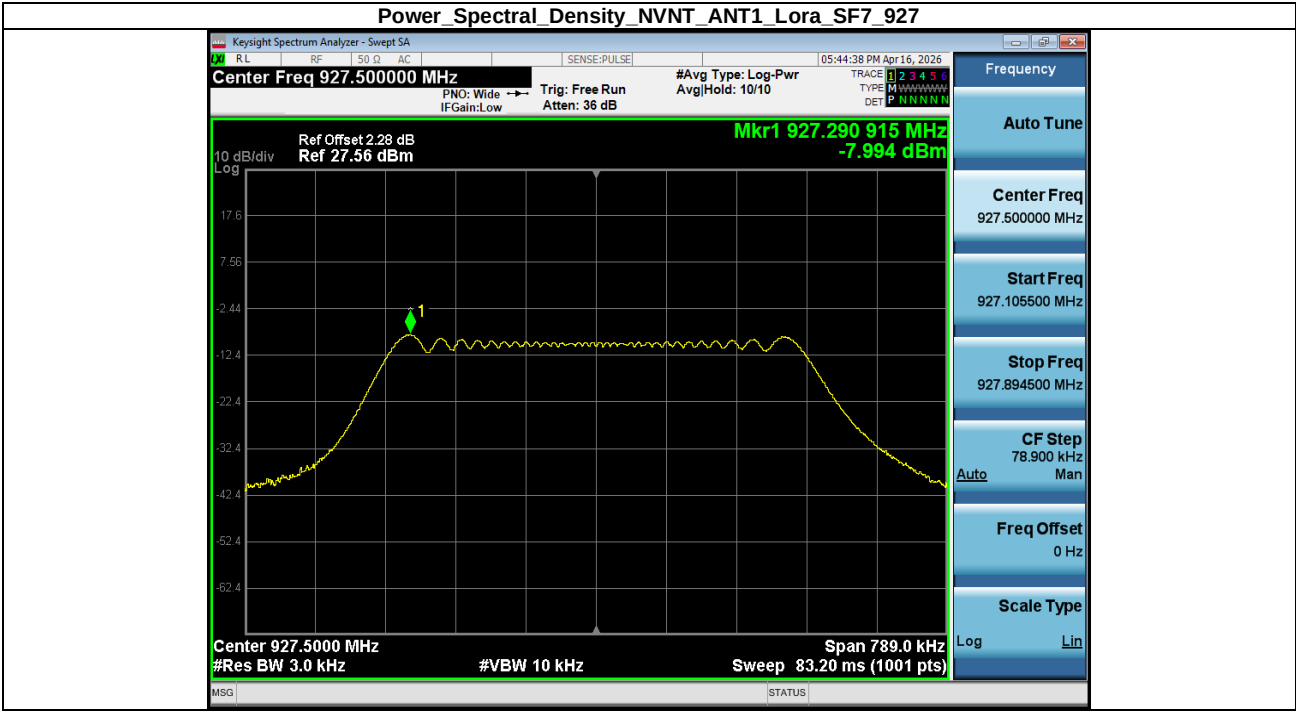
7.3. Test Setup



7.4. Test Results

Condition	Antenna	Test Mode	Frequency (MHz)	Power Spectral Density(dBm/3kHz)	Limit(dBm/3kHz)	Result
NVNT	ANT1	Lora_SF7	903.00	-7.37	8	Pass
NVNT	ANT1	Lora_SF7	914.20	-7.53	8	Pass
NVNT	ANT1	Lora_SF7	927.50	-7.99	8	Pass





8. Occupied Bandwidth

8.1. Test limits

Systems using digital modulation techniques may operate in the 902-928 MHz, and 2400-2483.5 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz

8.2. Test Procedure

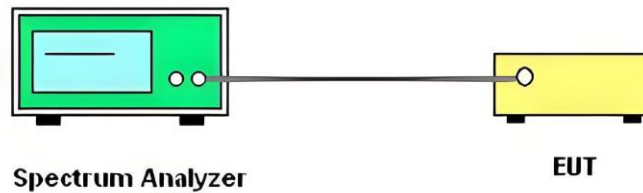
Details see the KDB558074 D01 Meas Guidance v05r02 and C63.10 section 6.9.3

a) The bandwidth is measured at an amplitude level reduced 6dB from the reference level. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst-case (i.e. the widest) bandwidth.

b) The test receiver set RBW = 100kHz, VBW $\geq$ 3*RBW =300kHz, Peak Detector, Sweep time set auto, detail see the test plot.

