

RF Test Data for Bluetooth(BDR+EDR) (Conducted Measurements)

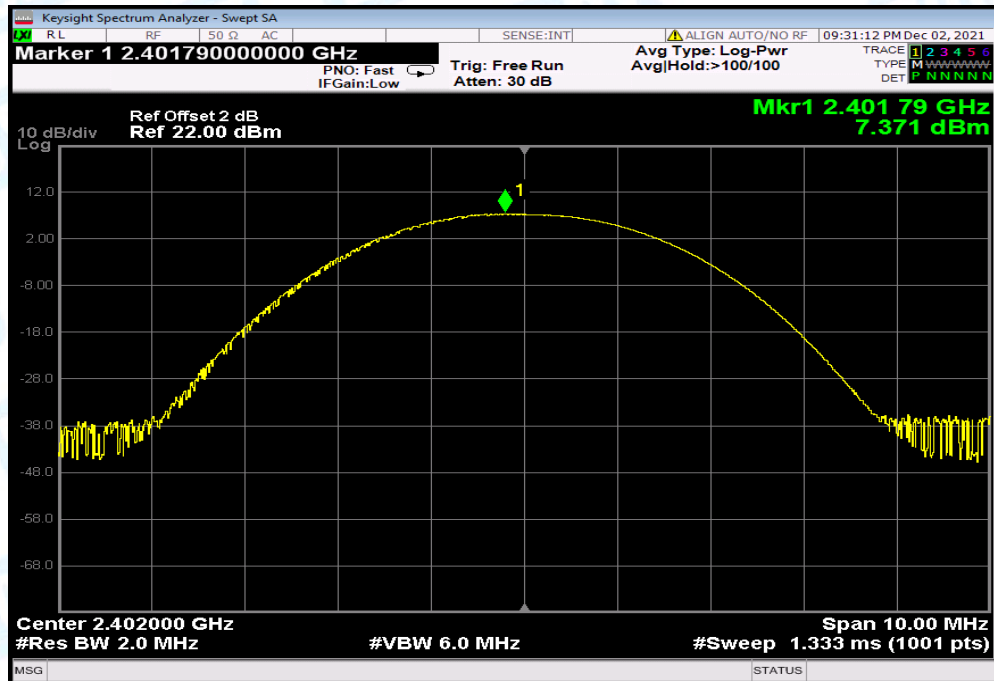
General Description of EUT	
Product Name:	Earshots
Test Model:	ESEP020
Sample ID:	20210804-23-2#
Environmental Conditions	
Temperature:	24℃
Relative Humidity:	50%
Test Voltage:	DC3.7V
Test Engineer:	Hejingchang
Note: For a more detailed features description, please refer to the report TB-FCC186329.	

Maximum Conducted Output Power

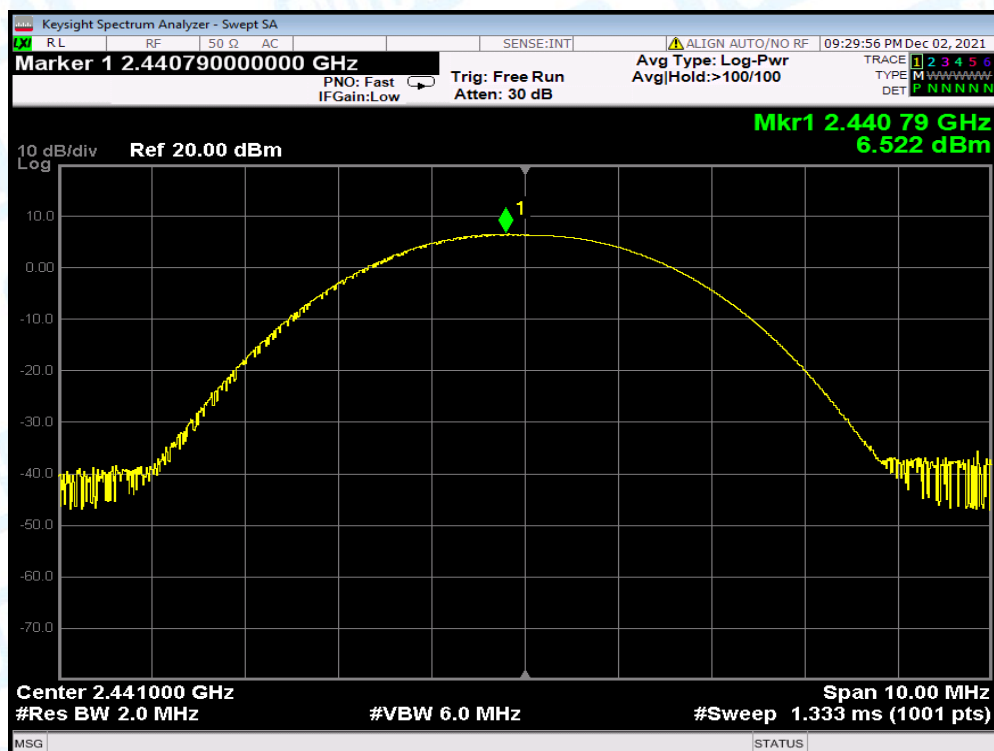
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	7.371	21	Pass
NVNT	1-DH1	2441	Ant1	6.522	21	Pass
NVNT	1-DH1	2480	Ant1	7.192	21	Pass
NVNT	2-DH1	2402	Ant1	7.113	21	Pass
NVNT	2-DH1	2441	Ant1	7.145	21	Pass
NVNT	2-DH1	2480	Ant1	7.264	21	Pass
NVNT	3-DH1	2402	Ant1	7.493	21	Pass
NVNT	3-DH1	2441	Ant1	7.59	21	Pass
NVNT	3-DH1	2480	Ant1	7.74	21	Pass

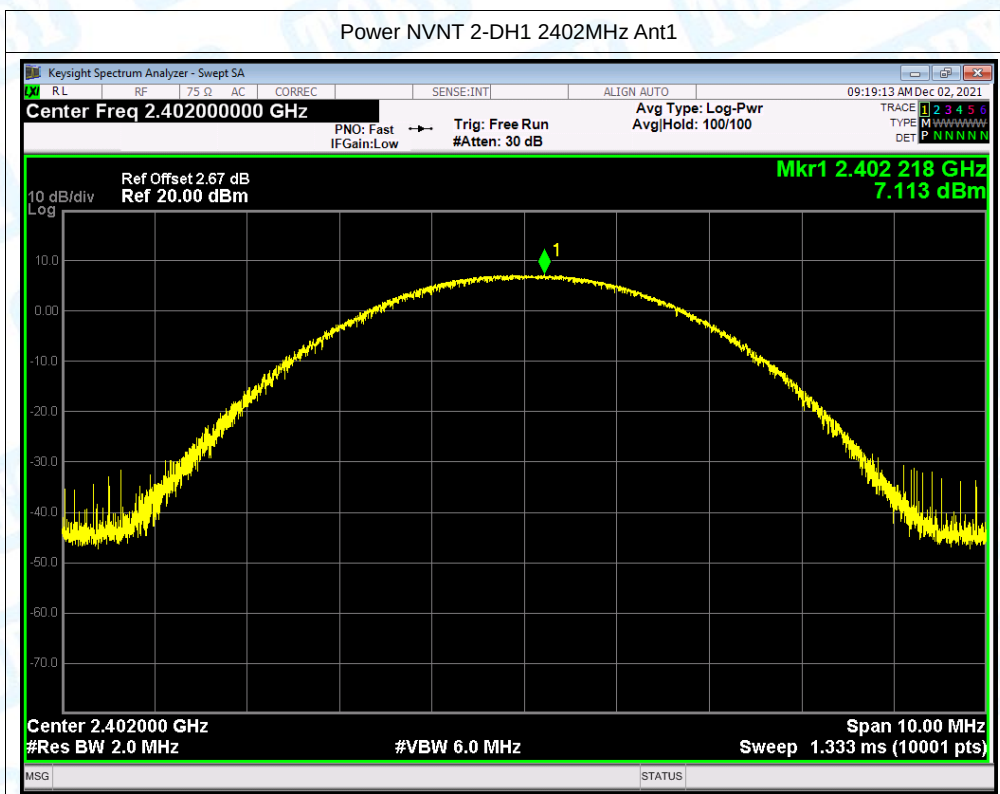
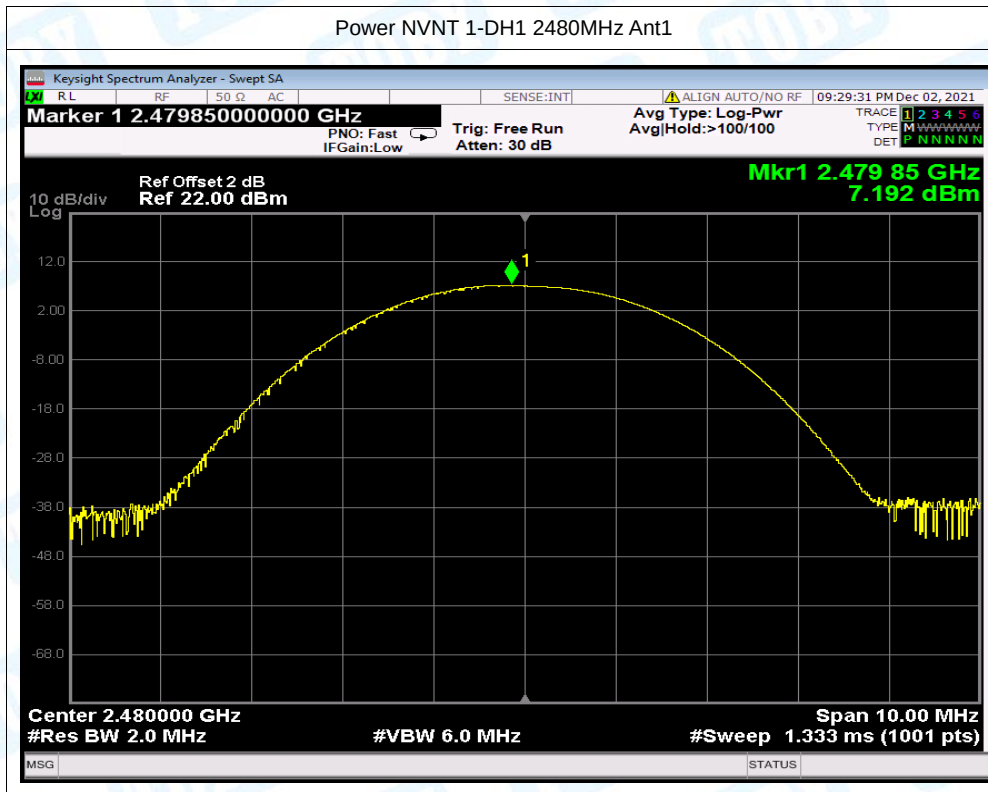
Test Graphs

