

**Hangzhou Kitchen Idea Technology Co., Ltd**

# RF TEST REPORT

**Report Type:**

FCC Part 15.247 RF report

**Model:**

SKI.WB800DS2.1

**REPORT NUMBER:**

230300086HAN-002

**ISSUE DATE:**

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**DOCUMENT CONTROL NUMBER:**

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**Type/Model:** SKI.WB800DS2.1

**FCC ID:** 2A2KP-K2902

**IC:** 30295-K2902

**SUMMARY:**

The equipment complies with the requirements according to the following standard(s) or Specification:

**47CFR Part 15 (2020):** Radio Frequency Devices (Subpart C)

**ANSI C63.10 (2013):** American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

**RSS-247 Issue 2 (February 2017):** Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices

**RSS-Gen Issue 5 (February 2021) Amendment 2:** General Requirements for Compliance of Radio Apparatus

**PREPARED BY:** \_\_\_\_\_ **REVIEWED BY:** \_\_\_\_\_

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**Revision History**

Report No.	Version	Description	Issued Date
230300086HAN-002	Rev. 01	Initial issue of report	July 31, 2023

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**Measurement result summary**

TEST ITEM	FCC REFERENCE	IC REFERENCE	RESULT
Minimum 6dB Bandwidth	15.247(a)(2)	RSS-247 Issue 2 Clause 5.2	Pass
Maximum conducted output power and e.i.r.p.	15.247(b)(3)	RSS-247 Issue 2 Clause 5.4	Pass
Power spectrum density	15.247(e)	RSS-247 Issue 2 Clause 5.2	Pass
Emission outside the frequency band	15.247(d)	RSS-247 Issue 2 Clause 5.5	Pass
Radiated Emissions in restricted frequency bands	15.247(d), 15.205&15.209	RSS-Gen Issue 5 Clause 8.9&8.10	Pass
Power line conducted emission	15.207(a)	RSS-Gen Issue 5 Clause 8.8	Pass
Occupied bandwidth	-	RSS-Gen Issue 5 Clause 6.6	Tested
Antenna requirement	15.203	-	Pass

Notes: 1: NA =Not Applicable

2: Determination of the test conclusion is based on IEC Guide 115 in consideration of measurement uncertainty.

3. Additions, Deviations and Exclusions from Standards: None.

**TEST REPORT**

**1 GENERAL INFORMATION**

**1.1 Description of Equipment Under Test (EUT)**

Product name:	RF module
Type/Model/HVIN:	SKI.WB800DS2.1
Description of EUT:	The EUT is a highly integrated SoC with dual band Wi-Fi and high-performance Cortex-M4F for wireless application. The Module band is 2.4GHz and 5.0GHz.
Rating:	12VDC
Category of EUT:	Class B
Brand name:	NA
EUT type:	<input checked="" type="checkbox"/> Tabletop <input type="checkbox"/> Floor standing
Product Marketing Name:	SKI.WB800DS2.1
Software Version:	NA
Hardware Version:	SKI.WB800DS2.1
Serial numbers:	NA
Sample Identification No.:	1230227-25-003
Sample received date:	April 15, 2023
Date of test:	June 10-30, 2023

**1.2 Technical Specification**

Frequency Band:	2400MHz ~ 2483.5MHz
Support Standards:	IEEE 802.11b, IEEE 802.11g IEEE 802.11n(HT20), IEEE 802.11AX(HE20) IEEE 802.11n(HT40), IEEE 802.11AX(HE40)
Type of Modulation:	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11n(HT20) /AX(HE20): OFDM (64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11n(HT40) /AX(HE40): OFDM (64-QAM, 16-QAM, QPSK, BPSK)
Operating Frequency:	2412MHz to 2462MHz for IEEE 802.11b/g/n(HT20) /AX(HE20) 2422MHz to 2452MHz for IEEE 802.11n(HT40) /AX(HE40)
Channel Number:	11 Channels for 802.11b, 802.11g and 802.11n(HT20) /AX(HE20) 7 Channels for 802.11n(HT40) /AX(HE40)
Channel Separation:	5 MHz
Antenna:	External Antenna, 3.7 dBi Gain

**TEST REPORT****1.3 Antenna information**

Mode	Tx/Rx Function	Beamforming function	CDD function	Directional gain (dBi)
802.11b	1Tx/1Rx	NO	NO	-
802.11g	1Tx/1Rx	NO	NO	-
802.11n(HT20) 802.11AX(HE20)	1Tx/1Rx	NO	NO	-
802.11n(HT40) 802.11AX(HE40)	1Tx/1Rx	NO	NO	-



**TEST REPORT**

**1.4 Description of Test Facility**

Name:	Intertek Testing Services Shanghai
Address:	Building 86, No. 1198 Qinzhou Road (North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized, certified, or accredited by these organizations:	CNAS Accreditation Lab Registration No. CNAS L0139
	FCC Accredited Lab Designation Number: CN0175
	IC Registration Lab CAB identifier.: CN0014
	VCCI Registration Lab Member No: 3598 (Registration No.: R-14243, G-10845, C-14723, T-12252)
	A2LA Accreditation Lab Certificate Number: 3309.02

**TEST REPORT**

**2 TEST SPECIFICATIONS**

**2.1 Standards or specification**

47CFR Part 15 (2020)  
 ANSI C63.10 (2013)  
 KDB 558074 (v05r02)  
 RSS-247 Issue 2 (February 2017)  
 RSS-Gen Issue 5 (February 2021) Amendment 2

**2.2 Mode of operation during the test**

While testing transmitting mode of EUT, the internal modulation and continuously transmission was applied.

Software name	Manufacturer	Version	Supplied by
adb tool	-	-	-

The lowest, middle and highest channel were tested as representatives.

Frequency Band (MHz)	Mode	Lowest (MHz)	Middle (MHz)	Highest (MHz)
2400-2483.5	802.11b	2412	2437	2462
	802.11g	2412	2437	2462
	802.11n(HT20)/AX(HE20)	2412	2437	2462
	802.11n(HT40)/AX(HE40)	2422	2437	2452

**Data rate and Power setting:**

The pre-scan for the conducted power with all rates in each modulation and bands was used, and the worst case was found and used in all test cases. After this pre-scan, we choose the following table of the data rate as the worst case.

Frequency Band (MHz)	Mode	Worst case data rate	Power Setting
2400-2483.5	802.11b	1Mbps	Default
	802.11g	6Mbps	Default
	802.11n(HT20)/AX(HE20)	MCS0	Default
	802.11n(HT40)/AX(HE40)	MCS0	Default

The EUT will use two types of antennas, and there have the following test mode:

Radiated test mode:

Mode 1: EUT transmitted signal with internal antenna.

Conducted test mode:

Mode 2: EUT transmitted signal from PCBA RF port connected to SPA directly.

We have verified all test modes, and list all the results in this report.

**TEST REPORT**

**2.3 Test software list**

Test Items	Software	Manufacturer	Version
Conducted emission	ESxS-K1	R&S	V2.1.0
Radiated emission	ES-K1	R&S	V1.71

**2.4 Test peripherals list**

Item No.	Name	Band and Model	Description
1	Laptop computer	DELL 5480	-
2	RF cable	/	0.2m length; 0.5dB loss

**2.5 Test environment condition:**

Test items	Temperature	Humidity
Minimum 6dB Bandwidth	19°C	53%RH
Maximum conducted output power and e.i.r.p.		
Power spectrum density		
Emission outside the frequency band		
Occupied bandwidth		
Radiated Emissions in restricted frequency bands	20°C	53%RH
Power line conducted emission	20°C	53%RH

TEST REPORT

2.6 Instrument list

Conducted Emission					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
<input checked="" type="checkbox"/>	Test Receiver	R&S	ESR7	EC 6194	2024-02-08
<input checked="" type="checkbox"/>	Attenuator	Hua Xiang	Ts5-10db-6g	EC 6194-1	2023-12-07
<input checked="" type="checkbox"/>	A.M.N.	R&S	ESH2-Z5	EC 3119	2023-11-09
<input type="checkbox"/>	A.M.N.	R&S	ENV4200	EC 3558	2024-06-05
<input checked="" type="checkbox"/>	Shielded room	Zhongyu	-	EC 2838	2024-01-11
Radiated Emission					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
<input checked="" type="checkbox"/>	Test Receiver	R&S	ESIB 26	EC 3045	2024-07-17
<input checked="" type="checkbox"/>	Test Receiver	R&S	ESR	EC6501	2023-09-05
<input checked="" type="checkbox"/>	Bilog Antenna	TESEQ	CBL 6112B	EC 6411	2024-08-22
<input checked="" type="checkbox"/>	Horn antenna	Tonscend	bha9120d	EC 6432-2	2024-02-15
<input checked="" type="checkbox"/>	Horn antenna	ETS	3117	EC 4792-1	2023-08-28
<input checked="" type="checkbox"/>	Horn antenna	TOYO	HAP18-26W	EC 4792-3	2023-07-29
<input checked="" type="checkbox"/>	Pre-amplifier	R&S	AFS42-00101800-25-S-42	EC 5262	2024-06-15
<input checked="" type="checkbox"/>	Semi-anechoic chamber	Albatross project	-	EC 3048	2024-07-08
RF test					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
<input checked="" type="checkbox"/>	PXA Signal Analyzer	Keysight	N9030A	EC 5338	2024-03-05
<input checked="" type="checkbox"/>	Vector Signal Generator	Agilent	N5182B	EC 5175	2024-03-05
<input checked="" type="checkbox"/>	Universal Radio Communication Tester	R&S	CMW500	EC5944	2024-03-05
<input checked="" type="checkbox"/>	MXG Analog Signal Generator	Agilent	N5181A	EC 5338-2	2024-03-05
<input type="checkbox"/>	Mobile Test System	Litepoint	lqxel	EC 5176	2024-01-11
<input checked="" type="checkbox"/>	Test Receiver	R&S	ESCI 7	EC 4501	2024-03-05
<input type="checkbox"/>	Climate chamber	GWS	MT3065	EC 6021	2024-03-06
<input checked="" type="checkbox"/>	Spectrum Analyzer	Keysight	N9030B	EC 6078	2024-06-15
<input checked="" type="checkbox"/>	Universal Radio Communication Tester	R&S	CMW500	EC 6209	2024-01-30
<input checked="" type="checkbox"/>	Signal generator	Agilent	N5182A	EC 6172	2023-08-09
<input checked="" type="checkbox"/>	Signal generator	Agilent	N5181A	EC 6171	2023-08-09
Additional instrument					
Used	Equipment	Manufacturer	Type	Internal no.	Due date
<input checked="" type="checkbox"/>	Therom-Hygrograph	ZJ1-2A	S.M.I.F.	EC 3783	2024-03-24
<input checked="" type="checkbox"/>	Pressure meter	YM3	Shanghai Mengde	EC 4620	2023-09-13

**TEST REPORT**

**2.7 Measurement uncertainty**

The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Test item	Measurement uncertainty
Maximum peak output power	$\pm 0.74\text{dB}$
Minimum 6dB bandwidth	
Power spectrum density	
Emission outside the frequency band	
Occupied bandwidth	
Radiated Emissions in restricted frequency bands below 1GHz	$\pm 4.90\text{dB}$
Radiated Emissions in restricted frequency bands above 1GHz	$\pm 5.02\text{dB}$
Emission outside the frequency band	$\pm 2.89\text{dB}$
Power line conducted emission	$\pm 3.19\text{dB}$

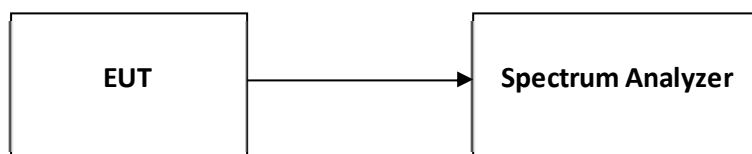
**TEST REPORT****3 Minimum 6dB bandwidth****Test result: Pass****3.1 Limit**

For systems using digital modulation techniques that may operate in the 902 - 928 MHz, 2400 - 2483.5 MHz and 5725 - 5850 MHz bands, the minimum 6 dB bandwidth shall be at least 500 kHz.

**3.2 Measurement Procedure**

The EUT was tested according to Subclause 11.8 of ANSI C63.10.

- a) Set RBW = 100 kHz.
- b) Set the video bandwidth (VBW)  $\geq 3 \times$  RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Sweep = auto couple.
- f) Allow the trace to stabilize.
- g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

**3.3 Test Configuration****3.4 Test Results of Minimum 6dB bandwidth**

Please refer to Appendix A

**TEST REPORT****4 Maximum conducted output power and e.i.r.p.****Test result: Pass****4.1 Limit**

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 W. (The e.i.r.p. shall not exceed 4 W)

If the transmitting antenna of directional gain greater than 6dBi is used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi. If there have a beam forming type, the limit should be the minimum of 30dBm and 30+ (6 –antenna gain-beam forming gain).

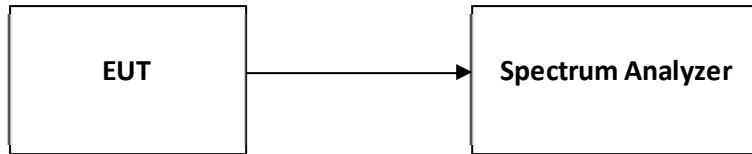
**4.2 Measurement Procedure**

The EUT was tested according to Subclause 11.9.2.2 of ANSI C63.10.

- a) Measure the duty cycle,  $x$ , of the transmitter output signal as described in Section 6.0.
- b) Set span to at least  $1.5 \times \text{OBW}$ .
- c) Set RBW = 1 % to 5 % of the OBW, not to exceed 1 MHz.
- d) Set VBW  $\geq 3 \times \text{RBW}$ .
- e) Number of points in sweep  $\geq 2 \times \text{span} / \text{RBW}$ . (This gives bin-to-bin spacing  $\leq \text{RBW}/2$ , so that narrowband signals are not lost between frequency bins.)
- f) Sweep time = auto.
- g) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
- h) Do not use sweep triggering. Allow the sweep to “free run”.
- i) Trace average at least 100 traces in power averaging (i.e., RMS) mode; however, the number of traces to be averaged shall be increased above 100 as needed such that the average accurately represents the true average over the on and off periods of the transmitter.
- j) Compute power by integrating the spectrum across the OBW of the signal using the instrument’s band power measurement function with band limits set equal to the OBW band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.
- k) Add  $10 \log (1/x)$ , where  $x$  is the duty cycle, to the measured power in order to compute the average power during the actual transmission times (because the measurement represents an average over both the on- and off-times of the transmission). For example, add  $10 \log (1/0.25) = 6 \text{ dB}$  if the duty cycle is 25 %.

**TEST REPORT**

**4.3 Test Configuration**



**4.4 Test Results of Maximum conducted output power**

Please refer to Appendix A



## TEST REPORT

### 5 Power spectrum density

**Test result:** Pass

#### 5.1 Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3 kHz band during any time interval of continuous transmission.

If the transmitting antenna of directional gain greater than 6dBi is used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi. If there have a beam forming type, the limit should be the minimum of 8dBm/MHz and  $8 + (6 - \text{antenna gain} - \text{beam forming gain})$ .

#### 5.2 Measurement Procedure

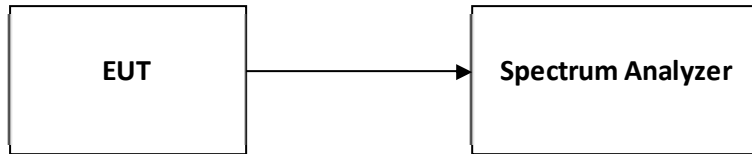
The EUT was tested according to Subclause 11.10 of ANSI C63.10.

This procedure is applicable when the EUT cannot be configured to transmit continuously (i.e., duty cycle < 98 %), and when sweep triggering/signal gating cannot be used to measure only when the EUT is transmitting at its maximum power control level, and when the transmission duty cycle is constant (i.e., duty cycle variations are less than  $\pm 2\%$ ):

- a) Measure the duty cycle (x) of the transmitter output signal as described in Section 6.0.
- b) Set instrument center frequency to DTS channel center frequency.
- c) Set span to at least  $1.5 \times \text{OBW}$ .
- d) Set RBW to:  $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$ .
- e) Set VBW  $\geq 3 \times \text{RBW}$ .
- f) Detector = power averaging (RMS) or sample detector (when RMS not available).
- g) Ensure that the number of measurement points in the sweep  $\geq 2 \times \text{span}/\text{RBW}$ .
- h) Sweep time = auto couple.
- i) Do not use sweep triggering. Allow sweep to "free run".
- j) Employ trace averaging (RMS) mode over a minimum of 100 traces.
- k) Use the peak marker function to determine the maximum amplitude level.
- l) Add  $10 \log (1/x)$ , where x is the duty cycle measured in step (a), to the measured PSD to compute the average PSD during the actual transmission time.
- m) If resultant value exceeds the limit, then reduce RBW (no less than 3 kHz) and repeat (note that this may require zooming in on the emission of interest and reducing the span in order to meet the minimum measurement point requirement as the RBW is reduced).

**TEST REPORT**

**5.3 Test Configuration**



**5.4 Test Results of Power spectrum density**

Please refer to Appendix A

**TEST REPORT****6 Emission outside the frequency band****Test result: Pass****6.1 Limit**

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

**6.2 Measurement Procedure**

The EUT was tested according to Subclause 11.11 of ANSI C63.10.

**Reference level measurement**

Establish a reference level by using the following procedure:

- a) Set instrument center frequency to DTS channel center frequency.
- b) Set the span to  $\geq 1.5$  times the DTS bandwidth.
- c) Set the RBW = 100 kHz.
- d) Set the VBW  $\geq 3 \times$  RBW.
- e) Detector = peak.
- f) Sweep time = auto couple.
- g) Trace mode = max hold.
- h) Allow trace to fully stabilize.
- i) Use the peak marker function to determine the maximum PSD level.

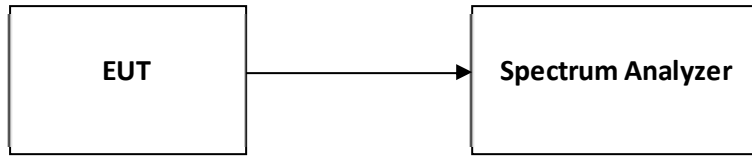
**Emission level measurement**

- a) Set the center frequency and span to encompass frequency range to be measured.
- b) Set the RBW = 100 kHz.
- c) Set the VBW  $\geq 3 \times$  RBW.
- d) Detector = peak.
- e) Sweep time = auto couple.
- f) Trace mode = max hold.
- g) Allow trace to fully stabilize.
- h) Use the peak marker function to determine the maximum amplitude level.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) are attenuated by at least the minimum requirements specified in 11.1 a) or 11.1 b). Report the three highest emissions relative to the limit.

**TEST REPORT**

**6.3 Test Configuration**



**6.4 The results of Emission outside the frequency band**

Please refer to Appendix A

**TEST REPORT**

**7 Radiated Emissions in restricted frequency bands**

**Test result:** Pass

**7.1 Limit**

The radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified showed as below:

<b>Frequencies (MHz)</b>	<b>Field Strength (microvolts/meter)</b>	<b>Measurement Distance (meters)</b>
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

**7.2 Measurement Procedure**

The EUT was tested according to Subclause 11.12 of ANSI C63.10.

**For Radiated emission below 30MHz:**

- a) The EUT was placed on the top of a rotating turntable 0.8 meters above the ground at a 3 meter chamber room. The turntable 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) Both X and Y axes of the antenna are set to make the measurement.
- d) For each suspected emission, the EUT was arranged to its worst case 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 Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

**NOTE:**

- 1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

**TEST REPORT****For Radiated emission above 30MHz:**

- a) The EUT was placed on the top of a rotating turntable 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The turntable 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 height of antenna 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 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 quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f) The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

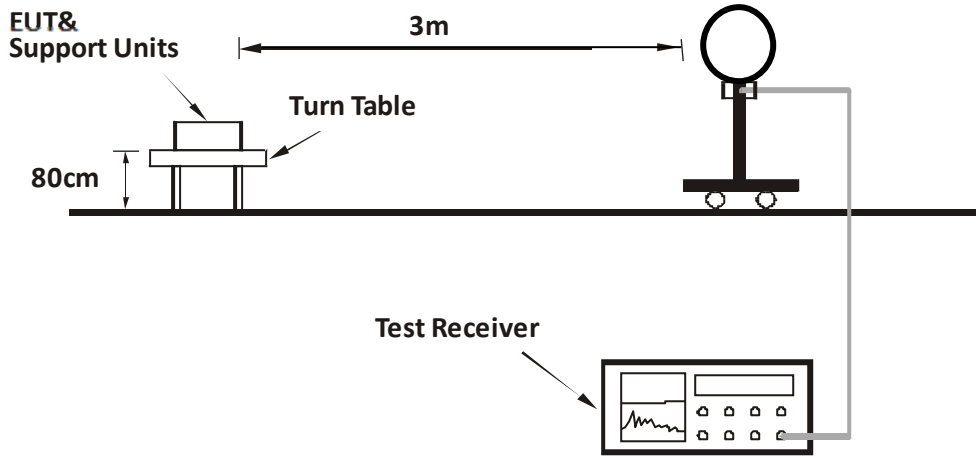
**Note:**

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is  $\geq 1/T$  (Duty cycle < 98%) or  $3 \times \text{RBW}$  (Duty cycle  $\geq 98\%$ ) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported

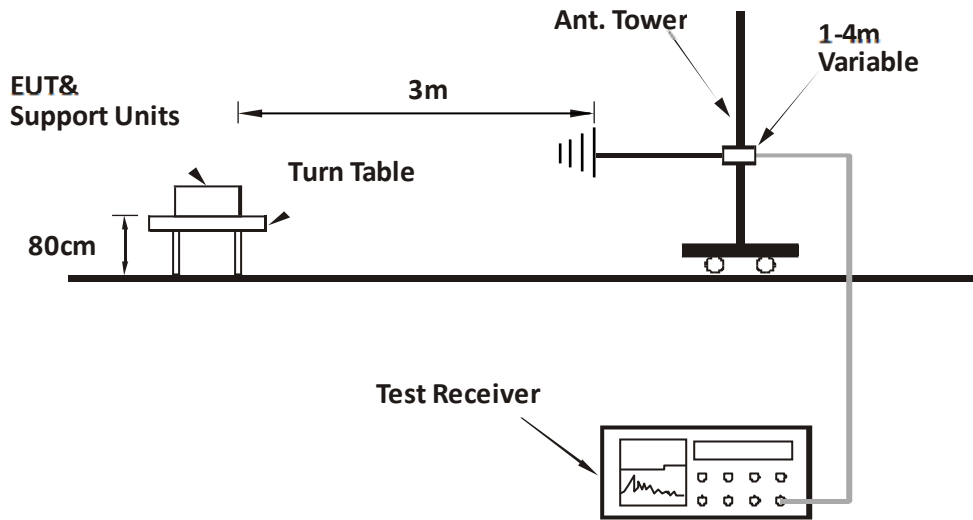
**TEST REPORT**

**7.3 Test Configuration**

**For Radiated emission below 30MHz:**

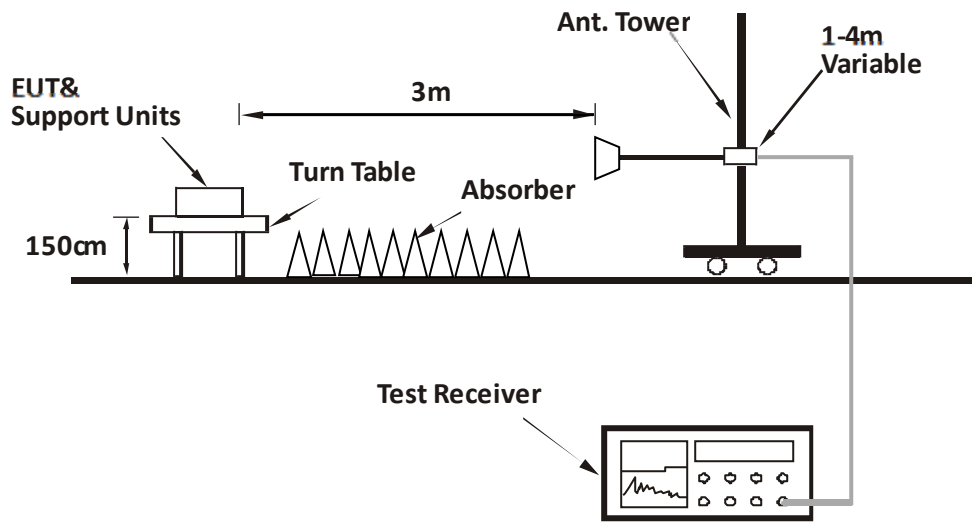


**For Radiated emission 30MHz to 1GHz:**



**TEST REPORT**

**For Radiated emission above 1GHz:**





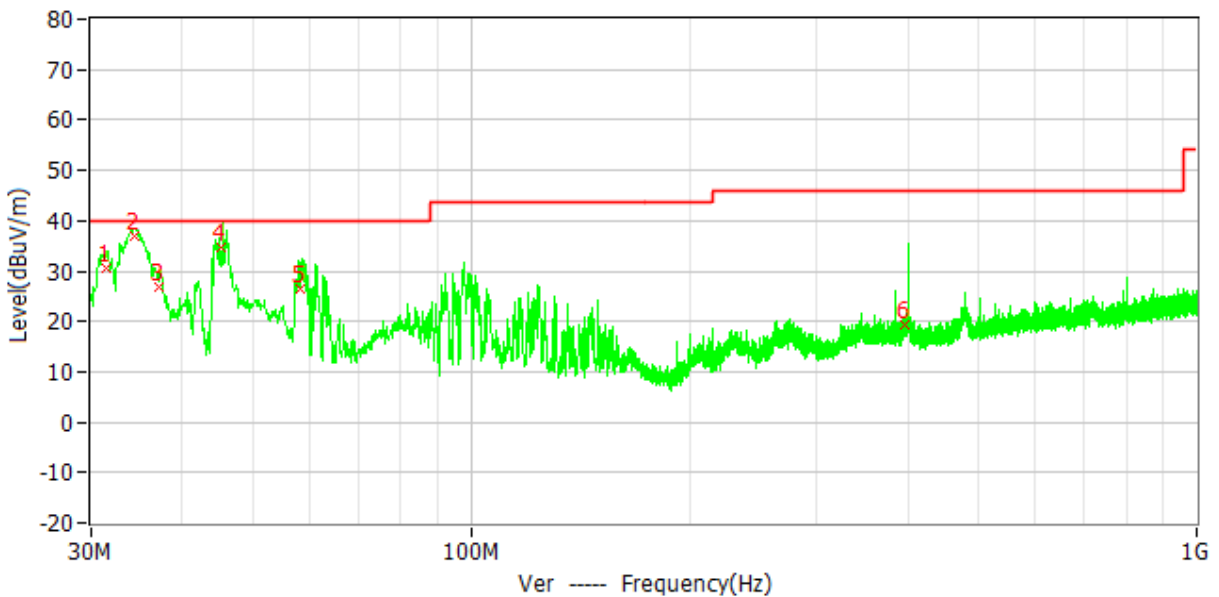
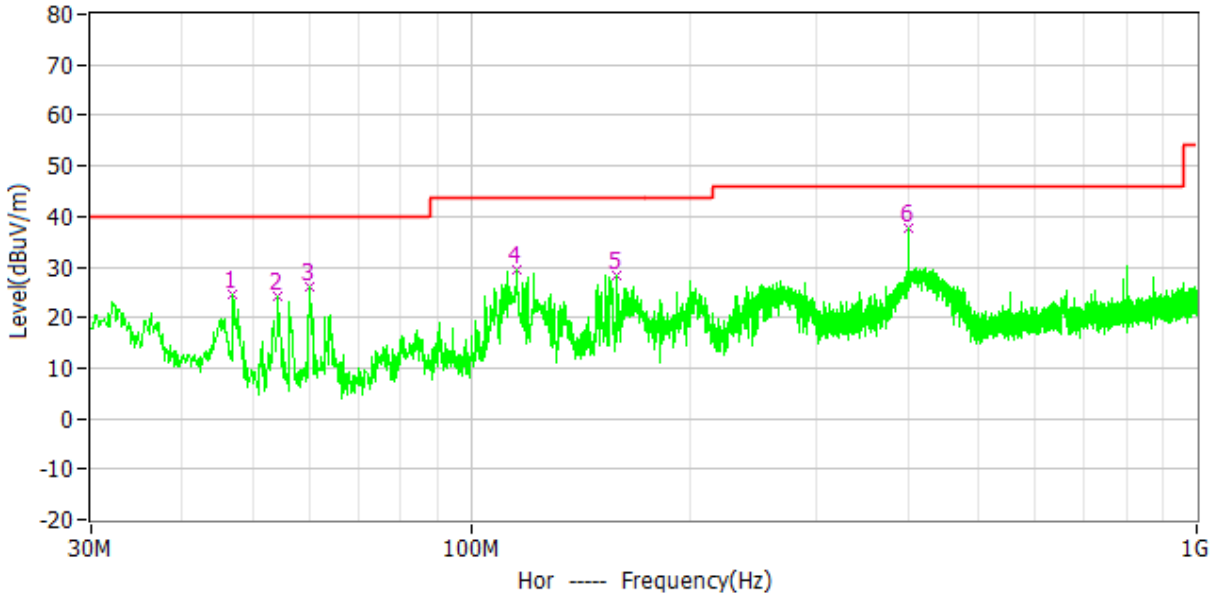
TEST REPORT

7.4 Test Results of Radiated Emissions

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

We test all models, and the worst waveform from 30MHz to 1000MHz is listed as below:

30M~1GHz:



**TEST REPORT**

**Test data:**

Antenna	Frequency (MHz)	Corrected Reading (dBuV/m)	Correct Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector
H	46.975	24.70	11.60	40.00	15.30	PK
H	54.250	24.30	9.30	40.00	15.70	PK
H	59.876	26.20	8.10	40.00	13.80	PK
H	115.554	29.50	13.50	43.50	14.00	PK
H	158.816	28.40	12.00	43.50	15.10	PK
H	399.958	37.60	18.50	46.00	8.40	PK
V	31.494	30.60	20.50	40.00	9.40	QP
V	34.369	37.10	18.70	40.00	2.90	QP
V	37.294	26.90	16.80	40.00	13.10	QP
V	45.385	34.50	12.40	40.00	5.50	QP
V	58.209	26.30	8.40	40.00	13.70	QP
V	395.981	19.20	18.40	46.00	26.80	QP

**Remark:**

1. Correct Factor = Antenna Factor + Cable Loss (+ Amplifier, for higher than 1GHz), the value was added to Original Receiver Reading by the software automatically.
2. Corrected Reading = Original Receiver Reading + Correct Factor
3. Margin = Limit - Corrected Reading
4. If the PK Corrected Reading is lower than AV limit, the AV test can be elided.

