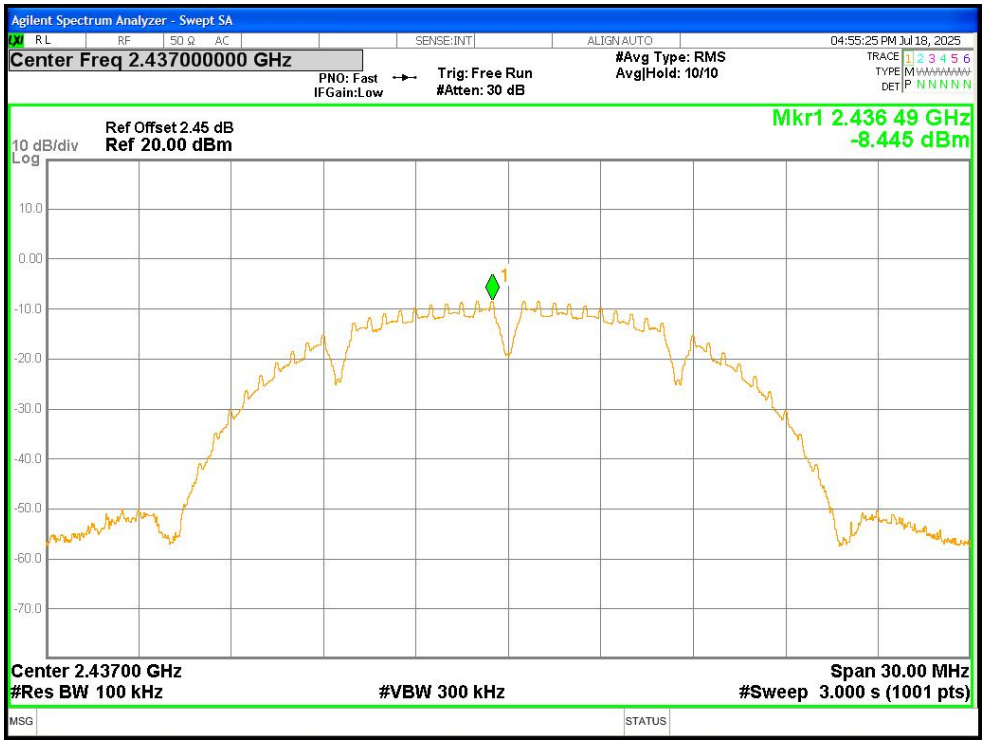
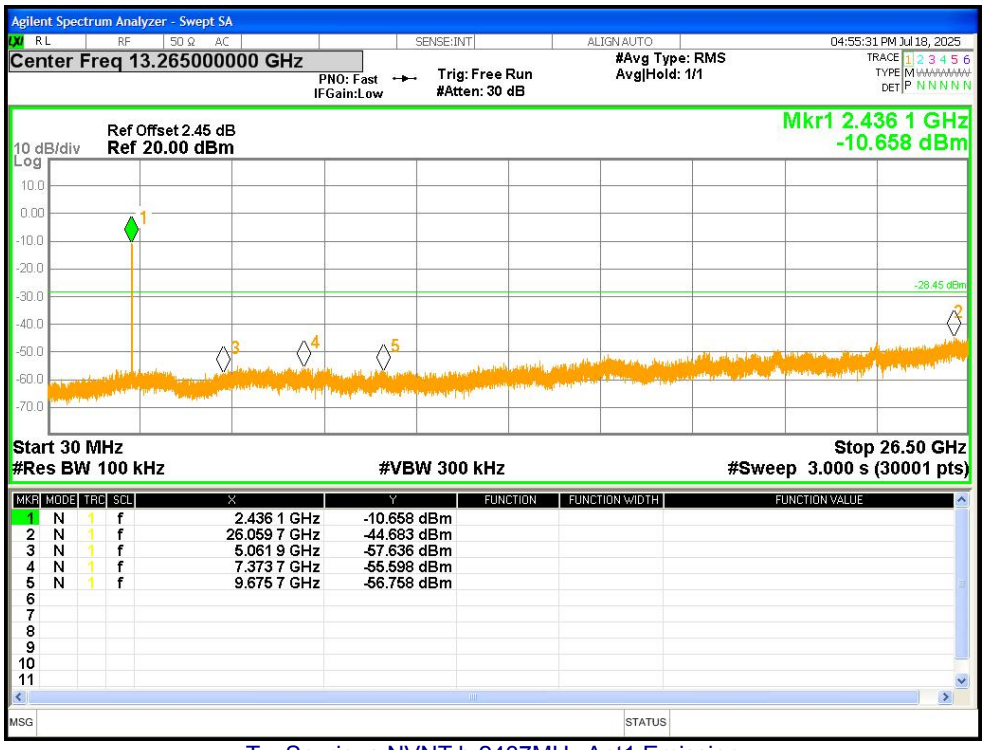
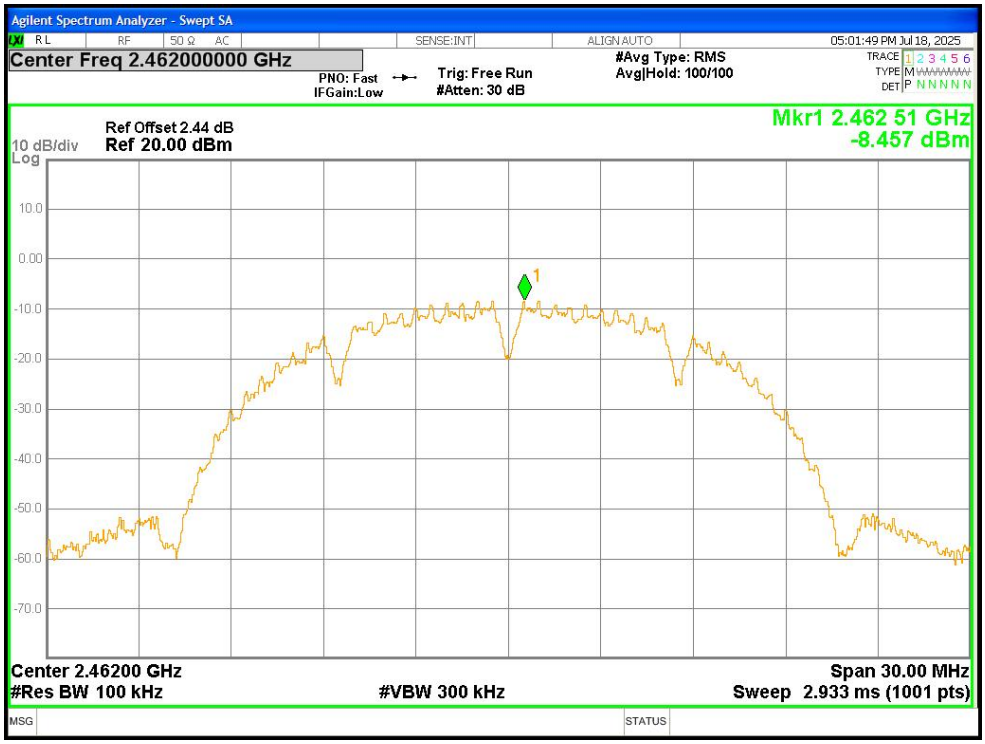


Tx. Spurious NVNT b 2437MHz Ant1 Ref



Tx. Spurious NVNT b 2437MHz Ant1 Emission



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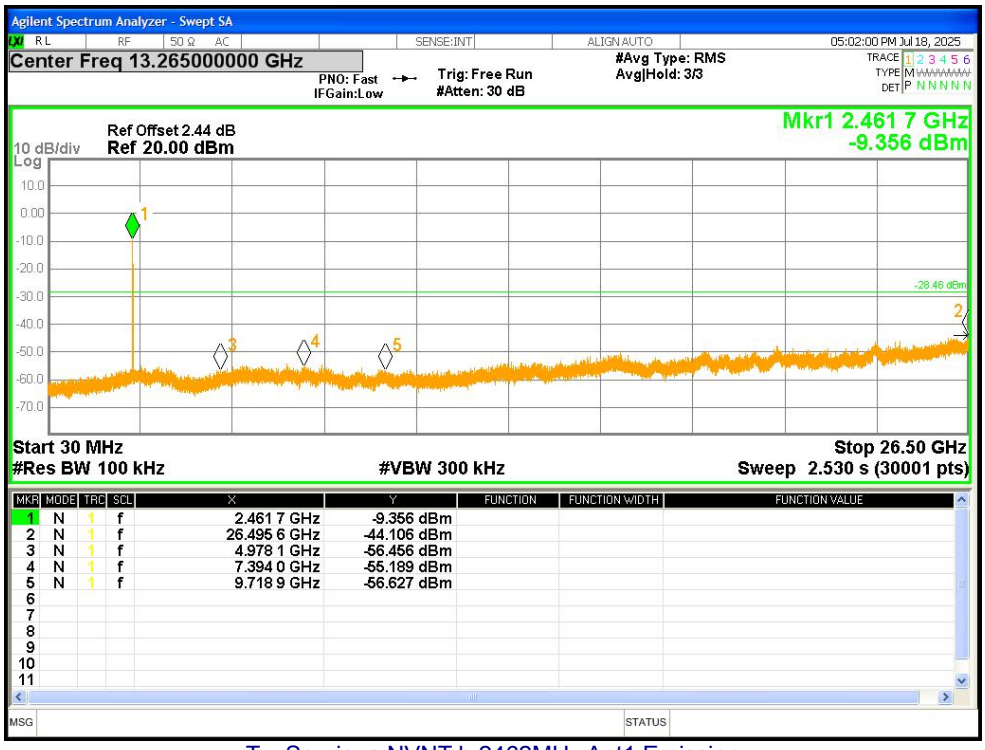
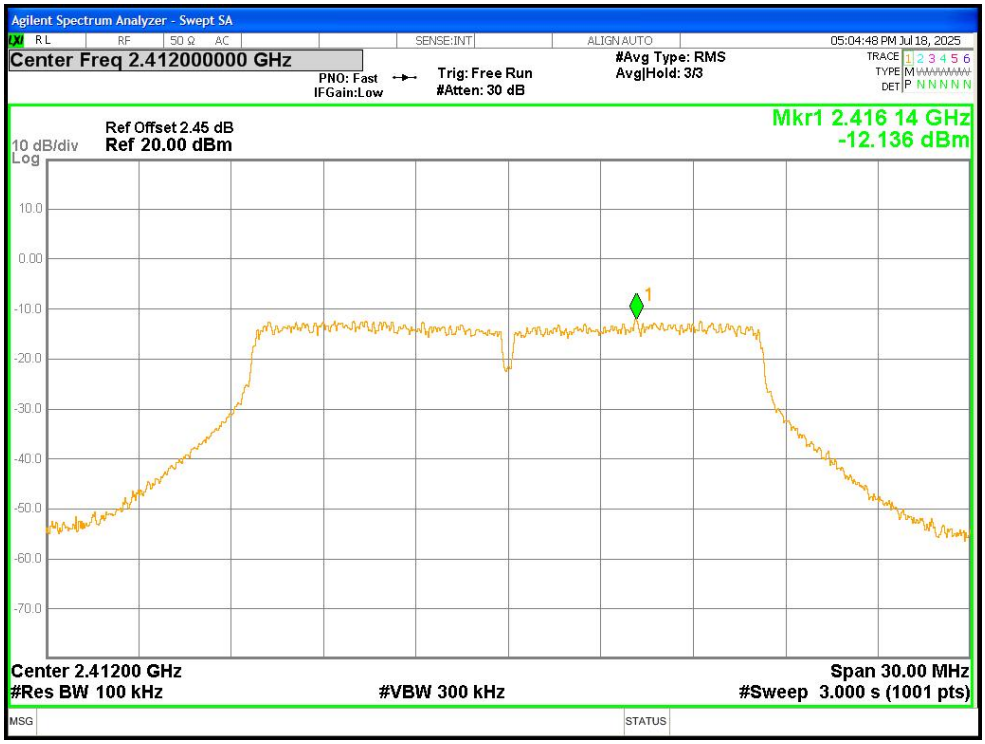
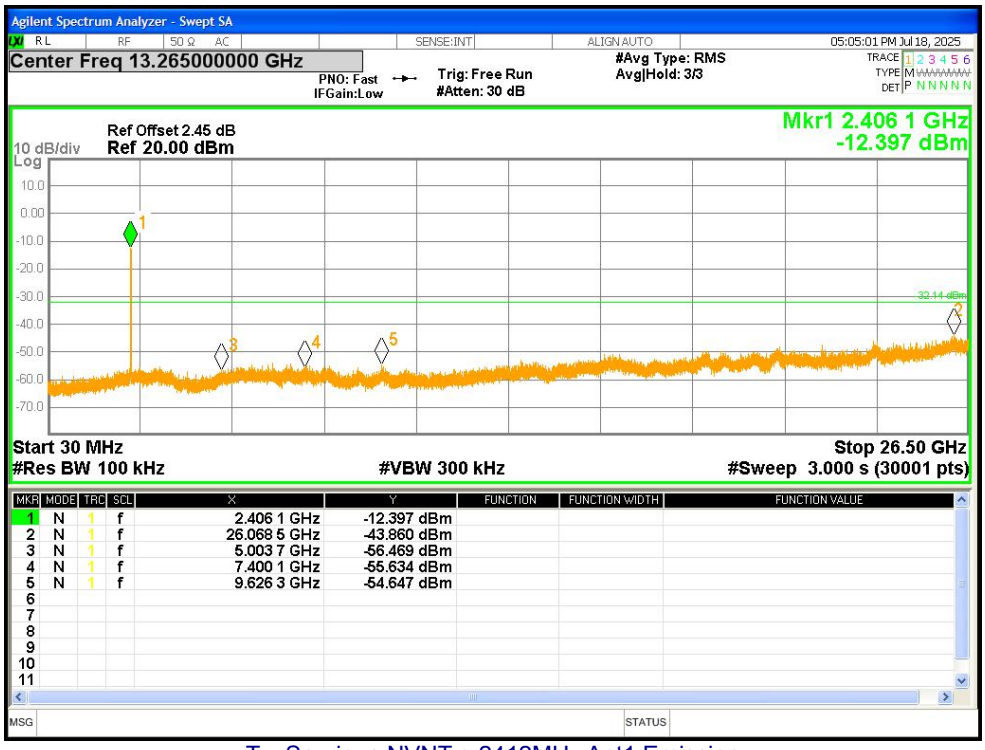


