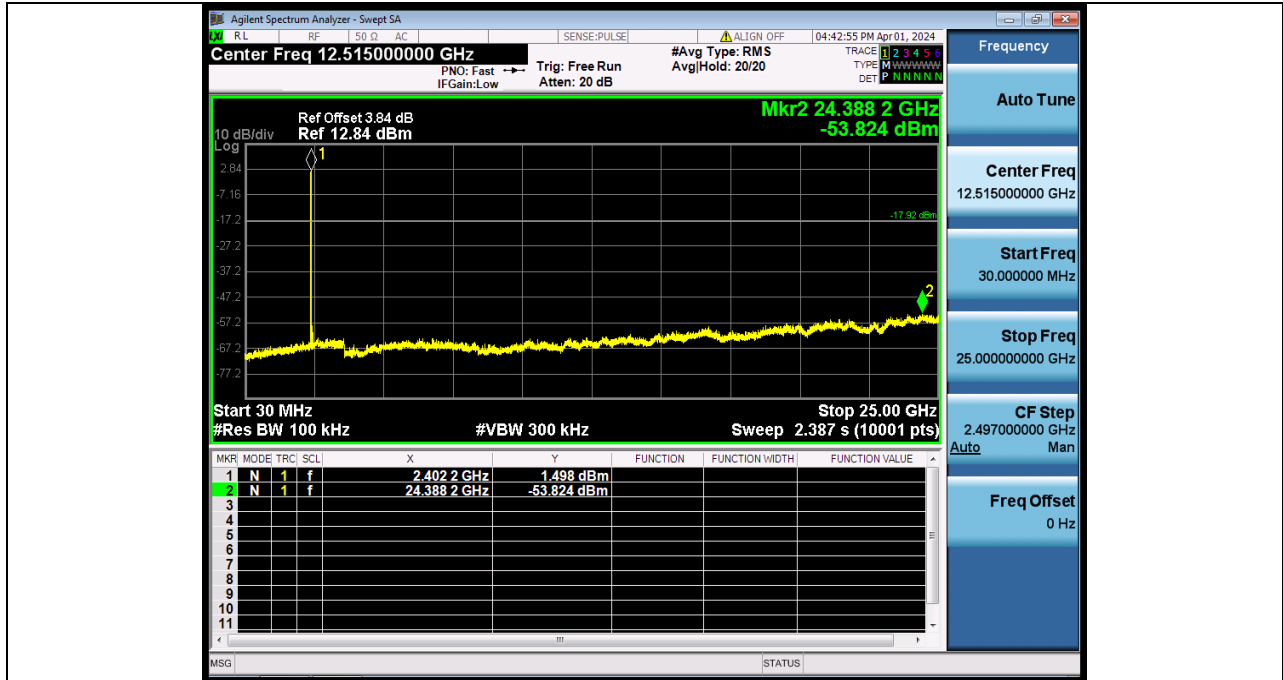
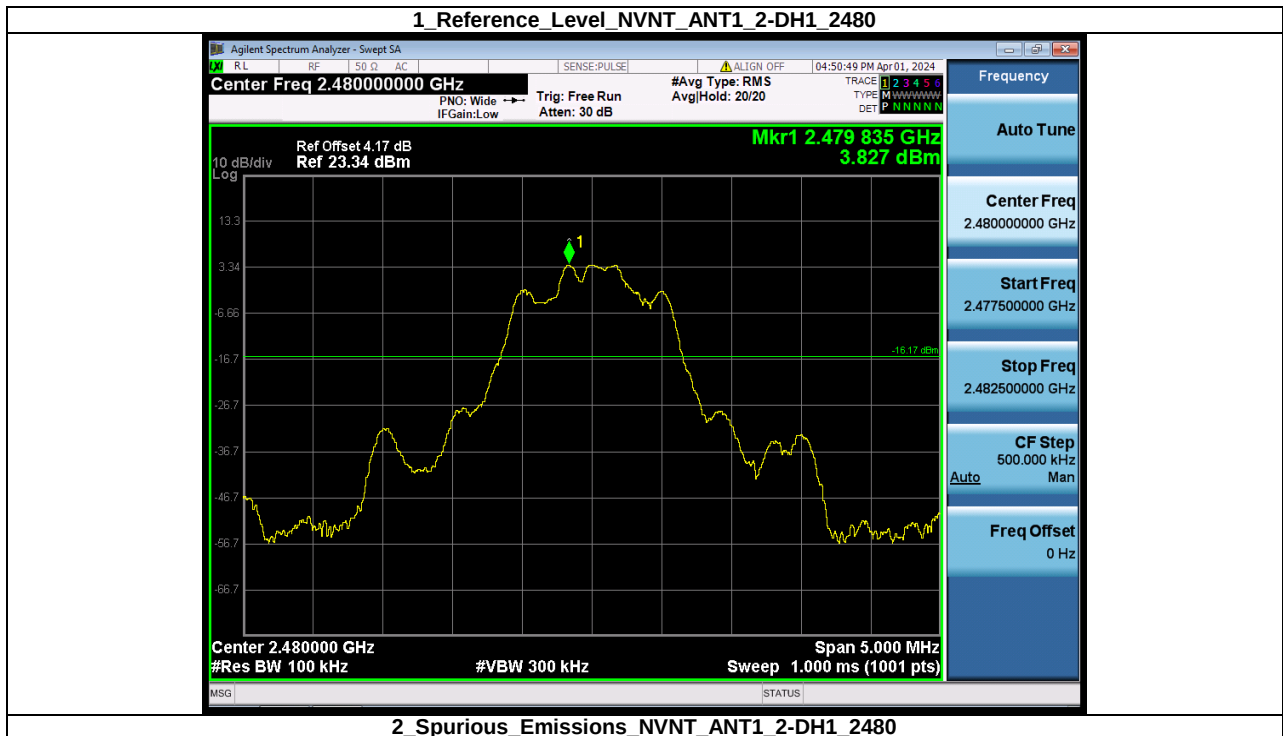
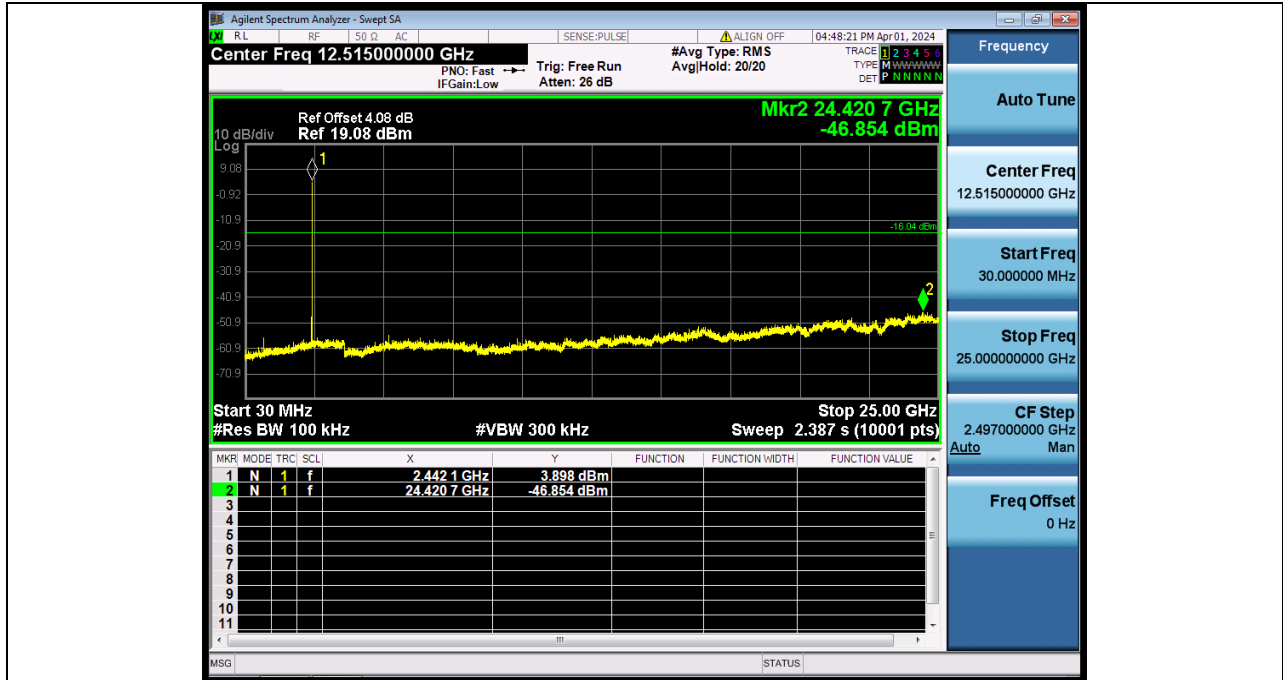


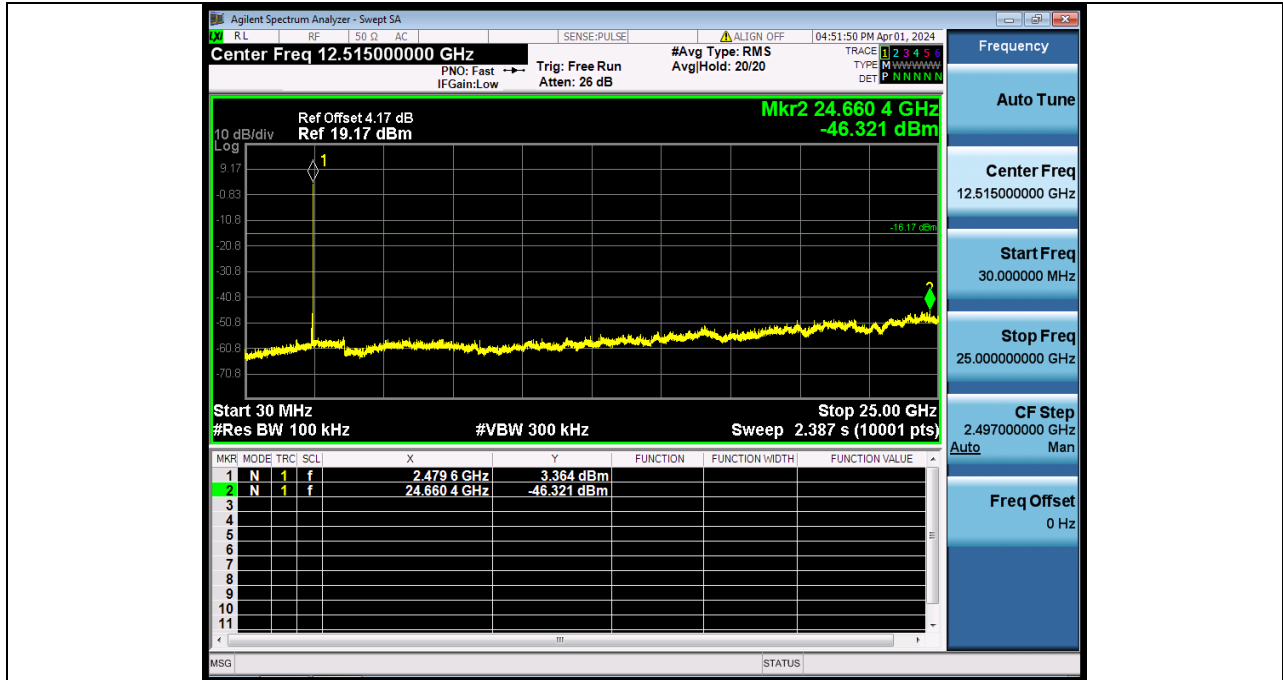


1 Reference_Level_NVNT_ANT1_2-DH1_2441



2 Spurious_Emissions_NVNT_ANT1_2-DH1_2441

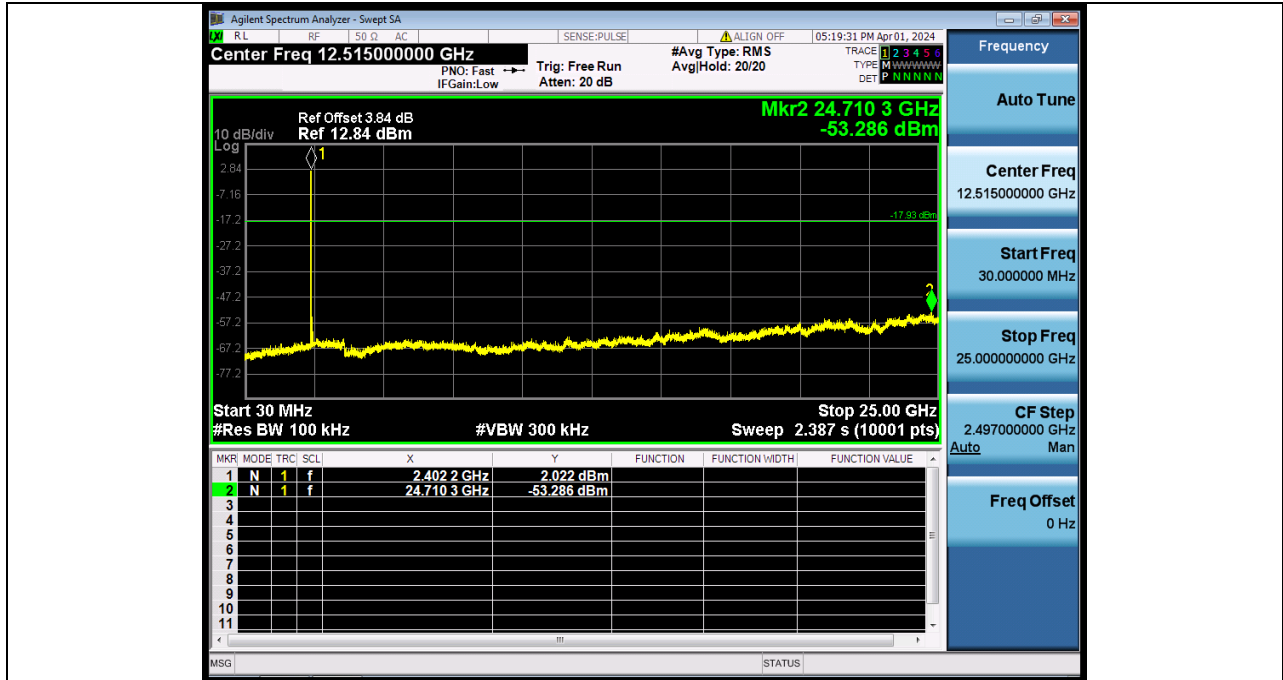




1 Reference_Level_NVNT_ANT1_3-DH1_2402



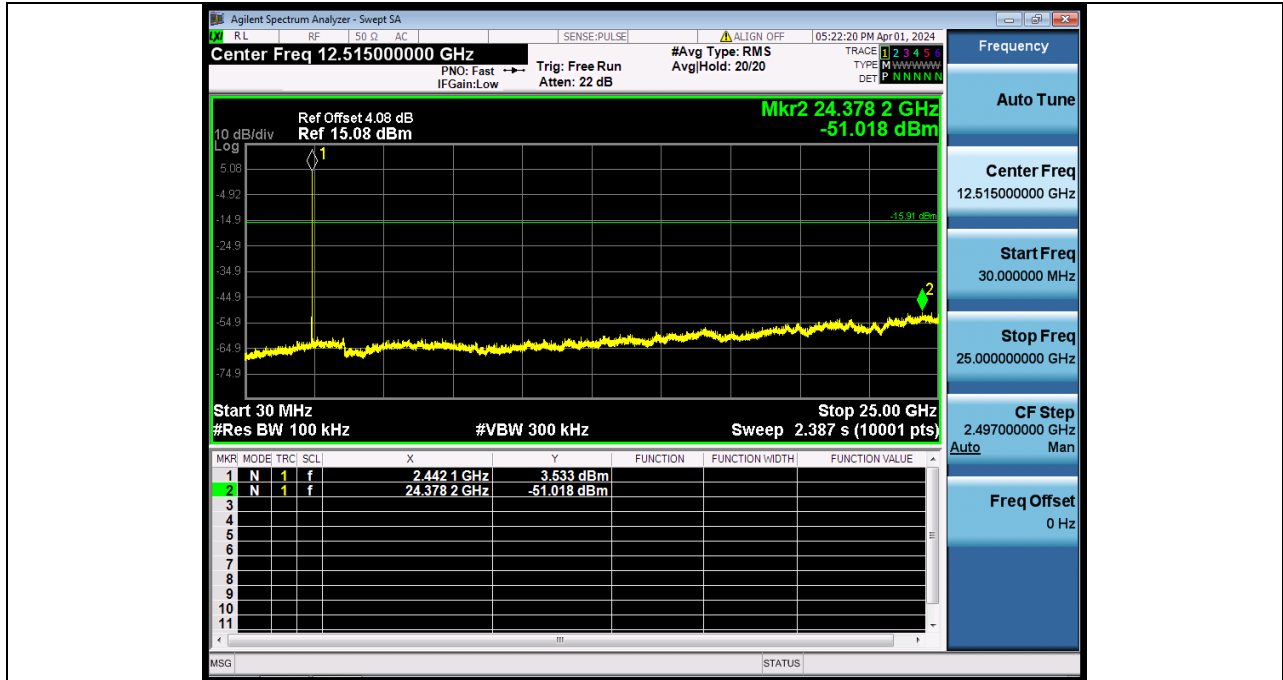
2 Spurious_Emissions_NVNT_ANT1_3-DH1_2402