Example: Assuming Antenna Factor = 30.20dB/m, Cable Loss = 2.00dB,  
 Gain of Preamplifier = 32.00dB, Original Receiver Reading = 10.00dBuV,  
 Limit = 40.00dBuV/m.  
 Then Correct Factor = 30.20 + 2.00 – 32.00 = 0.20dB/m;  
 Corrected Reading = 10dBuV + 0.20dB/m = 10.20dBuV/m;  
 Margin = 40.00dBuV/m - 10.20dBuV/m = 29.80dB.

**TEST REPORT**

**Test data:**

The emission was conducted from 1GHz to 25GHz

802.11b

CH	Antenna	Frequency (MHz)	Corrected Reading (dBuV/m)	Correct Factor (dB/m)	Limit (dBuV/m)	Margin (dBuV/m)	Detector
L	H	2390.00	45.10	32.50	74.00	28.90	PK
	H	2390.00	35.40	32.50	54.00	18.60	AV
	V	2390.00	45.10	32.50	74.00	28.90	PK
	V	2390.00	35.00	32.50	54.00	19.00	AV
	H	4824.00	35.40	-14.10	74.00	38.60	PK
	H	4824.00	24.90	-14.10	54.00	29.10	AV
	V	4824.00	44.30	-14.10	74.00	29.70	PK
	V	4824.00	31.40	-14.10	54.00	22.60	AV
M	H	4874.00	35.20	-14.00	74.00	38.80	PK
	H	4874.00	25.10	-14.00	54.00	28.90	AV
	V	4874.00	38.40	-14.00	74.00	35.60	PK
	V	4874.00	30.80	-14.00	54.00	23.20	AV
H	H	2483.50	46.40	32.90	74.00	27.60	PK
	H	2483.50	35.90	32.90	54.00	18.10	AV
	V	2483.50	46.20	32.90	74.00	27.80	PK
	V	2483.50	35.60	32.90	54.00	18.40	AV
	H	4924.00	35.10	-13.80	74.00	38.90	PK
	H	4924.00	25.40	-13.80	54.00	28.60	AV
	V	4924.00	44.30	-13.80	74.00	29.70	PK
	V	4924.00	31.60	-13.80	54.00	22.40	AV

**TEST REPORT**

802.11g

CH	Antenna	Frequency (MHz)	Corrected Reading (dBUV/m)	Correct Factor (dB/m)	Limit (dBUV/m)	Margin (dBUV/m)	Detector
L	H	2390.00	45.20	32.50	74.00	28.80	PK
	H	2390.00	35.10	32.50	54.00	18.90	AV
	V	2390.00	45.10	32.50	74.00	28.90	PK
	V	2390.00	35.00	32.50	54.00	19.00	AV
	H	4824.00	36.20	-14.10	74.00	37.80	PK
	H	4824.00	25.10	-14.10	54.00	28.90	AV
	V	4824.00	44.70	-14.10	74.00	29.30	PK
	V	4824.00	31.50	-14.10	54.00	22.50	AV
M	H	4874.00	36.60	-14.00	74.00	37.40	PK
	H	4874.00	27.80	-14.00	54.00	26.20	AV
	V	4874.00	38.10	-14.00	74.00	35.90	PK
	V	4874.00	31.30	-14.00	54.00	22.70	AV
H	H	2483.50	46.10	32.90	74.00	27.90	PK
	H	2483.50	35.40	32.90	54.00	18.60	AV
	V	2483.50	45.80	32.90	74.00	28.20	PK
	V	2483.50	35.20	32.90	54.00	18.80	AV
	H	4924.00	36.70	-13.80	74.00	37.30	PK
	H	4924.00	27.20	-13.80	54.00	26.80	AV
	V	4924.00	44.80	-13.80	74.00	29.20	PK
	V	4924.00	31.40	-13.80	54.00	22.60	AV

**TEST REPORT**

802.11n (HT20)

CH	Antenna	Frequency (MHz)	Corrected Reading (dBUV/m)	Correct Factor (dB/m)	Limit (dBUV/m)	Margin (dBUV/m)	Detector
L	H	2390.00	45.10	32.50	74.00	28.90	PK
	H	2390.00	35.40	32.50	54.00	18.60	AV
	V	2390.00	45.00	32.50	74.00	29.00	PK
	V	2390.00	35.30	32.50	54.00	18.70	AV
	H	4824.00	36.10	-14.10	74.00	37.90	PK
	H	4824.00	25.50	-14.10	54.00	28.50	AV
	V	4824.00	44.50	-14.10	74.00	29.50	PK
	V	4824.00	31.30	-14.10	54.00	22.70	AV
M	H	4874.00	37.20	-14.00	74.00	36.80	PK
	H	4874.00	28.20	-14.00	54.00	25.80	AV
	V	4874.00	37.80	-14.00	74.00	36.20	PK
	V	4874.00	30.20	-14.00	54.00	23.80	AV
H	H	2483.50	45.80	32.90	74.00	28.20	PK
	H	2483.50	35.10	32.90	54.00	18.90	AV
	V	2483.50	45.40	32.90	74.00	28.60	PK
	V	2483.50	35.40	32.90	54.00	18.60	AV
	H	4924.00	38.20	-13.80	74.00	35.80	PK
	H	4924.00	28.10	-13.80	54.00	25.90	AV
	V	4924.00	43.90	-13.80	74.00	30.10	PK
	V	4924.00	31.00	-13.80	54.00	23.00	AV

**TEST REPORT**

802.11n (HT40)

CH	Antenna	Frequency (MHz)	Corrected Reading (dBUV/m)	Correct Factor (dB/m)	Limit (dBUV/m)	Margin (dBUV/m)	Detector
L	H	2390.00	45.20	32.50	74.00	28.80	PK
	H	2390.00	35.20	32.50	54.00	18.80	AV
	V	2390.00	45.10	32.50	74.00	28.90	PK
	V	2390.00	35.00	32.50	54.00	19.00	AV
	H	4844.00	36.30	-14.00	74.00	37.70	PK
	H	4844.00	25.60	-14.00	54.00	28.40	AV
	V	4844.00	44.60	-14.00	74.00	29.40	PK
	V	4844.00	31.80	-14.00	54.00	22.20	AV
M	H	4874.00	35.60	-14.00	74.00	38.40	PK
	H	4874.00	25.60	-14.00	54.00	28.40	AV
	V	4874.00	43.80	-14.00	74.00	30.20	PK
	V	4874.00	32.10	-14.00	54.00	21.90	AV
H	H	2483.50	47.20	32.90	74.00	26.80	PK
	H	2483.50	37.80	32.90	54.00	16.20	AV
	V	2483.50	47.50	32.90	74.00	26.50	PK
	V	2483.50	37.90	32.90	54.00	16.10	AV
	H	4904.00	35.90	-13.90	74.00	38.10	PK
	H	4904.00	25.90	-13.90	54.00	28.10	AV
	V	4904.00	44.90	-13.90	74.00	29.10	PK
	V	4904.00	32.20	-13.90	54.00	21.80	AV

**TEST REPORT**

802.11AX (HT20)

CH	Antenna	Frequency (MHz)	Corrected Reading (dBUV/m)	Correct Factor (dB/m)	Limit (dBUV/m)	Margin (dBUV/m)	Detector
L	H	2390.00	45.30	32.50	74.00	28.70	PK
	H	2390.00	35.20	32.50	54.00	18.80	AV
	V	2390.00	45.20	32.50	74.00	28.80	PK
	V	2390.00	35.20	32.50	54.00	18.80	AV
	H	4824.00	36.50	-14.10	74.00	37.50	PK
	H	4824.00	25.80	-14.10	54.00	28.20	AV
	V	4824.00	44.20	-14.10	74.00	29.80	PK
	V	4824.00	32.70	-14.10	54.00	21.30	AV
M	H	4874.00	36.50	-14.00	74.00	37.50	PK
	H	4874.00	27.20	-14.00	54.00	26.80	AV
	V	4874.00	38.00	-14.00	74.00	36.00	PK
	V	4874.00	30.20	-14.00	54.00	23.80	AV
H	H	2483.50	44.10	32.90	74.00	29.90	PK
	H	2483.50	34.00	32.90	54.00	20.00	AV
	V	2483.50	44.80	32.90	74.00	29.20	PK
	V	2483.50	34.90	32.90	54.00	19.10	AV
	H	4924.00	37.50	-13.80	74.00	36.50	PK
	H	4924.00	28.40	-13.80	54.00	25.60	AV
	V	4924.00	43.50	-13.80	74.00	30.50	PK
	V	4924.00	30.60	-13.80	54.00	23.40	AV

**TEST REPORT**

802.11AX (HT40)

CH	Antenna	Frequency (MHz)	Corrected Reading (dBUV/m)	Correct Factor (dB/m)	Limit (dBUV/m)	Margin (dBUV/m)	Detector
L	H	2390.00	45.30	32.50	74.00	28.70	PK
	H	2390.00	35.20	32.50	54.00	18.80	AV
	V	2390.00	45.10	32.50	74.00	28.90	PK
	V	2390.00	35.20	32.50	54.00	18.80	AV
	H	4844.00	36.80	-14.00	74.00	37.20	PK
	H	4844.00	26.20	-14.00	54.00	27.80	AV
	V	4844.00	43.40	-14.00	74.00	30.60	PK
	V	4844.00	30.90	-14.00	54.00	23.10	AV
M	H	4874.00	35.20	-14.00	74.00	38.80	PK
	H	4874.00	25.50	-14.00	54.00	28.50	AV
	V	4874.00	43.60	-14.00	74.00	30.40	PK
	V	4874.00	32.90	-14.00	54.00	21.10	AV
H	H	2483.50	47.60	32.90	74.00	26.40	PK
	H	2483.50	38.20	32.90	54.00	15.80	AV
	V	2483.50	47.80	32.90	74.00	26.20	PK
	V	2483.50	38.50	32.90	54.00	15.50	AV
	H	4904.00	35.70	-13.90	74.00	38.30	PK
	H	4904.00	25.40	-13.90	54.00	28.60	AV
	V	4904.00	44.60	-13.90	74.00	29.40	PK
	V	4904.00	31.80	-13.90	54.00	22.20	AV

Note: Choose the worst power to test as representative.



**TEST REPORT**

**8 Power line conducted emission**

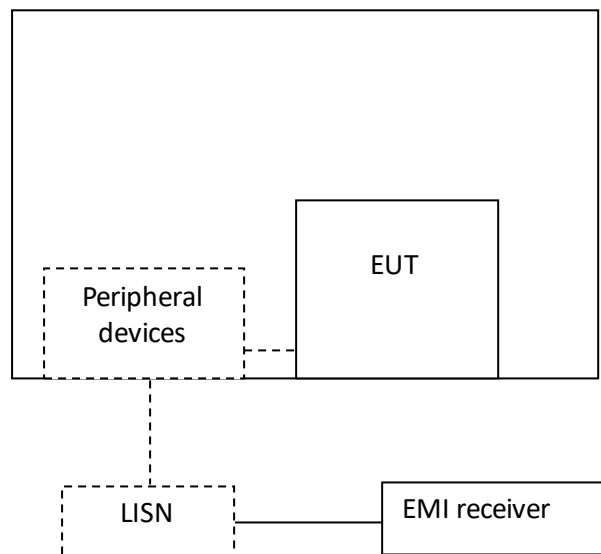
Test result: Pass

**8.1 Limit**

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	QP	AV
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.

**8.2 Test Configuration**



**TEST REPORT****8.3 Measurement Procedure**

Measured levels of ac power-line conducted emission shall be the emission voltages from the voltage probe, where permitted, or across the 50  $\Omega$  LISN port (to which the EUT is connected), where permitted, terminated into a 50  $\Omega$  measuring instrument. All emission voltage and current measurements shall be made on each current-carrying conductor at the plug end of the EUT power cord by the use of mating plugs and receptacles on the LISN, if used. Equipment shall be tested with power cords that are normally supplied or recommended by the manufacturer and that have electrical and shielding characteristics that are the same as those cords normally supplied or recommended by the manufacturer. For those measurements using a LISN, the 50  $\Omega$  measuring port is terminated by a measuring instrument having 50  $\Omega$  input impedance. All other ports are terminated in 50  $\Omega$  loads.

Tabletop devices shall be placed on a platform of nominal size 1 m by 1.5 m, raised 80 cm above the reference ground plane. The vertical conducting plane or wall of an RF-shielded (screened) room shall be located 40 cm to the rear of the EUT. Floor-standing devices shall be placed either directly on the reference ground-plane or on insulating material as described in ANSI C63.4. All other surfaces of tabletop or floor-standing EUTs shall be at least 80 cm from any other grounded conducting surface, including the case or cases of one or more LISNs.

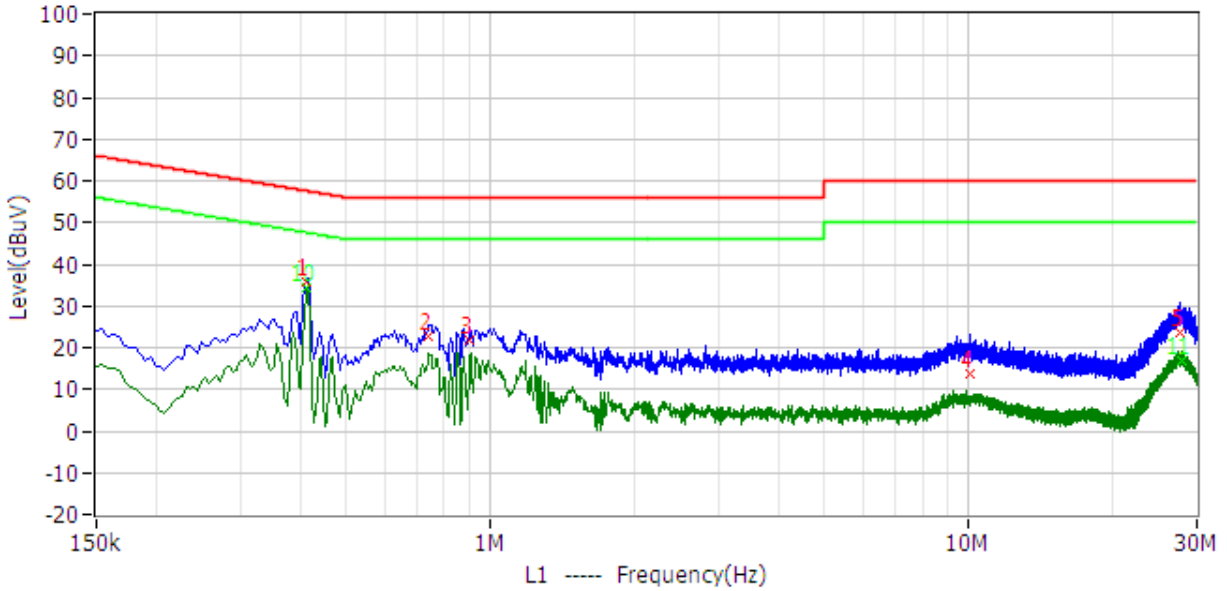
The bandwidth of the test receiver is set at 9 kHz.

TEST REPORT

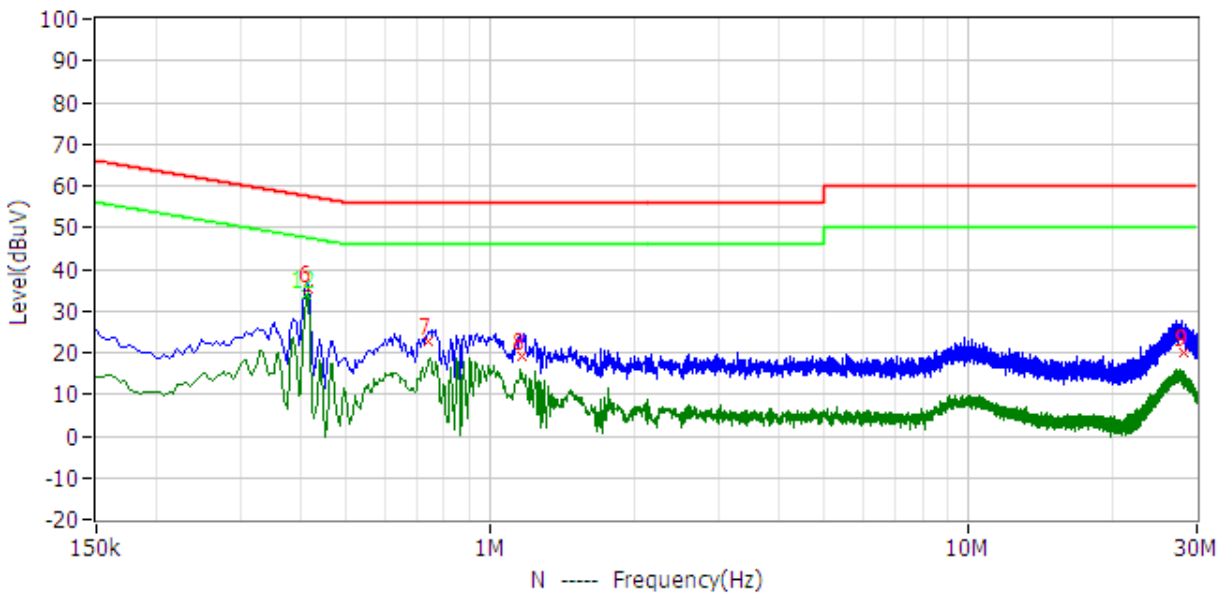
8.4 Test Results of Power line conducted emission

Test Curve:

L Line



N Line



Test Data:

No.	Frequency	Limit dB $\mu$ V	Level dB $\mu$ V	Delta dB	Reading dB $\mu$ V	Factor dB	Detector	Phase
1	411.000kHz	57.6	35.6	-22.0	25.3	10.3	QP	L1
2	744.000kHz	56.0	22.5	-33.5	12.2	10.3	QP	L1
3	901.500kHz	56.0	21.8	-34.2	11.5	10.3	QP	L1
4	10.059MHz	60.0	13.8	-46.2	3.2	10.6	QP	L1
5	27.704MHz	60.0	23.6	-36.4	12.5	11.1	QP	L1

**TEST REPORT**

No.	Frequency	Limit dB $\mu$ V	Level dB $\mu$ V	Delta dB	Reading dB $\mu$ V	Factor dB	Detector	Phase
6	415.500kHz	57.5	35.3	-22.2	25.0	10.3	QP	N
7	744.000kHz	56.0	22.5	-33.5	12.2	10.3	QP	N
8	1.167MHz	56.0	18.9	-37.1	8.6	10.3	QP	N
9	28.100MHz	60.0	19.8	-40.2	8.9	10.9	QP	N
10	411.000kHz	47.6	34.4	-13.2	24.1	10.3	CAV	L1
11	27.798MHz	50.0	16.8	-33.2	5.7	11.1	CAV	L1
12	411.000kHz	47.6	33.9	-13.7	23.6	10.3	CAV	N

- Remark: 1. Correct Factor = LISN Factor + Cable Loss, the value was added to Original Receiver Reading by the software automatically.*
- 2. Corrected Reading = Original Receiver Reading + Correct Factor*
- 3. Margin = Limit - Corrected Reading*
- 4. If the PK Corrected Reading is lower than AV limit, the AV test can be elided.*

**TEST REPORT****9 Occupied Bandwidth****Test result: Pass****9.1 Limit**

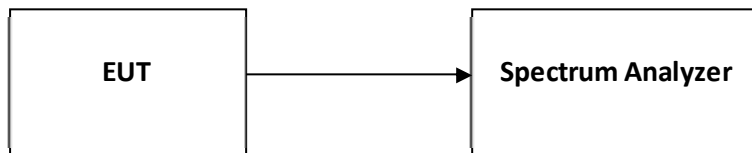
None

**9.2 Measurement Procedure**

The occupied bandwidth per RSS-Gen Issue 4 Clause 6.6 was measured using the Spectrum Analyzer.

The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts.

The resolution bandwidth (RBW) shall be in the range of 1% to 5% of the occupied bandwidth (OBW) and video bandwidth (VBW) shall be approximately 3x RBW.

**9.3 Test Configuration****9.4 The results of Occupied Bandwidth**

Please refer to Appendix A

**TEST REPORT****10 Antenna requirement****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.

**Result:**

EUT uses a unique coupling to the intentional radiator, so it can comply with the provisions of this section.

TEST REPORT

Appendix A: Test results

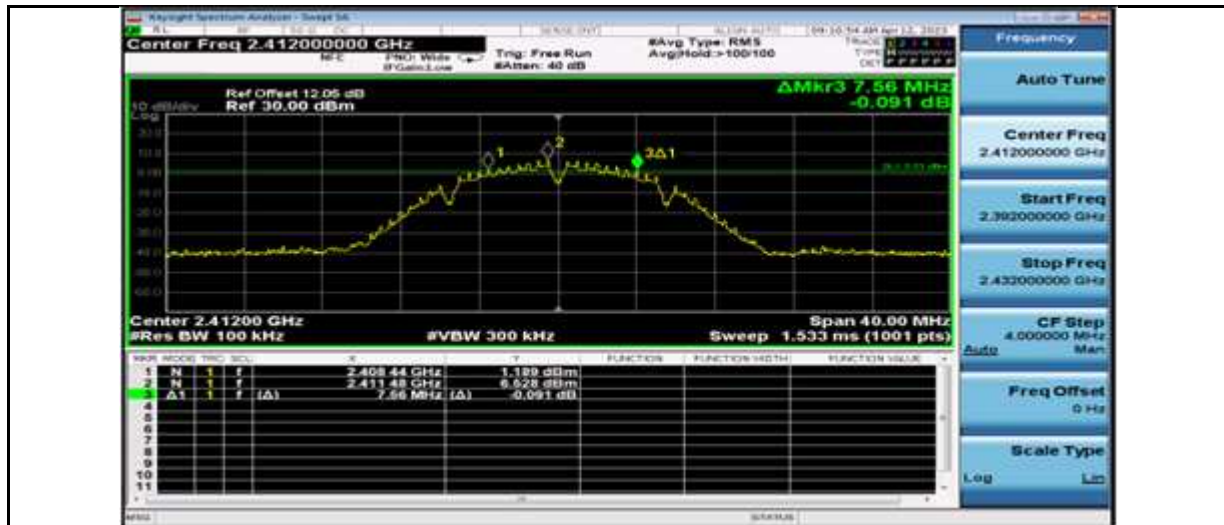
DTS Bandwidth

Test Data

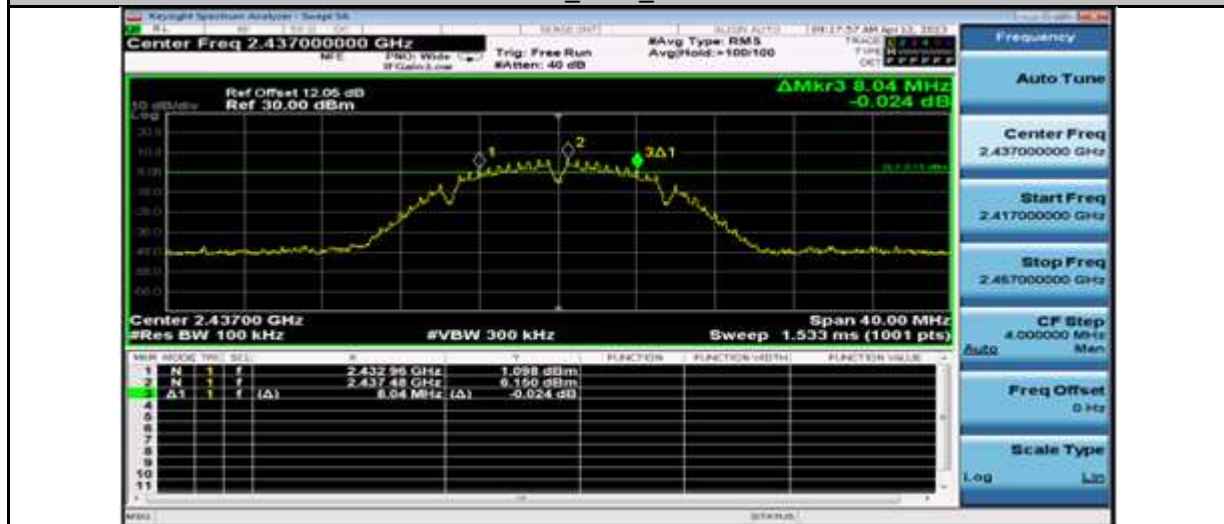
TestMode	Antenna	Frequency [MHz]	DTS BW [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11B	Ant1	2412	7.560	2408.440	2416.000	0.5	PASS
		2437	8.040	2432.960	2441.000	0.5	PASS
		2462	8.040	2457.960	2466.000	0.5	PASS
11G	Ant1	2412	16.320	2403.840	2420.160	0.5	PASS
		2437	16.320	2428.840	2445.160	0.5	PASS
		2462	16.320	2453.840	2470.160	0.5	PASS
11N20SISO	Ant1	2412	17.560	2403.200	2420.760	0.5	PASS
		2437	17.560	2428.200	2445.760	0.5	PASS
		2462	17.560	2453.200	2470.760	0.5	PASS
11N40SISO	Ant1	2422	35.920	2403.840	2439.760	0.5	PASS
		2437	35.920	2418.840	2454.760	0.5	PASS
		2452	36.320	2433.840	2470.160	0.5	PASS
11AX20SISO	Ant1	2412	18.960	2402.480	2421.440	0.5	PASS
		2437	18.920	2427.560	2446.480	0.5	PASS
		2462	18.960	2452.520	2471.480	0.5	PASS
11AX40SISO	Ant1	2422	38.080	2402.960	2441.040	0.5	PASS
		2437	37.920	2417.960	2455.880	0.5	PASS
		2452	37.920	2432.960	2470.880	0.5	PASS

## TEST REPORT

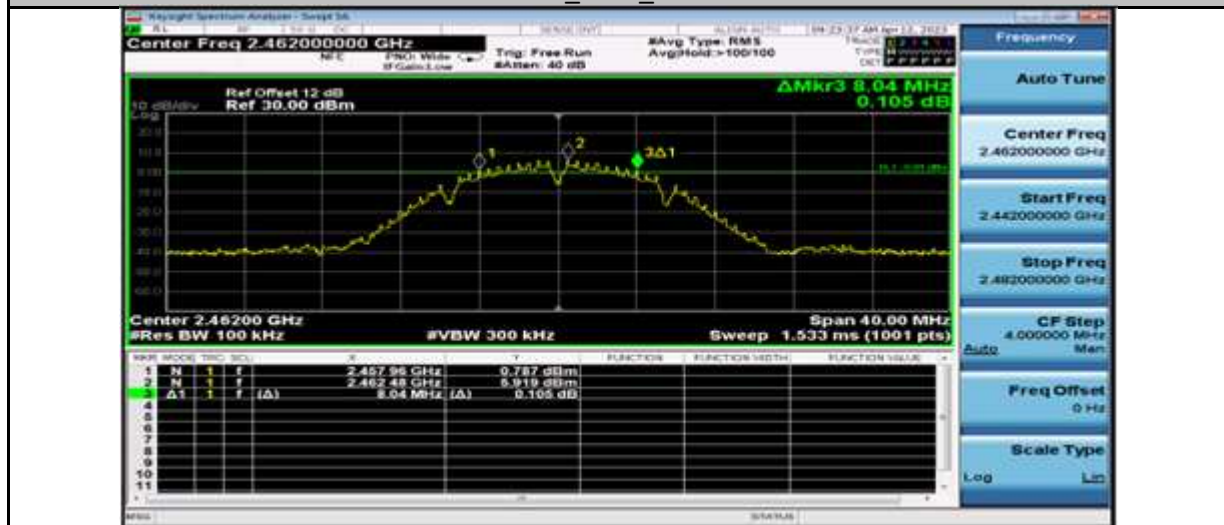
### Test Plots



11B\_Ant1\_2412



11B\_Ant1\_2437



11B\_Ant1\_2462



## TEST REPORT



11G Ant1\_2412

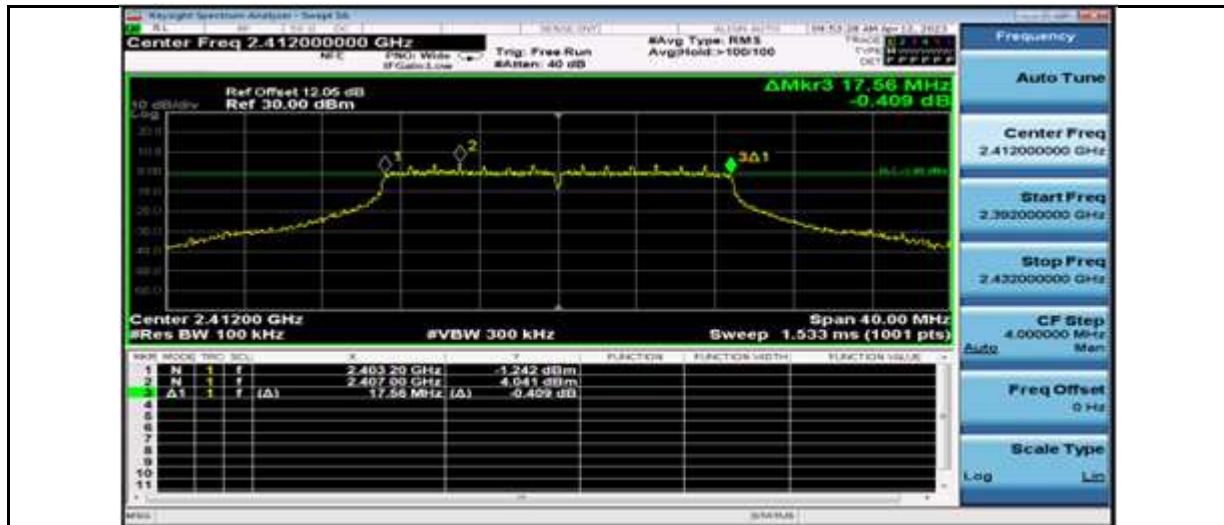


11G Ant1\_2437



11G Ant1\_2462

## TEST REPORT



11N20SISO\_Ant1\_2412



11N20SISO\_Ant1\_2437



11N20SISO\_Ant1\_2462

## TEST REPORT



11N40SISO\_Ant1\_2422



11N40SISO\_Ant1\_2437



11N40SISO\_Ant1\_2452



## TEST REPORT



11AX20SISO\_Ant1\_2412



11AX20SISO\_Ant1\_2437



11AX20SISO\_Ant1\_2462

## TEST REPORT



11AX40SISO\_Ant1\_2422



11AX40SISO\_Ant1\_2437



11AX40SISO\_Ant1\_2452

**TEST REPORT**

**Occupied Channel Bandwidth**

Test Data

TestMode	Antenna	Channel Frequency [MHz]	OCB [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11B	Ant1	2412	12.600	2405.646	2418.246	---	---
		2437	12.504	2430.717	2443.221	---	---
		2462	12.747	2455.602	2468.349	---	---
11G	Ant1	2412	18.097	2402.774	2420.871	---	---
		2437	18.263	2427.711	2445.974	---	---
		2462	18.111	2452.824	2470.935	---	---
11N20SISO	Ant1	2412	19.255	2402.303	2421.558	---	---
		2437	19.312	2427.245	2446.557	---	---
		2462	19.326	2452.296	2471.622	---	---
11N40SISO	Ant1	2422	37.682	2403.052	2440.734	---	---
		2437	37.844	2418.022	2455.866	---	---
		2452	37.772	2433.109	2470.881	---	---
11AX20SISO	Ant1	2412	19.764	2402.112	2421.876	---	---
		2437	19.884	2427.048	2446.932	---	---
		2462	19.867	2452.035	2471.902	---	---
11AX40SISO	Ant1	2422	38.462	2402.713	2441.175	---	---
		2437	38.564	2417.684	2456.248	---	---
		2452	38.466	2432.742	2471.208	---	---