Tx. Spurious NVNT b 2462MHz Ant1 Emission



Tx. Spurious NVNT g 2412MHz Ant1 Ref



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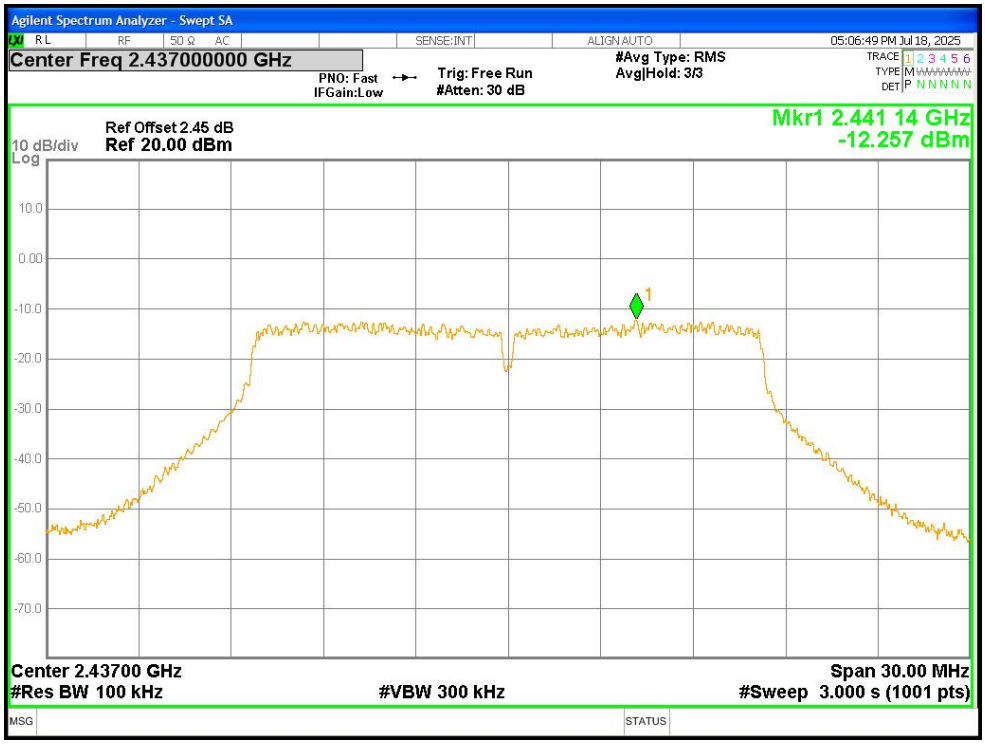

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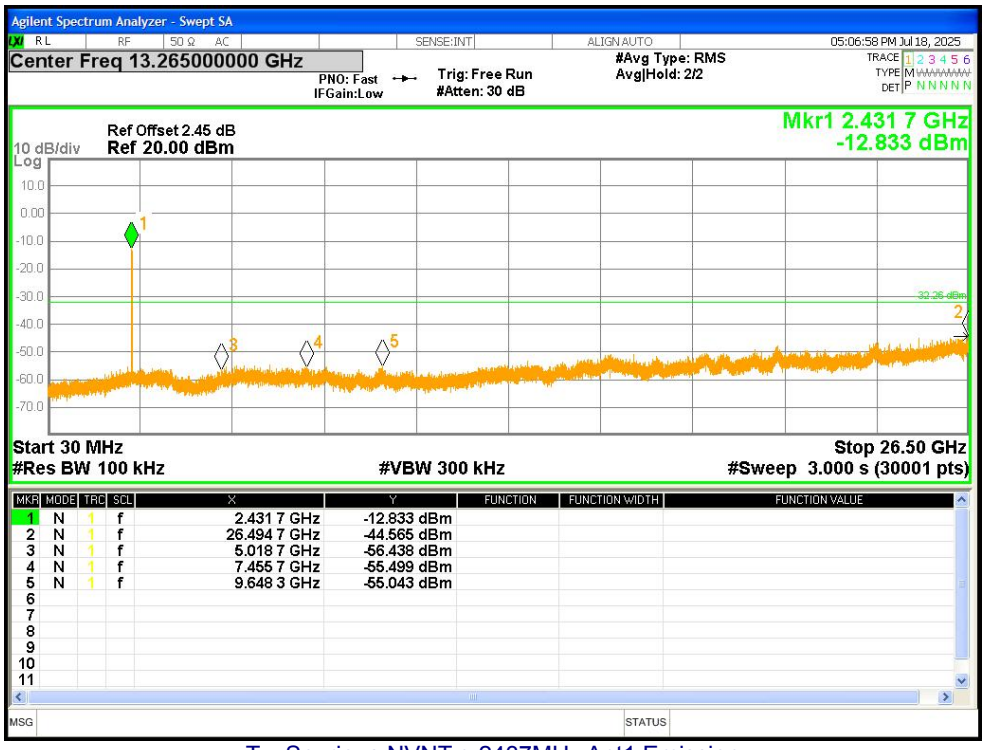

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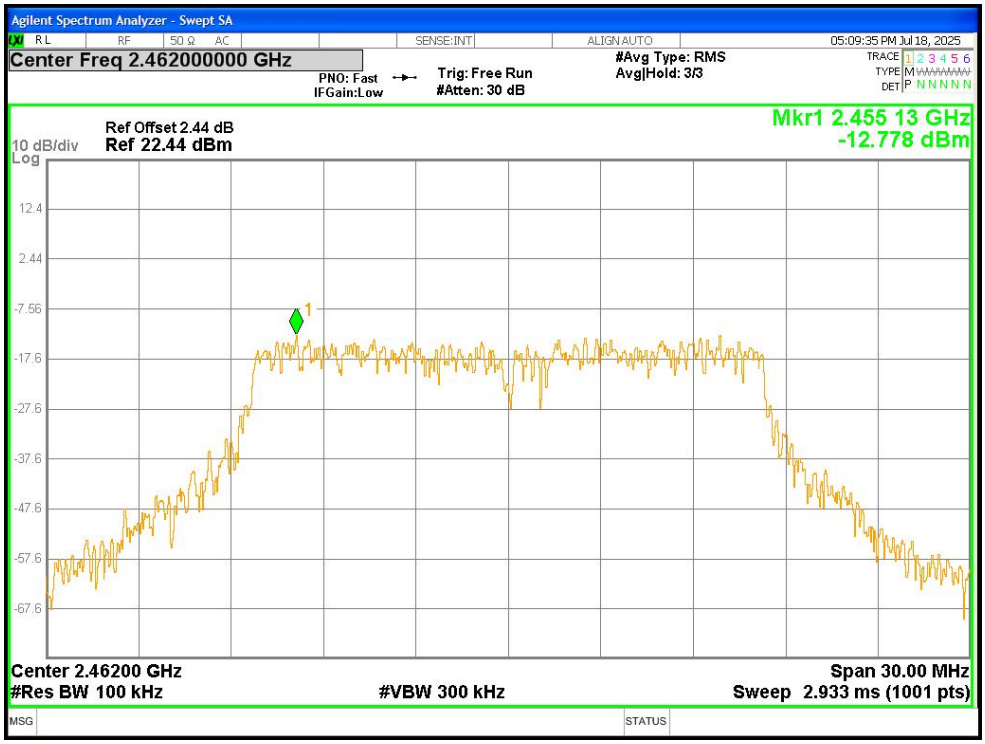

