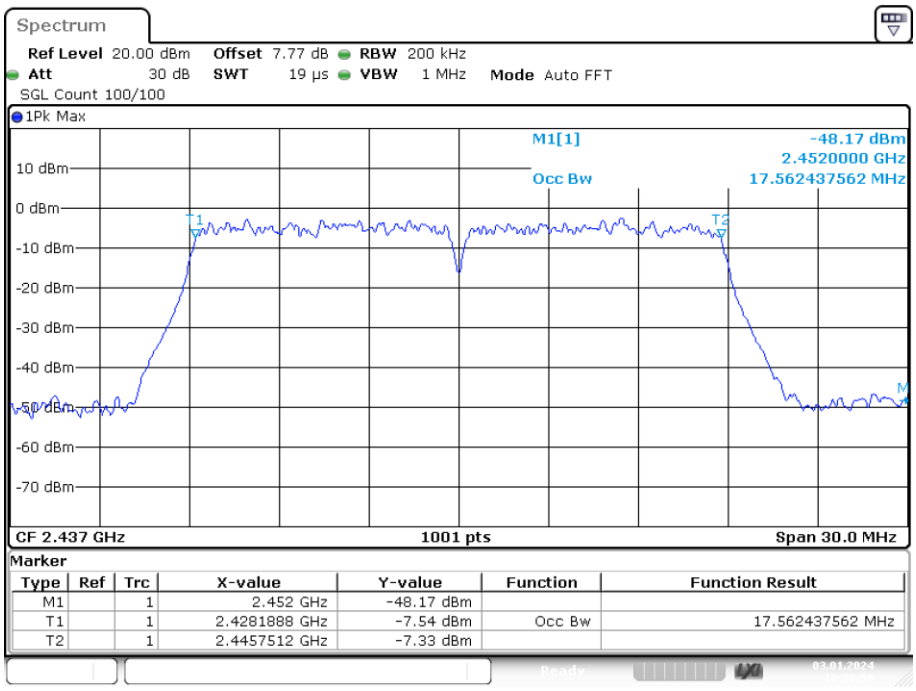
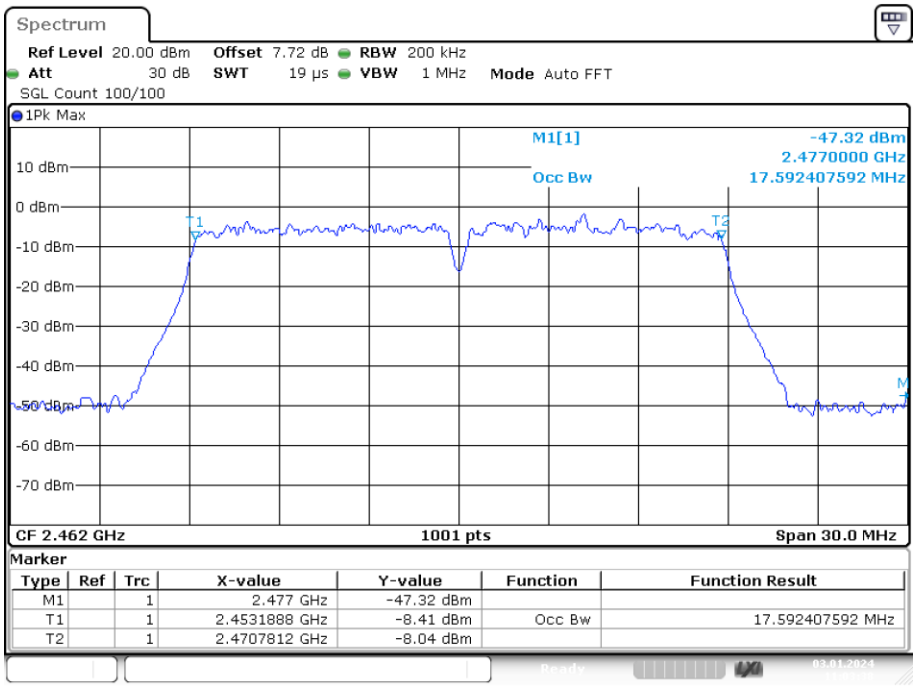
OBW NVNT n20 2437MHz Ant1



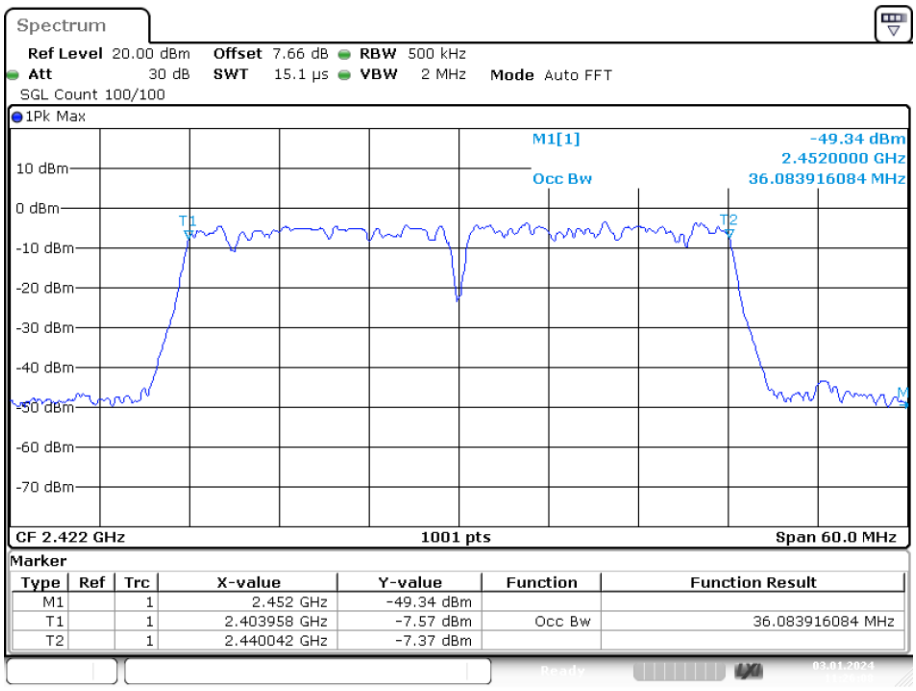
Date: 3.JAN.2024 10:56:51

OBW NVNT n20 2462MHz Ant1



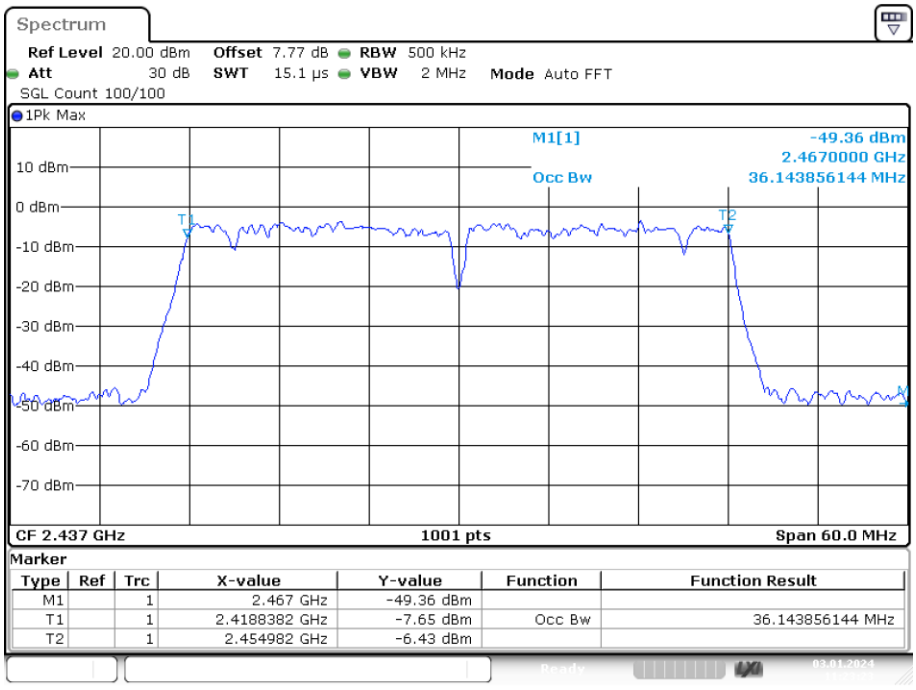
Date: 3.JAN.2024 11:03:38

OBW NVNT n40 2422MHz Ant1



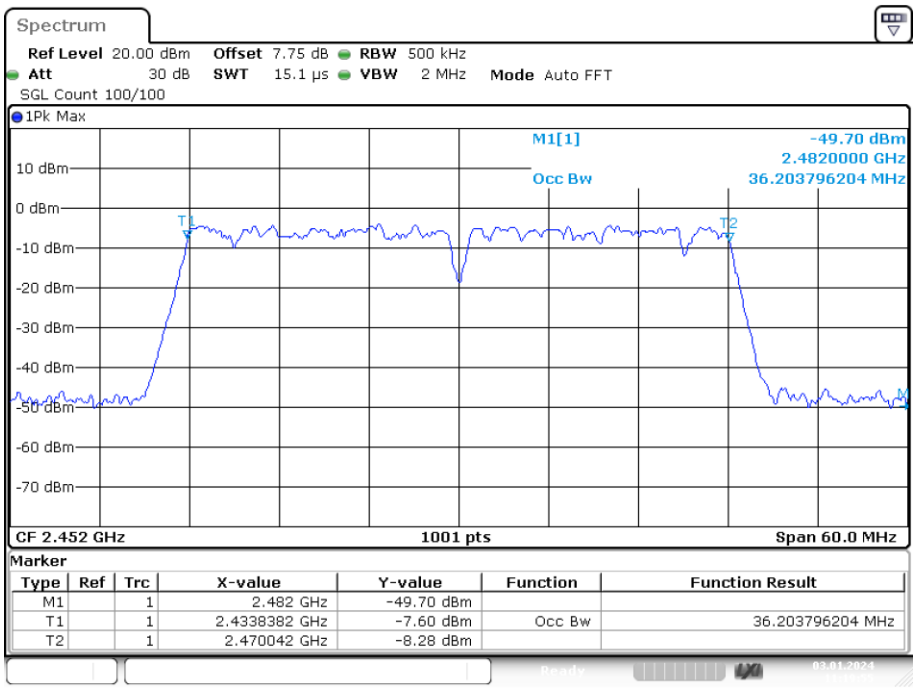
Date: 3.JAN.2024 11:26:08

OBW NVNT n40 2437MHz Ant1



Date: 3.JAN.2024 11:23:22

OBW NVNT n40 2452MHz Ant1



Date: 3.JAN.2024 11:19:55

8. BAND EDGE CHECK

8.1. Test limits

Please refer RSS-GEN & FCC PART 15: 15.247

All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits and RSS-GEN limits.

