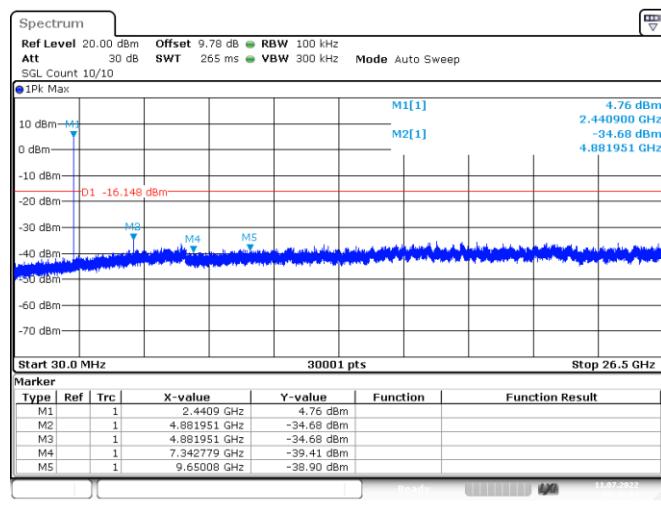


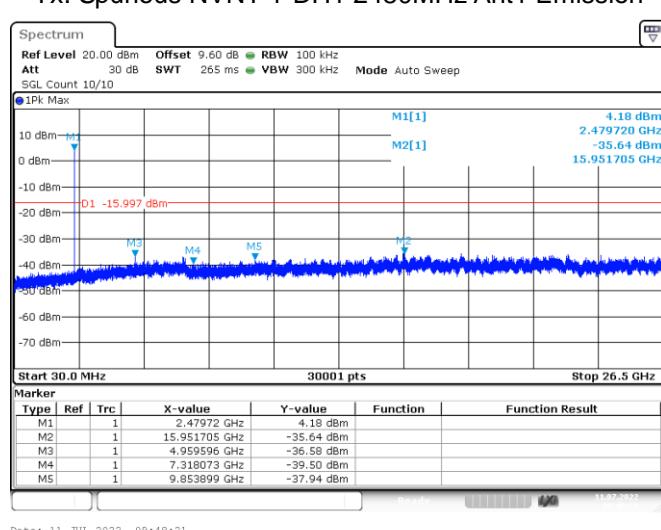
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



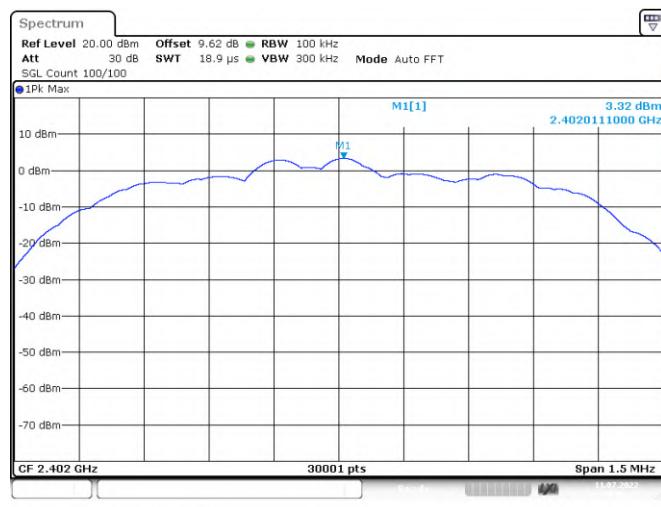
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



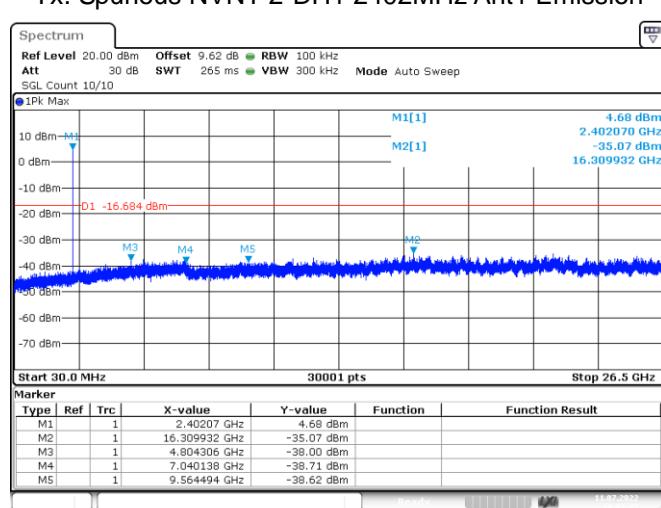
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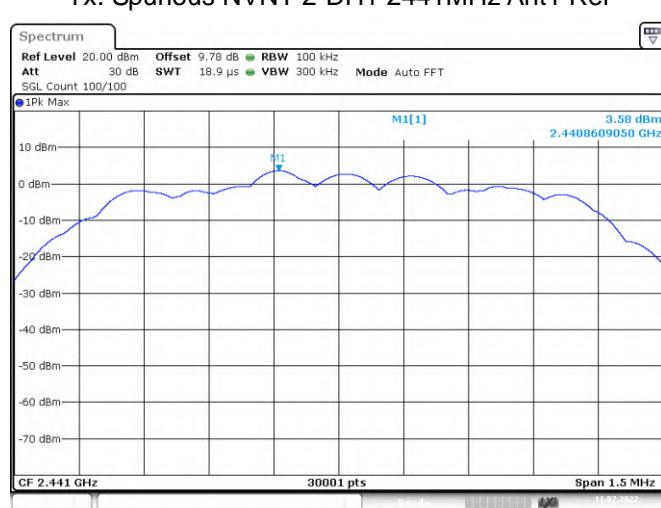
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



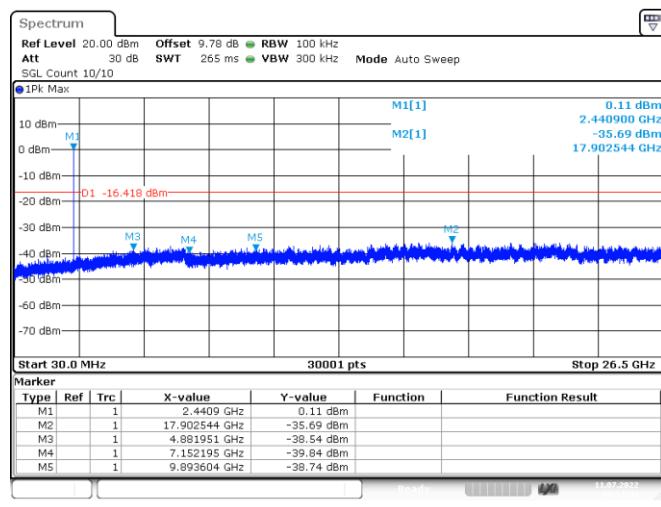
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



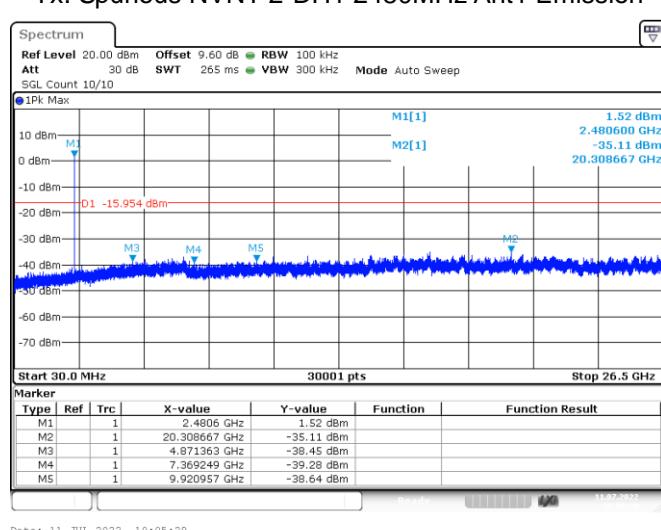
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



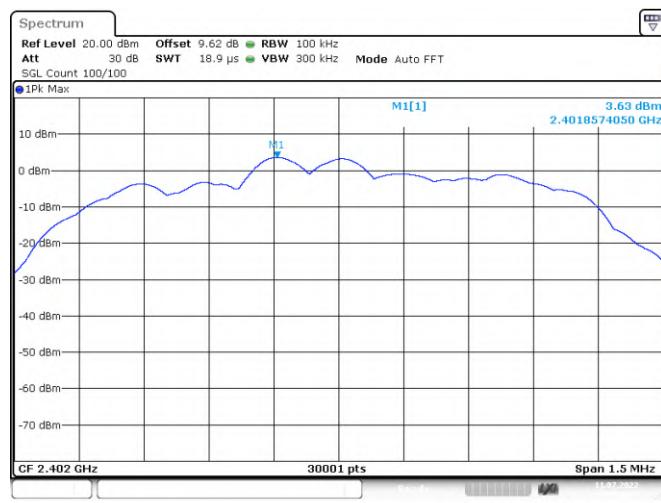
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



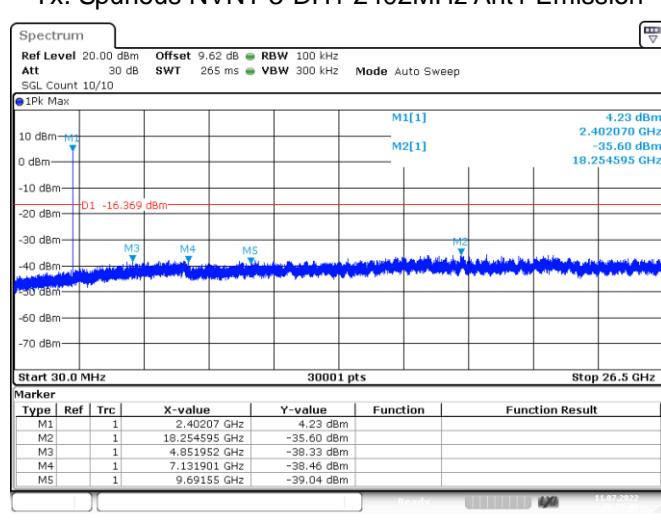
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



