



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Mini PC

Test Model: HPPMC10

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Taylor Hu
Supervised by:	Ling Zhu





A.1 -20dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	BT ANT	0.847	N/A	Pass
NVNT	1-DH5	2441	BT ANT	0.814	N/A	Pass
NVNT	1-DH5	2480	BT ANT	0.84	N/A	Pass
NVNT	2-DH5	2402	BT ANT	1.267	N/A	Pass
NVNT	2-DH5	2441	BT ANT	1.269	N/A	Pass
NVNT	2-DH5	2480	BT ANT	1.258	N/A	Pass
NVNT	3-DH5	2402	BT ANT	1.288	N/A	Pass
NVNT	3-DH5	2441	BT ANT	1.274	N/A	Pass
NVNT	3-DH5	2480	BT ANT	1.283	N/A	Pass

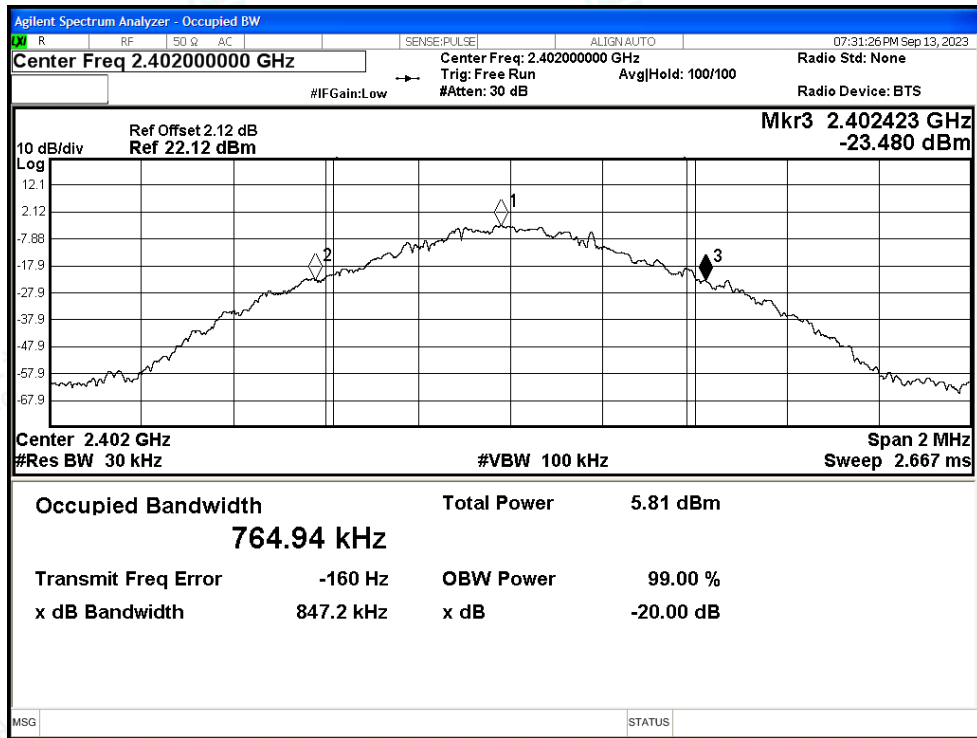


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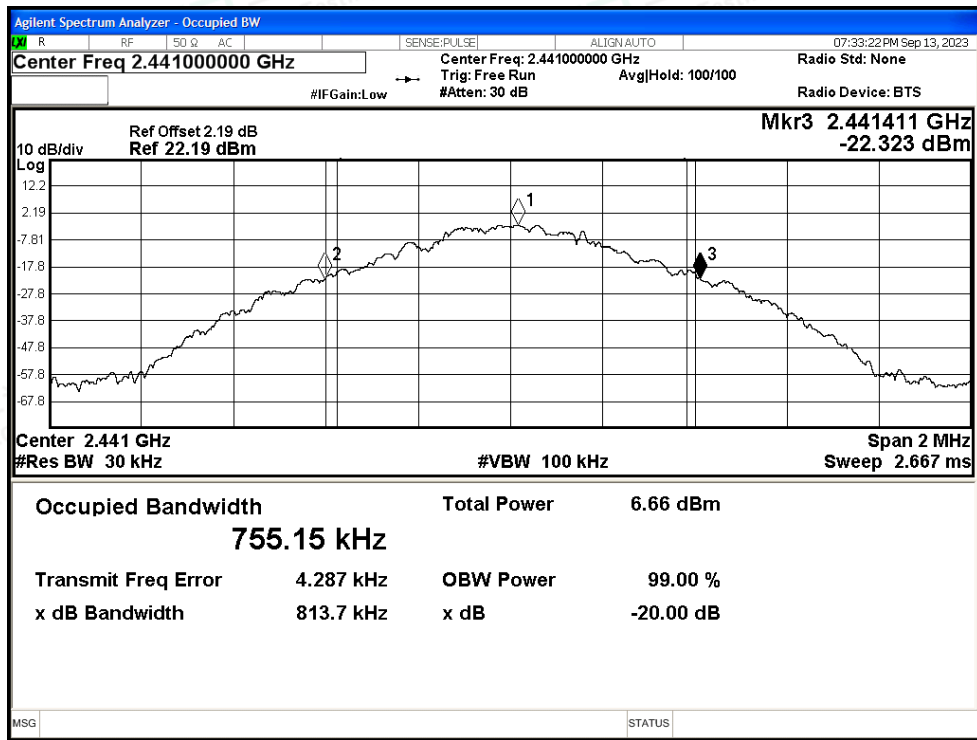


Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz BT ANT

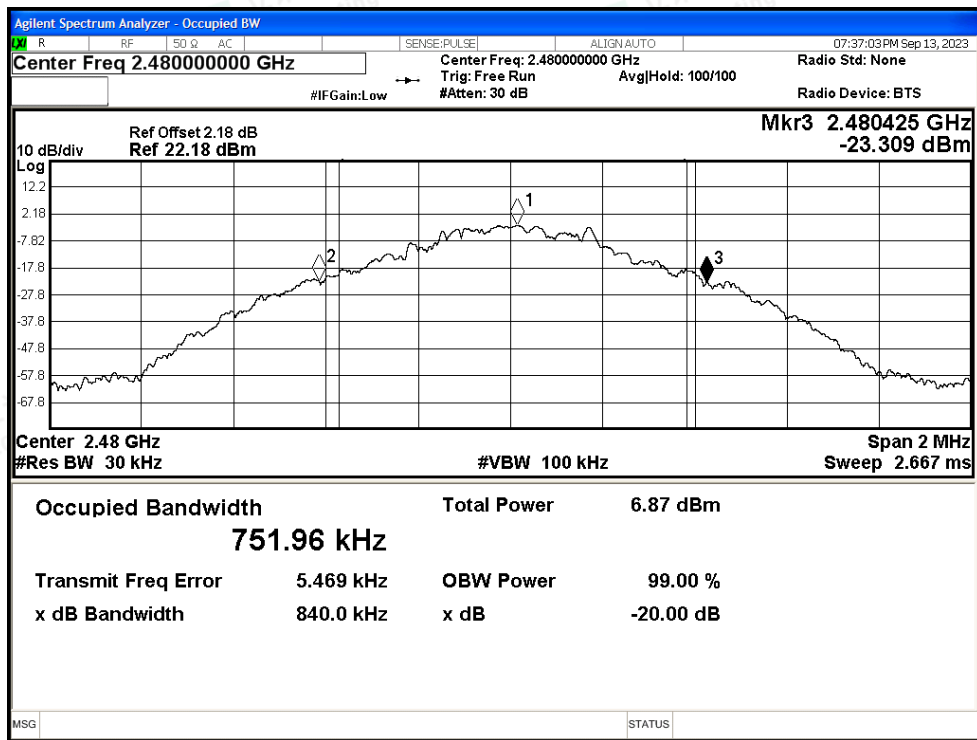


-20dB Bandwidth NVNT 1-DH5 2441MHz BT ANT

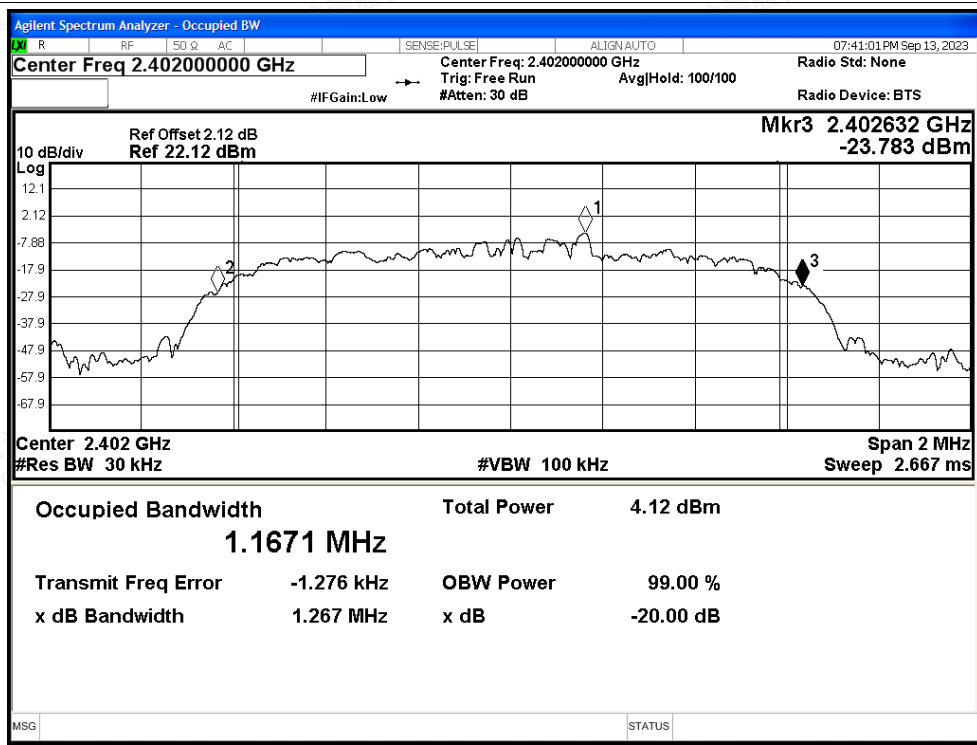