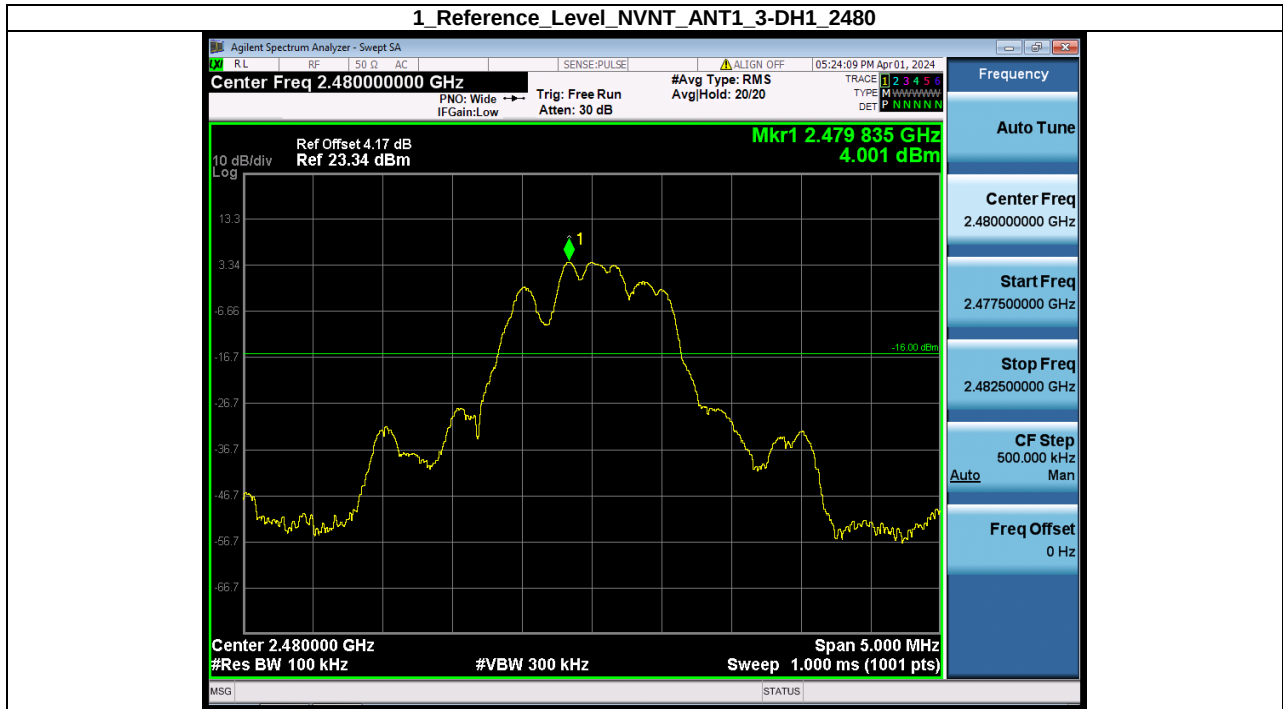
1 Reference_Level_NVNT_ANT1_3-DH1_2441



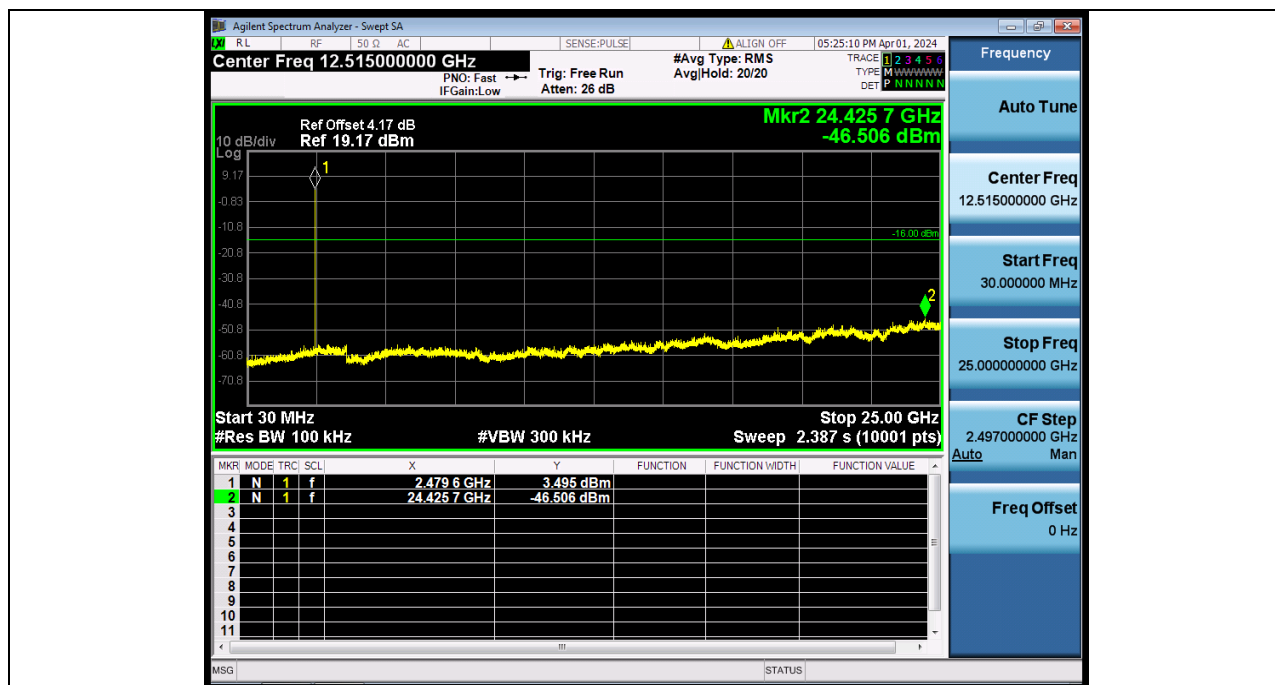
2 Spurious_Emissions_NVNT_ANT1_3-DH1_2441



1 Reference_Level_NVNT_ANT1_3-DH1_2480

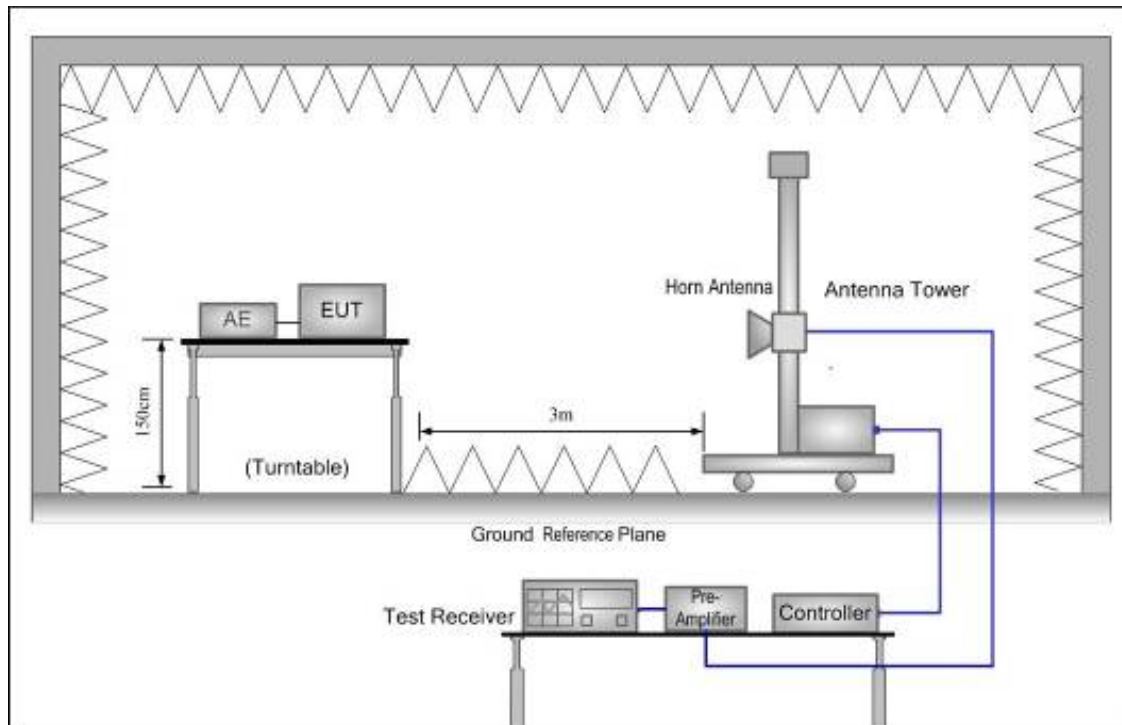


2 Spurious Emissions_NVNT_ANT1_3-DH1_2480



9. BAND EDGE COMPLIANCE

9.1. Block Diagram of Test Setup



9.2. Limit

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

9.3. Test Procedure

All restriction band and non- restriction band have been tested , only worse case is reported.

9.4. Test Result

PASS. (See below detailed test data)

Test Results					PASS			
Frequency Range					2310MHz~2410MHz			
Test Mode					GFSK TX 2402MHz			
N o.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	2390	H	72.27	-21.47	50.80	74.00	-23.20	Peak
2	2390	H	--	-21.47	--	54.00	--	Avg
3	2400	H	75.58	-26.12	49.46	74.00	-24.54	Peak
4	2400	H	--	-26.12	--	54.00	--	Avg
1	2390	V	69.92	-21.47	48.45	74.00	-25.55	Peak
2	2390	V	--	-21.47	--	54.00	--	Avg
3	2400	V	77.87	-26.12	51.75	74.00	-22.25	Peak
4	2400	V	--	-26.12	--	54.00	--	Avg
Test Results					PASS			
Frequency Range					2450MHz~2550MHz			
Test Mode					GFSK TX 2480MHz			
1	2483.5	H	77.08	-25.29	51.79	74.00	-22.21	Peak
2	2483.5	H	--	-25.29	--	54.00	--	Avg
1	2483.5	V	73.38	-25.29	48.09	74.00	-25.91	Peak
2	2483.5	V	--	-25.29	--	54.00	--	Avg
Note: 1. Means other frequency and mode comply with standard requirements and at least have 20dB margin. 2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain. Result=Reading + Correct Factor. Margin= Result-Limit. 3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.								

Test Results					PASS			
Frequency Range					2310MHz~2410MHz			
Test Mode					$\pi/4$ DQPSK TX 2402MHz			
N o.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	2390	H	70.93	-21.47	49.46	74.00	-24.54	Peak
2	2390	H	--	-21.47	--	54.00	--	Avg
3	2400	H	77.22	-26.12	51.10	74.00	-22.90	Peak
4	2400	H	--	-26.12	--	54.00	--	Avg
1	2390	V	70.59	-21.47	49.12	74.00	-24.88	Peak
2	2390	V	--	-21.47	--	54.00	--	Avg
3	2400	V	77.61	-26.12	51.49	74.00	-22.51	Peak
4	2400	V	--	-26.12	--	54.00	--	Avg
Test Results					PASS			
Frequency Range					2450MHz~2550MHz			
Test Mode					$\pi/4$ DQPSK TX 2480MHz			
1	2483.5	H	75.30	-25.29	50.01	74.00	-23.99	Peak
2	2483.5	H	--	-25.29	--	54.00	--	Avg
1	2483.5	V	73.64	-25.29	48.35	74.00	-25.65	Peak
2	2483.5	V	--	-25.29	--	54.00	--	Avg
Note: 1. Means other frequency and mode comply with standard requirements and at least have 20dB margin. 2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain. Result=Reading + Correct Factor. Margin= Result-Limit. 3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.								

Test Results					PASS			
Frequency Range					2310MHz~2410MHz			
Test Mode					8DPSK TX 2402MHz			
N o.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	2390	H	71.10	-21.47	49.63	74.00	-24.37	Peak
2	2390	H	--	-21.47	--	54.00	--	Avg
3	2400	H	75.73	-26.12	49.61	74.00	-24.39	Peak
4	2400	H	--	-26.12	--	54.00	--	Avg
1	2390	V	68.06	-21.47	46.59	74.00	-27.41	Peak
2	2390	V	--	-21.47	--	54.00	--	Avg
3	2400	V	77.44	-26.12	51.32	74.00	-22.68	Peak
4	2400	V	--	-26.12	--	54.00	--	Avg
Test Results					PASS			
Frequency Range					2450MHz~2550MHz			
Test Mode					8DPSK TX 2480MHz			
1	2483.5	H	73.53	-25.29	48.24	74.00	-25.76	Peak
2	2483.5	H	--	-25.29	--	54.00	--	Avg
1	2483.5	V	75.43	-25.29	50.14	74.00	-23.86	Peak
2	2483.5	V	--	-25.29	--	54.00	--	Avg
Note: 1. Means other frequency and mode comply with standard requirements and at least have 20dB margin. 2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain. Result=Reading + Correct Factor. Margin= Result-Limit. 3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.								

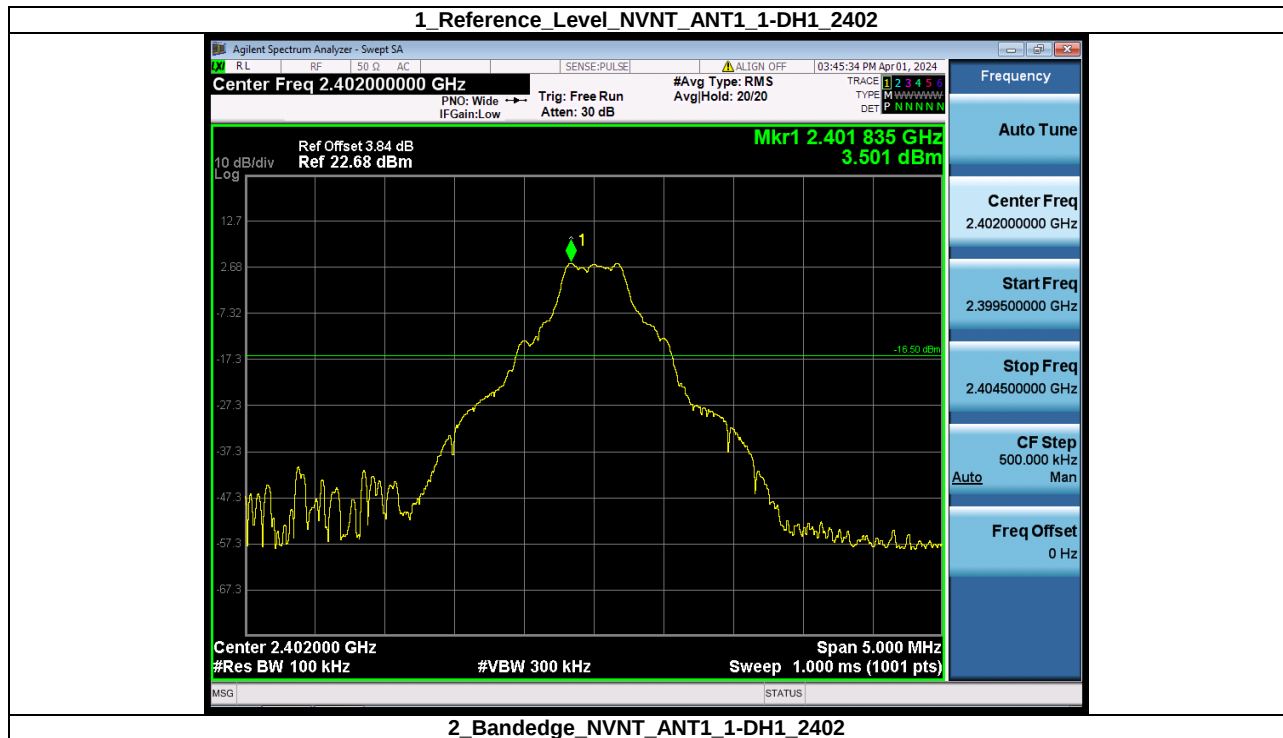
Test Results					PASS			
Frequency Range					2310MHz~2410MHz			
Test Mode					GFSK Hopping			
N o.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	2390	H	72.13	-21.47	50.66	74.00	-23.34	Peak
2	2390	H	--	-21.47	--	54.00	--	Avg
3	2400	H	75.52	-26.12	49.40	74.00	-24.60	Peak
4	2400	H	--	-26.12	--	54.00	--	Avg
1	2390	V	70.42	-21.47	48.95	74.00	-25.05	Peak
2	2390	V	--	-21.47	--	54.00	--	Avg
3	2400	V	76.70	-26.12	50.58	74.00	-23.42	Peak
4	2400	V	--	-26.12	--	54.00	--	Avg
Test Results					PASS			
Frequency Range					2450MHz~2550MHz			
Test Mode					GFSK Hopping			
1	2483.5	H	75.39	-25.29	50.10	74.00	-23.90	Peak
2	2483.5	H	--	-25.29	--	54.00	--	Avg
1	2483.5	V	75.21	-25.29	49.92	74.00	-24.08	Peak
2	2483.5	V	--	-25.29	--	54.00	--	Avg
Note: 1. Means other frequency and mode comply with standard requirements and at least have 20dB margin. 2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain. Result=Reading + Correct Factor. Margin= Result-Limit. 3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.								