8.2. Test Procedure

Details see the KDB558074 D01 Meas Guidance v05r02

8.2.1 Put the EUT on a 1.5m high table, power on the EUT. Emissions were scanned and measured rotating the EUT to 360 degrees, Find the maximum Emission

8.2.2 Check the spurious emissions out of band.

8.2.3 RBW 1MHz, VBW 3MHz, peak detector for peak value, RBW 1MHz, VBW 10Hz, RMS detector for AV value.

8.3. Test Setup

Same as 5.2.2.

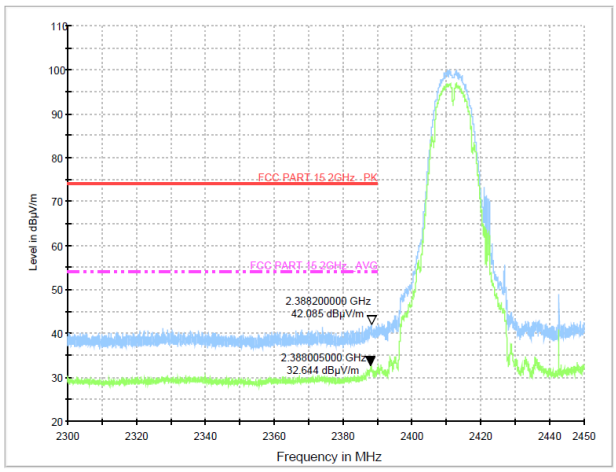
8.4. Test Results

PASS.

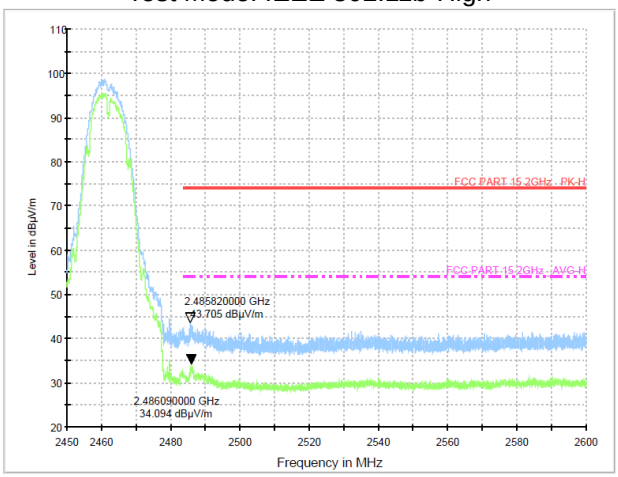
Detailed information please see the following page.

Radiation testing

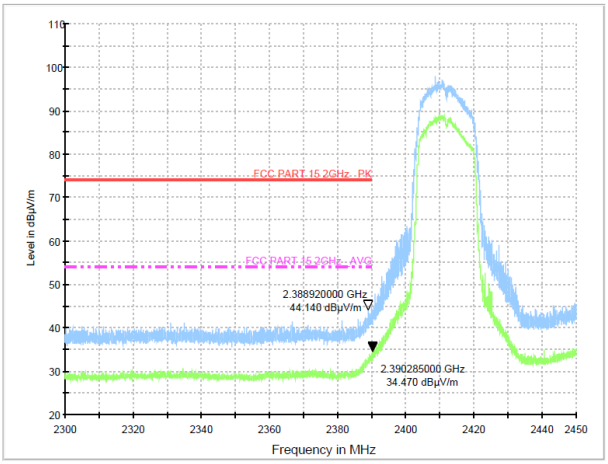
Test Mode: IEEE 802.11b-Low



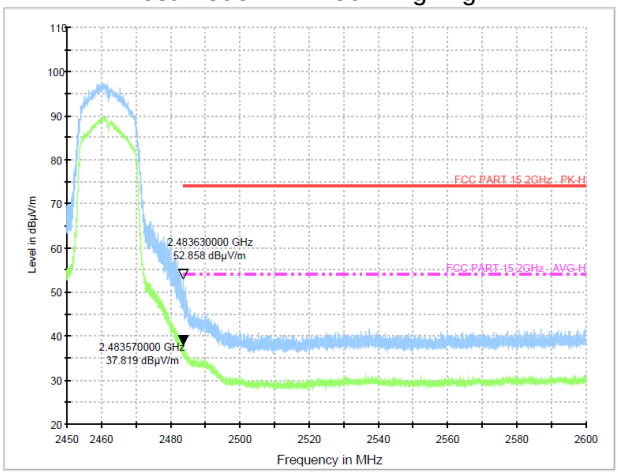
Test Mode: IEEE 802.11b-High



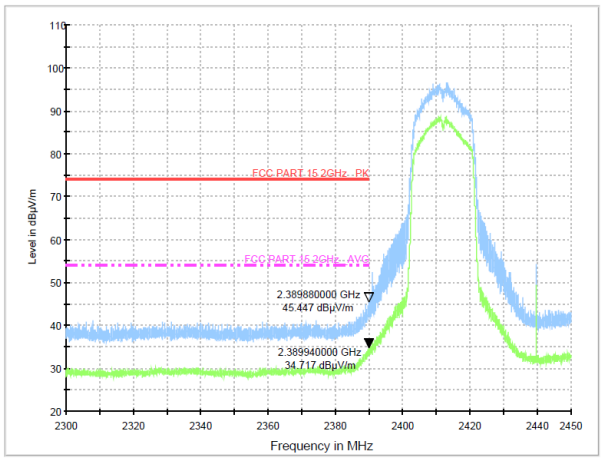
Test Mode: IEEE 802.11g-Low



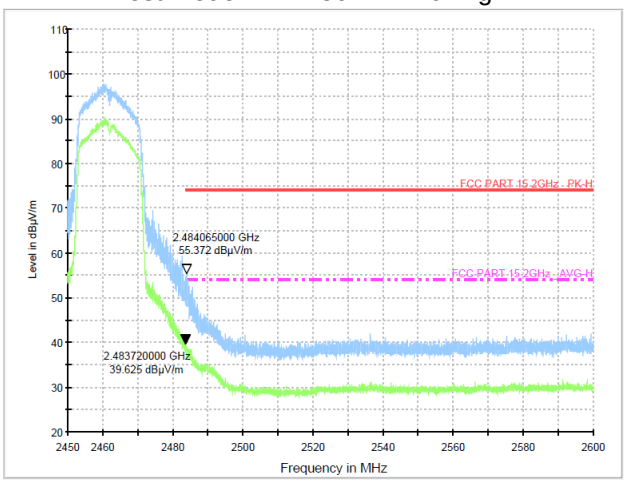
Test Mode: IEEE 802.11g-High



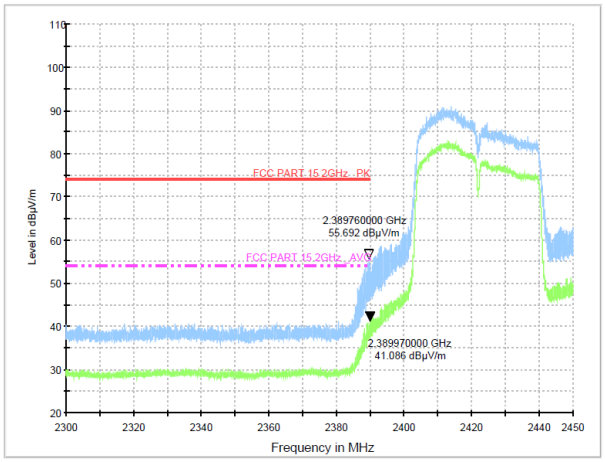
Test Mode: IEEE 802.11n20-Low



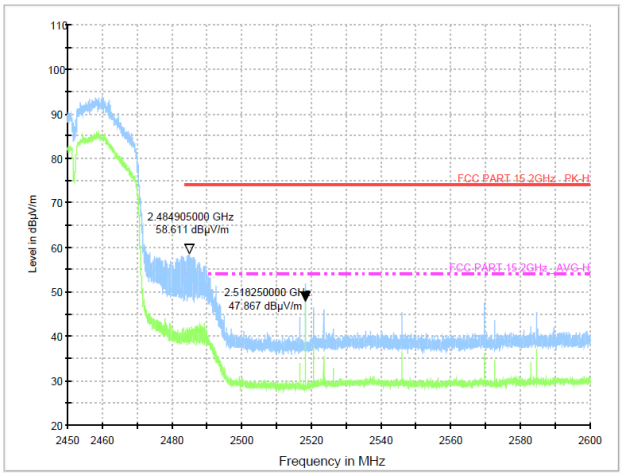
Test Mode: IEEE 802.11n20-High



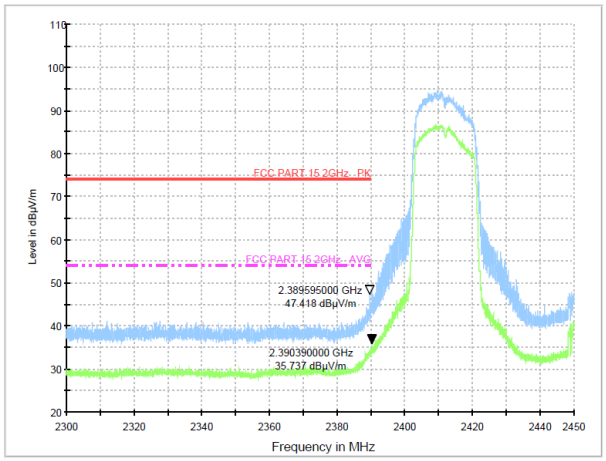
Test Mode: IEEE 802.11n40-Low



Test Mode: IEEE 802.11n40-High



Test Mode: IEEE 802.11n20-Low



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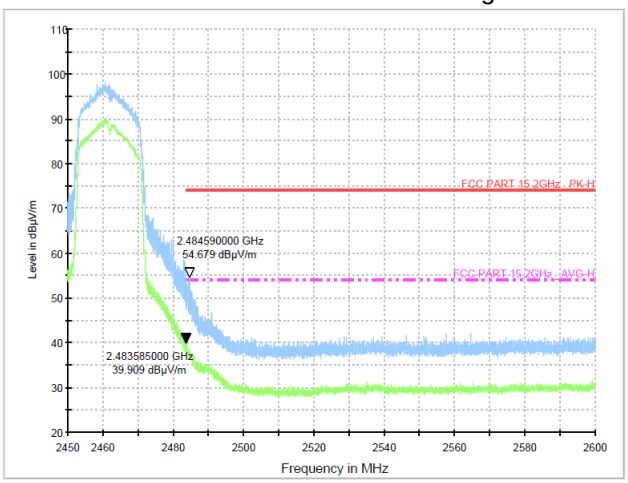