## TEST REPORT

### Test Plots



11B\_Ant1\_2412



11B\_Ant1\_2437



11B\_Ant1\_2462



## TEST REPORT



11G\_Ant1\_2412



11G\_Ant1\_2437



11G\_Ant1\_2462



## TEST REPORT



11N20SISO\_Ant1\_2412



11N20SISO\_Ant1\_2437



11N20SISO\_Ant1\_2462

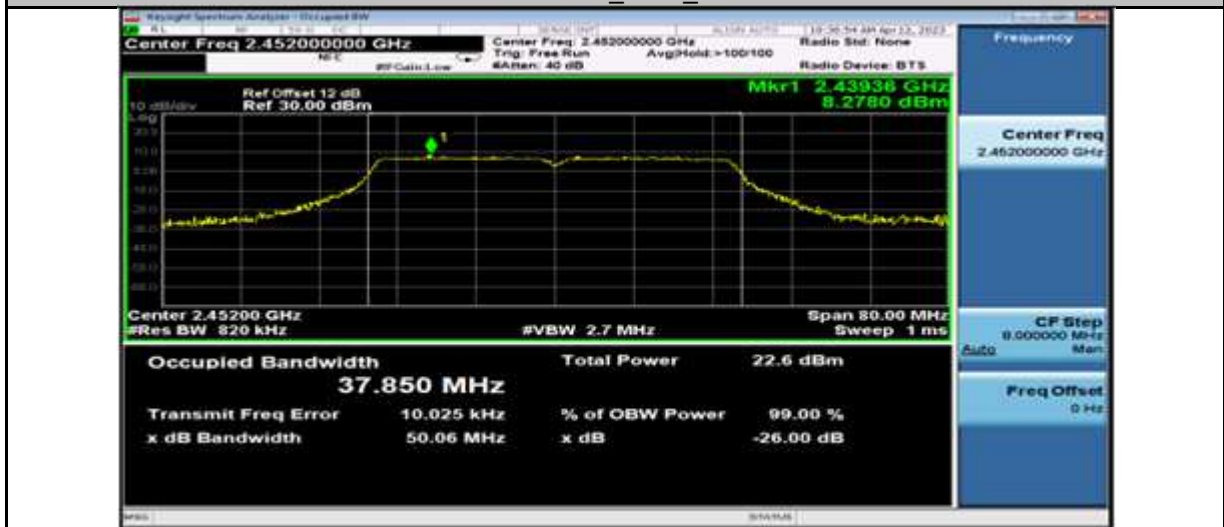
## TEST REPORT



11N40SISO\_Ant1\_2422

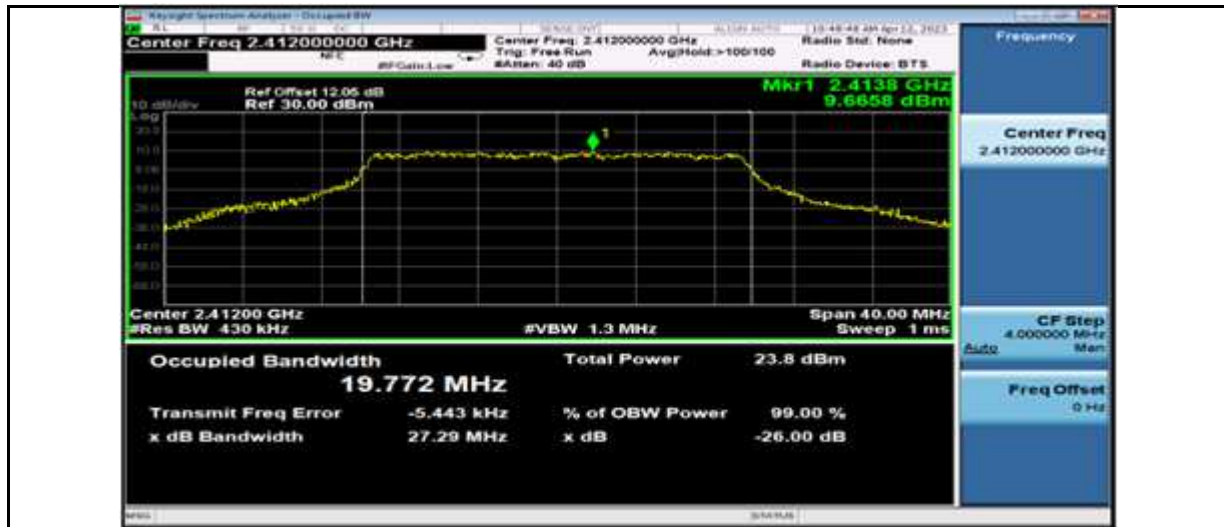


11N40SISO\_Ant1\_2437

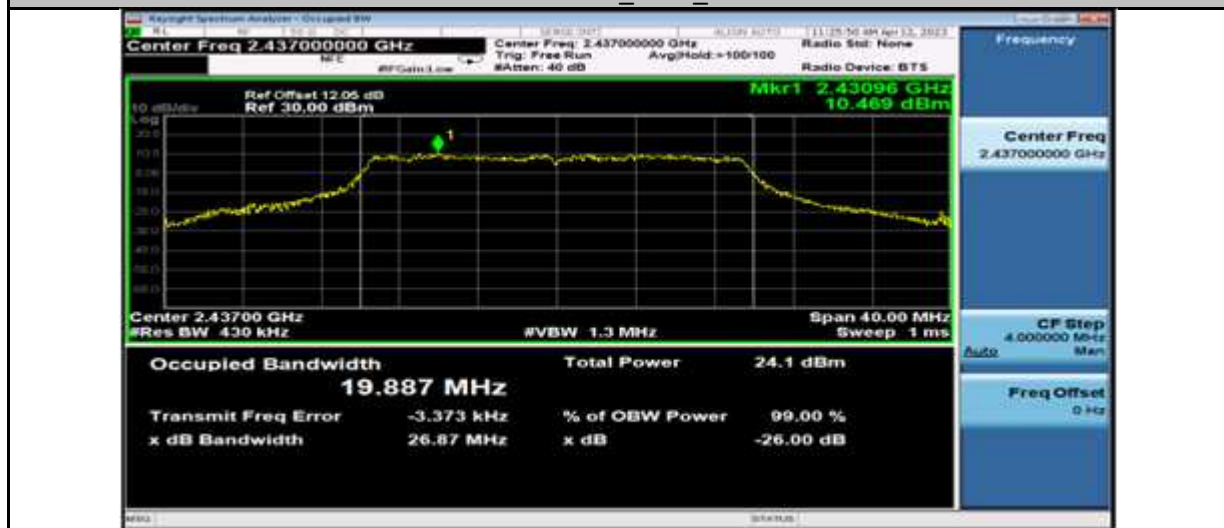


11N40SISO\_Ant1\_2452

## TEST REPORT



11AX20SISO\_Ant1\_2412



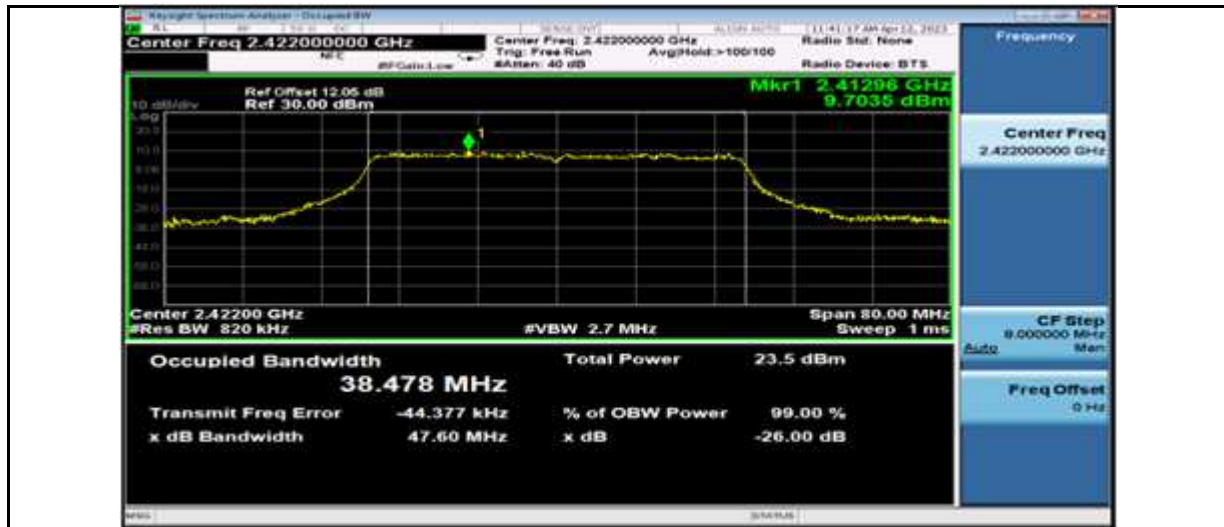
11AX20SISO\_Ant1\_2437



11AX20SISO\_Ant1\_2462



## TEST REPORT



11AX40SISO\_Ant1\_2422



11AX40SISO\_Ant1\_2437



11AX40SISO\_Ant1\_2452

TEST REPORT

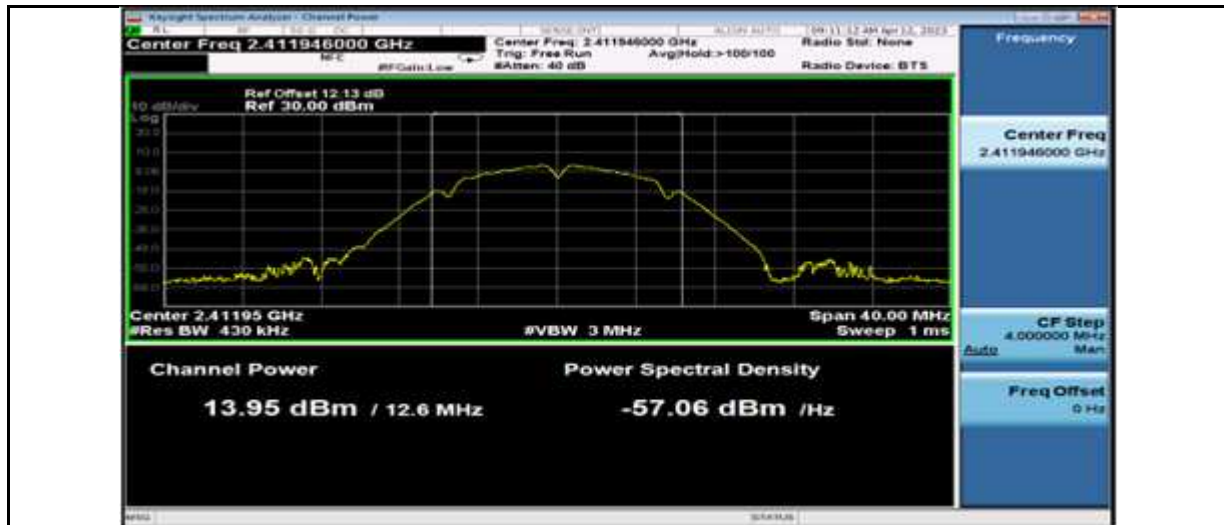
Maximum conducted output power and e.i.r.p

Test Data

TestMode	Antenna	Frequency [MHz]	Peak Power [dBm]	Conducted Limit [dBm]	EIRP [dBm]	EIRP Limit [dBm]	Verdict
11B	Ant1	2412	13.96	≤30.00	17.66	≤36.00	PASS
		2437	13.85	≤30.00	17.55	≤36.00	PASS
		2462	13.64	≤30.00	17.34	≤36.00	PASS
11G	Ant1	2412	15.02	≤30.00	18.72	≤36.00	PASS
		2437	15.30	≤30.00	19.00	≤36.00	PASS
		2462	14.53	≤30.00	18.23	≤36.00	PASS
11N20SISO	Ant1	2412	14.95	≤30.00	18.65	≤36.00	PASS
		2437	15.15	≤30.00	18.85	≤36.00	PASS
		2462	14.89	≤30.00	18.59	≤36.00	PASS
11N40SISO	Ant1	2422	15.07	≤30.00	18.77	≤36.00	PASS
		2437	<b>15.61</b>	≤30.00	19.31	≤36.00	PASS
		2452	15.26	≤30.00	18.96	≤36.00	PASS
11AX20SISO	Ant1	2412	14.94	≤30.00	18.64	≤36.00	PASS
		2437	15.53	≤30.00	19.23	≤36.00	PASS
		2462	14.88	≤30.00	18.58	≤36.00	PASS
11AX40SISO	Ant1	2422	14.87	≤30.00	18.57	≤36.00	PASS
		2437	15.58	≤30.00	19.28	≤36.00	PASS
		2452	15.44	≤30.00	19.14	≤36.00	PASS