Test Results					PASS			
Frequency Range					2310MHz~2410MHz			
Test Mode					$\pi/4$ DQPSK Hopping			
N o.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	2390	H	73.32	-21.47	51.85	74.00	-22.15	Peak
2	2390	H	--	-21.47	--	54.00	--	Avg
3	2400	H	78.15	-26.12	52.03	74.00	-21.97	Peak
4	2400	H	--	-26.12	--	54.00	--	Avg
1	2390	V	67.73	-21.47	46.26	74.00	-27.74	Peak
2	2390	V	--	-21.47	--	54.00	--	Avg
3	2400	V	78.02	-26.12	51.90	74.00	-22.10	Peak
4	2400	V	--	-26.12	--	54.00	--	Avg
Test Results					PASS			
Frequency Range					2450MHz~2550MHz			
Test Mode					$\pi/4$ DQPSK Hopping			
1	2483.5	H	74.29	-25.29	49.00	74.00	-25.00	Peak
2	2483.5	H	--	-25.29	--	54.00	--	Avg
1	2483.5	V	75.00	-25.29	49.71	74.00	-24.29	Peak
2	2483.5	V	--	-25.29	--	54.00	--	Avg
Note: 1. Means other frequency and mode comply with standard requirements and at least have 20dB margin. 2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain. Result=Reading + Correct Factor. Margin= Result-Limit. 3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.								

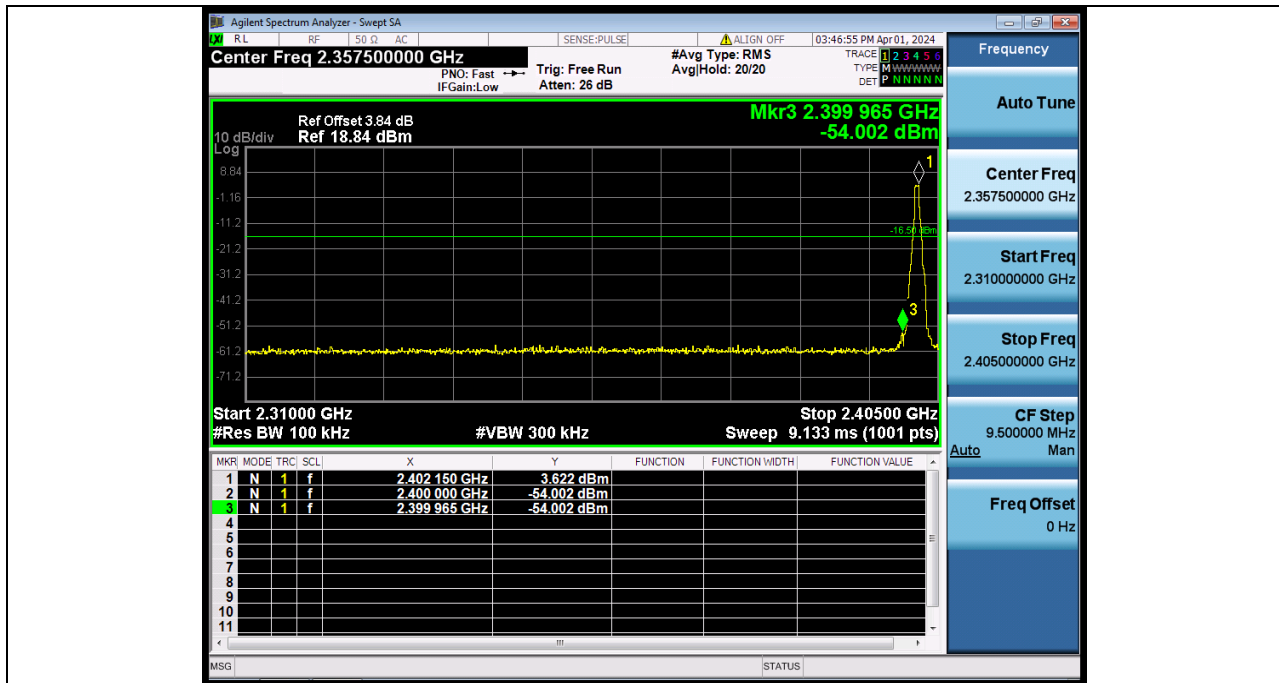
Test Results					PASS			
Frequency Range					2310MHz~2410MHz			
Test Mode					8DPSK Hopping			
N o.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	2390	H	71.78	-21.47	50.31	74.00	-23.69	Peak
2	2390	H	--	-21.47	--	54.00	--	Avg
3	2400	H	79.13	-26.12	53.01	74.00	-20.99	Peak
4	2400	H	--	-26.12	--	54.00	--	Avg
1	2390	V	69.19	-21.47	47.72	74.00	-26.28	Peak
2	2390	V	--	-21.47	--	54.00	--	Avg
3	2400	V	75.82	-26.12	49.70	74.00	-24.30	Peak
4	2400	V	--	-26.12	--	54.00	--	Avg
Test Results					PASS			
Frequency Range					2450MHz~2550MHz			
Test Mode					8DPSK Hopping			
1	2483.5	H	73.48	-25.29	48.19	74.00	-25.81	Peak
2	2483.5	H	--	-25.29	--	54.00	--	Avg
1	2483.5	V	73.33	-25.29	48.04	74.00	-25.96	Peak
2	2483.5	V	--	-25.29	--	54.00	--	Avg
Note: 1. Means other frequency and mode comply with standard requirements and at least have 20dB margin. 2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain. Result=Reading + Correct Factor. Margin= Result-Limit. 3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.								

Conducted Method

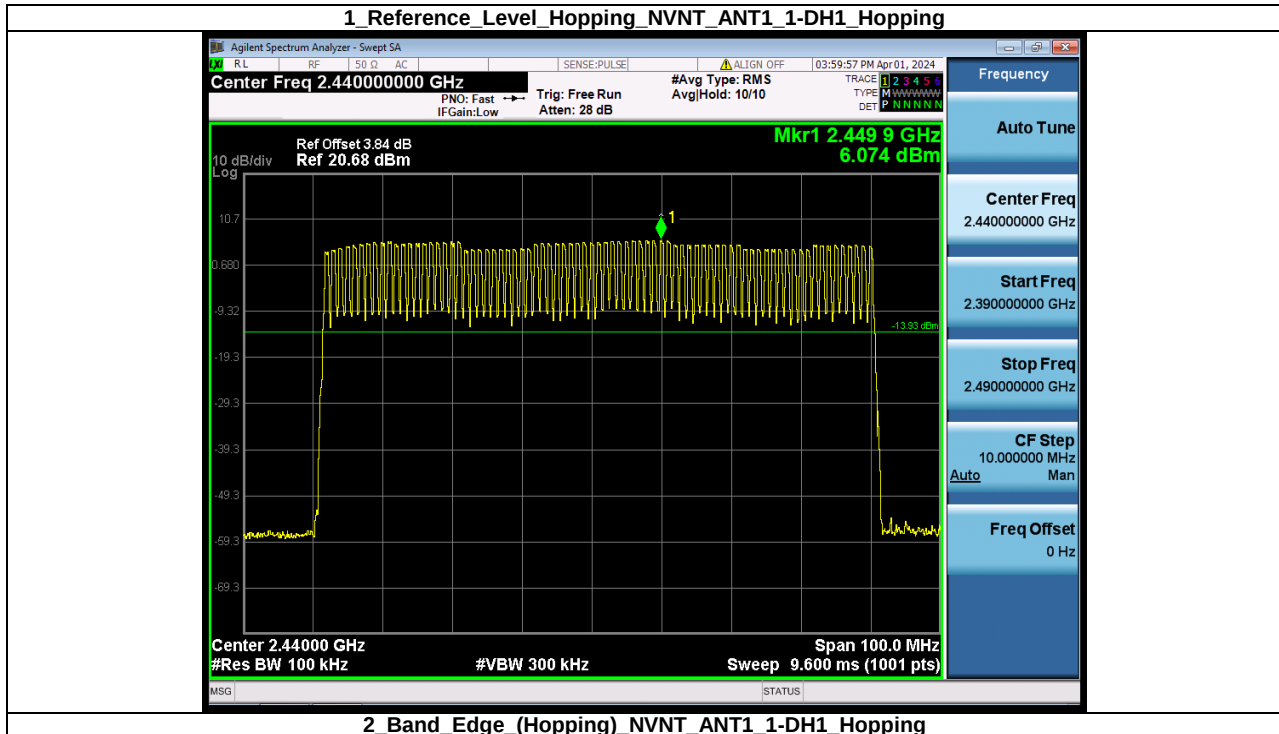
Condition	Antenna	Modulation	TX Mode	Bandedge MAX.Value	Limit	Result
NVNT	ANT1	1-DH1	2402.00	-54.002	-16.499	Pass
NVNT	ANT1	1-DH1	Hopping_LCH	-59.882	-13.926	Pass
NVNT	ANT1	1-DH1	2480.00	-56.598	-14.866	Pass
NVNT	ANT1	1-DH1	Hopping_HCH	-43.377	-13.806	Pass
NVNT	ANT1	2-DH1	2402.00	-53.819	-17.920	Pass
NVNT	ANT1	2-DH1	Hopping_LCH	-54.353	-15.251	Pass
NVNT	ANT1	2-DH1	2480.00	-56.342	-16.173	Pass
NVNT	ANT1	2-DH1	Hopping_HCH	-45.668	-15.194	Pass
NVNT	ANT1	3-DH1	2402.00	-53.561	-17.930	Pass
NVNT	ANT1	3-DH1	Hopping_LCH	-53.465	-15.129	Pass
NVNT	ANT1	3-DH1	2480.00	-55.719	-15.999	Pass
NVNT	ANT1	3-DH1	Hopping_HCH	-55.195	-14.910	Pass



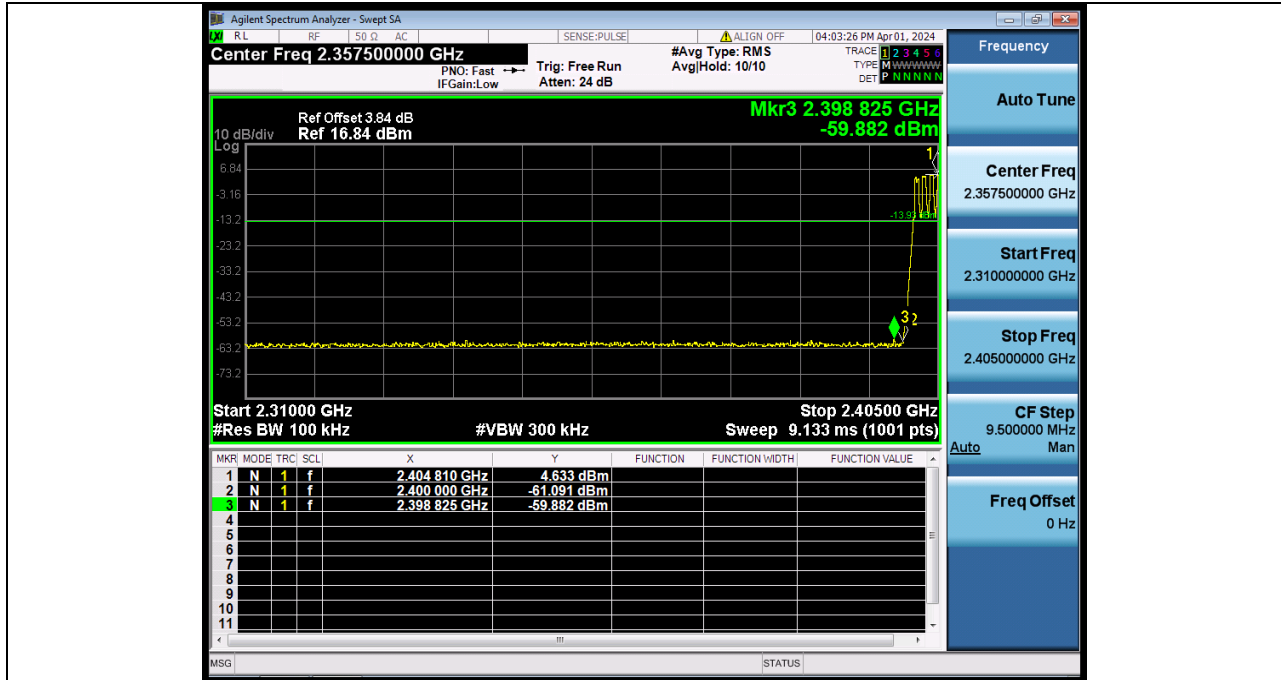
2 Bandedge_NVNT_ANT1_1-DH1_2402



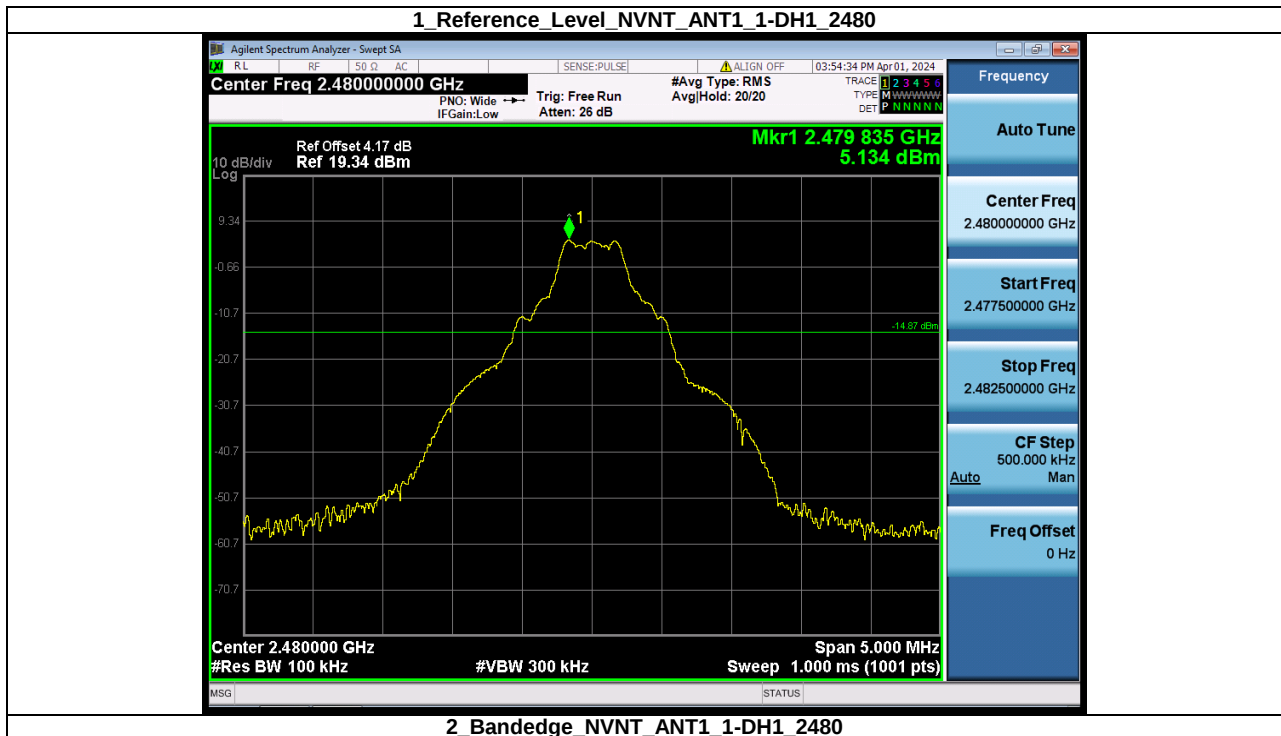
1 Reference_Level_Hopping_NVNT_ANT1_1-DH1_Hopping