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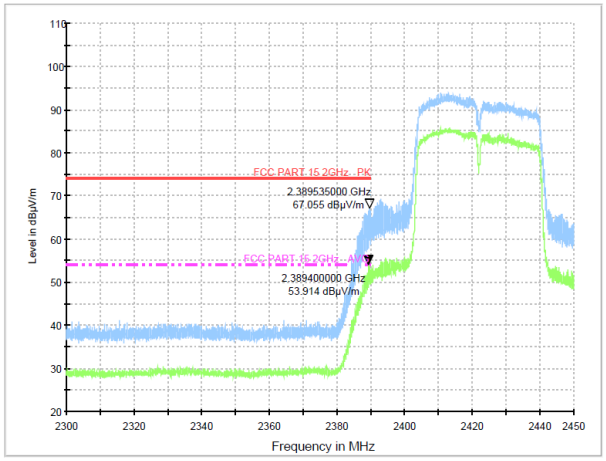
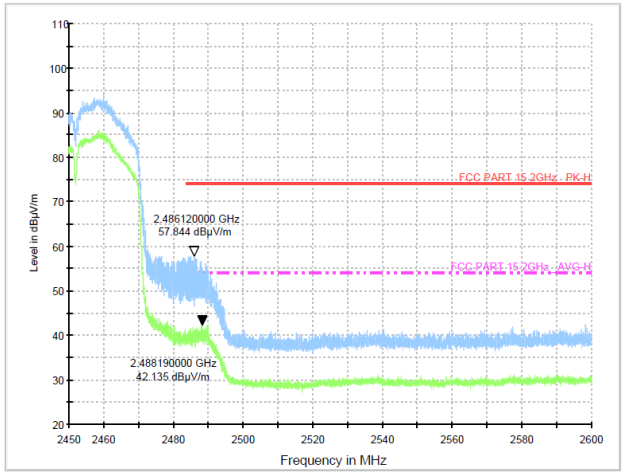
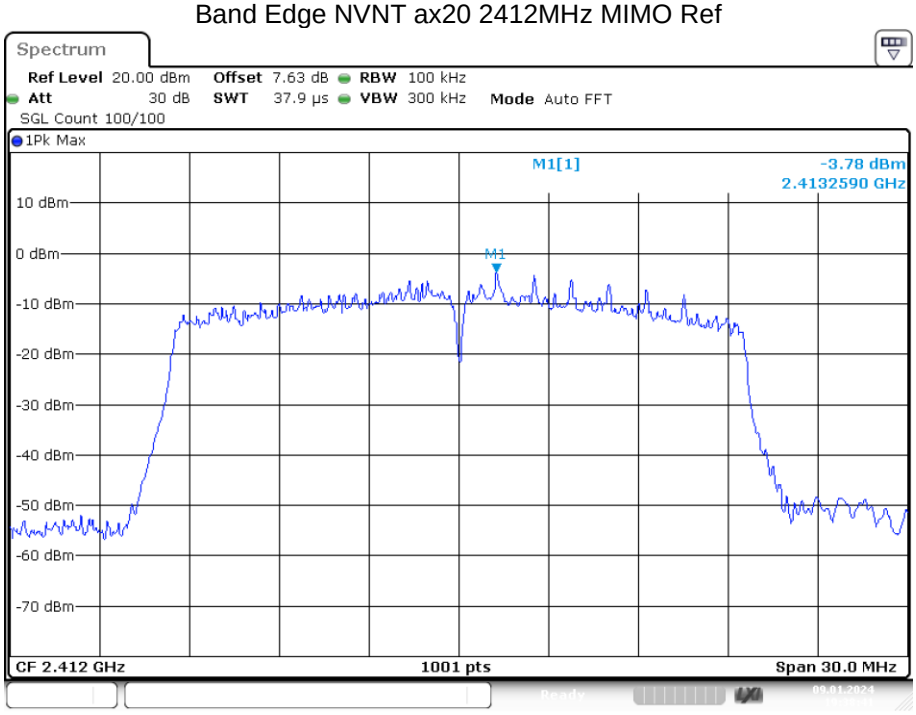


Test Mode: IEEE 802.11n40-High



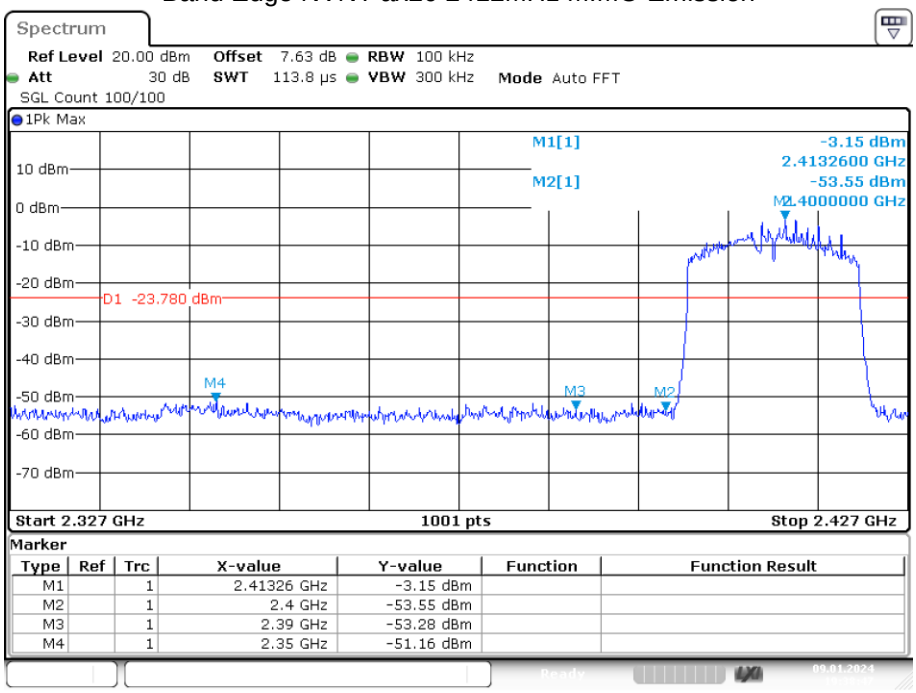
Conduction method testing

Band Edge NVNT ax20 2412MHz MIMO Ref



Date: 9.JAN.2024 19:38:41

Band Edge NVNT ax20 2412MHz MIMO Emission

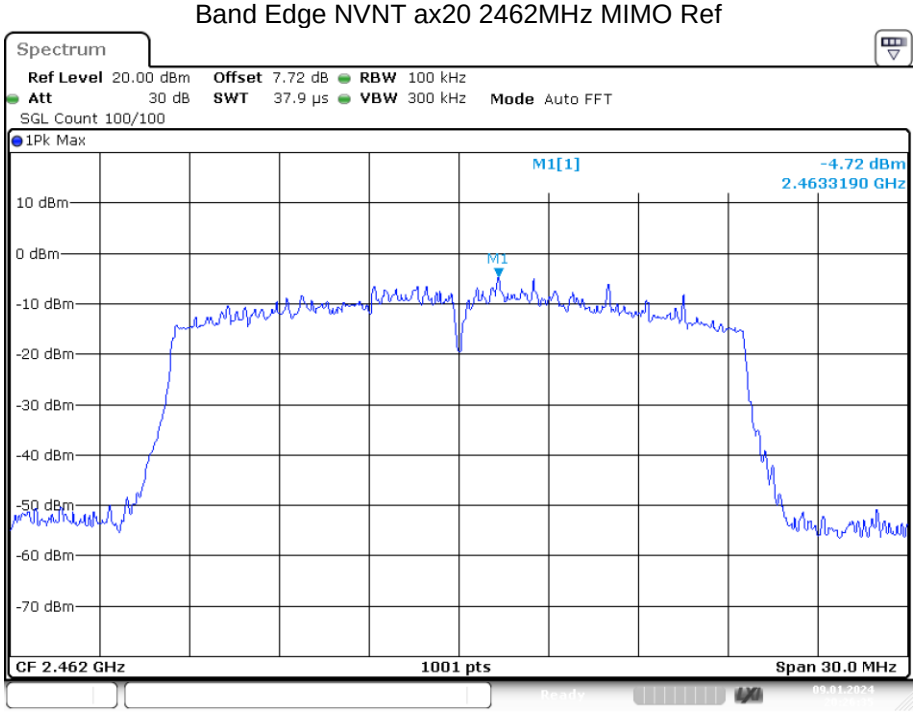


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.41326 GHz	-3.15 dBm		
M2		1	2.4 GHz	-53.55 dBm		
M3		1	2.39 GHz	-53.28 dBm		
M4		1	2.35 GHz	-51.16 dBm		

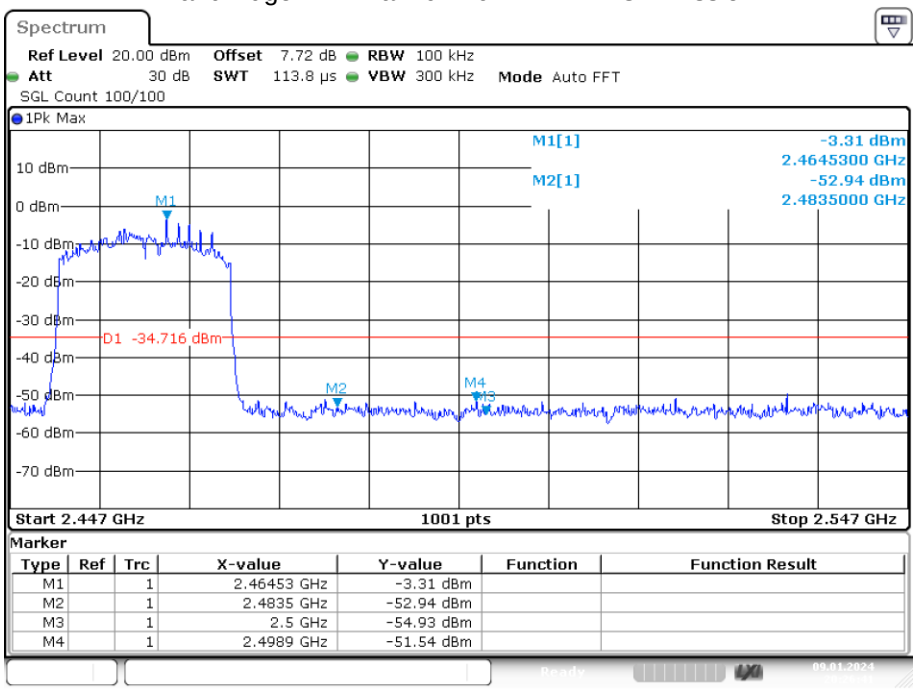
Date: 9.JAN.2024 19:38:47

Band Edge NVNT ax20 2462MHz MIMO Ref



Date: 9.JAN.2024 20:26:34

Band Edge NVNT ax20 2462MHz MIMO Emission

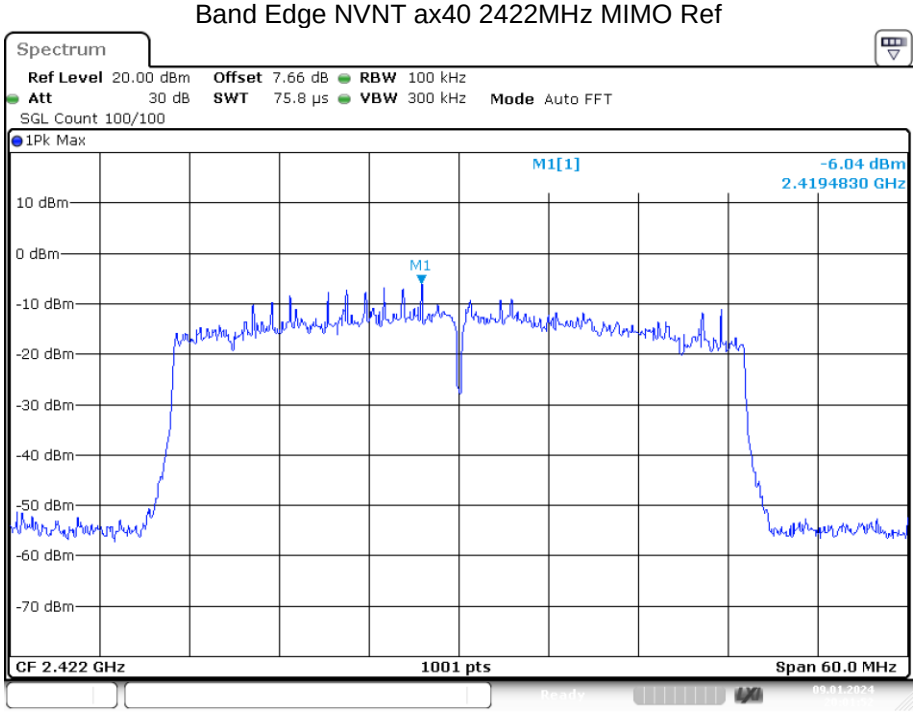


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.46453 GHz	-3.31 dBm		
M2		1	2.4835 GHz	-52.94 dBm		
M3		1	2.5 GHz	-54.93 dBm		
M4		1	2.4989 GHz	-51.54 dBm		