Power NVNT 1-DH1 2402MHz Ant1

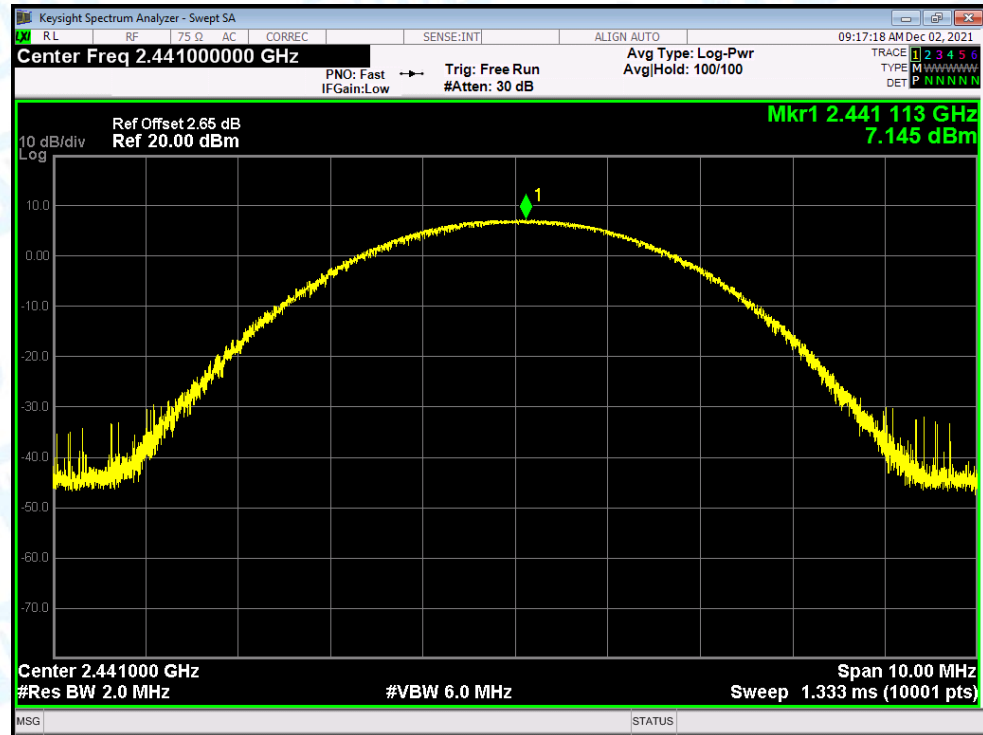


Power NVNT 1-DH1 2441MHz Ant1

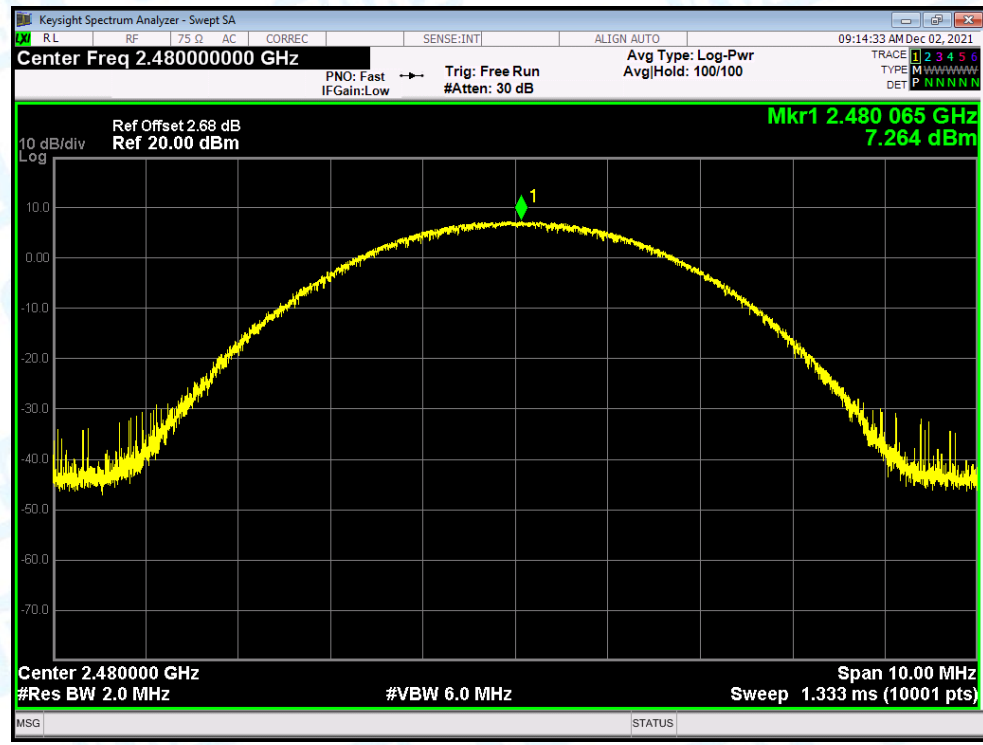




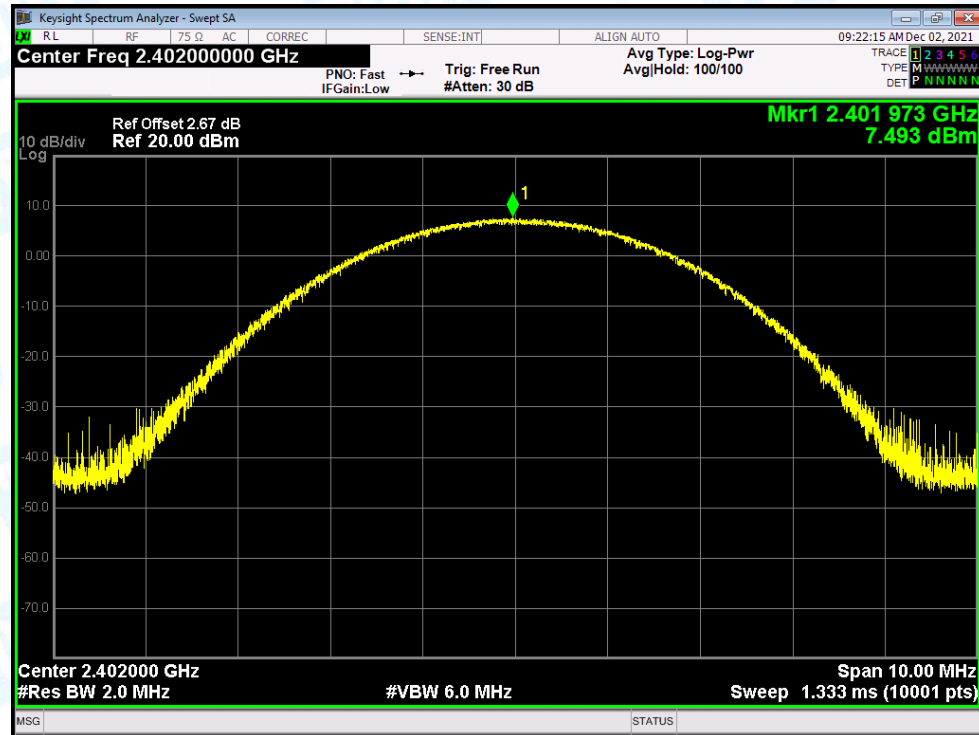
Power NVNT 2-DH1 2441MHz Ant1



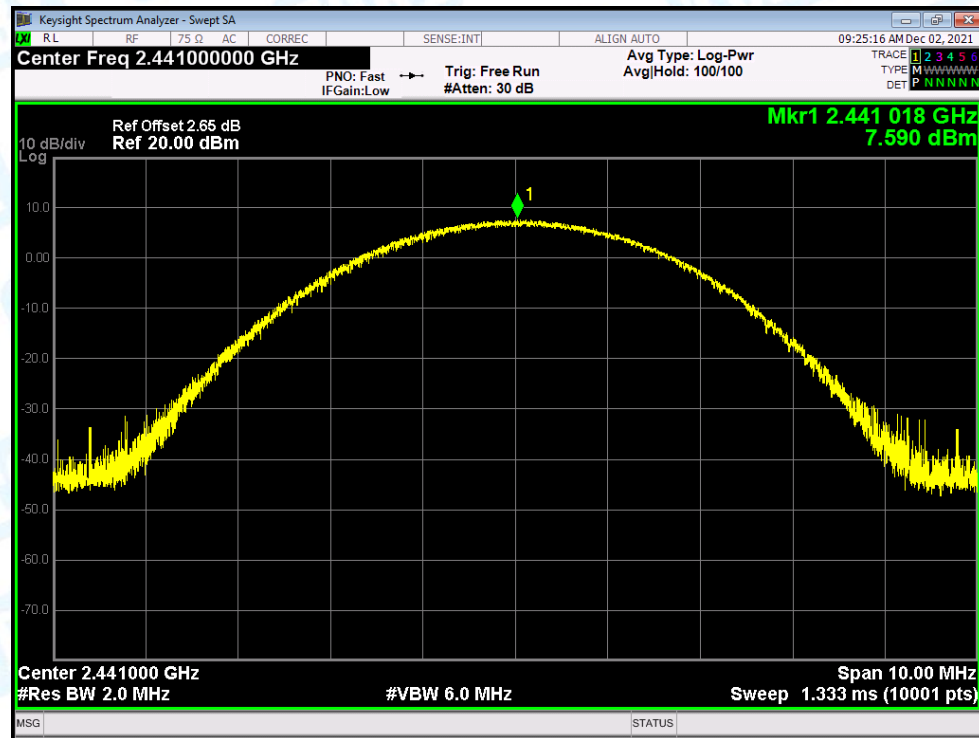
Power NVNT 2-DH1 2480MHz Ant1

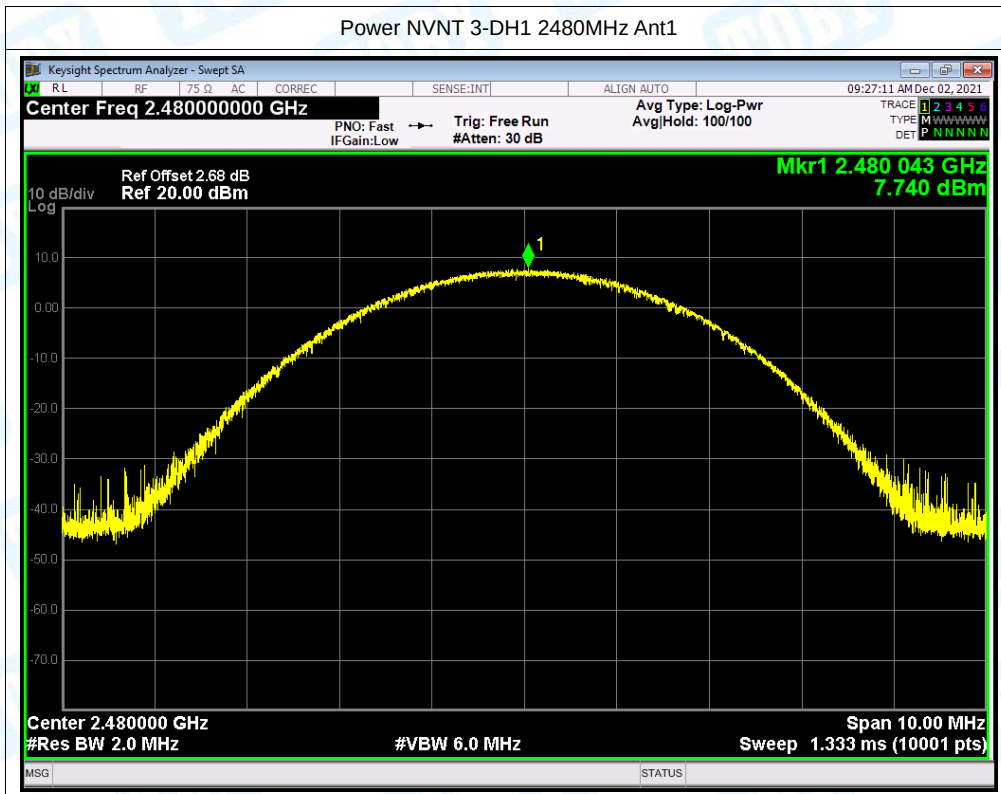


Power NVNT 3-DH1 2402MHz Ant1



Power NVNT 3-DH1 2441MHz Ant1



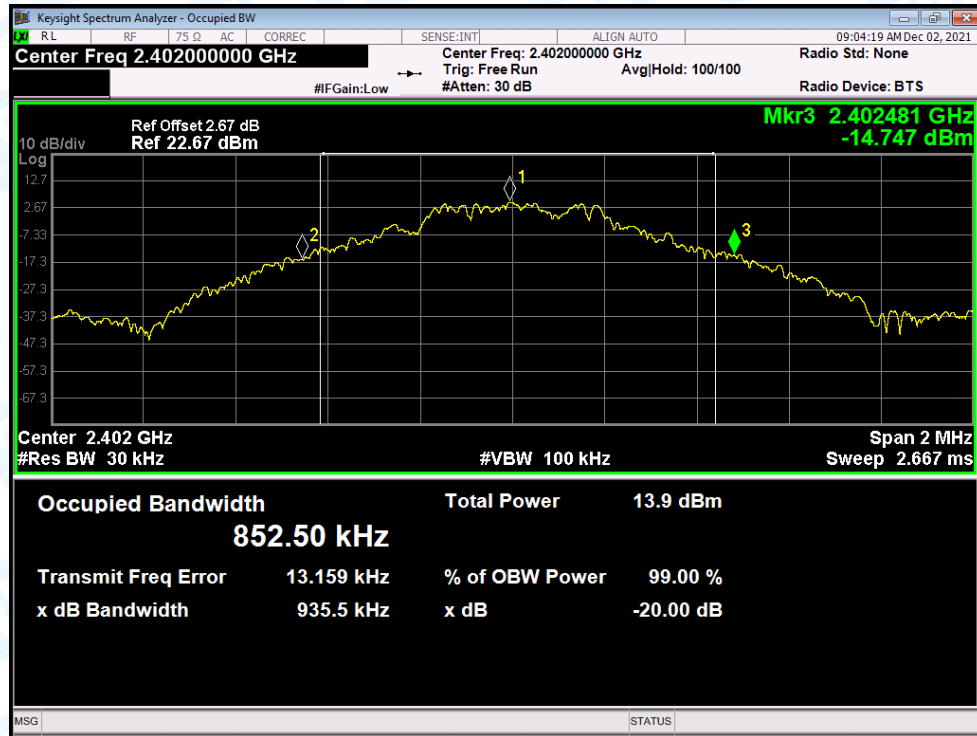


-20dB Bandwidth

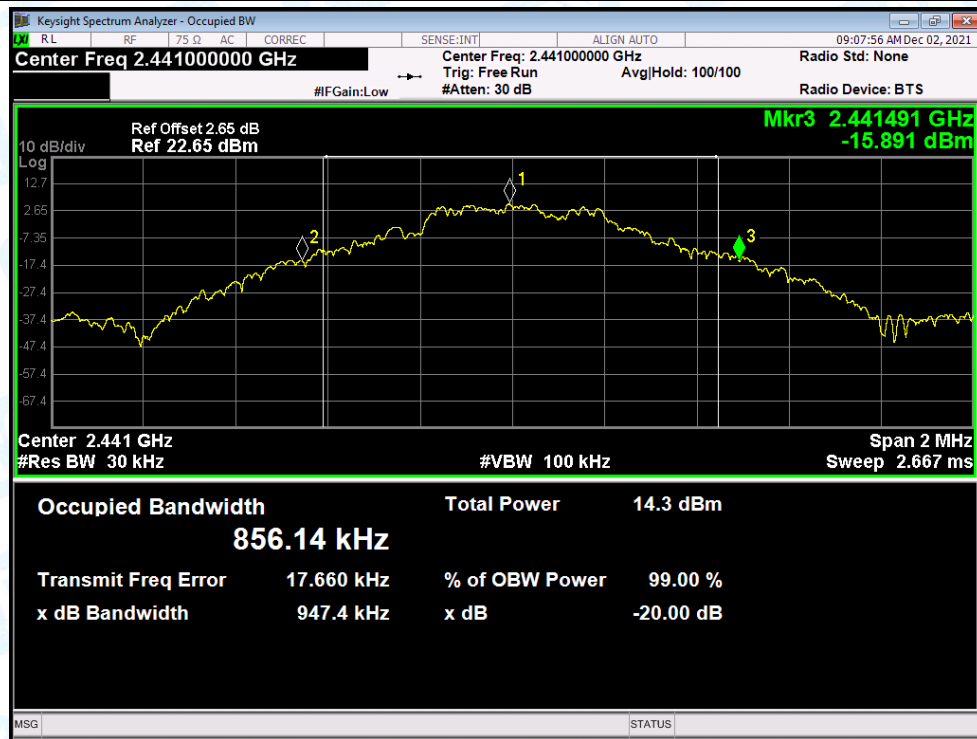
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.9355	0	Pass
NVNT	1-DH1	2441	Ant1	0.9474	0	Pass
NVNT	1-DH1	2480	Ant1	0.9178	0	Pass
NVNT	2-DH1	2402	Ant1	1.354	0	Pass
NVNT	2-DH1	2441	Ant1	1.335	0	Pass
NVNT	2-DH1	2480	Ant1	1.350	0	Pass
NVNT	3-DH1	2402	Ant1	1.285	0	Pass
NVNT	3-DH1	2441	Ant1	1.292	0	Pass
NVNT	3-DH1	2480	Ant1	1.302	0	Pass

Test Graphs

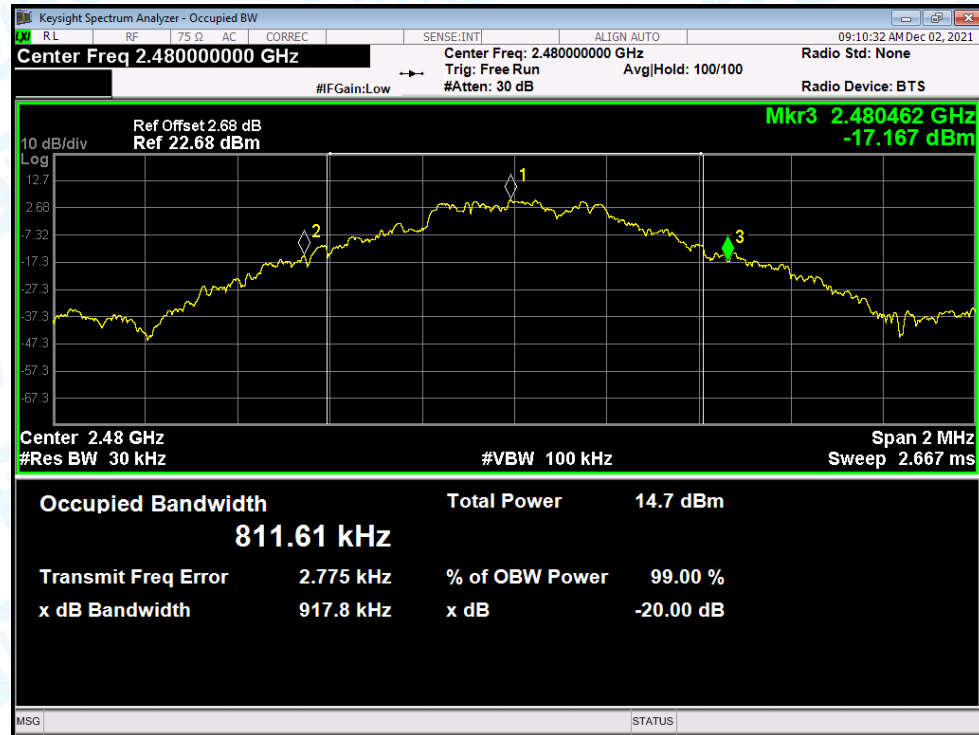
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



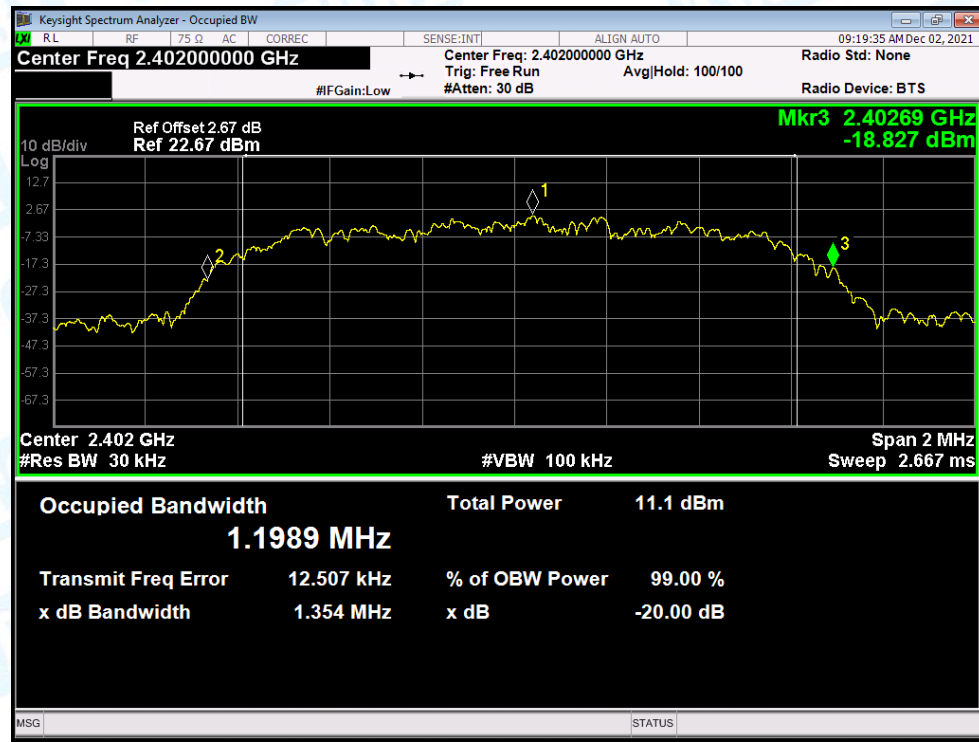
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



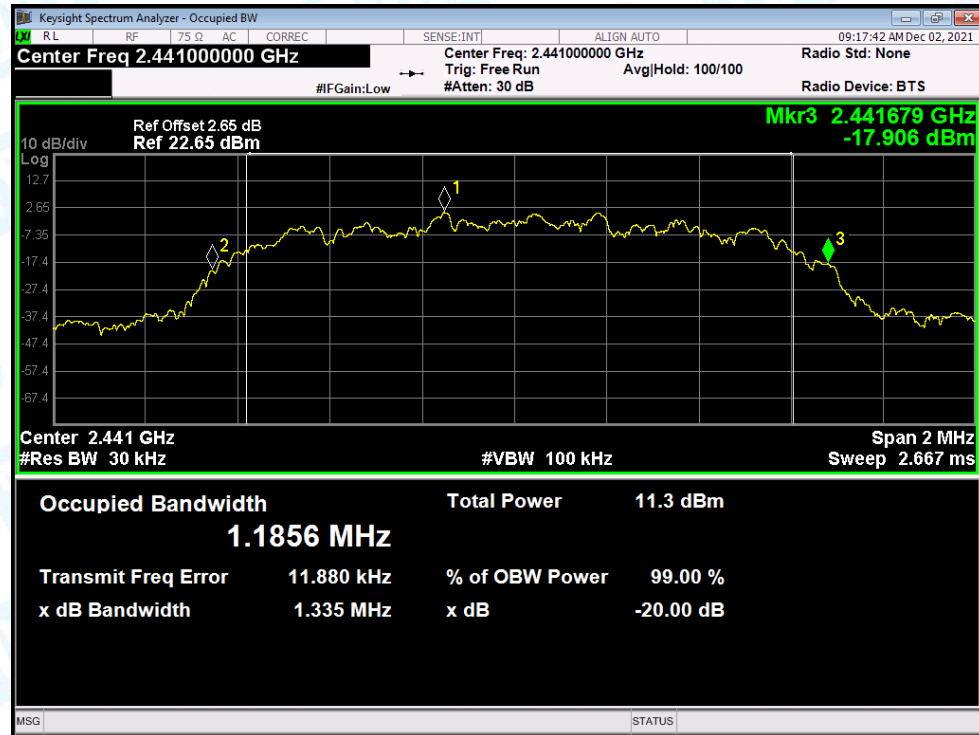
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



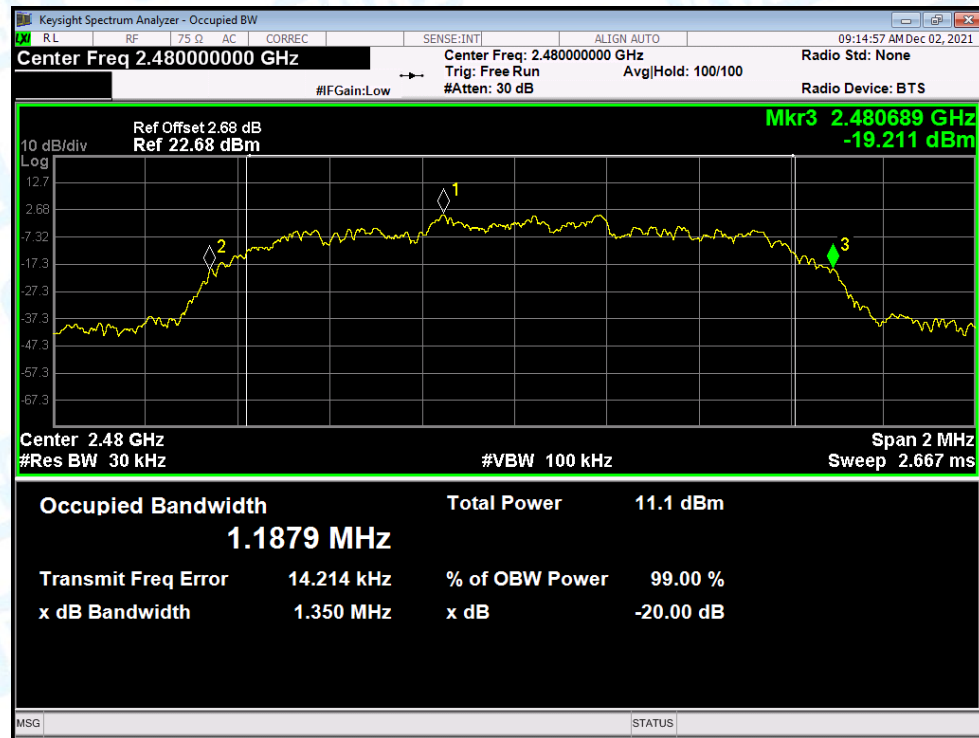
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



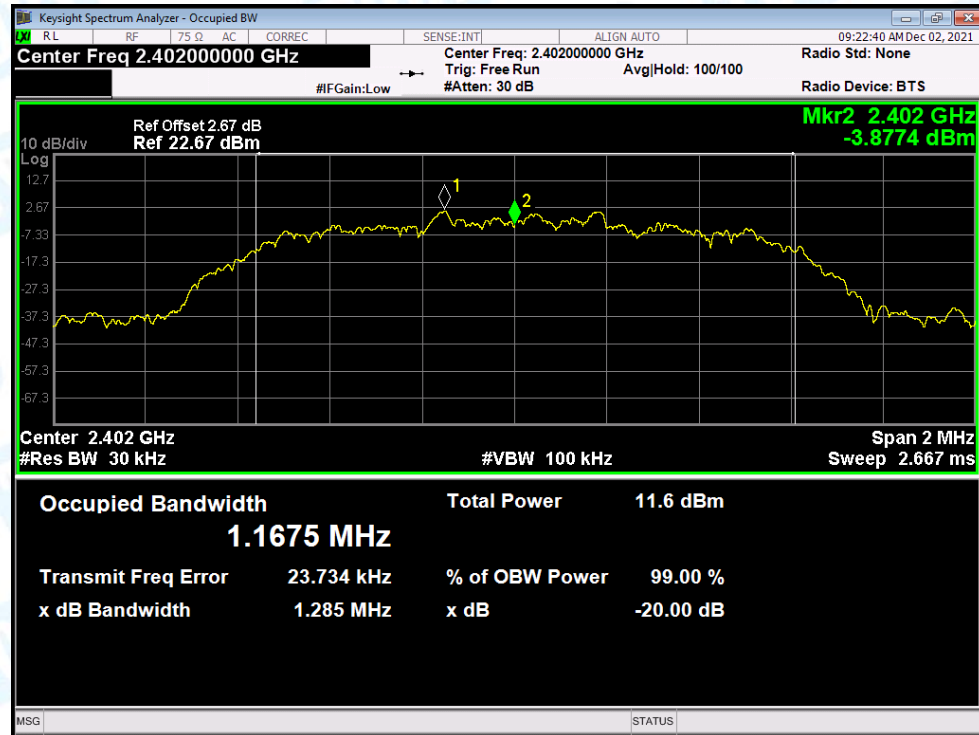
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



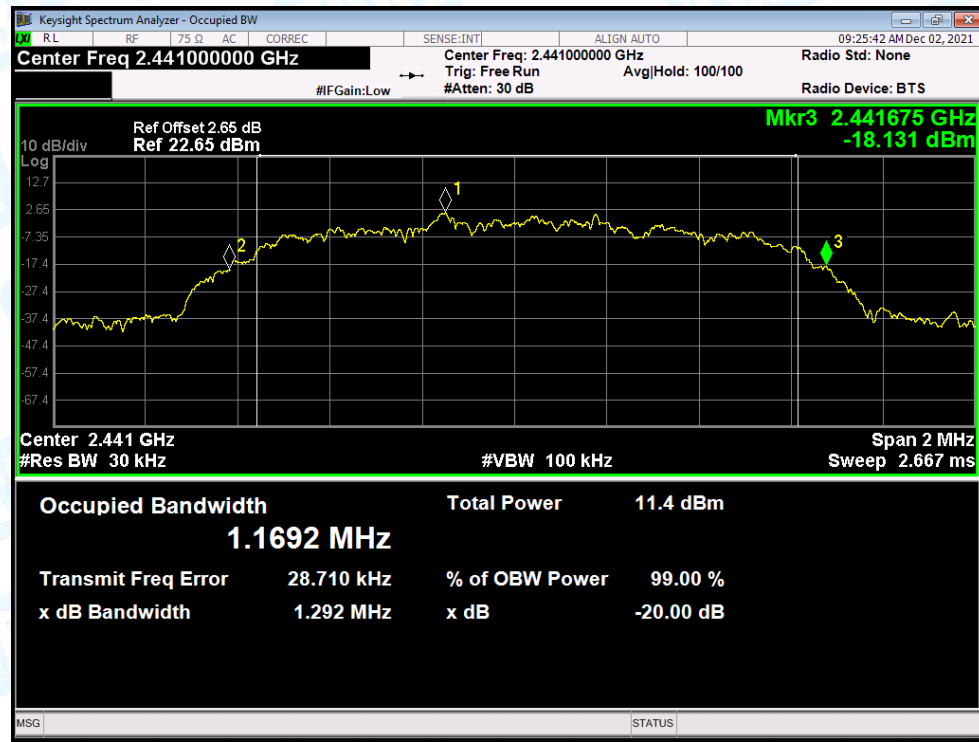
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

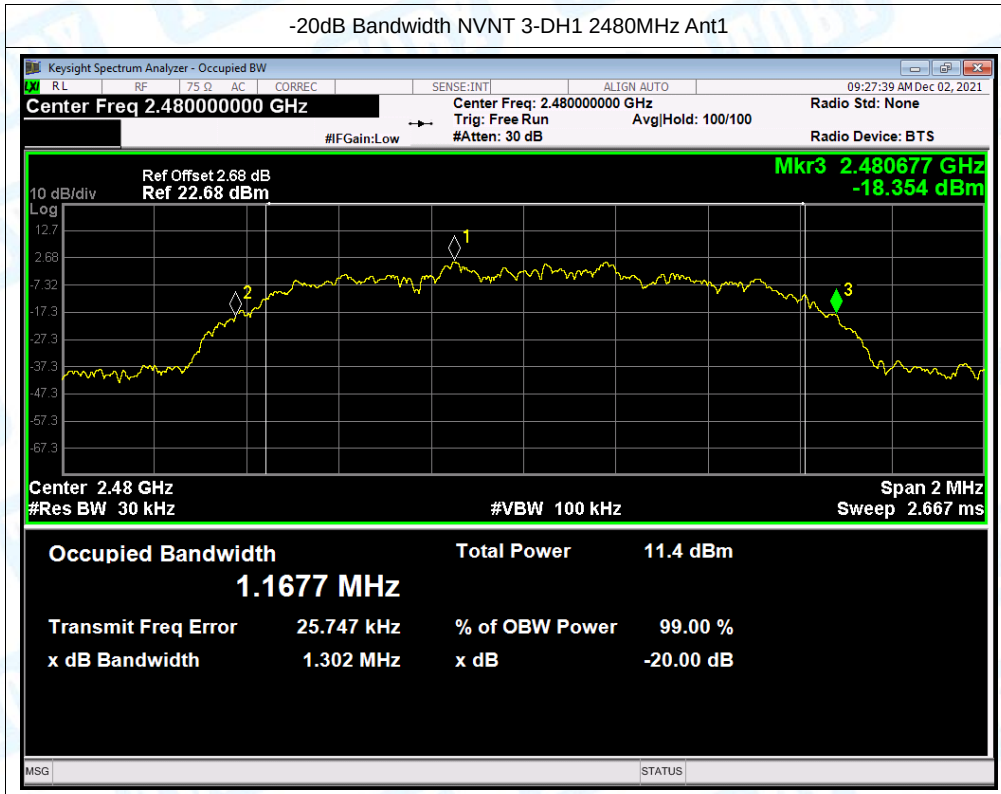


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



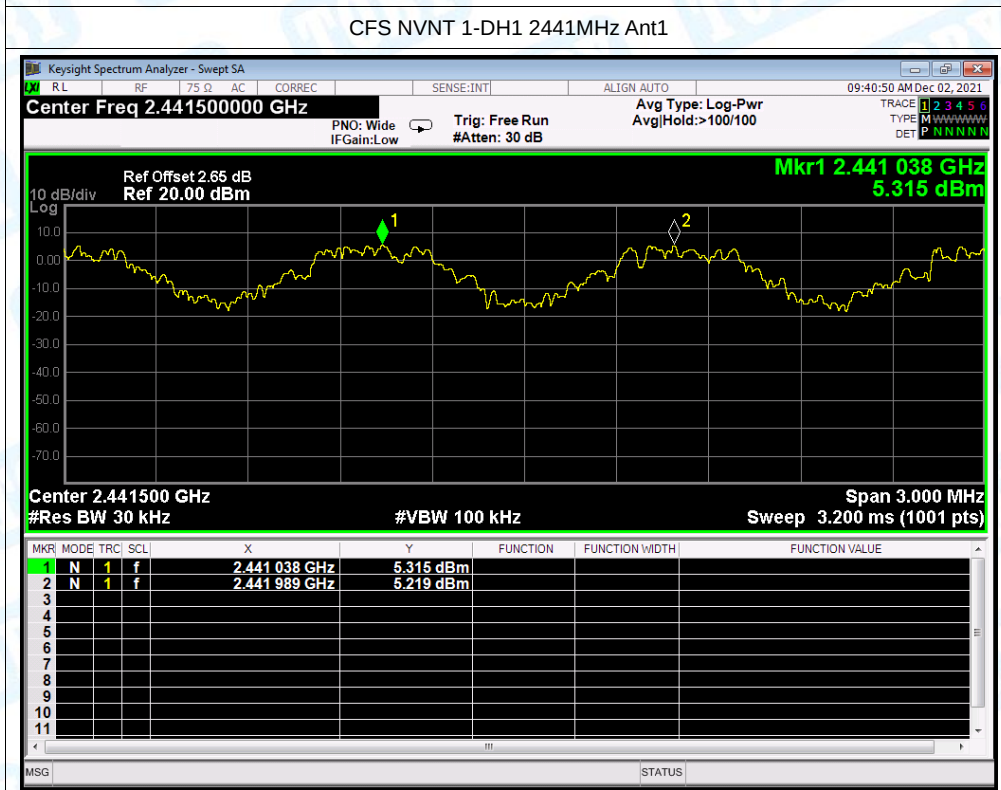
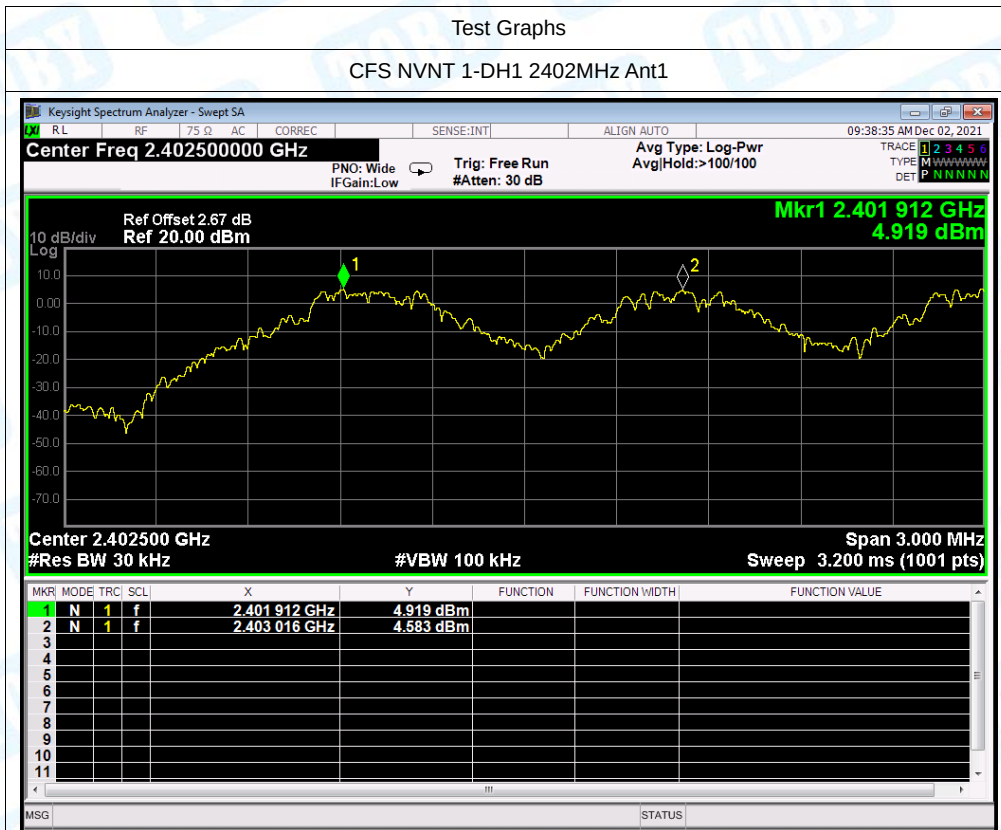
-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1