## TEST REPORT

### Test Plots



11B\_Ant1\_2412

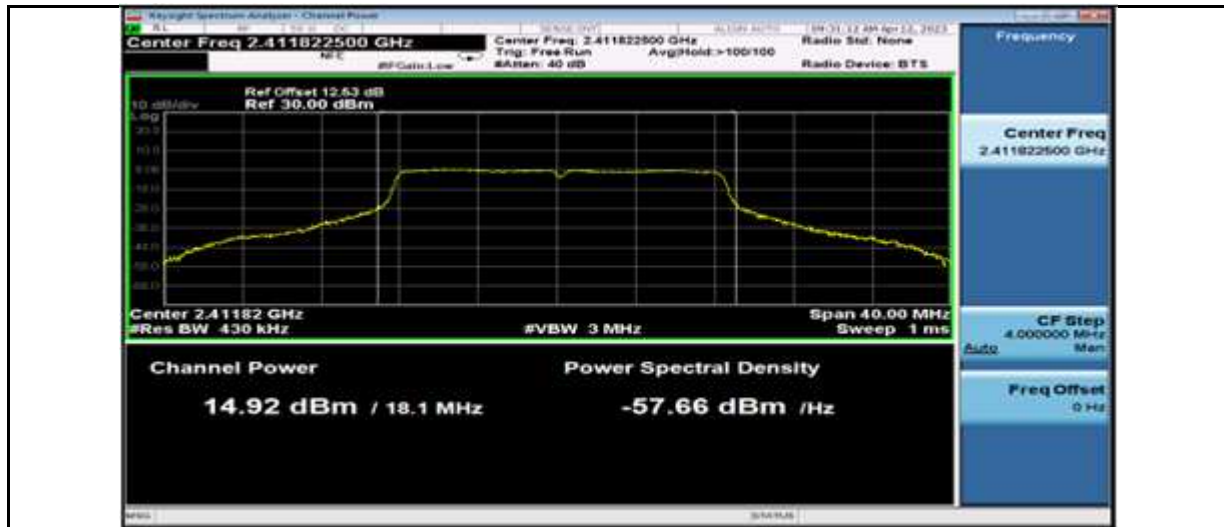


11B\_Ant1\_2437

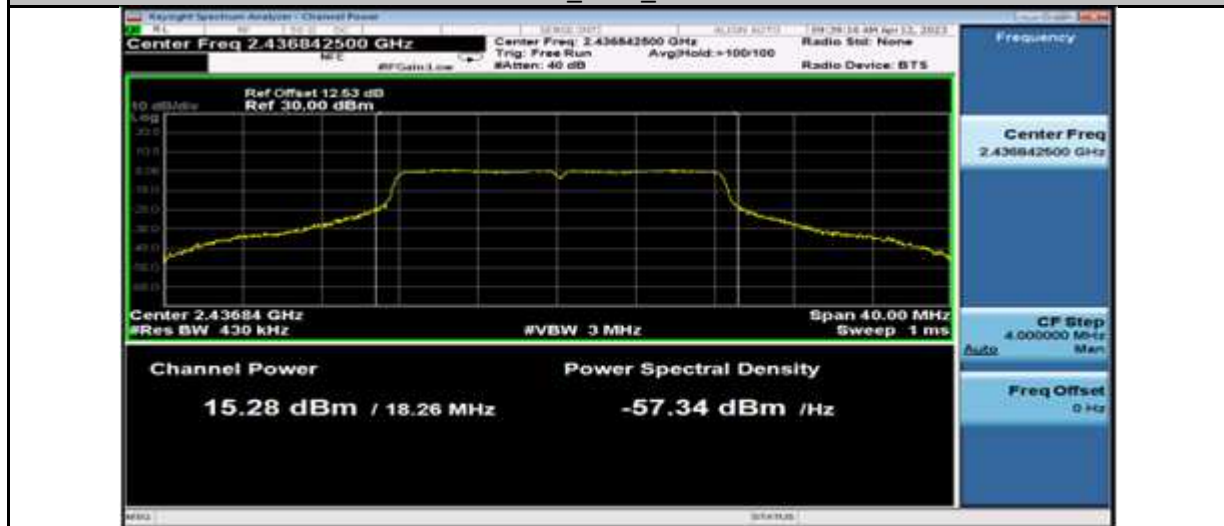


11B\_Ant1\_2462

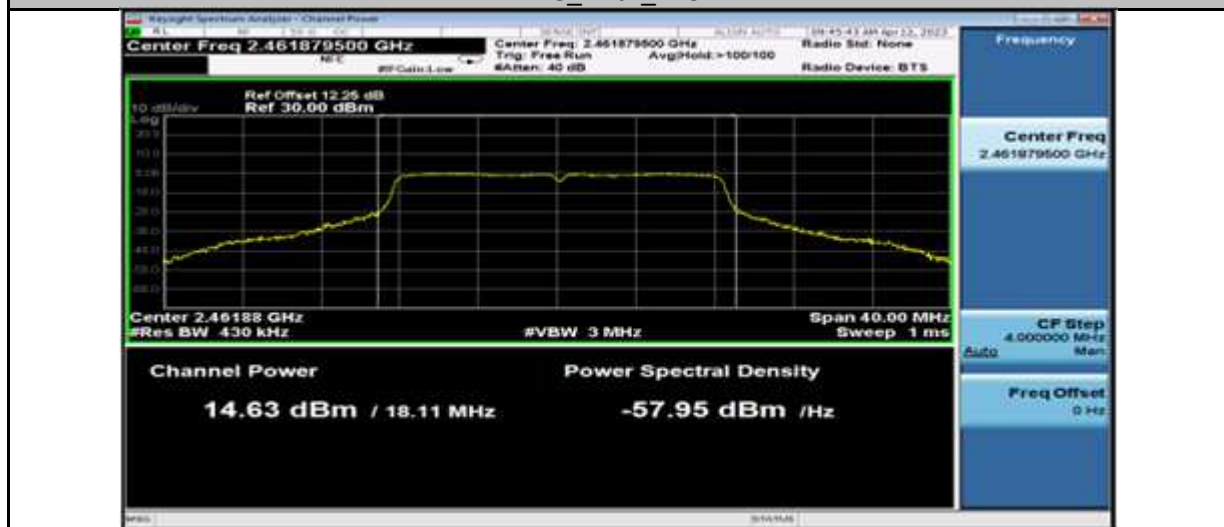
## TEST REPORT



11G\_Ant1\_2412



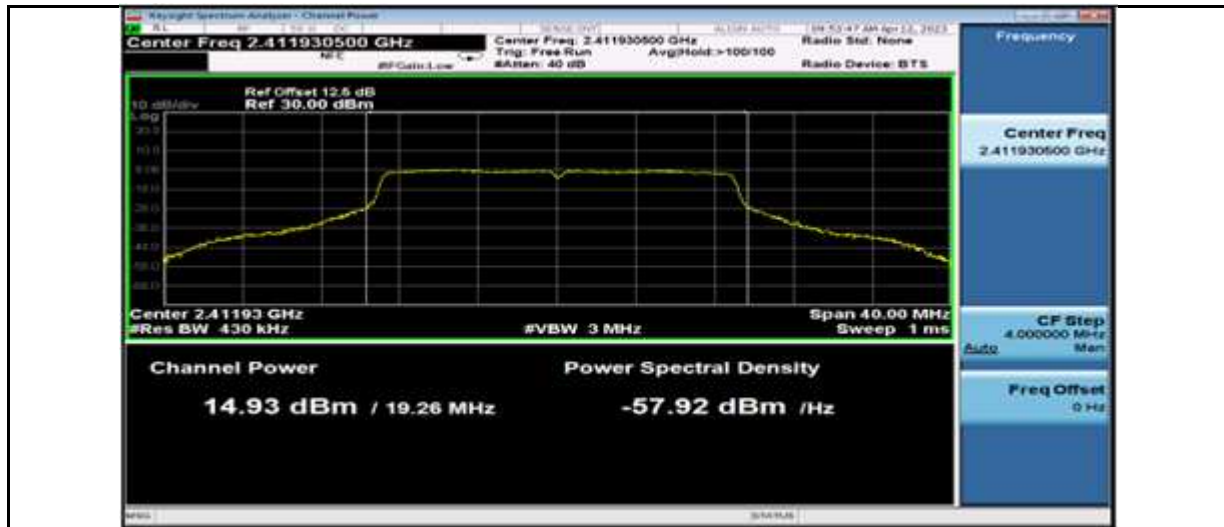
11G\_Ant1\_2437



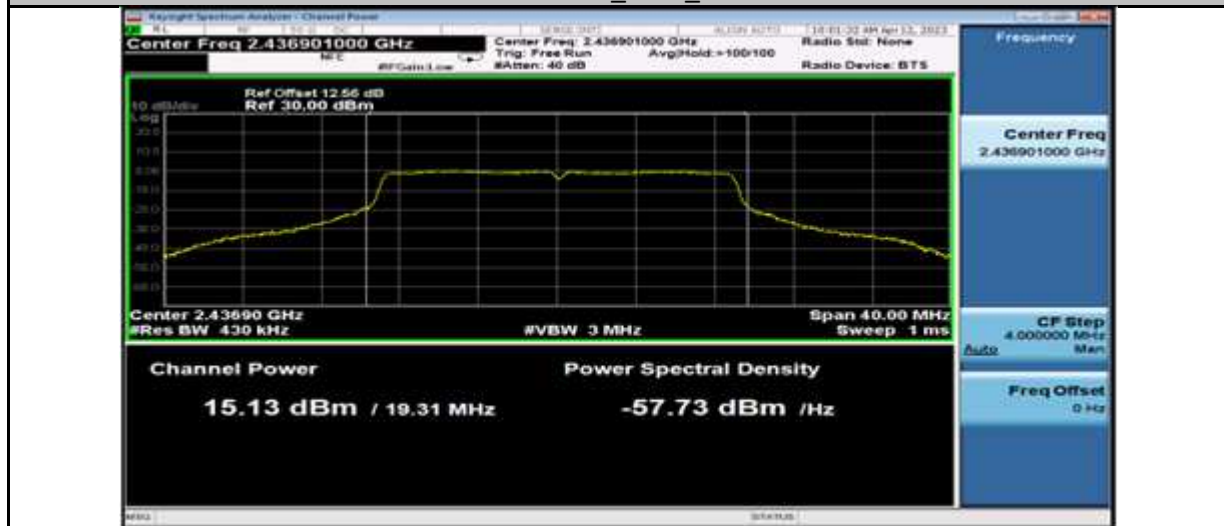
11G\_Ant1\_2462



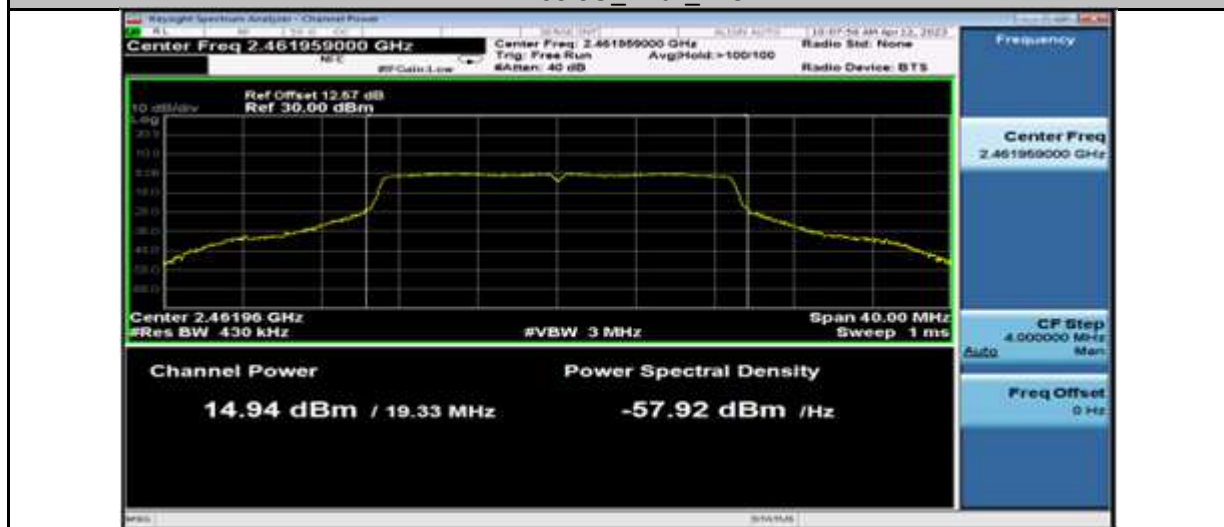
## TEST REPORT



11N20SISO\_Ant1\_2412



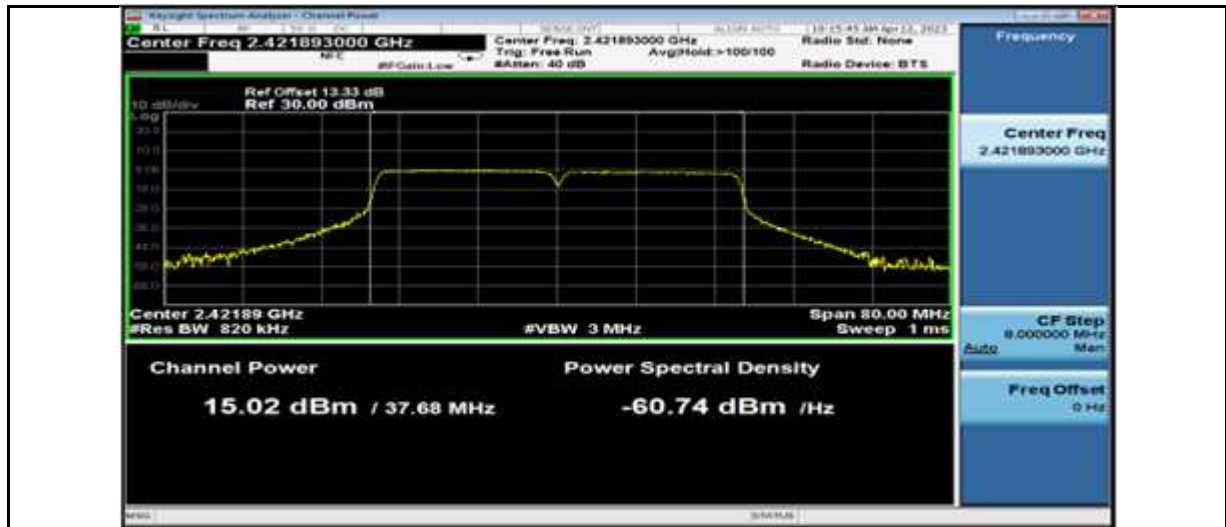
11N20SISO\_Ant1\_2437



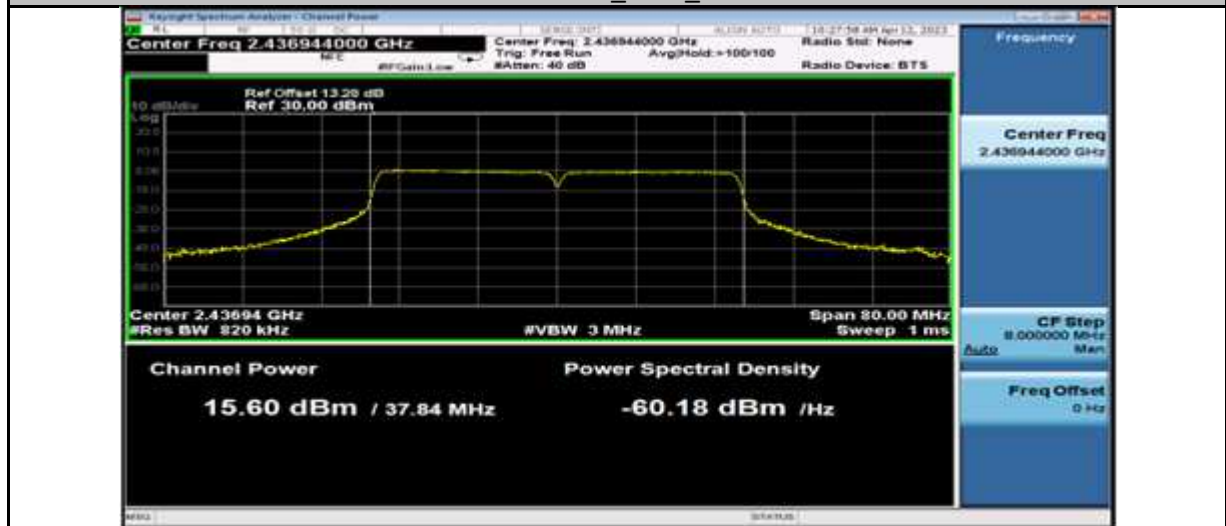
11N20SISO\_Ant1\_2462



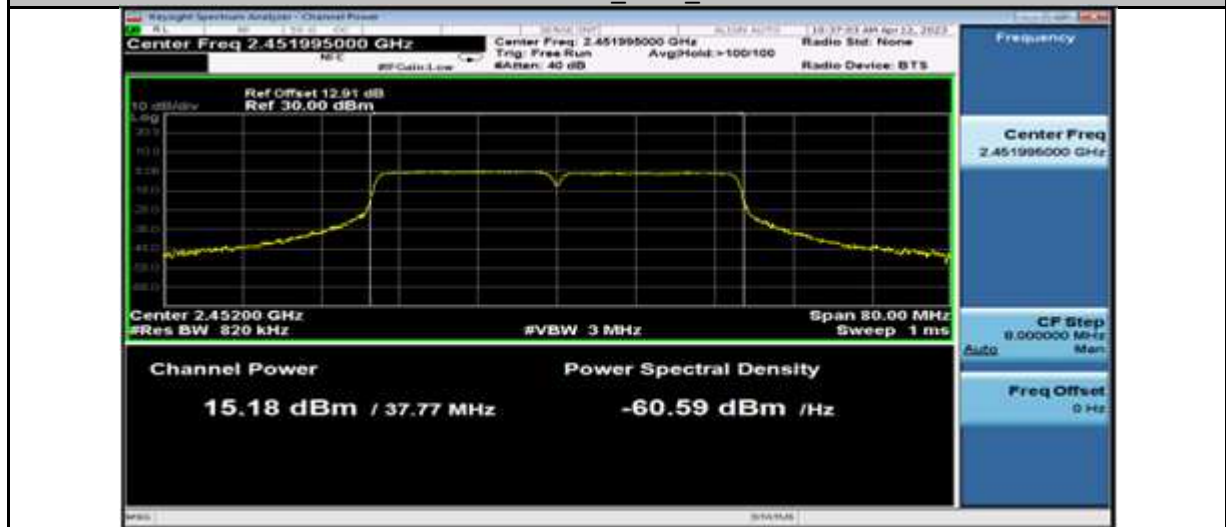
**TEST REPORT**



11N40SISO\_Ant1\_2422

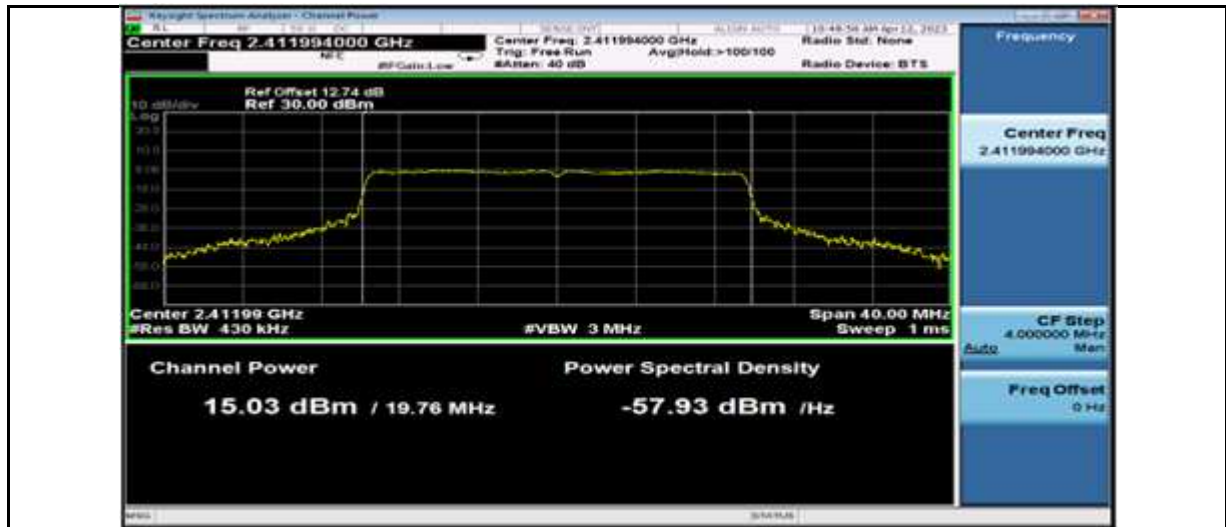


11N40SISO\_Ant1\_2437

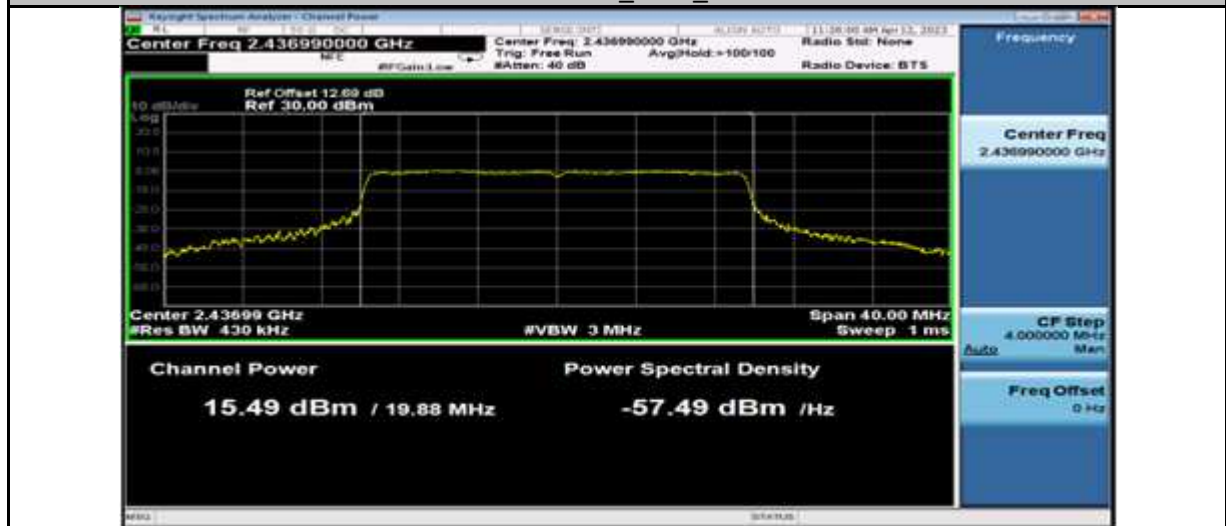


11N40SISO\_Ant1\_2452

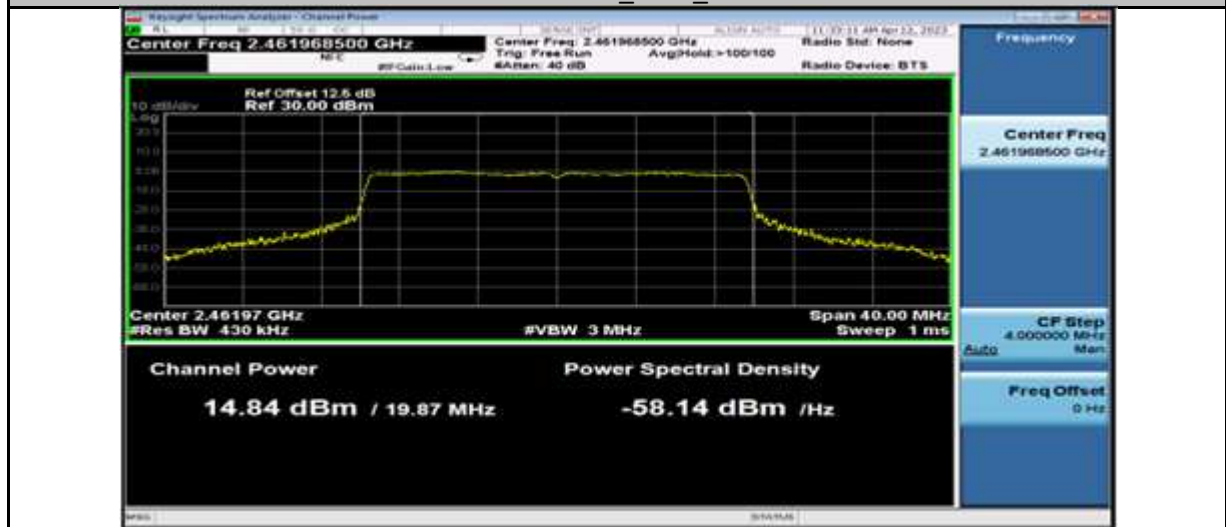
## TEST REPORT



11AX20SISO\_Ant1\_2412

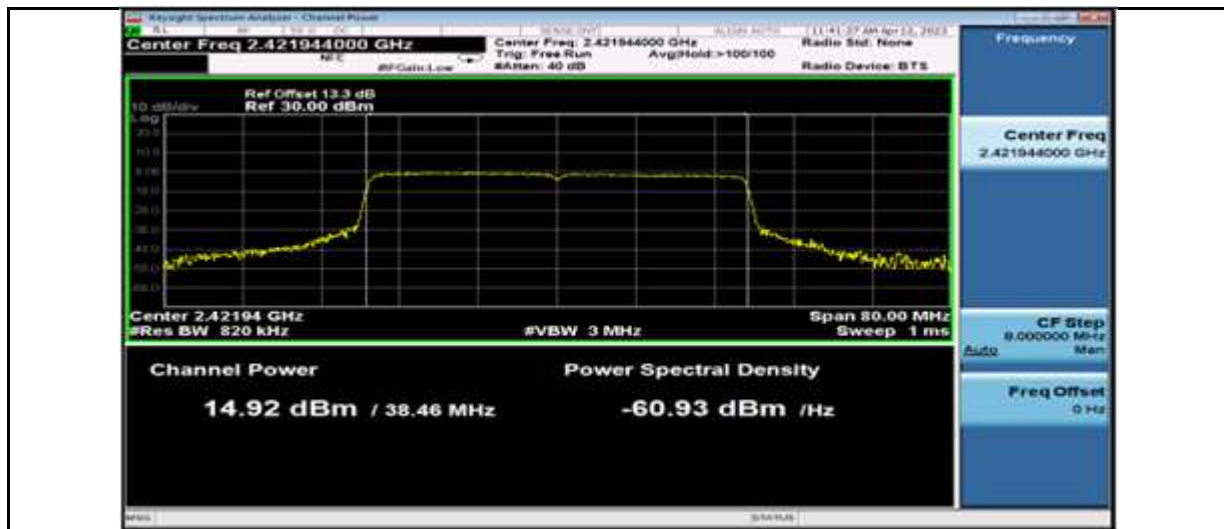


11AX20SISO\_Ant1\_2437

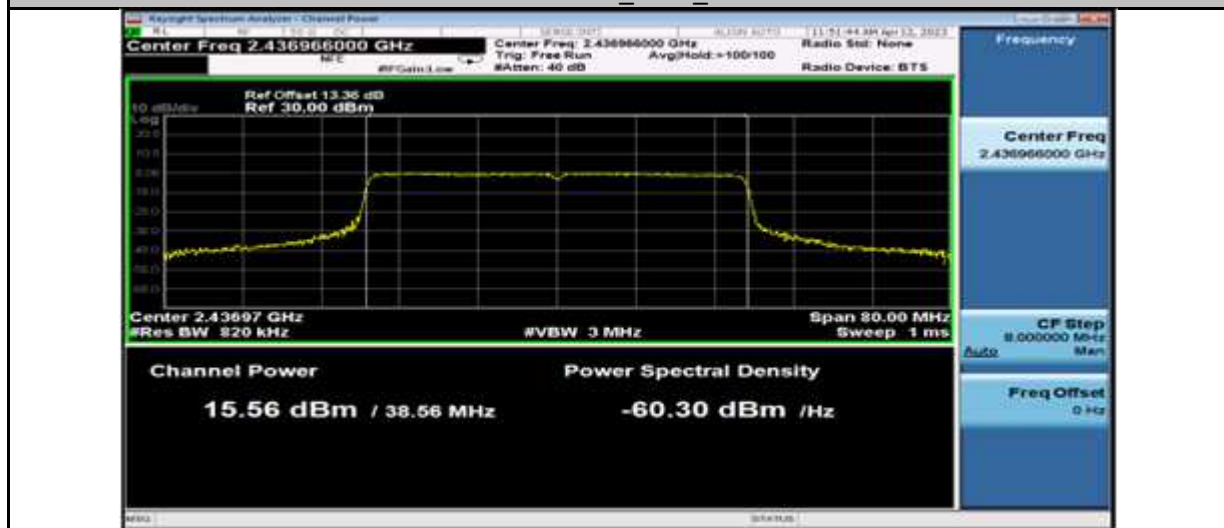


11AX20SISO\_Ant1\_2462

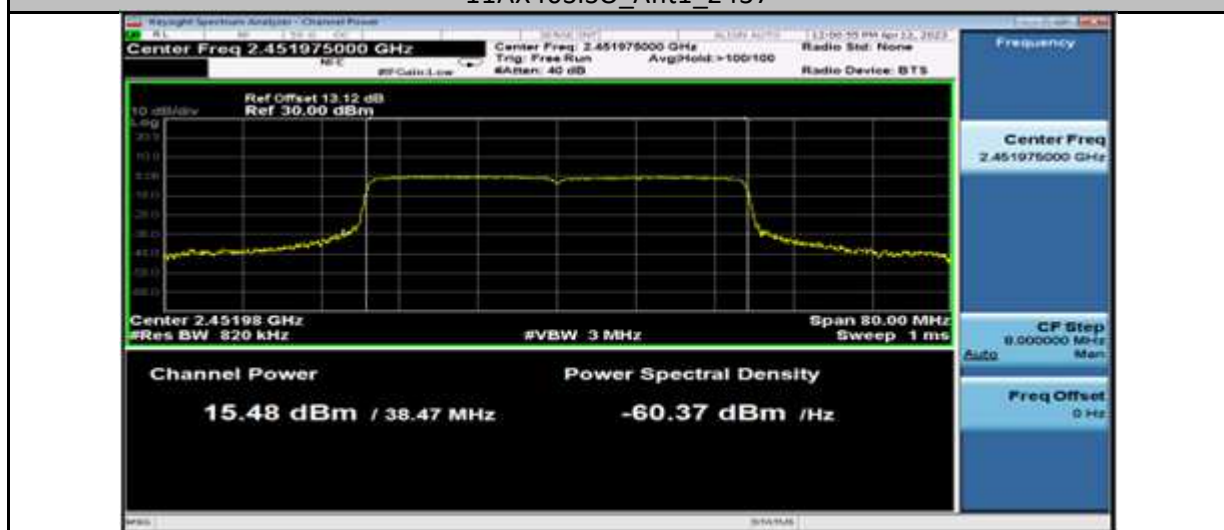
## TEST REPORT



11AX40SISO\_Ant1\_2422



11AX40SISO\_Ant1\_2437



11AX40SISO\_Ant1\_2452

**TEST REPORT**

**Maximum power spectrum density**

Test Data

TestMode	Antenna	Frequency [MHz]	Result [dBm/3-100kHz]	Limit [dBm/3kHz]	Verdict
11B	Ant1	2412	-16.02	≤8.00	PASS
		2437	-16.21	≤8.00	PASS
		2462	-16.74	≤8.00	PASS
11G	Ant1	2412	-16.94	≤8.00	PASS
		2437	-17.39	≤8.00	PASS
		2462	-18.28	≤8.00	PASS
11N20SISO	Ant1	2412	-17.69	≤8.00	PASS
		2437	-17.82	≤8.00	PASS
		2462	-18.28	≤8.00	PASS
11N40SISO	Ant1	2422	-19.9	≤8.00	PASS
		2437	-19.33	≤8.00	PASS
		2452	-20.15	≤8.00	PASS
11AX20SISO	Ant1	2412	-17.86	≤8.00	PASS
		2437	-17.2	≤8.00	PASS
		2462	-18.93	≤8.00	PASS
11AX40SISO	Ant1	2422	-20.74	≤8.00	PASS
		2437	-20.22	≤8.00	PASS
		2452	-20.39	≤8.00	PASS