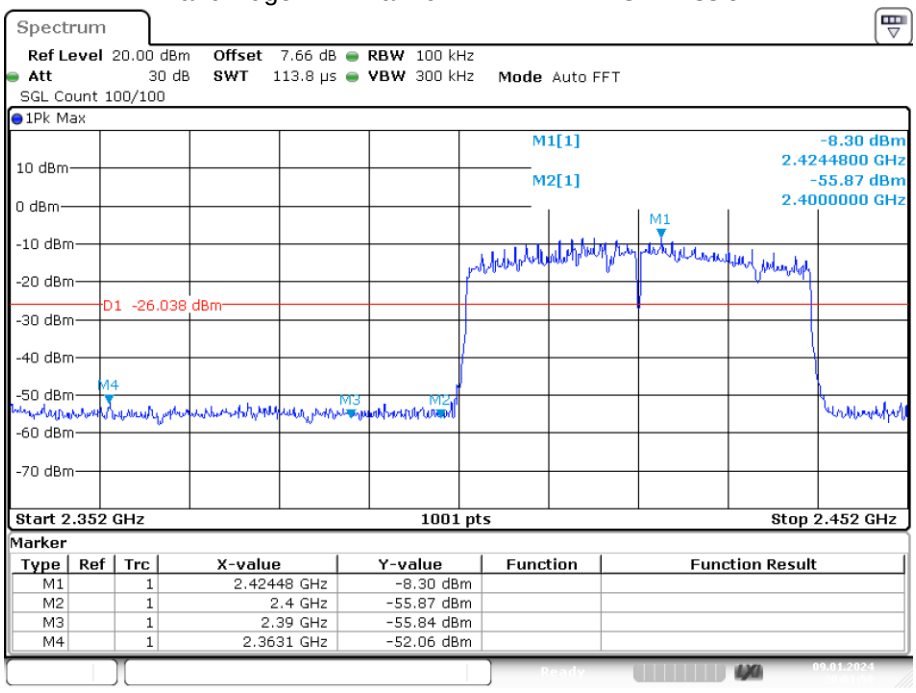
Date: 9.JAN.2024 20:26:40

Band Edge NVNT ax40 2422MHz MIMO Ref



Date: 9.JAN.2024 20:01:52

Band Edge NVNT ax40 2422MHz MIMO Emission

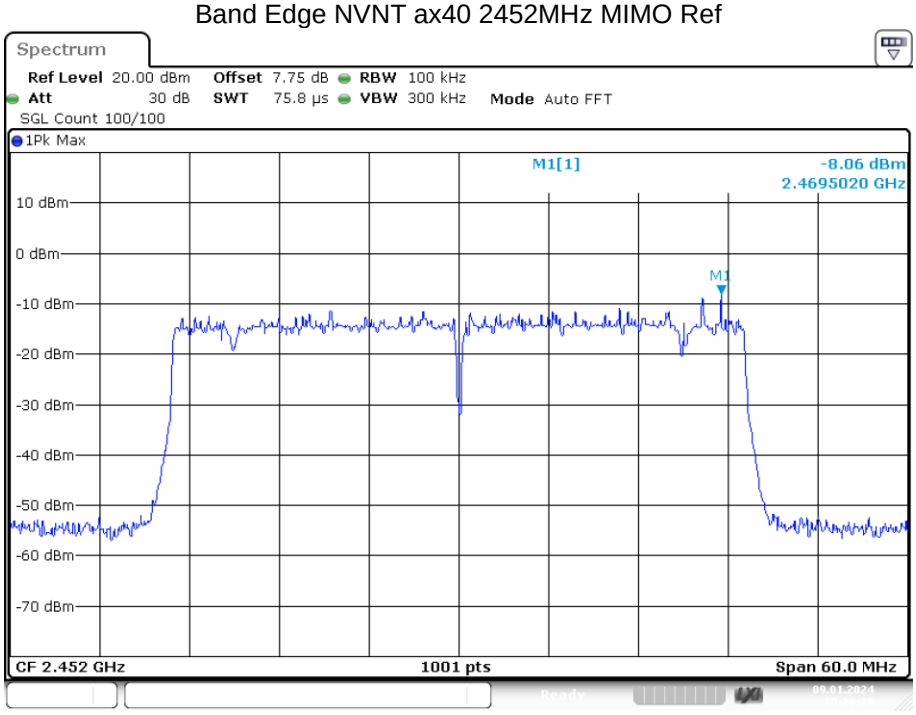


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.42448 GHz	-8.30 dBm		
M2		1	2.4 GHz	-55.87 dBm		
M3		1	2.39 GHz	-55.84 dBm		
M4		1	2.3631 GHz	-52.06 dBm		

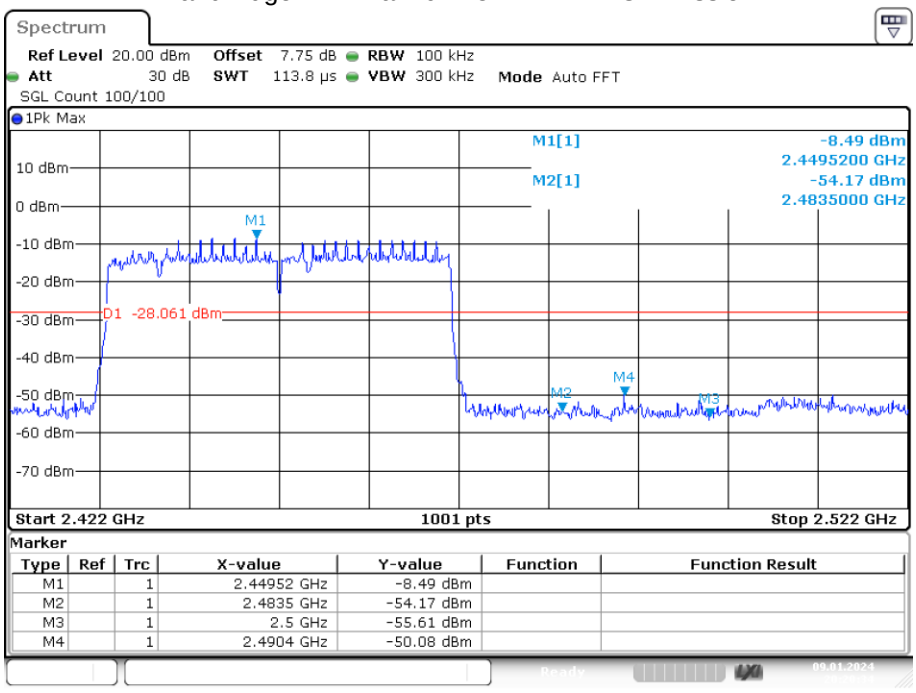
Date: 9.JAN.2024 20:01:58

Band Edge NVNT ax40 2452MHz MIMO Ref



Date: 9.JAN.2024 20:20:27

Band Edge NVNT ax40 2452MHz MIMO Emission



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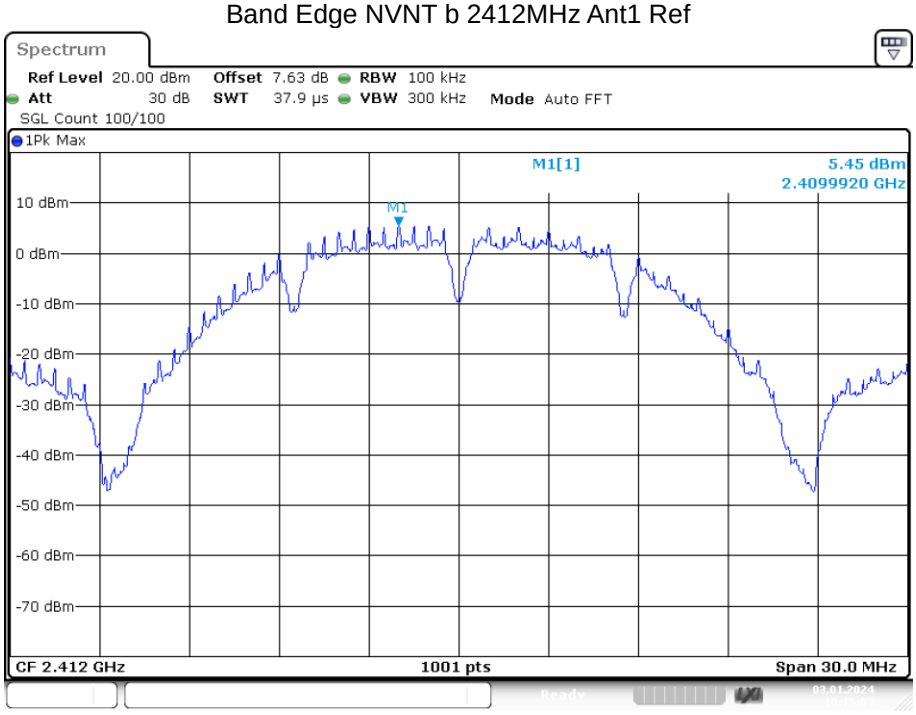
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.44952 GHz	-8.49 dBm		
M2		1	2.4835 GHz	-54.17 dBm		
M3		1	2.5 GHz	-55.61 dBm		
M4		1	2.4904 GHz	-50.08 dBm		