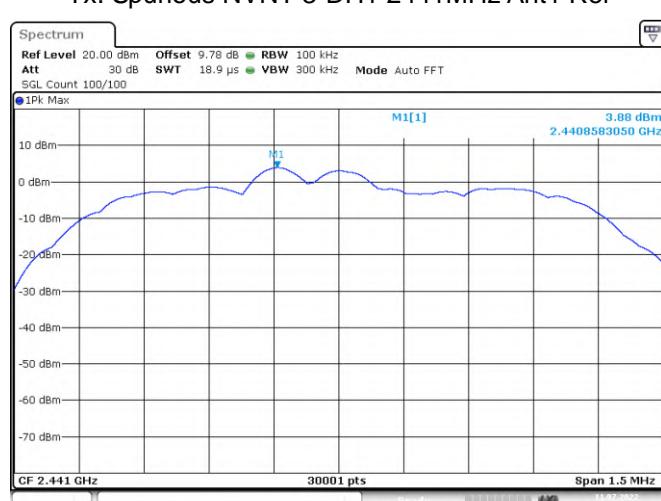
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



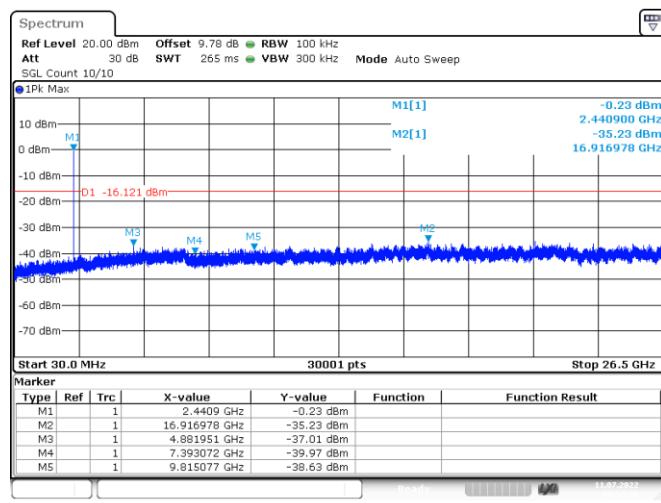
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



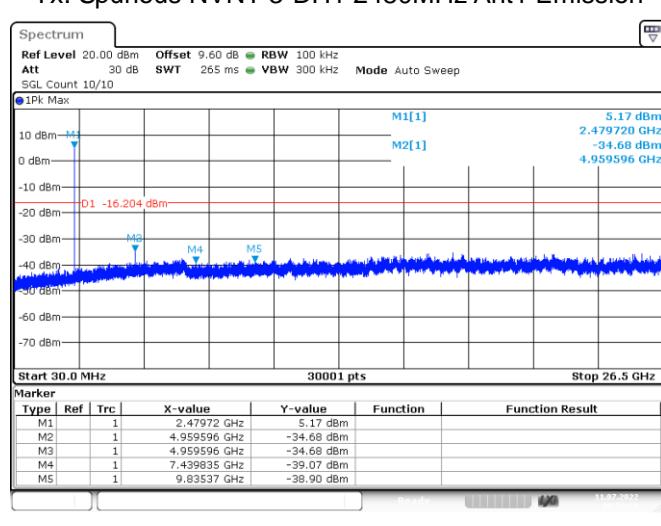
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission



9. Band Edge Compliance

9.1. Limit

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.

9.2. Test Procedure

9.2.1 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

9.2.2 Check the spurious emissions out of band.

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

9.3. Block Diagram of Test Setup

Same as 8.3.

9.4. Test Result

PASS. (See below detailed test data)

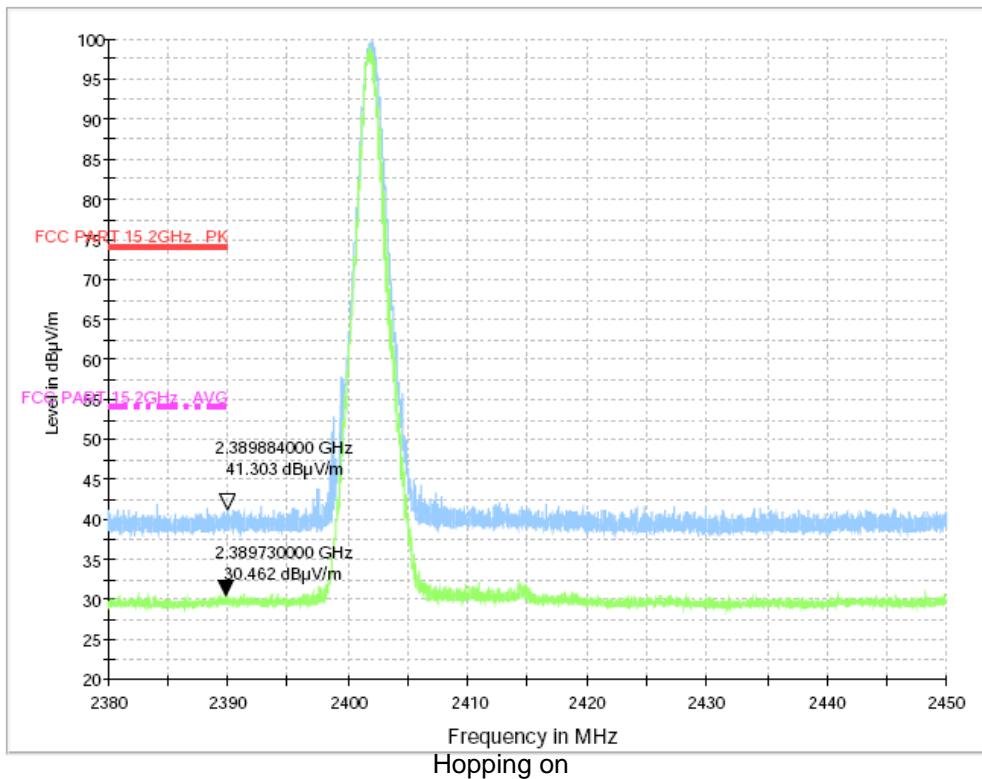
Radiated Method:

Hopping off

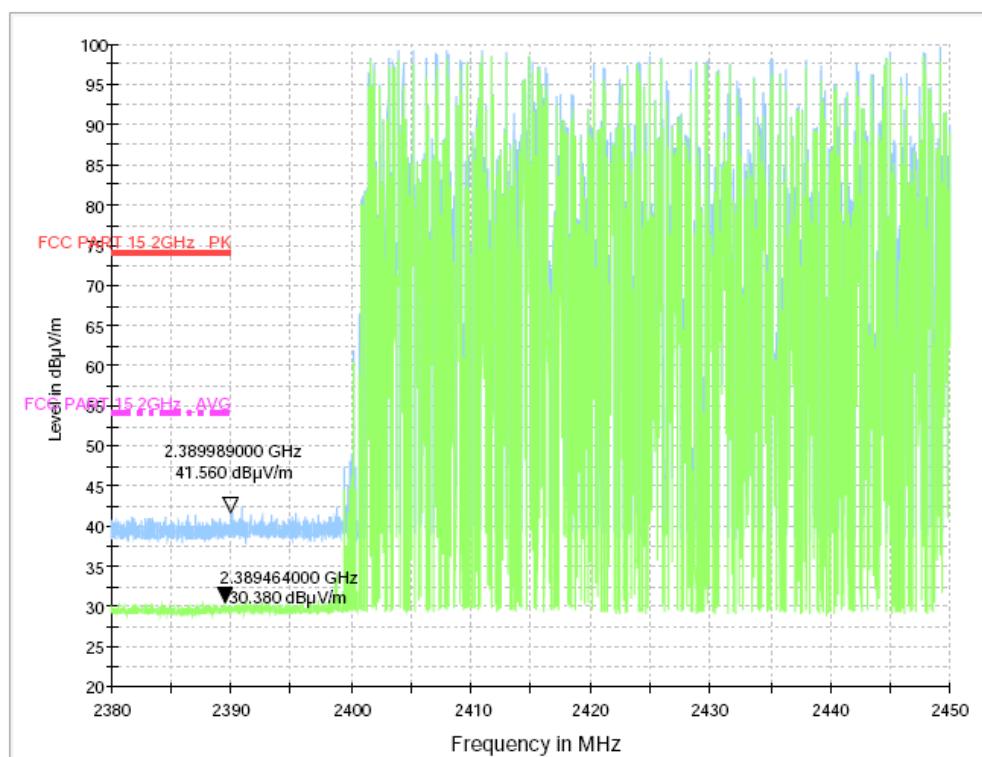
Polarization: Vertical & Horizontal

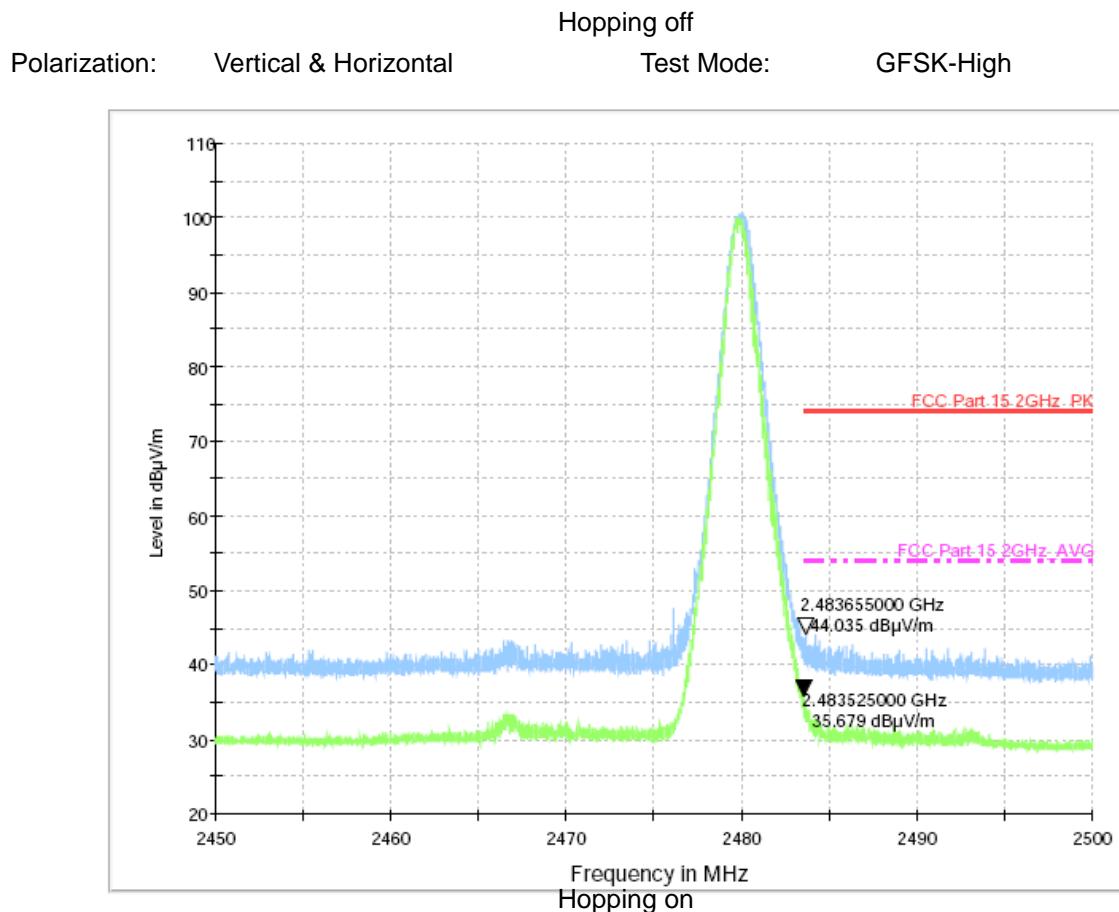
Test Mode:

GFSK-Low

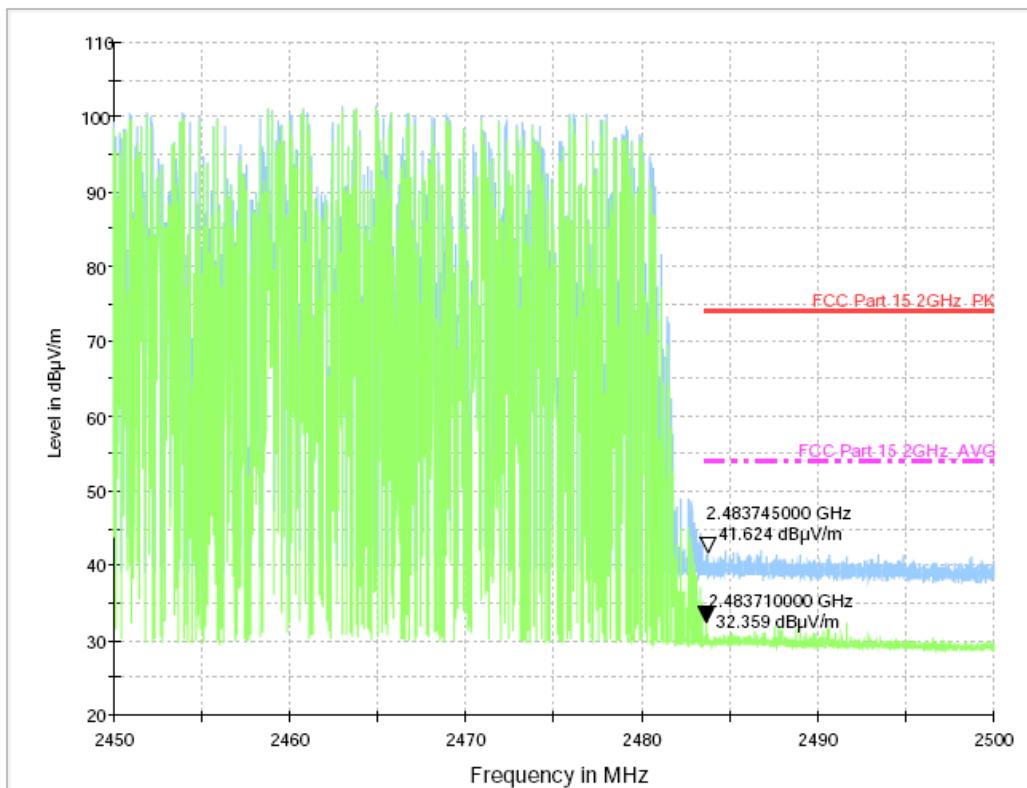


Polarization: Vertical & Horizontal

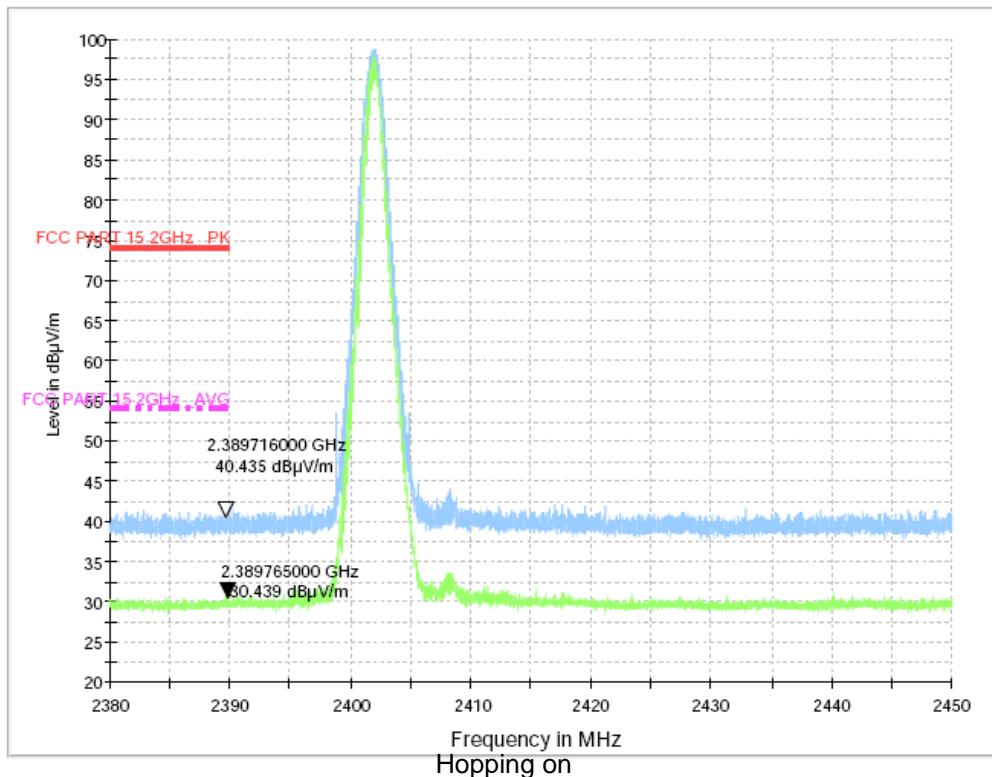




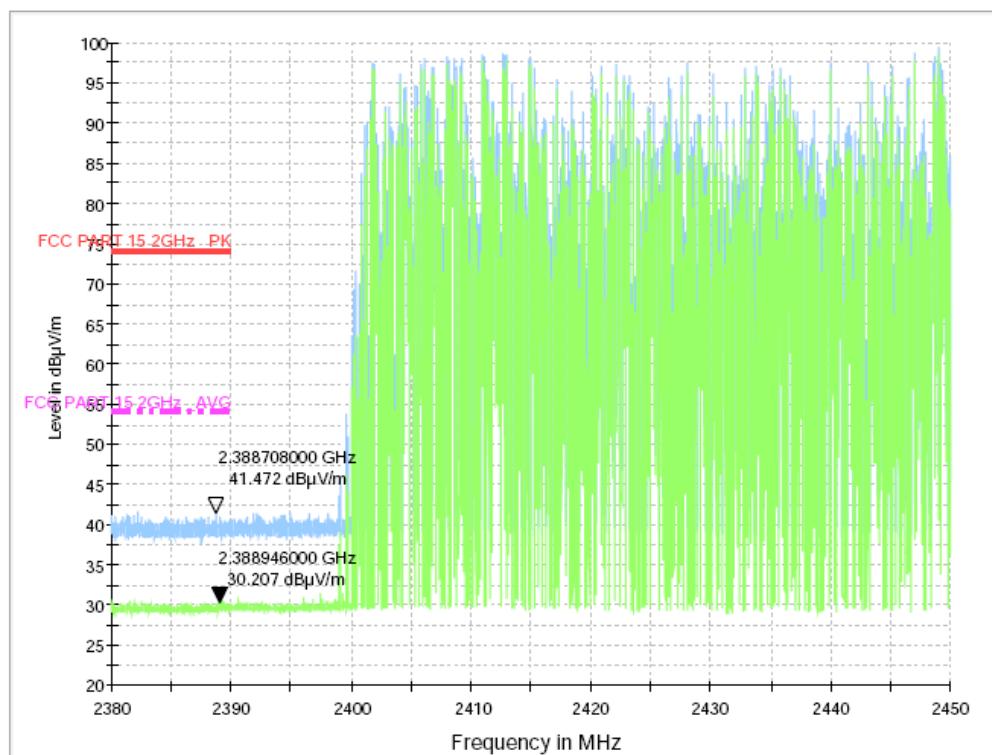
Polarization: Vertical & Horizontal



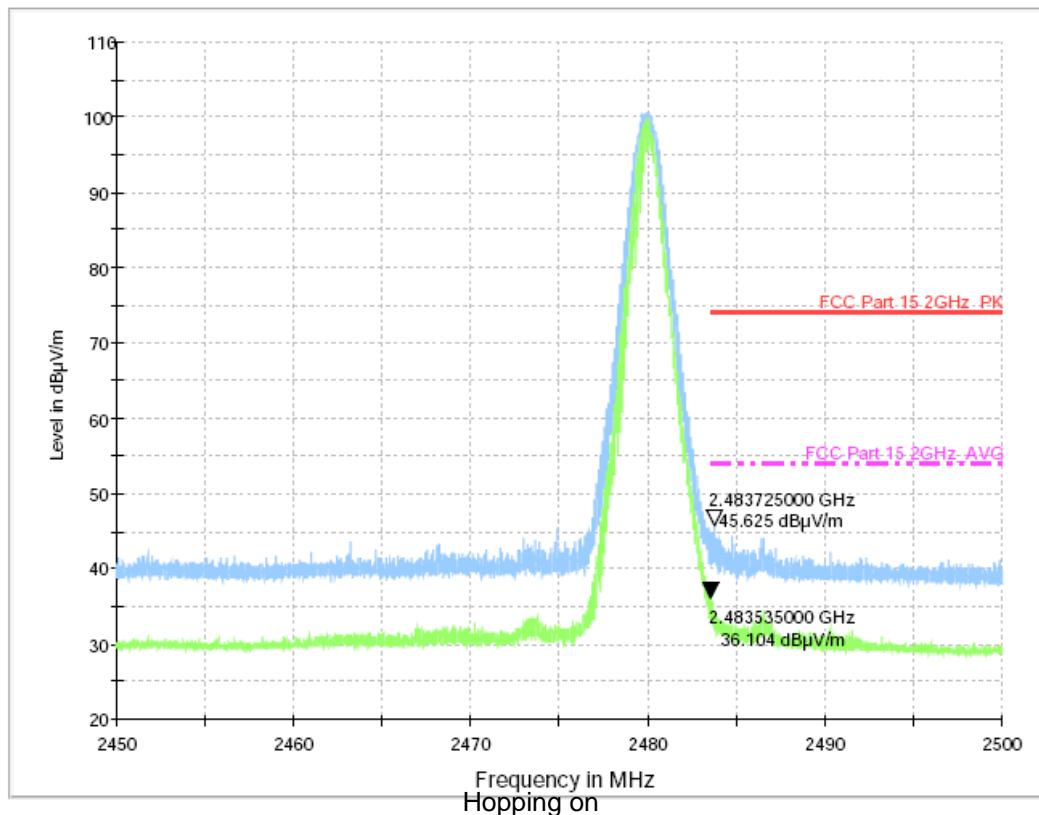
Hopping off
Polarization: Vertical & Horizontal Test Mode: $\pi/4$ DQPSK -Low



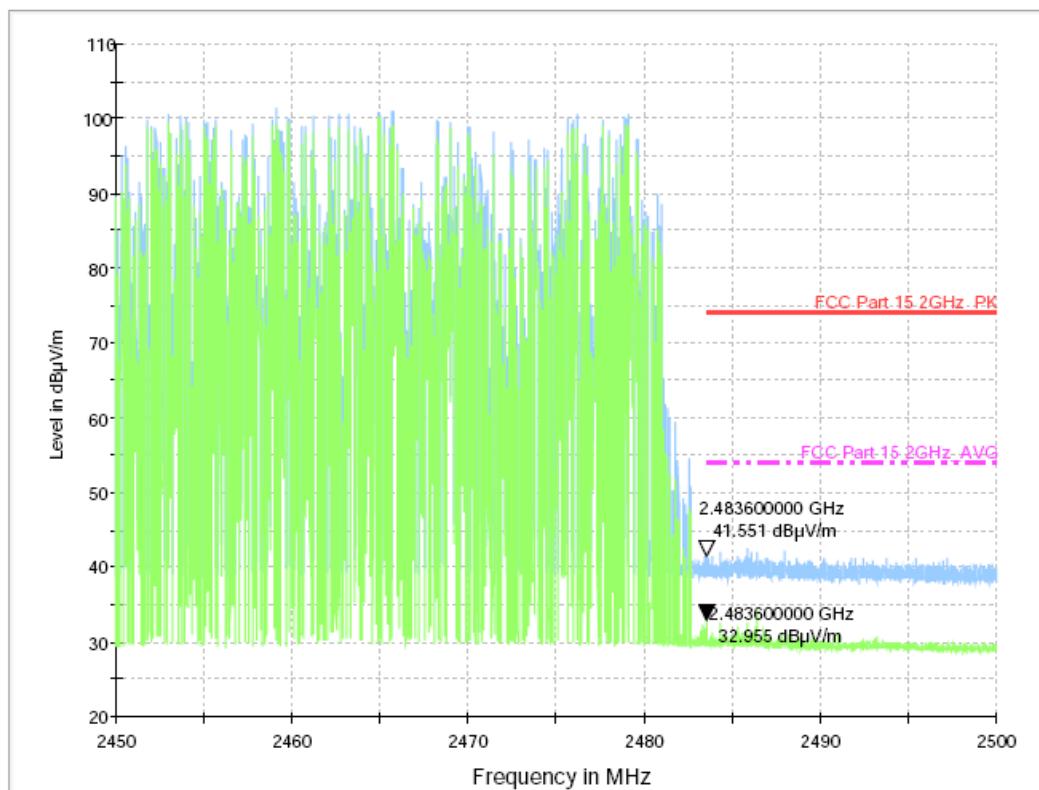
Polarization: Vertical & Horizontal



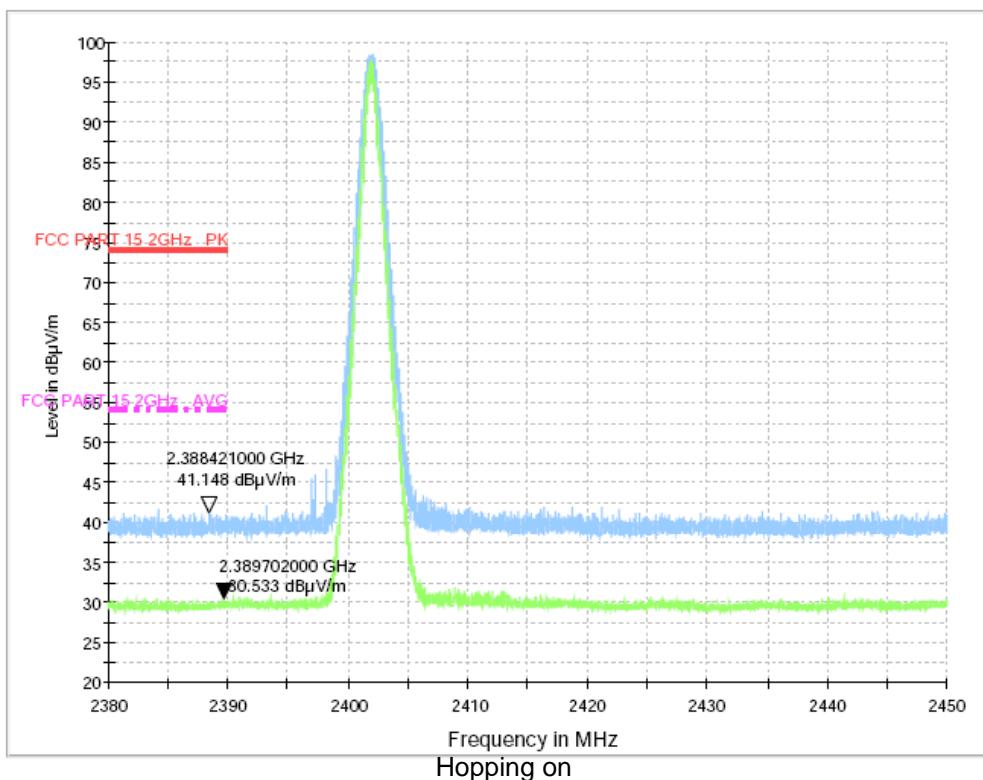
Hopping off
Polarization: Vertical & Horizontal Test Mode: $\pi/4$ DQPSK -High