## TEST REPORT

### Test Plots



11B\_Ant1\_2412

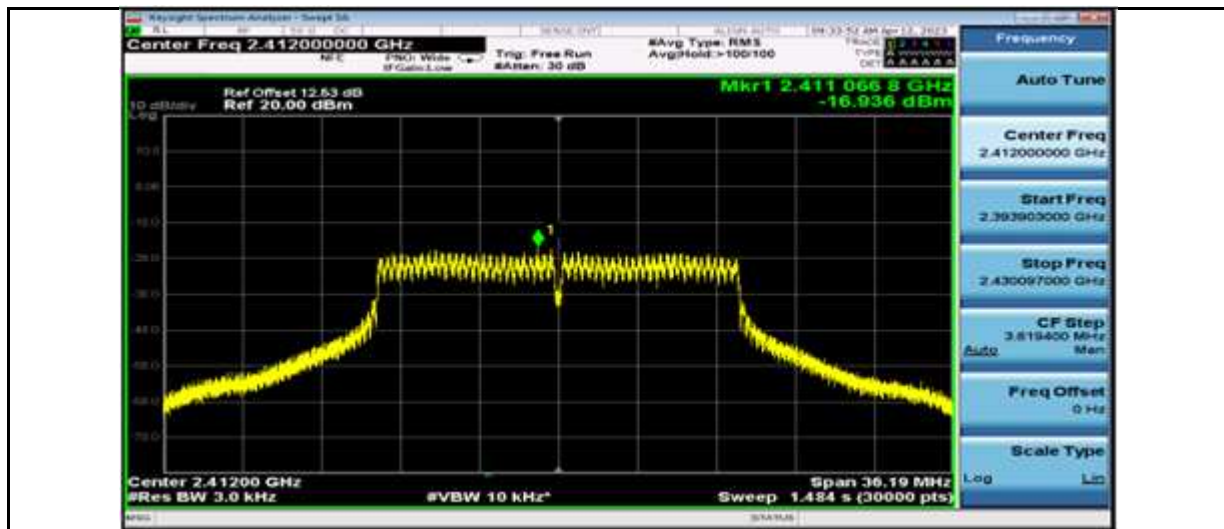


11B\_Ant1\_2437

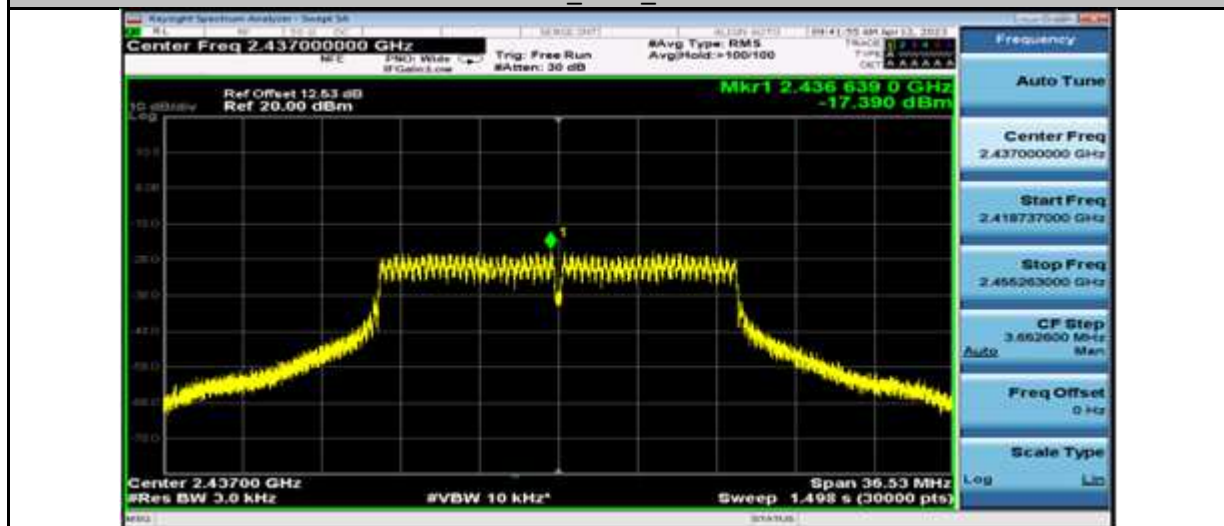


11B\_Ant1\_2462

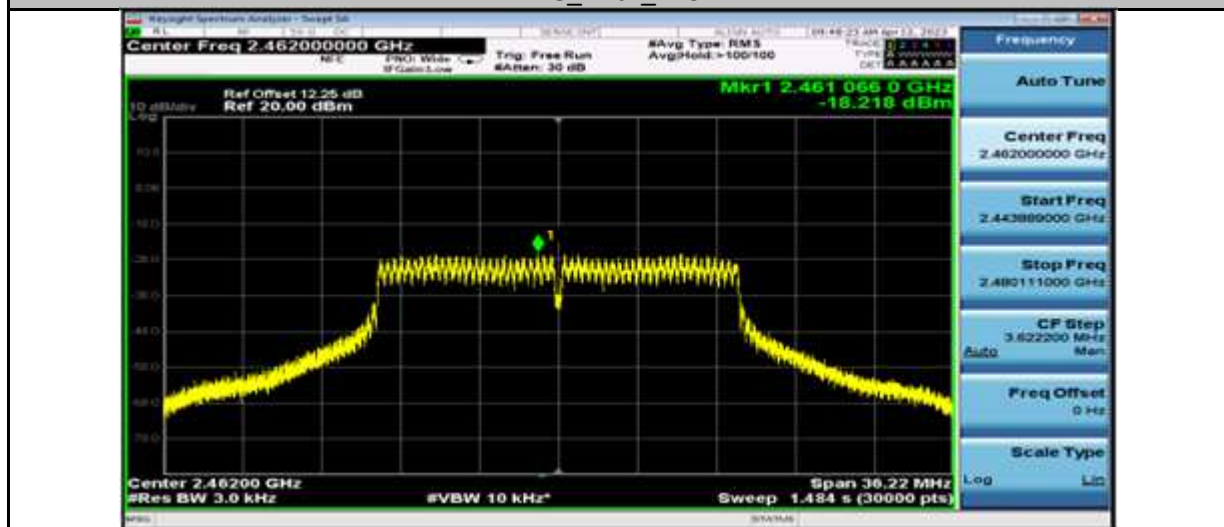
## TEST REPORT



11G\_Ant1\_2412

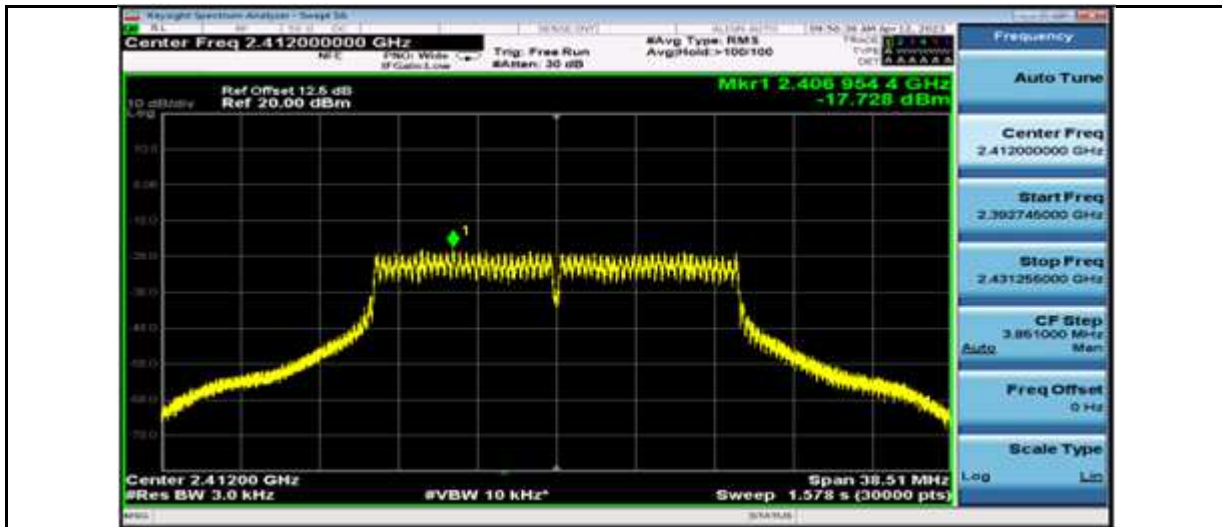


11G\_Ant1\_2437

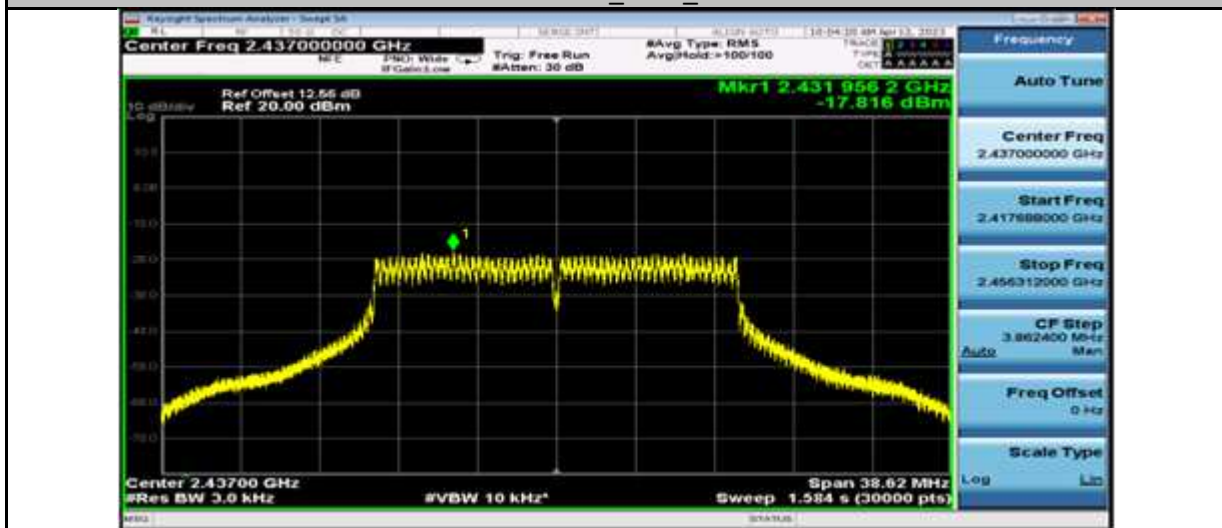


11G\_Ant1\_2462

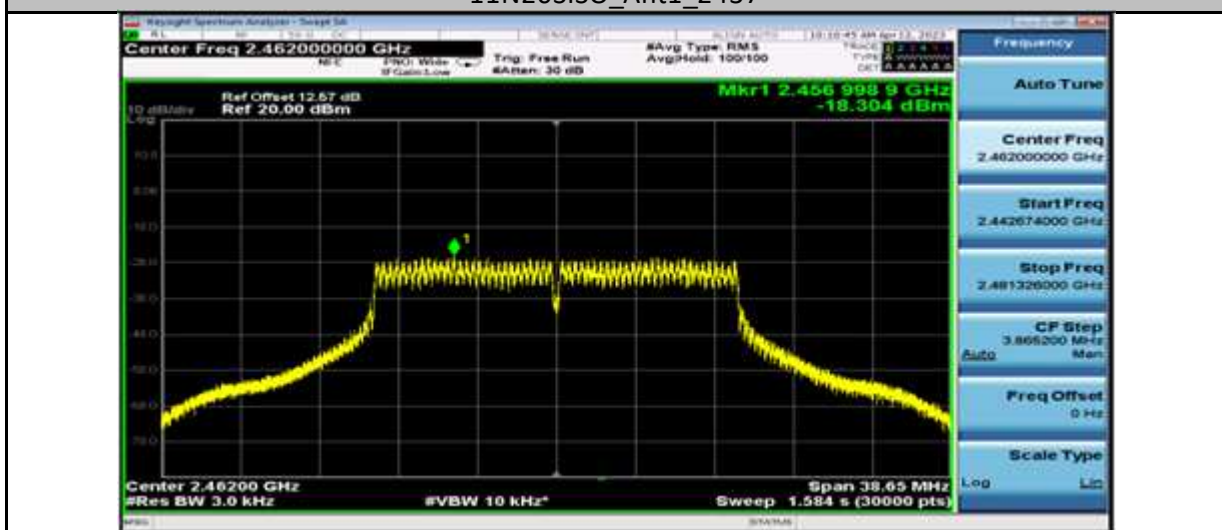
## TEST REPORT



11N20SISO\_Ant1\_2412



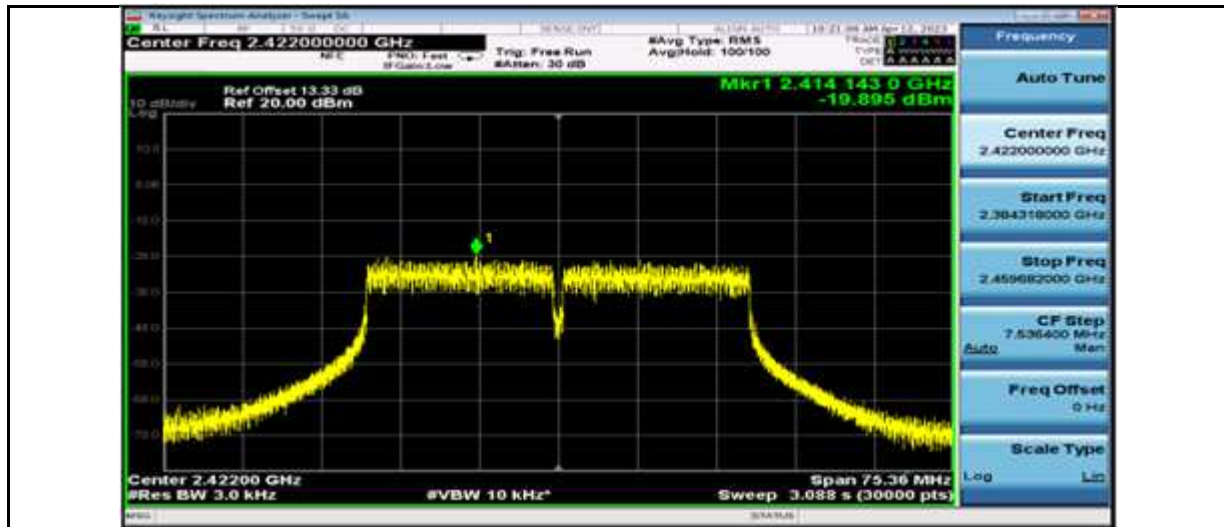
11N20SISO\_Ant1\_2437



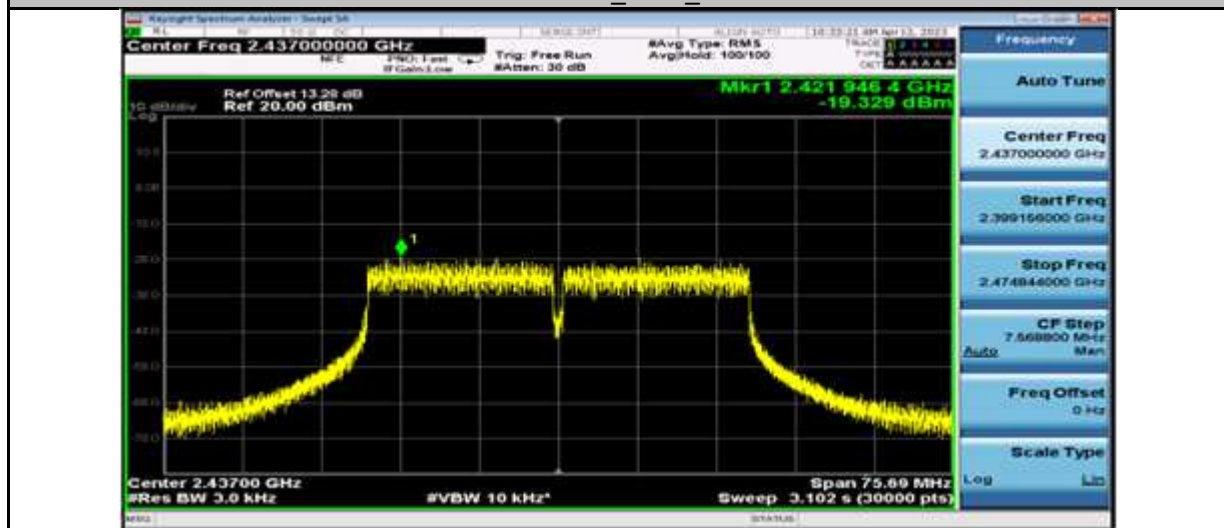
11N20SISO\_Ant1\_2462



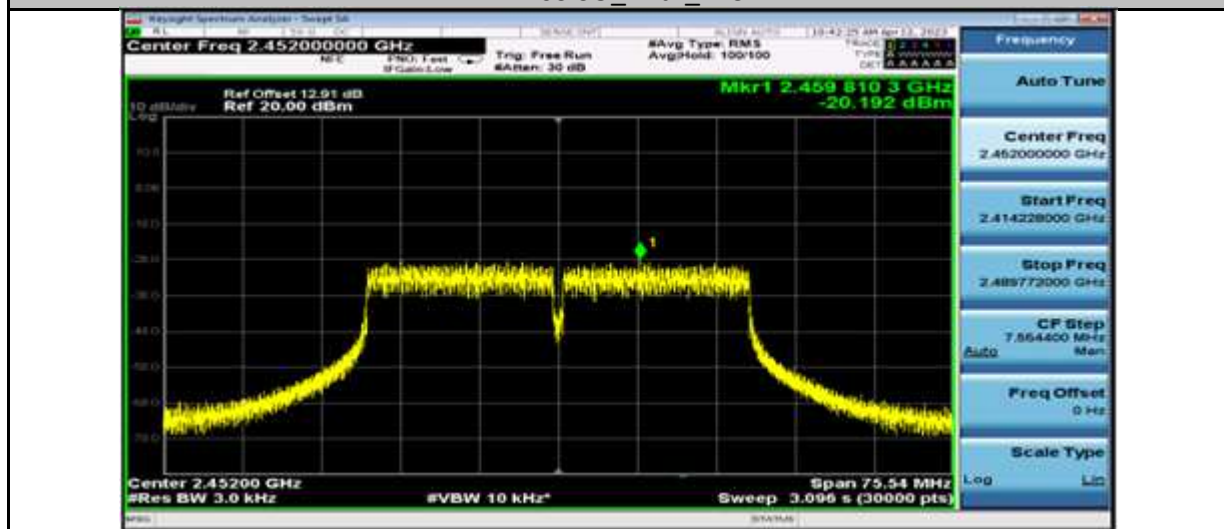
## TEST REPORT



11N40SISO\_Ant1\_2422



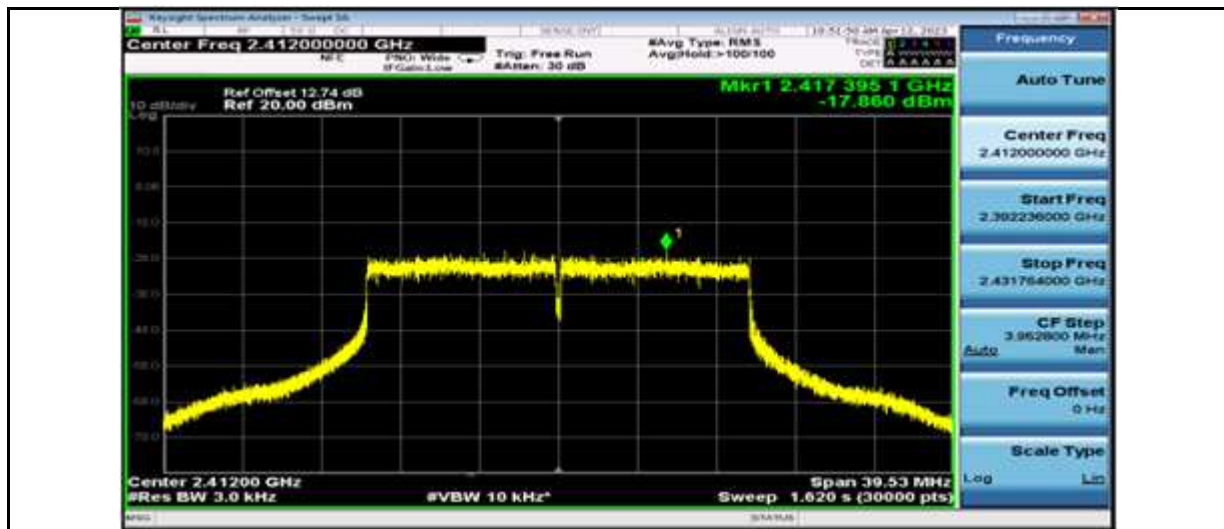
11N40SISO\_Ant1\_2437



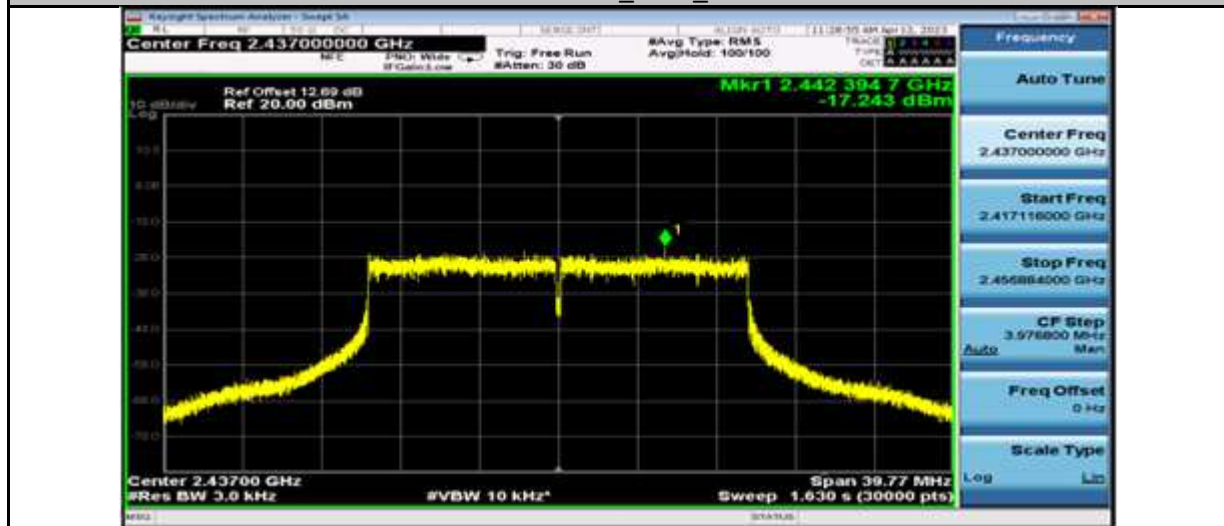
11N40SISO\_Ant1\_2452



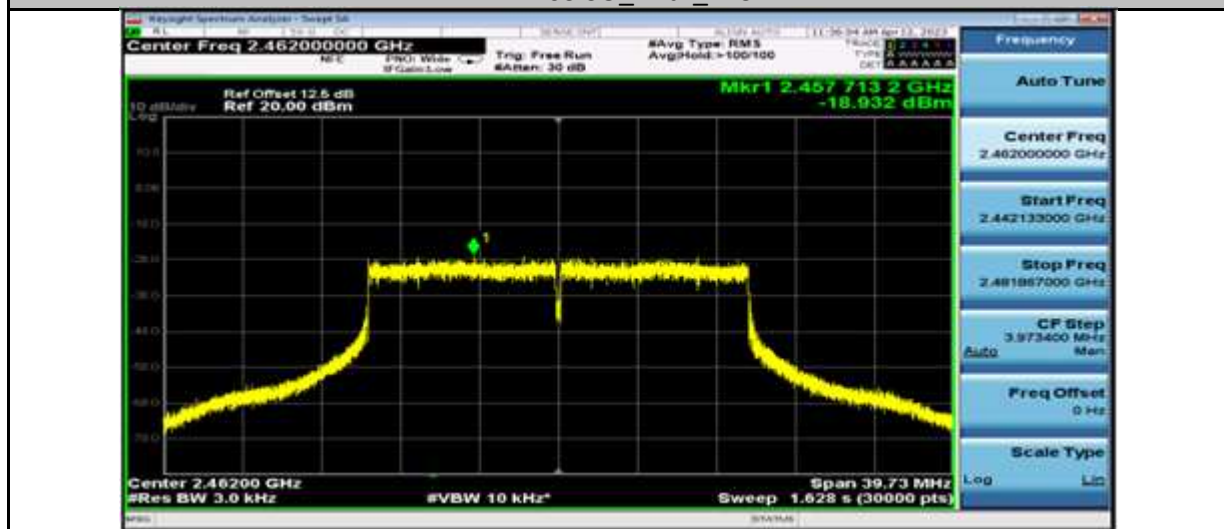
## TEST REPORT



11AX20SISO\_Ant1\_2412

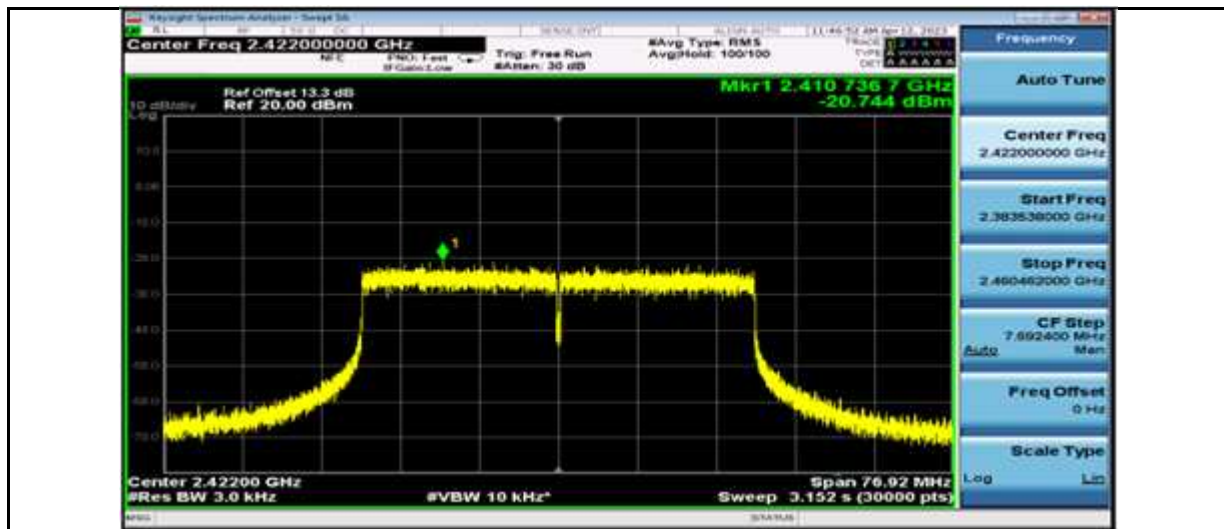


11AX20SISO\_Ant1\_2437

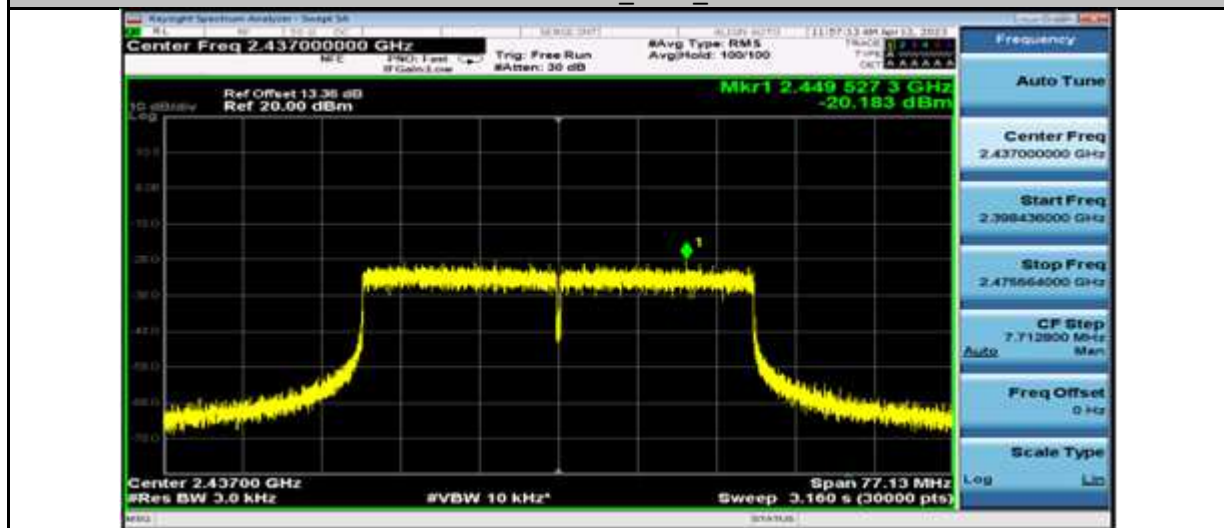


11AX20SISO\_Ant1\_2462

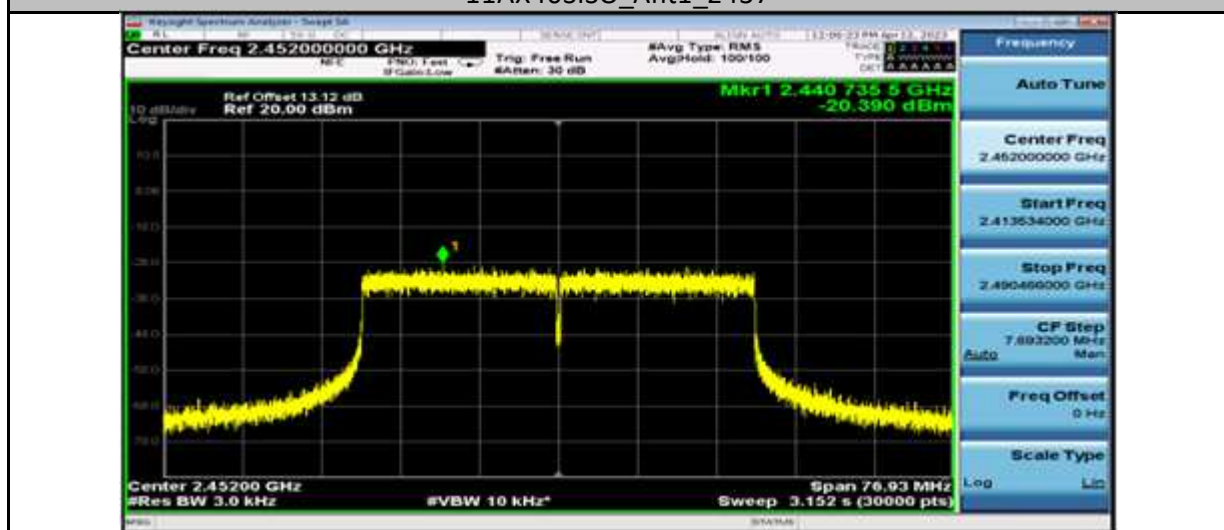
## TEST REPORT



11AX40SISO\_Ant1\_2422



11AX40SISO\_Ant1\_2437



11AX40SISO\_Ant1\_2452

TEST REPORT

Conducted Spurious Emission

Test Data

TestMode	Antenna	Frequency [MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	6.05	6.05	---	PASS
			30~1000	6.05	-59.93	≤-23.95	PASS
			1000~26500	6.05	-44.6	≤-23.95	PASS
		2437	Reference	6.44	6.44	---	PASS
			30~1000	6.44	-59.46	≤-23.56	PASS
			1000~26500	6.44	-45.99	≤-23.56	PASS
		2462	Reference	5.81	5.81	---	PASS
			30~1000	5.81	-59.37	≤-24.19	PASS
			1000~26500	5.81	-46.6	≤-24.19	PASS
11G	Ant1	2412	Reference	3.92	3.92	---	PASS
			30~1000	3.92	-59.68	≤-26.08	PASS
			1000~26500	3.92	-51.21	≤-26.08	PASS
		2437	Reference	4.01	4.01	---	PASS
			30~1000	4.01	-59.2	≤-25.99	PASS
			1000~26500	4.01	-46.46	≤-25.99	PASS
		2462	Reference	3.32	3.32	---	PASS
			30~1000	3.32	-59.05	≤-26.68	PASS
			1000~26500	3.32	-48.33	≤-26.68	PASS
11N20SISO	Ant1	2412	Reference	3.96	3.96	---	PASS
			30~1000	3.96	-59.89	≤-26.04	PASS
			1000~26500	3.96	-47.98	≤-26.04	PASS
		2437	Reference	3.98	3.98	---	PASS
			30~1000	3.98	-59.57	≤-26.02	PASS
			1000~26500	3.98	-48.1	≤-26.02	PASS
		2462	Reference	3.56	3.56	---	PASS
			30~1000	3.56	-59.37	≤-26.44	PASS
			1000~26500	3.56	-46.96	≤-26.44	PASS
11N40SISO	Ant1	2422	Reference	0.42	0.42	---	PASS
			30~1000	0.42	-48.16	≤-29.58	PASS
			1000~26500	0.42	-50.81	≤-29.58	PASS
		2437	Reference	0.95	0.95	---	PASS
			30~1000	0.95	-47.57	≤-29.05	PASS
			1000~26500	0.95	-51.51	≤-29.05	PASS
		2452	Reference	0.74	0.74	---	PASS
			30~1000	0.74	-46.06	≤-29.26	PASS
			1000~26500	0.74	-51.34	≤-29.26	PASS
11AX20SISO	Ant1	2412	Reference	3.84	3.84	---	PASS
			30~1000	3.84	-59.55	≤-26.16	PASS
			1000~26500	3.84	-49.19	≤-26.16	PASS
		2437	Reference	4.17	4.17	---	PASS
			30~1000	4.17	-60.21	≤-25.83	PASS
1000~26500	4.17	-49.97	≤-25.83	PASS			

**TEST REPORT**

11AX40SISO	2462	Reference	3.69	3.69	---	PASS	
		30~1000	3.69	-59.38	≤-26.31	PASS	
		1000~26500	3.69	-49.17	≤-26.31	PASS	
	Ant1	2422	Reference	0.47	0.47	---	PASS
			30~1000	0.47	-48.71	≤-29.53	PASS
			1000~26500	0.47	-50.28	≤-29.53	PASS
		2437	Reference	0.96	0.96	---	PASS
			30~1000	0.96	-47.57	≤-29.04	PASS
			1000~26500	0.96	-49.71	≤-29.04	PASS
2452		Reference	0.77	0.77	---	PASS	
		30~1000	0.77	-47.97	≤-29.23	PASS	
		1000~26500	0.77	-50.98	≤-29.23	PASS	