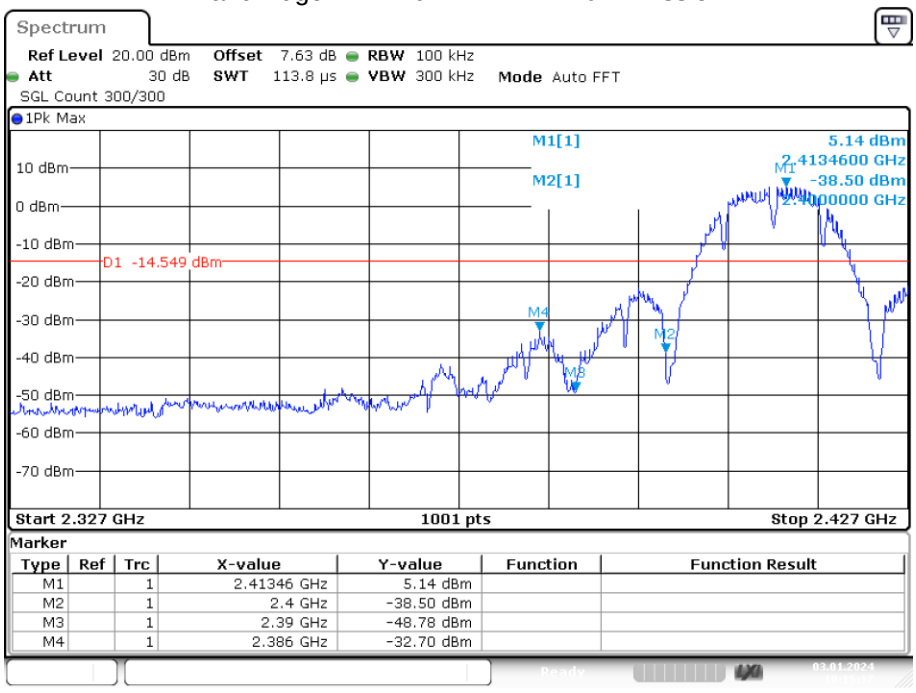
Date: 9.JAN.2024 20:20:33

Band Edge NVNT b 2412MHz Ant1 Ref



Date: 3.JAN.2024 10:15:03

Band Edge NVNT b 2412MHz Ant1 Emission



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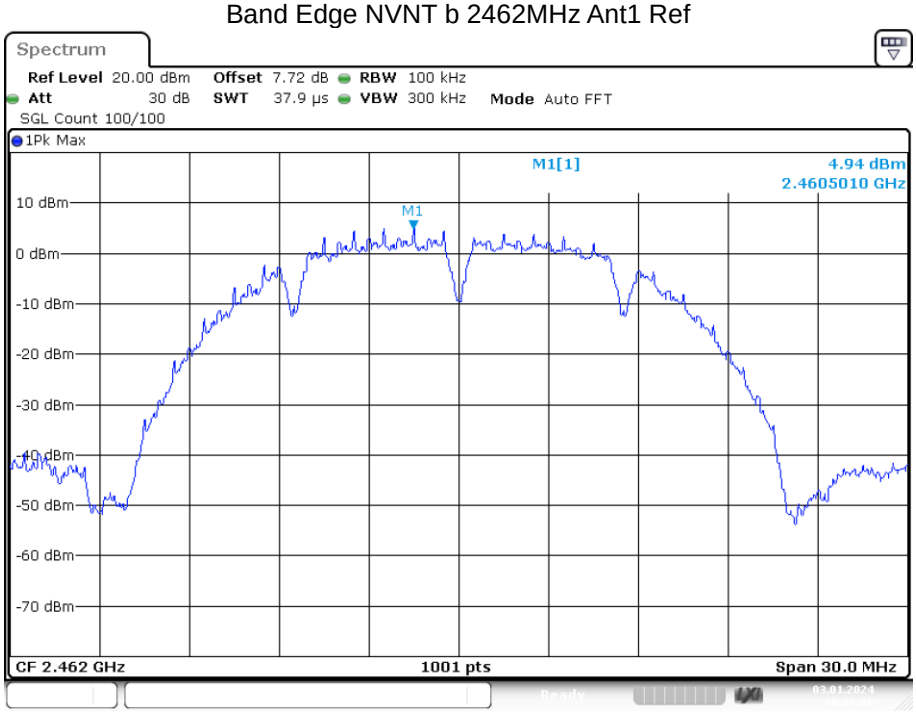
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.41346 GHz	5.14 dBm		
M2		1	2.4 GHz	-38.50 dBm		
M3		1	2.39 GHz	-48.78 dBm		
M4		1	2.386 GHz	-32.70 dBm		

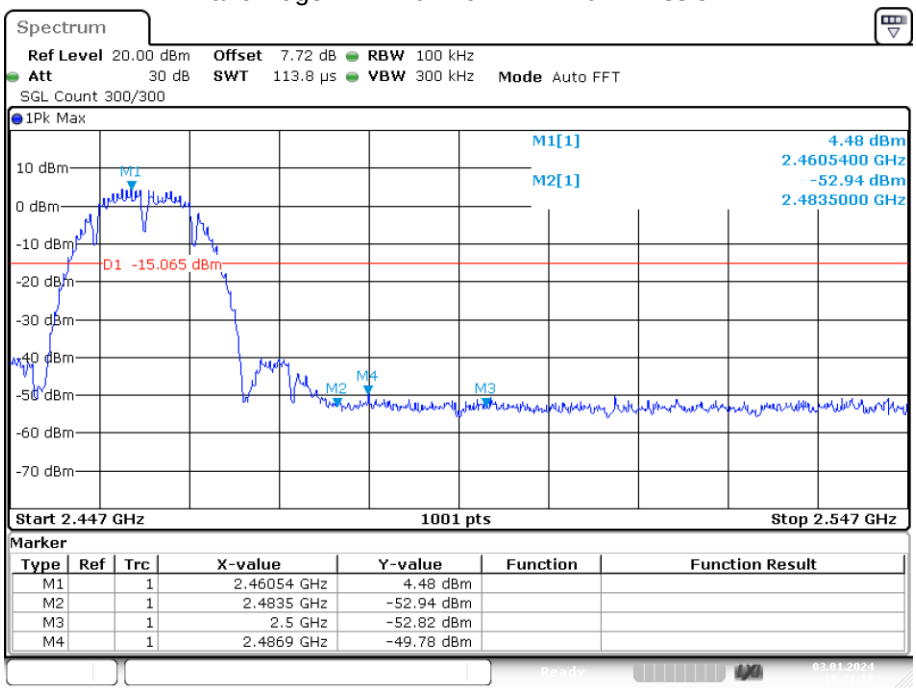
Date: 3.JAN.2024 10:15:17

Band Edge NVNT b 2462MHz Ant1 Ref



Date: 3.JAN.2024 10:31:06

Band Edge NVNT b 2462MHz Ant1 Emission

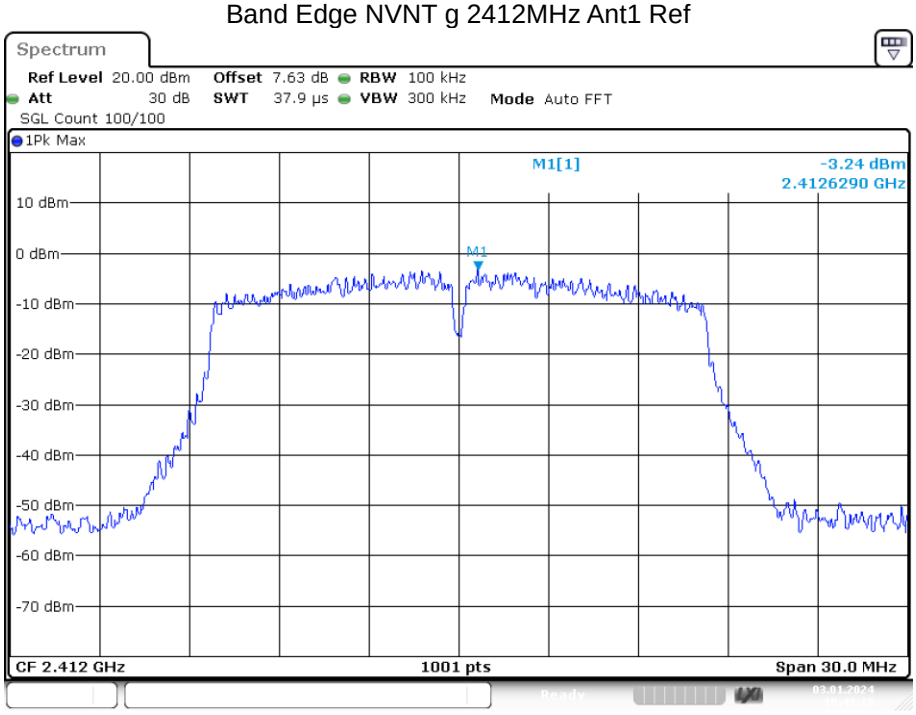


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.46054 GHz	4.48 dBm		
M2		1	2.4835 GHz	-52.94 dBm		
M3		1	2.5 GHz	-52.82 dBm		
M4		1	2.4869 GHz	-49.78 dBm		