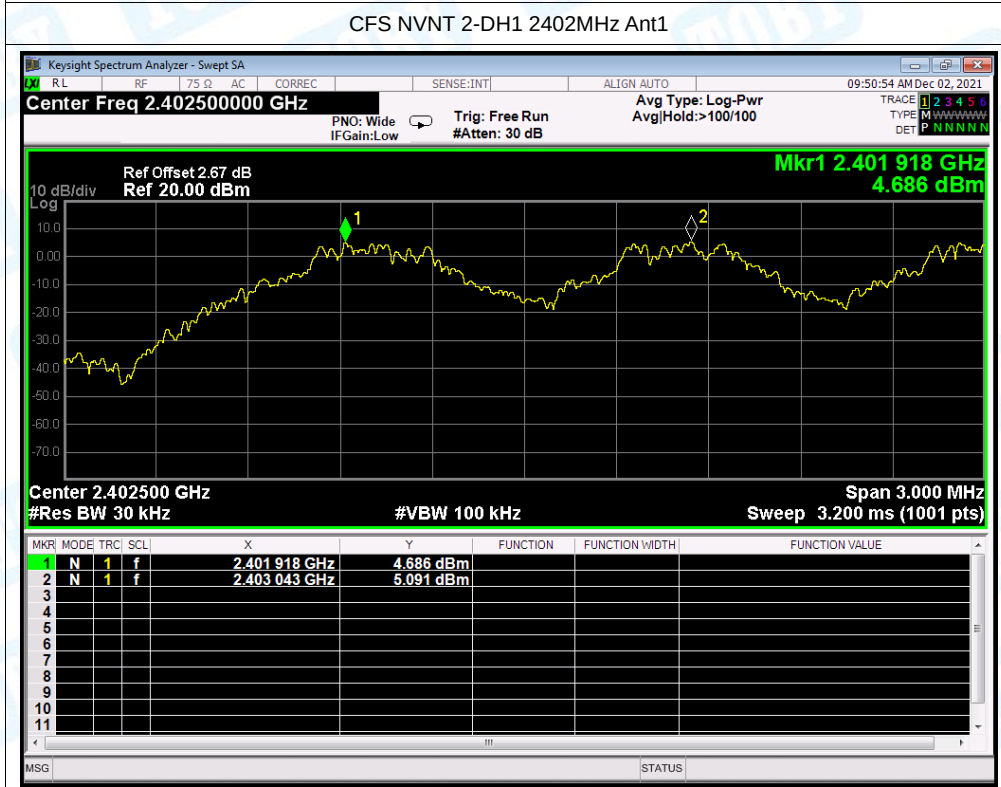
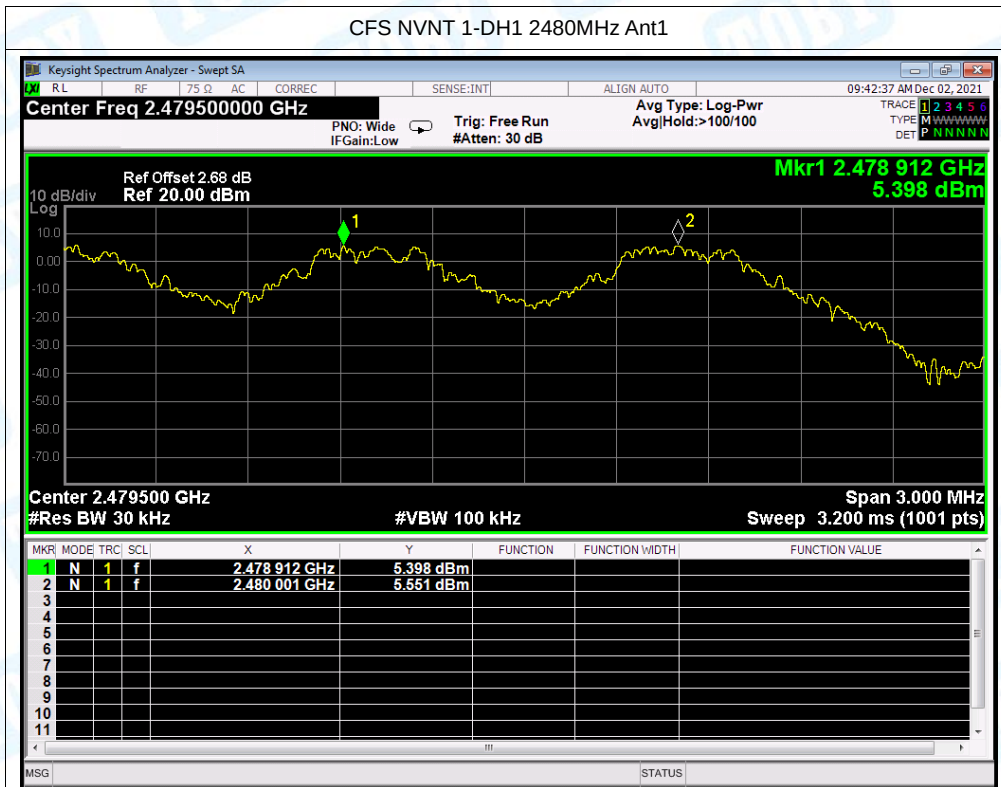


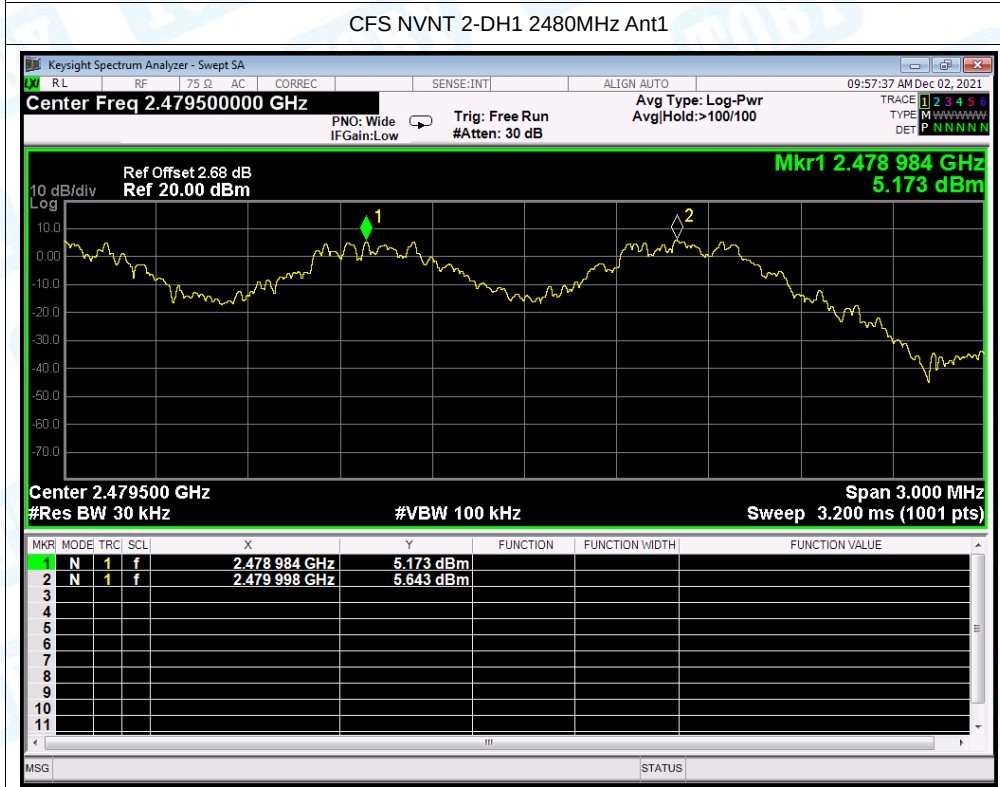
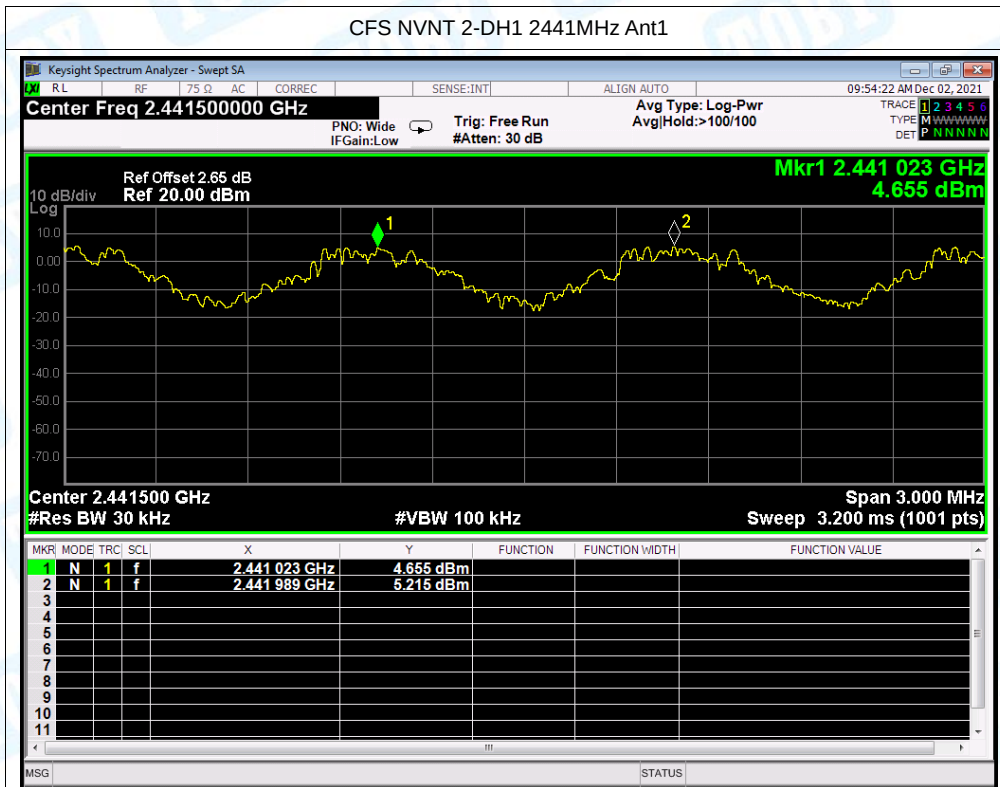


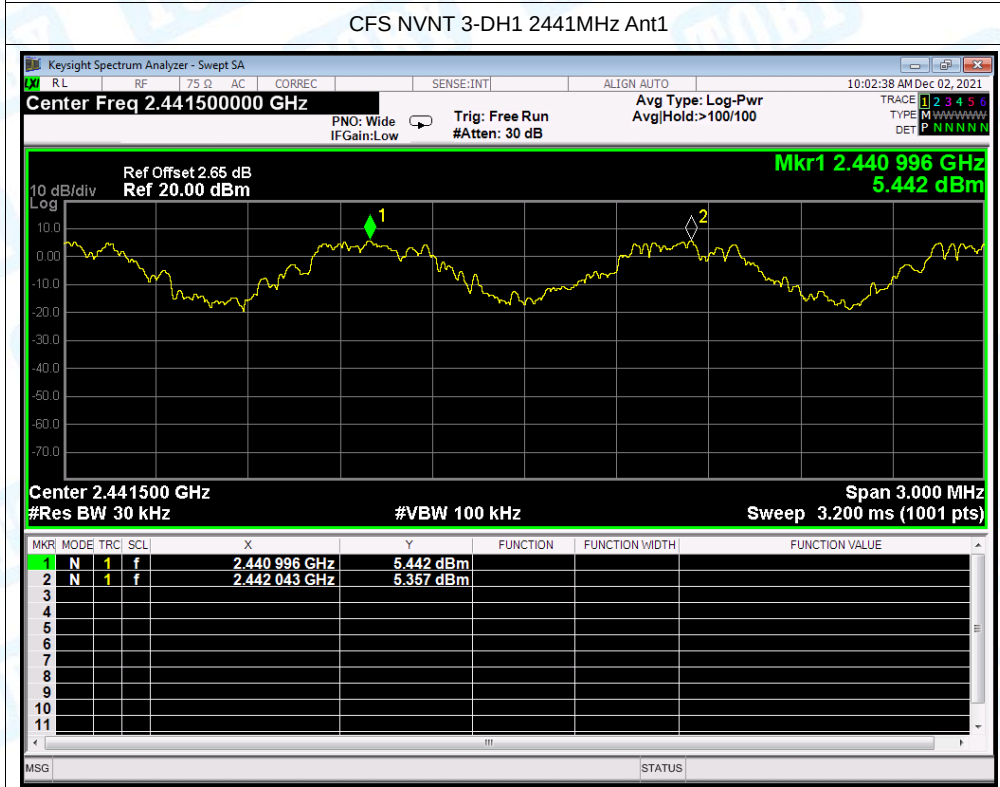
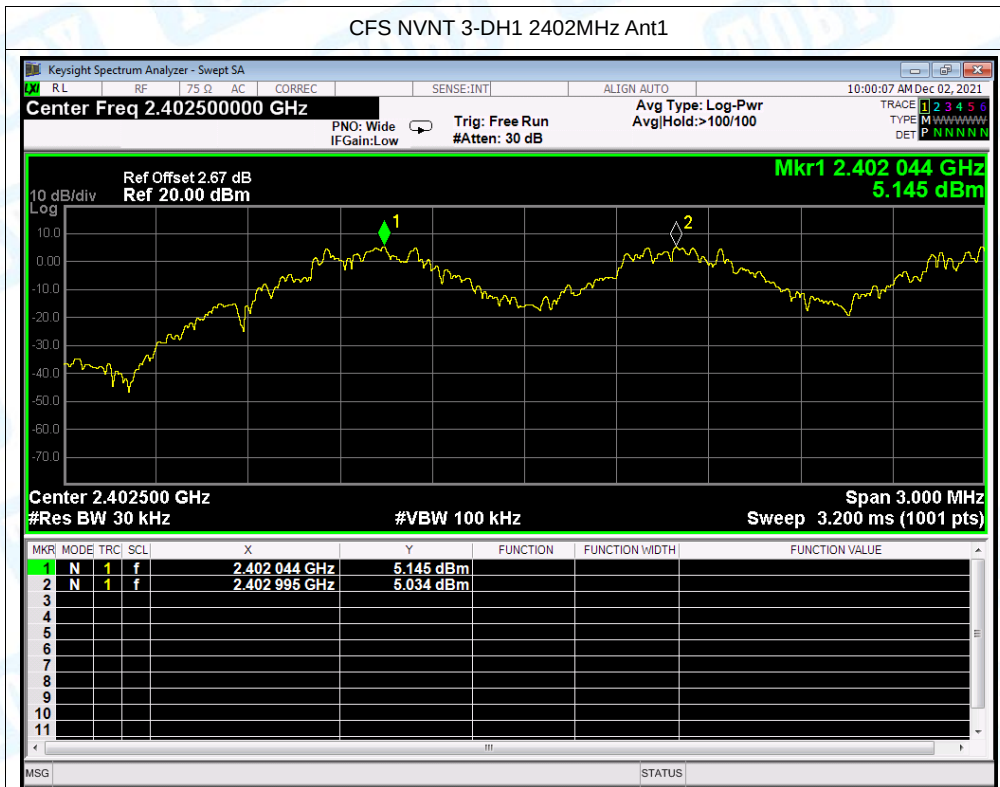
Carrier Frequencies Separation

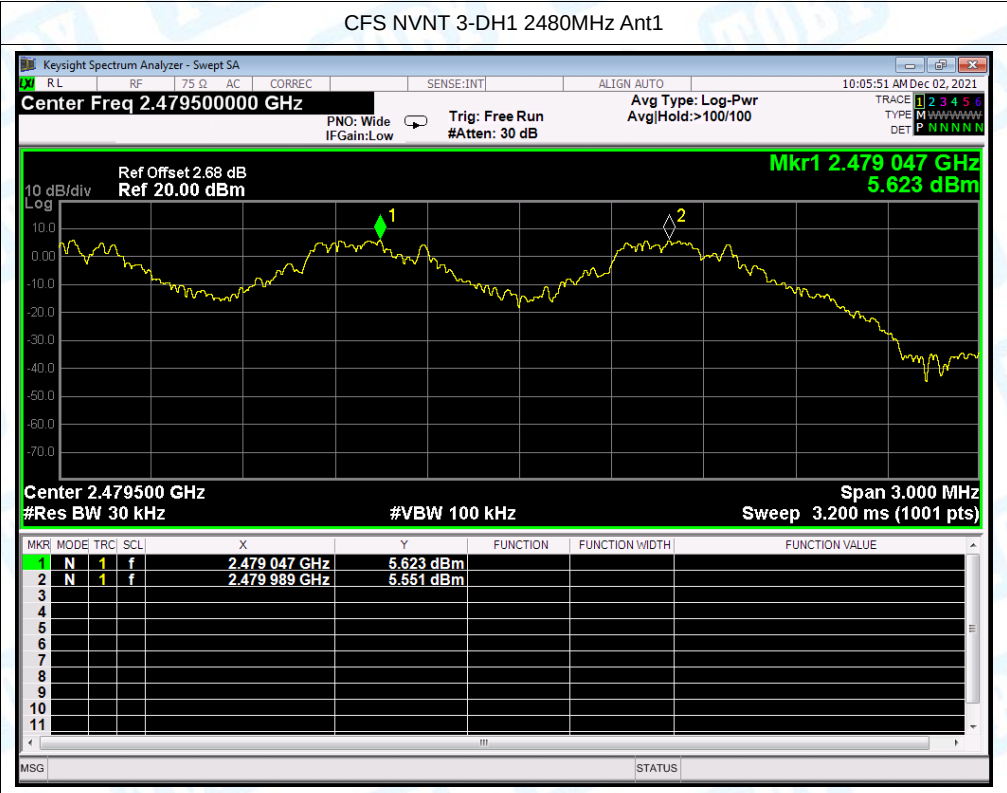
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2401.912	2403.016	1.104	0.624	Pass
NVNT	1-DH1	Ant1	2441.038	2441.989	0.951	0.631	Pass
NVNT	1-DH1	Ant1	2478.912	2480.001	1.089	0.612	Pass
NVNT	2-DH1	Ant1	2401.918	2403.043	1.125	0.903	Pass
NVNT	2-DH1	Ant1	2441.023	2441.989	0.966	0.89	Pass
NVNT	2-DH1	Ant1	2478.984	2479.998	1.014	0.9	Pass
NVNT	3-DH1	Ant1	2402.044	2402.995	0.951	0.857	Pass
NVNT	3-DH1	Ant1	2440.996	2442.043	1.047	0.861	Pass
NVNT	3-DH1	Ant1	2479.047	2479.989	0.942	0.868	Pass





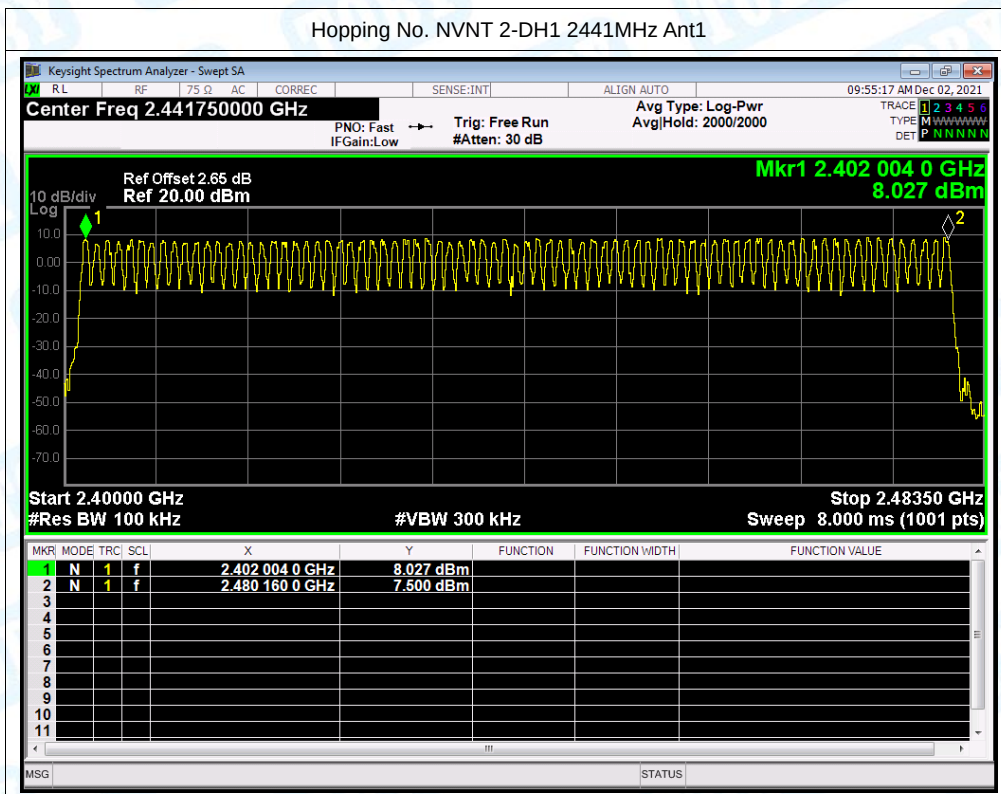
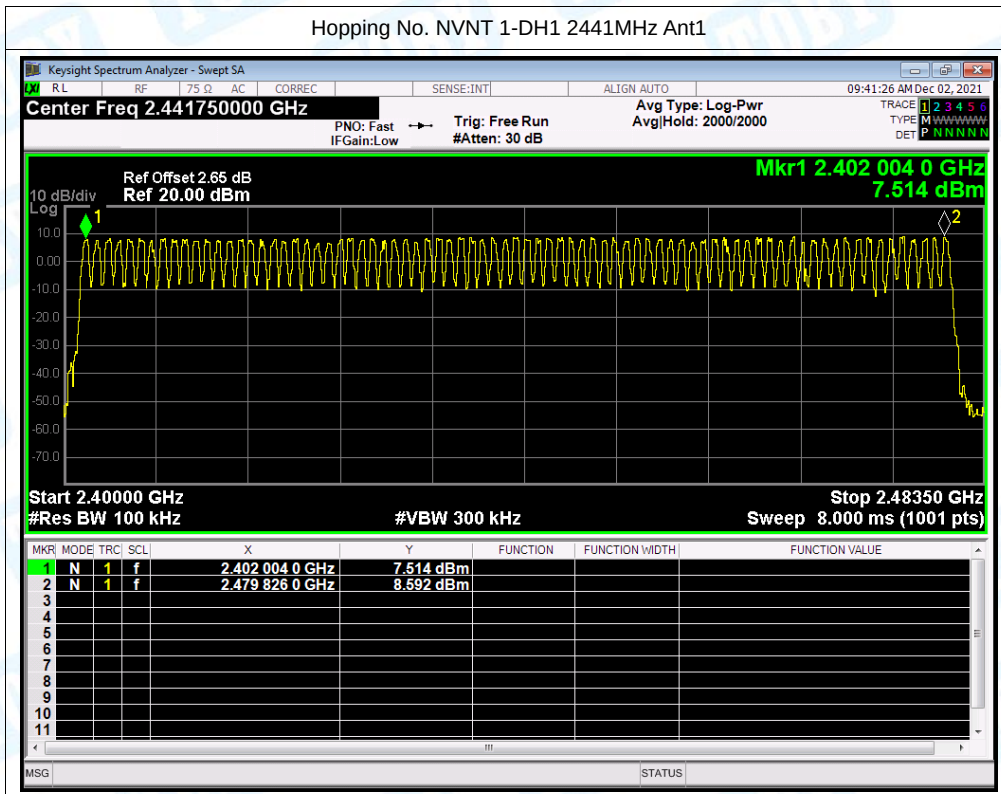