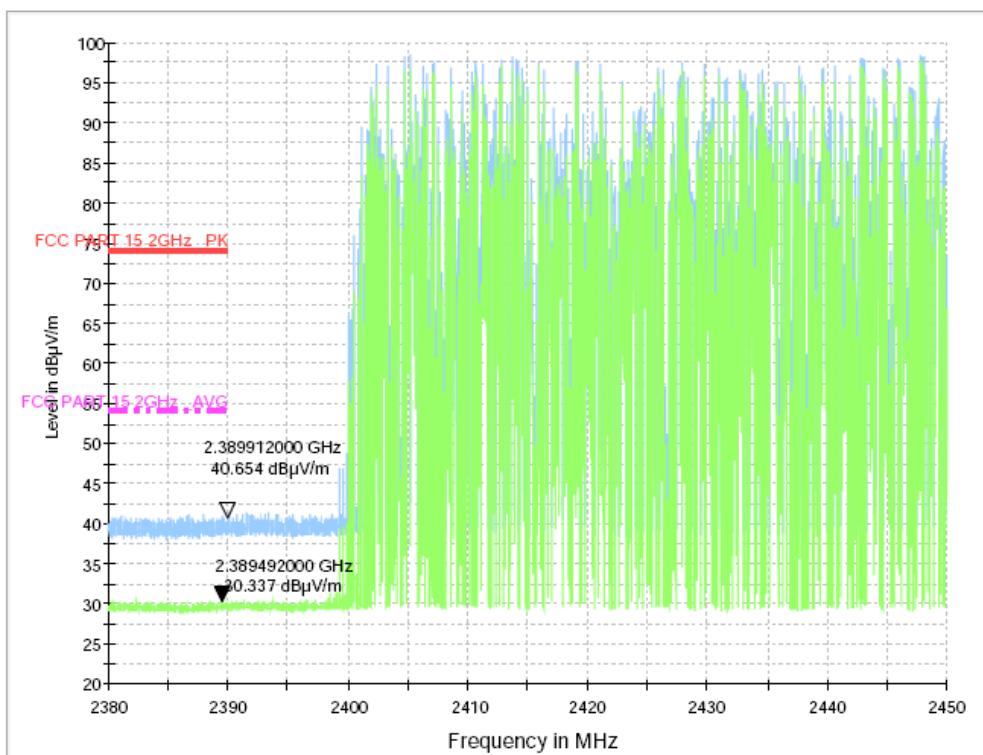
Polarization: Vertical & Horizontal



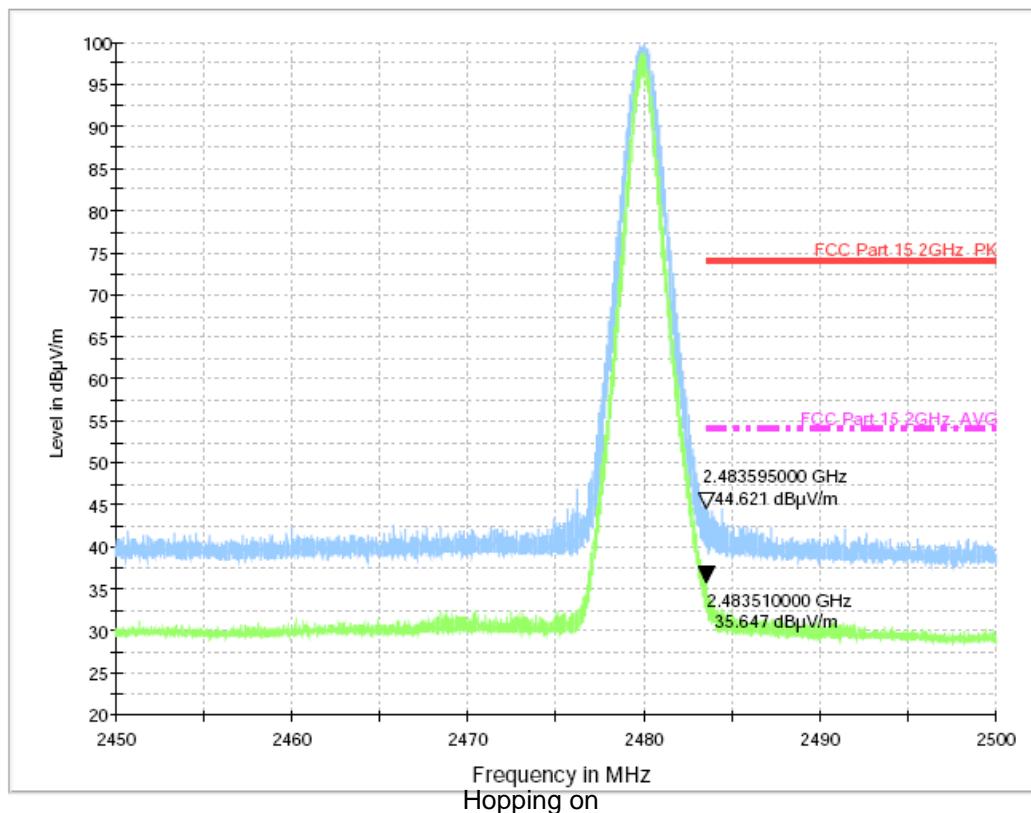
Hopping off
Polarization: Vertical & Horizontal Test Mode: 8-DPSK -Low



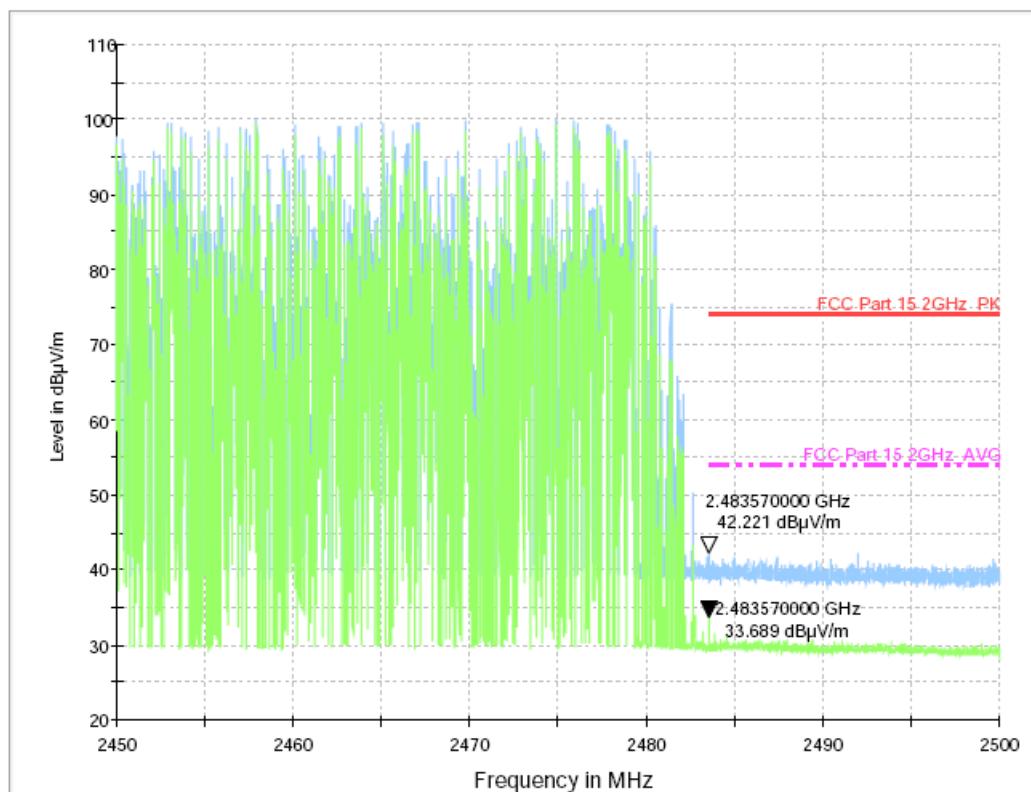
Polarization: Vertical & Horizontal



Hopping off
Polarization: Vertical & Horizontal Test Mode: 8-DPSK -High

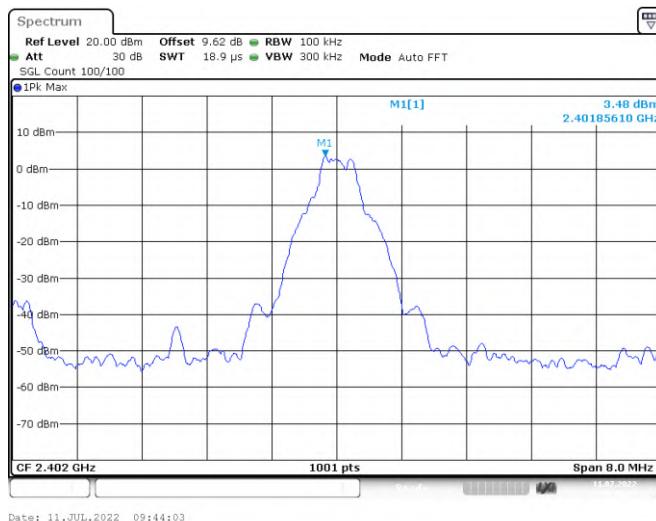


Polarization: Vertical & Horizontal

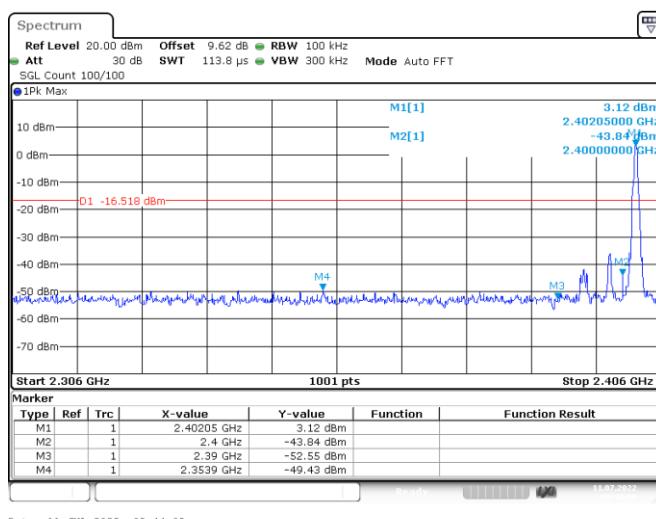


Conducted Method

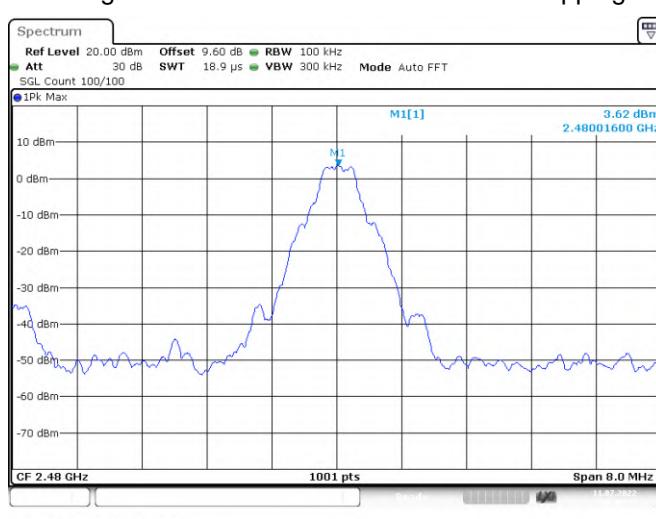
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



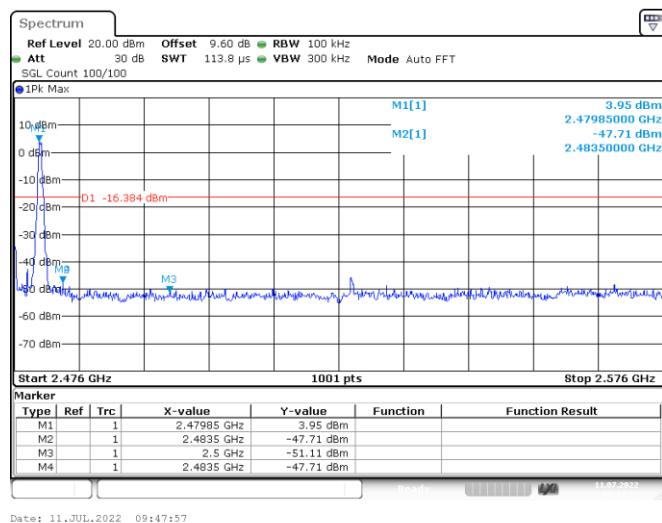
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