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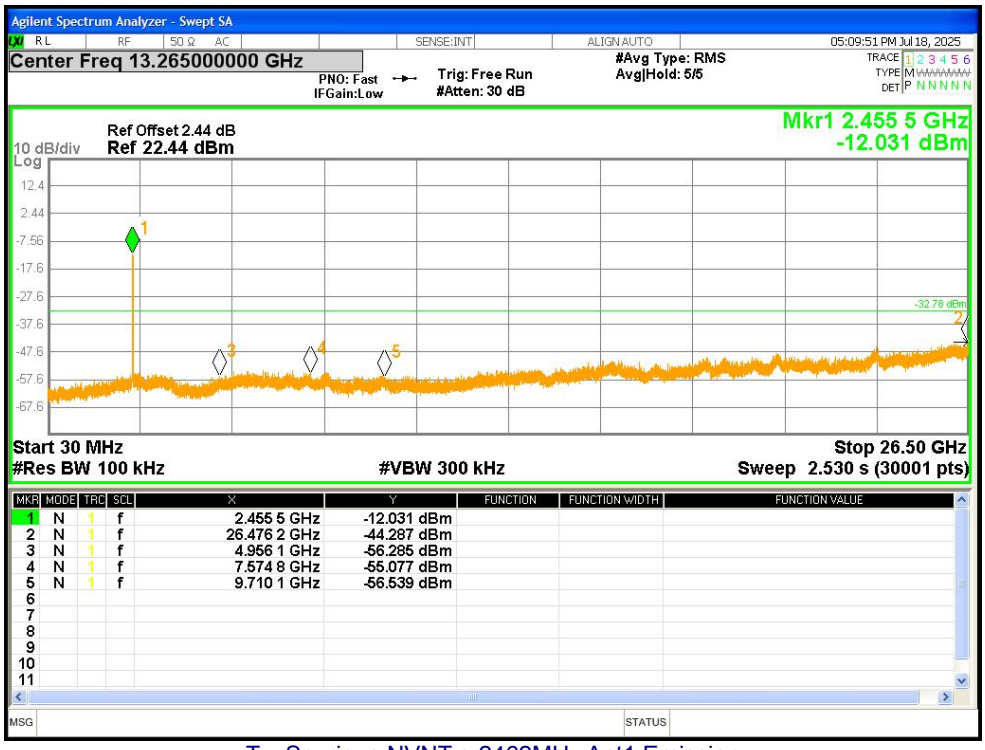
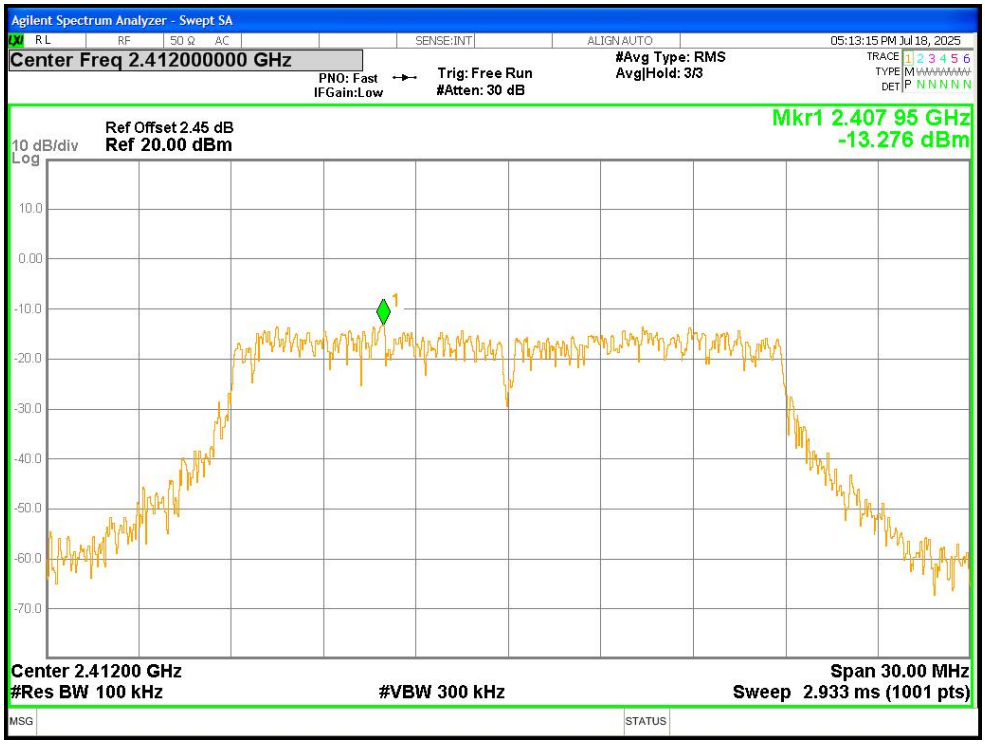
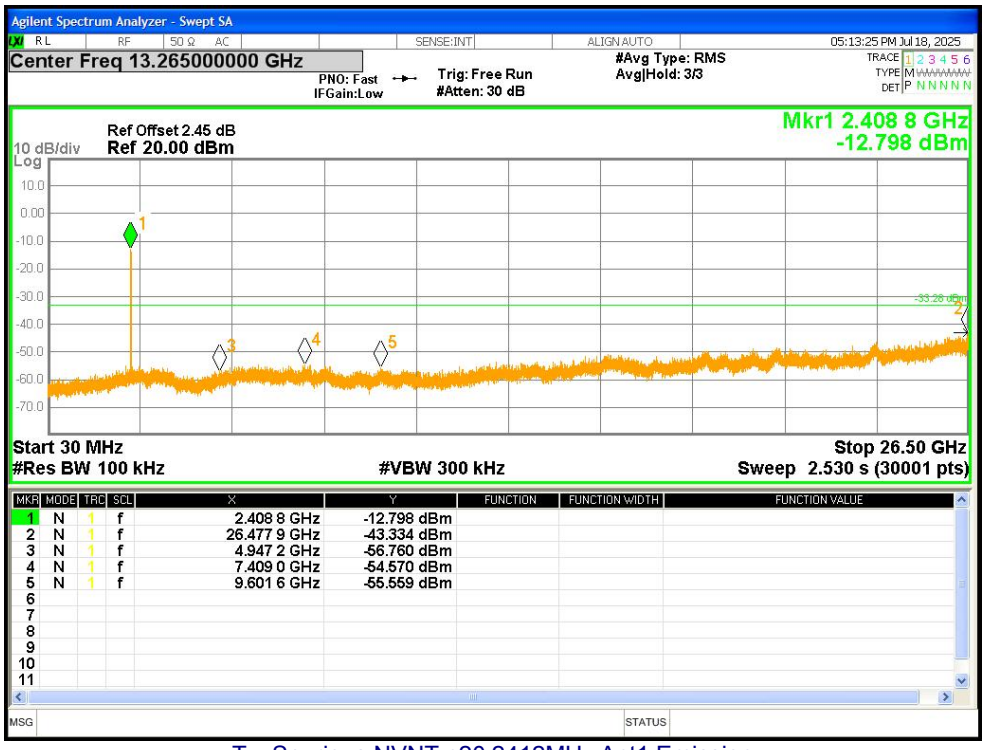


Tx. Spurious NVNT g 2462MHz Ant1 Emission



Tx. Spurious NVNT n20 2412MHz Ant1 Ref



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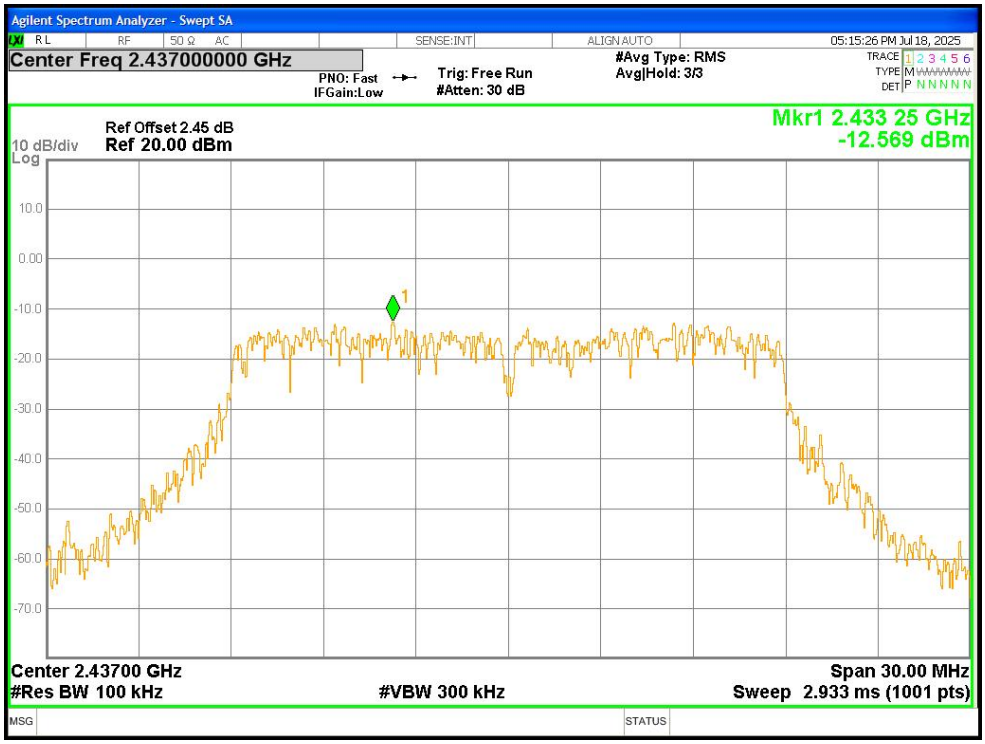