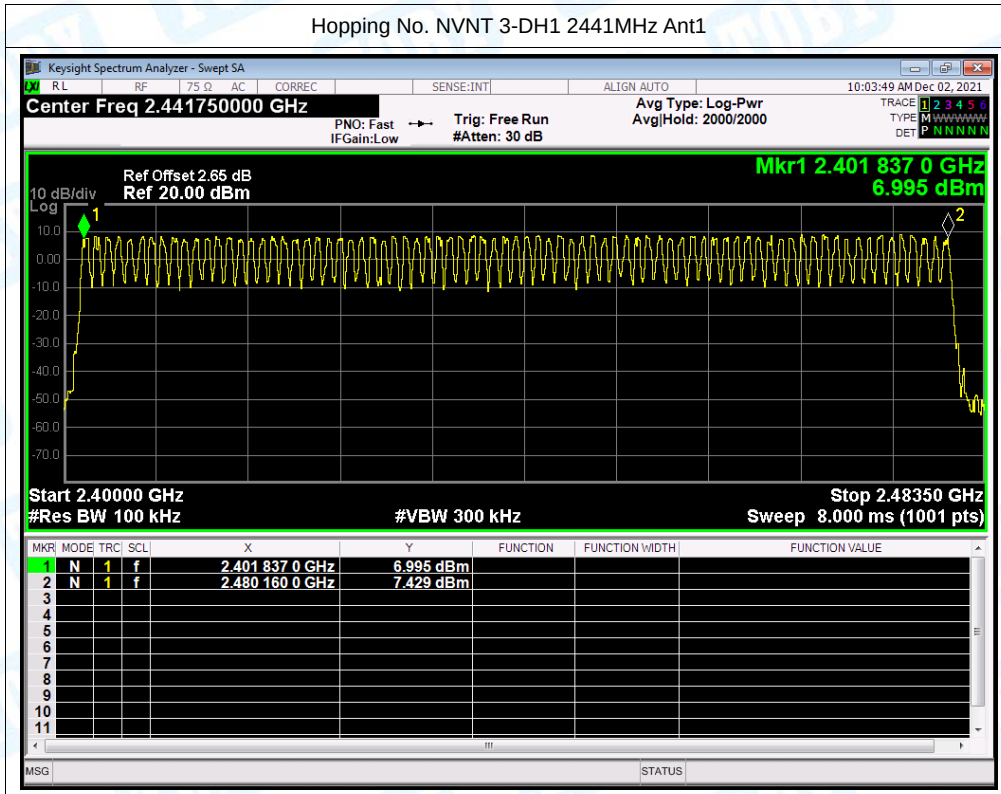




Number of Hopping Channel

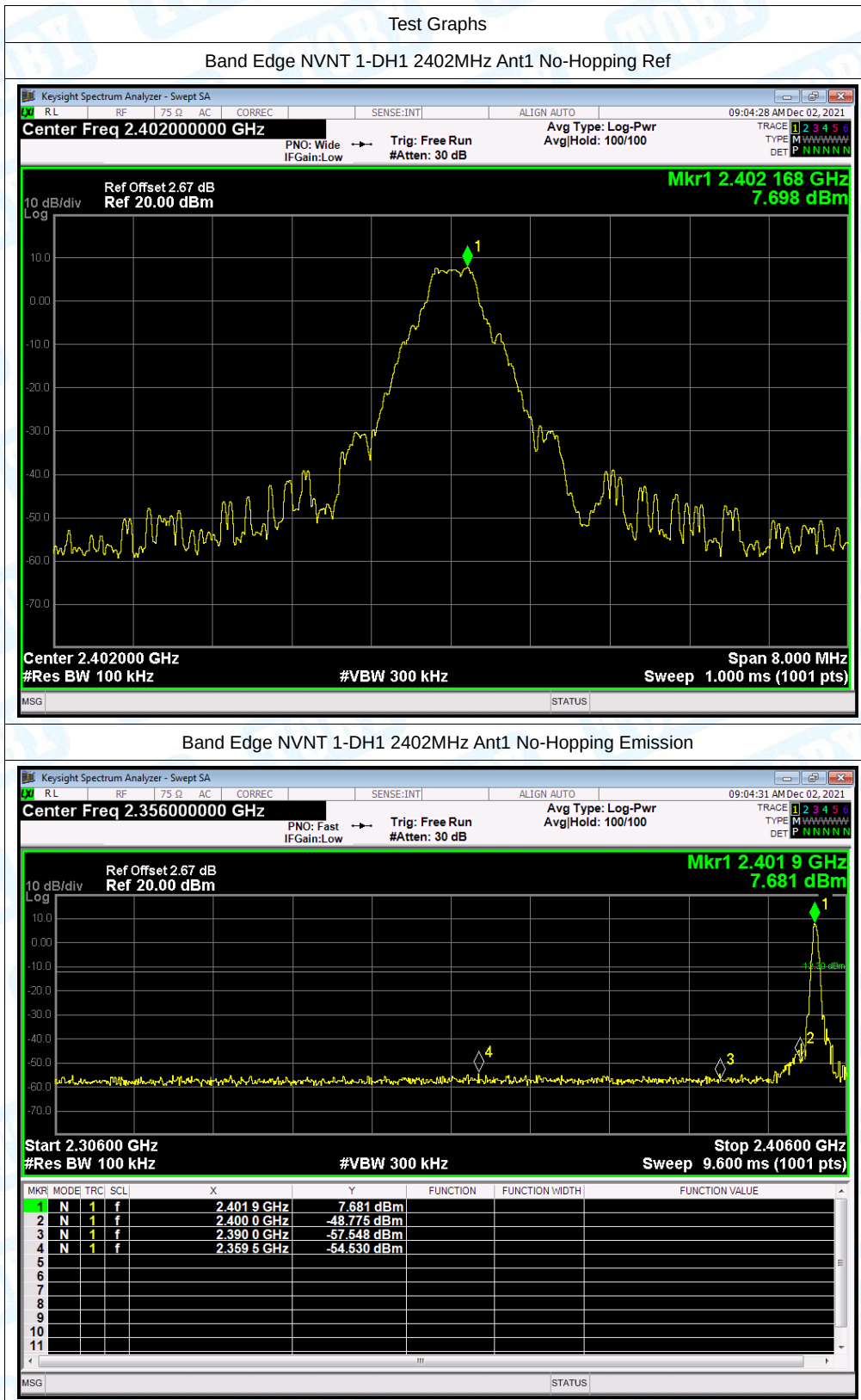
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

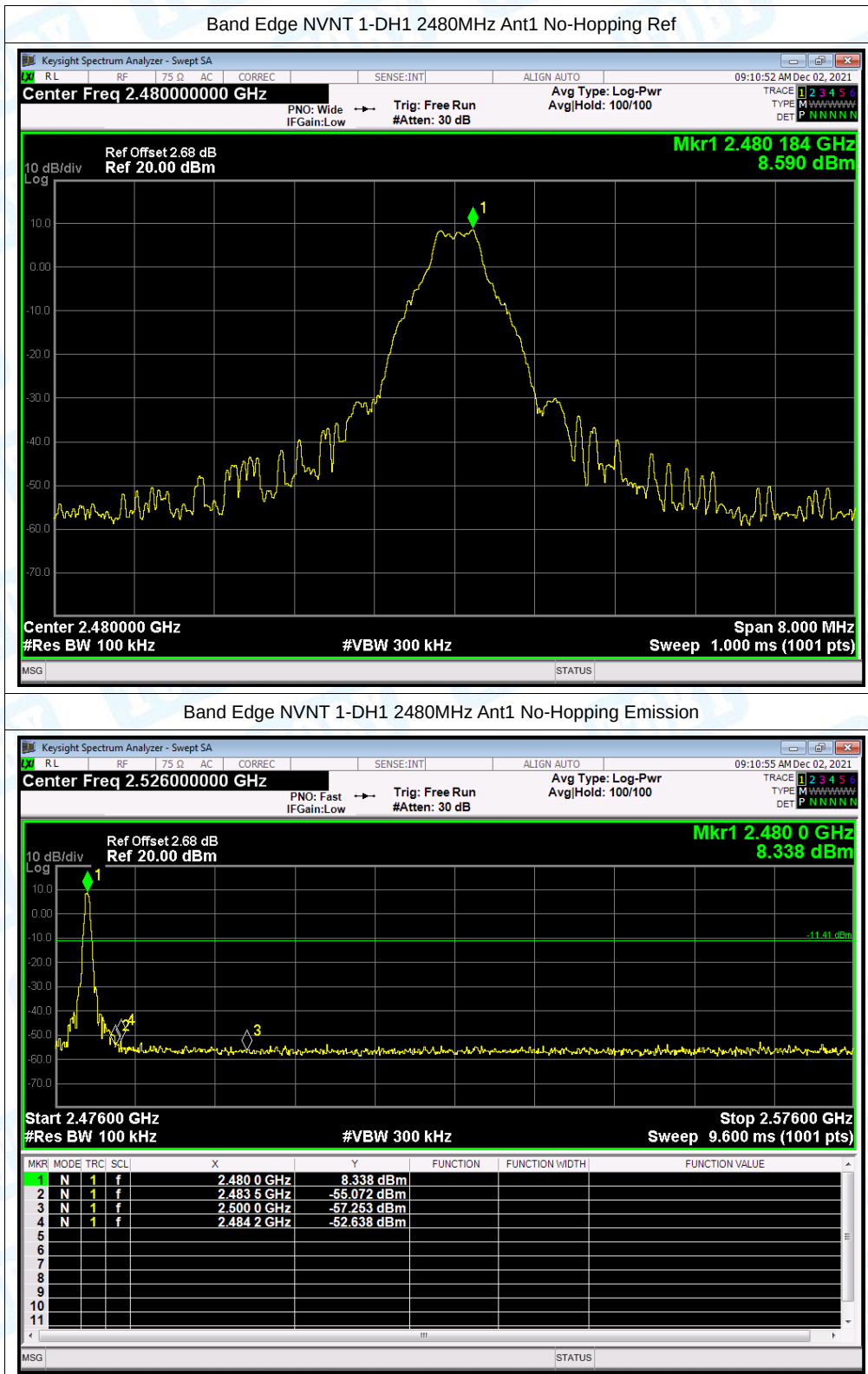


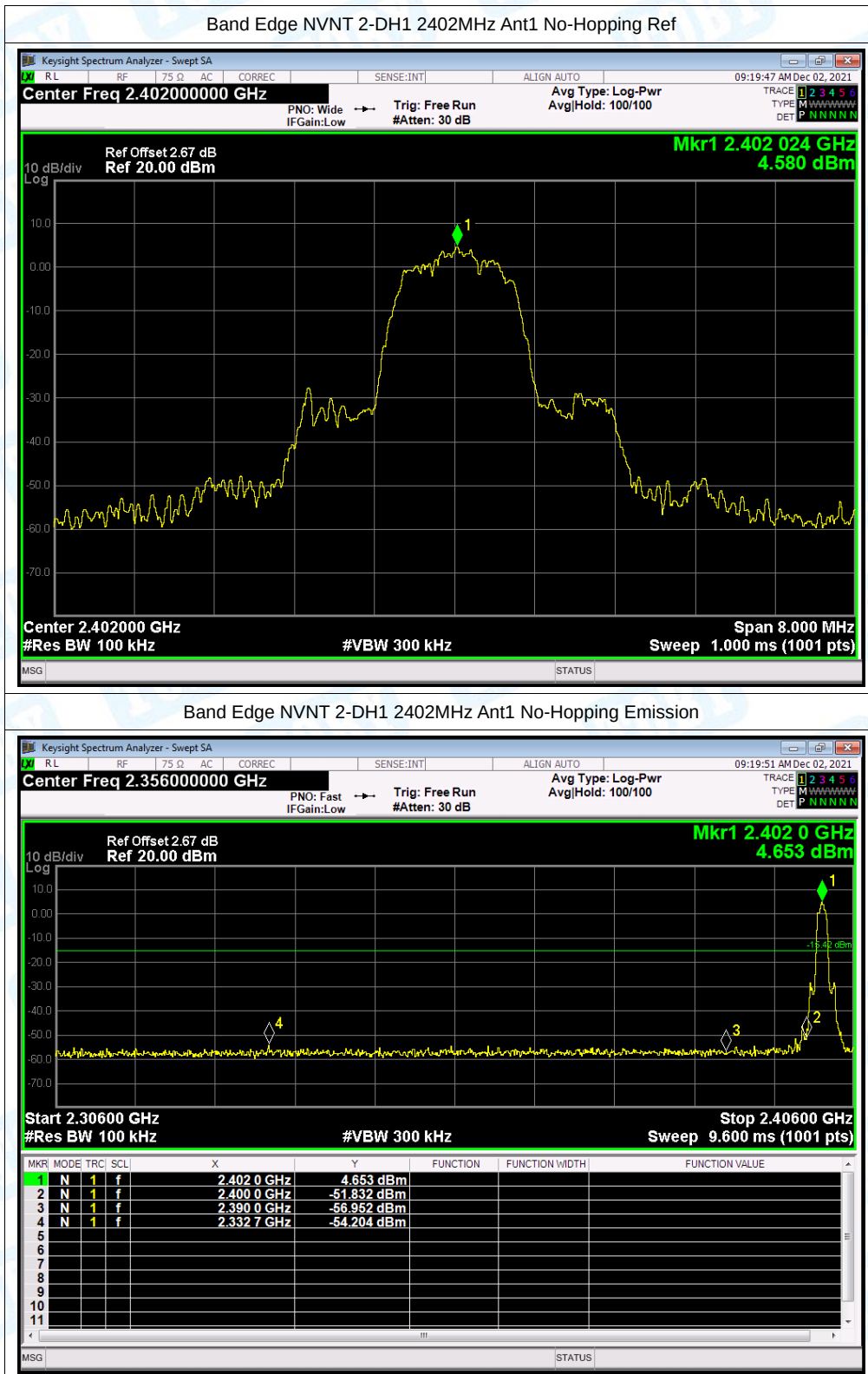


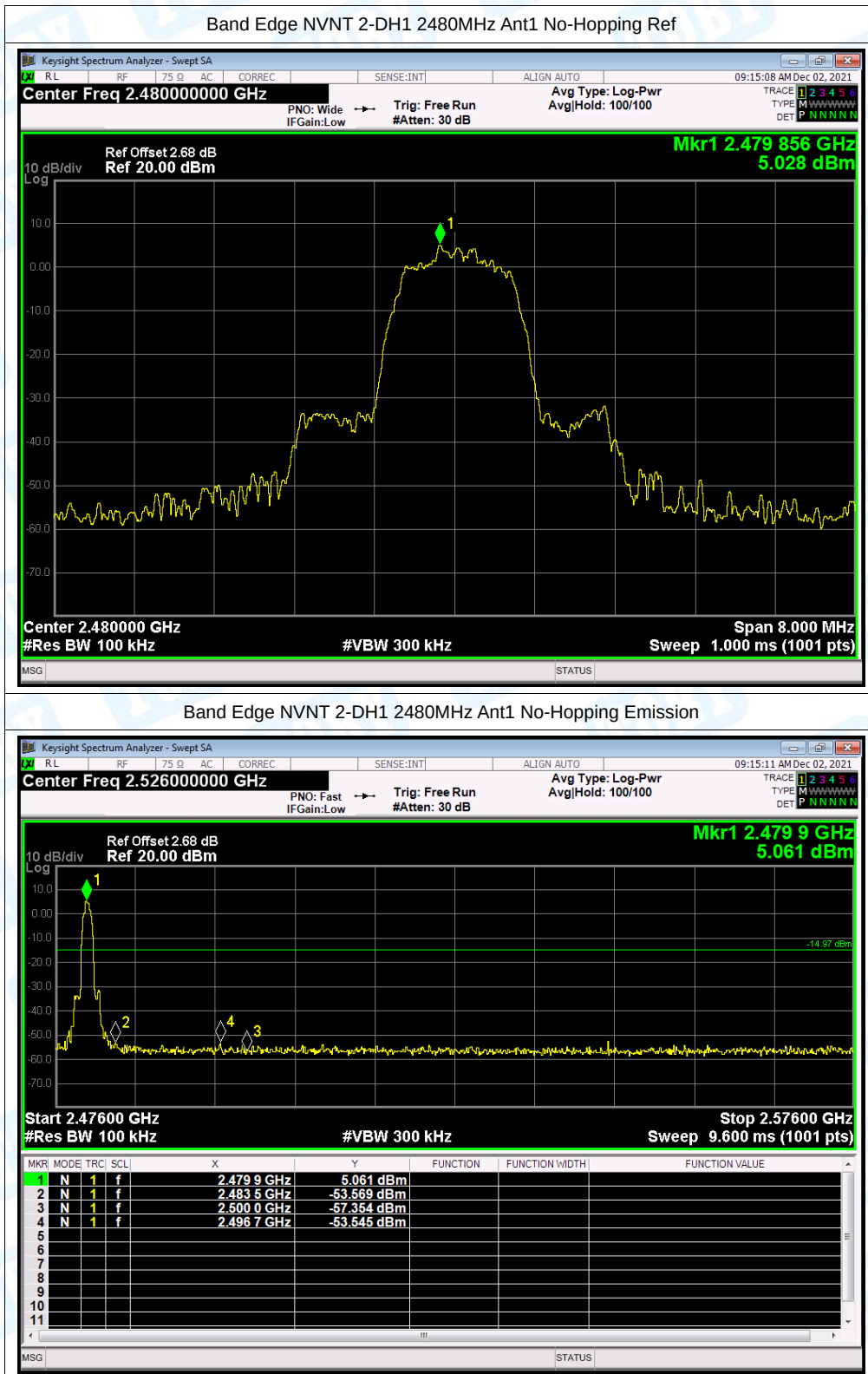
Band Edge

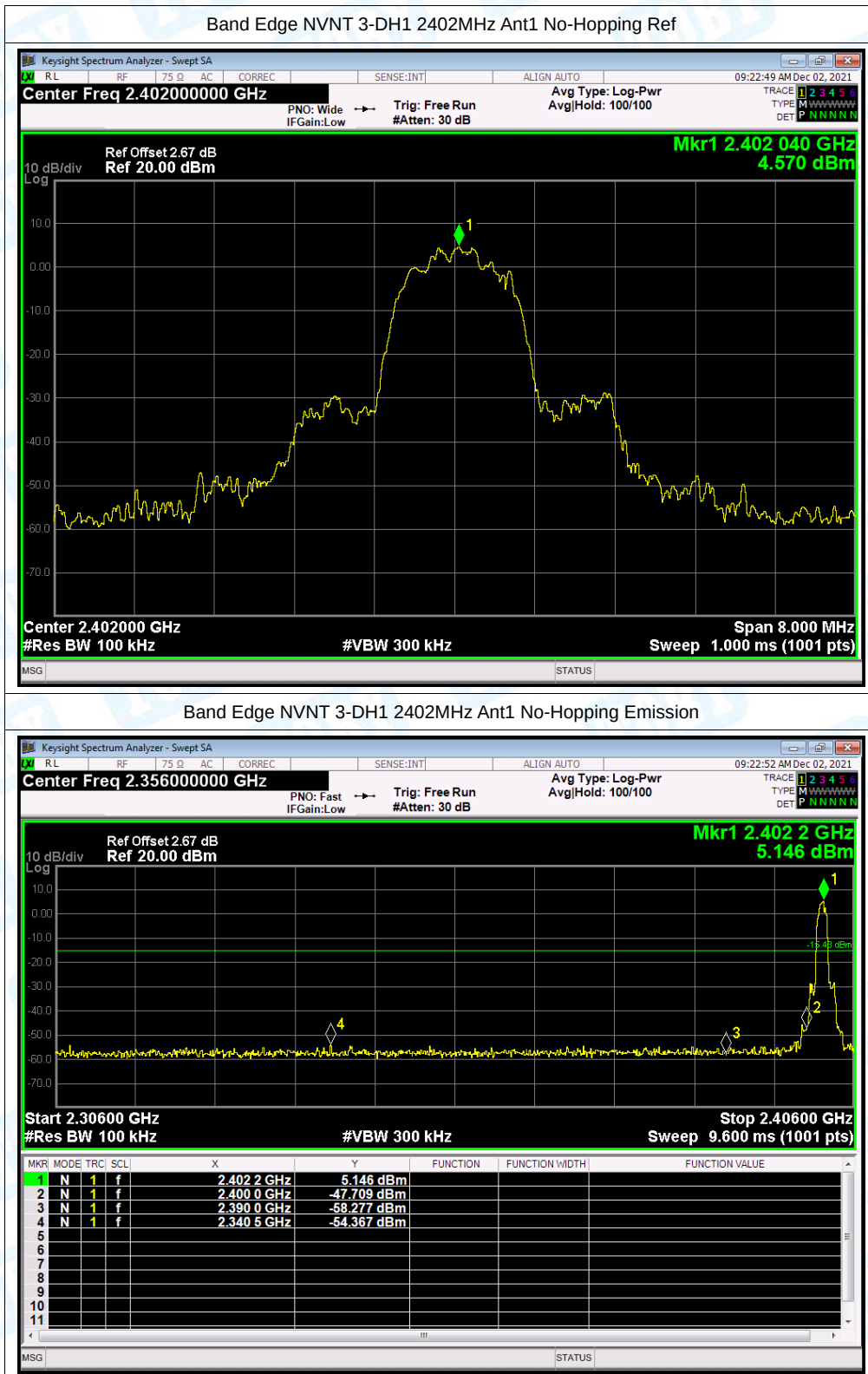
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-62.23	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-61.22	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-58.78	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-58.57	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-58.93	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-57.82	-20	Pass