## TEST REPORT

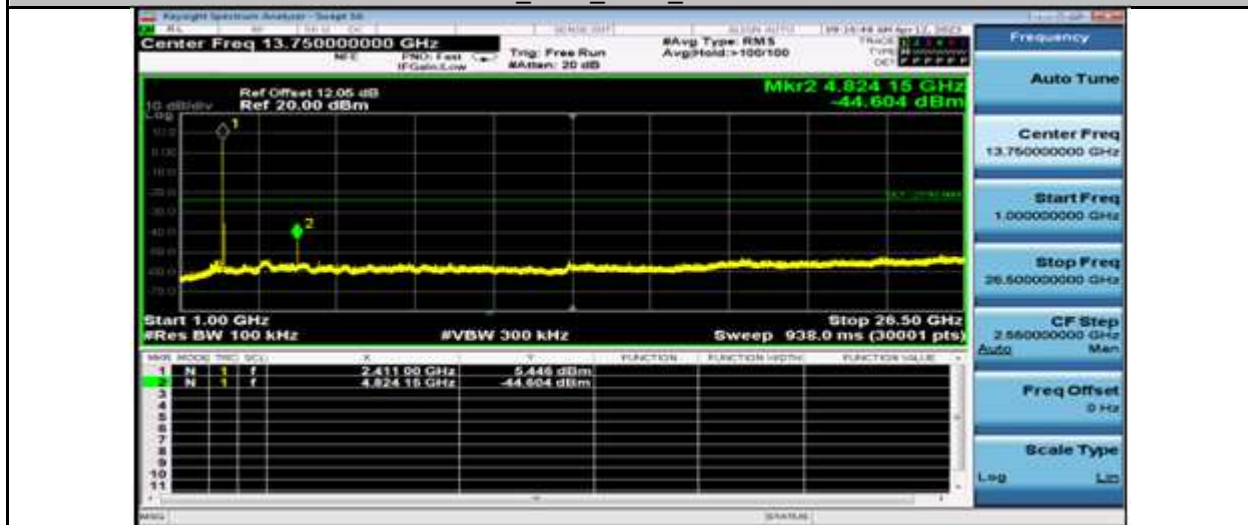
### Test Plots



11B\_Ant1\_2412\_0~Reference



11B\_Ant1\_2412\_30~1000



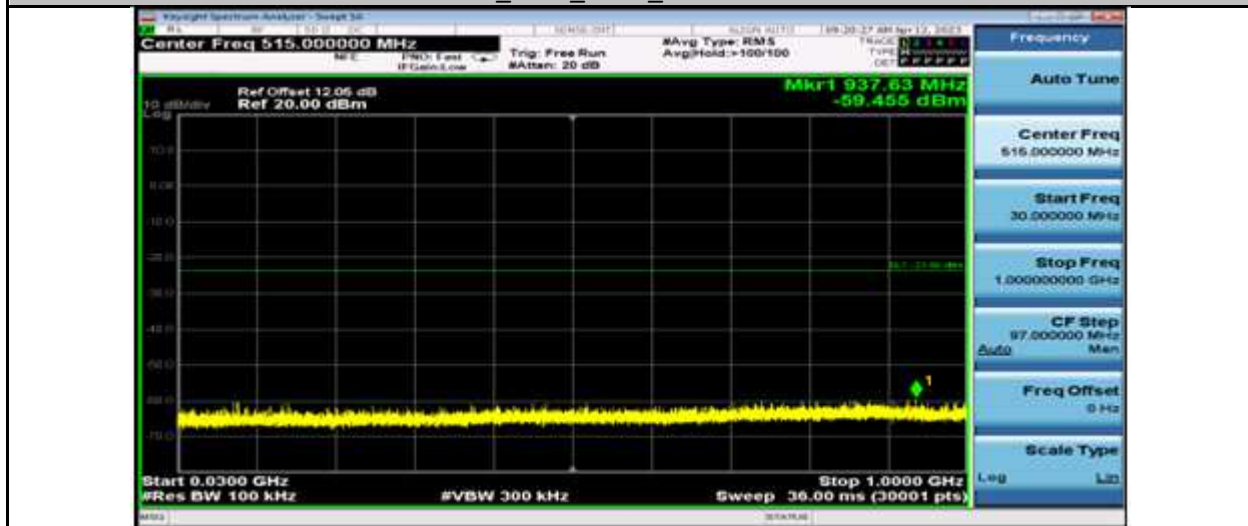
11B\_Ant1\_2412\_1000~26500



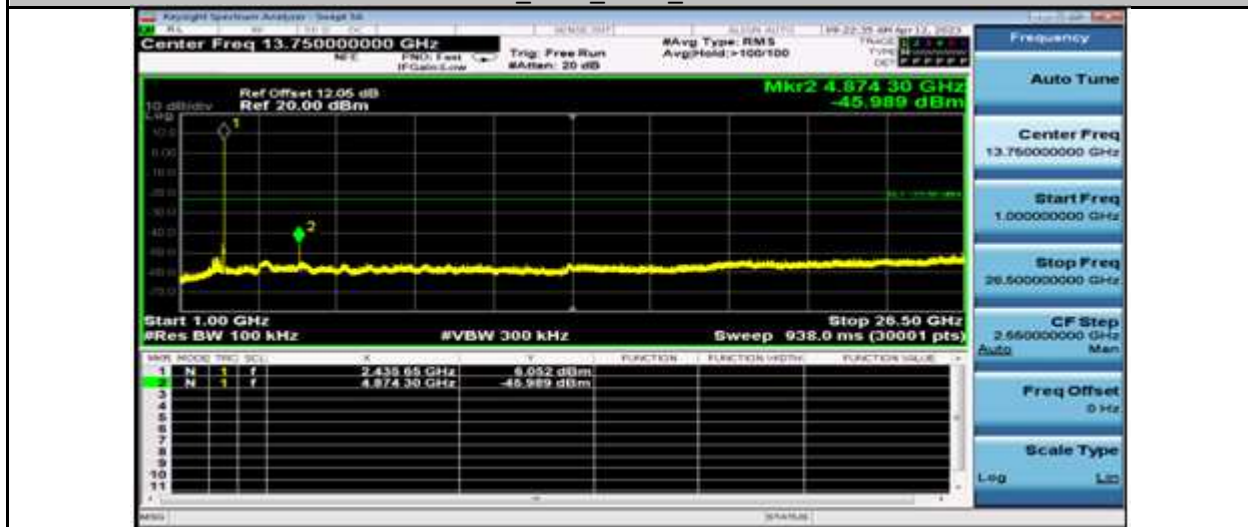
## TEST REPORT



11B\_Ant1\_2437\_0~Reference



11B\_Ant1\_2437\_30~1000



11B\_Ant1\_2437\_1000~26500

## TEST REPORT



11B\_Ant1\_2462\_0~Reference



11B\_Ant1\_2462\_30~1000

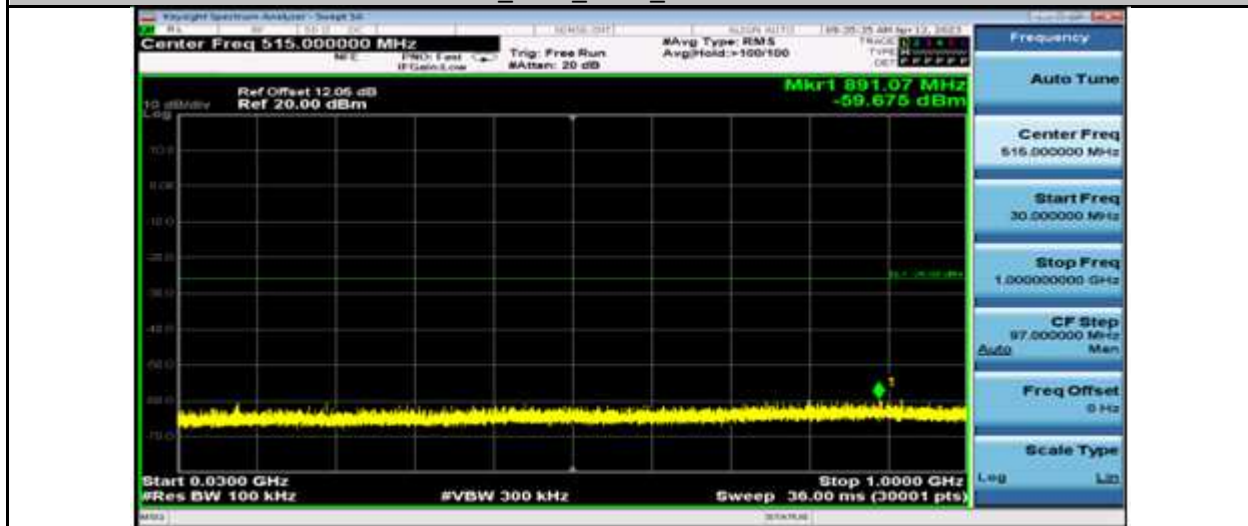


11B\_Ant1\_2462\_1000~26500

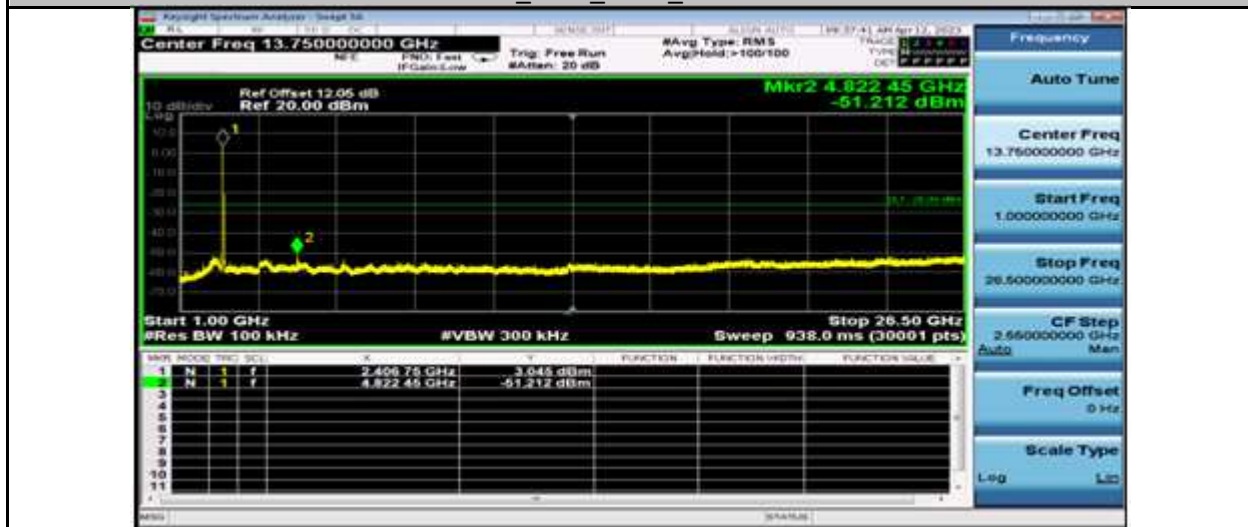
## TEST REPORT



11G\_Ant1\_2412\_0~Reference



11G\_Ant1\_2412\_30~1000



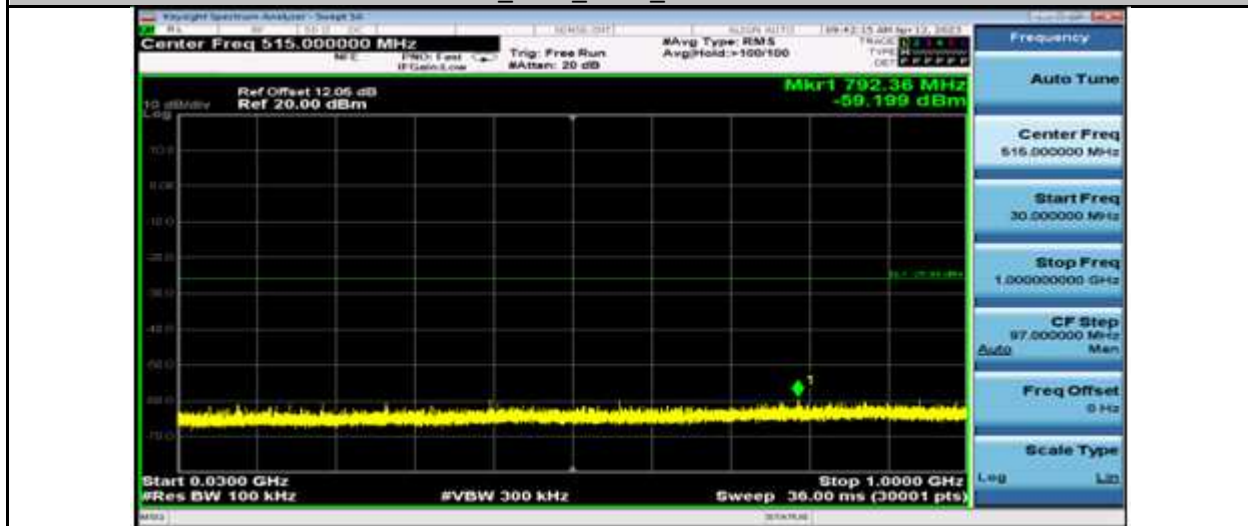
11G\_Ant1\_2412\_1000~26500



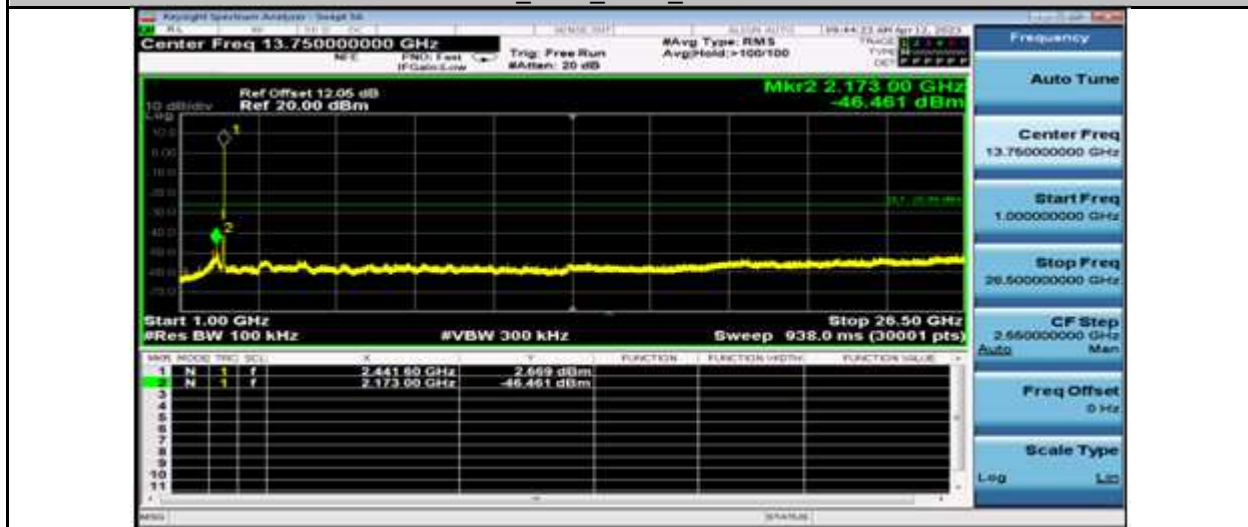
## TEST REPORT



11G\_Ant1\_2437\_0~Reference



11G\_Ant1\_2437\_30~1000

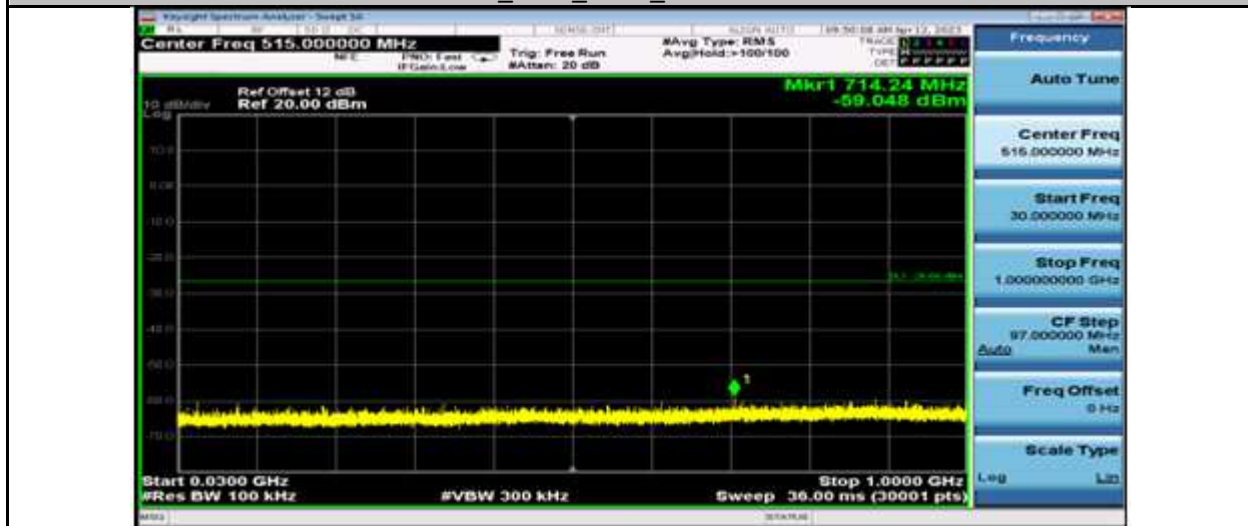


11G\_Ant1\_2437\_1000~26500

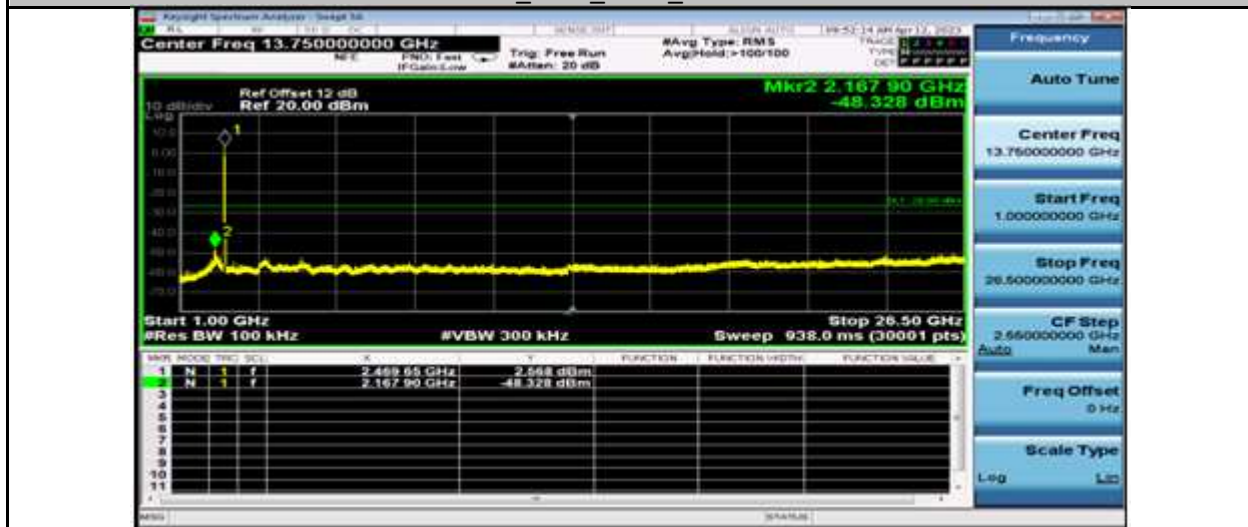
## TEST REPORT



11G\_Ant1\_2462\_0~Reference



11G\_Ant1\_2462\_30~1000



11G\_Ant1\_2462\_1000~26500

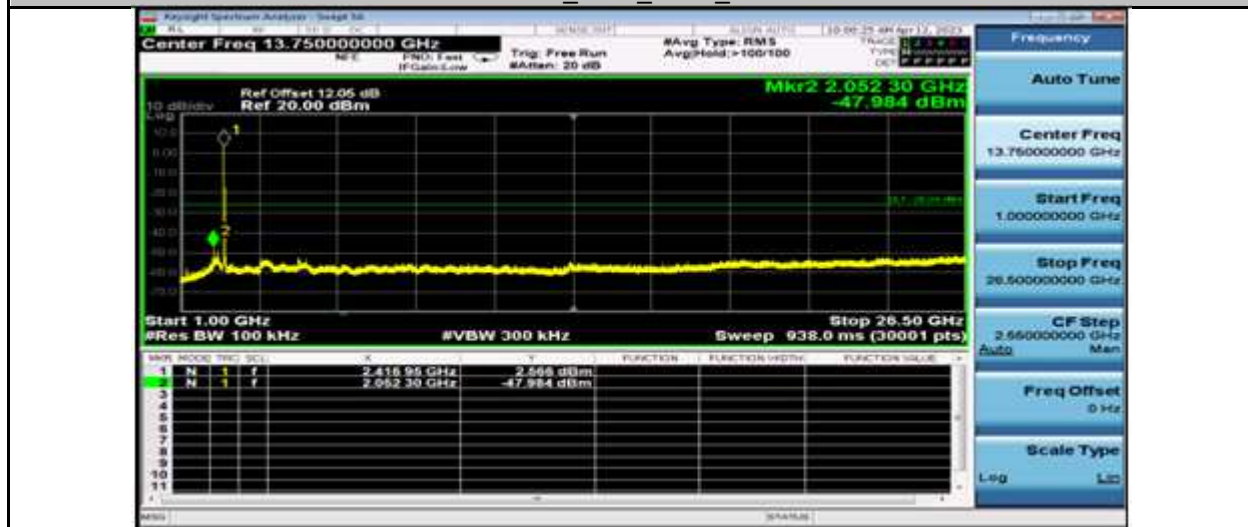
## TEST REPORT



11N20SISO\_Ant1\_2412\_0~Reference



11N20SISO\_Ant1\_2412\_30~1000



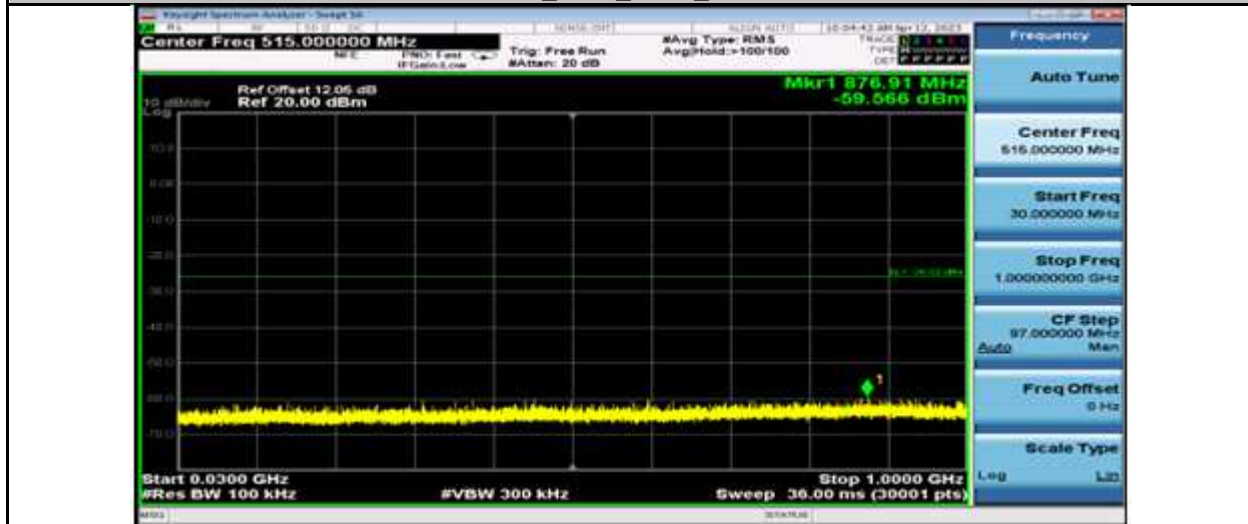
11N20SISO\_Ant1\_2412\_1000~26500



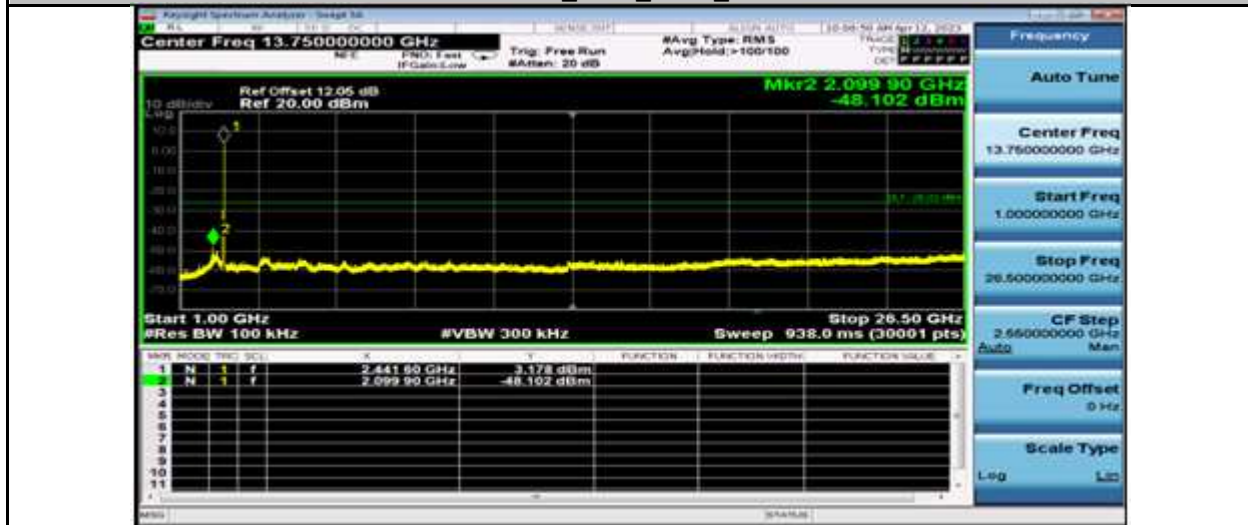
## TEST REPORT



11N20SISO\_Ant1\_2437\_0~Reference



11N20SISO\_Ant1\_2437\_30~1000

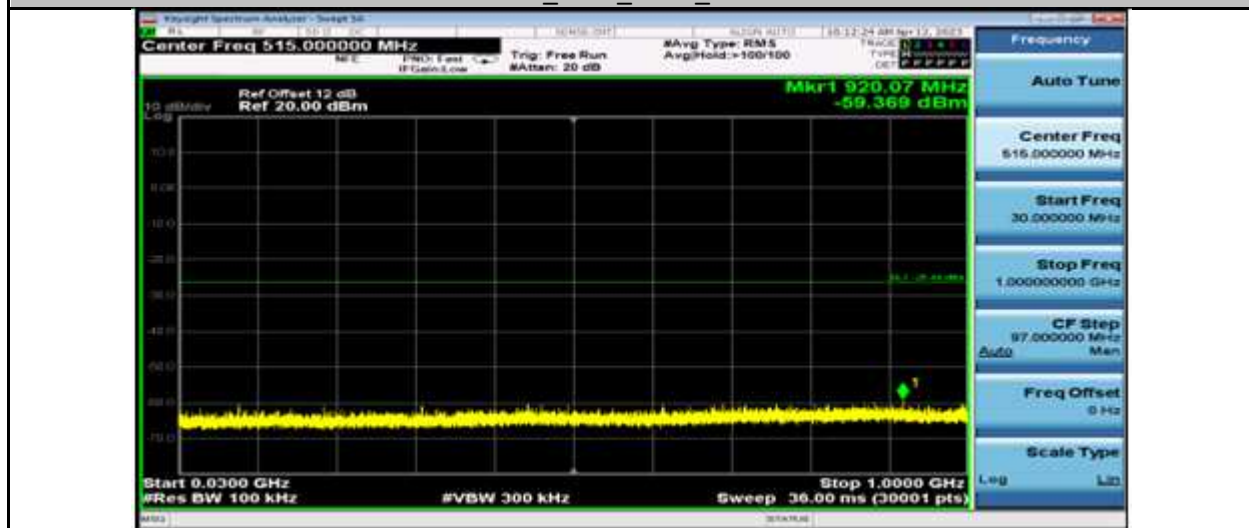


11N20SISO\_Ant1\_2437\_1000~26500

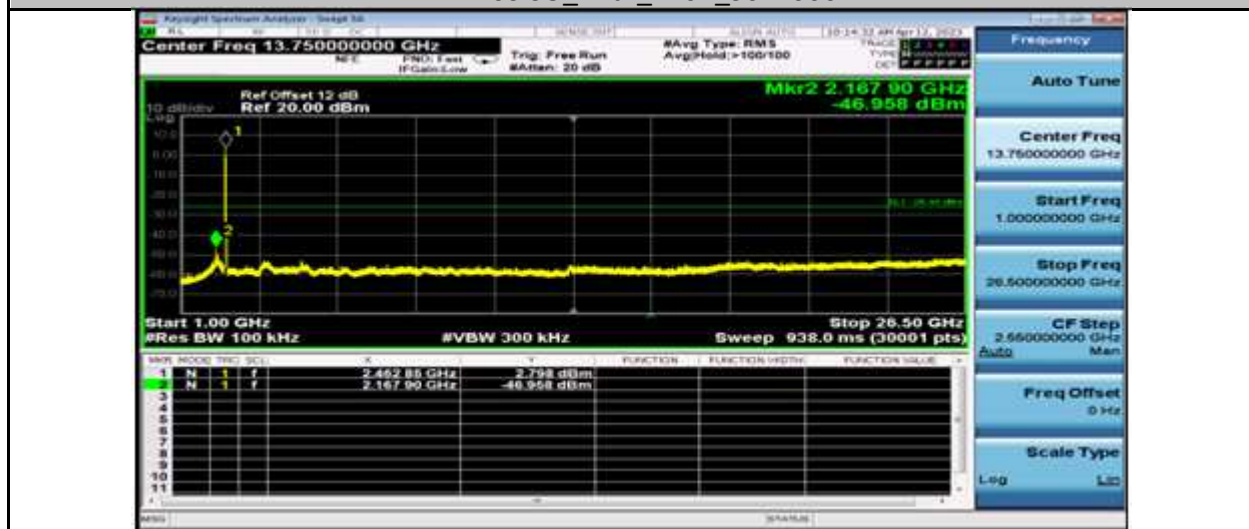
## TEST REPORT



11N20SISO\_Ant1\_2462\_0~Reference

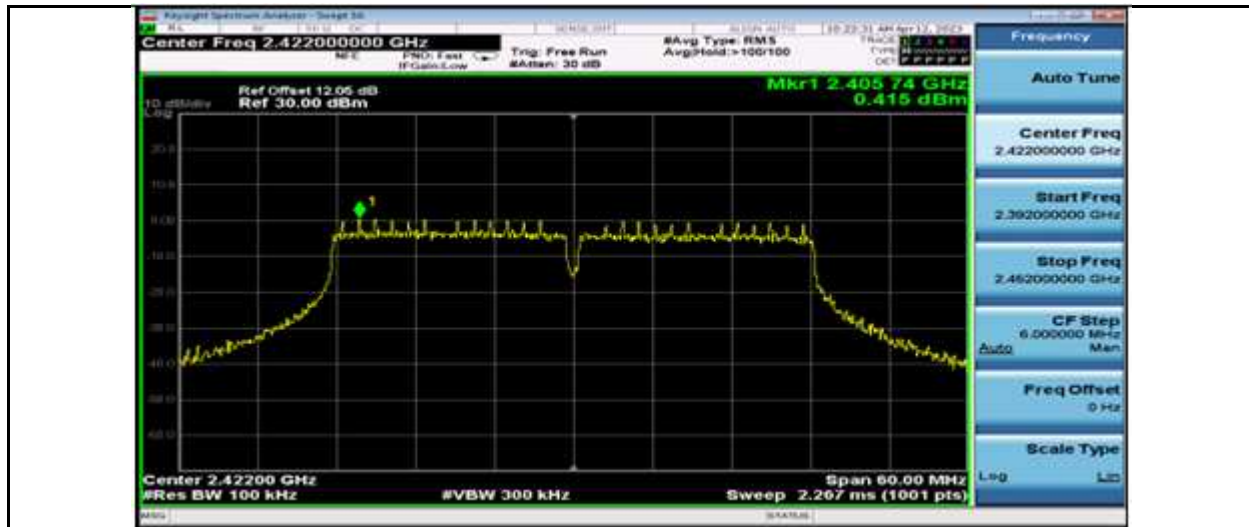


11N20SISO\_Ant1\_2462\_30~1000

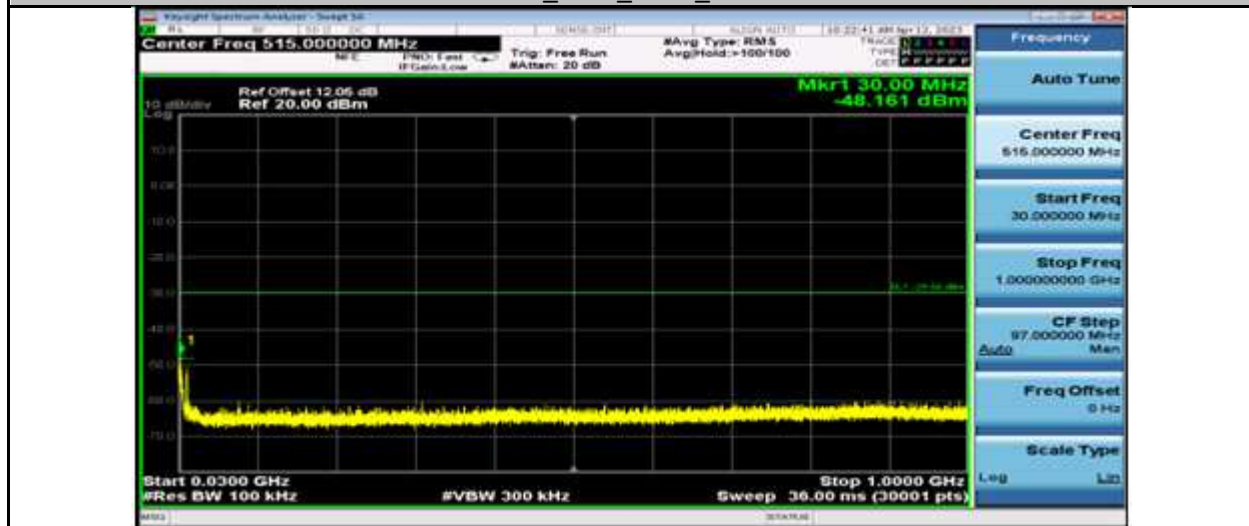


11N20SISO\_Ant1\_2462\_1000~26500

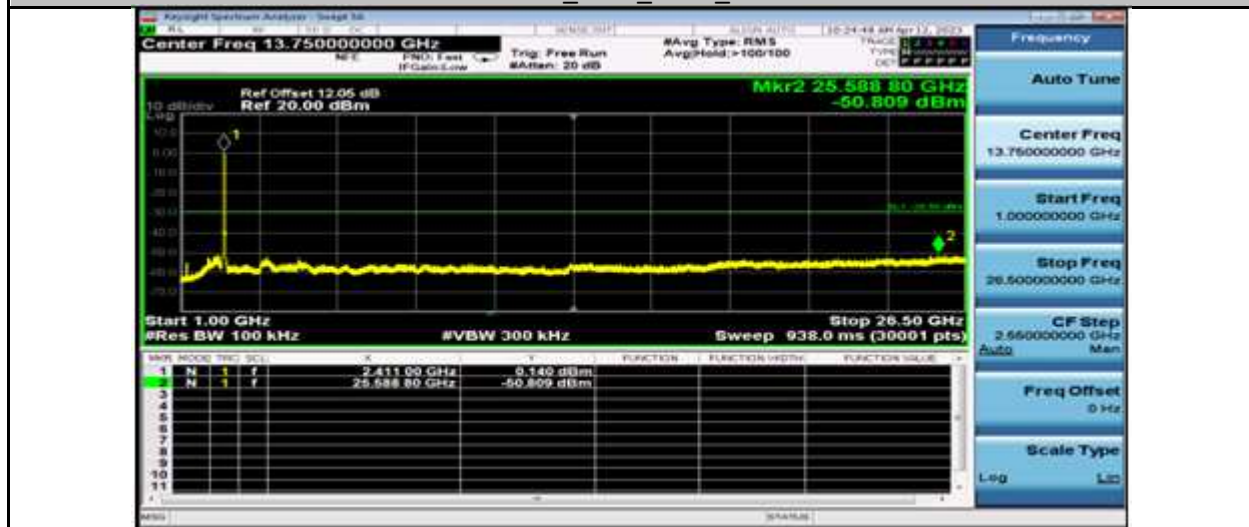
## TEST REPORT



11N40SISO\_Ant1\_2422\_0~Reference



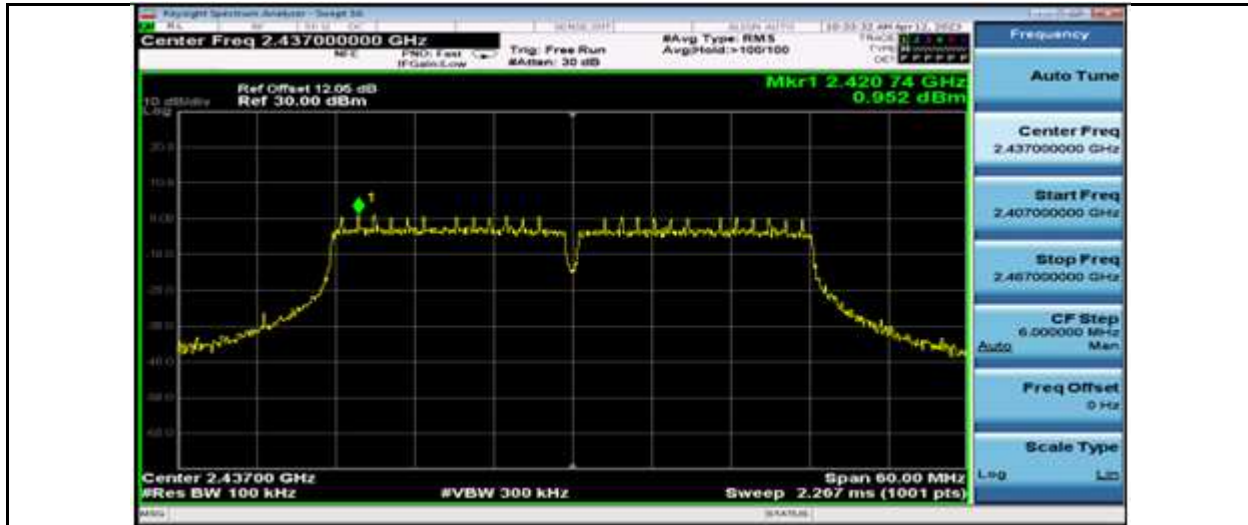
11N40SISO\_Ant1\_2422\_30~1000



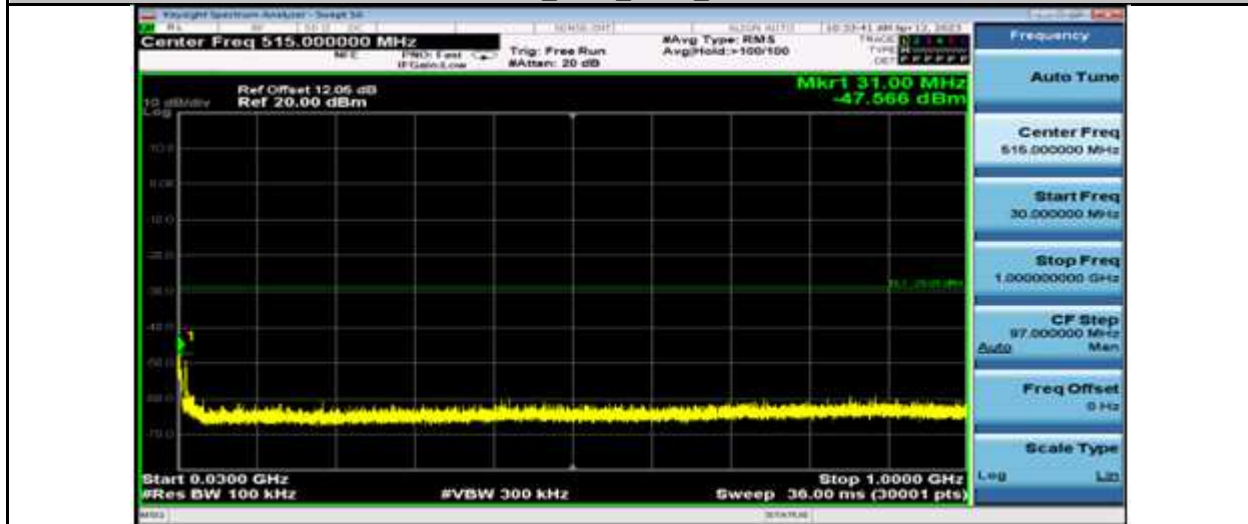
11N40SISO\_Ant1\_2422\_1000~26500



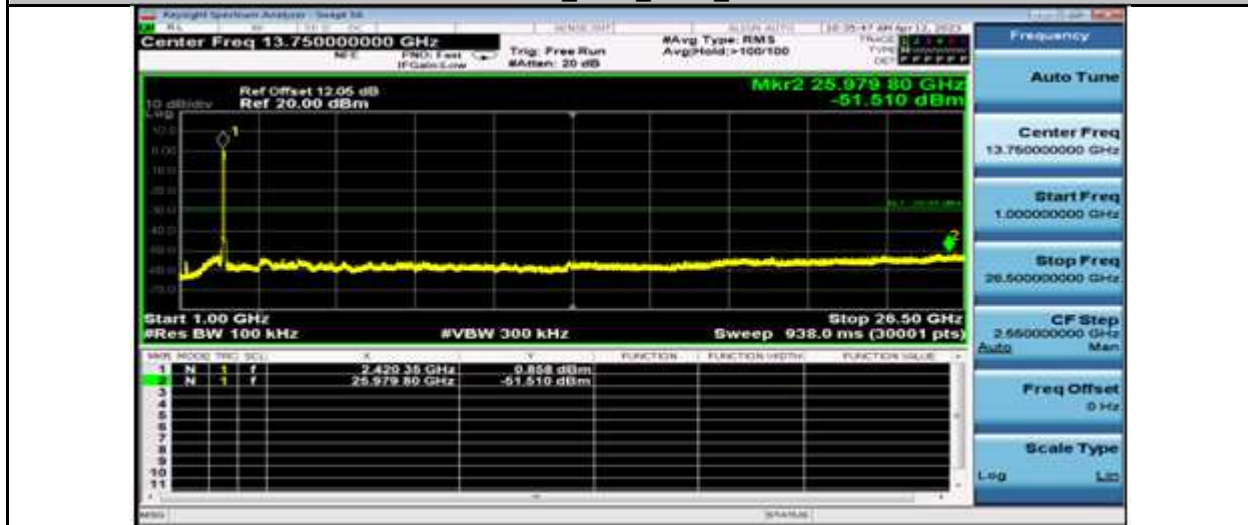
## TEST REPORT



11N40SISO\_Ant1\_2437\_0~Reference



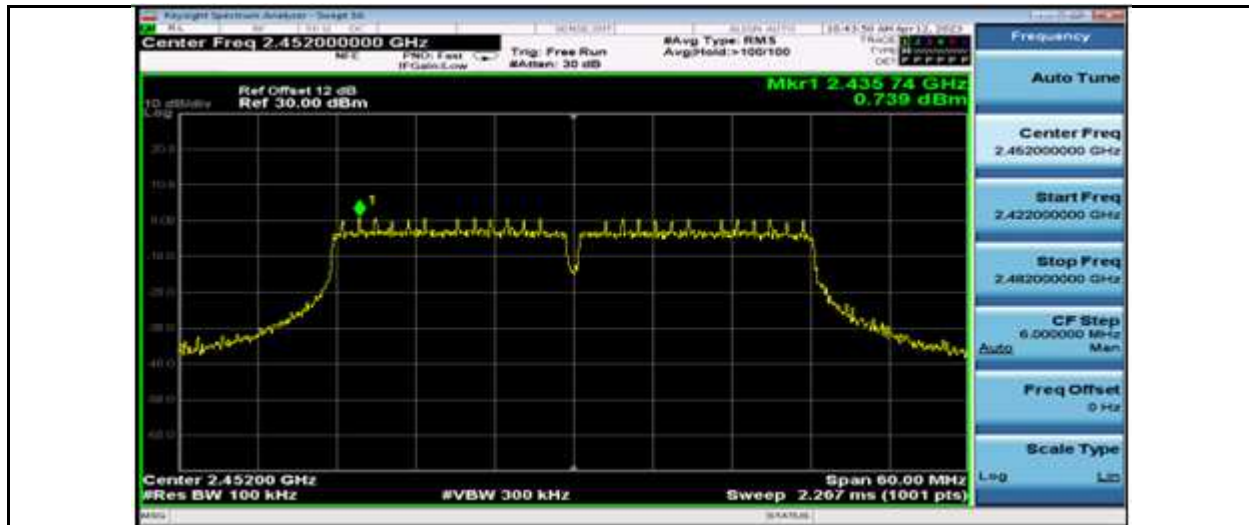
11N40SISO\_Ant1\_2437\_30~1000