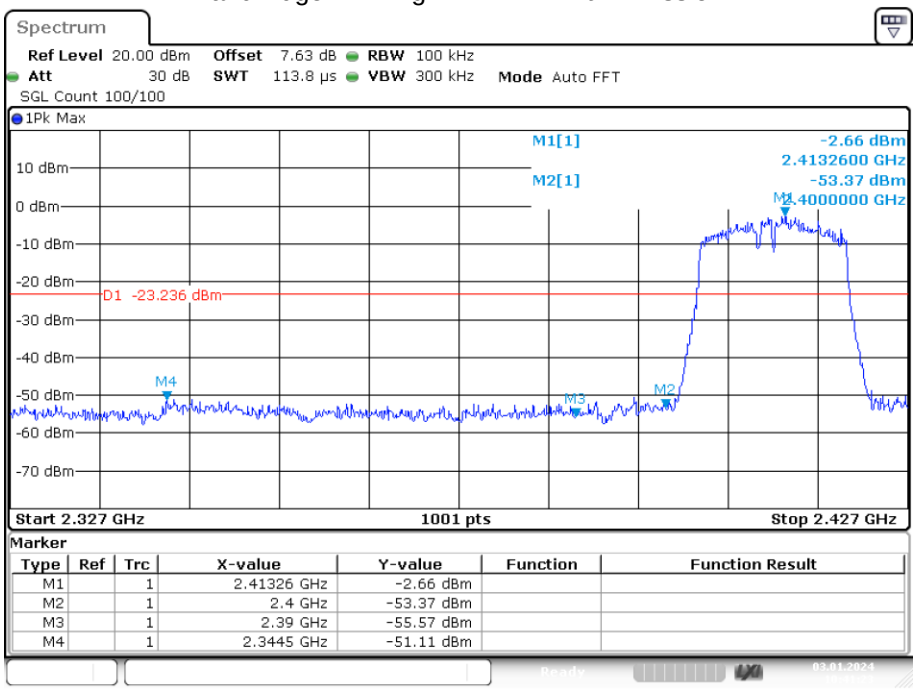
Date: 3.JAN.2024 10:31:18

Band Edge NVNT g 2412MHz Ant1 Ref



Date: 3.JAN.2024 10:41:18

Band Edge NVNT g 2412MHz Ant1 Emission

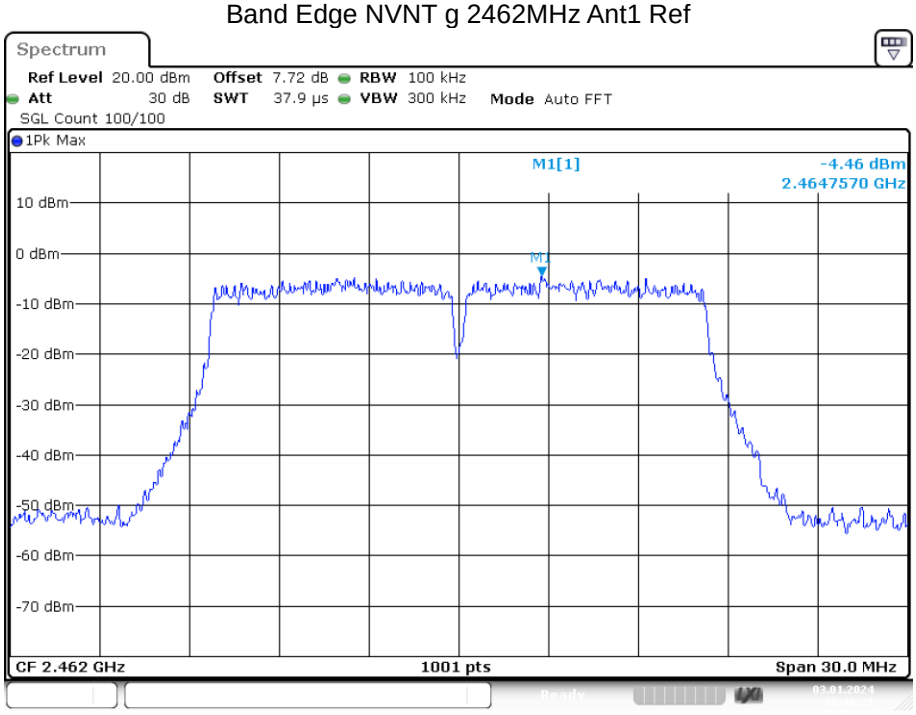


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.41326 GHz	-2.66 dBm		
M2		1	2.4 GHz	-53.37 dBm		
M3		1	2.39 GHz	-55.57 dBm		
M4		1	2.3445 GHz	-51.11 dBm		

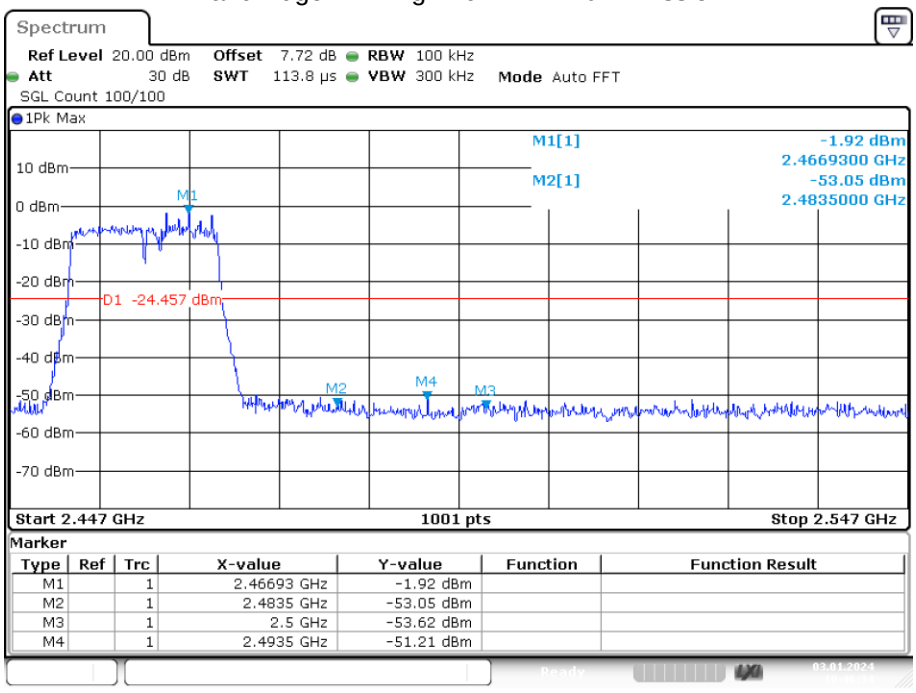
Date: 3.JAN.2024 10:41:24

Band Edge NVNT g 2462MHz Ant1 Ref



Date: 3.JAN.2024 10:46:28

Band Edge NVNT g 2462MHz Ant1 Emission

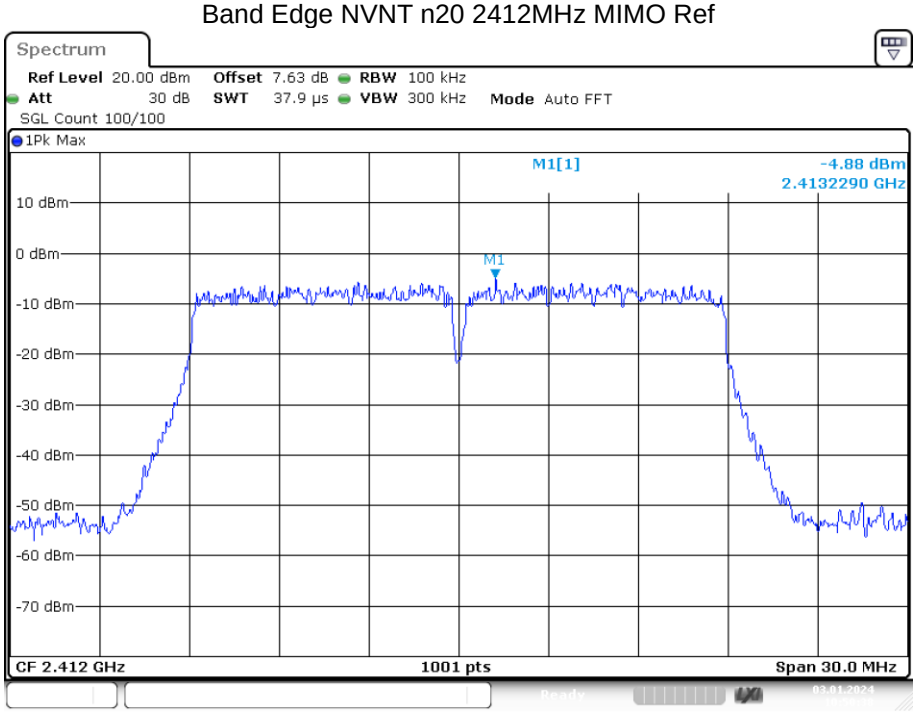


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.46693 GHz	-1.92 dBm		
M2		1	2.4835 GHz	-53.05 dBm		
M3		1	2.5 GHz	-53.62 dBm		
M4		1	2.4935 GHz	-51.21 dBm		

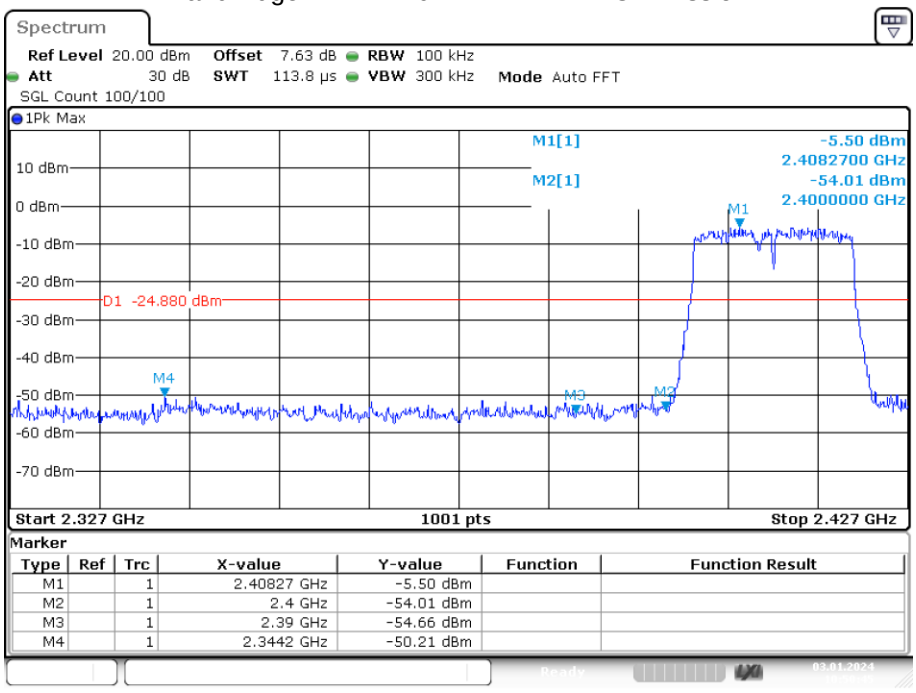
Date: 3.JAN.2024 10:46:34

Band Edge NVNT n20 2412MHz MIMO Ref



Date: 3.JAN.2024 10:50:39

Band Edge NVNT n20 2412MHz MIMO Emission

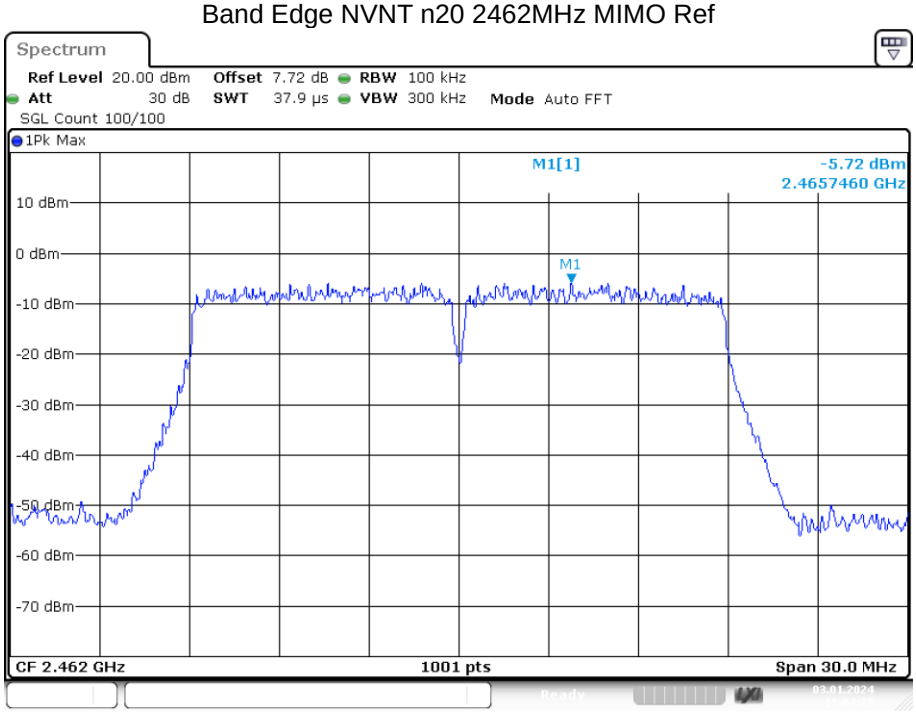


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.40827 GHz	-5.50 dBm		
M2		1	2.4 GHz	-54.01 dBm		
M3		1	2.39 GHz	-54.66 dBm		
M4		1	2.3442 GHz	-50.21 dBm		