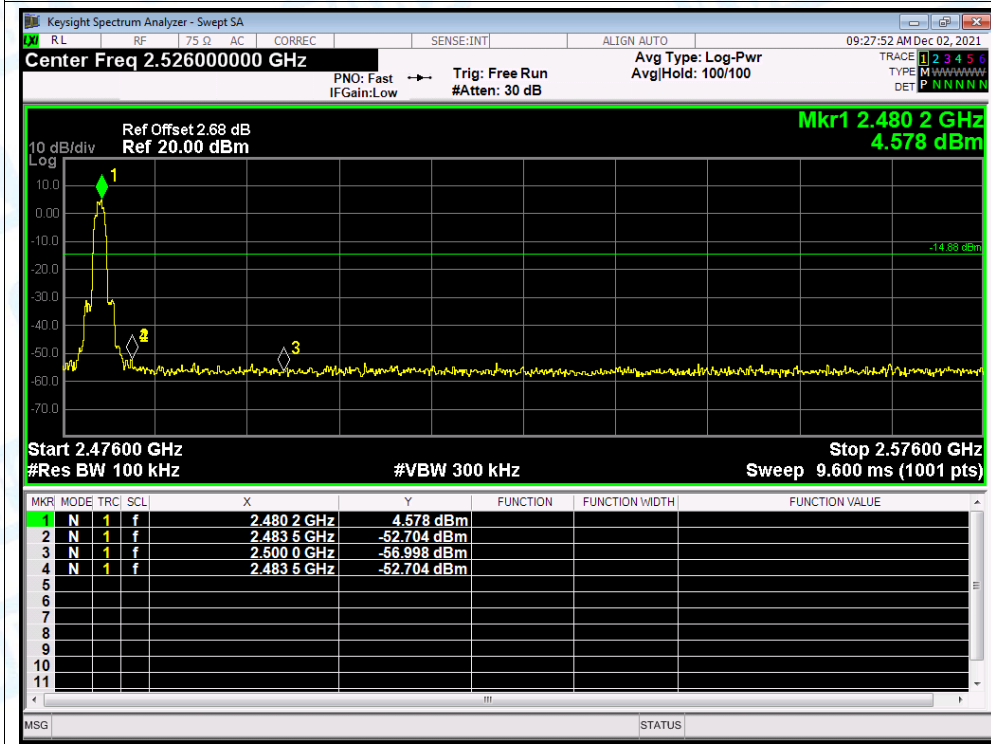




Band Edge NVNT 3-DH1 2480MHz Ant1 No-Hopping Ref

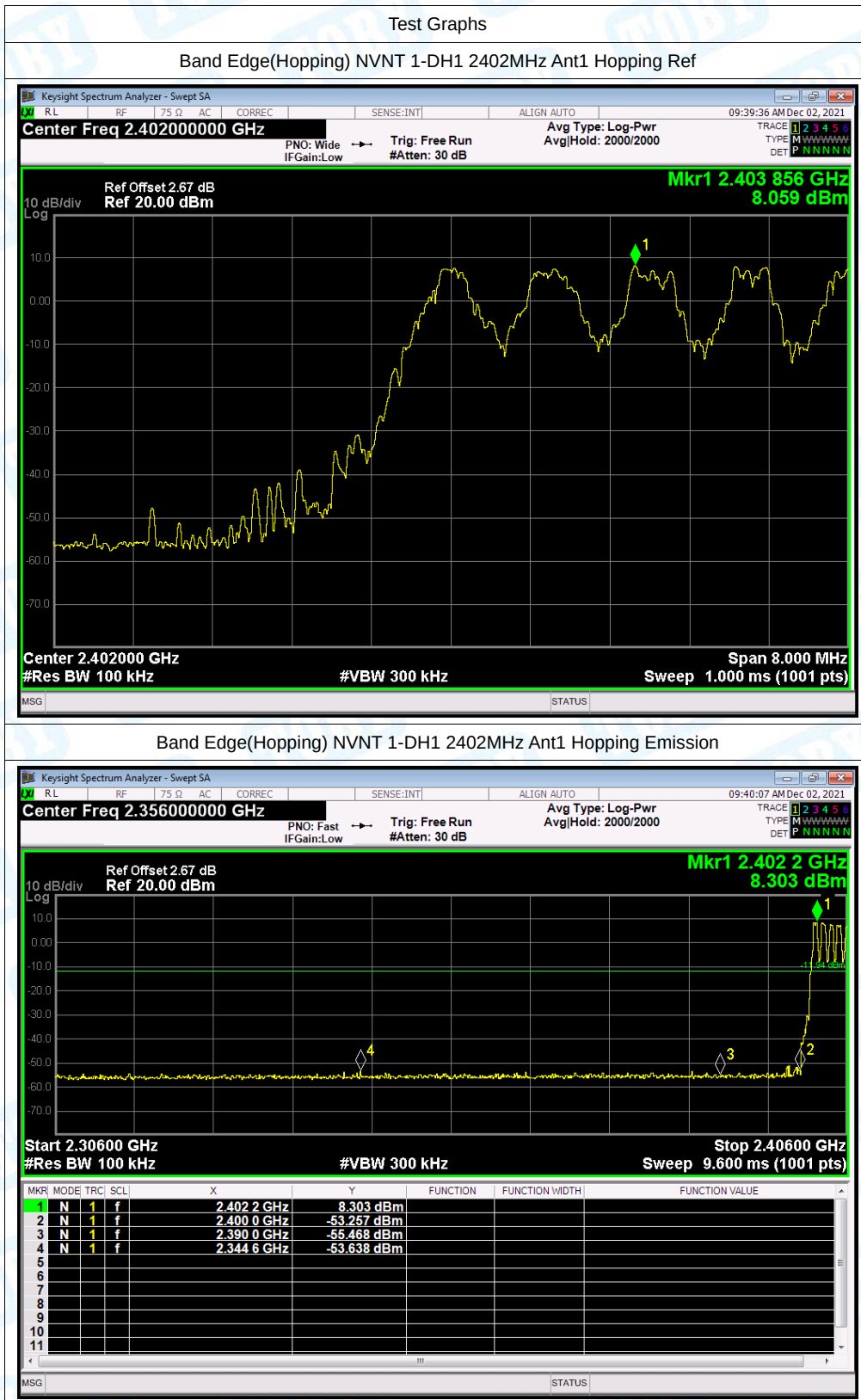


Band Edge NVNT 3-DH1 2480MHz Ant1 No-Hopping Emission



Band Edge(Hopping)

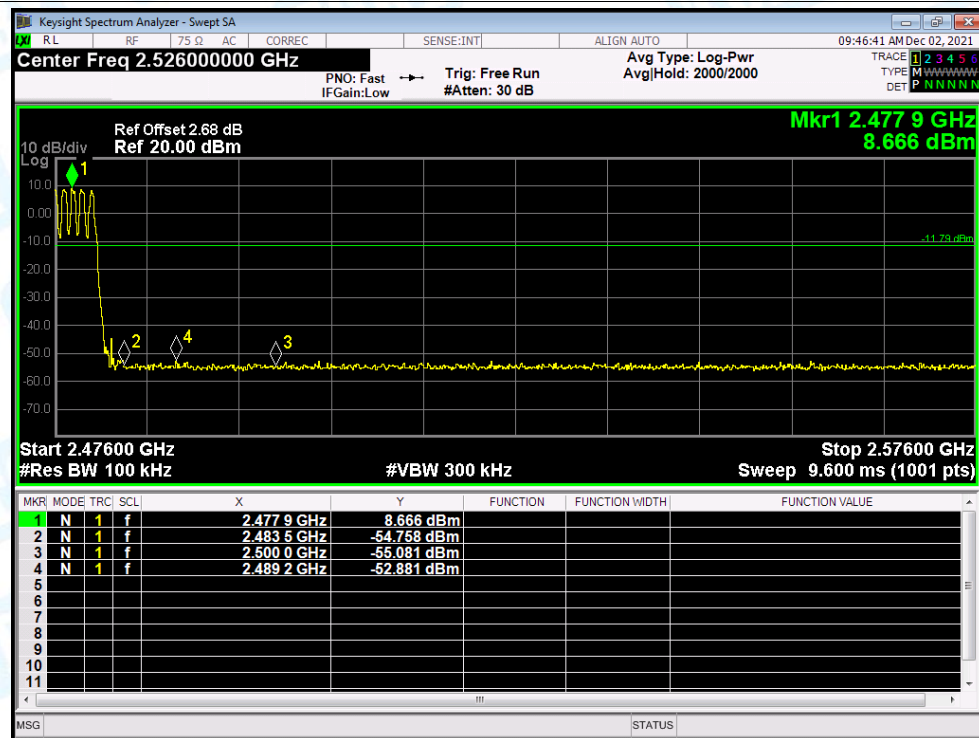
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-61.69	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-61.09	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-61.77	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-61.64	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-61.19	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-61.5	-20	Pass



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



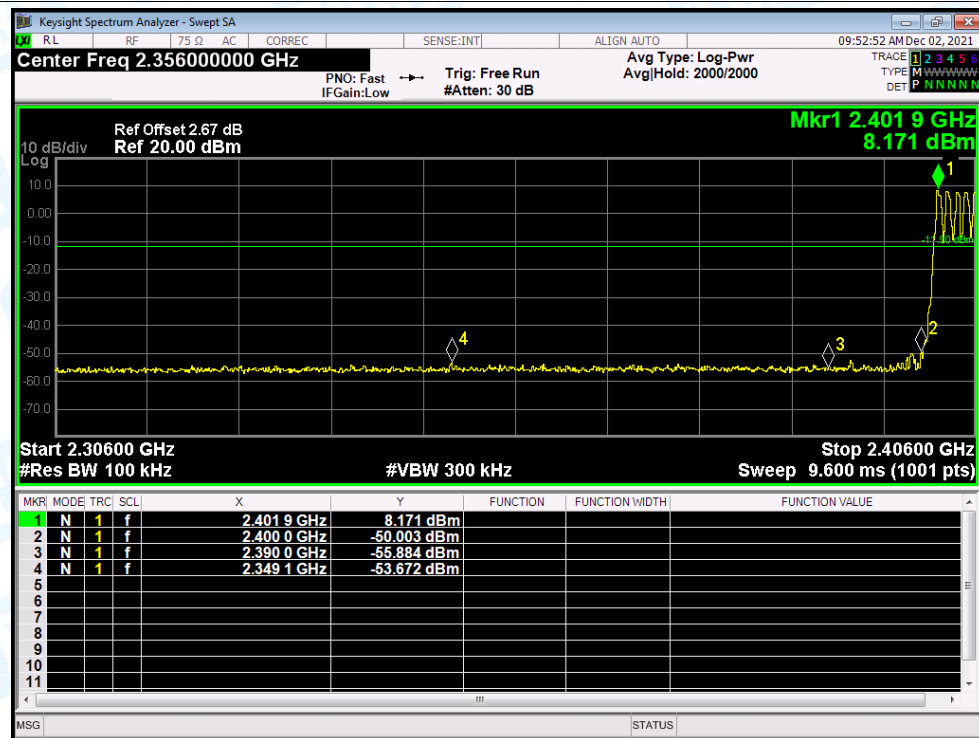
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



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



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

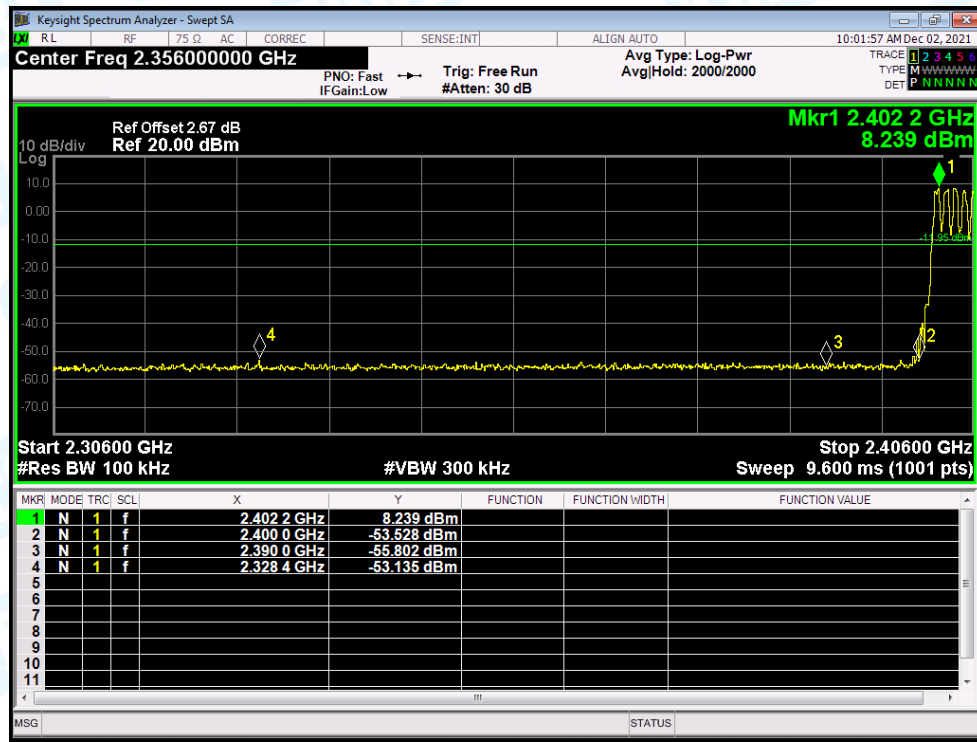




Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Ref



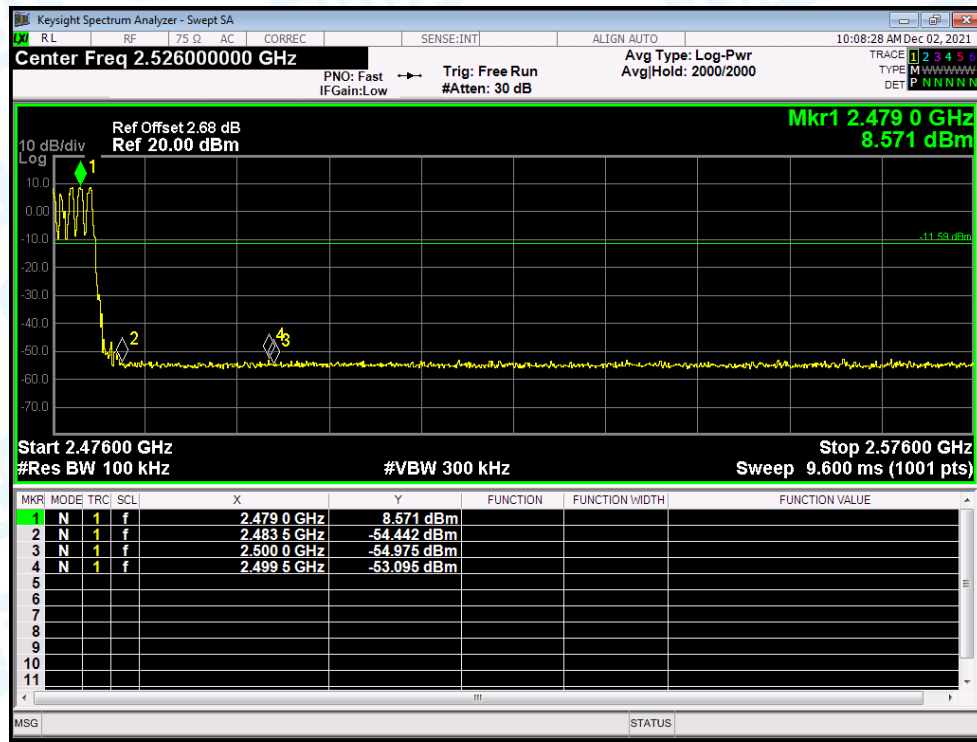
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



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

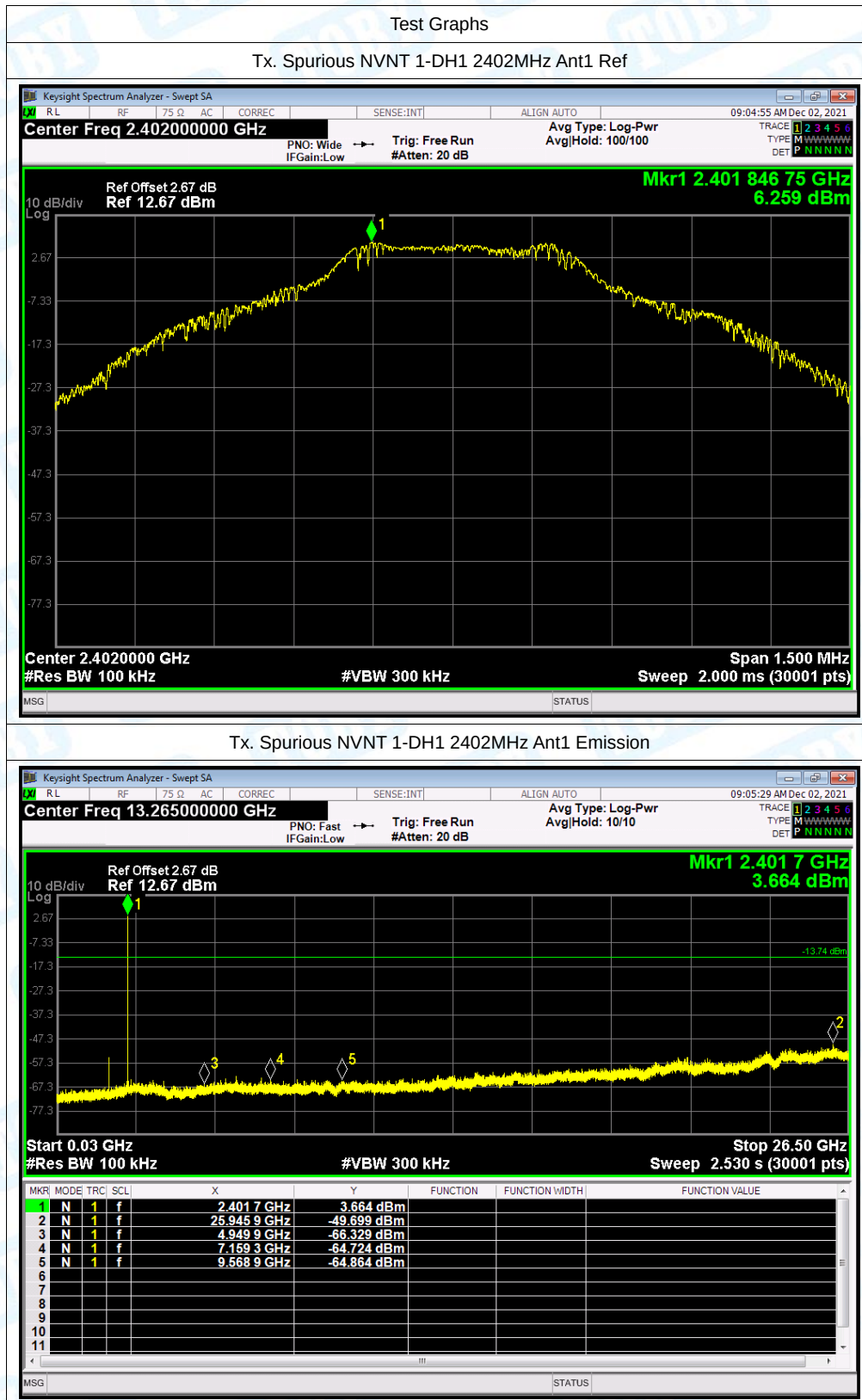


Band Edge(Hopping) NVNT 3-DH1 2480MHz Ant1 Hopping Emission

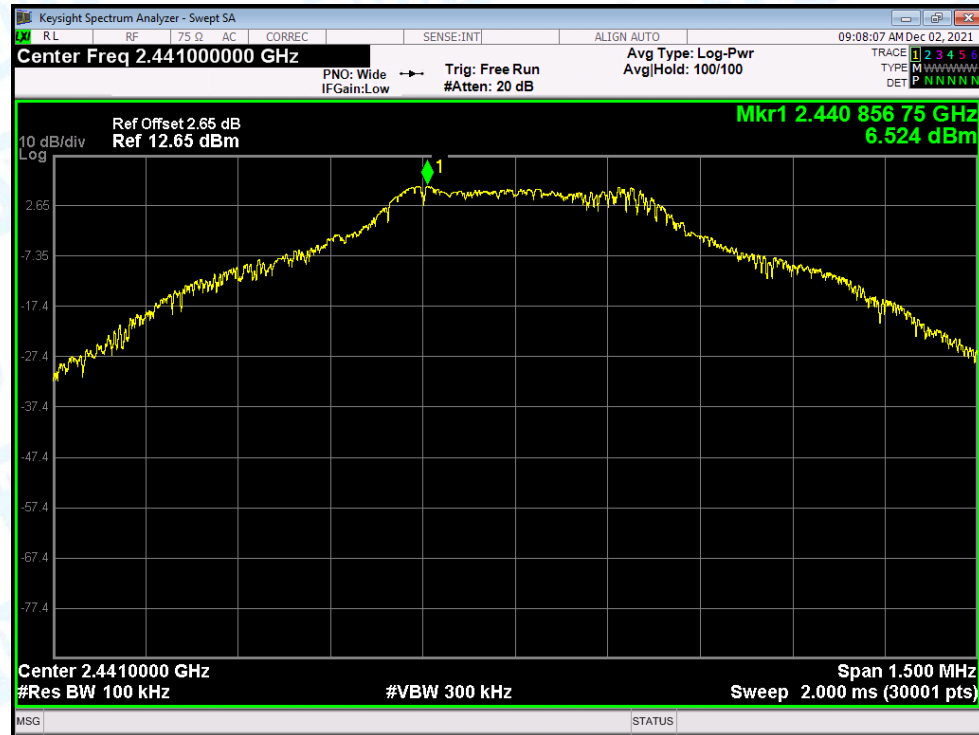


Conducted RF Spurious Emission

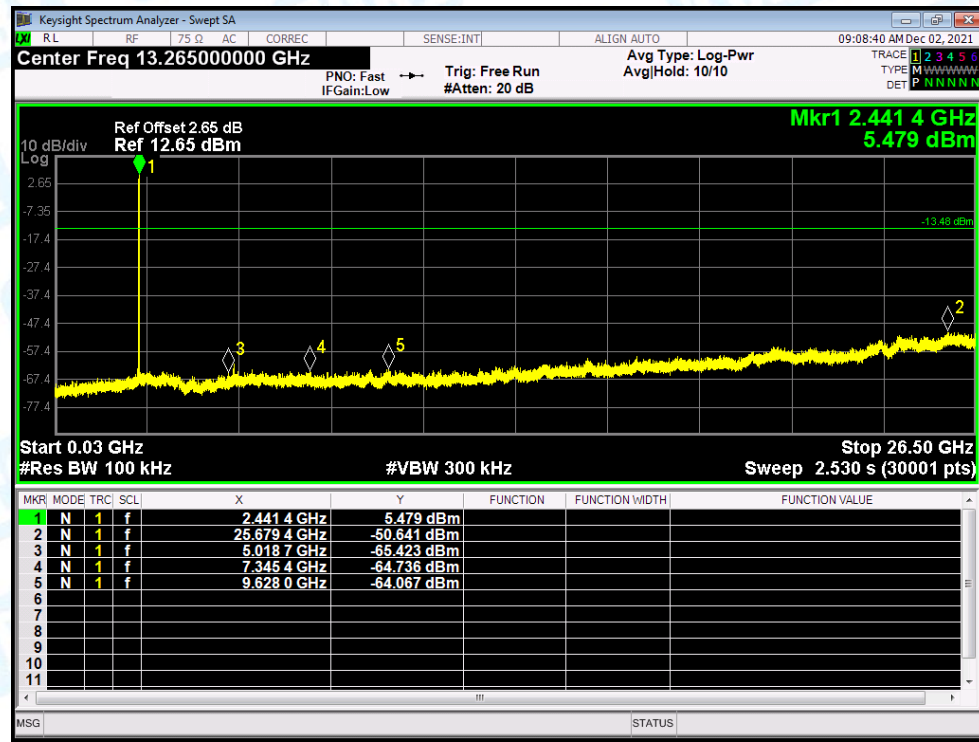
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-55.95	-20	Pass
NVNT	1-DH1	2441	Ant1	-57.16	-20	Pass
NVNT	1-DH1	2480	Ant1	-57.7	-20	Pass
NVNT	2-DH1	2402	Ant1	-53.95	-20	Pass
NVNT	2-DH1	2441	Ant1	-53.81	-20	Pass
NVNT	2-DH1	2480	Ant1	-53.71	-20	Pass
NVNT	3-DH1	2402	Ant1	-54.08	-20	Pass
NVNT	3-DH1	2441	Ant1	-53.13	-20	Pass
NVNT	3-DH1	2480	Ant1	-53.27	-20	Pass



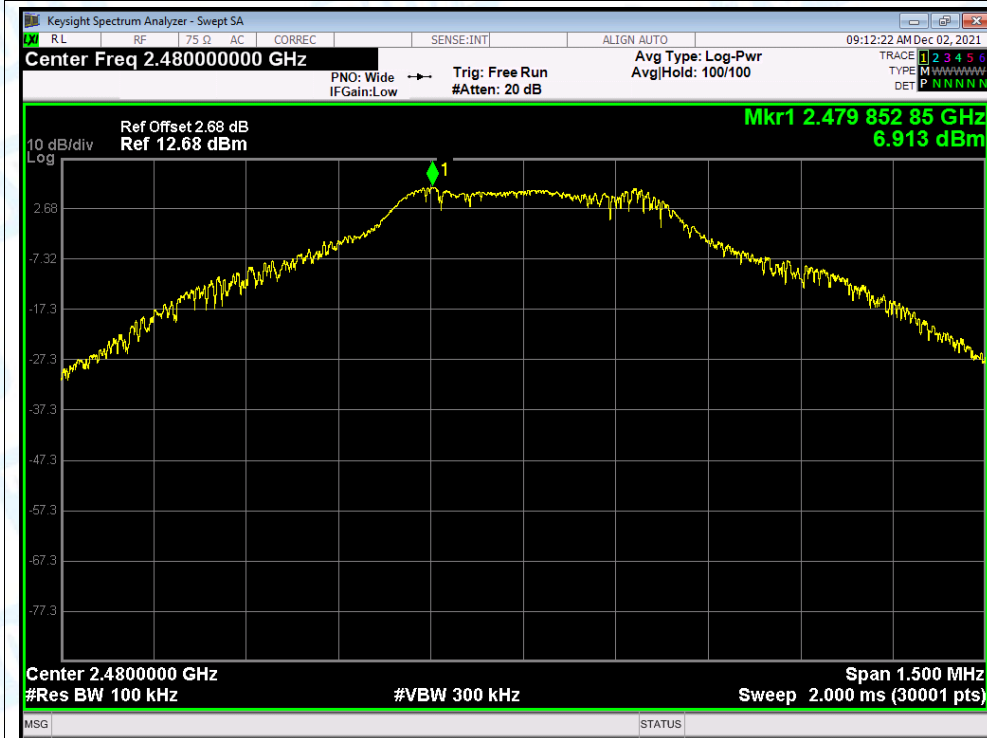
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