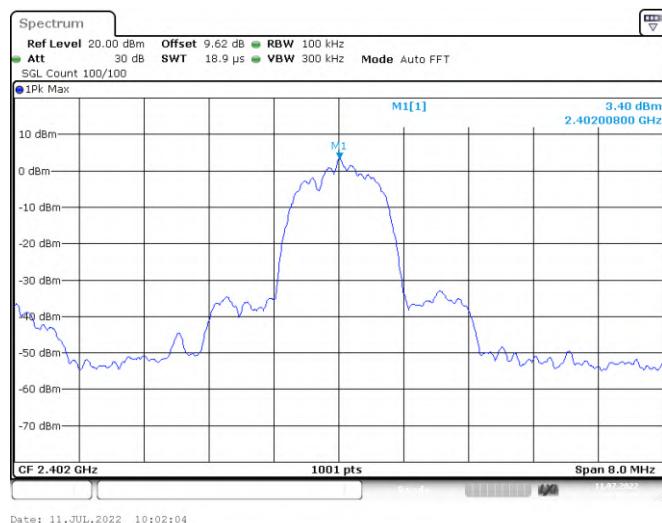
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



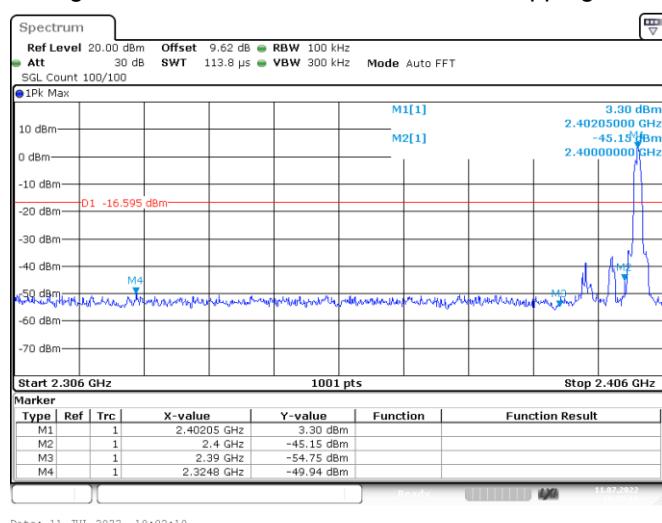
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref



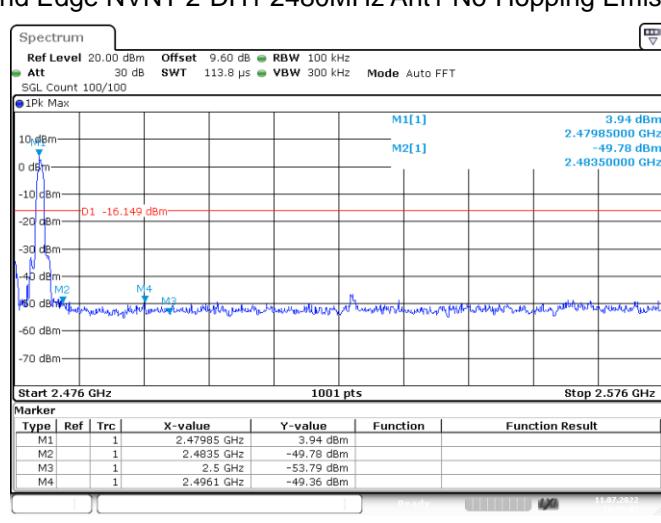
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission



Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Ref



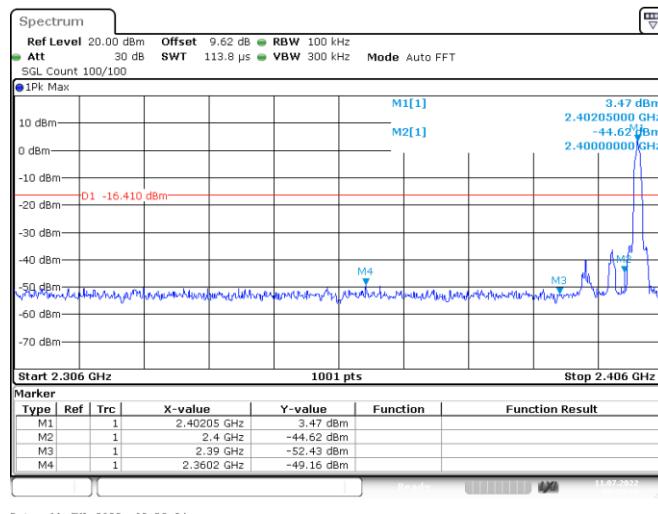
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission



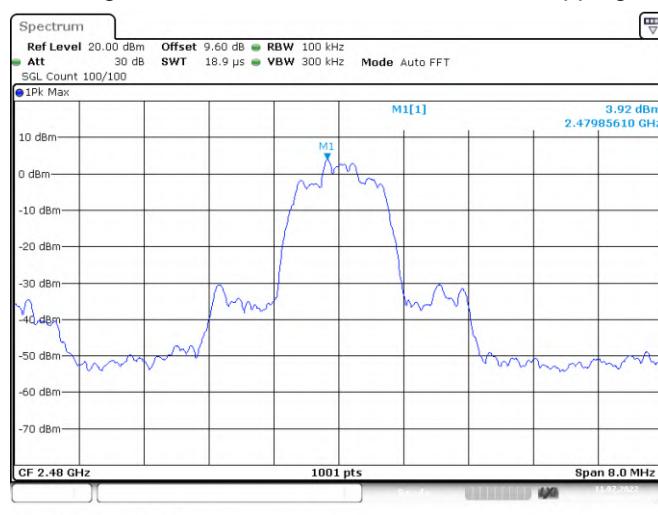
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Ref



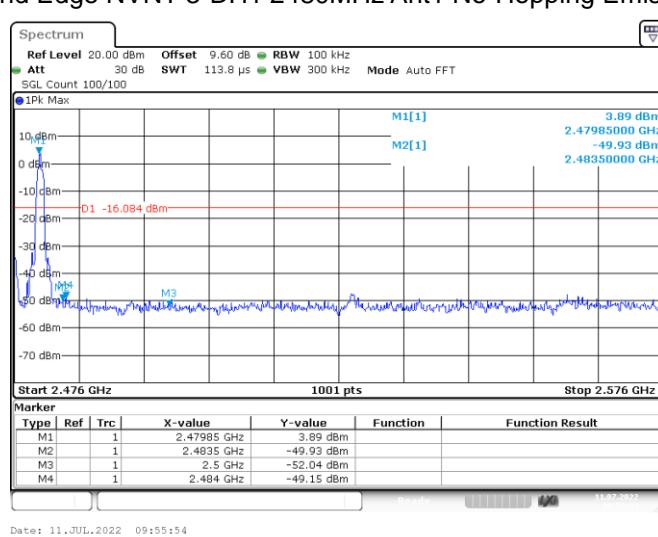
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission



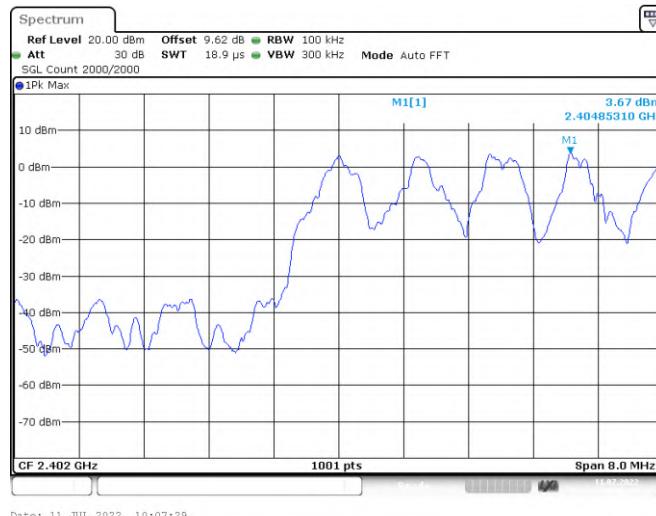
Band Edge NVNT 3-DH1 2480MHz Ant1 No-Hopping Ref



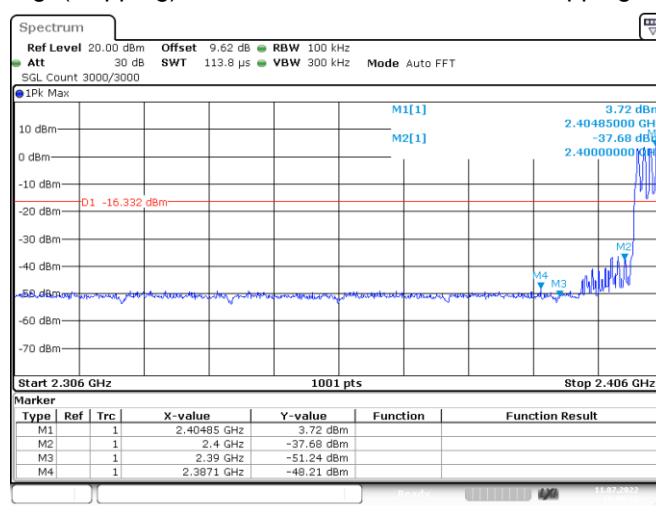
Band Edge NVNT 3-DH1 2480MHz Ant1 No-Hopping Emission