-20dB Bandwidth NVNT 1-DH5 2480MHz BT ANT

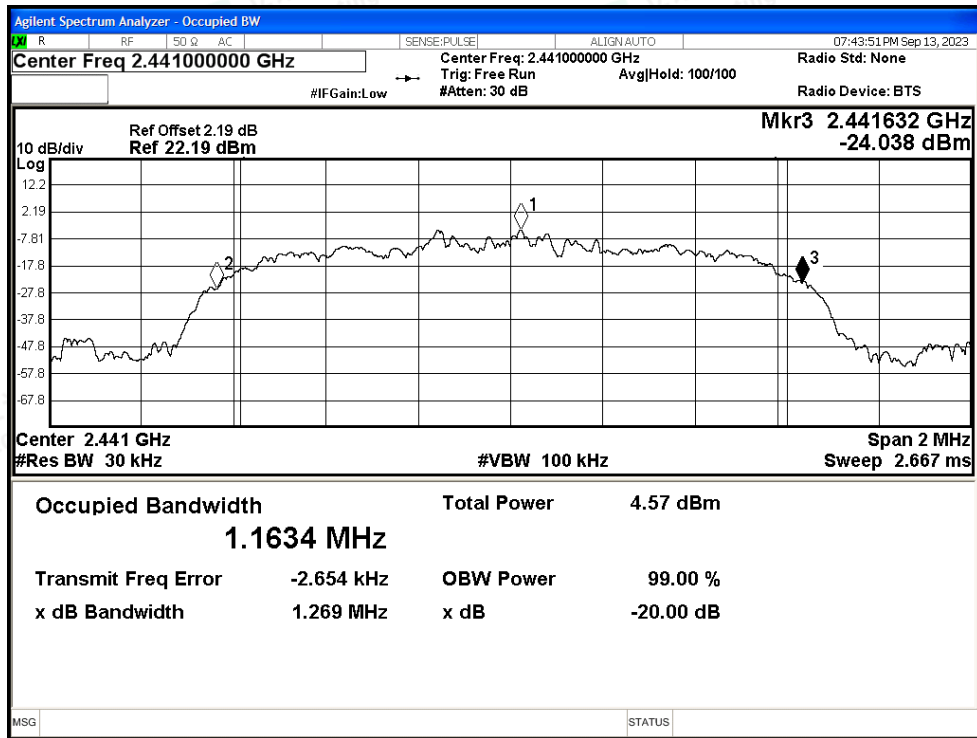


-20dB Bandwidth NVNT 2-DH5 2402MHz BT ANT

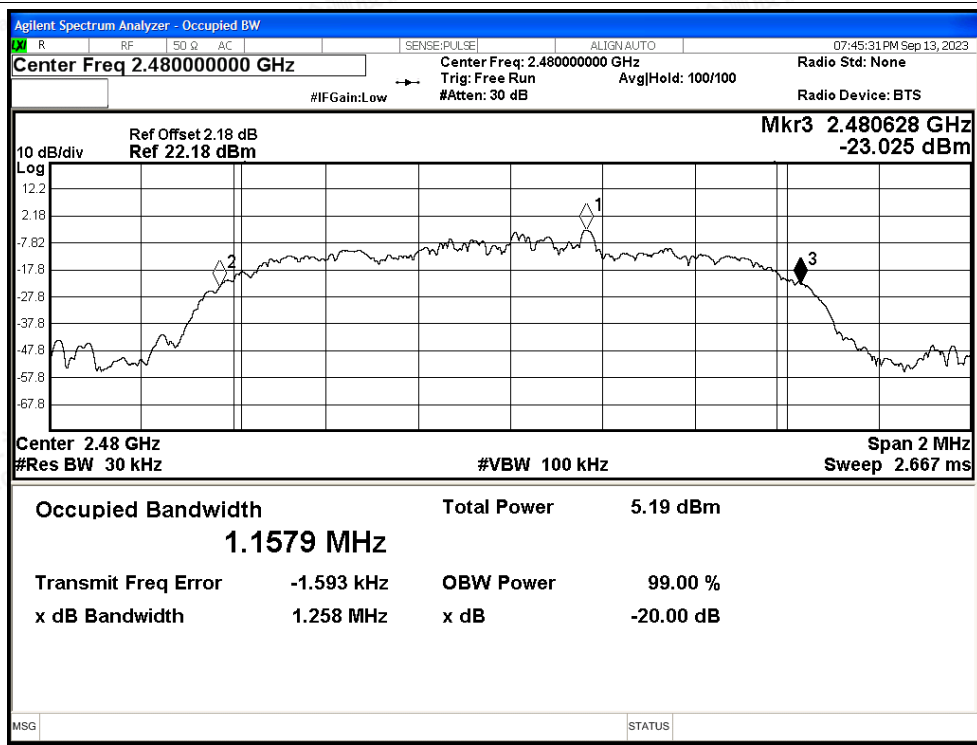




-20dB Bandwidth NVNT 2-DH5 2441MHz BT ANT