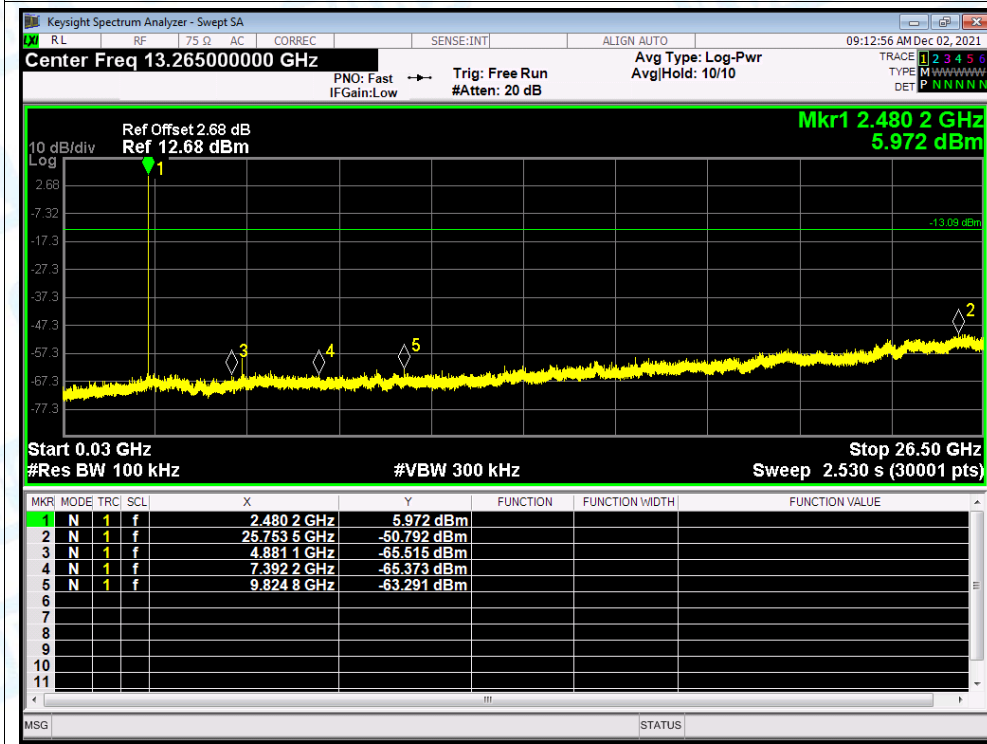
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



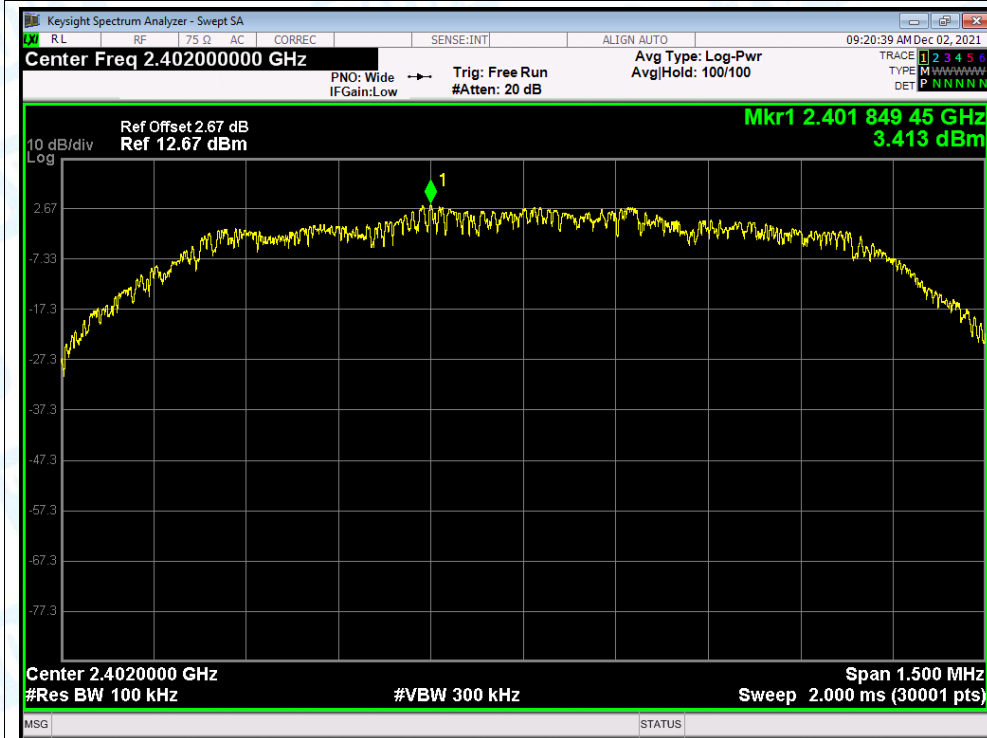
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



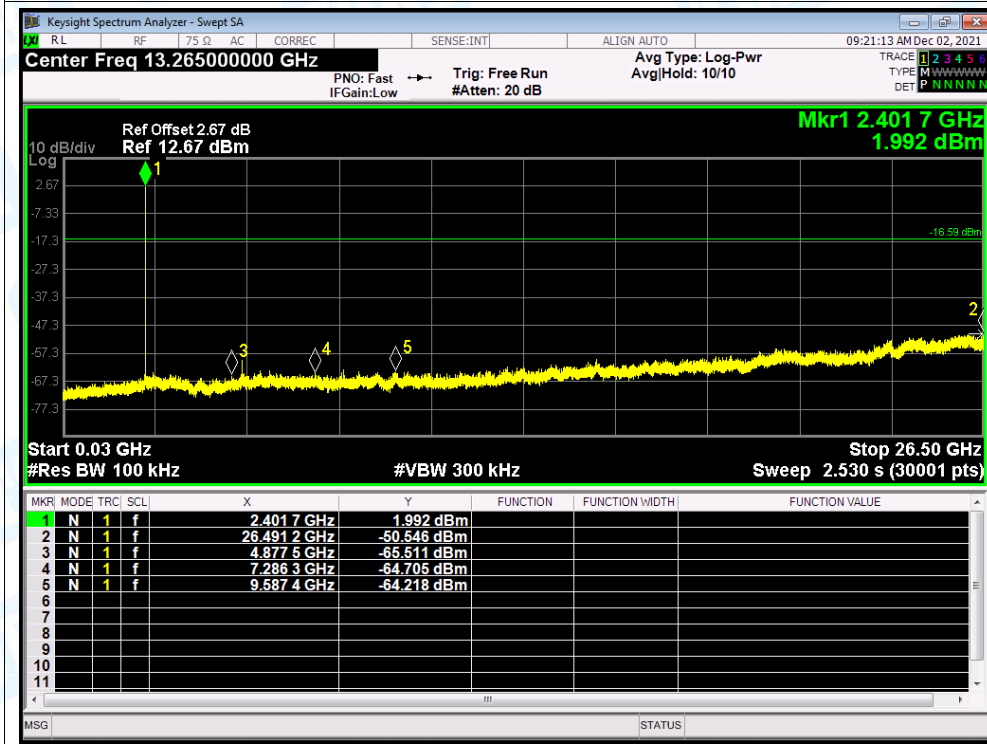
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



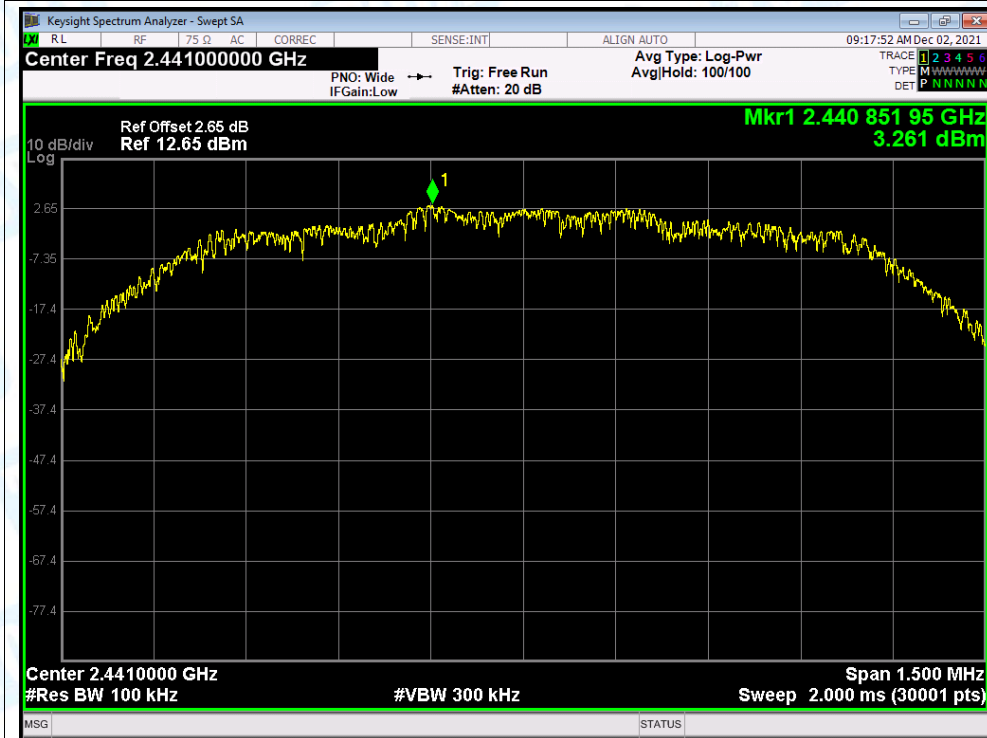
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



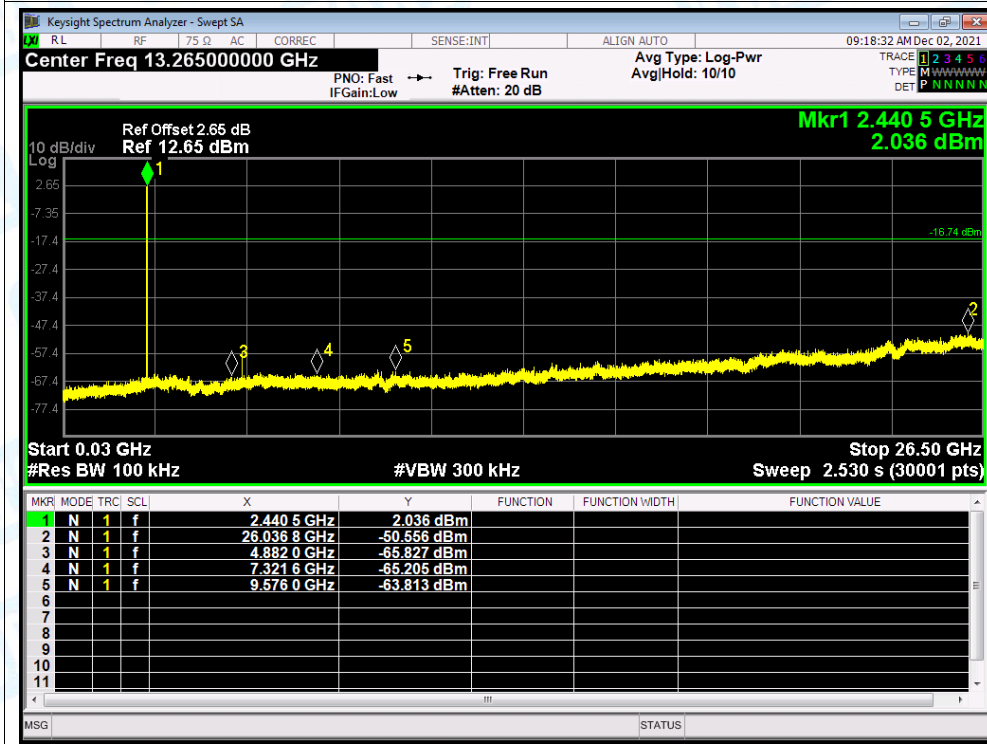
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



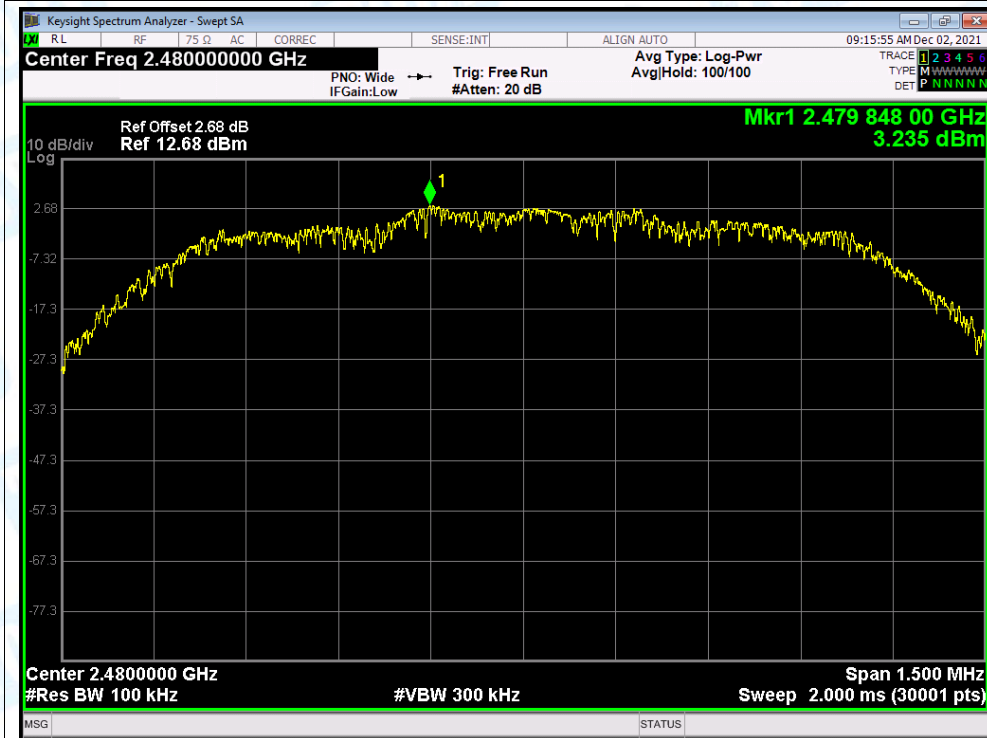
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



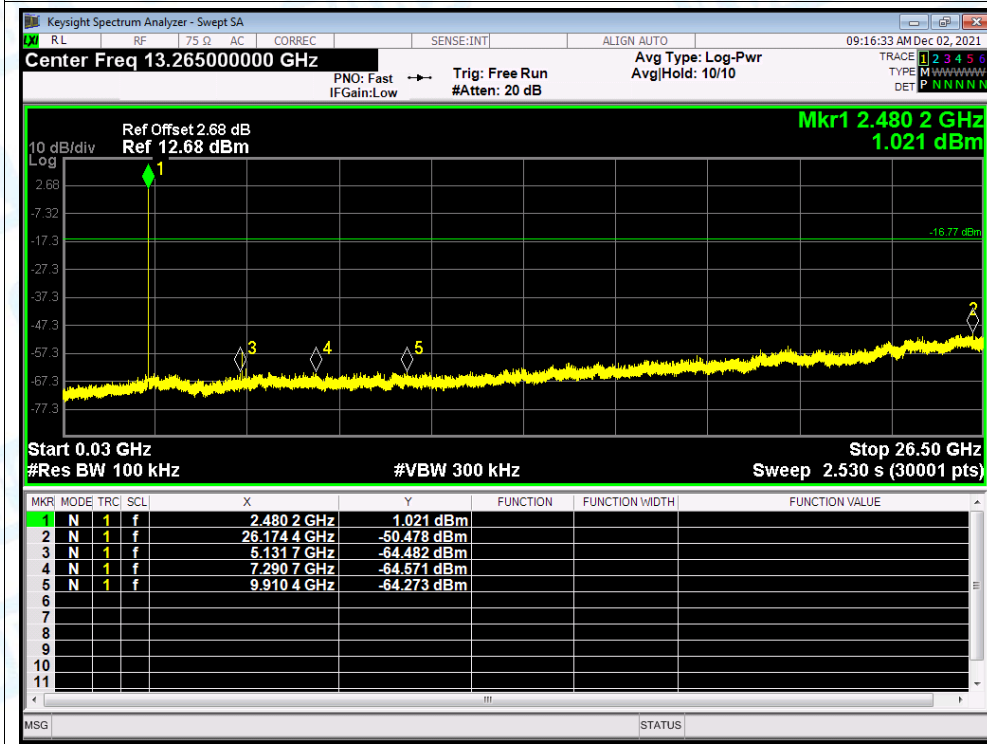
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



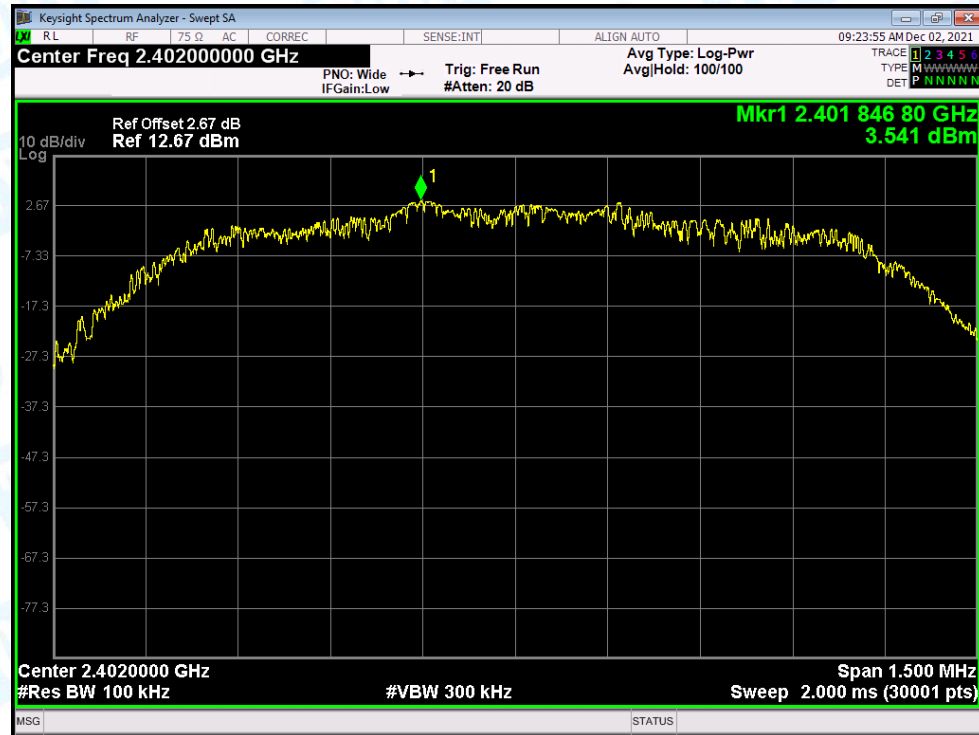
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



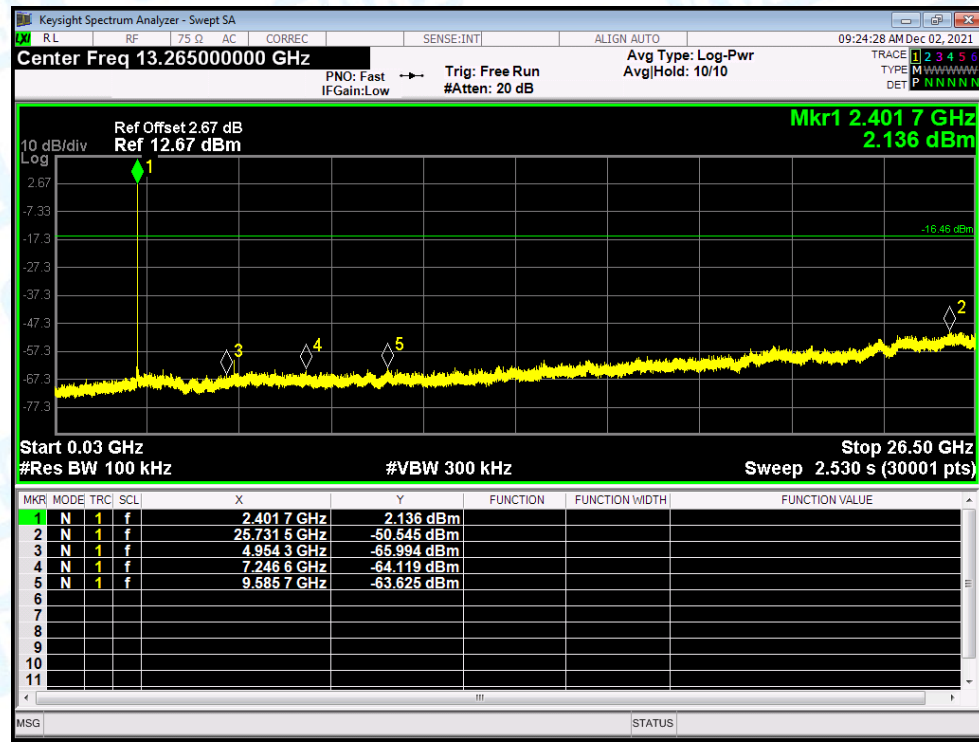
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



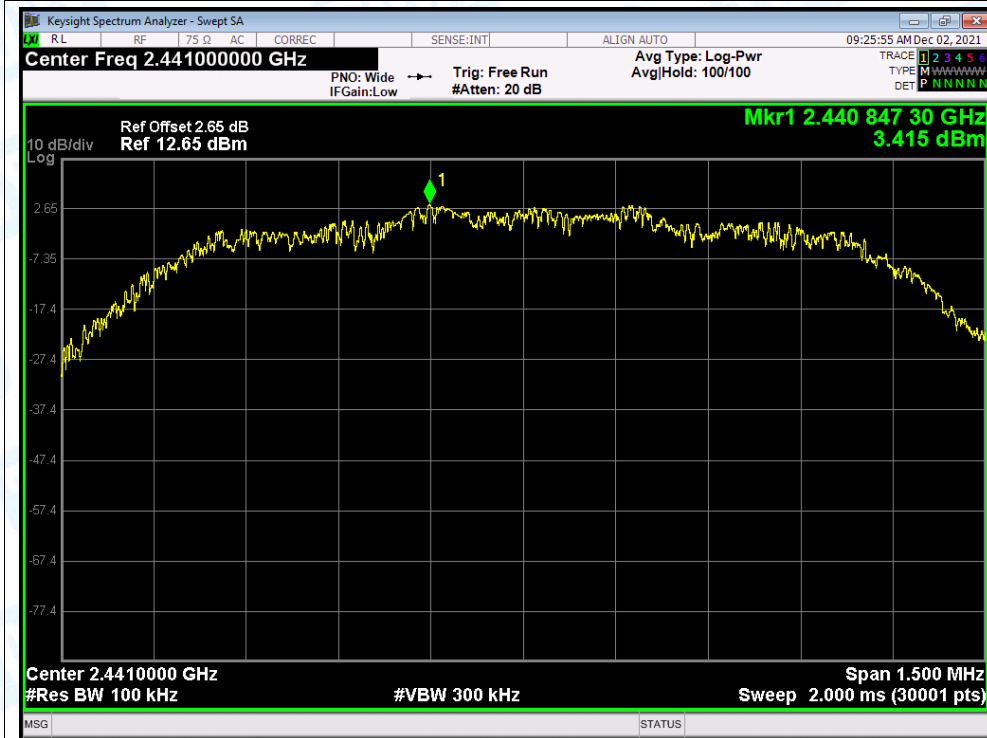
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