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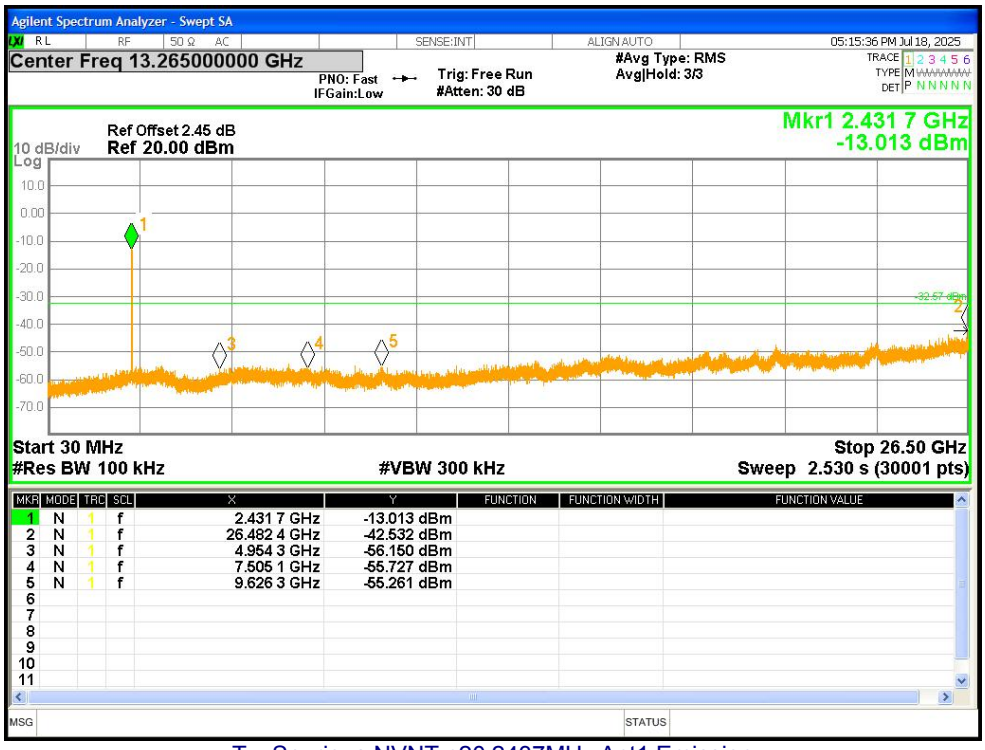
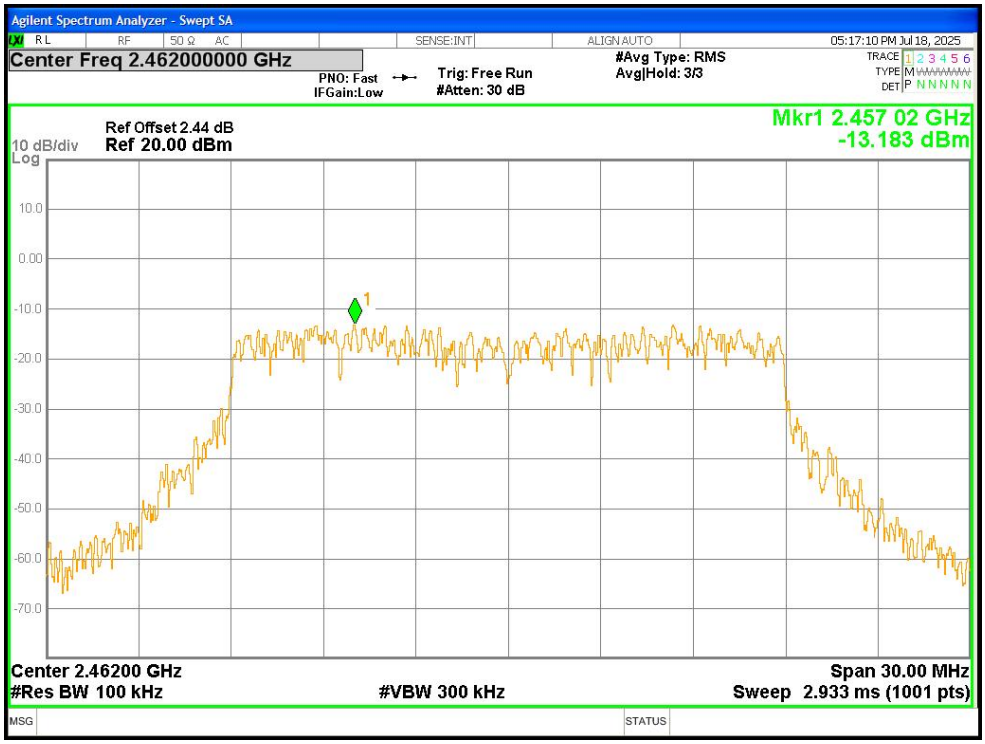
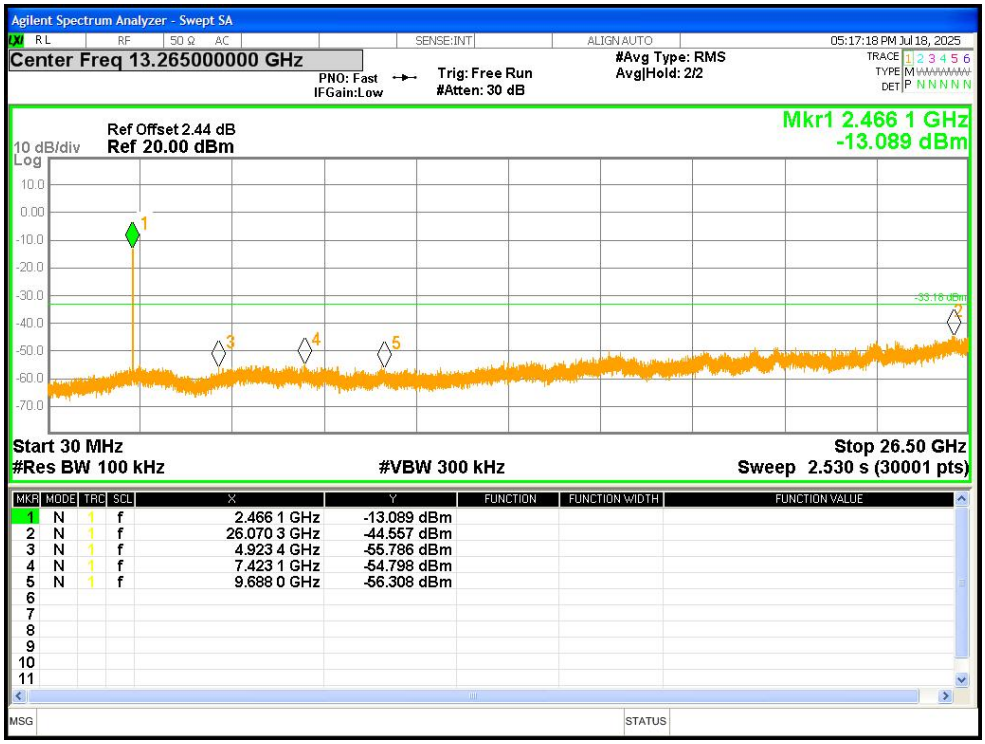


Tx. Spurious NVNT n20 2437MHz Ant1 Emission

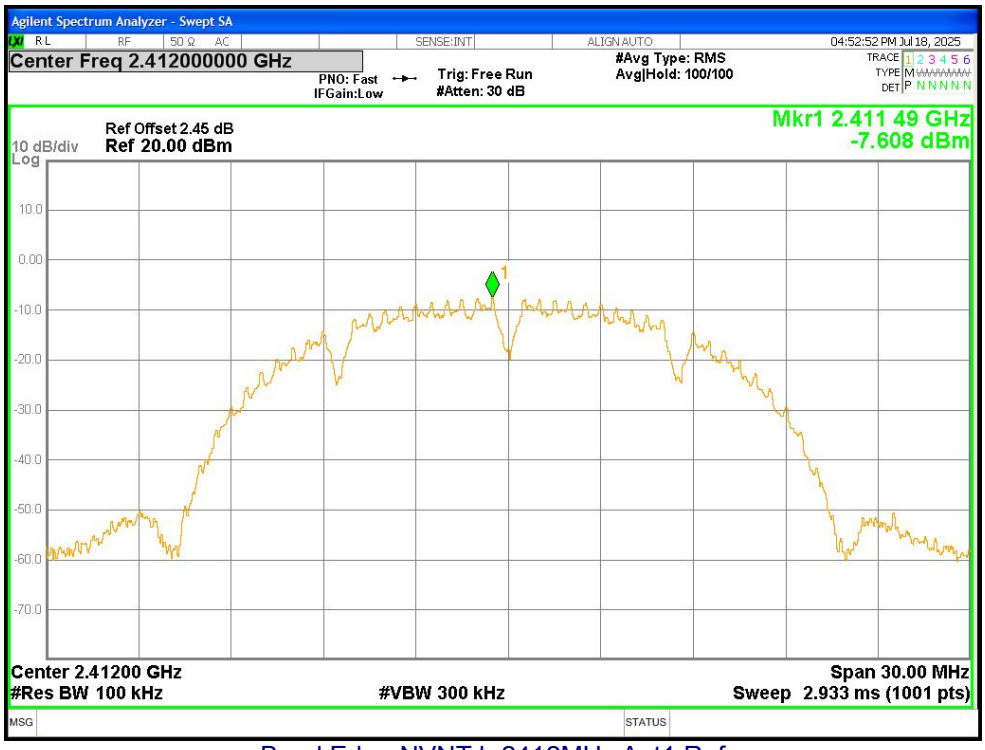


Tx. Spurious NVNT n20 2462MHz Ant1 Ref

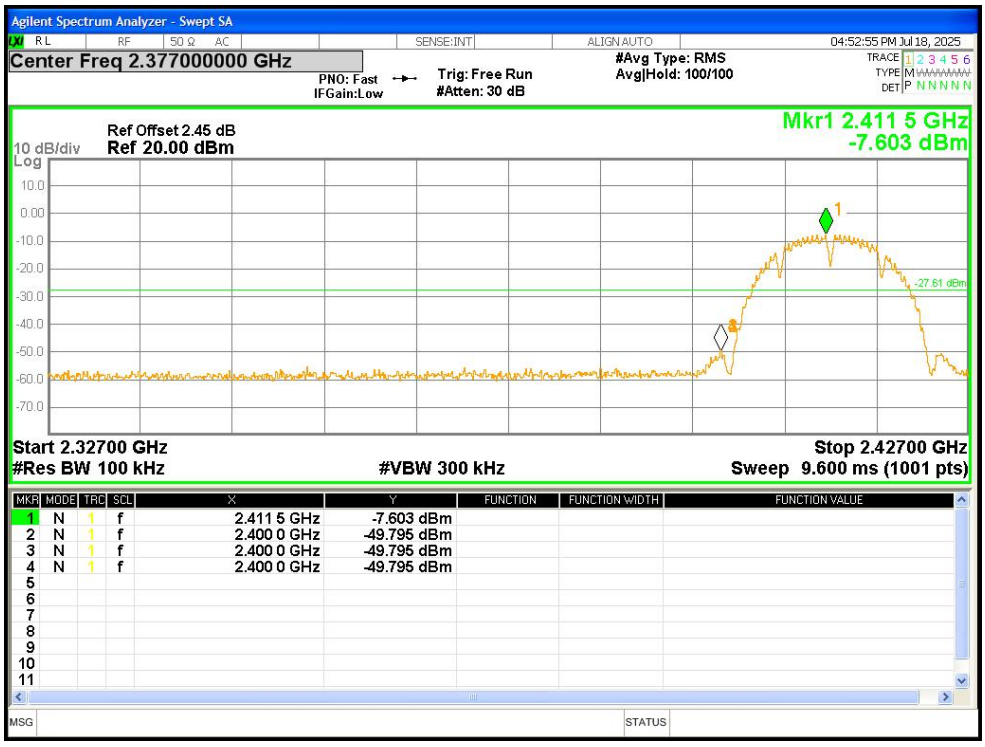


Tx. Spurious NVNT n20 2462MHz Ant1 Emission

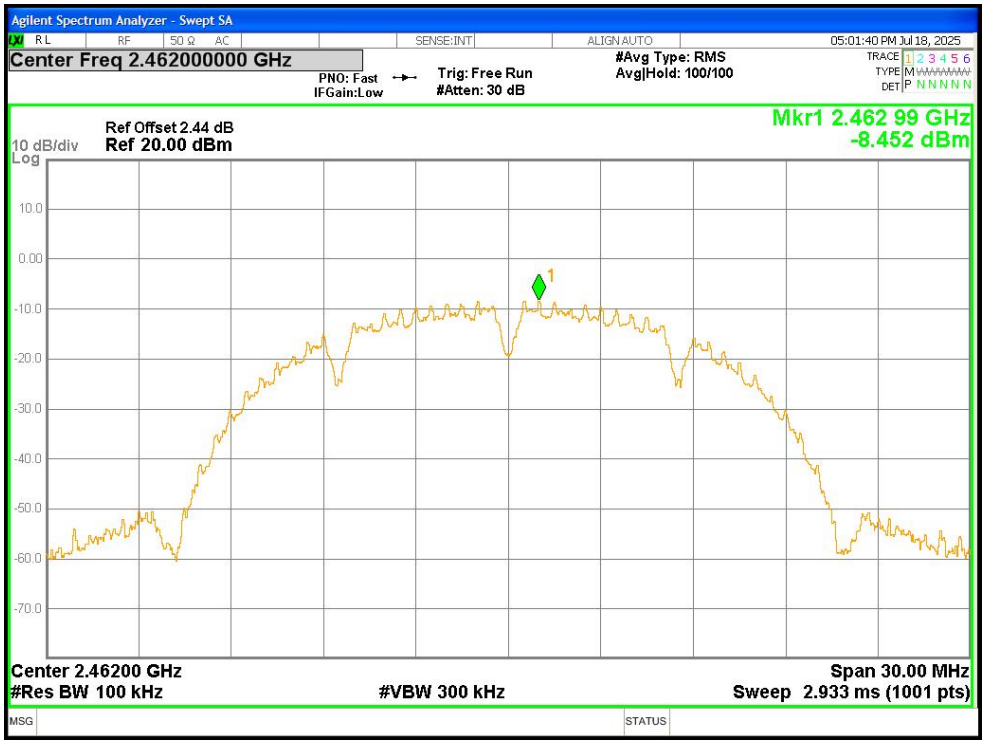
Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
b	2412	Ant1	-42.18	-20	Pass
b	2462	Ant1	-48.57	-20	Pass
g	2412	Ant1	-37.93	-20	Pass
g	2462	Ant1	-44.32	-20	Pass
n20	2412	Ant1	-34.44	-20	Pass
n20	2462	Ant1	-46.15	-20	Pass