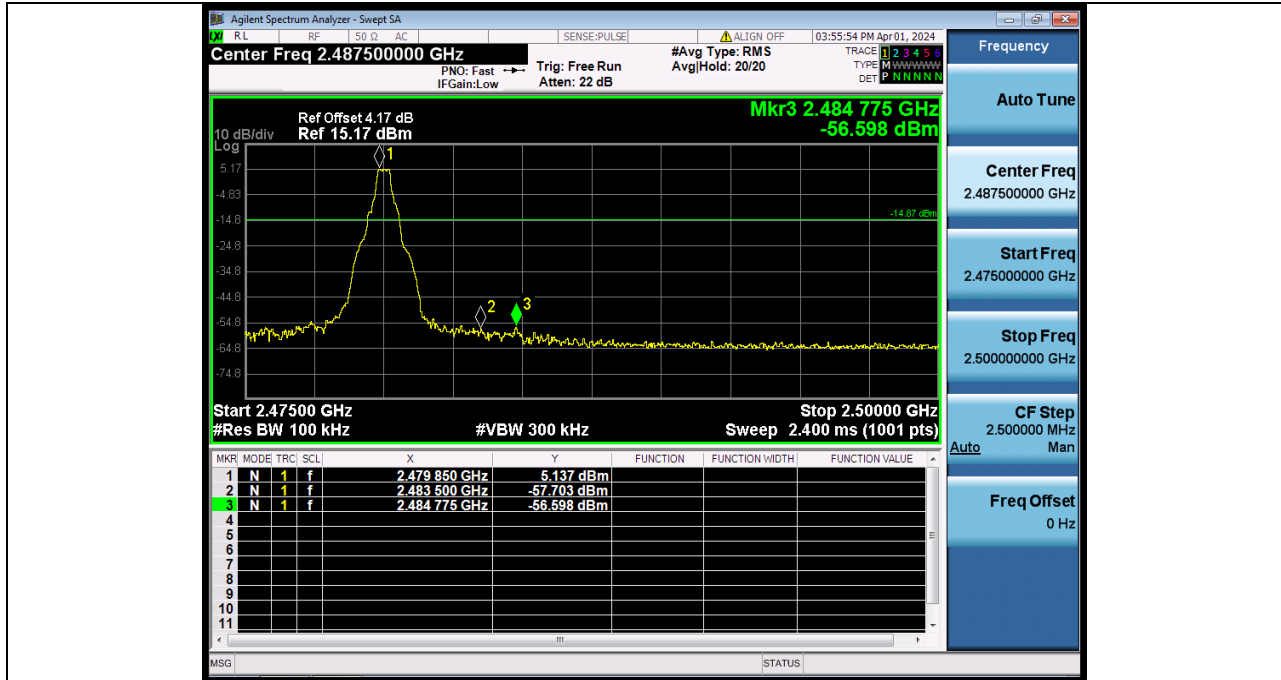
2_Band_Edge_(Hopping)_NVNT_ANT1_1-DH1_Hopping



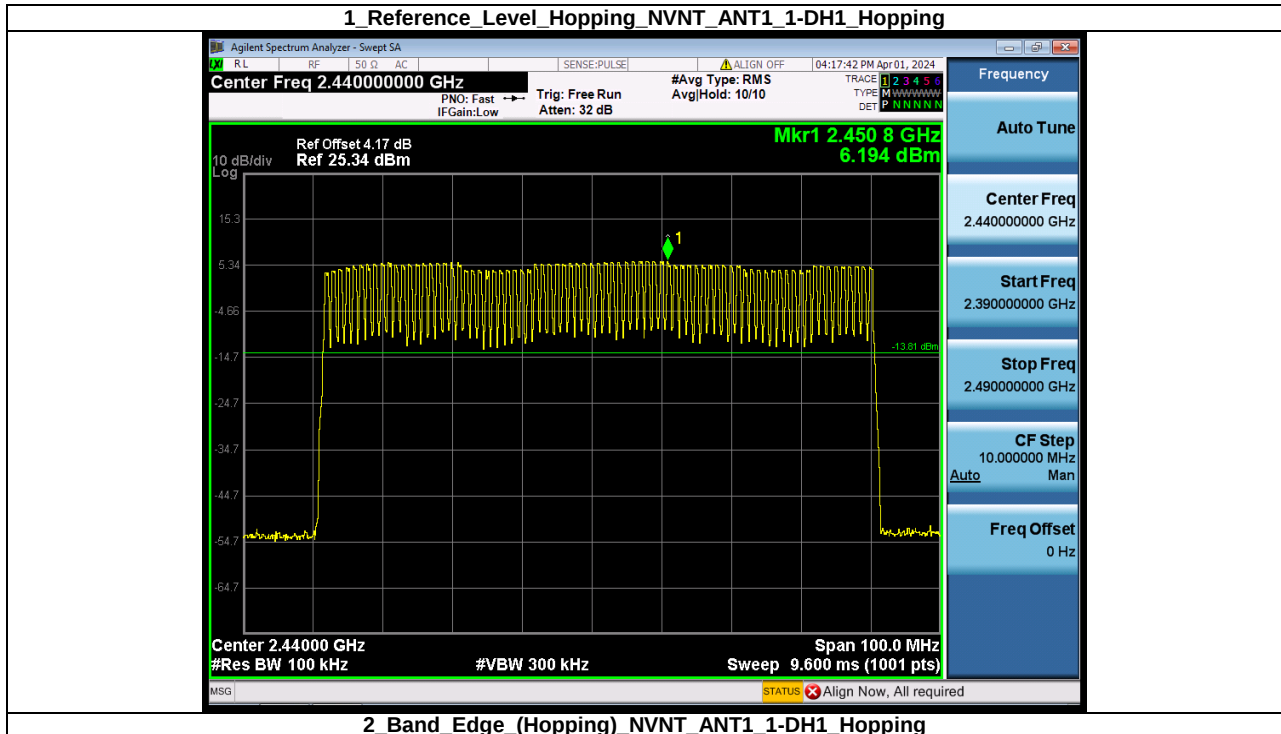
1 Reference_Level_NVNT_ANT1_1-DH1_2480



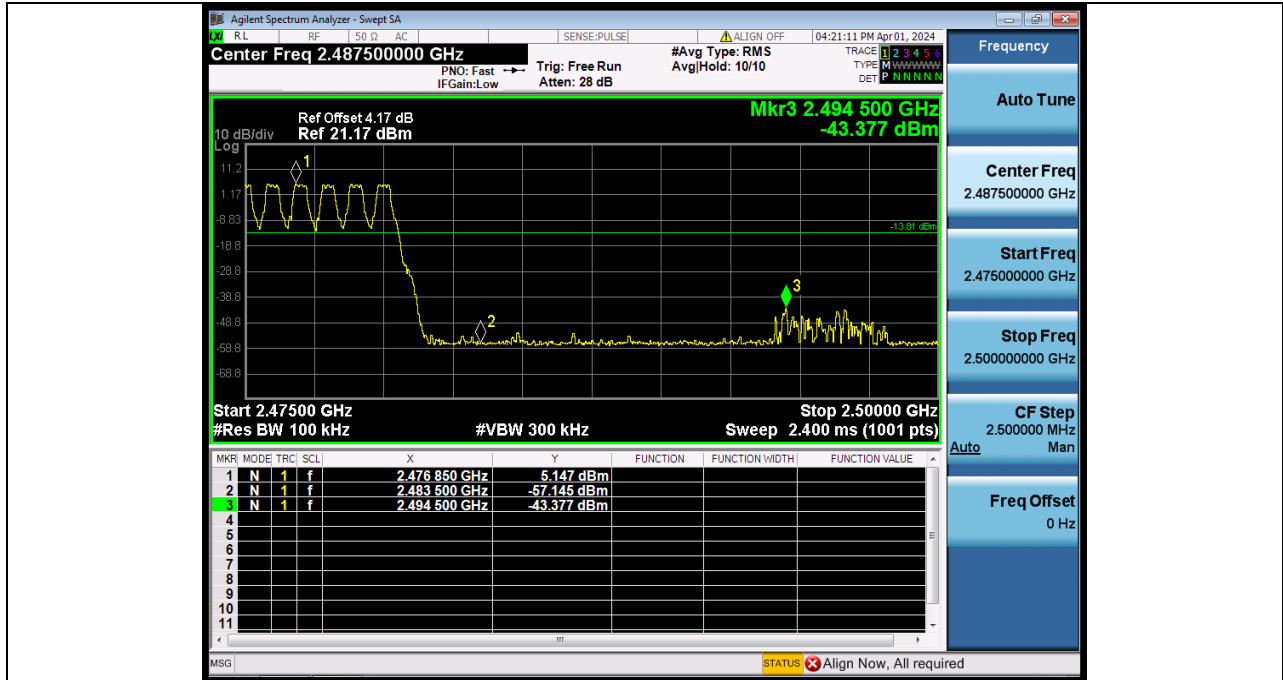
2_Bandedge_NVNT_ANT1_1-DH1_2480



1 Reference_Level_Hopping_NVNT_ANT1_1-DH1_Hopping



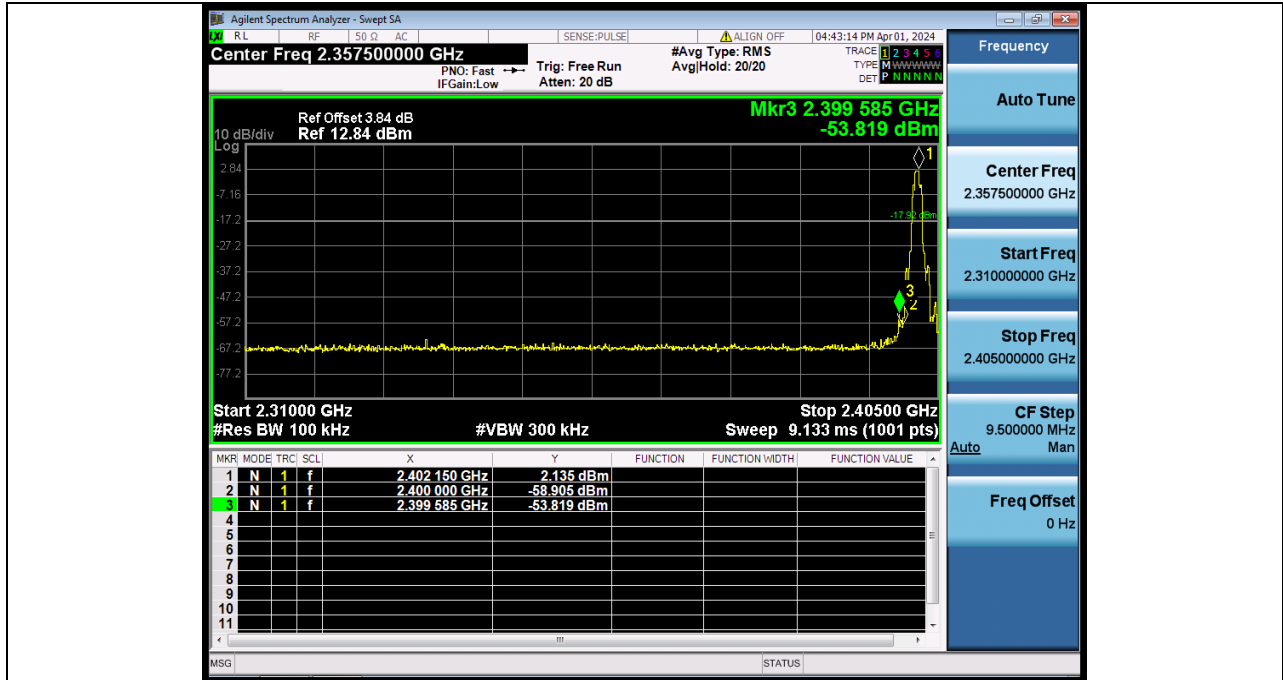
2_Band_Edge_(Hopping)_NVNT_ANT1_1-DH1_Hopping