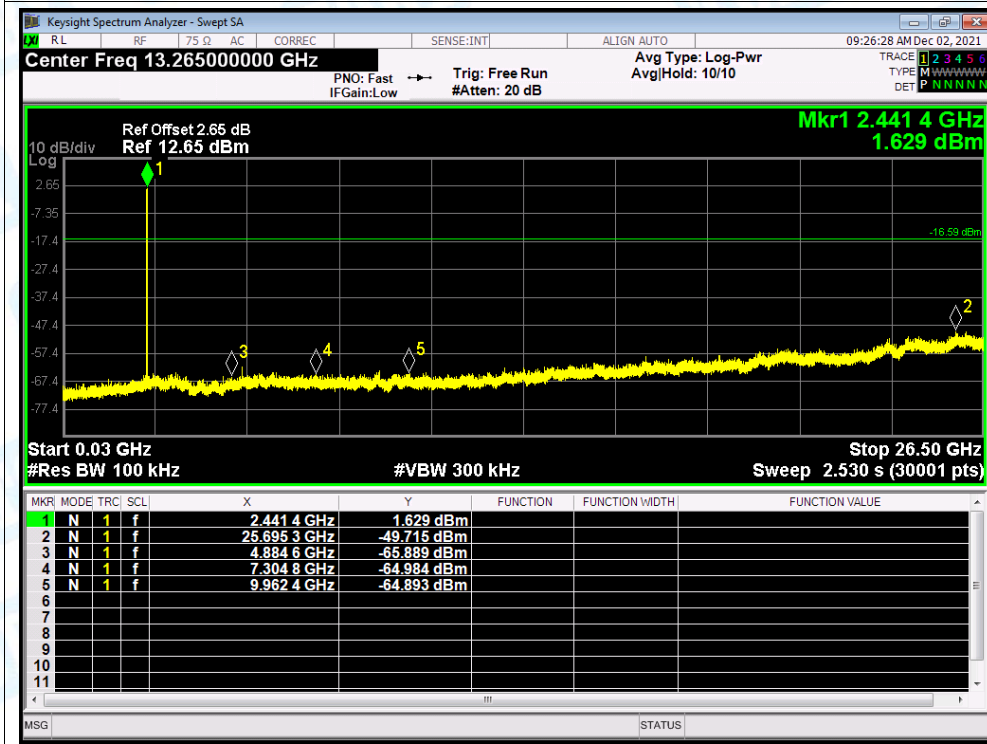
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



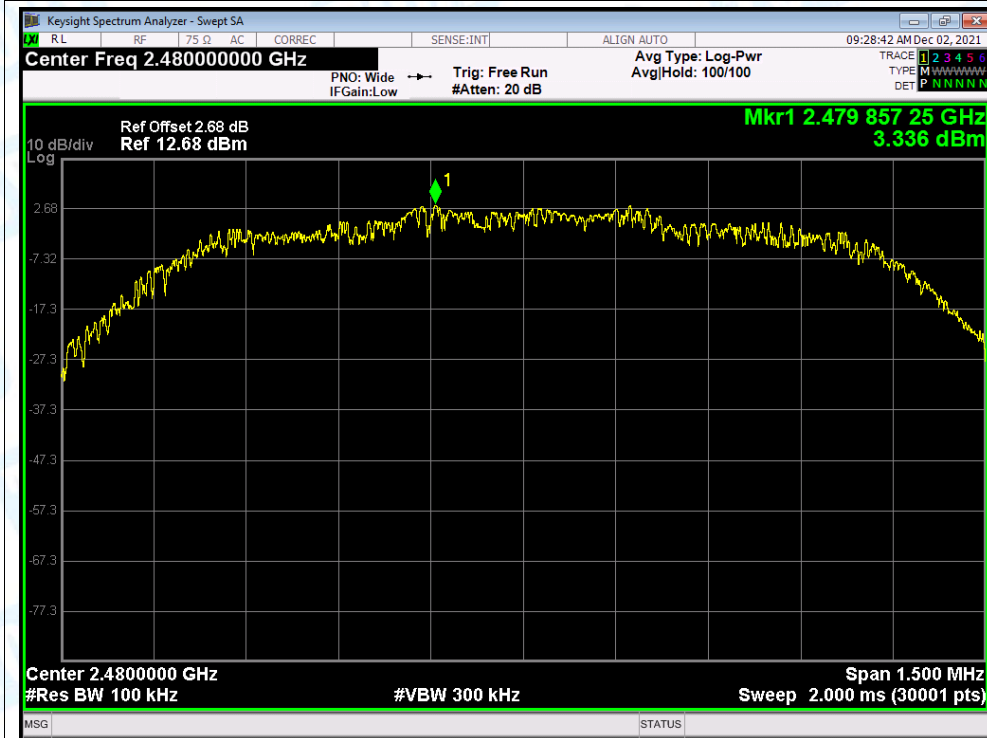
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



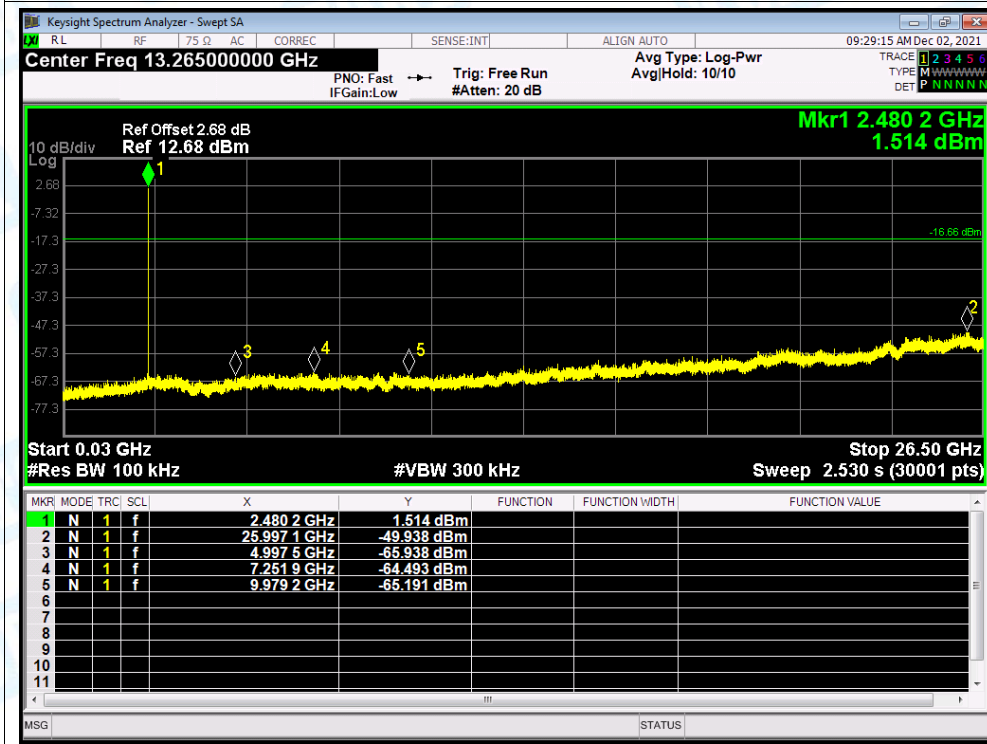
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref

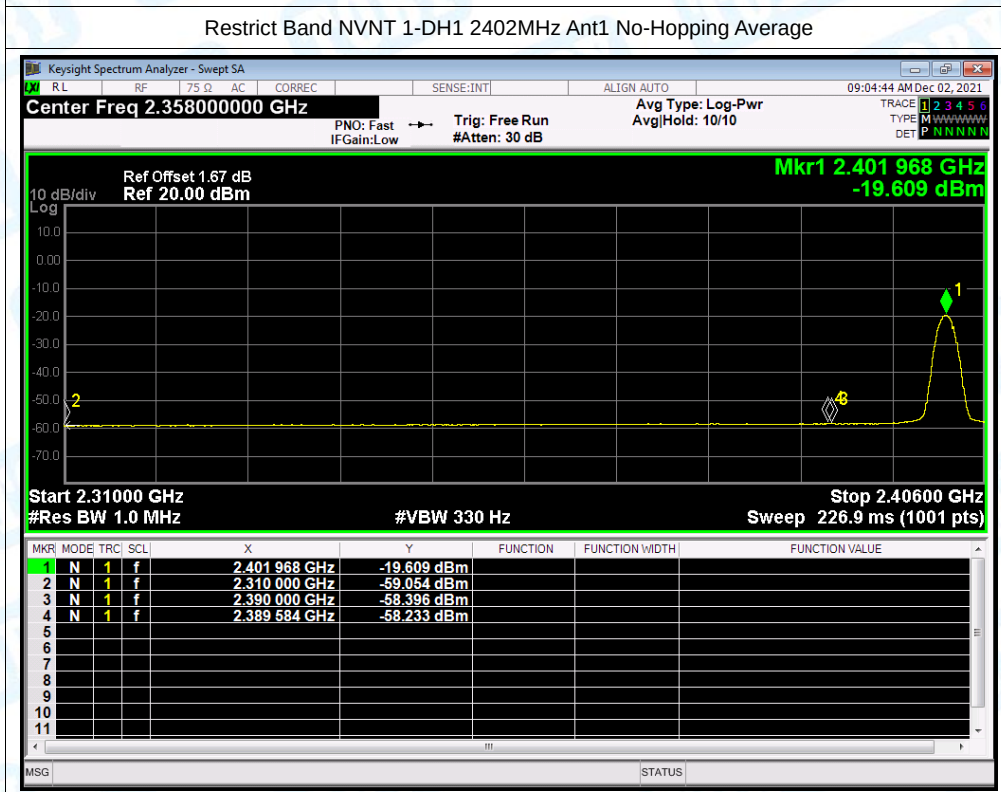
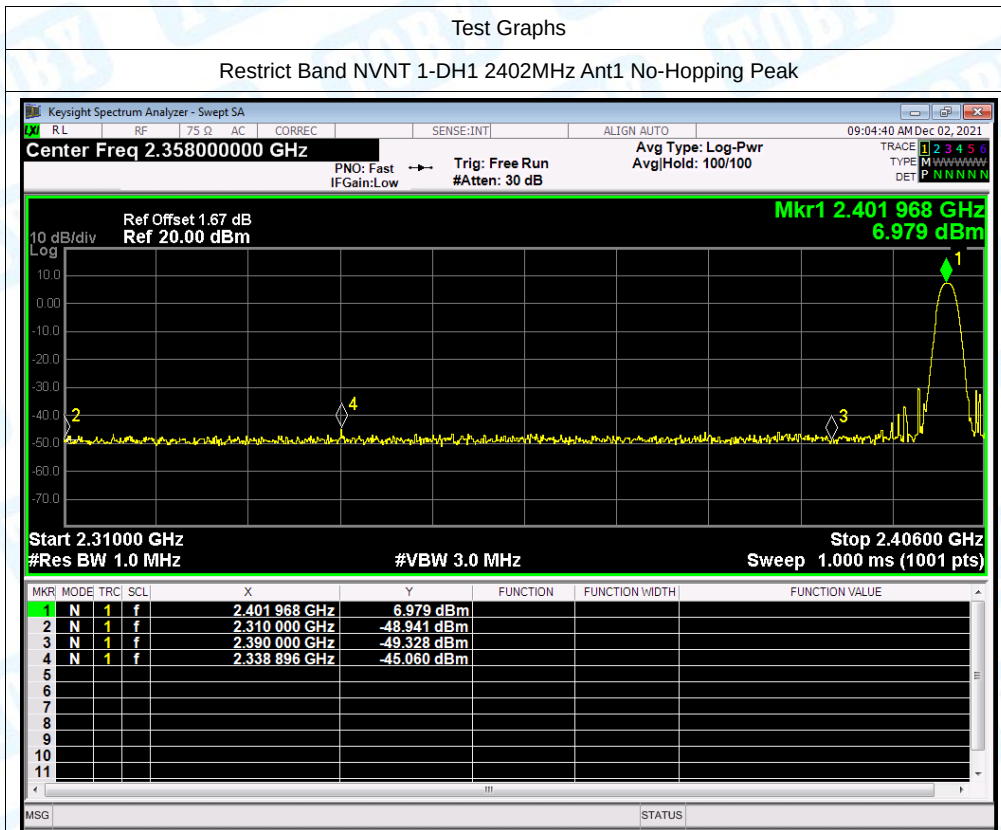


Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

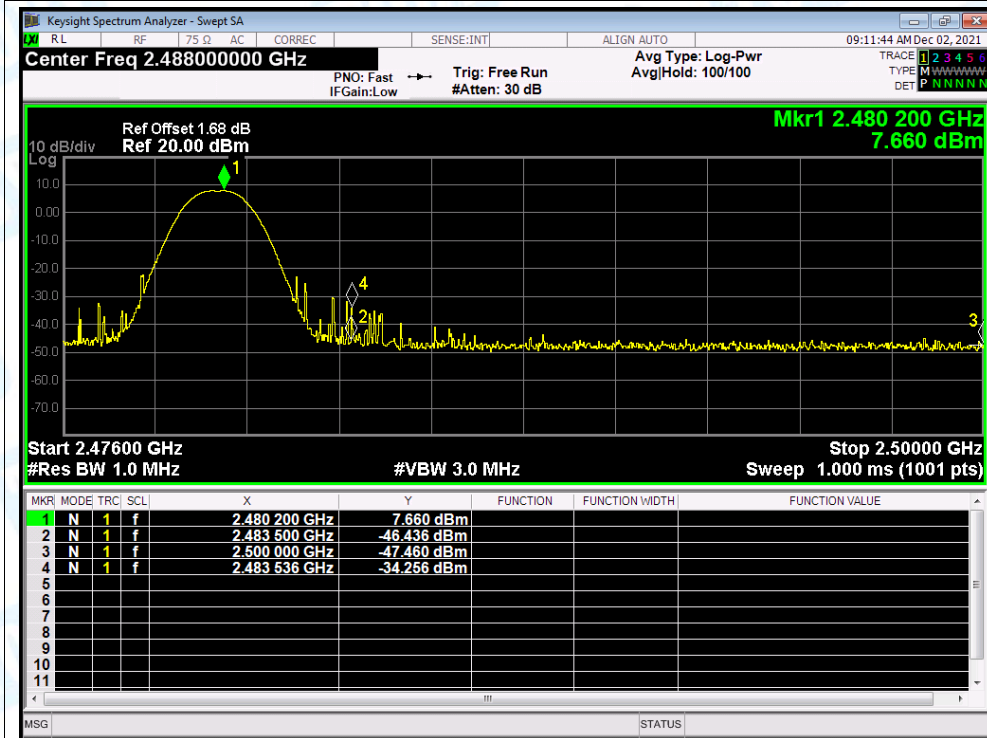


Restrict Band

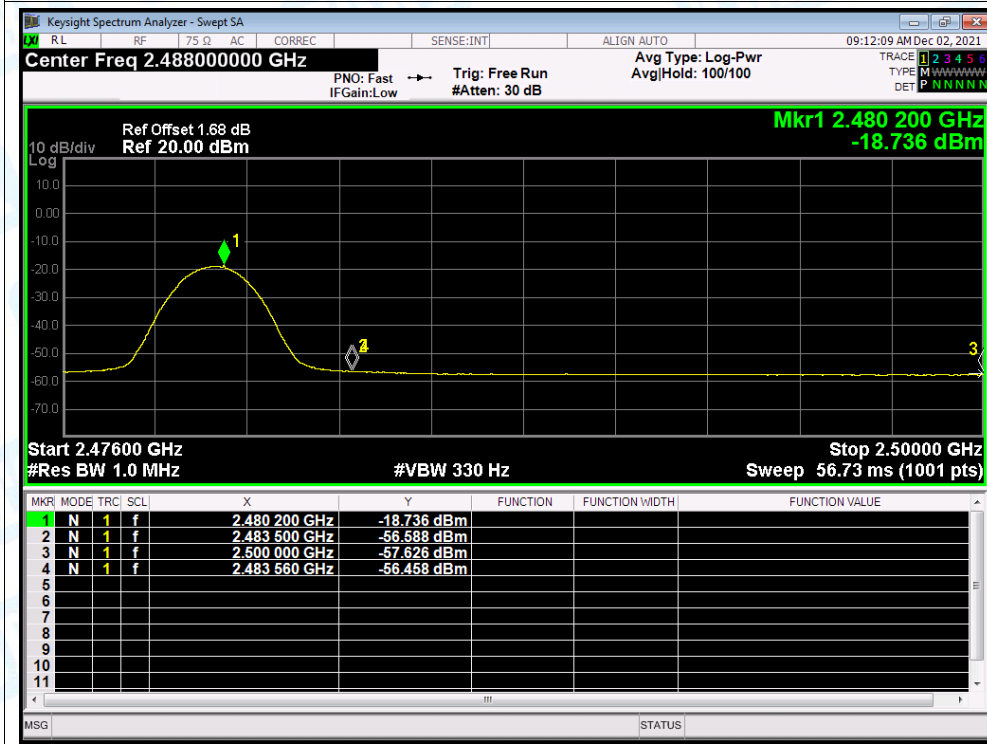
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-49.55	2	47.71	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-59.24	2	38.02	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2338.896	-45.05	2	52.21	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2389.584	-58.23	2	39.03	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-48.75	2	48.51	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-58.44	2	38.82	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-46.43	2	50.83	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-56.58	2	40.68	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.536	-34.25	2	63.01	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.56	-56.45	2	40.81	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-47.45	2	49.81	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-57.62	2	39.64	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-49.59	2	47.67	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-59.02	2	38.24	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2389.584	-46.05	2	51.21	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2389.968	-58.1	2	39.16	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-47.3	2	49.96	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-58.25	2	39.01	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-46.91	2	50.35	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-56.93	2	40.33	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.728	-38.77	2	58.49	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.968	-56.88	2	40.38	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-48.04	2	49.22	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-57.76	2	39.5	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-48.68	2	48.58	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-59.01	2	38.25	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2355.12	-44.98	2	52.28	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2388.912	-58.1	2	39.16	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-49.87	2	47.39	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-58.24	2	39.02	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-36.72	2	60.54	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-56.84	2	40.42	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.512	-36.72	2	60.54	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.512	-56.84	2	40.42	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-48.7	2	48.56	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-57.86	2	39.4	Average	54	Pass



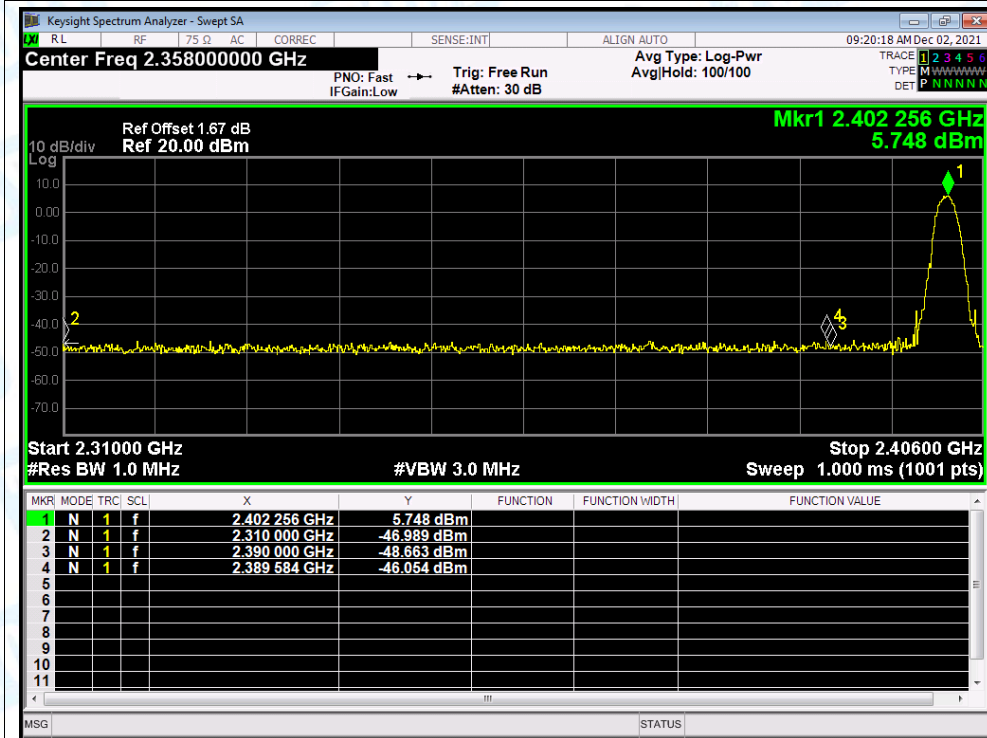
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