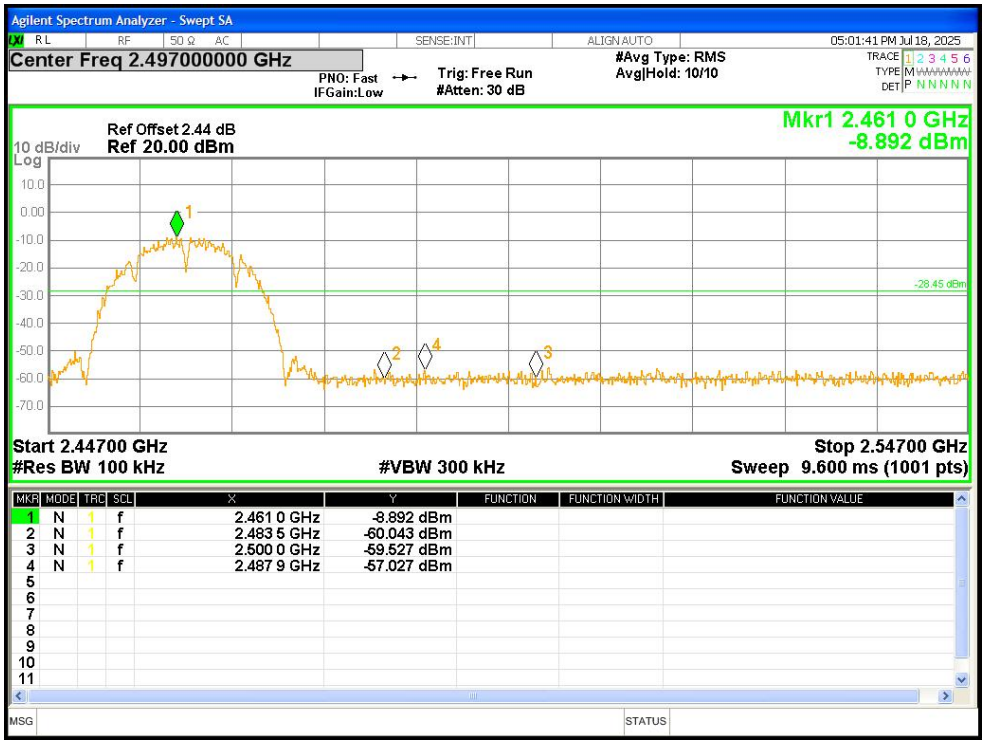
Band Edge NVNT b 2412MHz Ant1 Ref



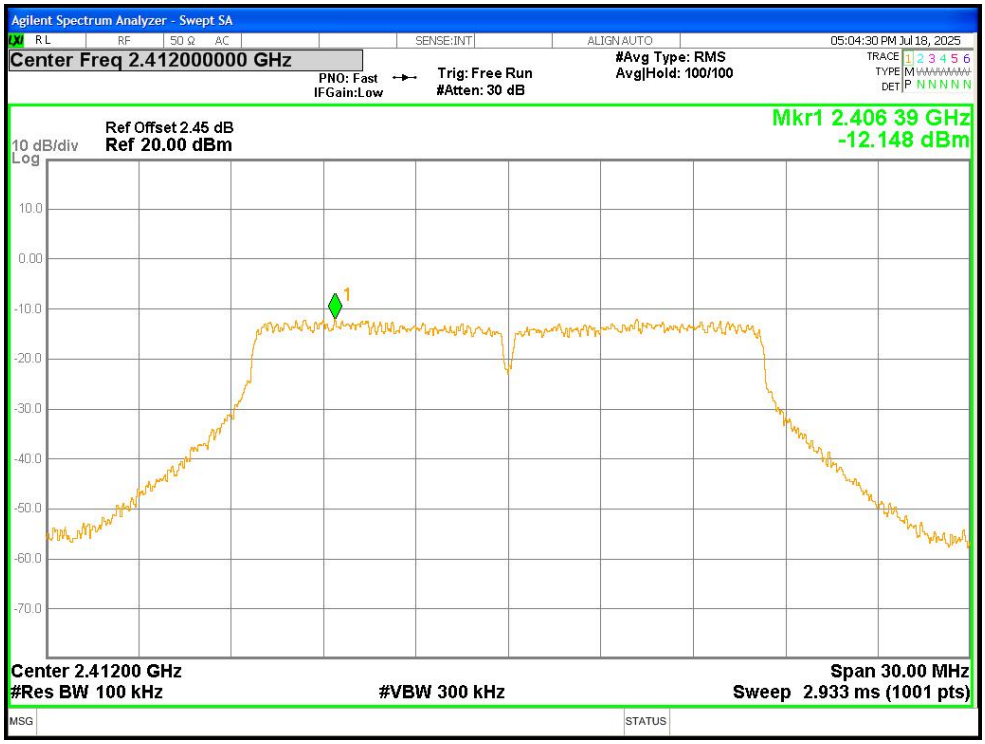
Band Edge NVNT b 2412MHz Ant1 Emission



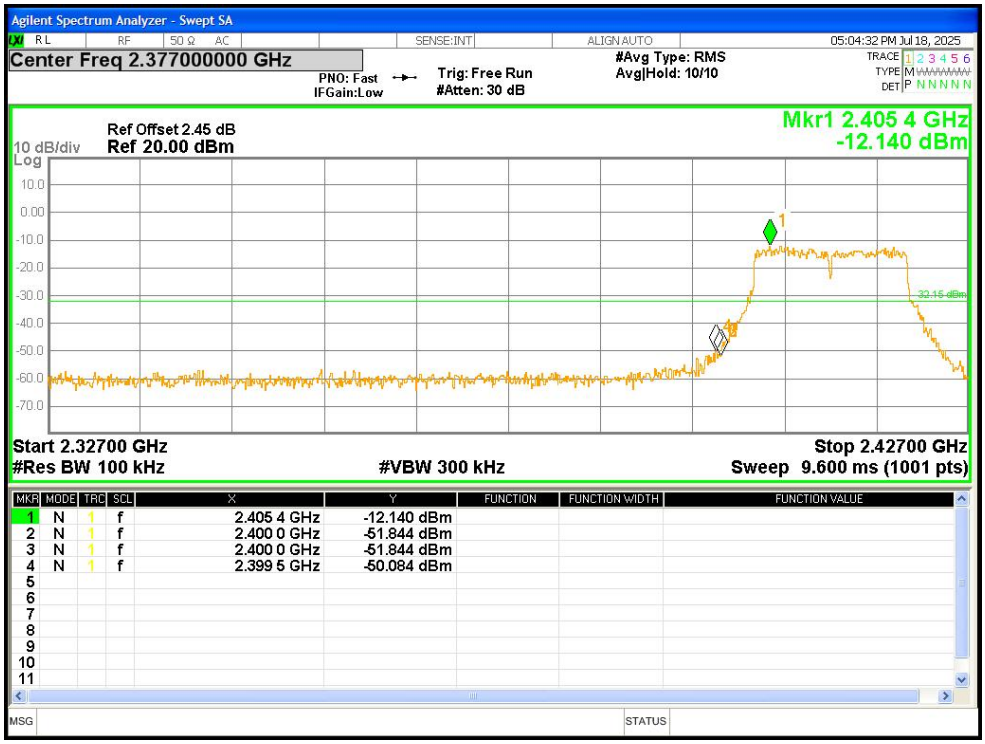
Band Edge NVNT b 2462MHz Ant1 Ref



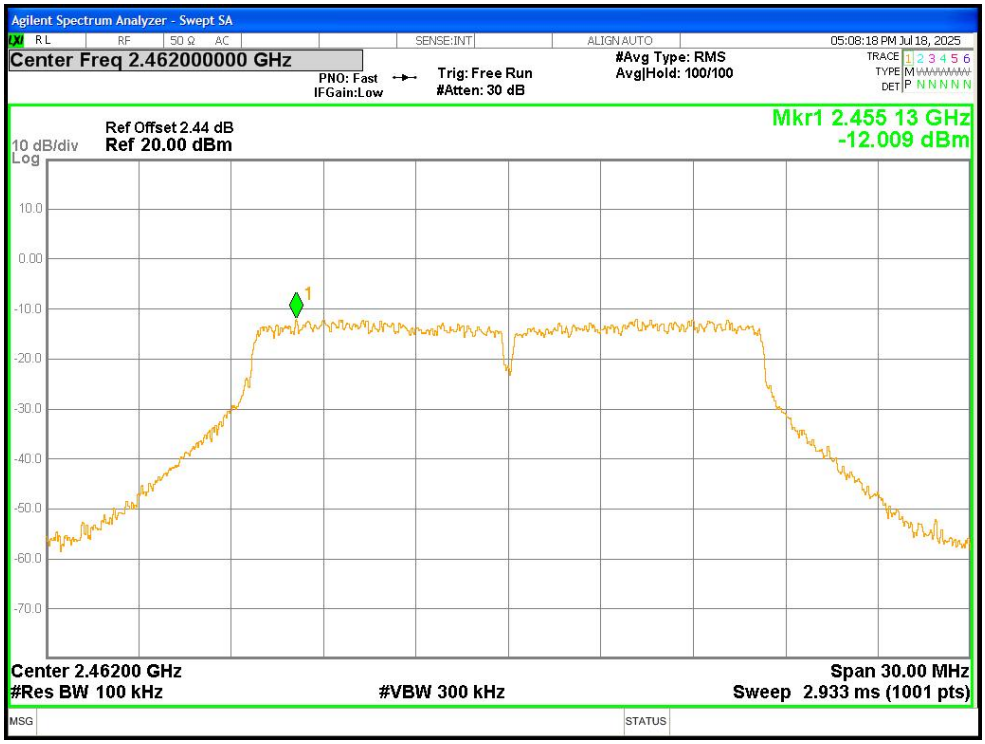
Band Edge NVNT b 2462MHz Ant1 Emission



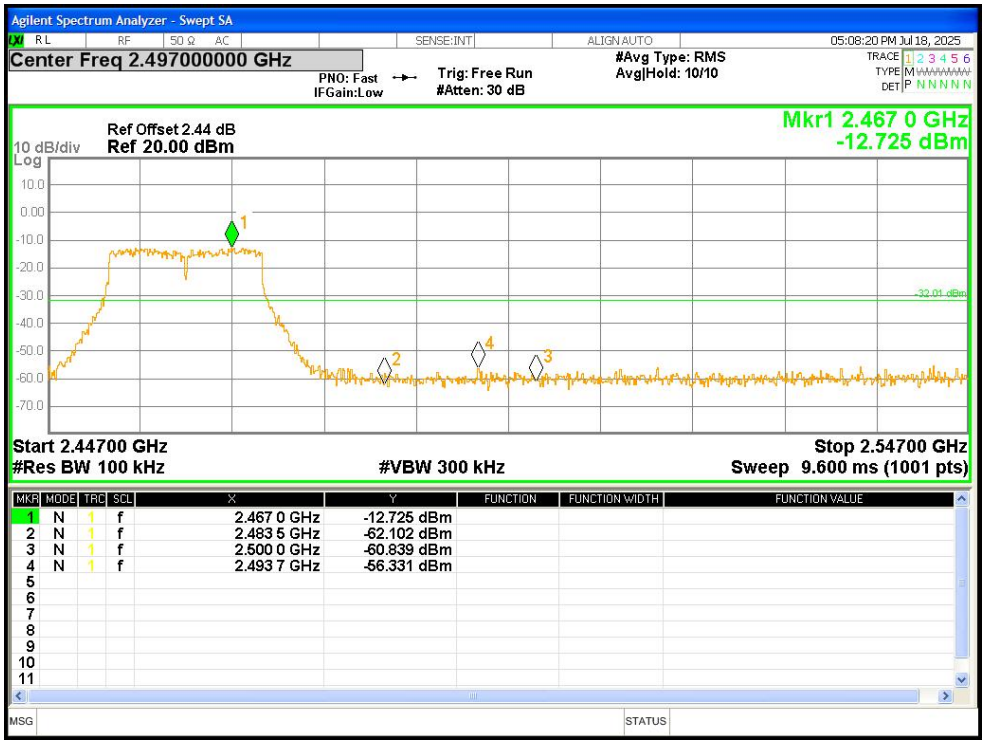
Band Edge NVNT g 2412MHz Ant1 Ref



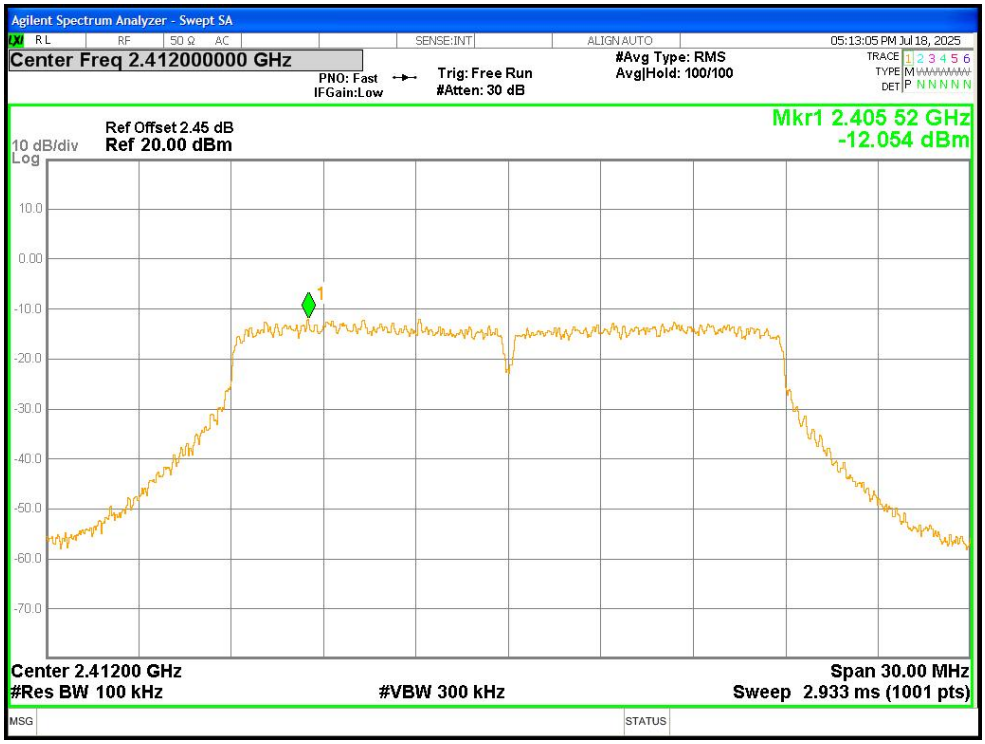
Band Edge NVNT g 2412MHz Ant1 Emission



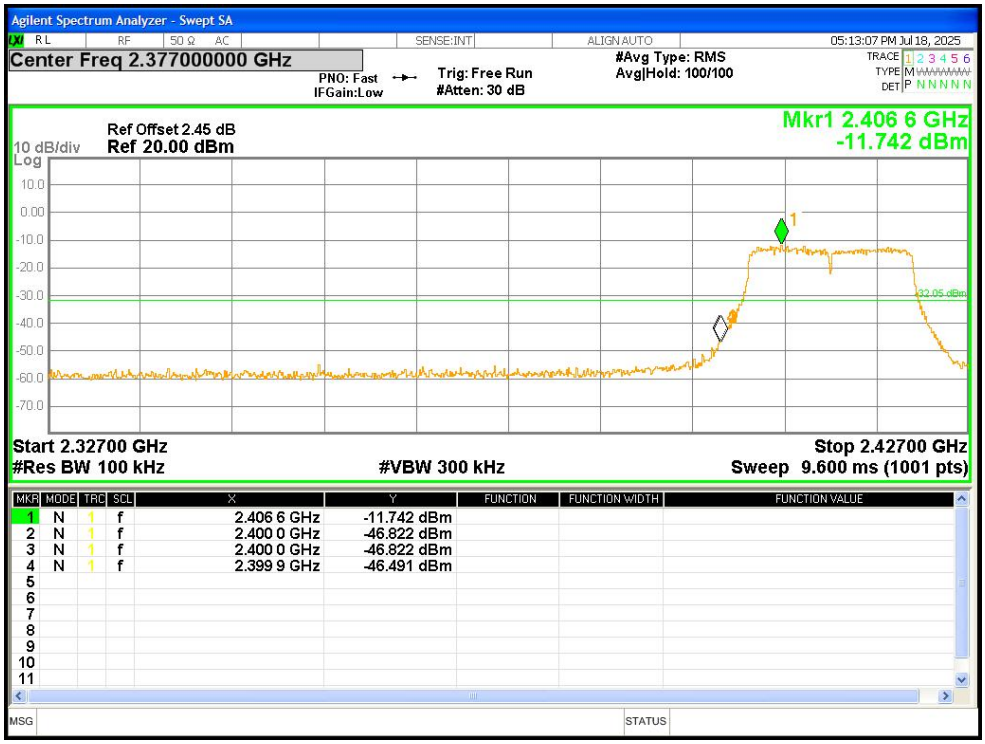
Band Edge NVNT g 2462MHz Ant1 Ref



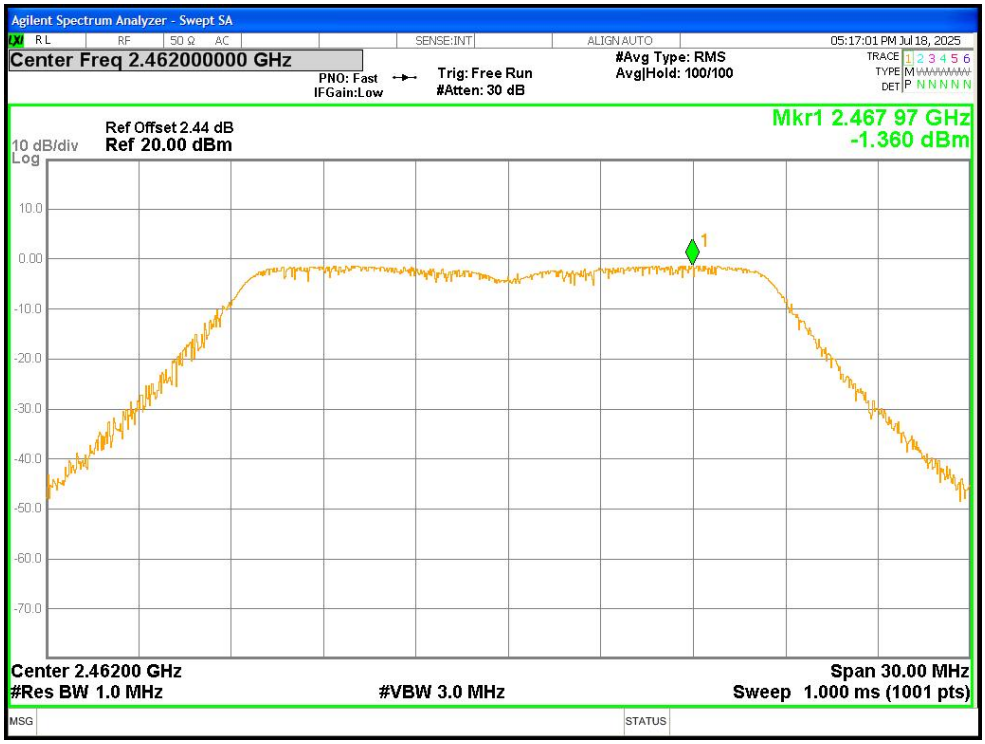
Band Edge NVNT g 2462MHz Ant1 Emission



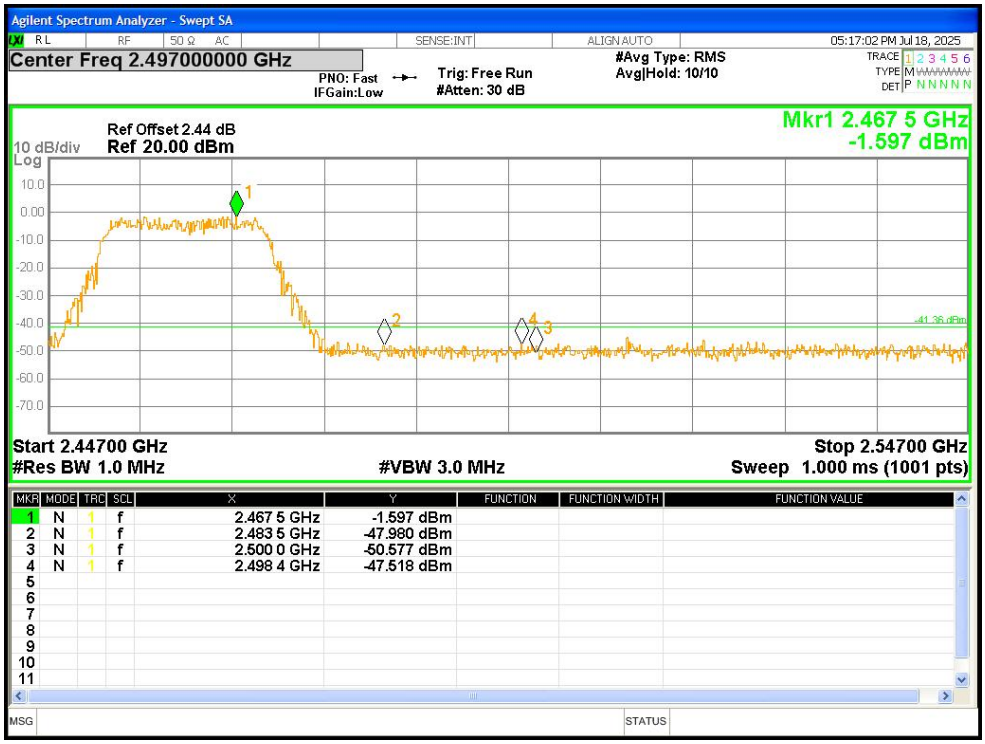
Band Edge NVNT n20 2412MHz Ant1 Ref



Band Edge NVNT n20 2412MHz Ant1 Emission



Band Edge NVNT n20 2462MHz Ant1 Ref



MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.467 5 GHz	-1.597 dBm			
2	N	1	f	2.483 5 GHz	-47.980 dBm			
3	N	1	f	2.500 0 GHz	-50.577 dBm			
4	N	1	f	2.498 4 GHz	-47.518 dBm			
5								
6								
7								
8								
9								
10								
11								

Band Edge NVNT n20 2462MHz Ant1 Emission

10. 99% OCCUPY BANDWIDTH

Test Requirement:	RSS-Gen 6.7
Test Method:	ANSI C63.10:2013 Section 6.9

10.1 CONFORMANCE LIMIT

No limit requirement.

10.2 TEST PROCEDURE

The EUT was operating in Bluetooth transmitter mode and controlled its channel. Printed out the test result from the spectrum by hard copy function.

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.

Set to the maximum power setting and enable the EUT transmit continuously

Set RBW = 1-5% of 99% occupied bandwidth.

Set the video bandwidth (VBW) ⩾3*RBW.

Set Span= approximately 2 to 3 times OBW

Set Detector = Peak.

Set Trace mode = max hold.

Set Sweep = auto couple.

If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

Measure and record the results in the test report.

10.3 DEVIATION FROM STANDARD

No deviation.