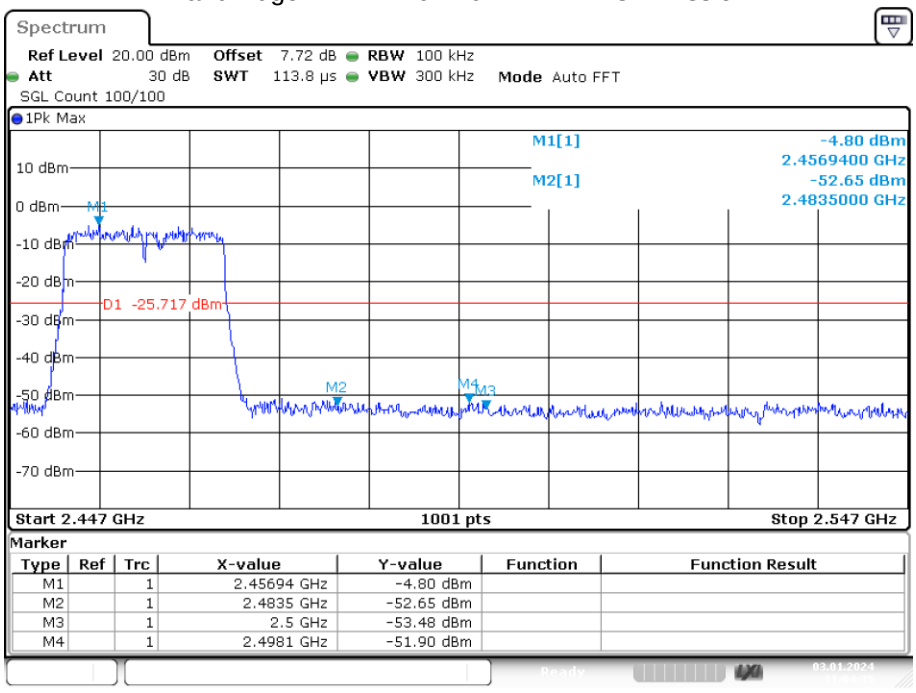
Date: 3.JAN.2024 10:50:45

Band Edge NVNT n20 2462MHz MIMO Ref



Date: 3.JAN.2024 11:04:29

Band Edge NVNT n20 2462MHz MIMO Emission

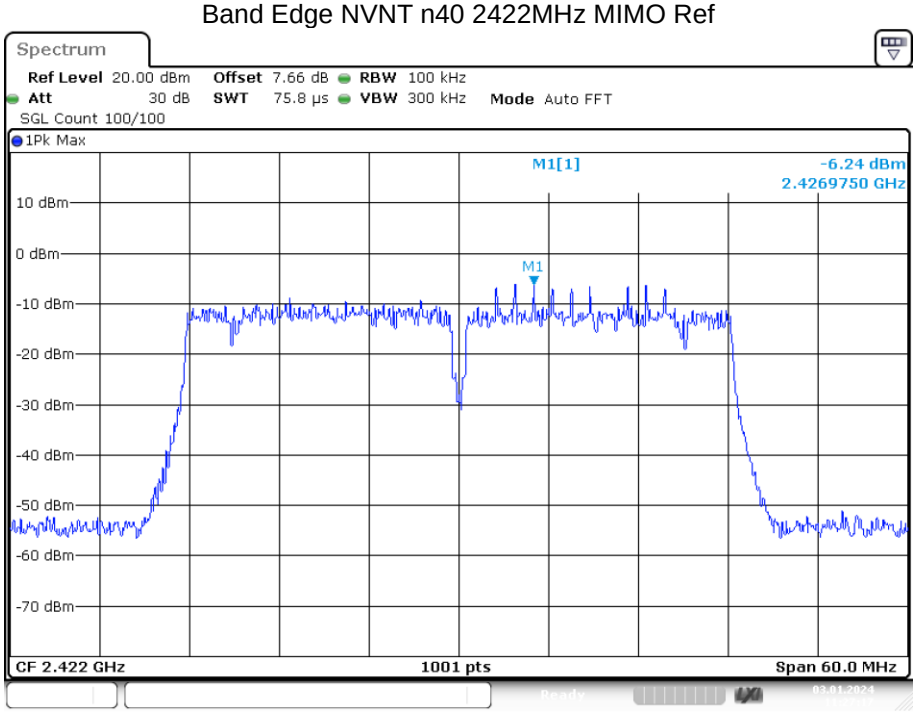


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.45694 GHz	-4.80 dBm		
M2		1	2.4835 GHz	-52.65 dBm		
M3		1	2.5 GHz	-53.48 dBm		
M4		1	2.4981 GHz	-51.90 dBm		

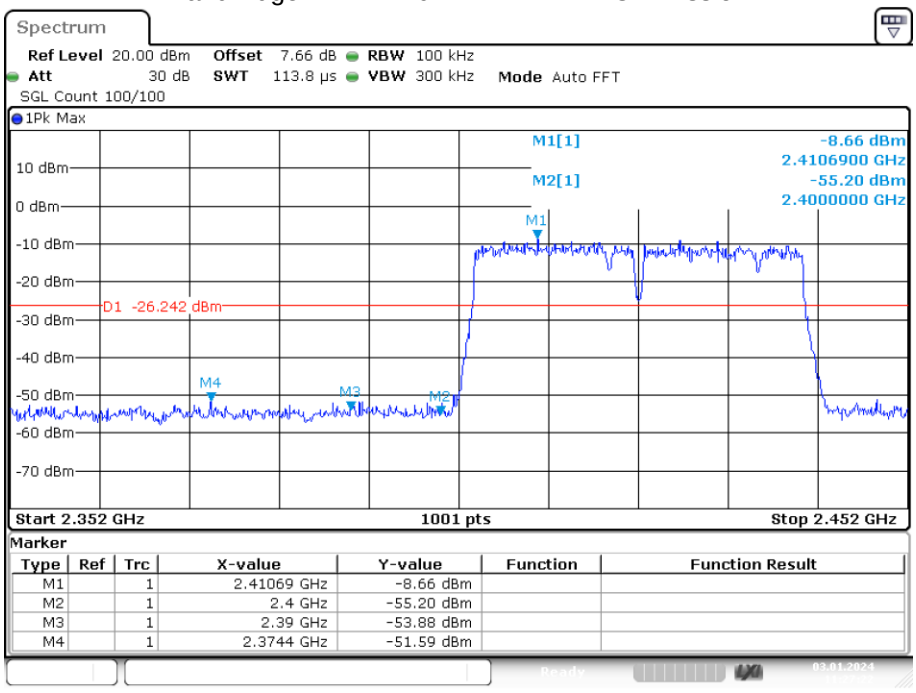
Date: 3.JAN.2024 11:04:35

Band Edge NVNT n40 2422MHz MIMO Ref



Date: 3.JAN.2024 11:27:17

Band Edge NVNT n40 2422MHz MIMO Emission

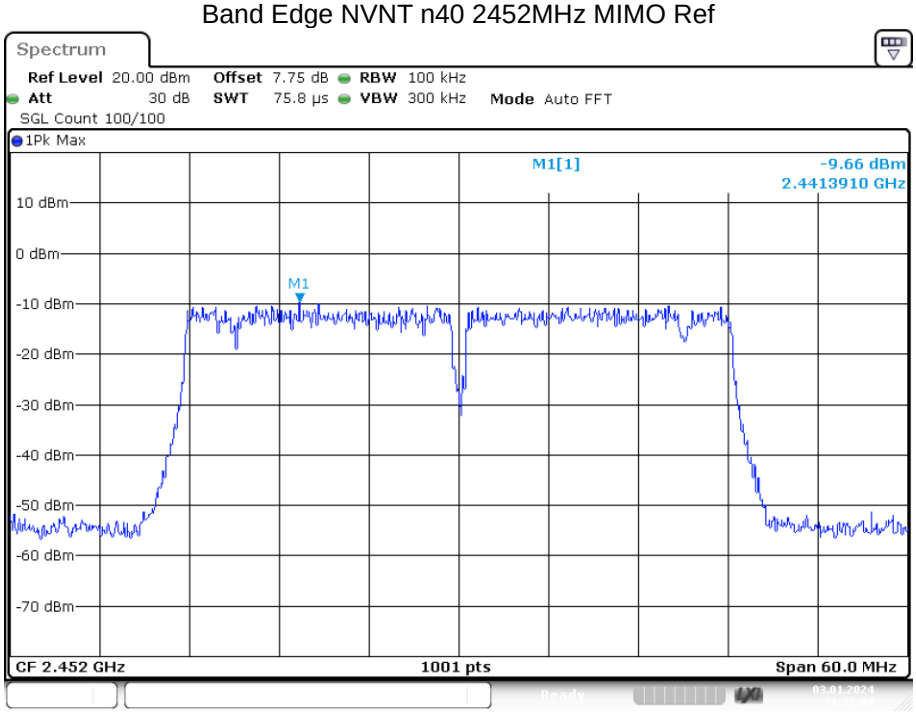


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.41069 GHz	-8.66 dBm		
M2		1	2.4 GHz	-55.20 dBm		
M3		1	2.39 GHz	-53.88 dBm		
M4		1	2.3744 GHz	-51.59 dBm		

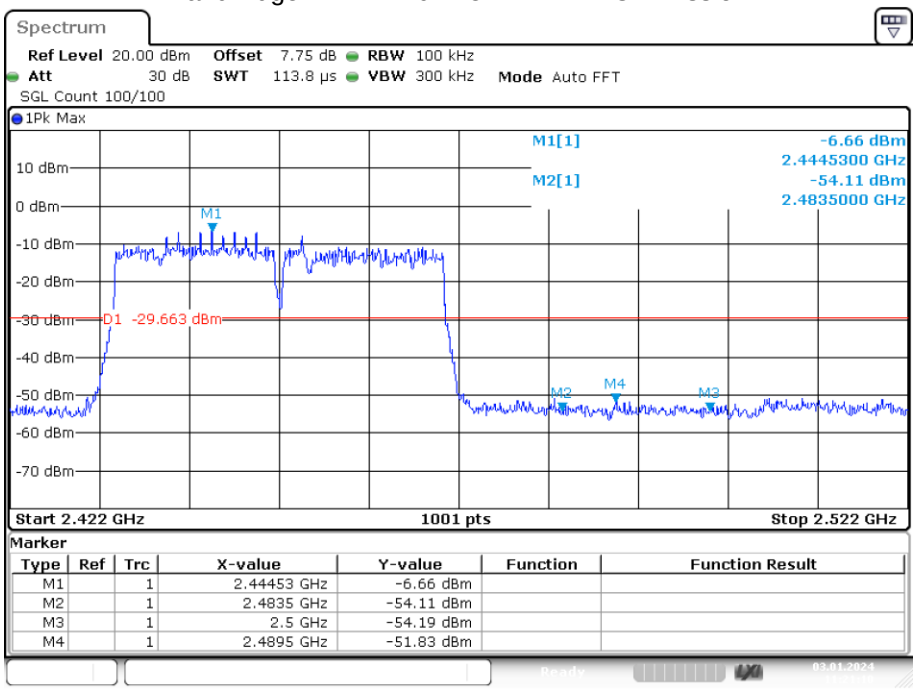
Date: 3.JAN.2024 11:27:22

Band Edge NVNT n40 2452MHz MIMO Ref



Date: 3.JAN.2024 11:21:03

Band Edge NVNT n40 2452MHz MIMO Emission



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Note: 1. Except for mode b/g, other modes test the MIMO status.
2. All antennas have been tested, only the worst data of each pattern is reflected.