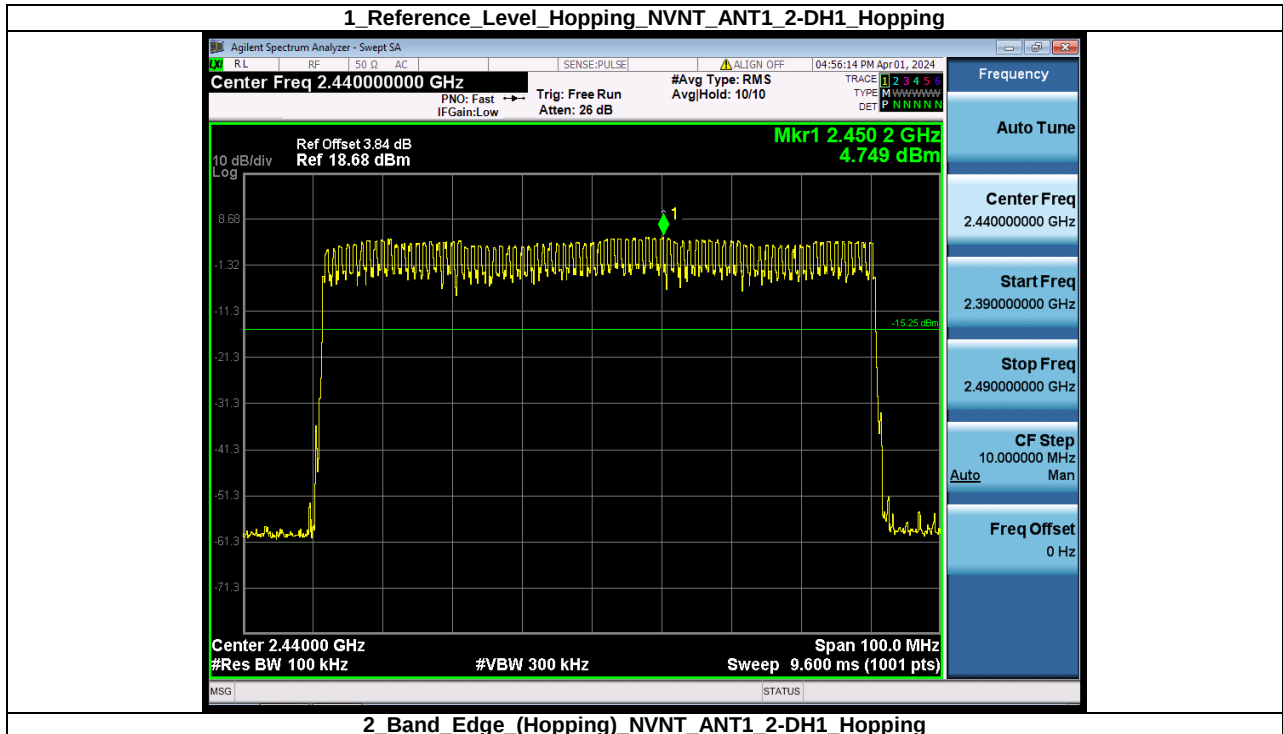
1_Reference_Level_NVNT_ANT1_2-DH1_2402



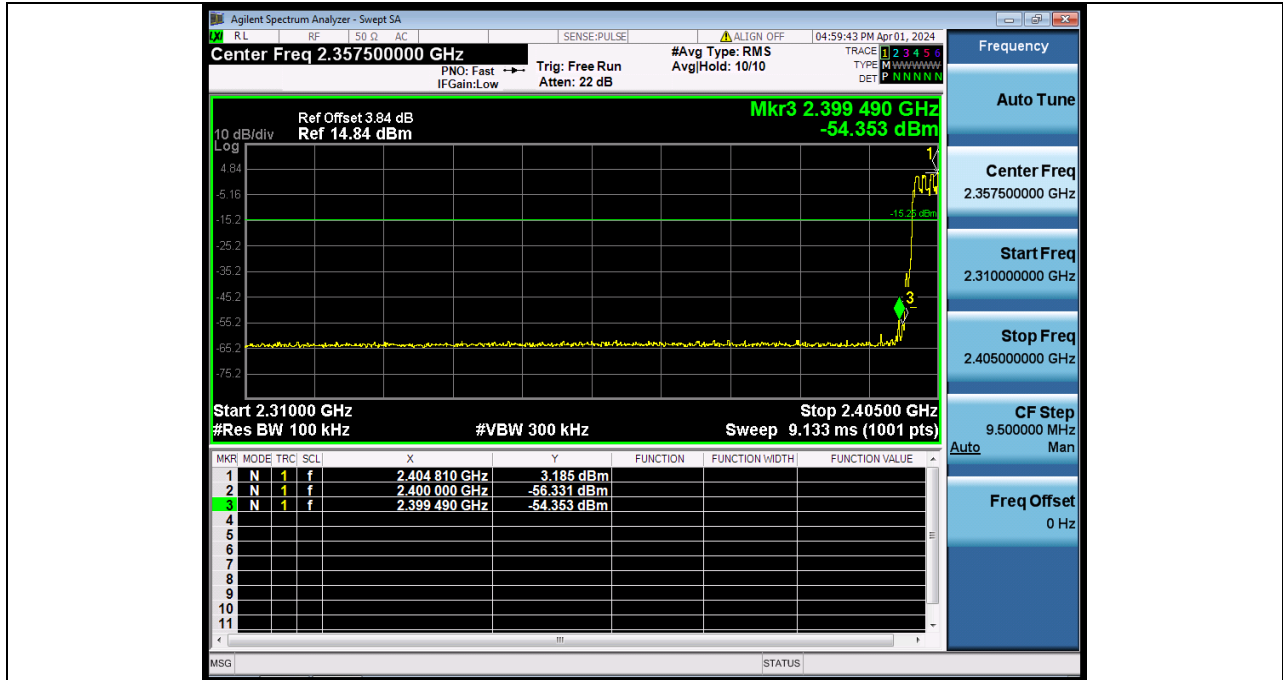
2_Bandedge_NVNT_ANT1_2-DH1_2402



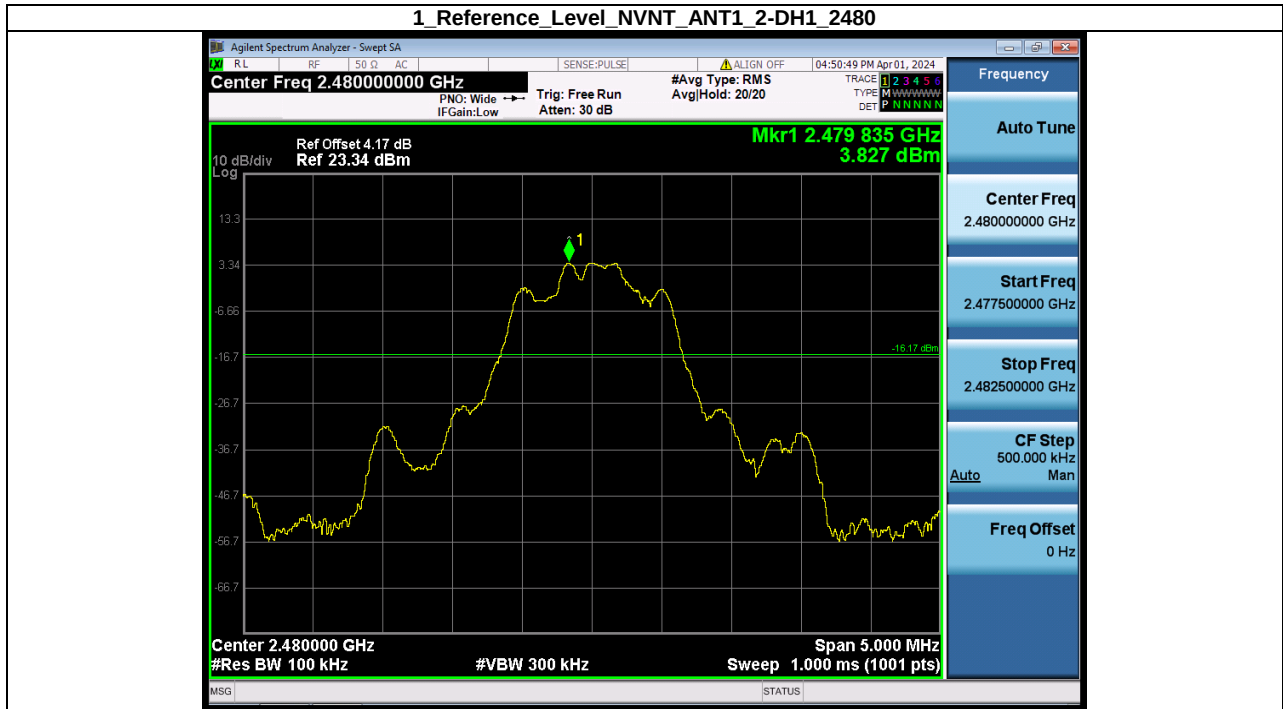
1 Reference_Level_Hopping_NVNT_ANT1_2-DH1_Hopping



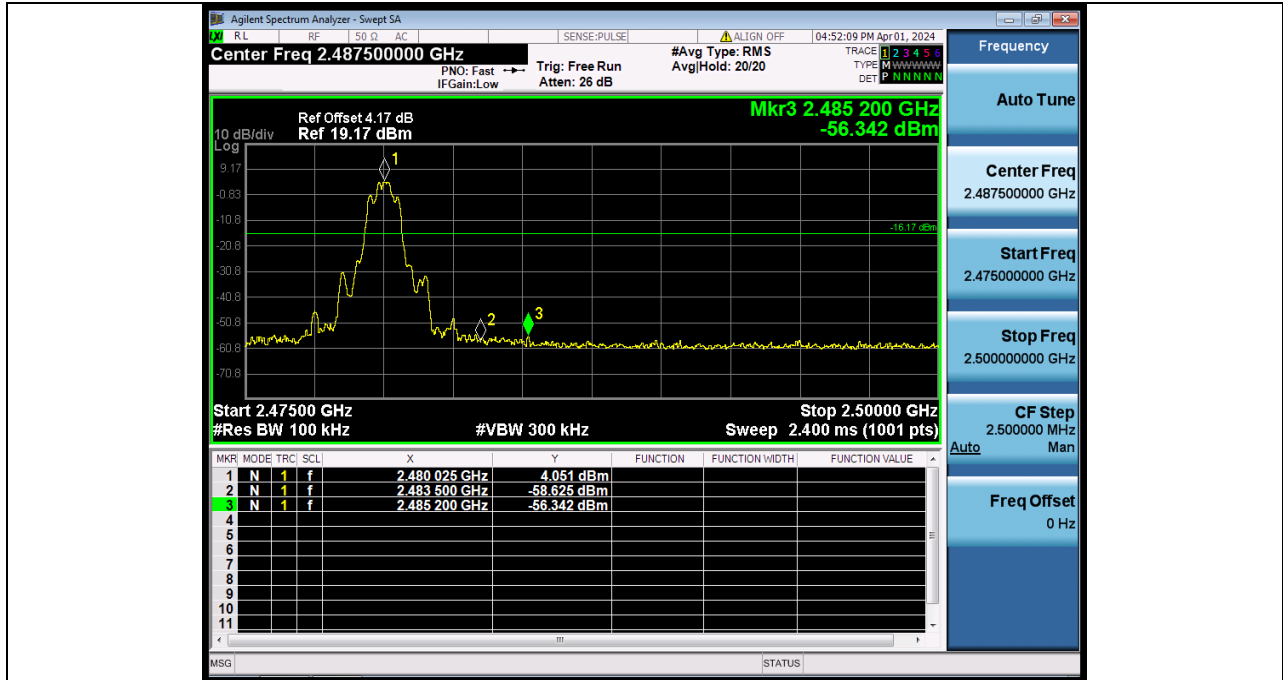
2_Band_Edge_(Hopping)_NVNT_ANT1_2-DH1_Hopping



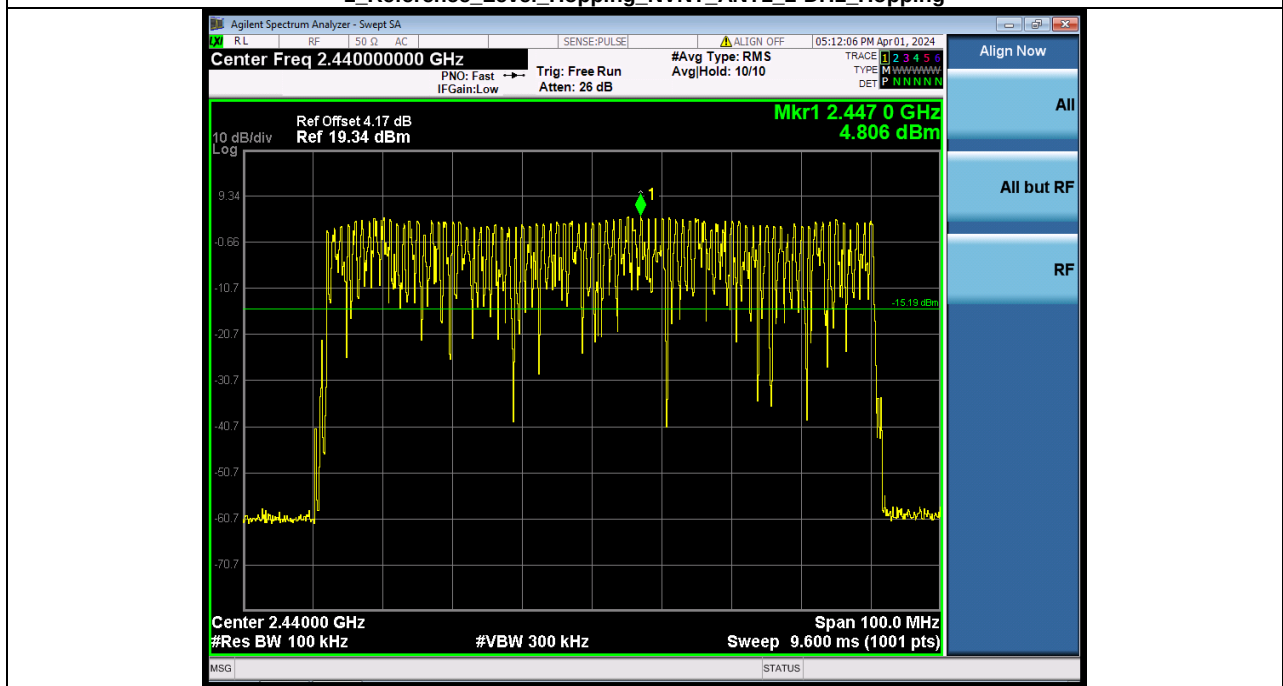
1 Reference_Level_NVNT_ANT1_2-DH1_2480



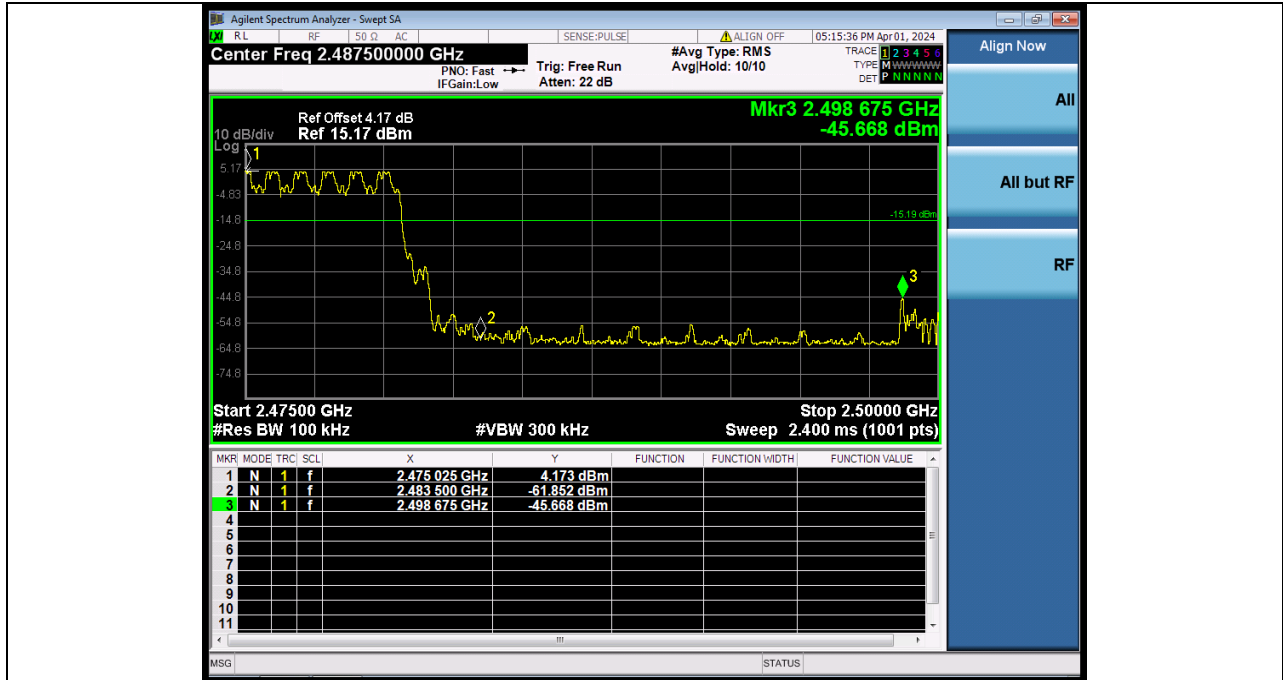
2_Bandedge_NVNT_ANT1_2-DH1_2480



1 Reference_Level_Hopping_NVNT_ANT1_2-DH1_Hopping

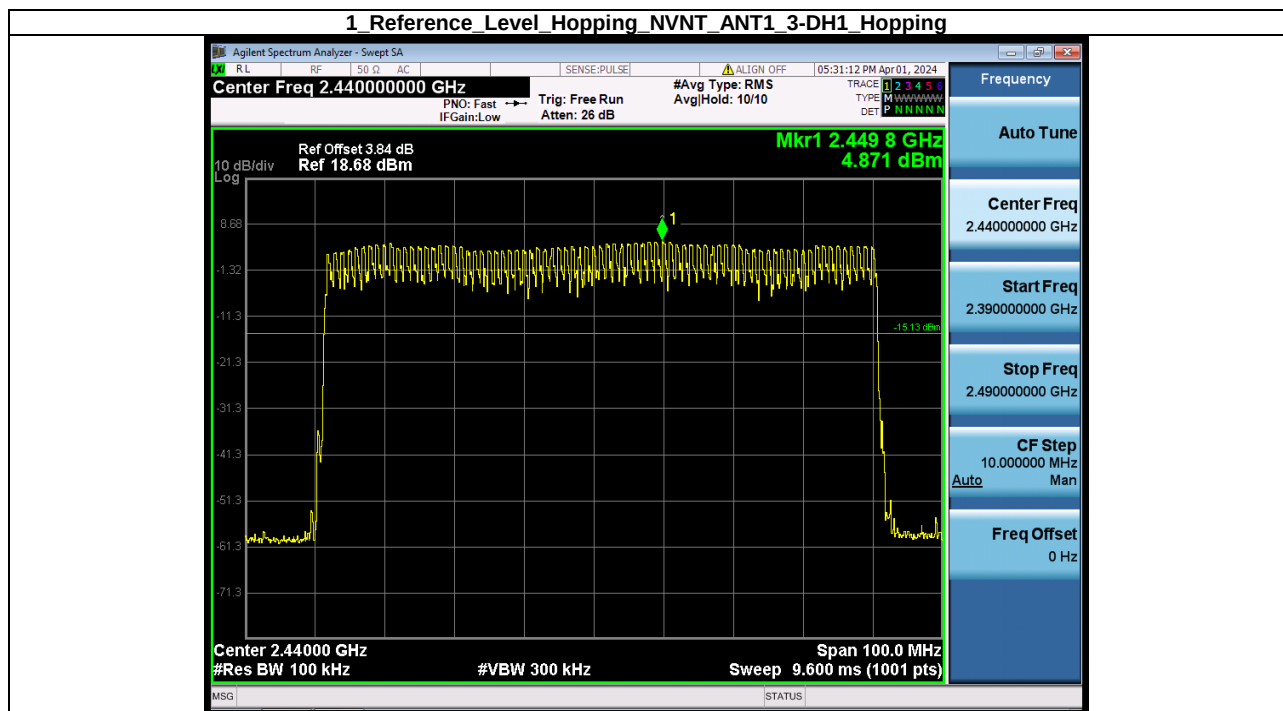
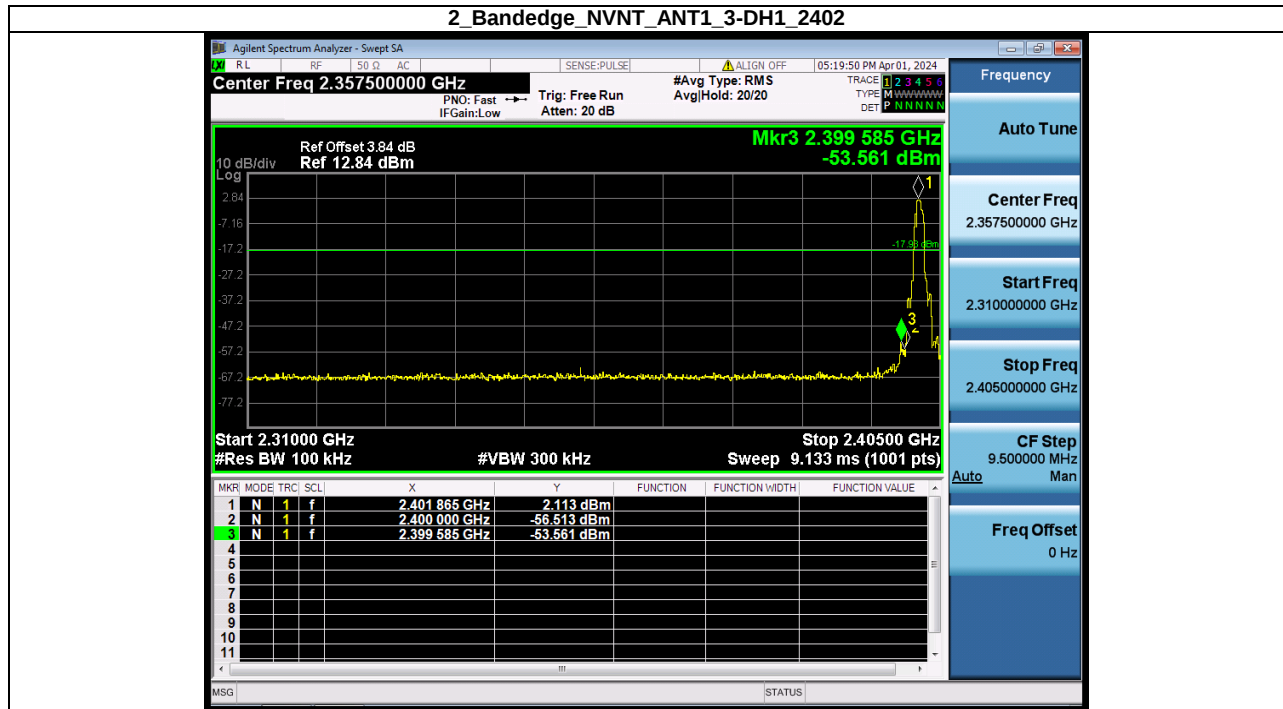