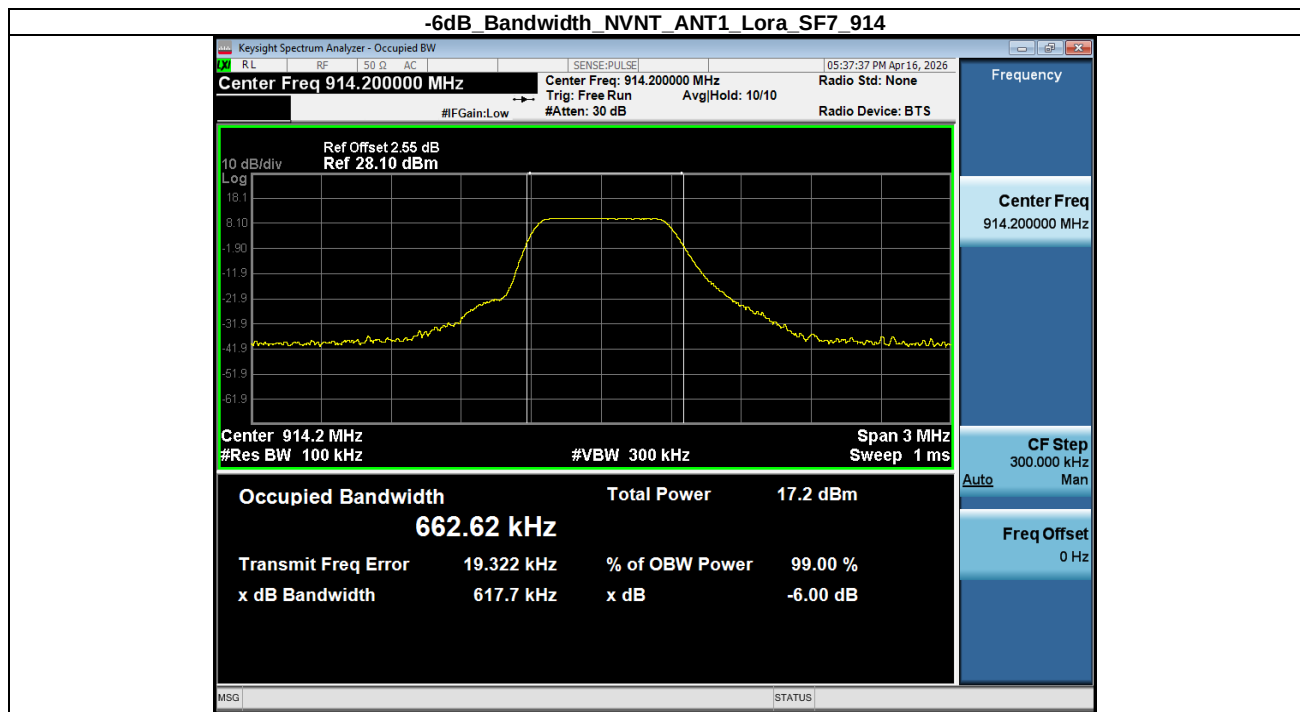
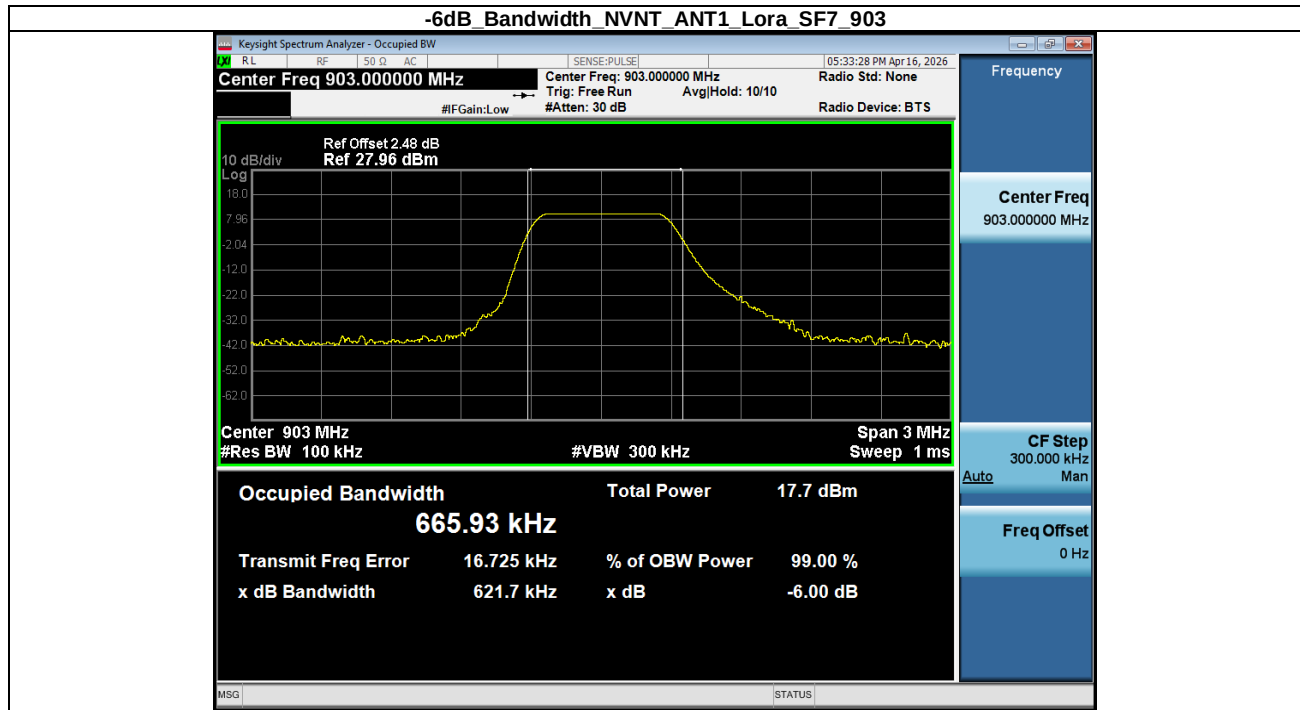
c) The test receiver set RBW =1-5%BW, VBW>3*RBW, Sweep time set auto, detail see the test plot for 99%Bandwidth.