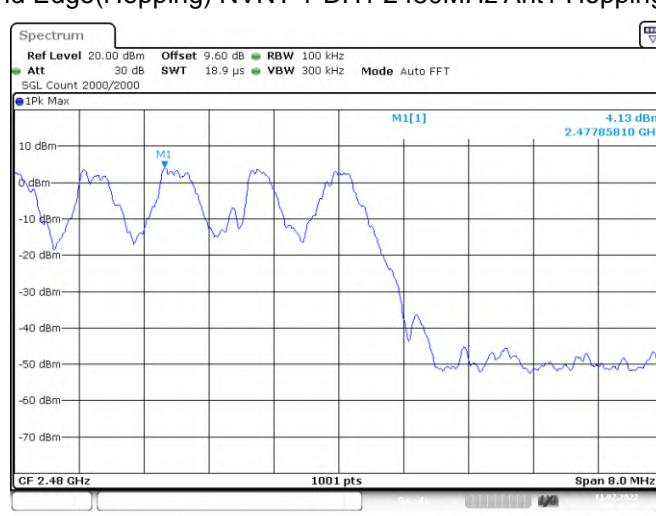
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref



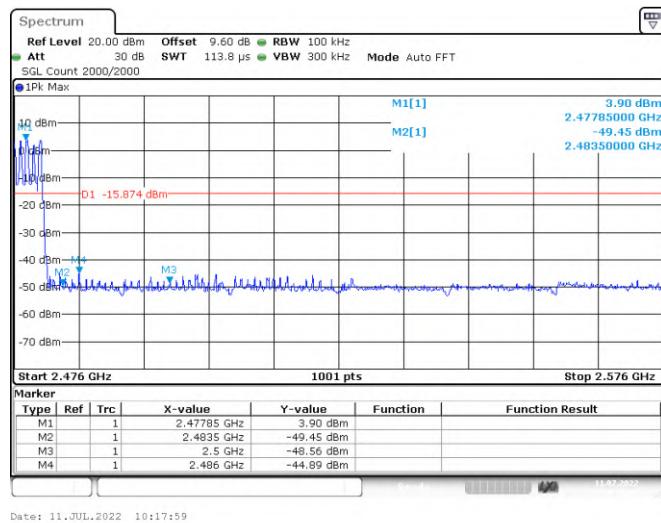
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



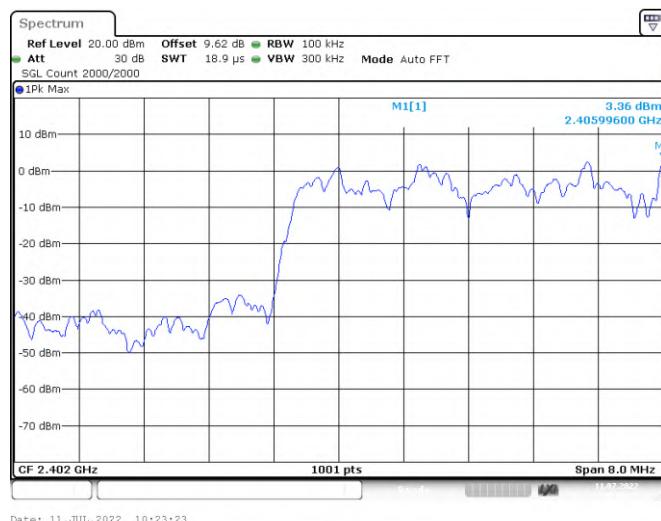
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Ref



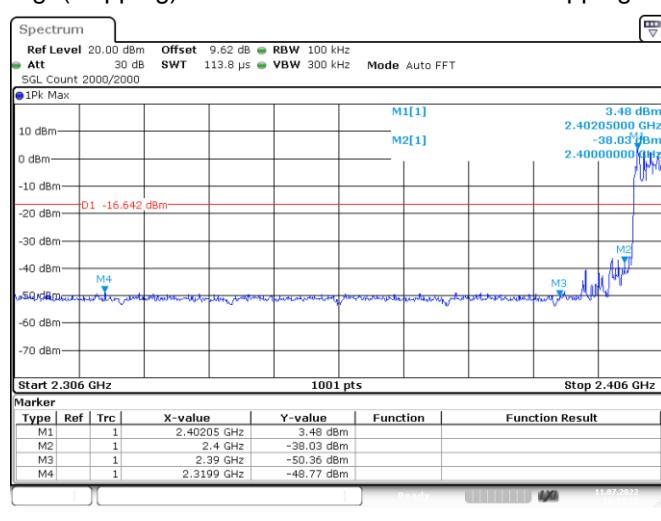
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



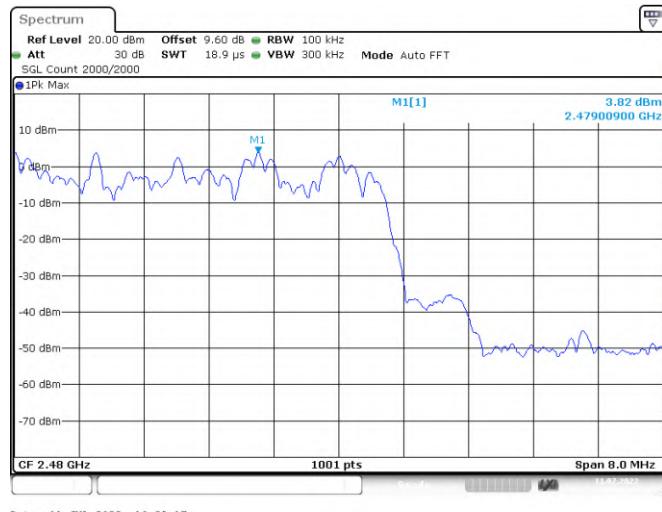
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Ref



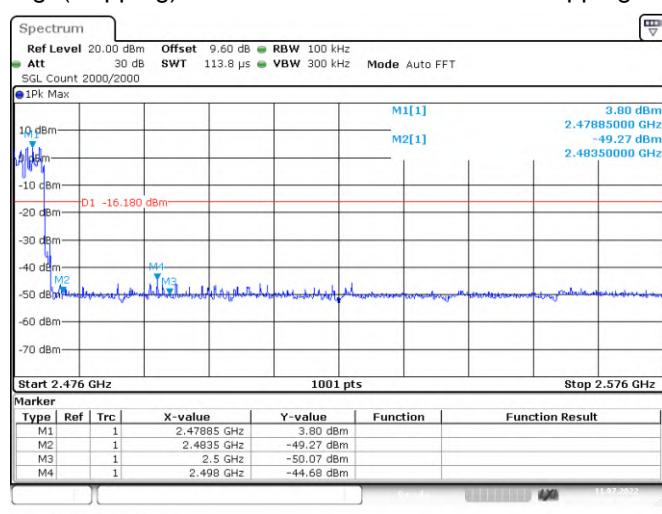
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission



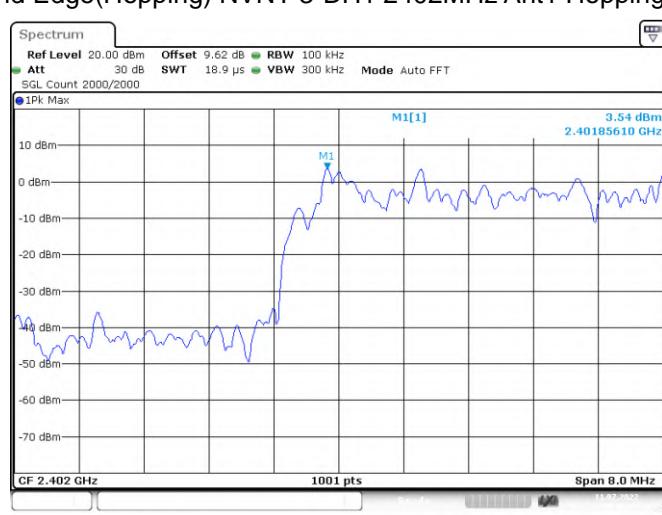
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Ref



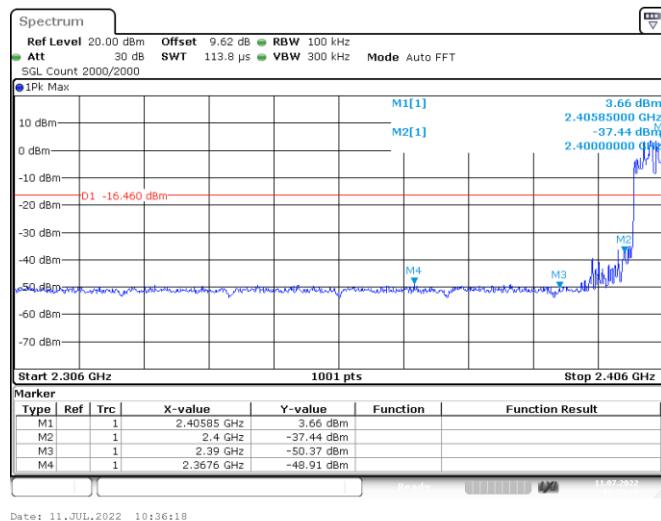
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission



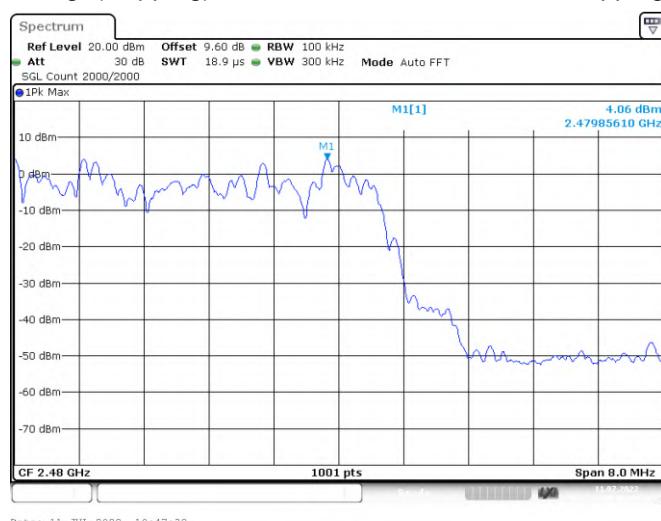
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Ref