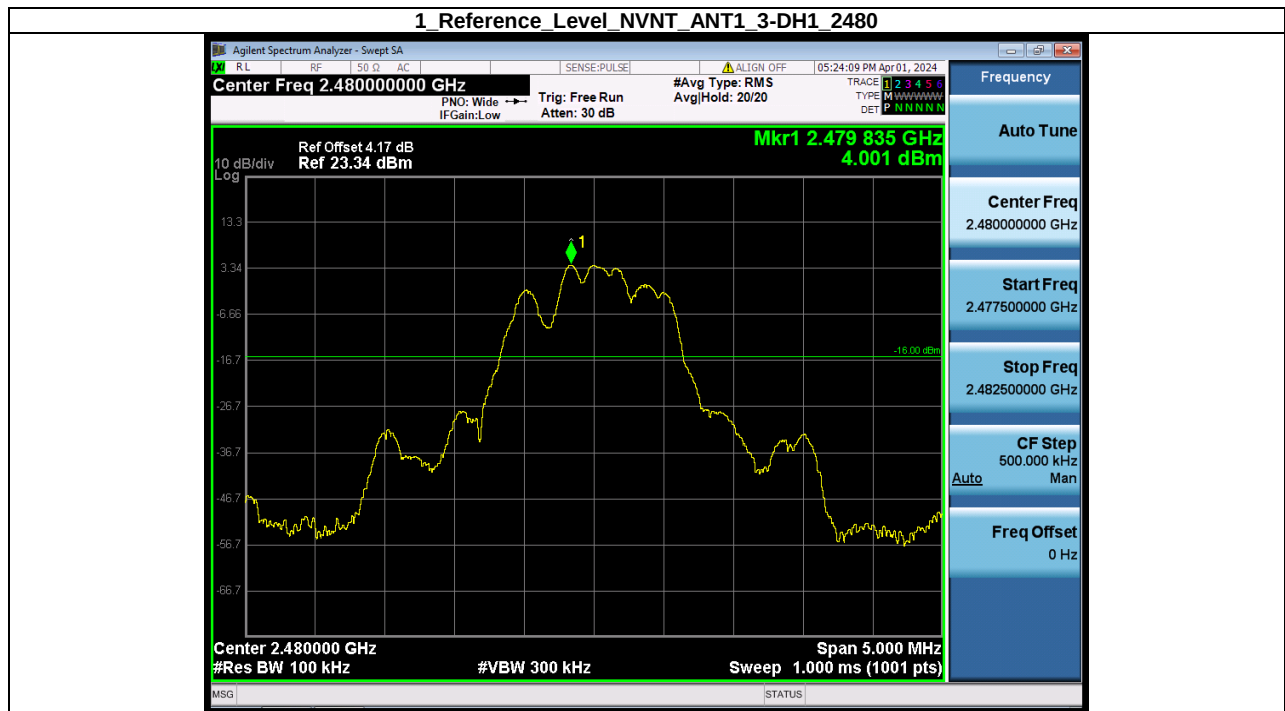
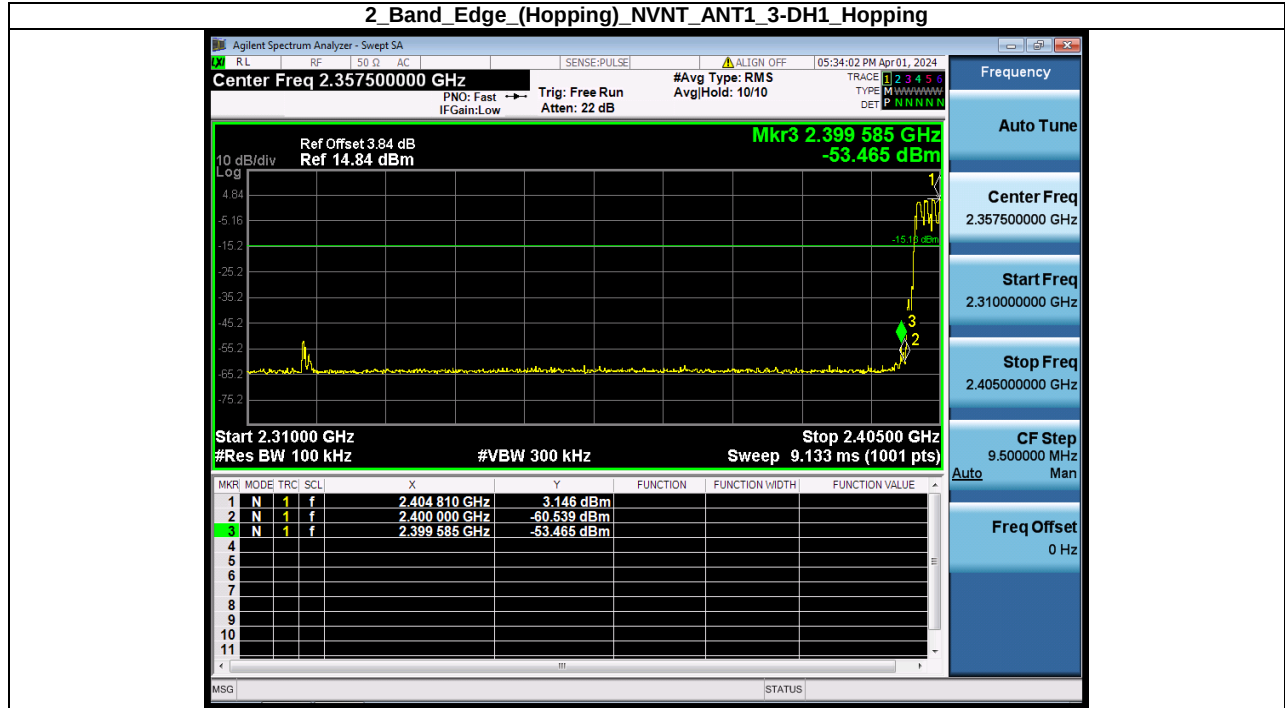
2_Band_Edge_(Hopping)_NVNT_ANT1_2-DH1_Hopping

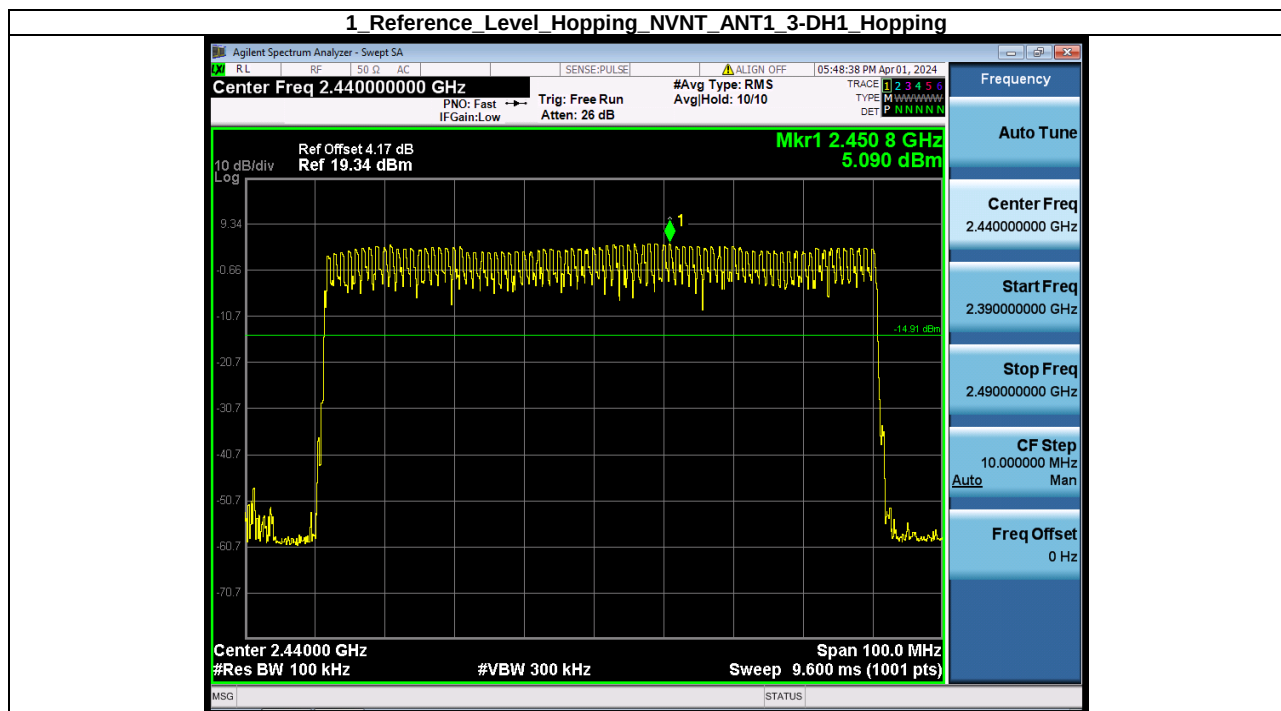
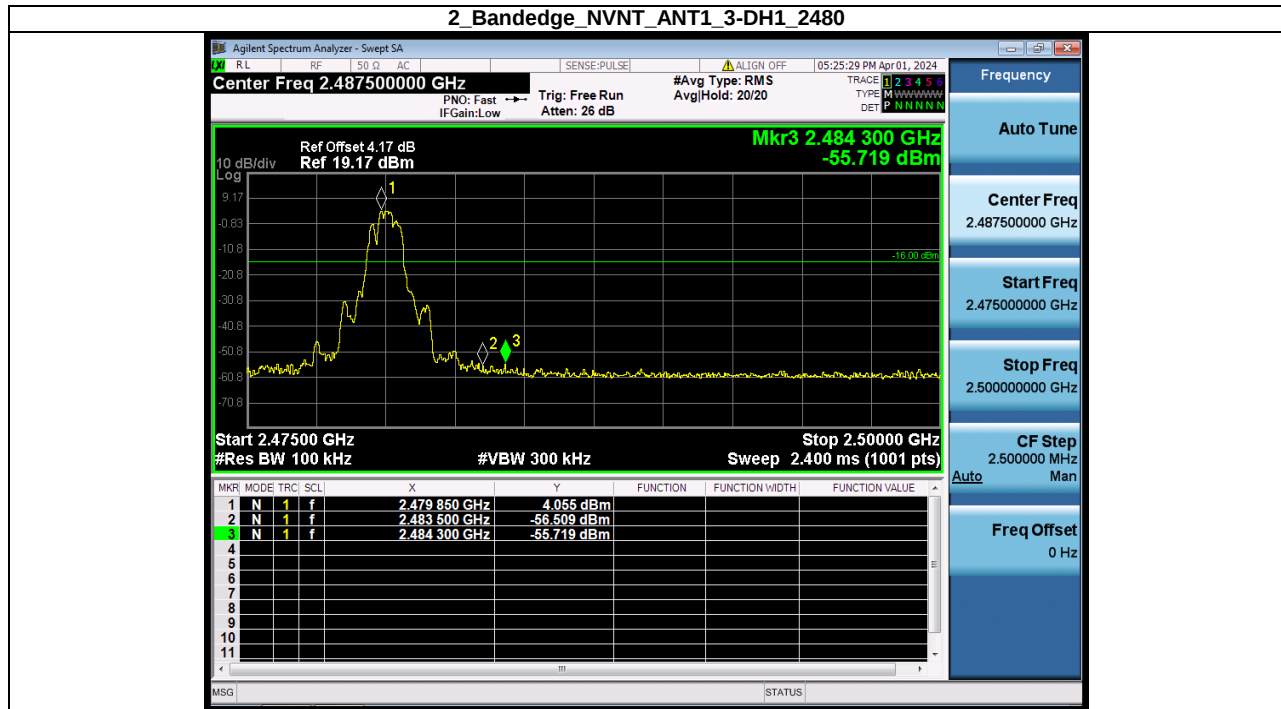


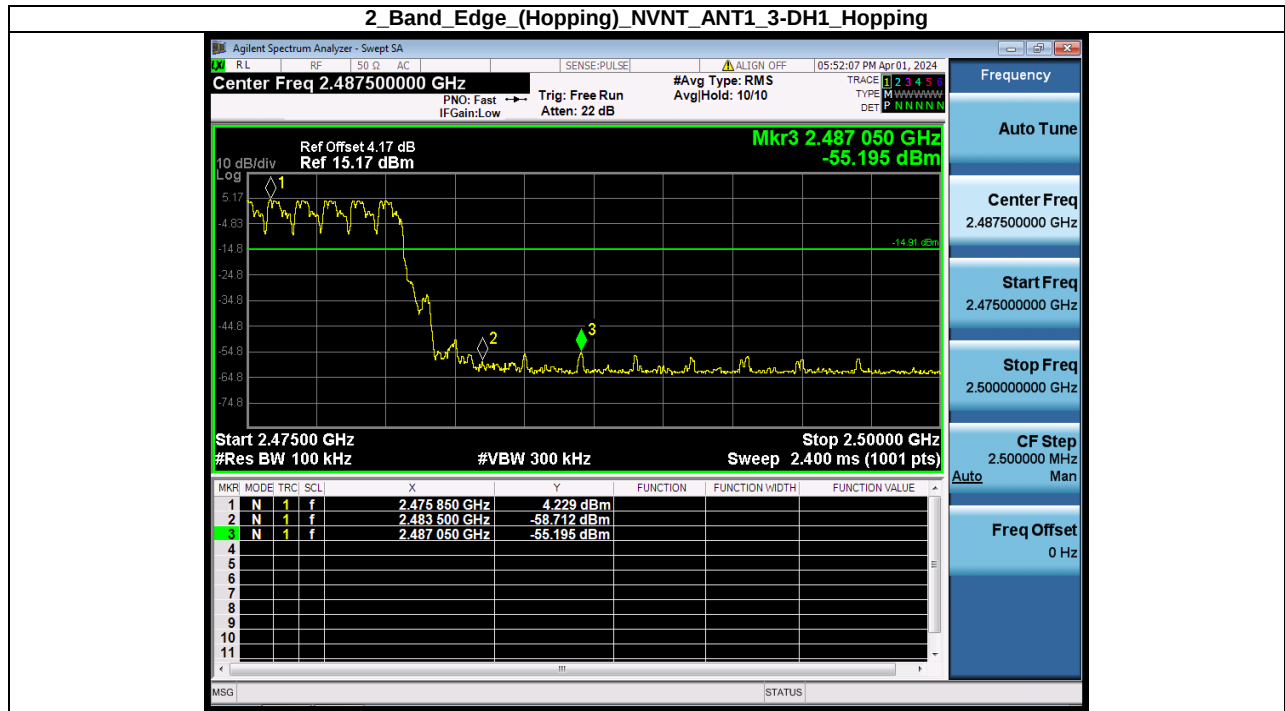
1 Reference_Level_NVNT_ANT1_3-DH1_2402





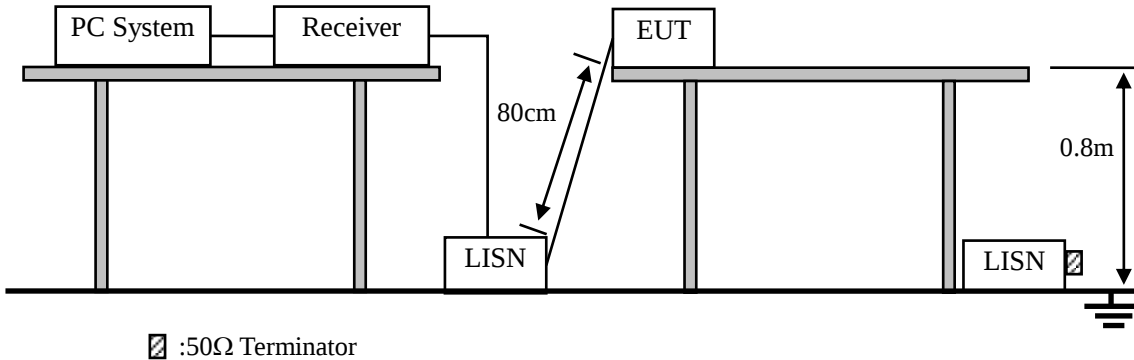






10. POWER LINE CONDUCTED EMISSIONS

10.1. Block Diagram of Test Setup



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.