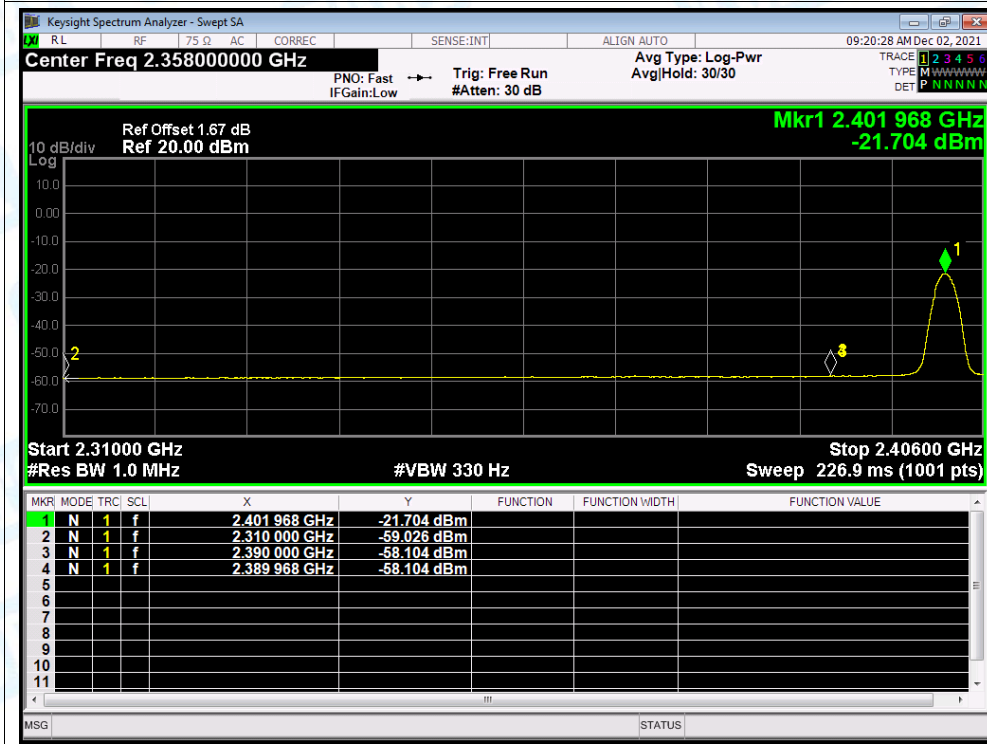
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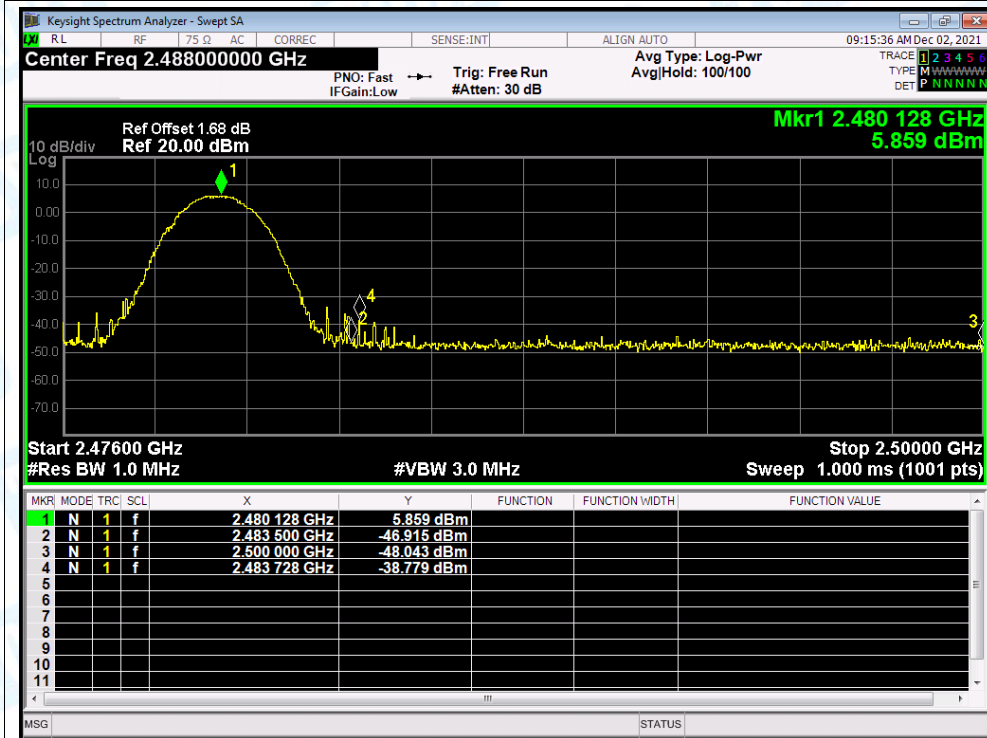
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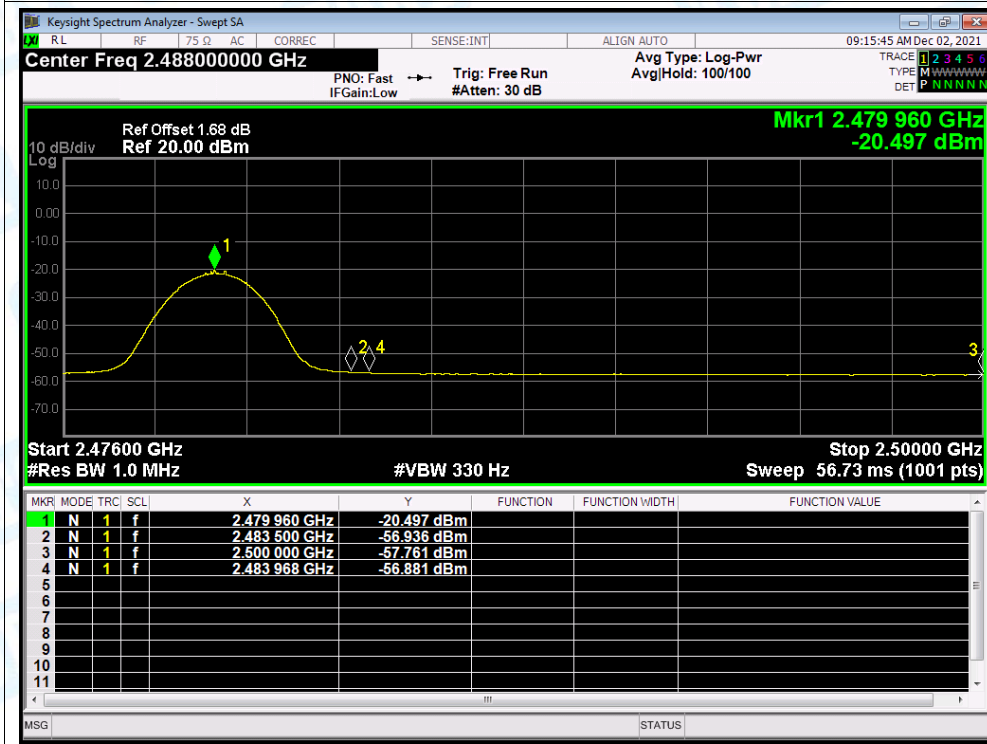
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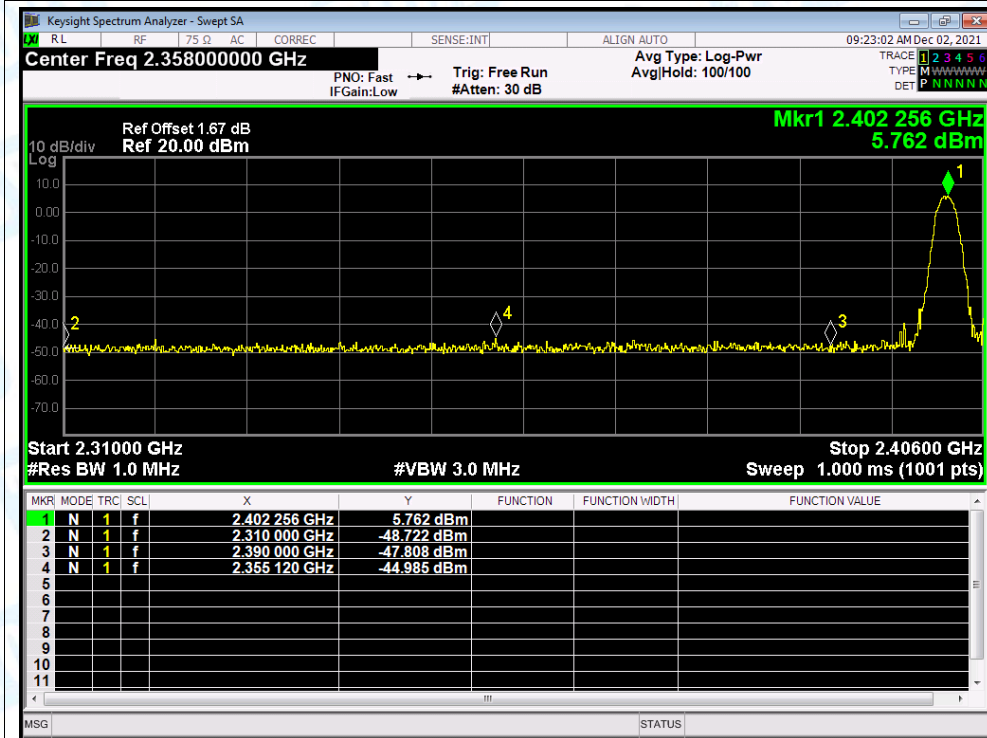
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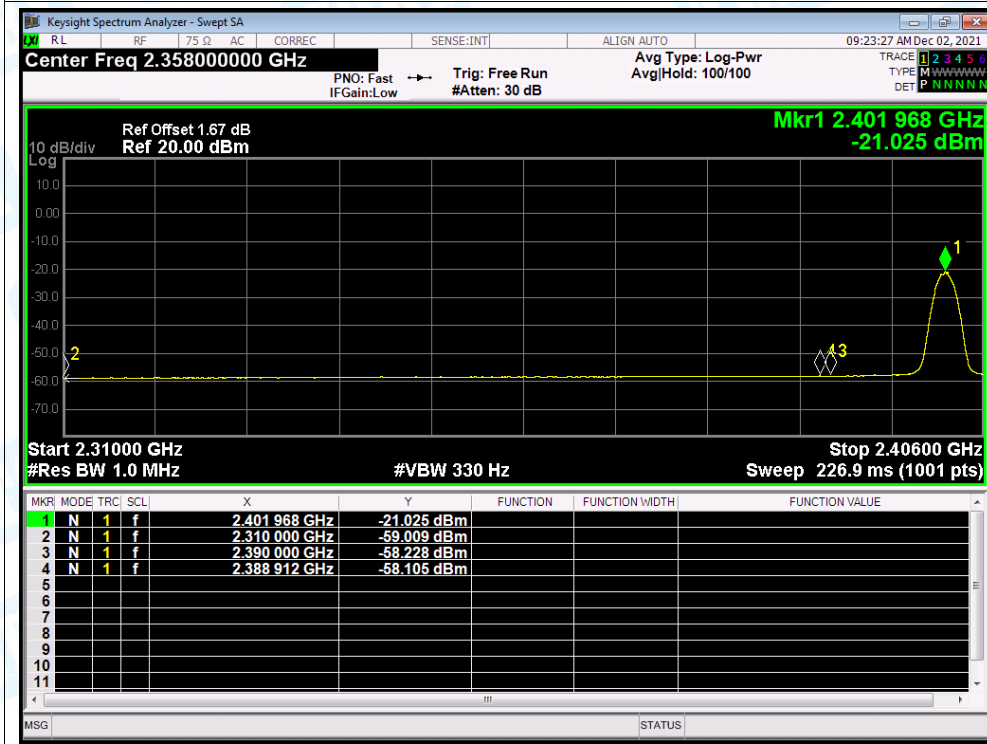
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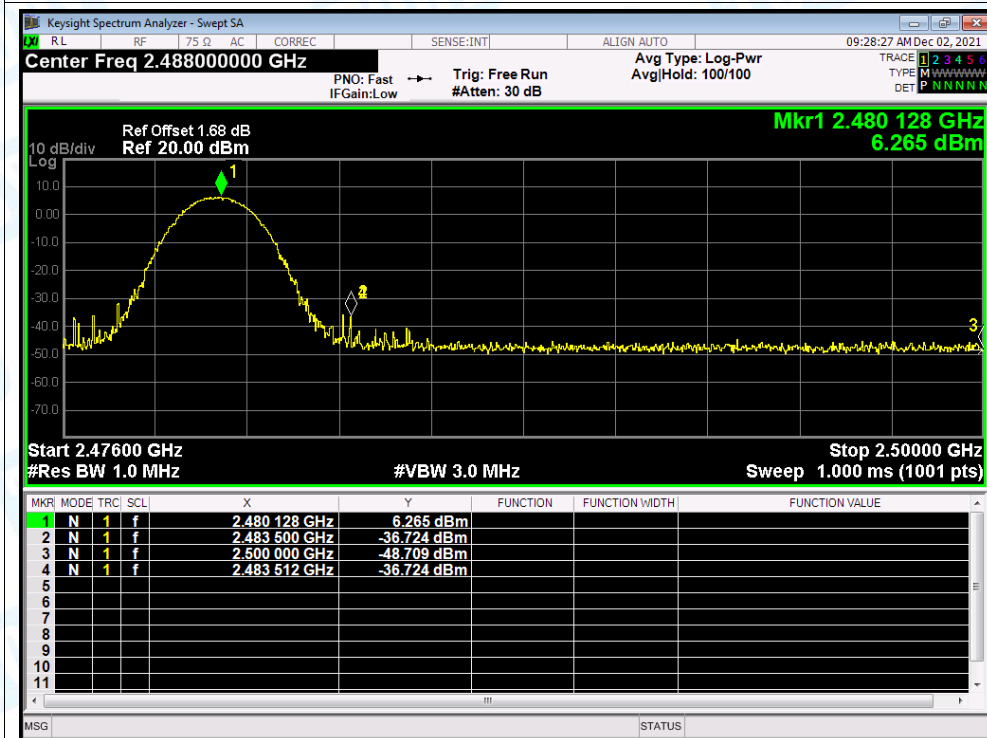
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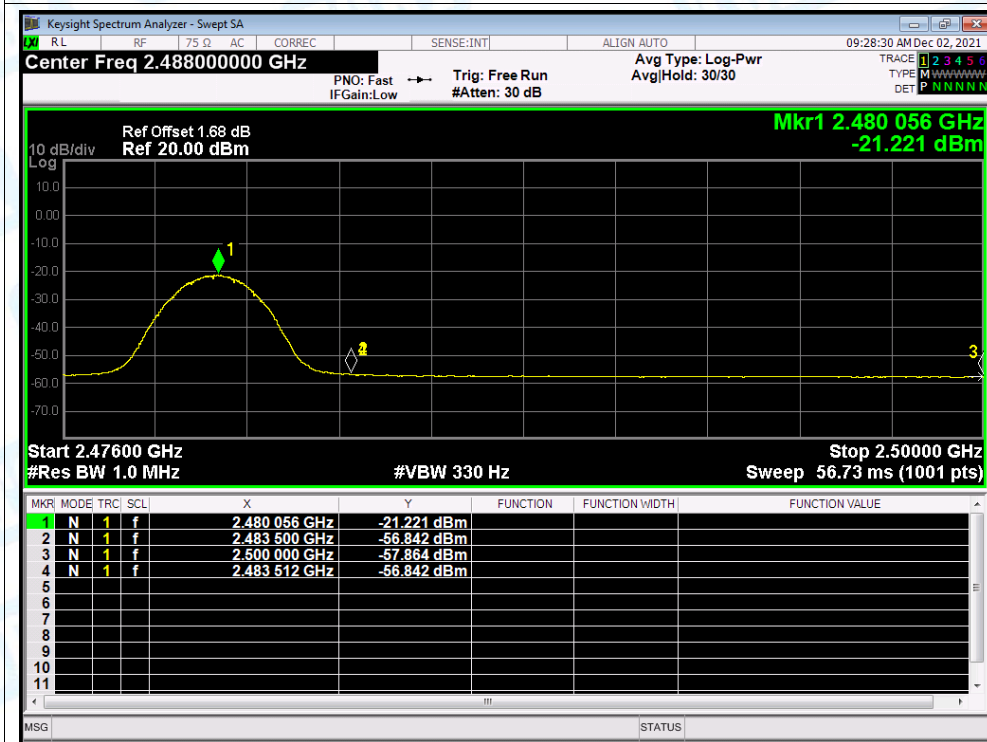
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Restrict Band NVNT 3-DH1 2480MHz Ant1 No-Hopping Peak

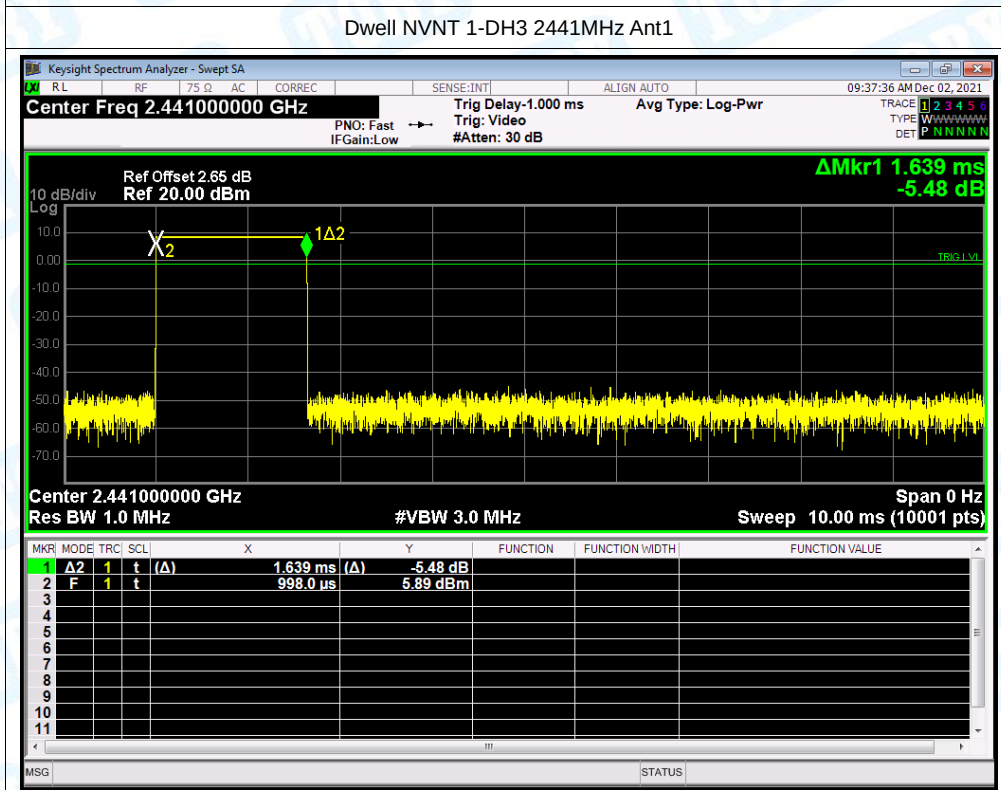
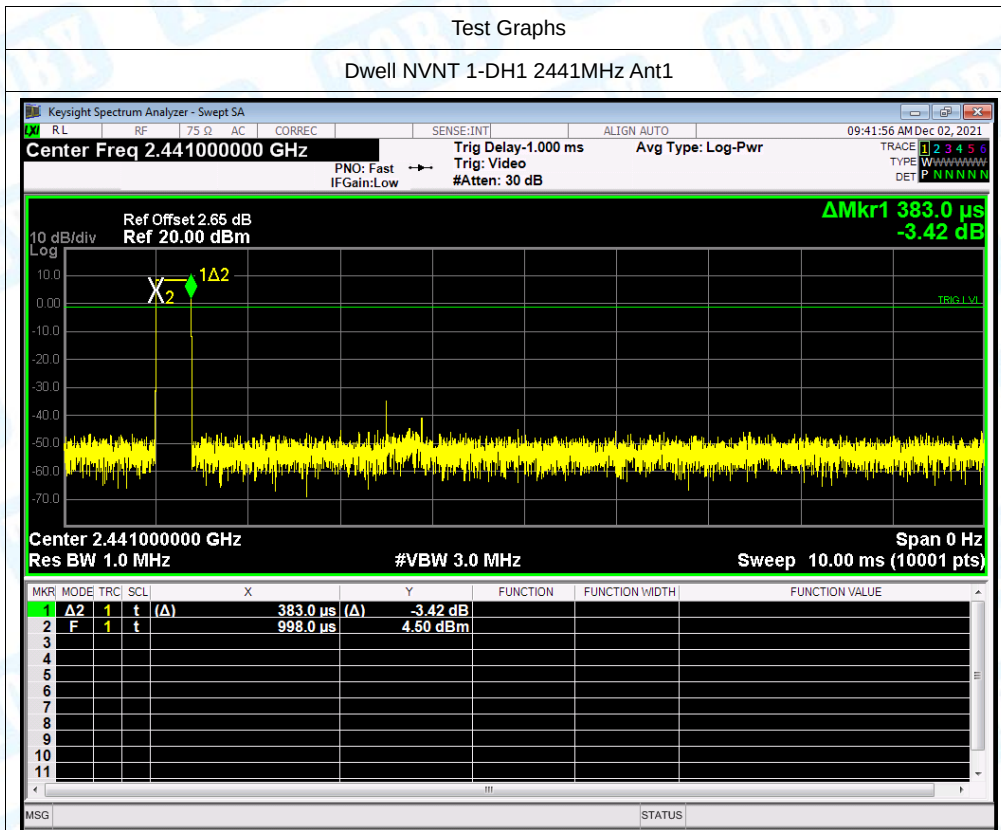


Restrict Band NVNT 3-DH1 2480MHz Ant1 No-Hopping Average

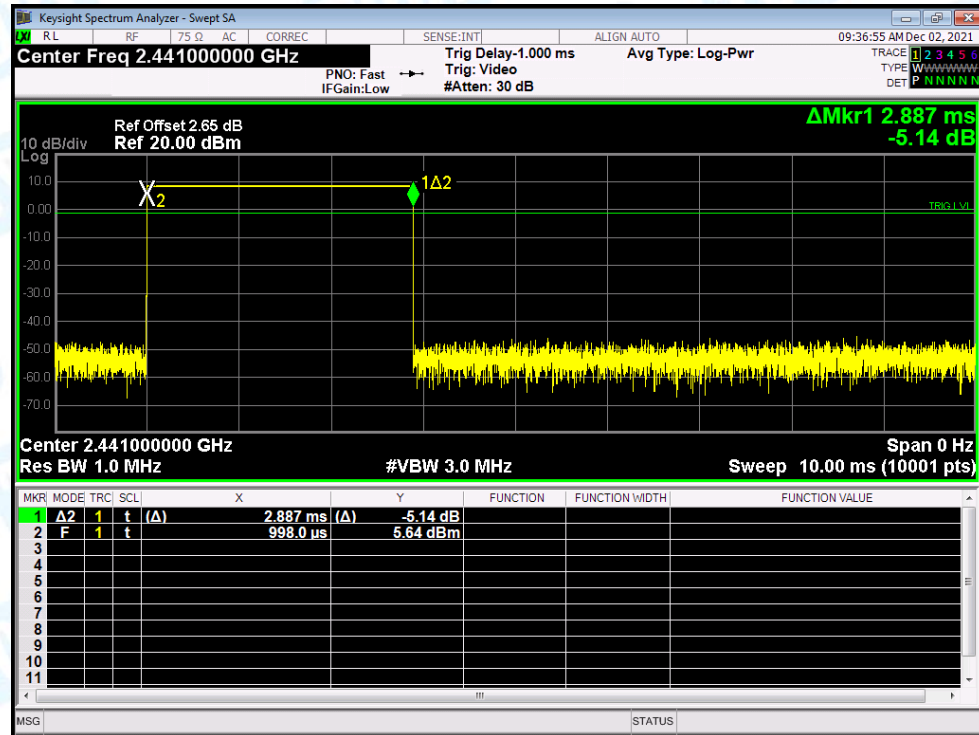


Dwell Time

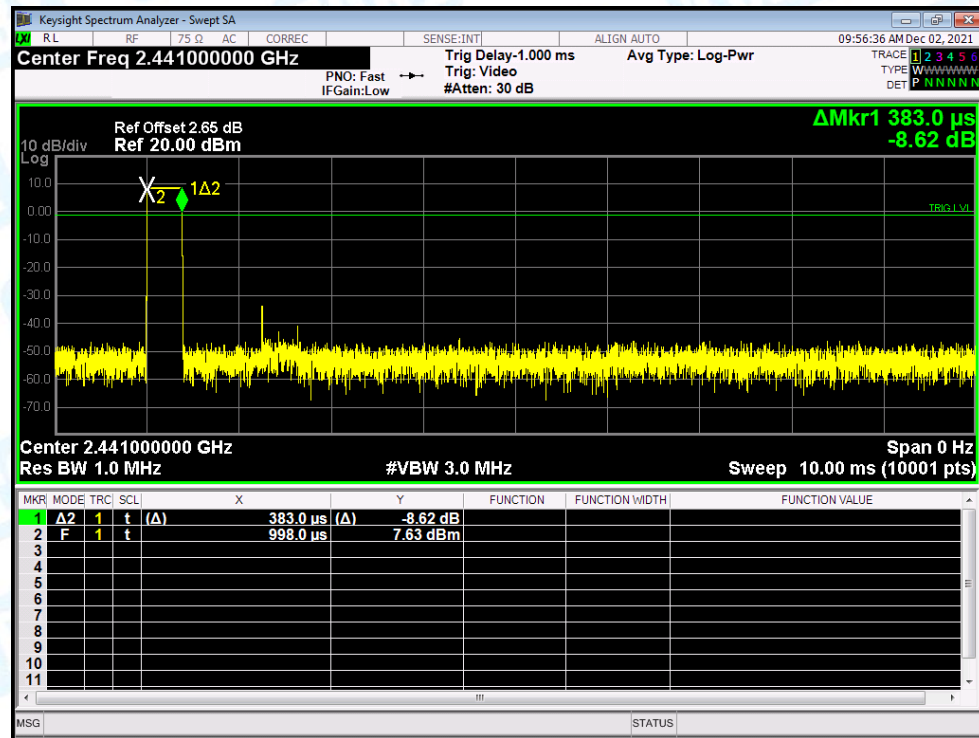
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.383	122.56	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.639	262.24	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.887	307.947	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.383	122.56	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.637	261.92	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.885	307.733	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.383	122.56	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.636	261.76	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.886	307.84	31600	400	Pass



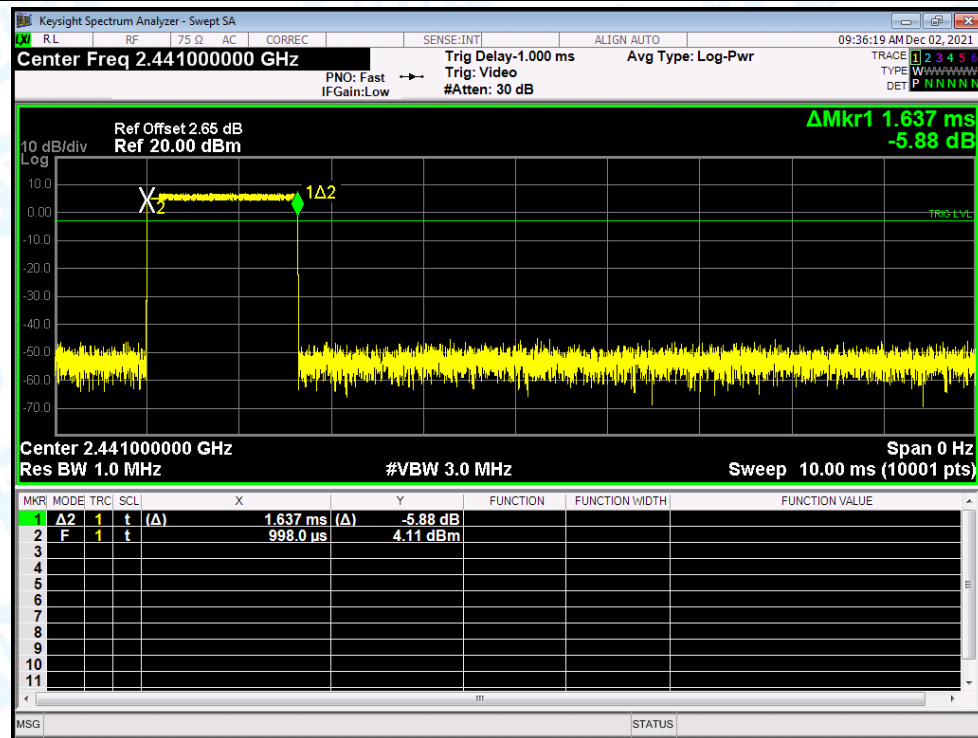
Dwell NVNT 1-DH5 2441MHz Ant1



Dwell NVNT 2-DH1 2441MHz Ant1



Dwell NVNT 2-DH3 2441MHz Ant1



Dwell NVNT 2-DH5 2441MHz Ant1