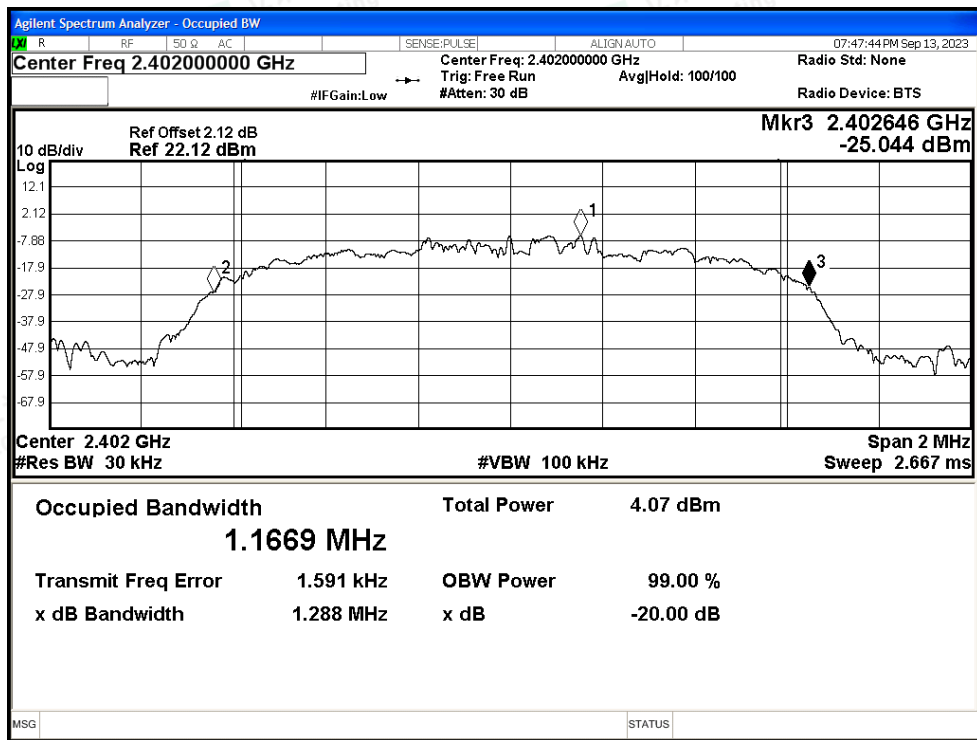


-20dB Bandwidth NVNT 2-DH5 2480MHz BT ANT

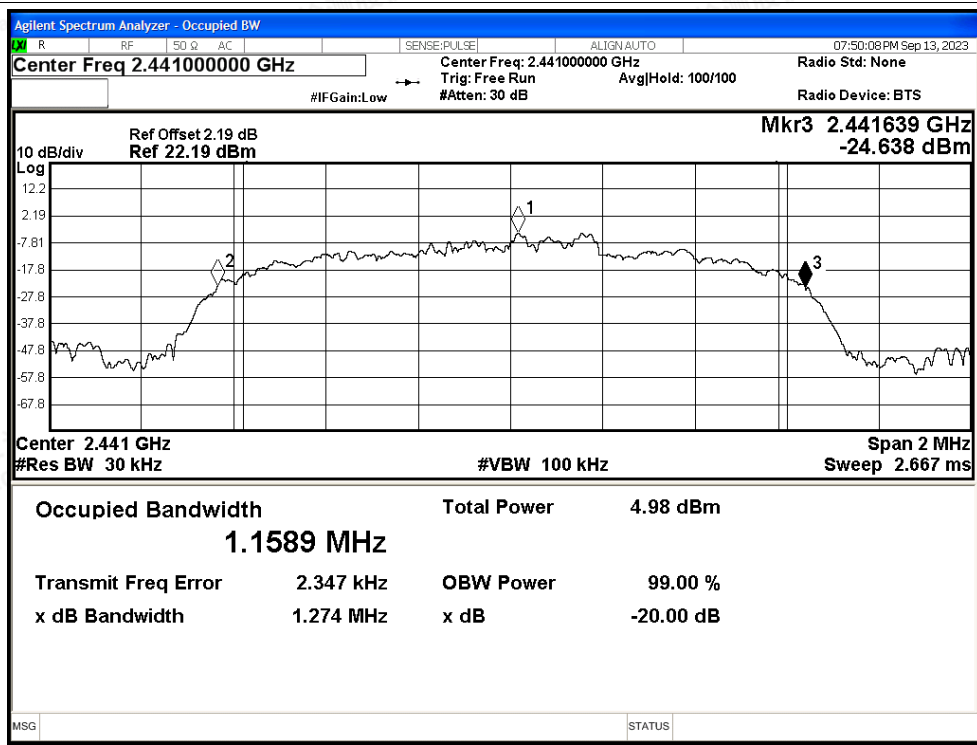


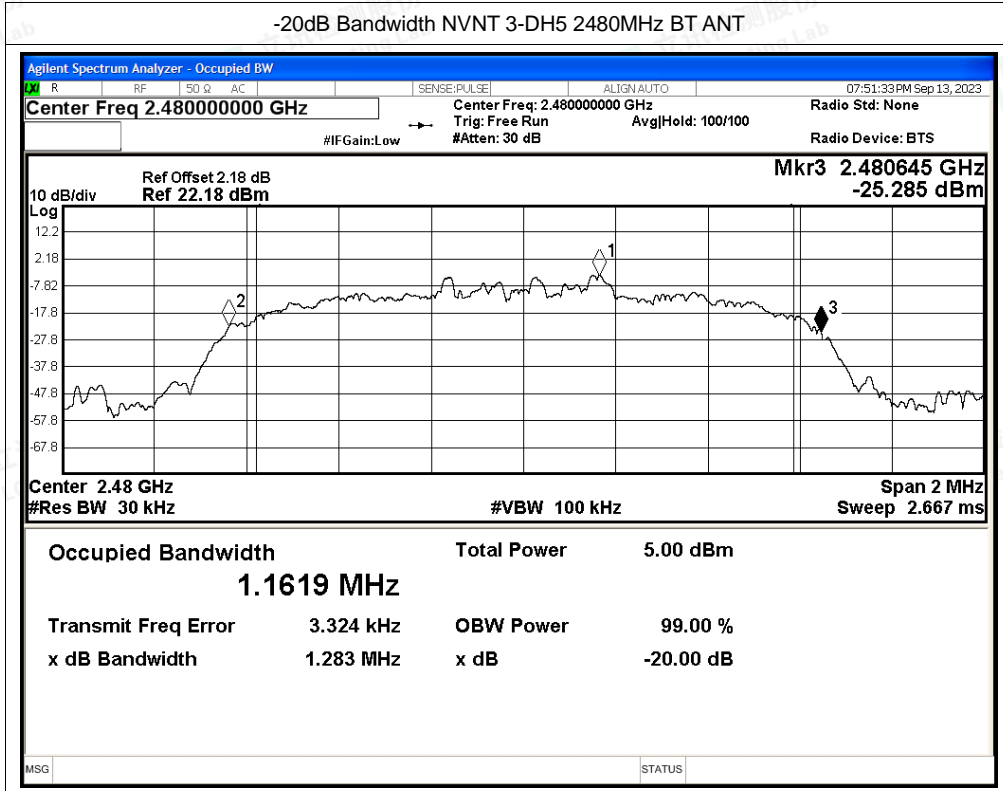


-20dB Bandwidth NVNT 3-DH5 2402MHz BT ANT



-20dB Bandwidth NVNT 3-DH5 2441MHz BT ANT







A.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	BT ANT	0.12	21	Pass
NVNT	1-DH5	2441	BT ANT	0.55	21	Pass
NVNT	1-DH5	2480	BT ANT	0.71	21	Pass
NVNT	2-DH5	2402	BT ANT	-0.47	21	Pass
NVNT	2-DH5	2441	BT ANT	-0.04	21	Pass
NVNT	2-DH5	2480	BT ANT	0.08	21	Pass
NVNT	3-DH5	2402	BT ANT	-0.48	21	Pass
NVNT	3-DH5	2441	BT ANT	-0.04	21	Pass
NVNT	3-DH5	2480	BT ANT	0.10	21	Pass