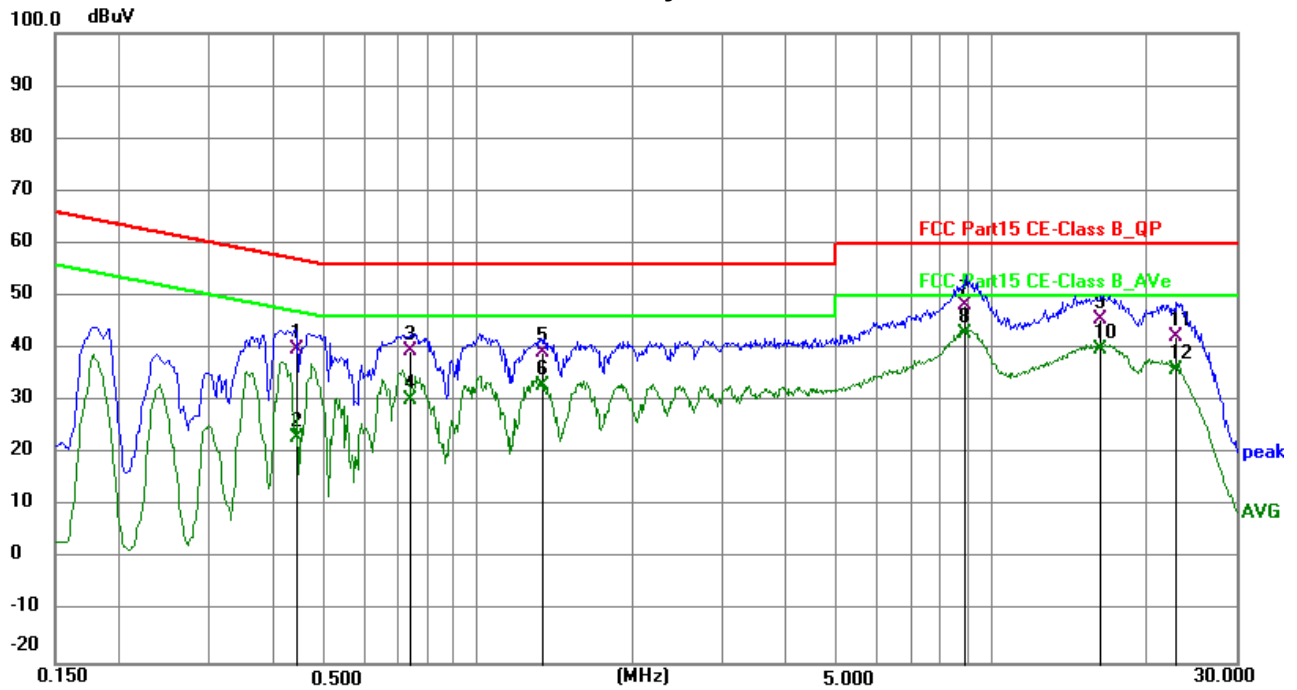
10.3. Test Procedure

- (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

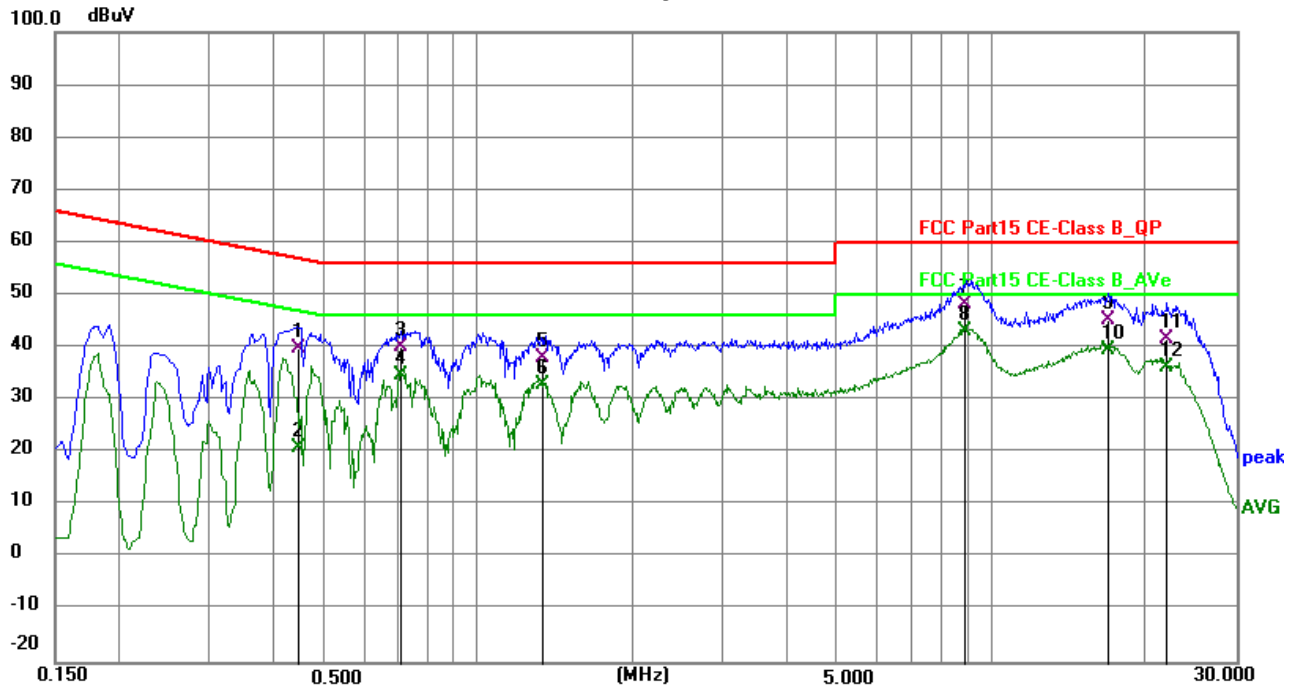
Pass

Polarity: L



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.4445	30.32	9.63	39.95	56.98	-17.03	QP	P	
2	0.4445	13.44	9.63	23.07	46.98	-23.91	AVG	P	
3	0.7396	29.80	9.63	39.43	56.00	-16.57	QP	P	
4	0.7396	20.55	9.63	30.18	46.00	-15.82	AVG	P	
5	1.3400	29.56	9.64	39.20	56.00	-16.80	QP	P	
6	1.3400	23.26	9.64	32.90	46.00	-13.10	AVG	P	
7	8.9192	38.54	9.72	48.26	60.00	-11.74	QP	P	
8 *	8.9192	33.21	9.72	42.93	50.00	-7.07	AVG	P	
9	16.3961	35.80	9.76	45.56	60.00	-14.44	QP	P	
10	16.3961	30.23	9.76	39.99	50.00	-10.01	AVG	P	
11	22.9896	32.59	9.77	42.36	60.00	-17.64	QP	P	
12	22.9896	26.21	9.77	35.98	50.00	-14.02	AVG	P	

Polarity: N



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.4485	30.18	9.62	39.80	56.90	-17.10	QP	P	
2	0.4485	11.29	9.62	20.91	46.90	-25.99	AVG	P	
3	0.7065	30.51	9.62	40.13	56.00	-15.87	QP	P	
4	0.7065	25.04	9.62	34.66	46.00	-11.34	AVG	P	
5	1.3439	28.54	9.64	38.18	56.00	-17.82	QP	P	
6	1.3439	23.26	9.64	32.90	46.00	-13.10	AVG	P	
7	8.9541	38.50	9.72	48.22	60.00	-11.78	QP	P	
8 *	8.9541	33.29	9.72	43.01	50.00	-6.99	AVG	P	
9	16.8455	35.45	9.77	45.22	60.00	-14.78	QP	P	
10	16.8455	29.92	9.77	39.69	50.00	-10.31	AVG	P	
11	21.9424	31.91	9.82	41.73	60.00	-18.27	QP	P	
12	21.9424	26.40	9.82	36.22	50.00	-13.78	AVG	P	

11. ANTENNA REQUIREMENTS

11.1.Limit

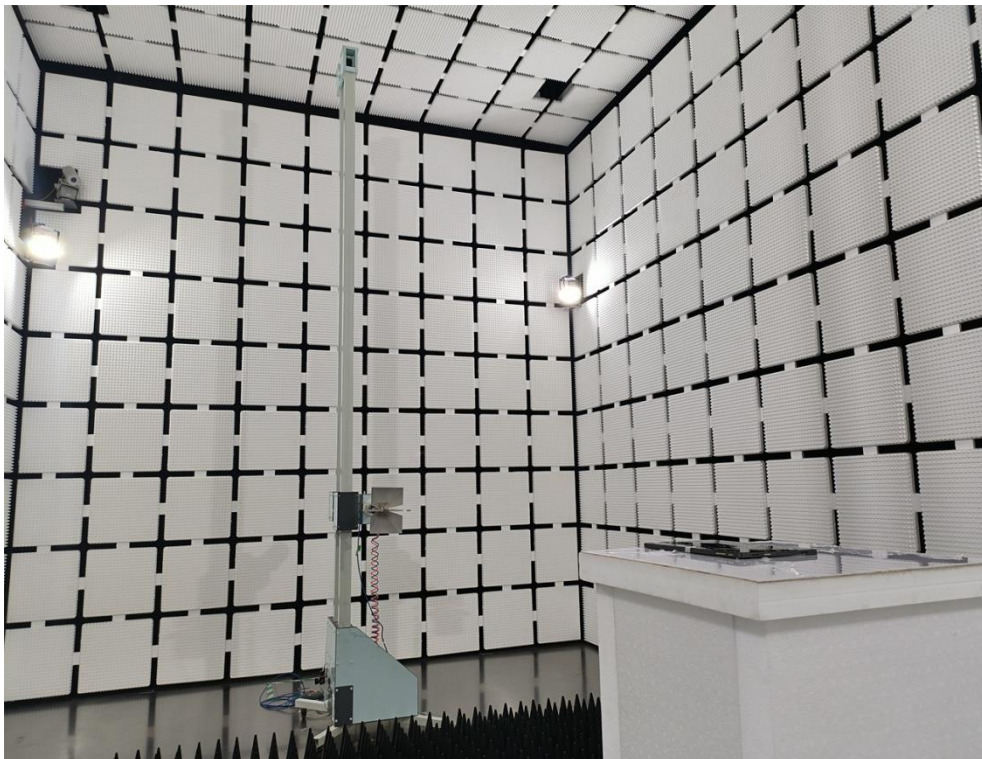
For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional 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 PIFA Antenna. It comply with the standard requirement.

12. TEST SETUP PHOTO

12.1.Photo of Radiated Emission test

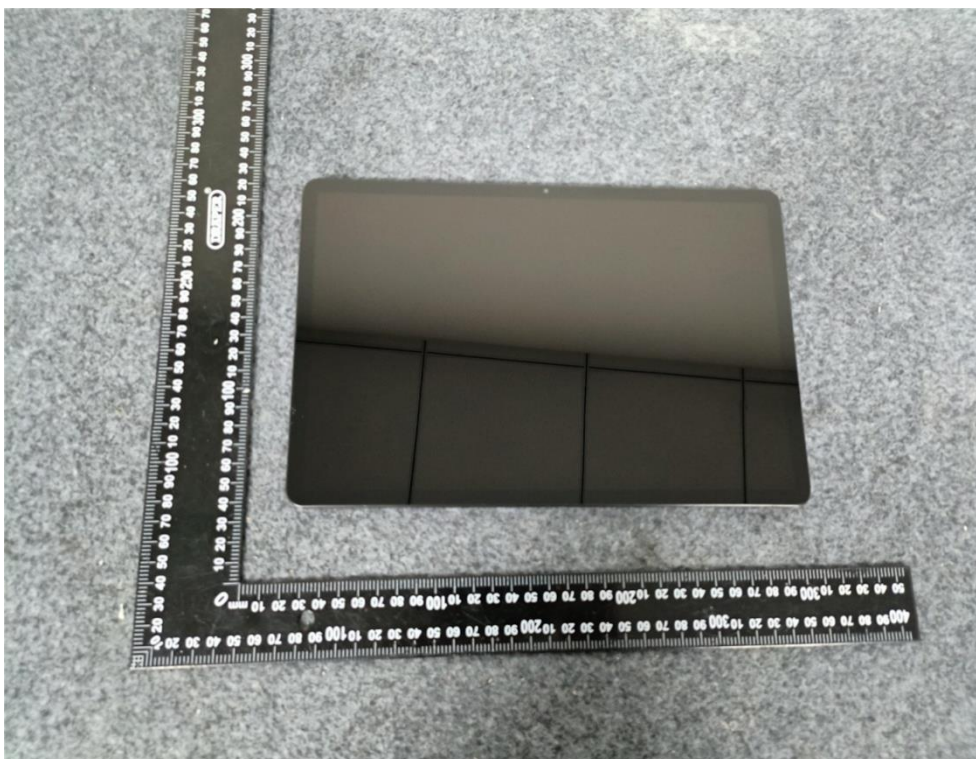
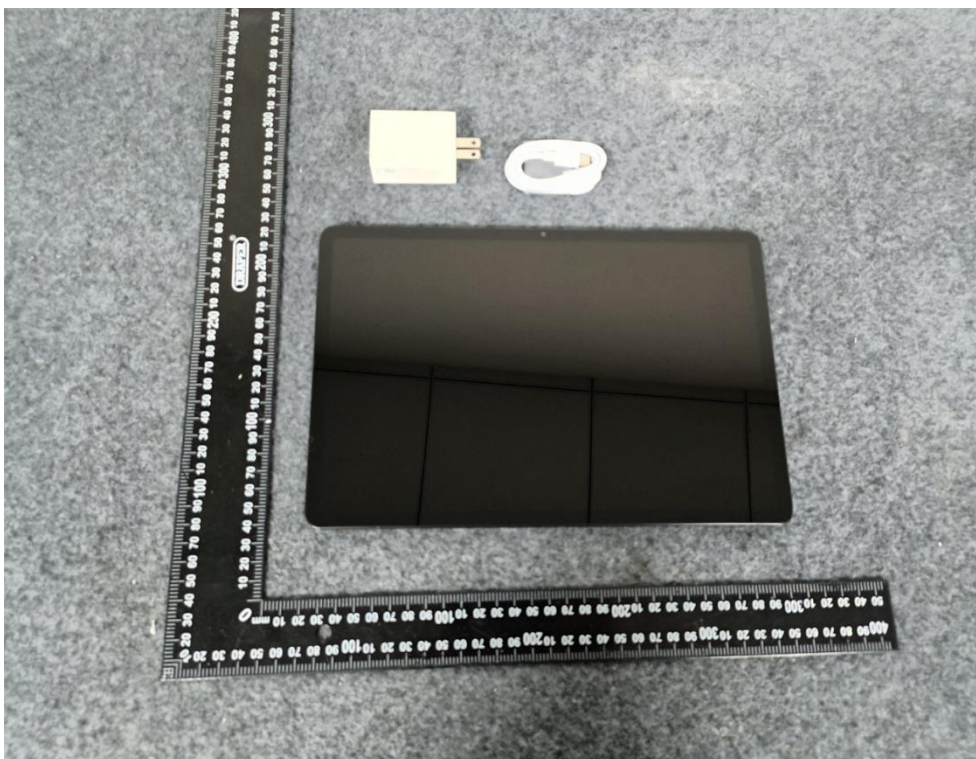