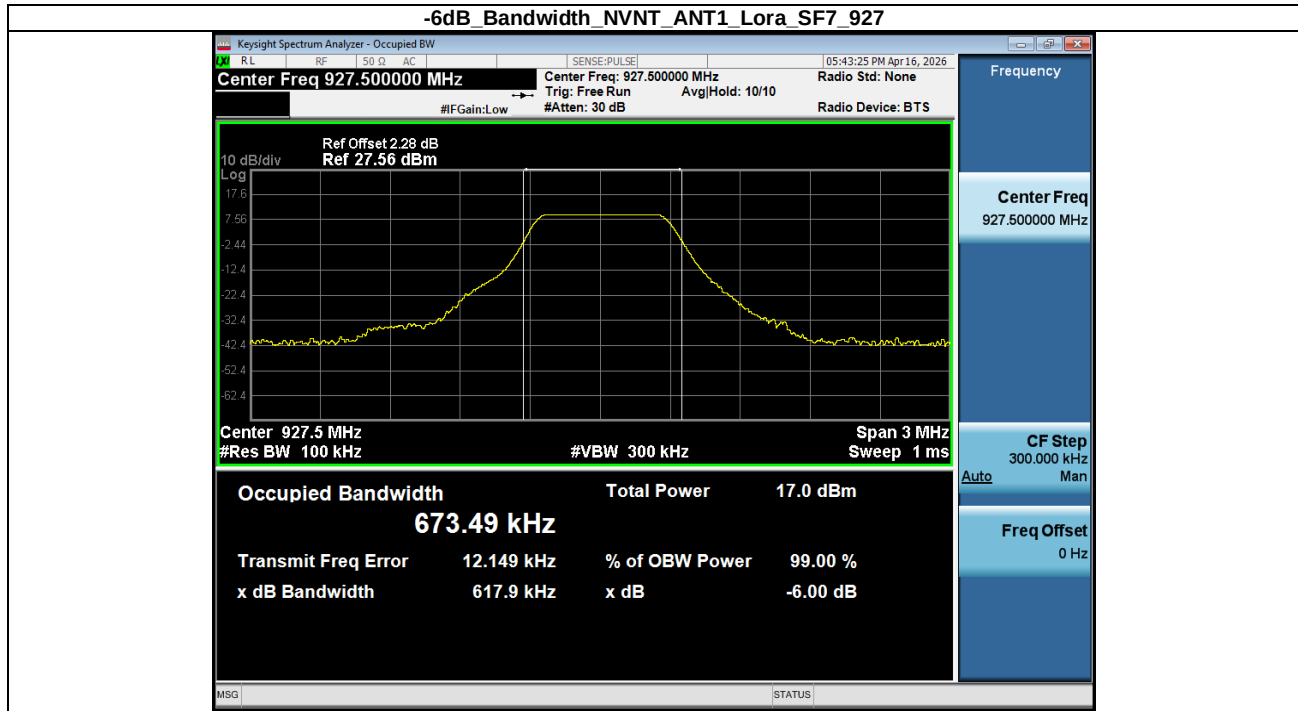
8.3. Test Setup



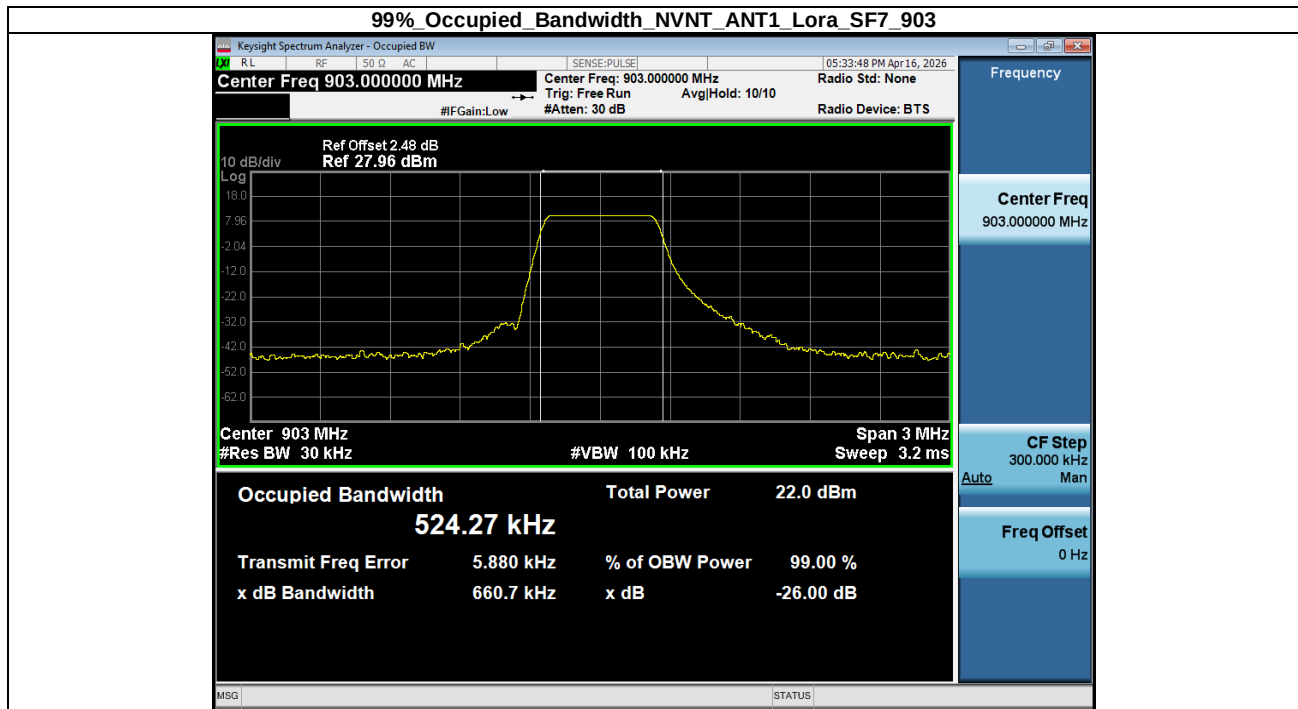
8.4. Test Results

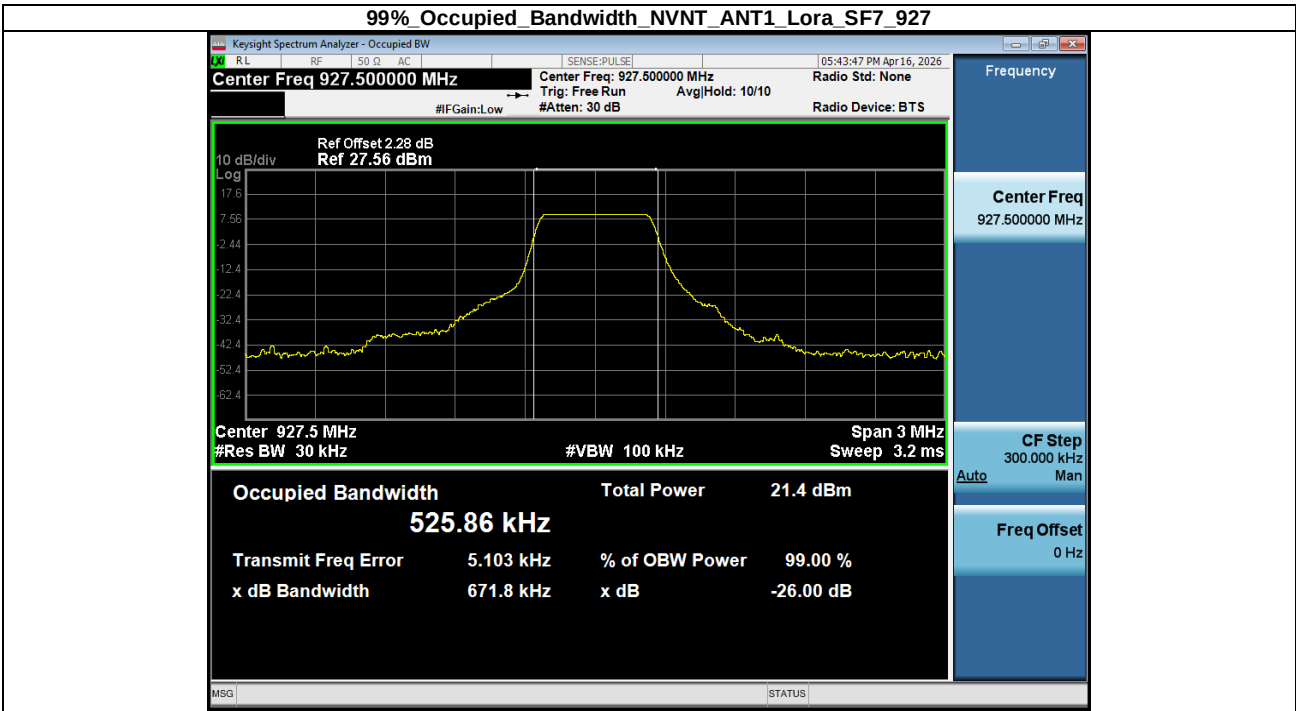
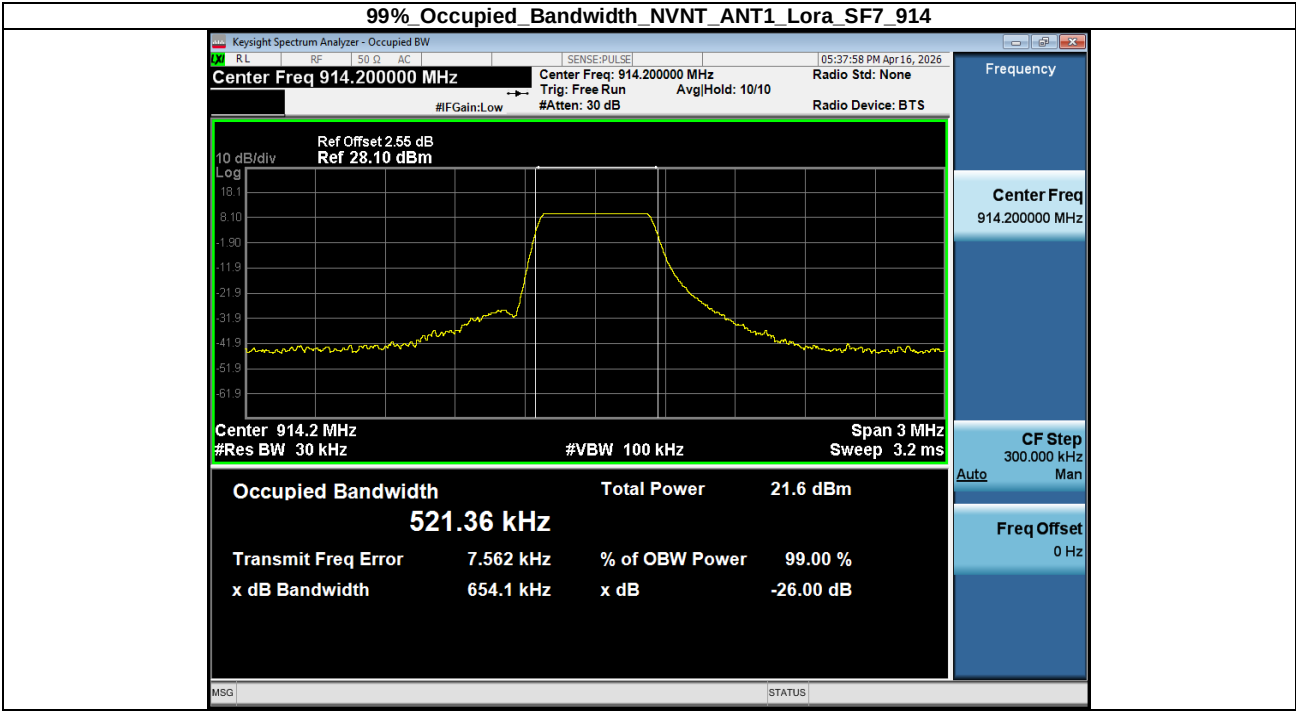
Condition	Antenna	Test Mode	Frequency (MHz)	-6dB BW(kHz)	limit(kHz)	Result
NVNT	ANT1	Lora_SF7	903.00	621.74	500	Pass
NVNT	ANT1	Lora_SF7	914.20	617.70	500	Pass
NVNT	ANT1	Lora_SF7	927.50	617.89	500	Pass





Condition	Antenna	Test Mode	Frequency (MHz)	99%OBW(MHz)
NVNT	ANT1	Lora_SF7	903.00	0.524
NVNT	ANT1	Lora_SF7	914.20	0.521
NVNT	ANT1	Lora_SF7	927.50	0.526





9. Antenna Requirement

9.1. 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 shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the Lora_SF7, but the use of a standard antenna jack or electrical connector is prohibited.

9.2. Test Results

The EUT antenna is external antenna. It complies with the standard requirement.

10. Photos of test setup

Reference to the **appendix I Test Setup Photo** for details.

11. Photos of EUT

Reference to the **appendix II external photos** and **appendix III internal photos** for details.

----- END OF REPORT-----