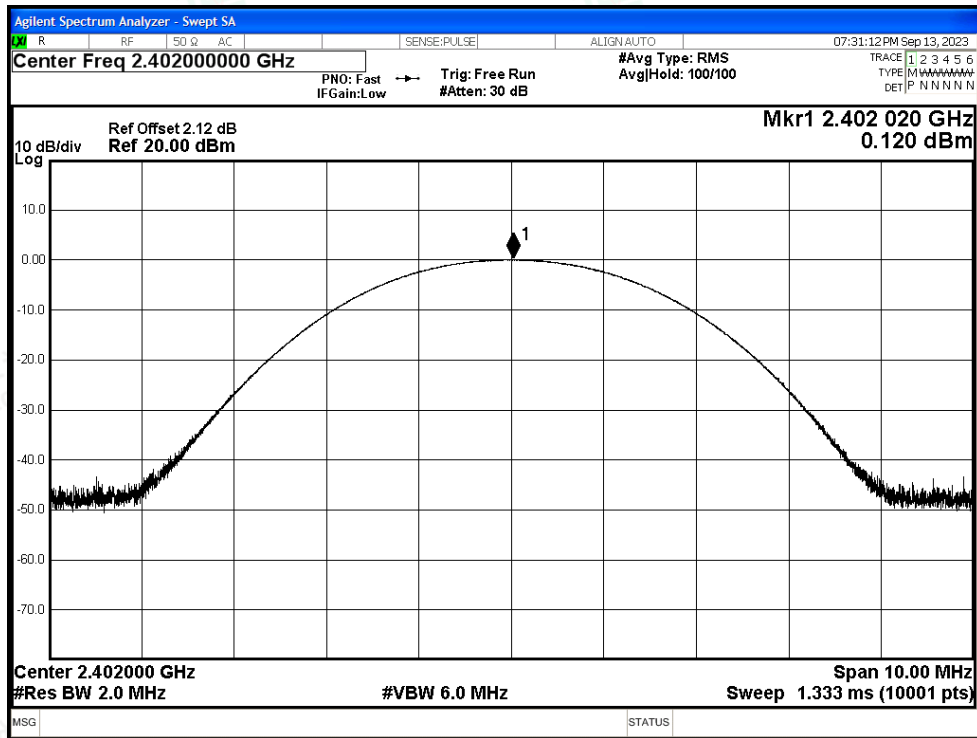


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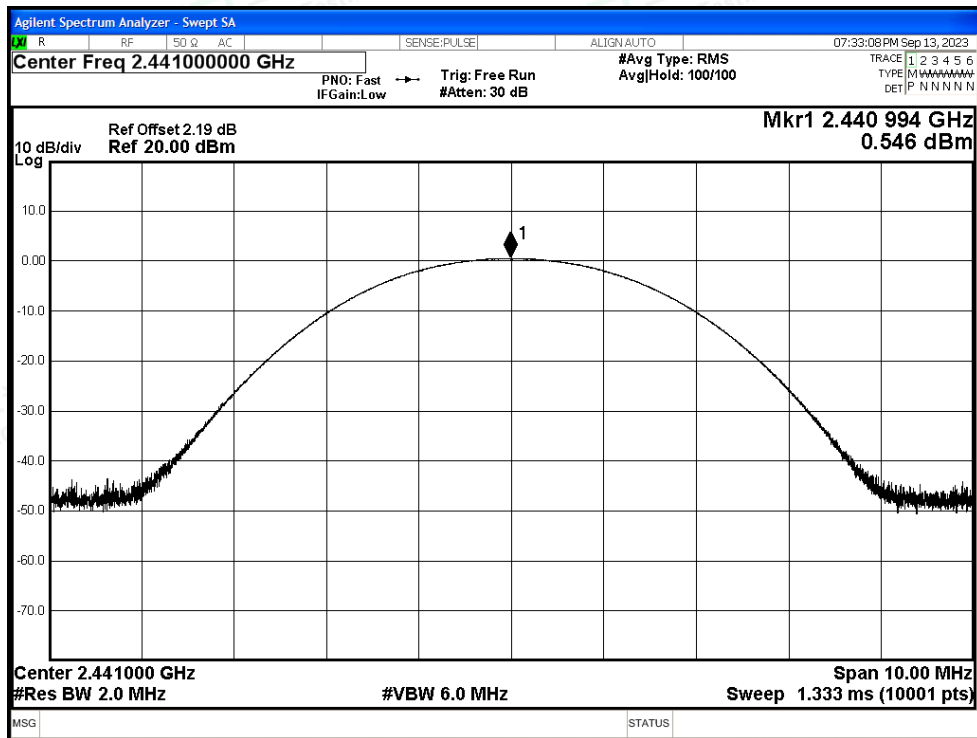