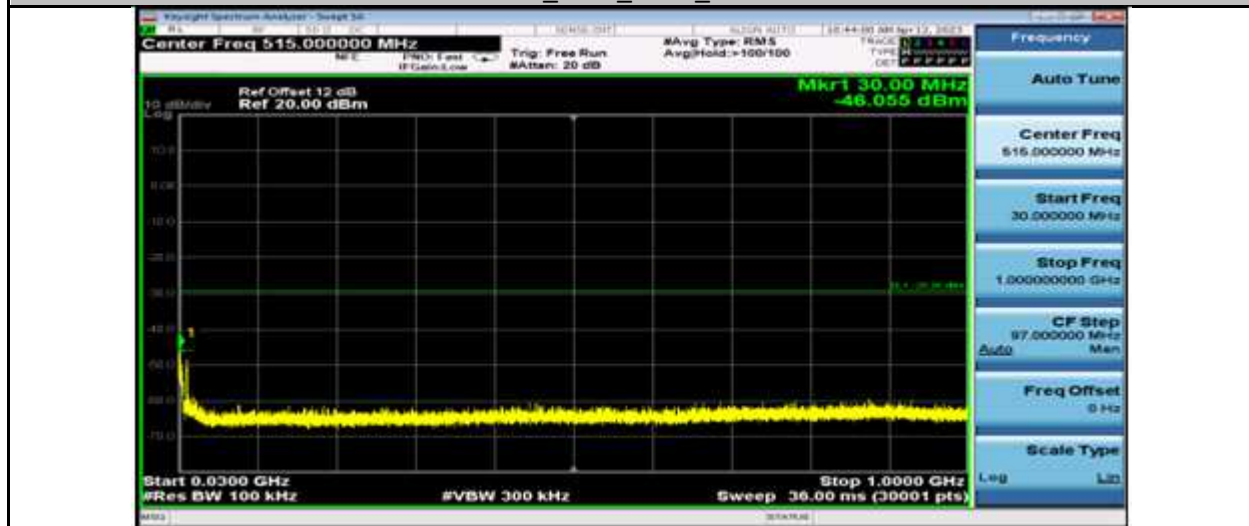
11N40SISO\_Ant1\_2437\_1000~26500



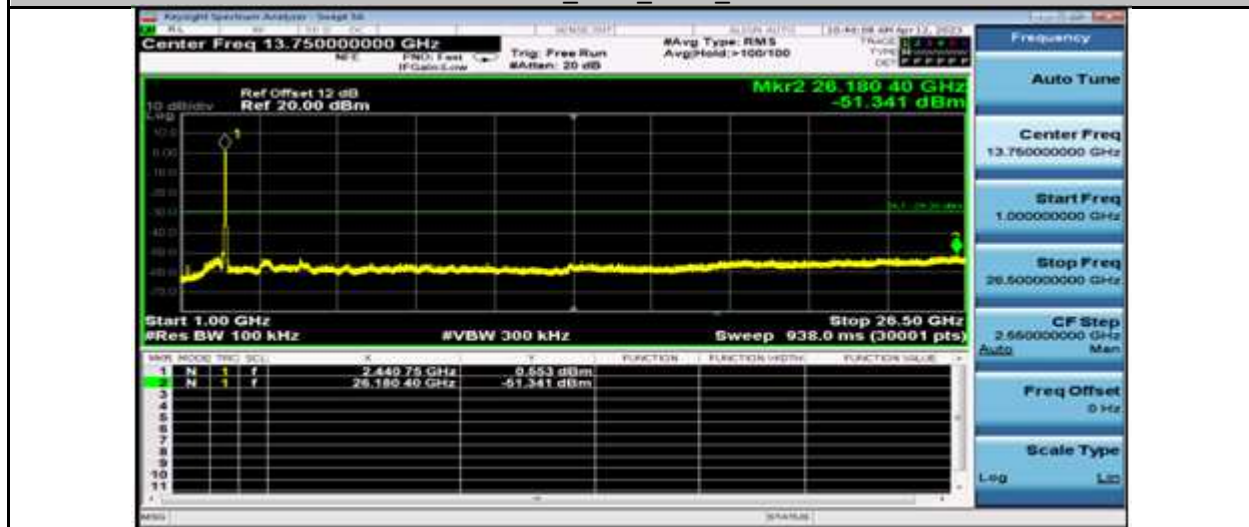
## TEST REPORT



11N40SISO\_Ant1\_2452\_0~Reference



11N40SISO\_Ant1\_2452\_30~1000

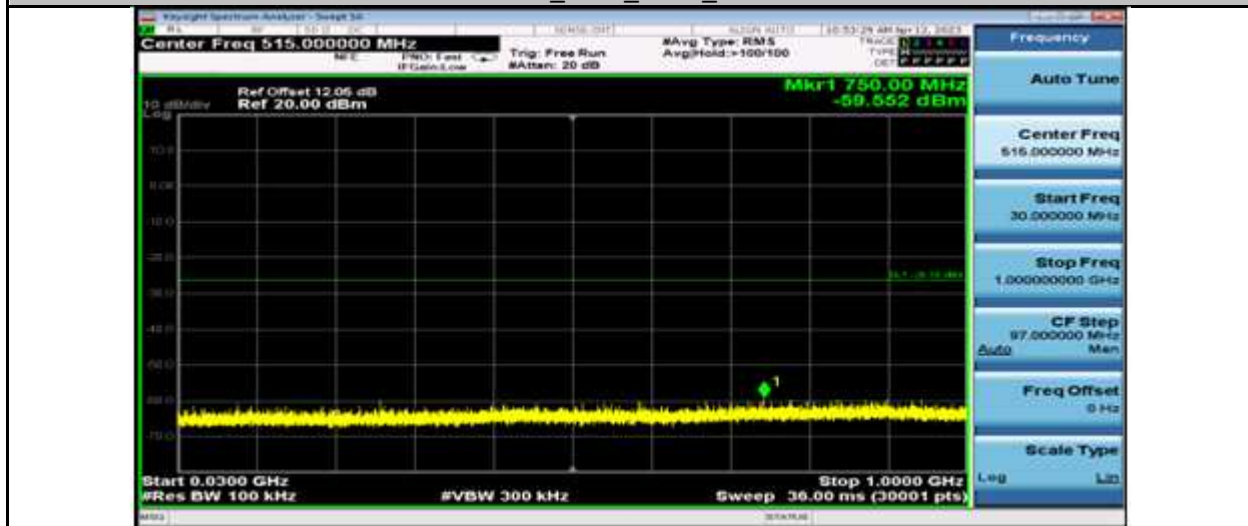


11N40SISO\_Ant1\_2452\_1000~26500

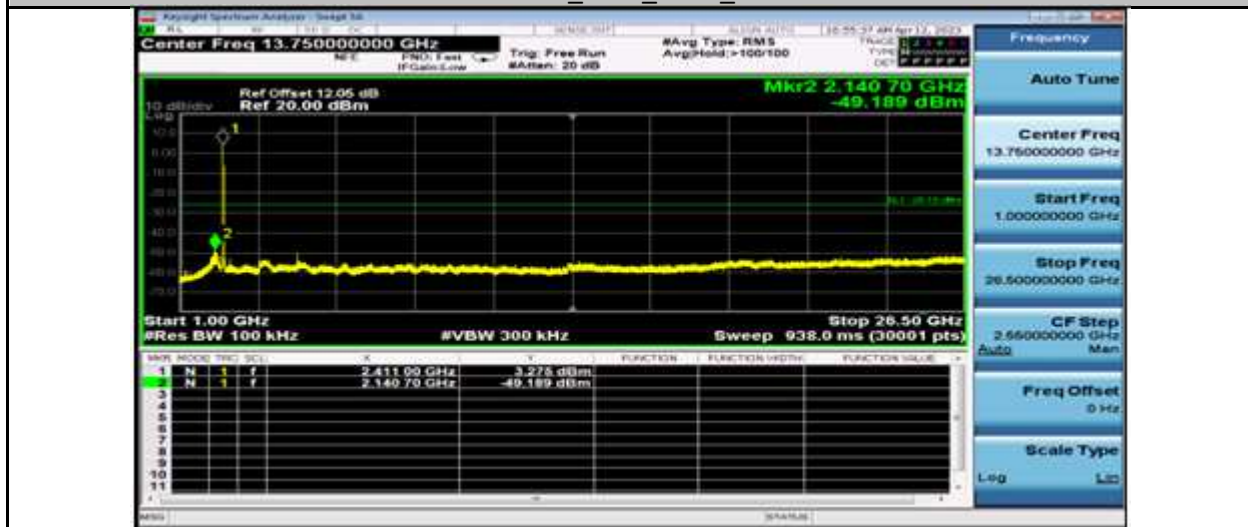
## TEST REPORT



11AX20SISO\_Ant1\_2412\_0~Reference



11AX20SISO\_Ant1\_2412\_30~1000



11AX20SISO\_Ant1\_2412\_1000~26500

## TEST REPORT



11AX20SISO\_Ant1\_2437\_0~Reference



11AX20SISO\_Ant1\_2437\_30~1000



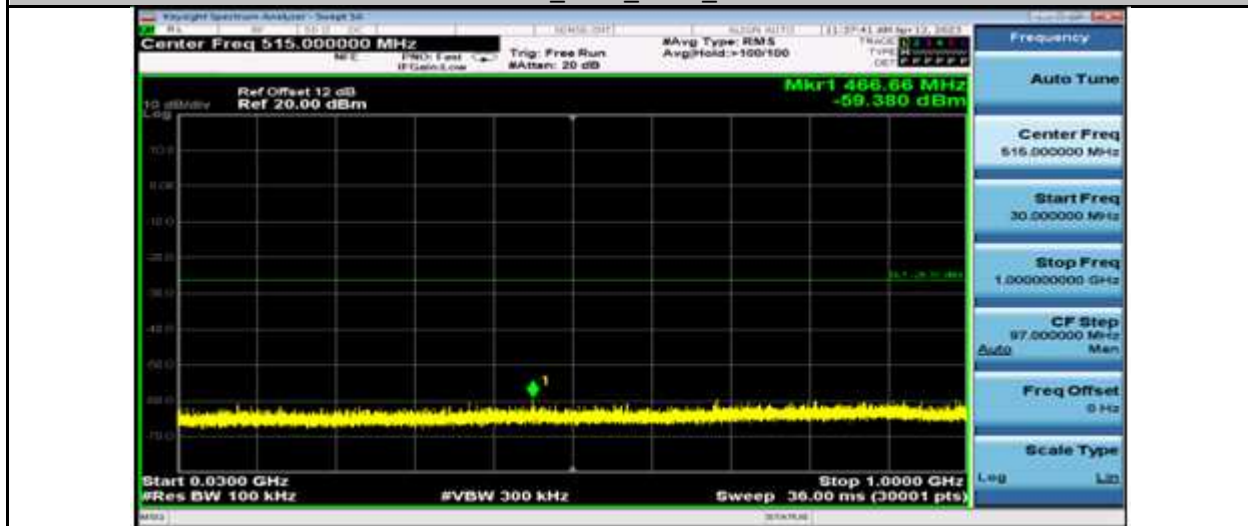
11AX20SISO\_Ant1\_2437\_1000~26500



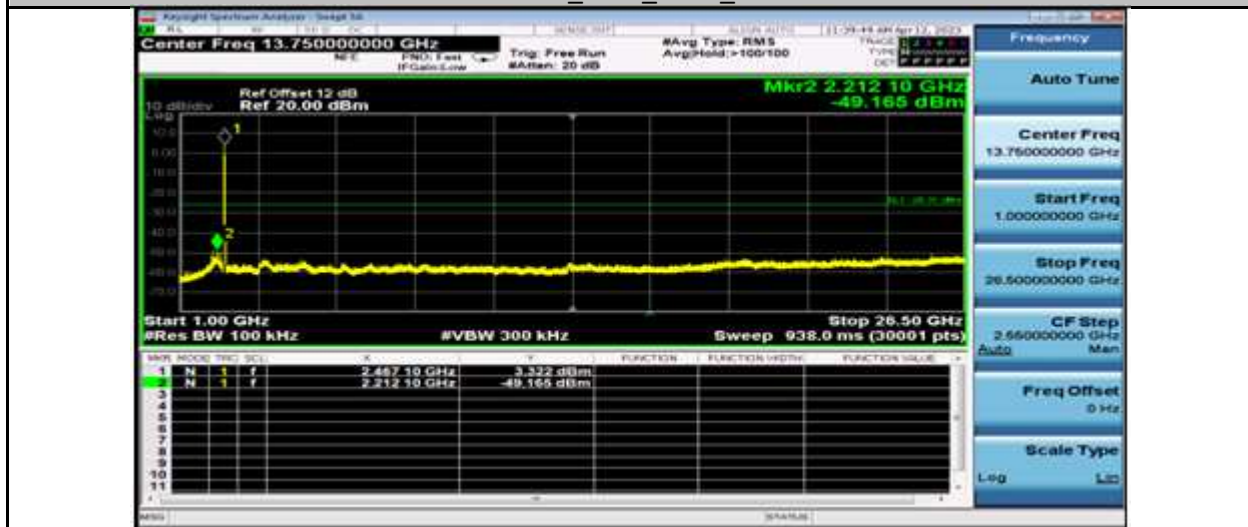
## TEST REPORT



11AX20SISO\_Ant1\_2462\_0~Reference

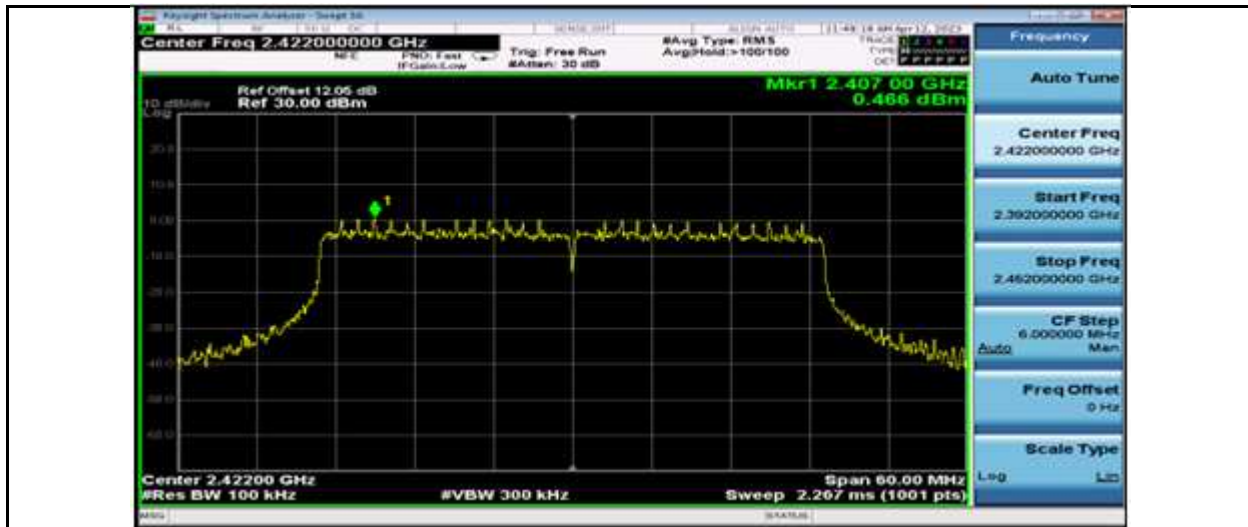


11AX20SISO\_Ant1\_2462\_30~1000

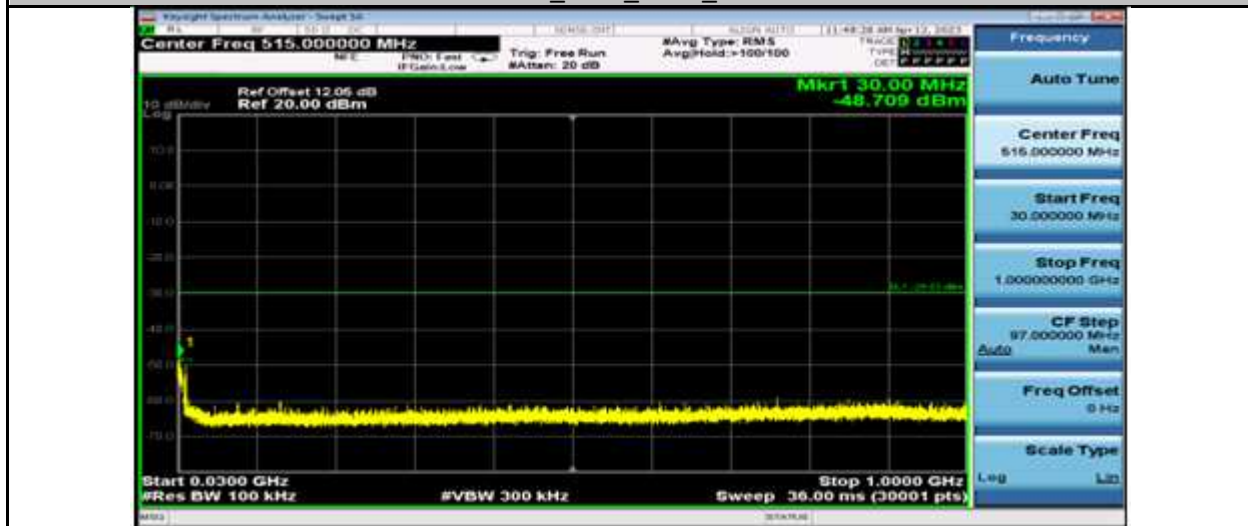


11AX20SISO\_Ant1\_2462\_1000~26500

## TEST REPORT



11AX40SISO\_Ant1\_2422\_0~Reference



11AX40SISO\_Ant1\_2422\_30~1000

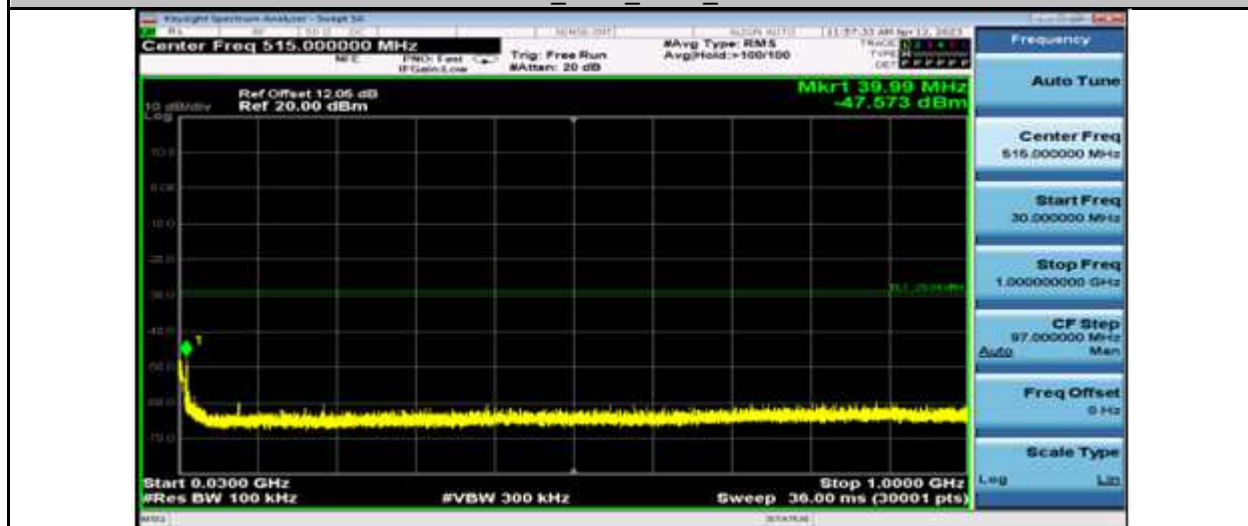


11AX40SISO\_Ant1\_2422\_1000~26500

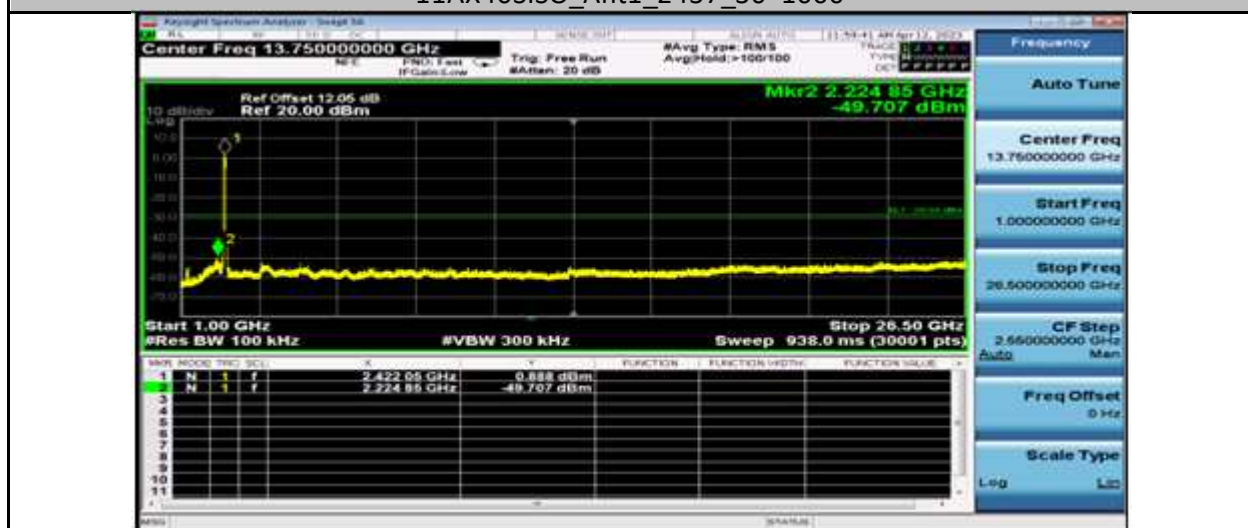
## TEST REPORT



11AX40SISO\_Ant1\_2437\_0~Reference



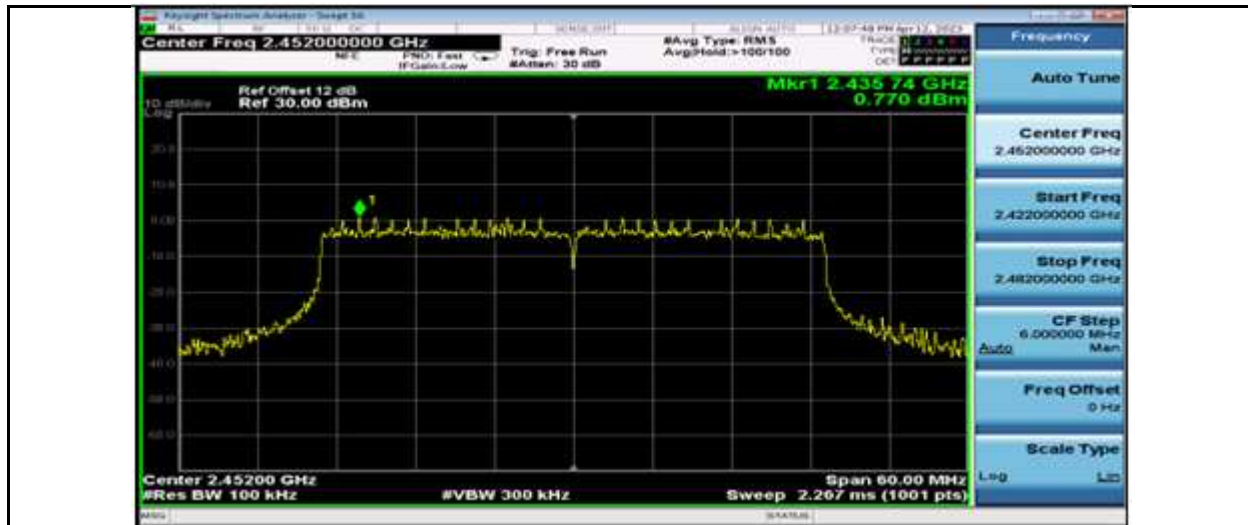
11AX40SISO\_Ant1\_2437\_30~1000



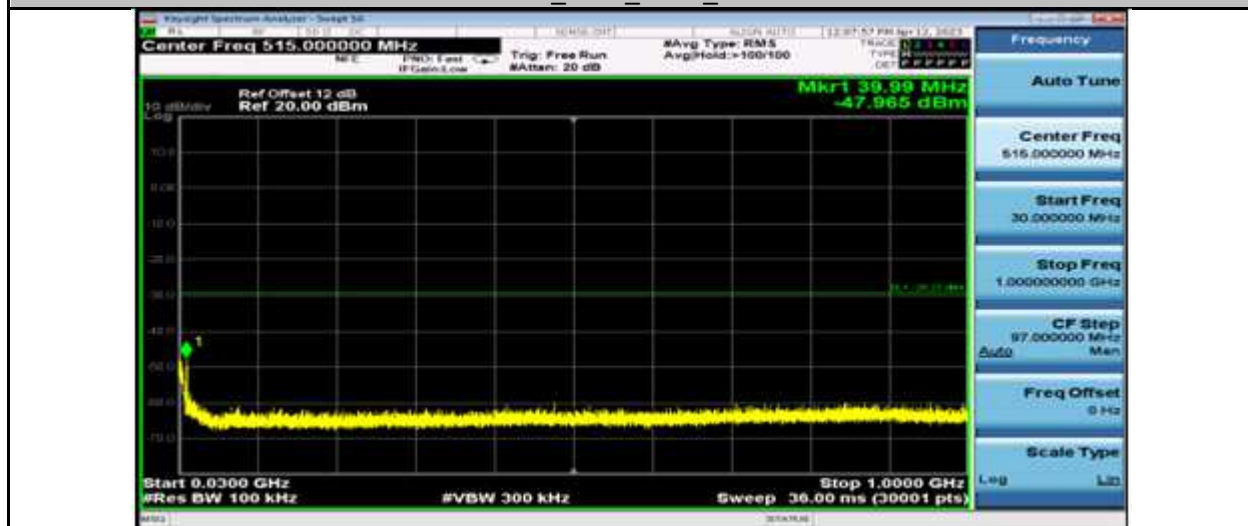
11AX40SISO\_Ant1\_2437\_1000~26500



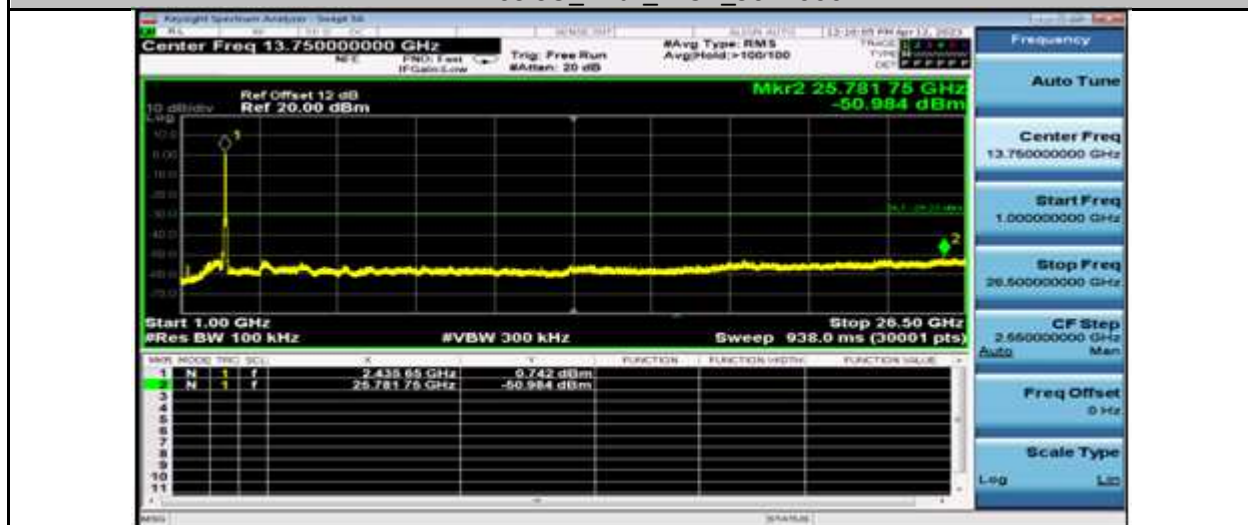
## TEST REPORT



11AX40SISO\_Ant1\_2452\_0~Reference



11AX40SISO\_Ant1\_2452\_30~1000



11AX40SISO\_Ant1\_2452\_1000~26500



**TEST REPORT**

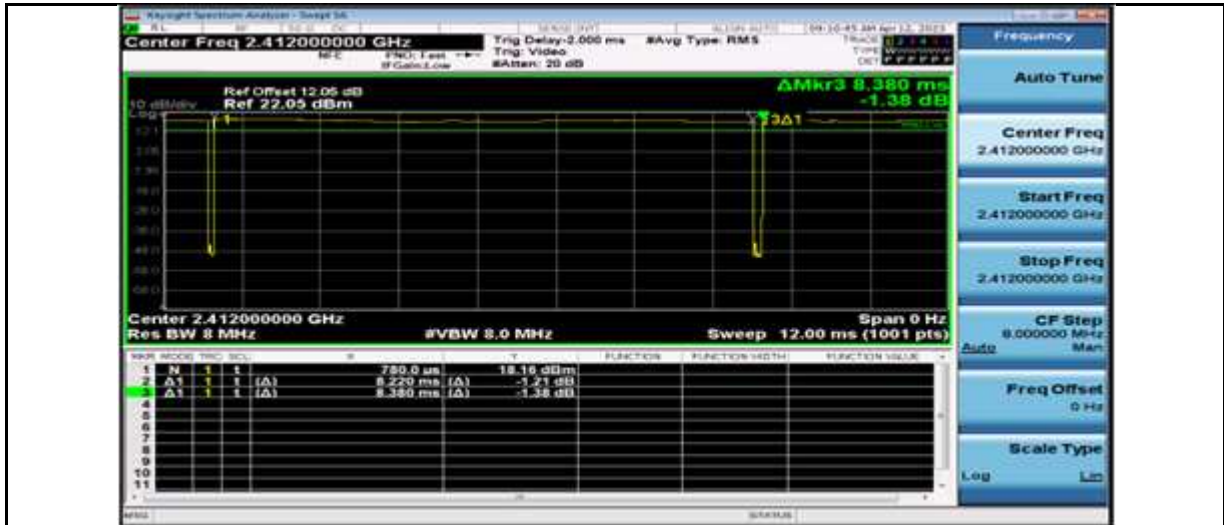
**Duty Cycle**

Test Data

TestMode	Antenna	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
11B	Ant1	2412	8.22	8.38	98.09
		2437	8.24	8.26	99.76
		2462	8.22	8.35	98.44
11G	Ant1	2412	1.37	1.53	89.54
		2437	1.37	1.53	89.54
		2462	1.37	1.45	94.48
11N20SISO	Ant1	2412	1.27	1.41	90.07
		2437	1.28	1.44	88.89
		2462	1.28	1.46	87.67
11N40SISO	Ant1	2422	0.64	0.86	74.42
		2437	0.64	0.85	75.29
		2452	0.64	0.79	81.01
11AX20SISO	Ant1	2412	0.99	1.16	85.34
		2437	1.00	1.16	86.21
		2462	0.99	1.11	89.19
11AX40SISO	Ant1	2422	0.51	0.68	75.00
		2437	0.51	0.69	73.91
		2452	0.51	0.66	77.27