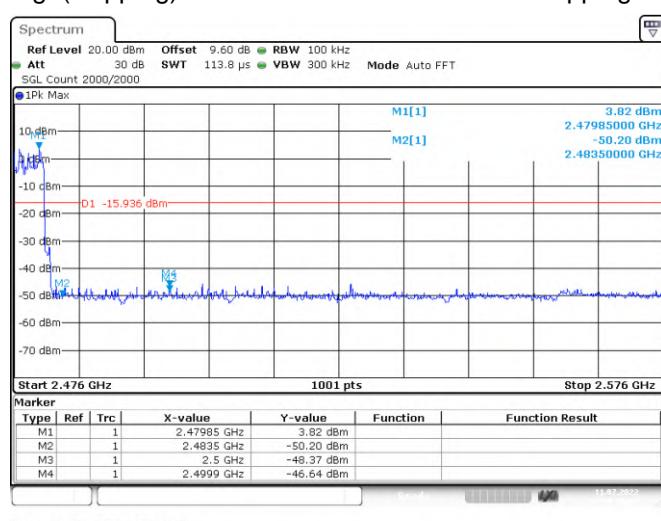
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 3-DH1 2480MHz Ant1 Hopping Ref

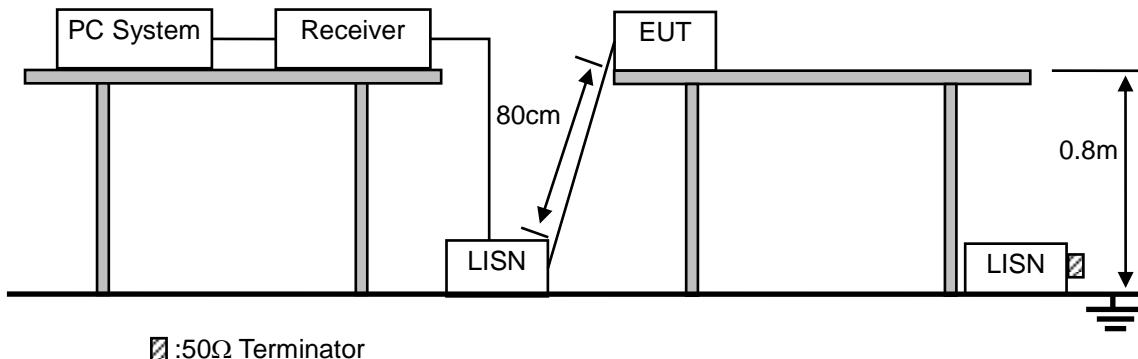


Band Edge(Hopping) NVNT 3-DH1 2480MHz Ant1 Hopping Emission



10. Power Line Conducted Emissions

10.1. Block Diagram of Test Setup



50Ω Terminator

10.2. Limit

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(µV)	Average Level dB(µV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

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

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

10.3. Test Procedure

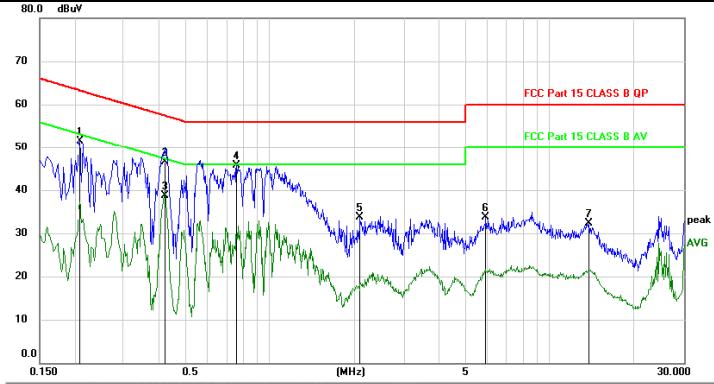
- (1) The EUT was placed on a non-metallic table, 80cm above the ground plane.
- (2) Setup the EUT and simulator as shown in 10.1
- (3) The EUT Power connected to the power mains through a power adapter and a line impedance stabilization network (L.I.S.N1). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N2), this provided a 50-ohm coupling impedance for the EUT (Please refer to the block diagram of the test setup and photographs). Both sides of power line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10 :2013 on conducted Emission test.
- (4) The bandwidth of test receiver is set at 10KHz.
- (5) The frequency range from 150 KHz to 30MHz is checked.

10.4. Test Result

PASS. (See below detailed test data)

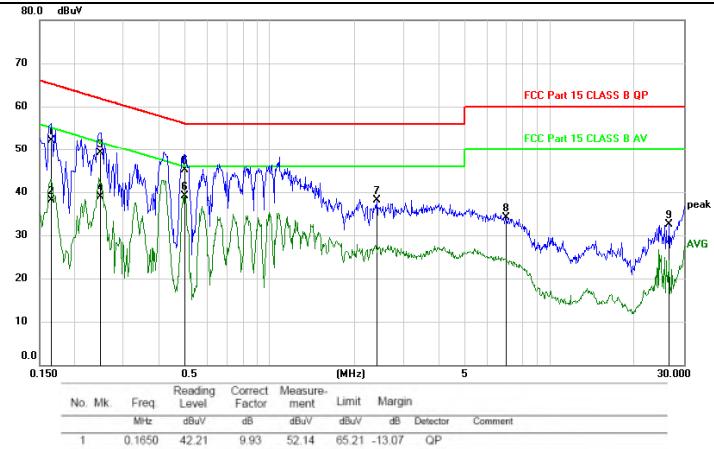
Note: If peak Result comply with AV limit, QP and AV Result is deemed to comply with AV limit

EUT Description	Geodetic GNSS Receiver	Model No.	SG7
Temperature	24°C	Humidity	56%
Pol	Line	Test date	2022.05.10
Test Voltage	AC 120V/ 60Hz	Test mode	GFSK (2441MHz)



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV	Limit dB	Margin dB	Detector	Comment
1	0.2100	41.64	9.93	51.57	63.21	-11.64	peak		
2	0.4230	36.60	9.94	46.54	57.39	-10.85	QP		
3 *	0.4230	28.76	9.94	38.70	47.39	-8.69	AVG		
4	0.7590	35.77	9.94	45.71	56.00	-10.29	peak		
5	2.0970	23.88	9.88	33.76	56.00	-22.24	peak		
6	5.9279	23.59	10.08	33.67	60.00	-26.33	peak		
7	13.8330	21.93	10.30	32.23	60.00	-27.77	peak		

Pol	Neutral
------------	---------



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV	Limit dB	Margin dB	Detector	Comment
1	0.1650	42.21	9.93	52.14	65.21	-13.07	QP		
2	0.1650	28.27	9.93	38.20	55.21	-17.01	AVG		
3	0.2490	39.19	9.97	49.16	61.79	-12.63	QP		
4	0.2490	28.93	9.97	38.90	51.79	-12.89	AVG		
5	0.4980	35.23	9.96	45.19	56.03	-10.84	QP		
6 *	0.4980	29.15	9.96	39.11	46.03	-6.92	AVG		
7	2.4090	28.30	9.90	38.20	56.00	-17.80	peak		
8	6.9810	24.05	10.12	34.17	60.00	-25.83	peak		
9	26.6130	21.92	10.51	32.43	60.00	-27.57	peak		

*:Maximum data

x:Over limit !:over margin

Note: Measurement=Reading Level+Correc Factor. Factor=(LISN or ISN or PLC or Current Probe)Factor+Cable

Remark: All modes have been tested, and only worst data of GFSK (2441MHz) was listed in this report.

11. Antenna Requirements

11.1. Limit

For intentional device, according to FCC 47 CFR Section 15.203, 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. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

11.2. Result

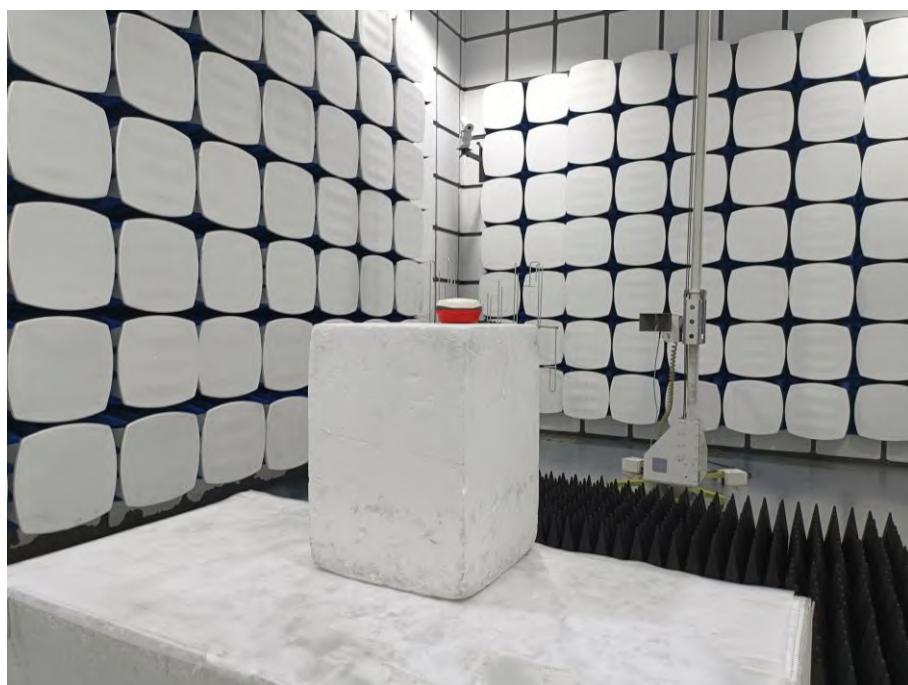
The EUT antenna is internal antenna. It complies with the standard requirement.

12. Test Setup Photo

12.1. Radiated Emission Test (In Semi Anechoic Chamber 30MHz~1GHz)



12.2. Radiated Emission Test (In Semi Anechoic Chamber above 1GHz)



12.3.Conducted disturbance at mains terminals test



13. Photographs Of The EUT

Please refer to report A2204325-C01-R02.

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