9. FREQUENCY STABILITY

9.1. Test limit

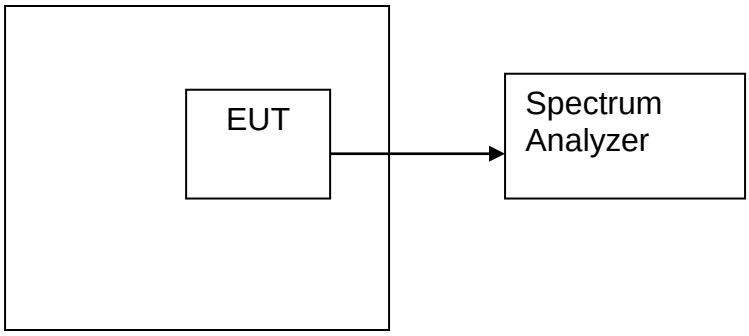
Please refer section RSS-Gen.

Regulation RSS-Gen If the frequency stability of the licence-exempt radio apparatus is not specified in the applicable RSS, the fundamental emissions of the radio apparatus should be kept within at least the central 80% of its permitted operating frequency band in order to minimize the possibility of out-of-band operation. In addition, its occupied bandwidth shall be entirely outside the restricted bands and the prohibited TV bands of 54-72 MHz, 76-88 MHz, 174-216 MHz, and 470-602 MHz, unless otherwise indicated.

9.2. Test Procedure

The following equipment are installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

9.3. Test Setup



Temperature controller

9.4. Test Results

PASS.

Detailed information please see the following page.

Assigned Frequency(MHz): 2412MHz				
Voltage	Temperature	Measured Frequency (MHz)	Frequency stability (MHz)	Limit (MHz)
Low DC 3.0V	+20℃	2412.002	0.002	±0.020
Normal DC 3.3V	-10℃	2412.001	0.001	±0.020
	-5℃	2412.002	0.002	±0.020
	0℃	2412.005	0.005	±0.020
	+10℃	2412.002	0.002	±0.020
	+20℃	2412.006	0.006	±0.020
	+30℃	2412.002	0.002	±0.020
	+40℃	2412.004	0.004	±0.020
	+50℃	2412.002	0.002	±0.020
	+60℃	2412.003	0.003	±0.020
High DC 3.6V	+20℃	2412.002	0.002	±0.020

Note: Record data for worst case mode

10. ANTENNA REQUIREMENT

10.1.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 user, but the use of a standard antenna jack or electrical connector is prohibited.

10.2.Antenna Connected Construction

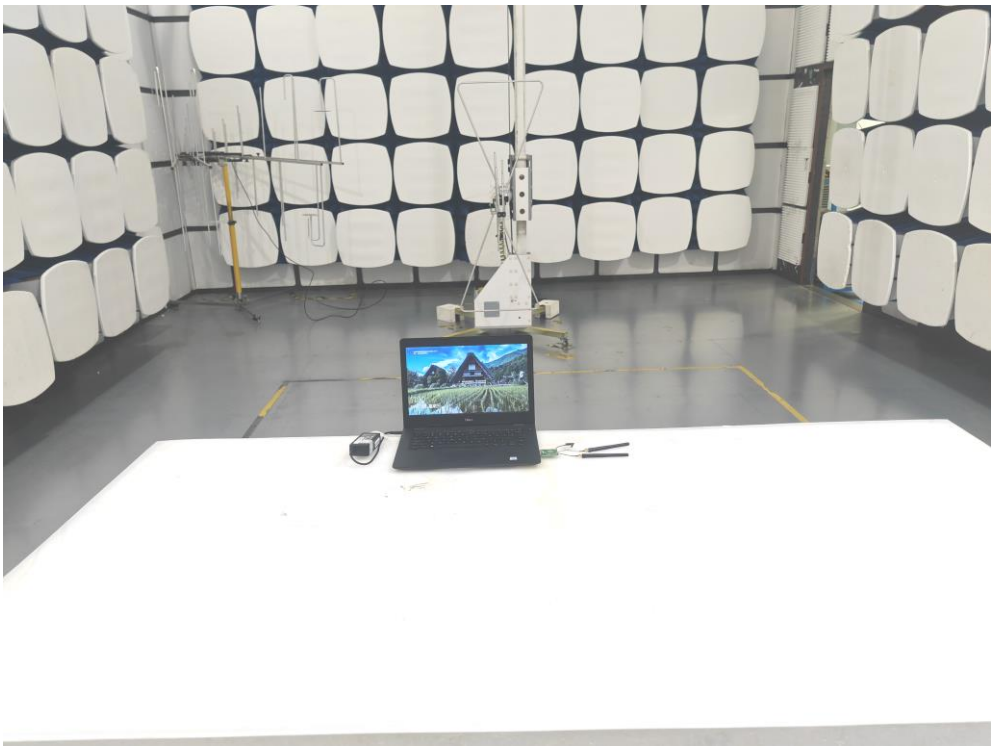
The antenna connector is unique antenna and no consideration of replacement. Please see EUT photo for details.

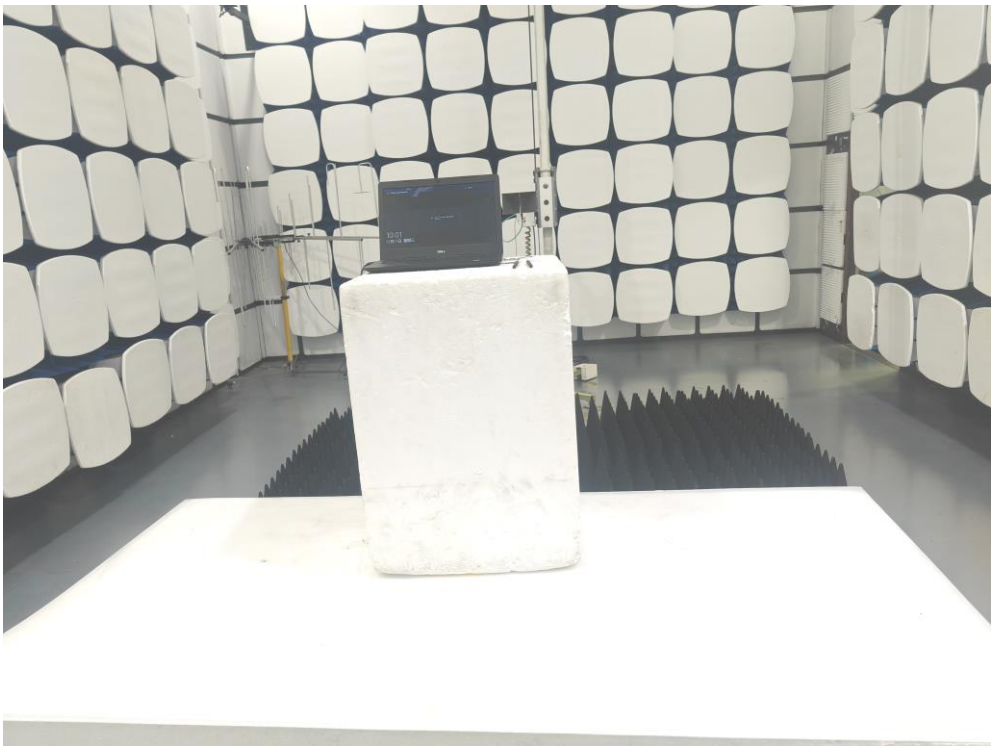
10.3.Results

The EUT antenna is internal Antenna. It complies with the standard requirement.

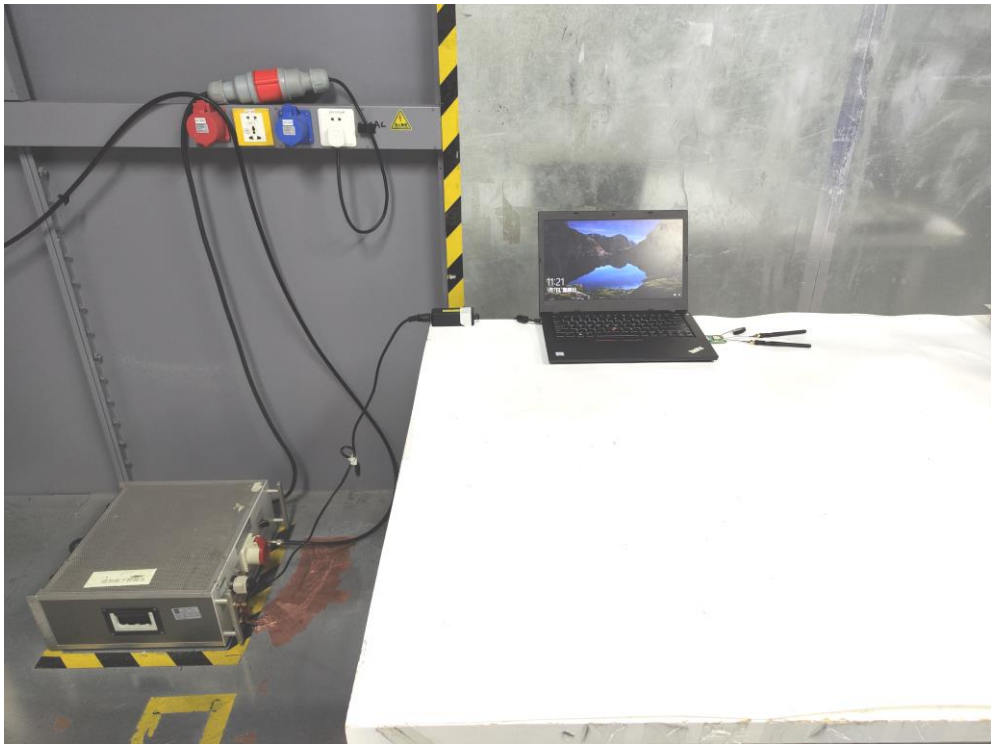
11. TEST SETUP PHOTO

11.1.Photo of Radiated Emission test





11.2.Photo of Conducted Emission test



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