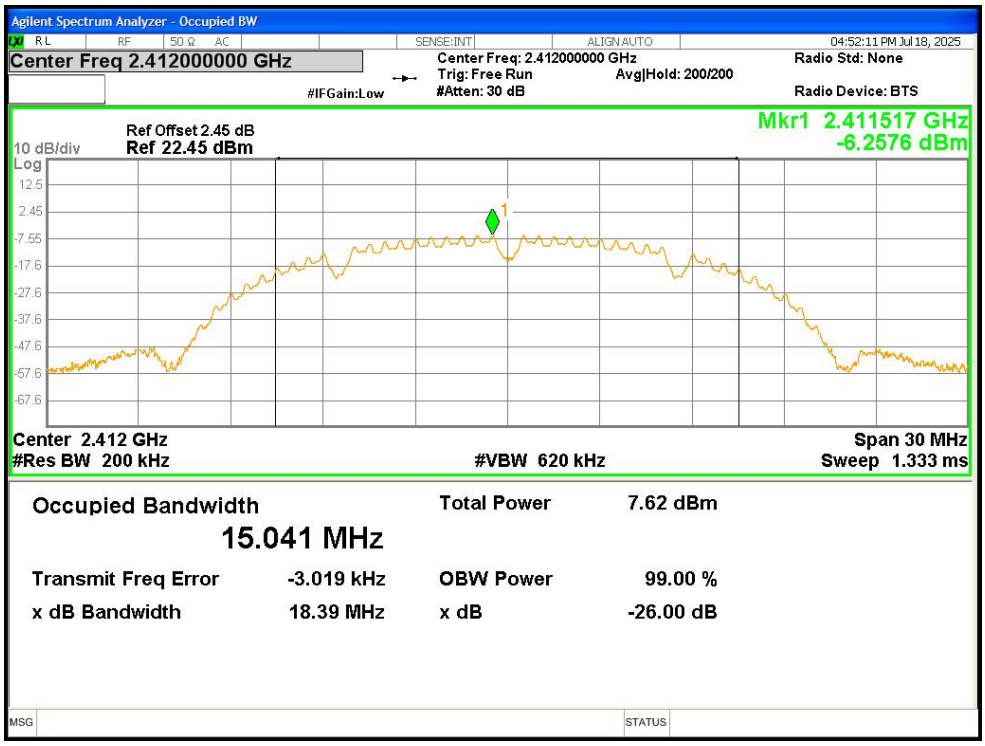
10.4 TEST SETUP

10.5 EUT OPERATION CONDITIONS

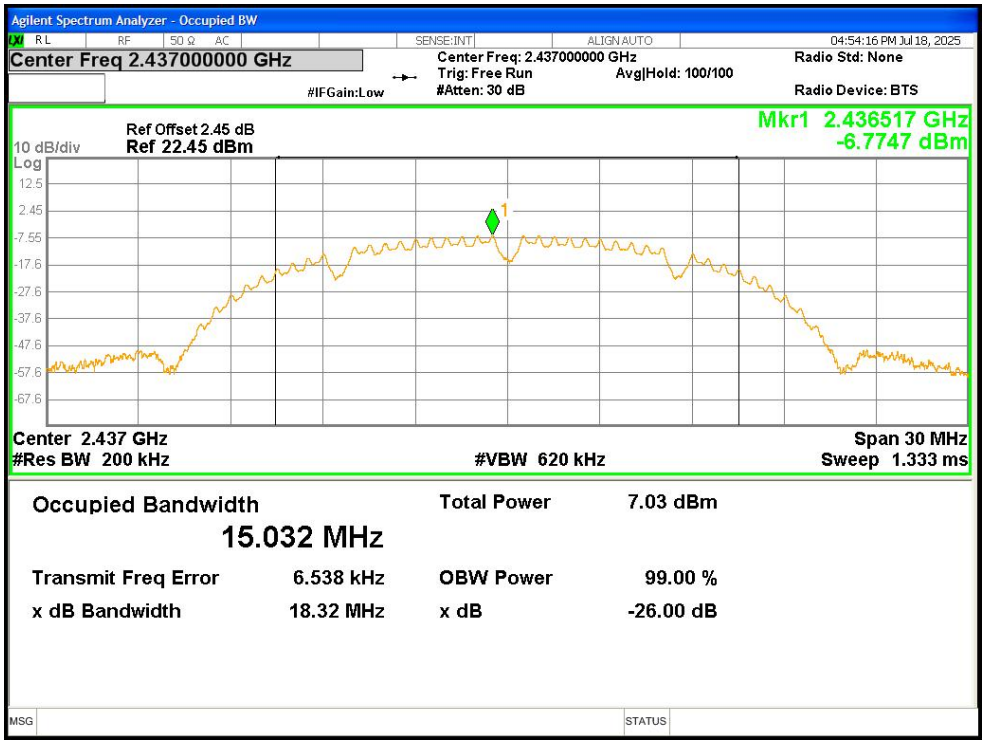
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

10.6 TEST RESULTS

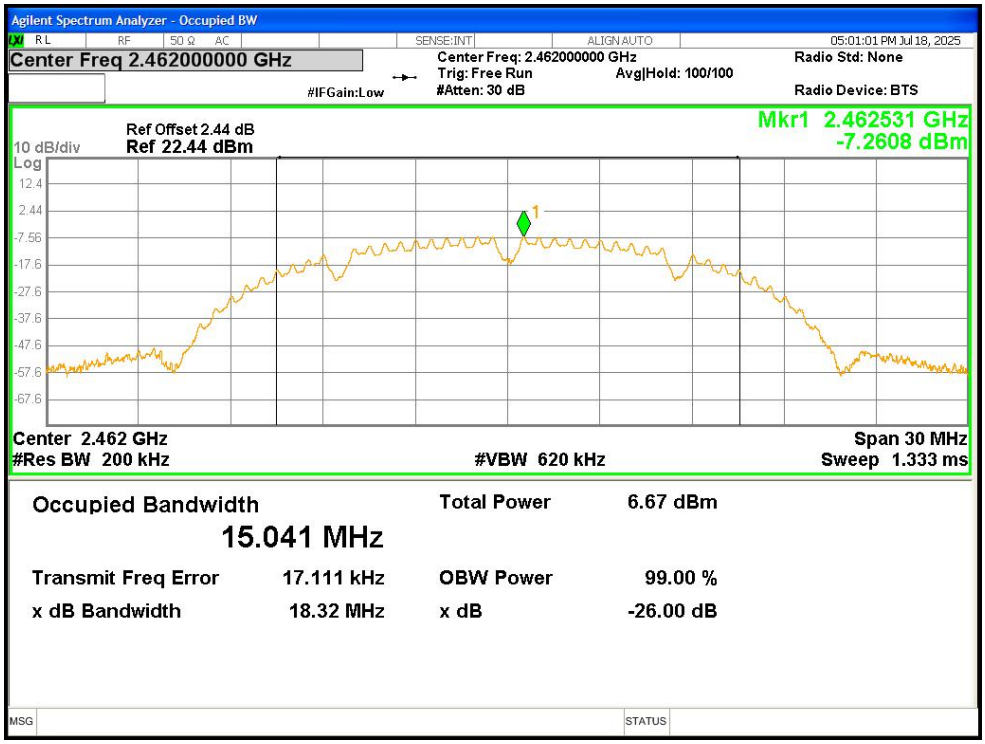
Mode	Channel Frequency (MHz)	99% Occupied Bandwidth (MHz)	Verdict
b	2412	15.041	PASS
b	2437	15.032	PASS
b	2462	15.041	PASS
g	2412	16.519	PASS
g	2437	16.568	PASS
g	2462	16.573	PASS
n20	2412	17.715	PASS
n20	2437	17.704	PASS
n20	2462	17.725	PASS