## TEST REPORT

### Test Plots



11B\_Ant1\_2412

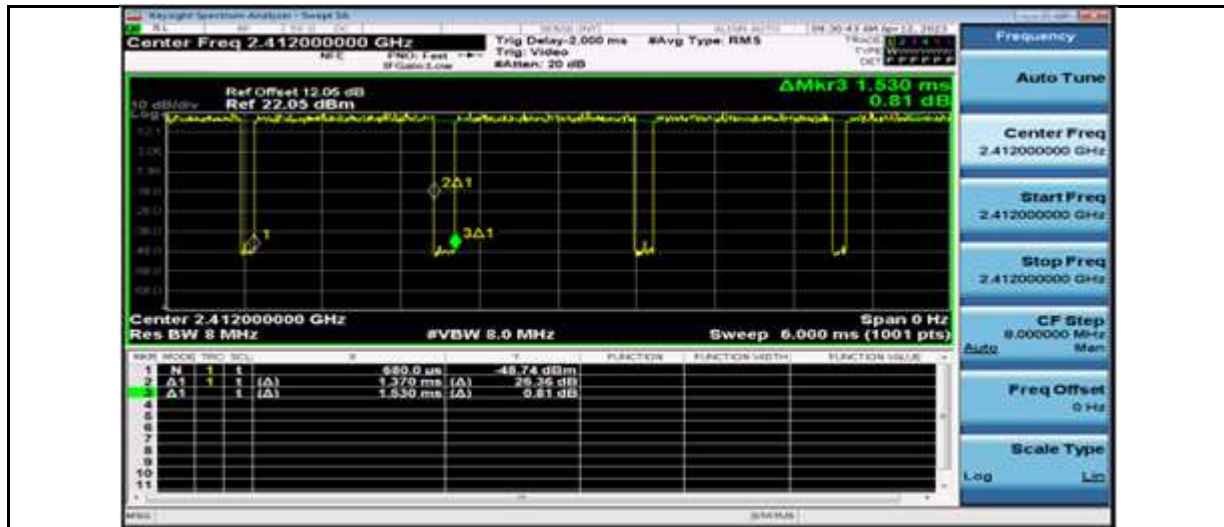


11B\_Ant1\_2437



11B\_Ant1\_2462

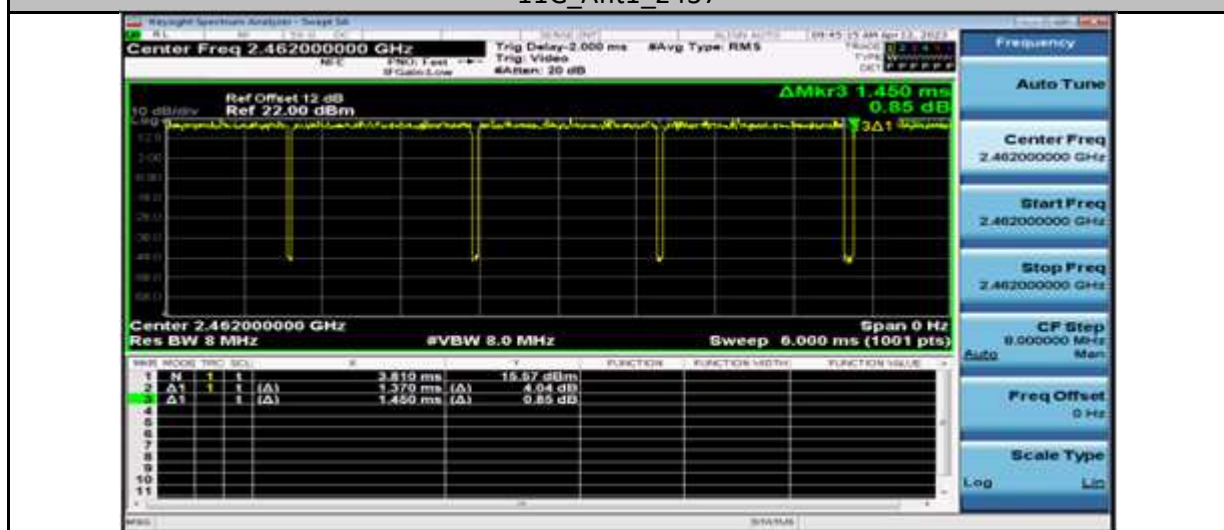
## TEST REPORT



11G Ant1\_2412

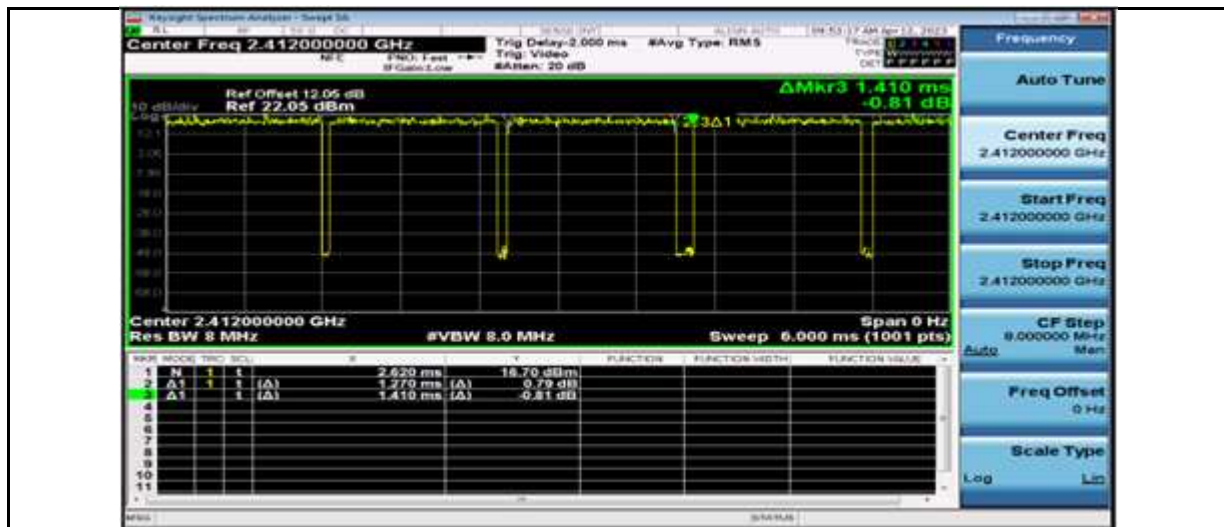


11G Ant1\_2437

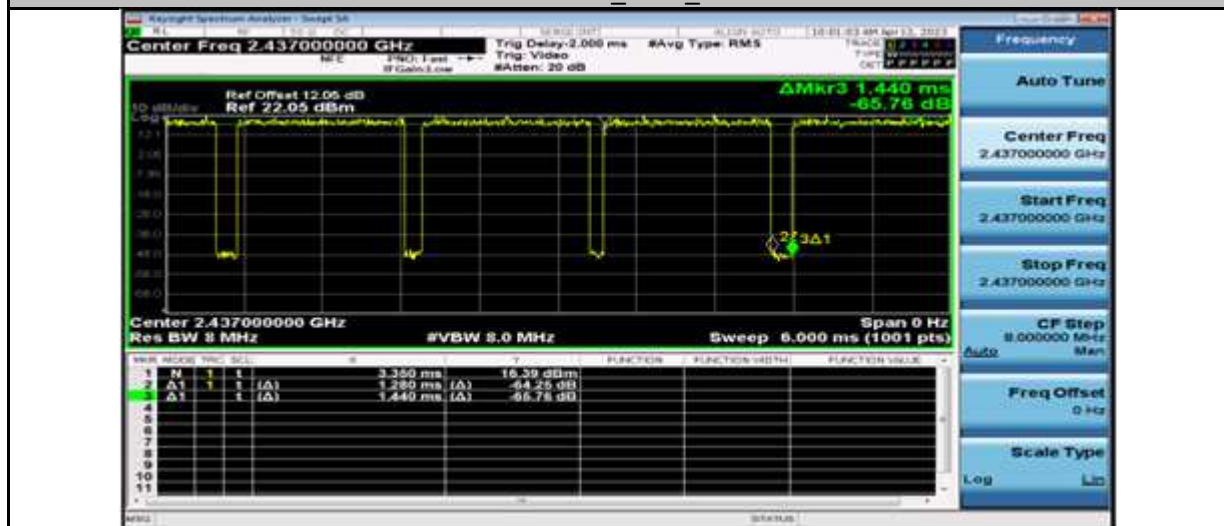


11G Ant1\_2462

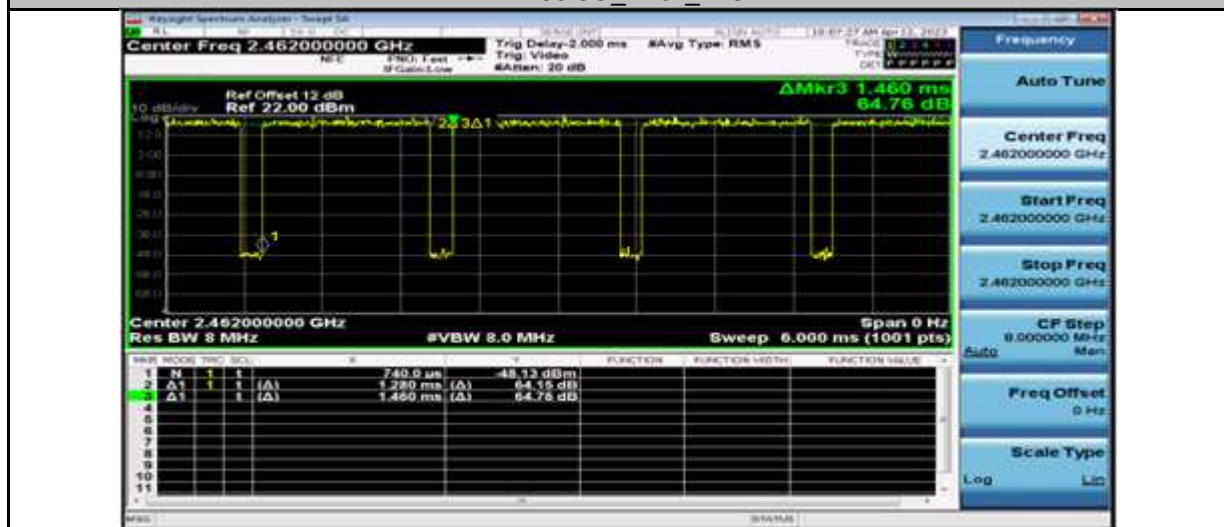
## TEST REPORT



11N20SISO\_Ant1\_2412



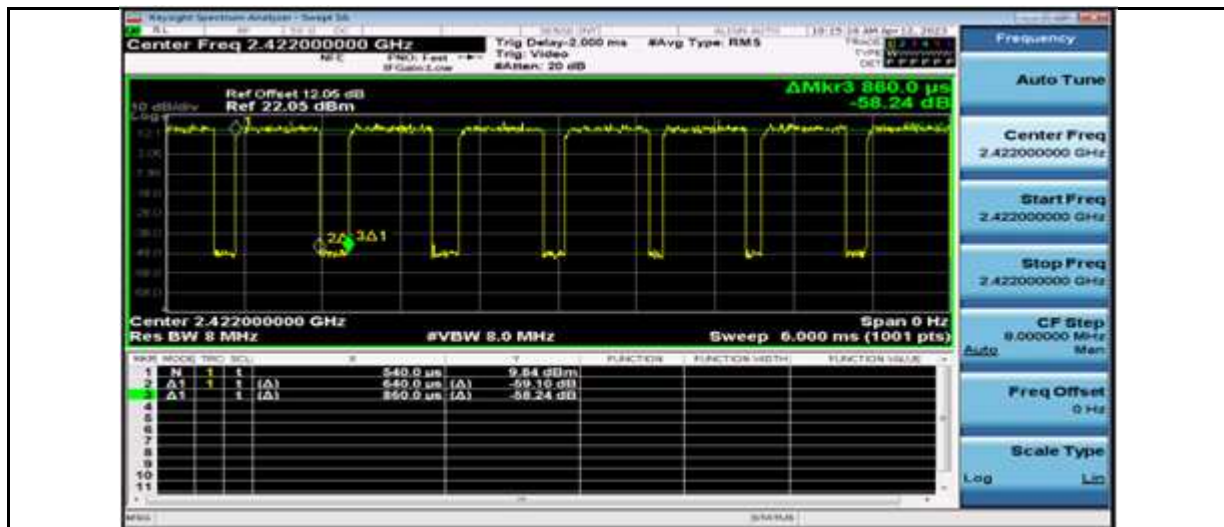
11N20SISO\_Ant1\_2437



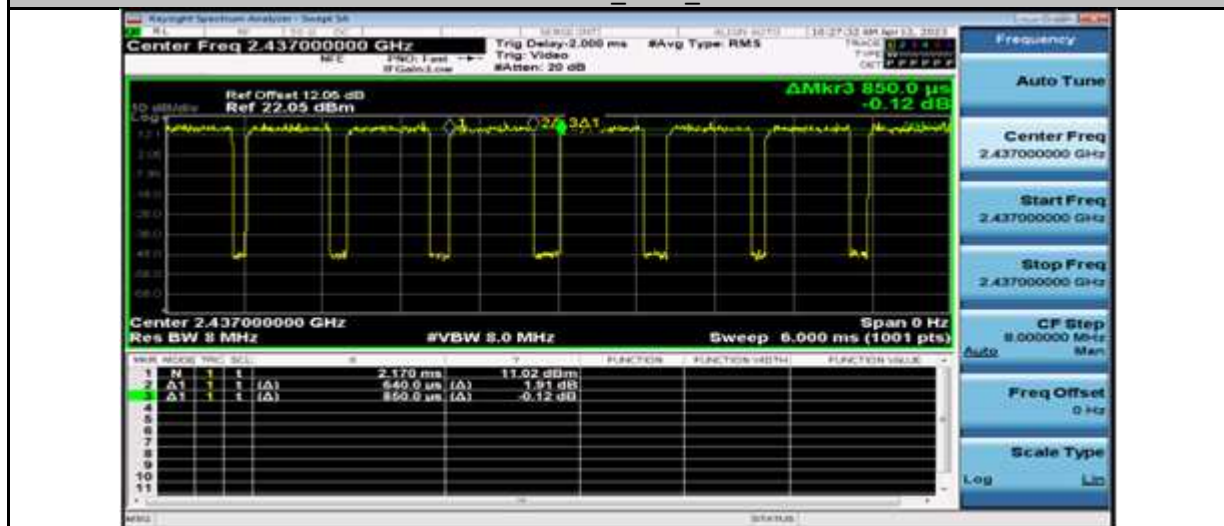
11N20SISO\_Ant1\_2462



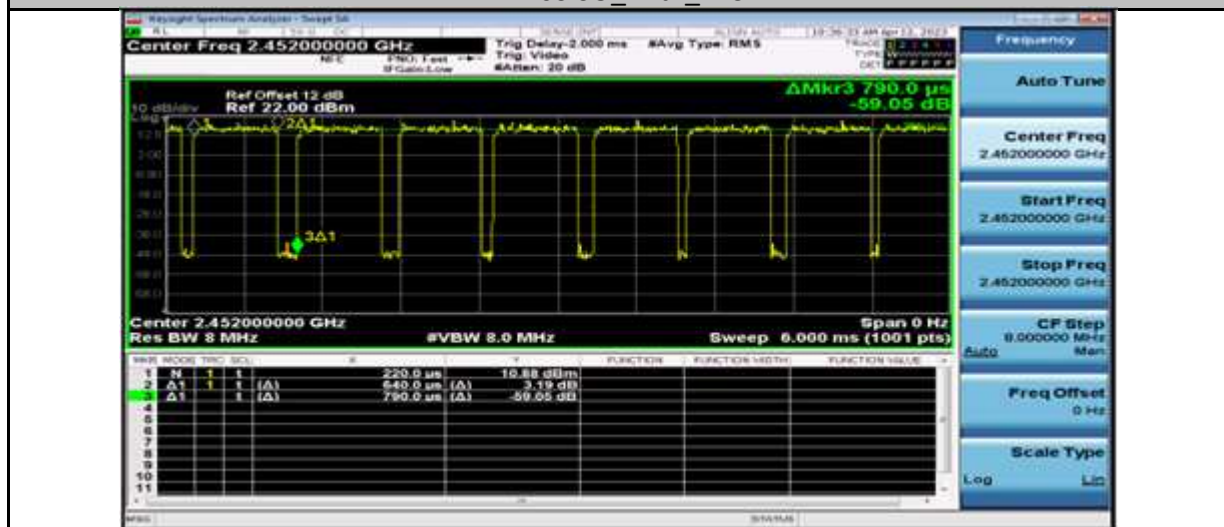
## TEST REPORT



11N40SISO\_Ant1\_2422

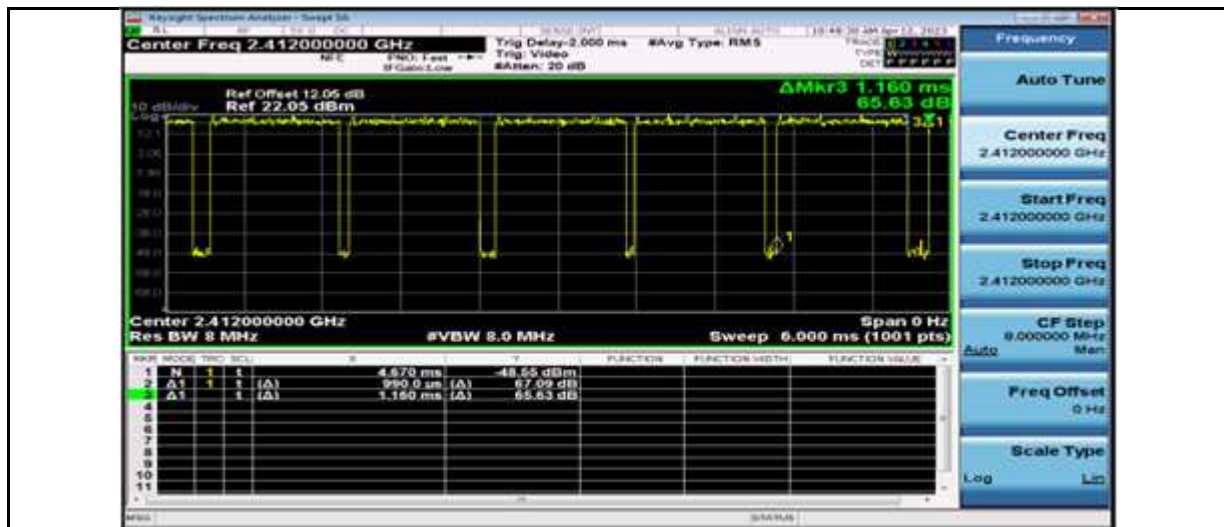


11N40SISO\_Ant1\_2437

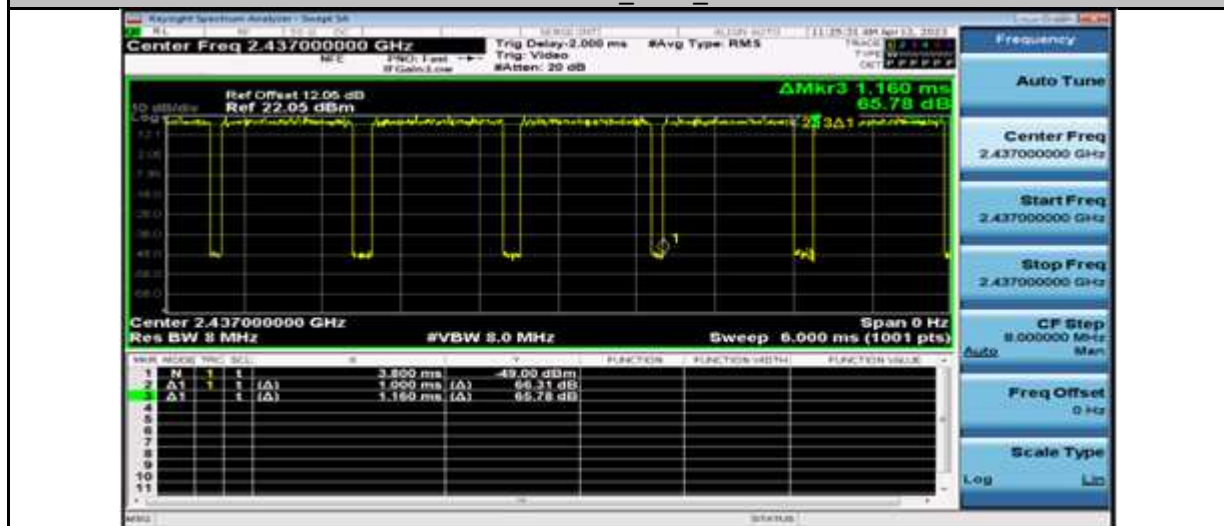


11N40SISO\_Ant1\_2452

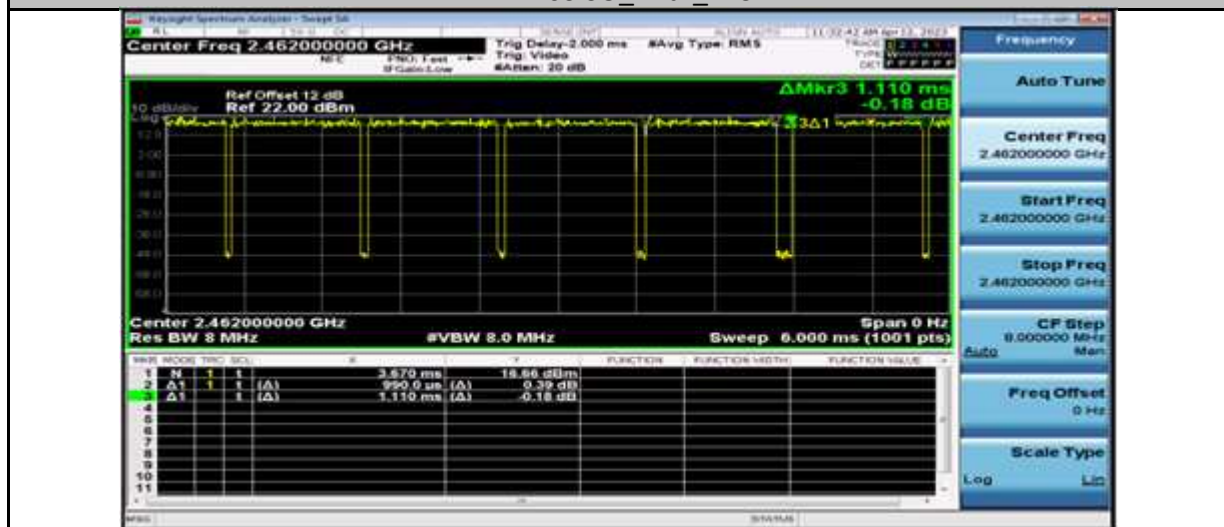
## TEST REPORT



11AX20SISO\_Ant1\_2412

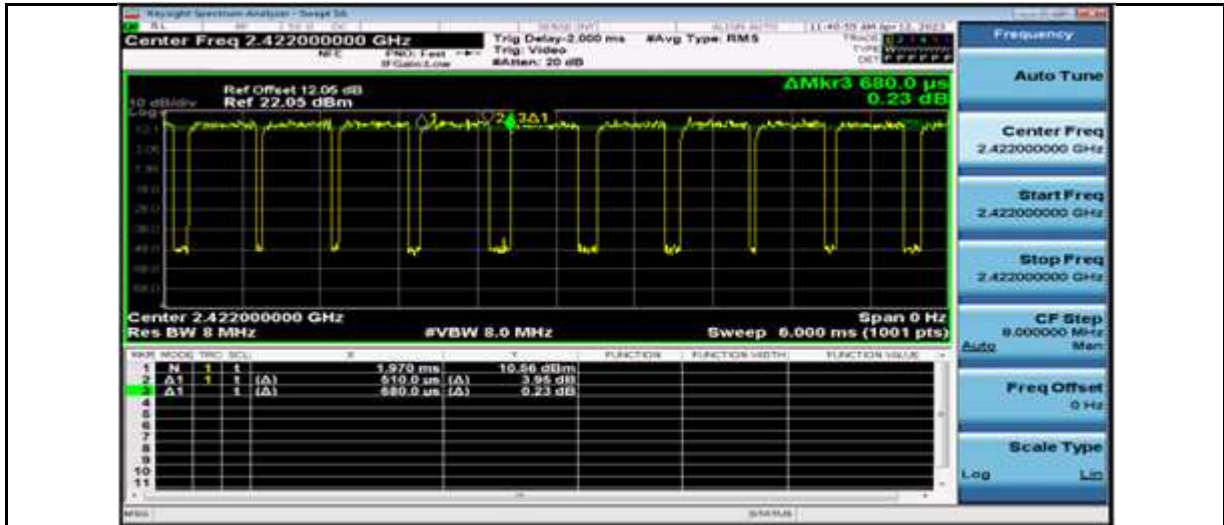


11AX20SISO\_Ant1\_2437

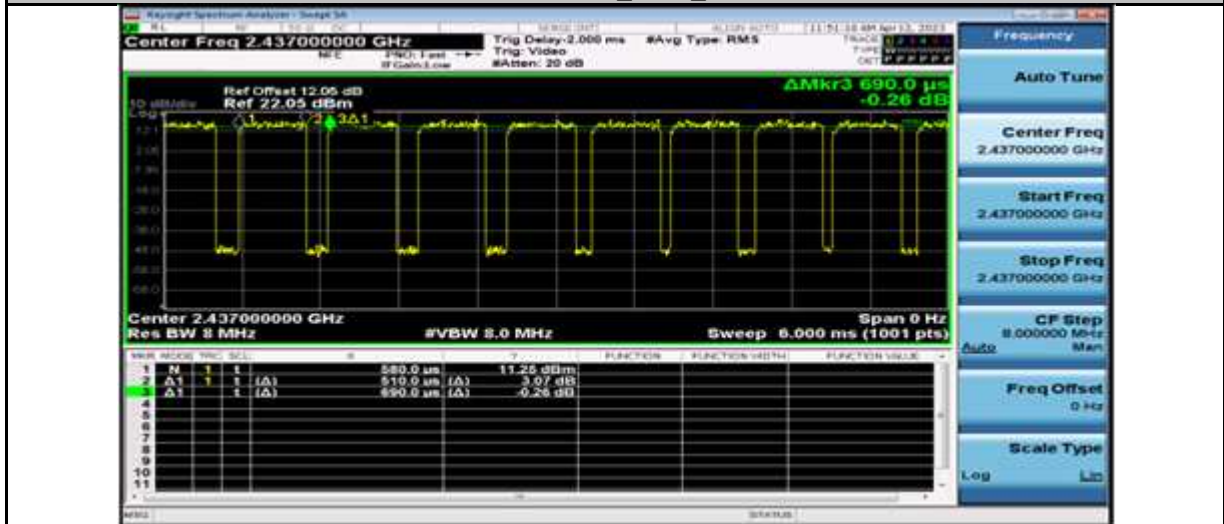


11AX20SISO\_Ant1\_2462

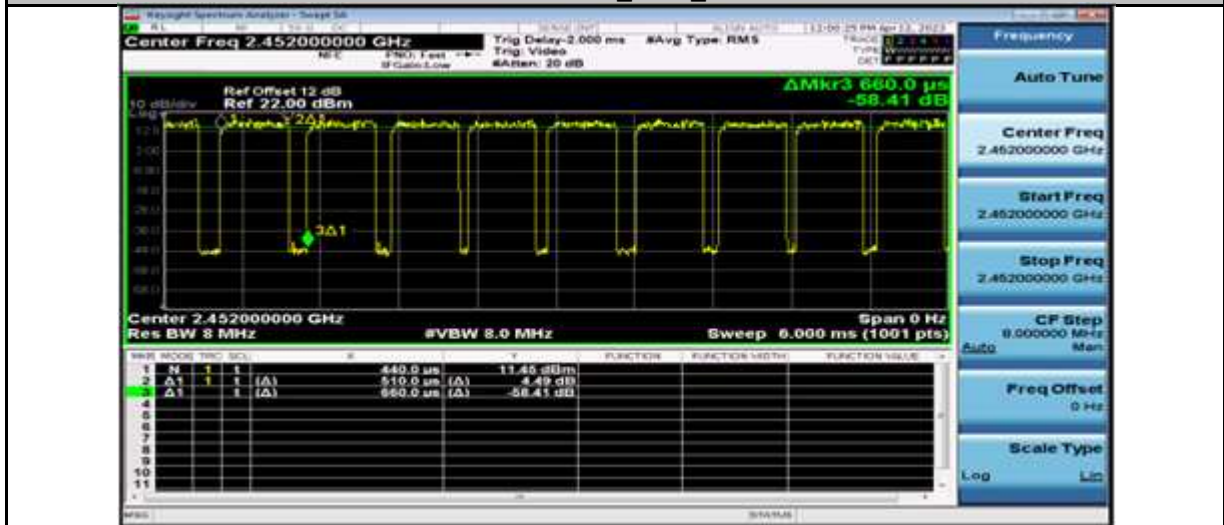
## TEST REPORT



11AX40SISO\_Ant1\_2422



11AX40SISO\_Ant1\_2437



11AX40SISO\_Ant1\_2452

\*\*\*\*\* END \*\*\*\*\*