12.2.Photo of Conducted Emission test



12.3.Conducted Test Photos

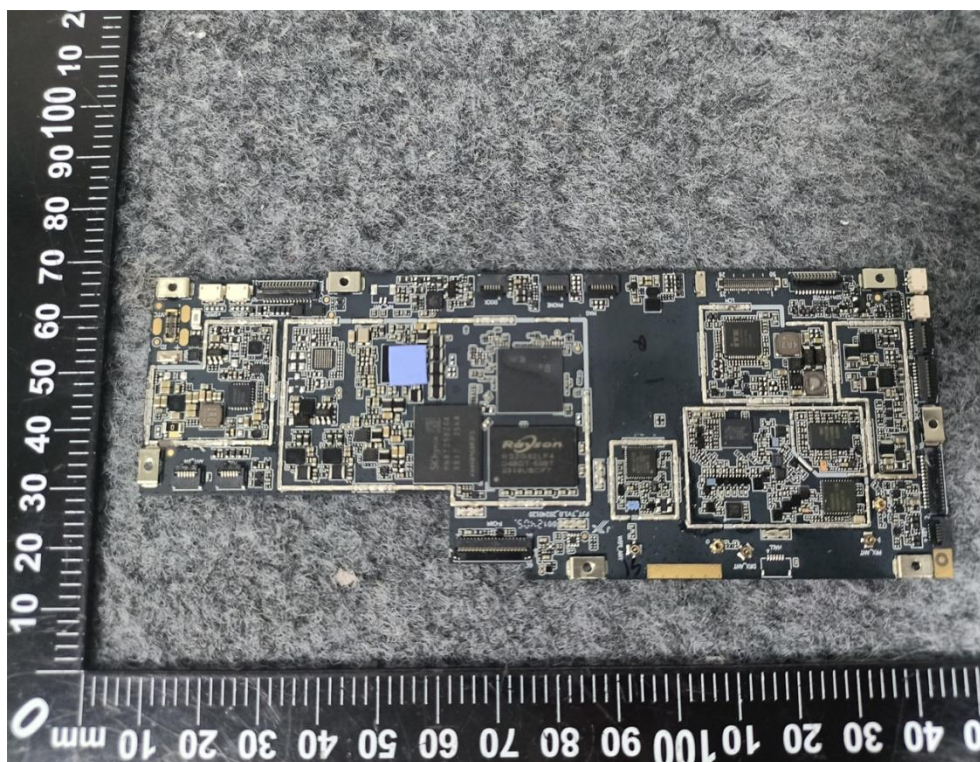


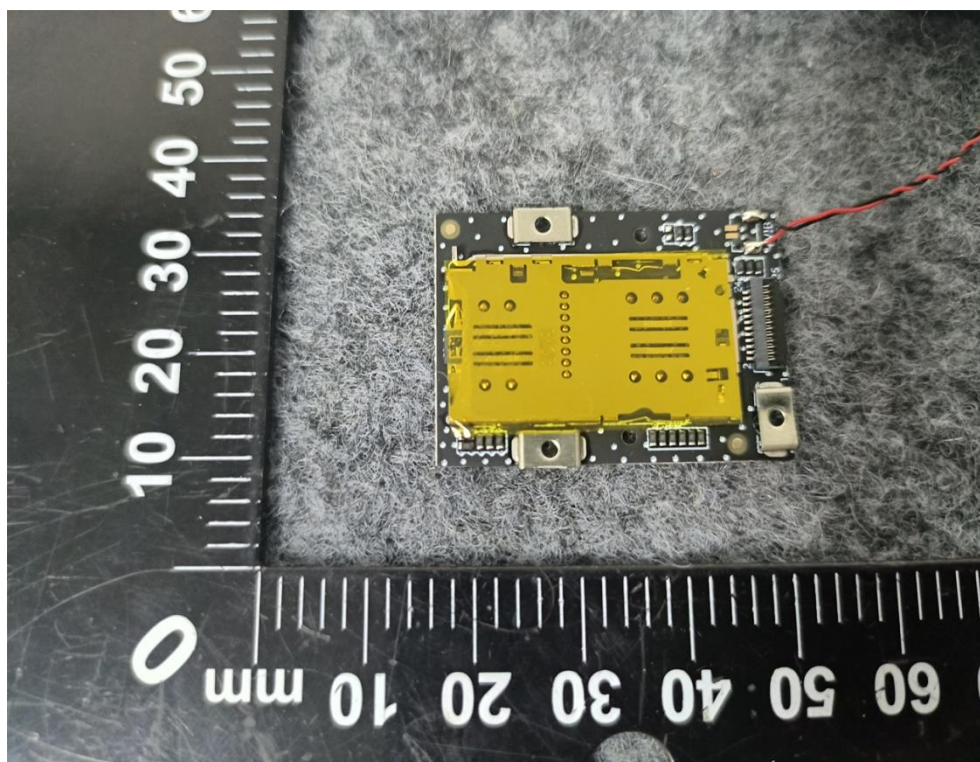
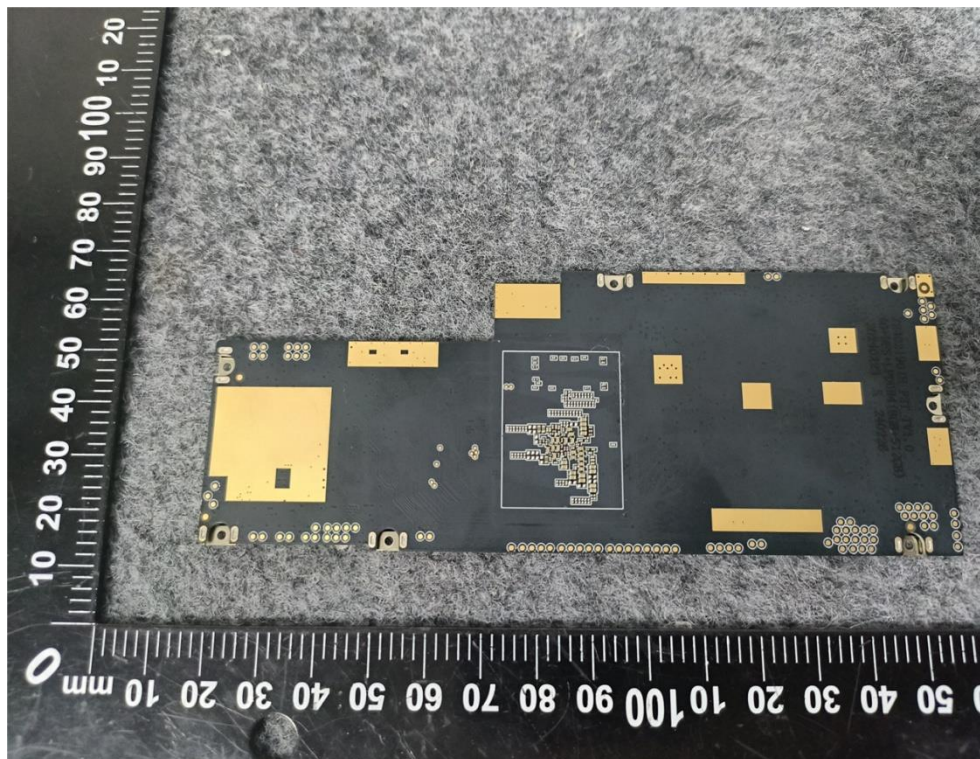
13. PHOTOS OF EUT

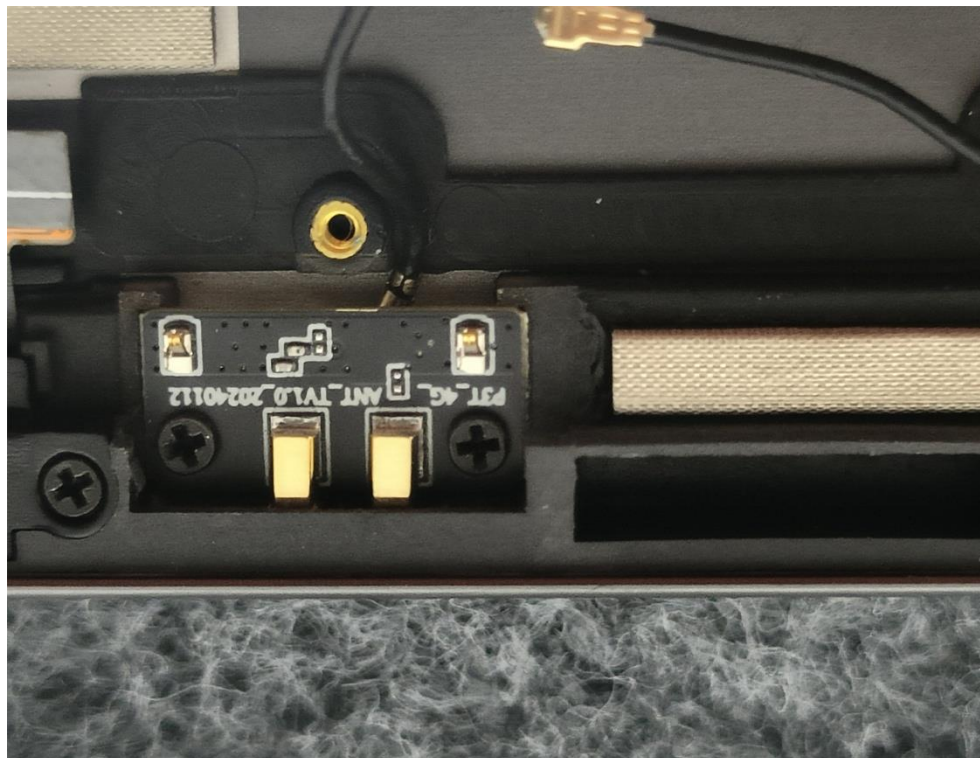
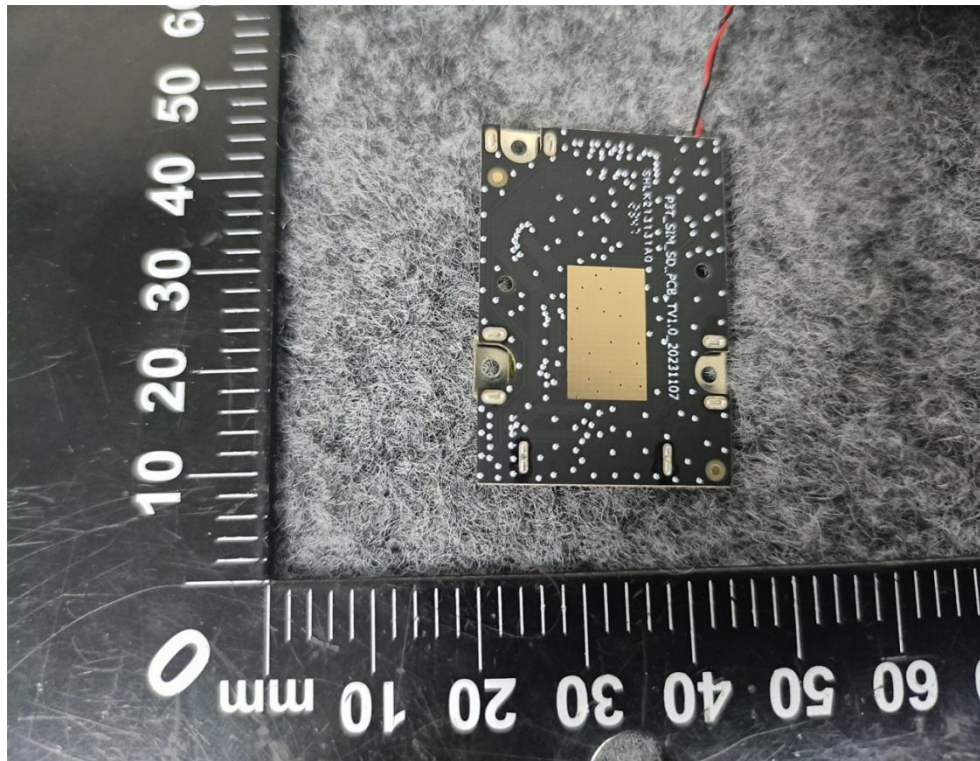


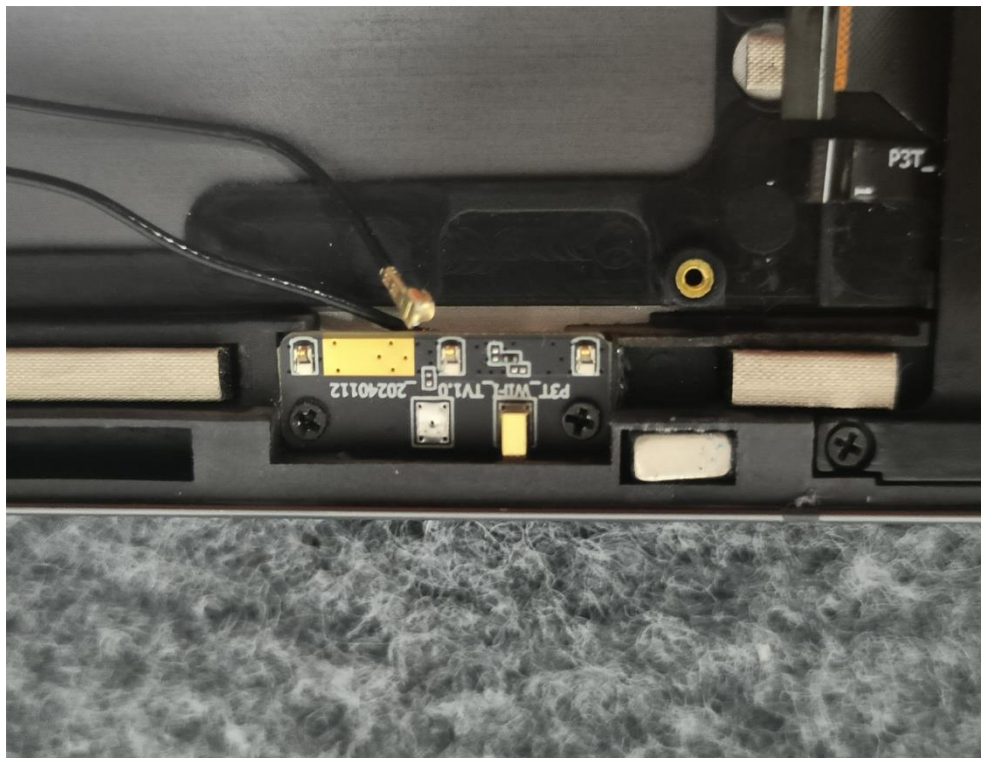
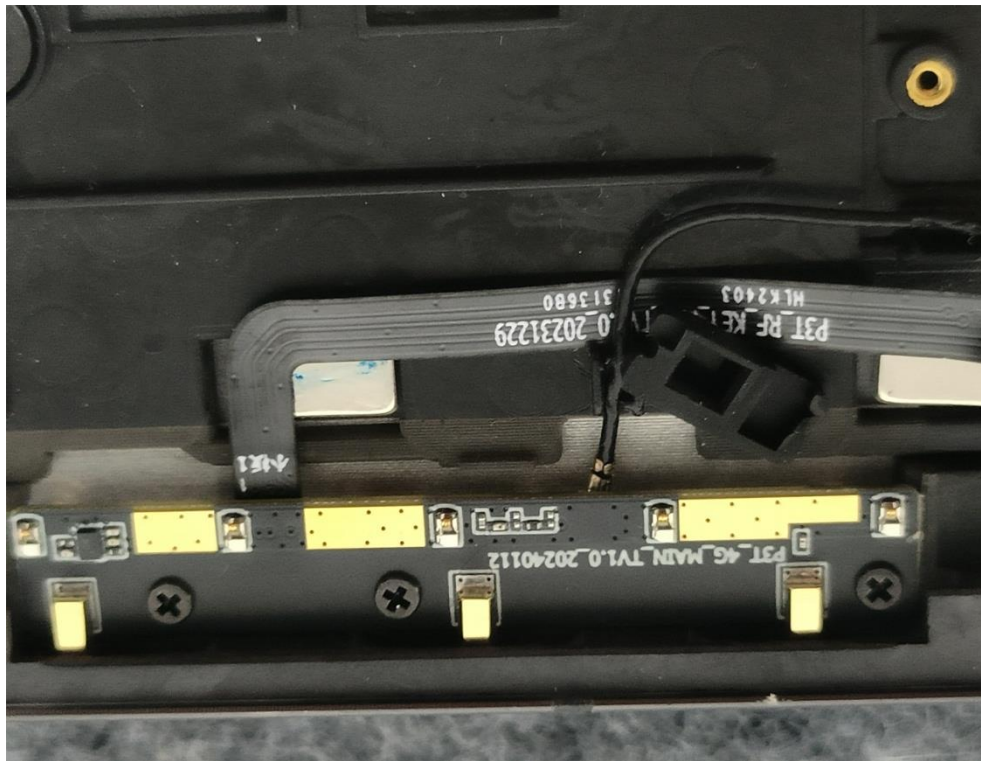


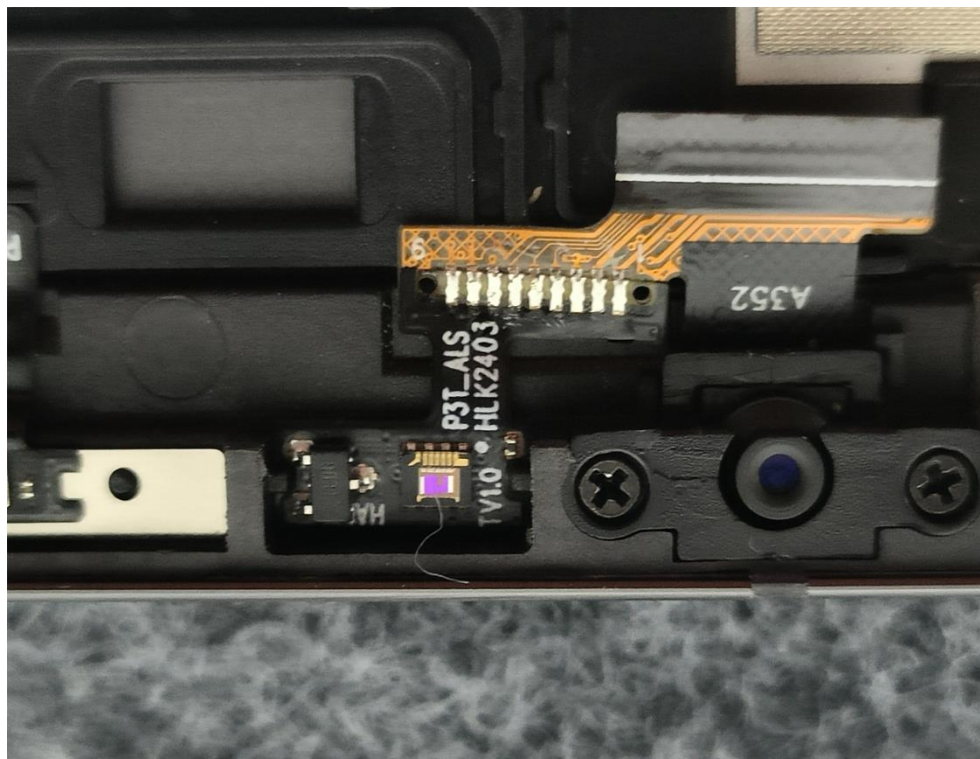












-----END OF REPORT-----