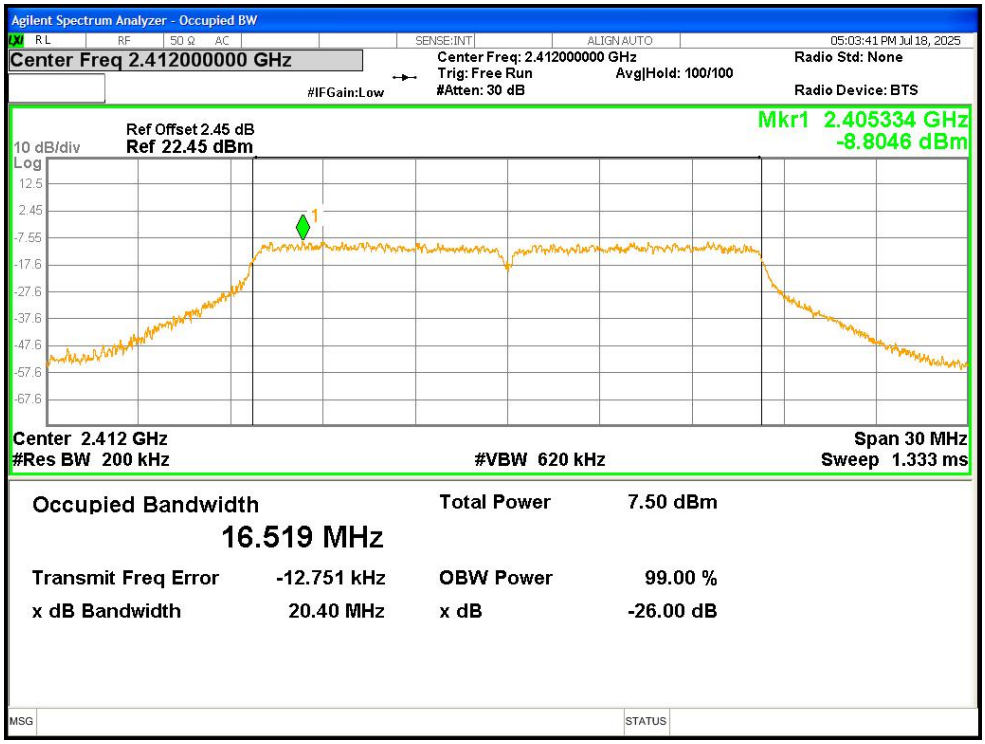
OBW NVNT b 2412MHz Ant1



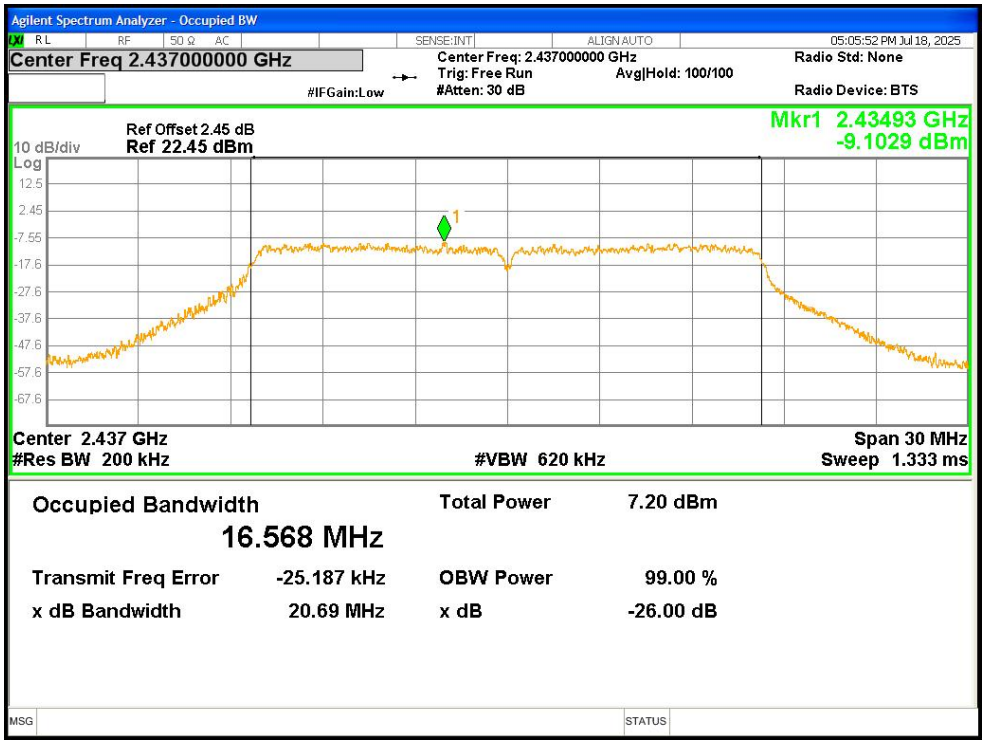
OBW NVNT b 2437MHz Ant1



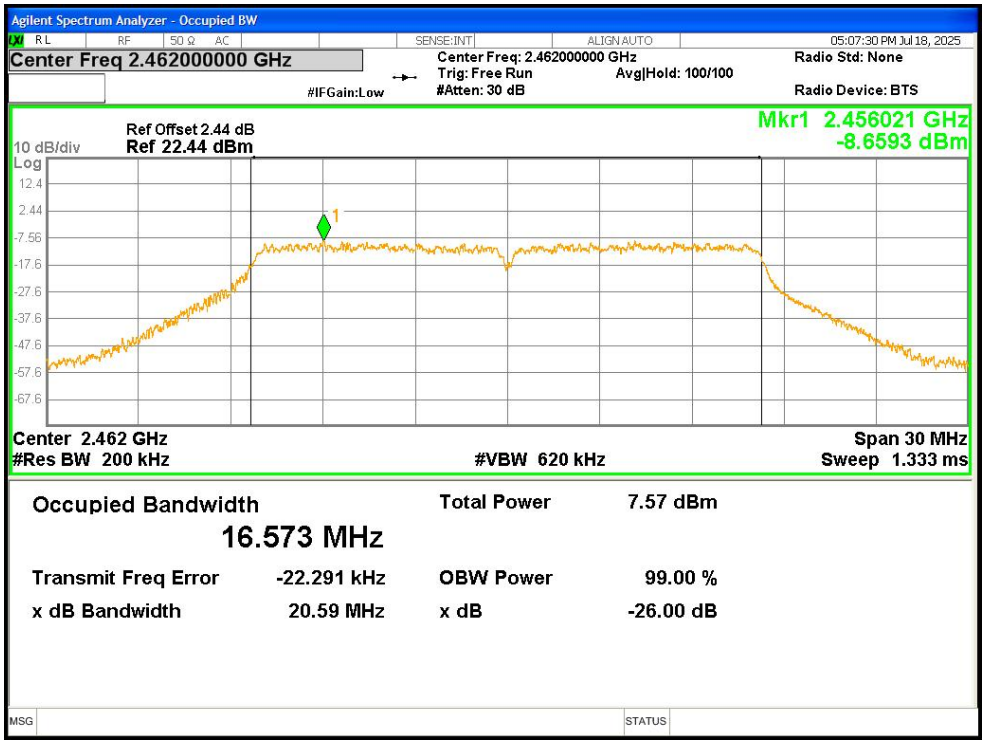
OBW NVNT b 2462MHz Ant1



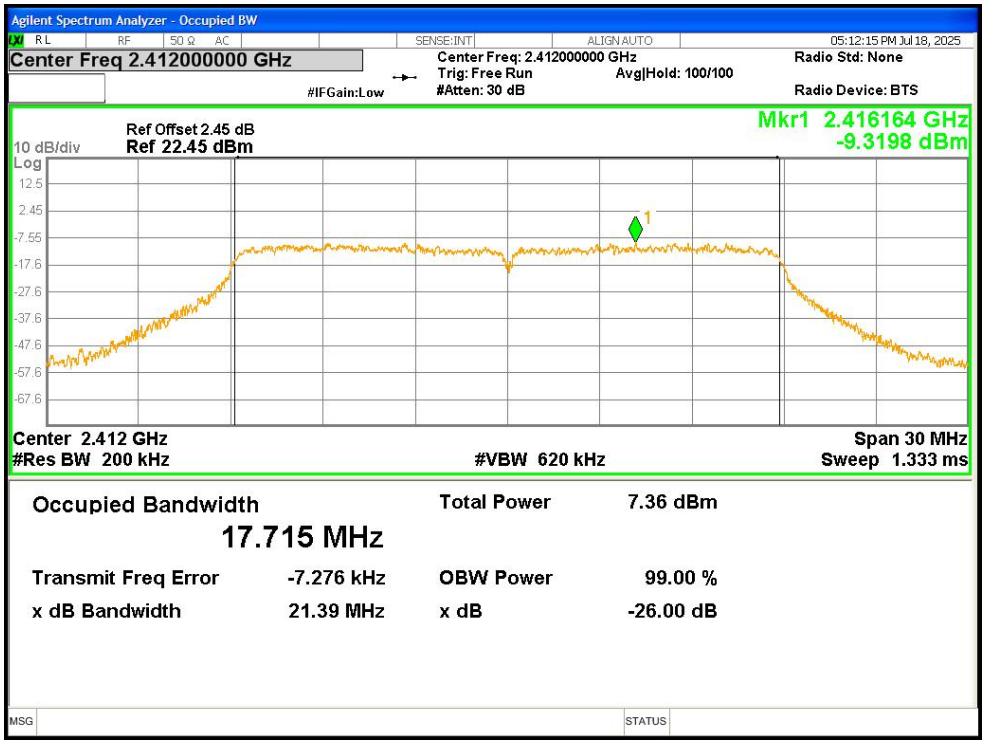
OBW NVNT g 2412MHz Ant1



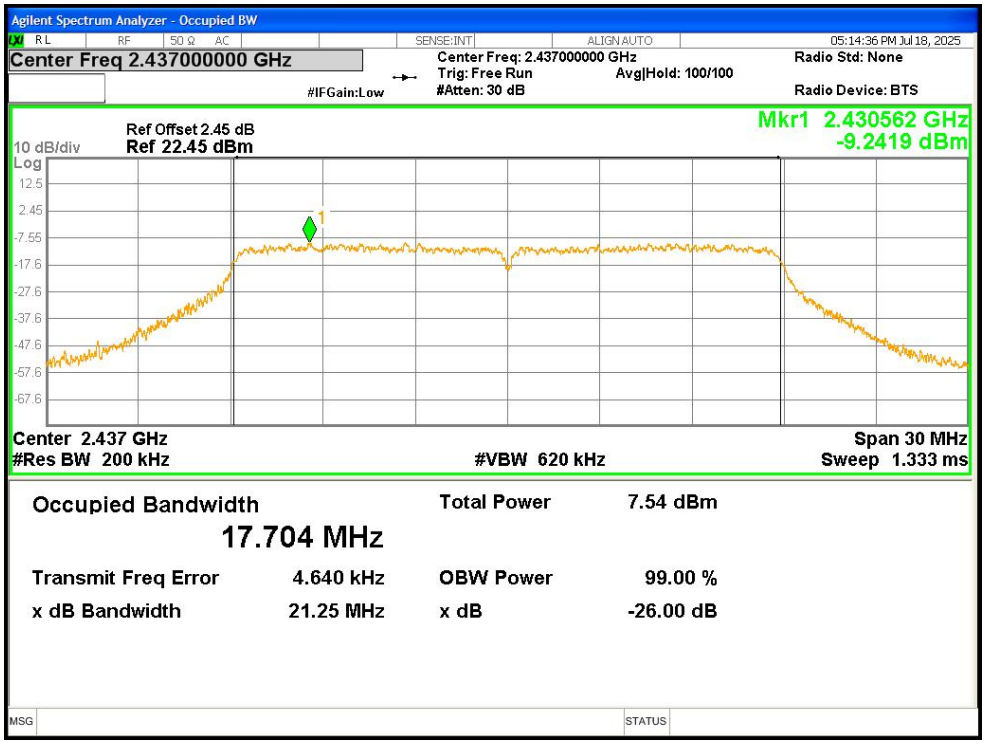
OBW NVNT g 2437MHz Ant1



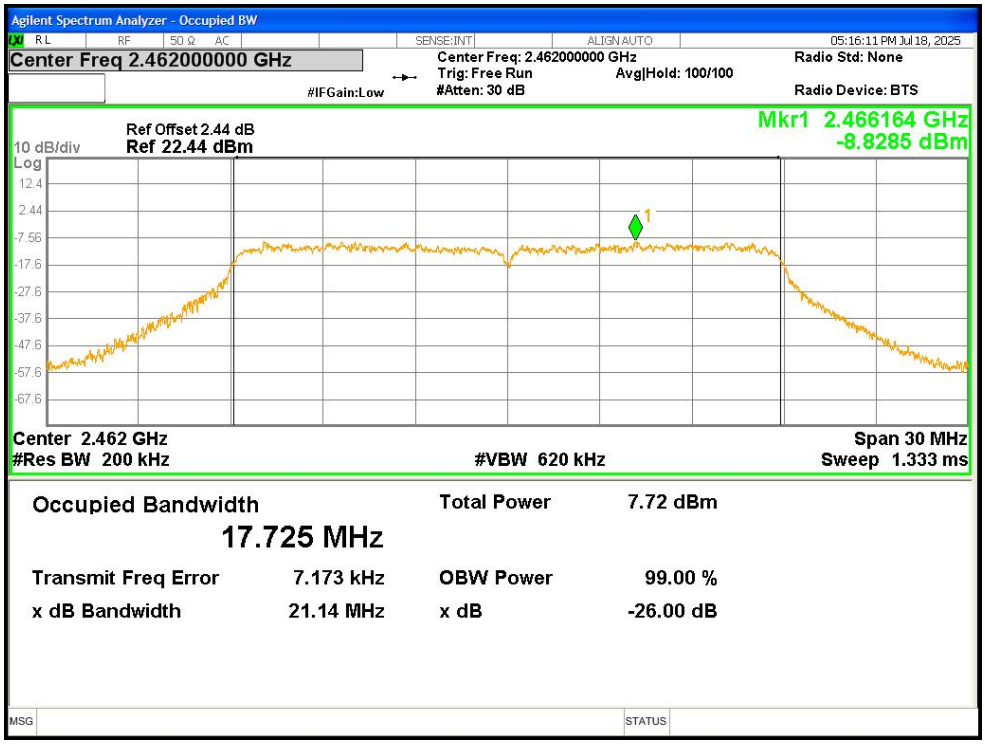
OBW NVNT g 2462MHz Ant1



OBW NVNT n20 2412MHz Ant1



OBW NVNT n20 2437MHz Ant1



OBW NVNT n20 2462MHz Ant1

11. ANTENNA REQUIREMENT

Standard requirement:	FCC Part15 C Section 15.203 /247(c) RSS-Gen Section 6.8

15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(c) (1)(i) requirement:

(i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

When a measurement at the antenna connector is used to determine RF output power, the effective gain of the device’s antenna shall be stated, based on measurement or on data from the antenna manufacturer. For transmitters of RF output power of 10 milliwatts or less, only the portion of the antenna gain that is in excess of 6 dBi (6 dB above isotropic gain) shall be added to the measured RF output power to demonstrate compliance with the radiated power limits specified in the applicable standard. For transmitters of output power greater than 10 milliwatts, the total antenna gain shall be added to the measured RF output power to demonstrate compliance to the specified radiated power

RSS-Gen requirement:

According to the RSS-Gen Section 6.8, 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.

EUT Antenna:

The WIFI 2.4G antenna is FPC antenna, the best case gain for the antenna is -2.29dBi, reference to the appendix II for details

12. TEST SETUP PHOTO

Reference to the appendix I for details.

13. EUT CONSTRUCTIONAL DETAILS

Reference to the appendix II for details.

※※※※※ END OF REPORT ※※※※※