Test Graphs

Power NVNT 1-DH5 2402MHz BT ANT

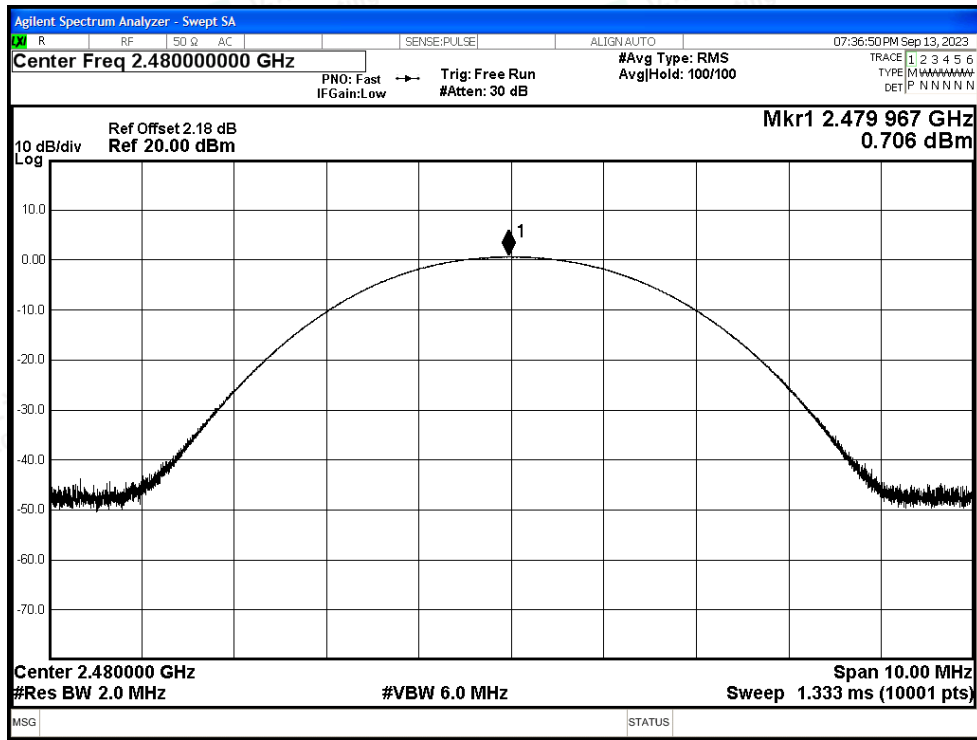


Power NVNT 1-DH5 2441MHz BT ANT

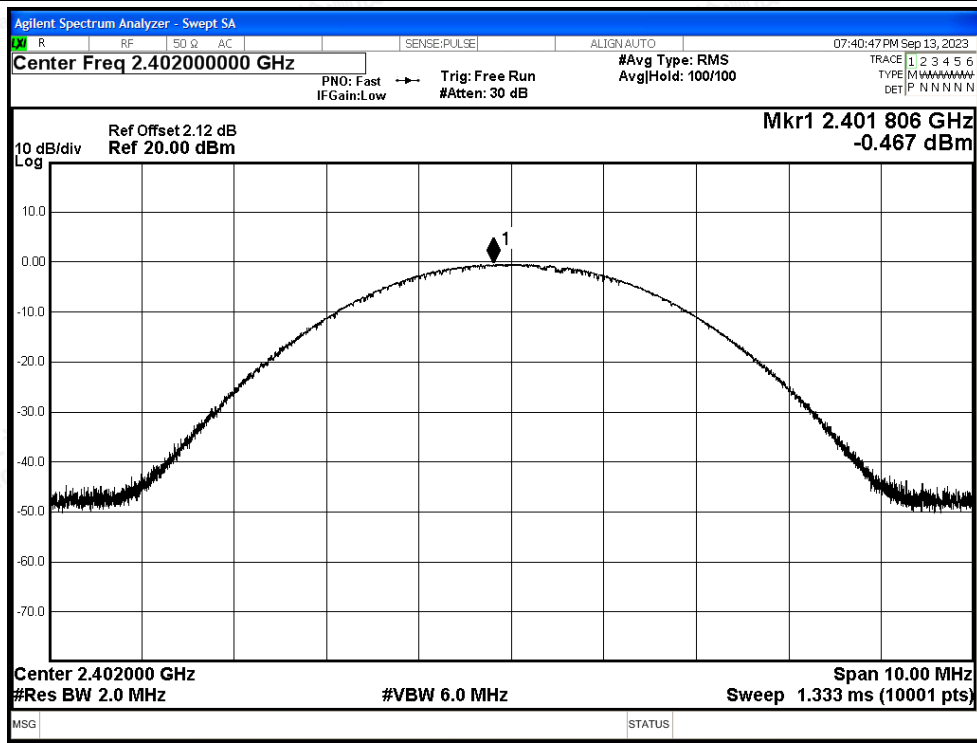




Power NVNT 1-DH5 2480MHz BT ANT

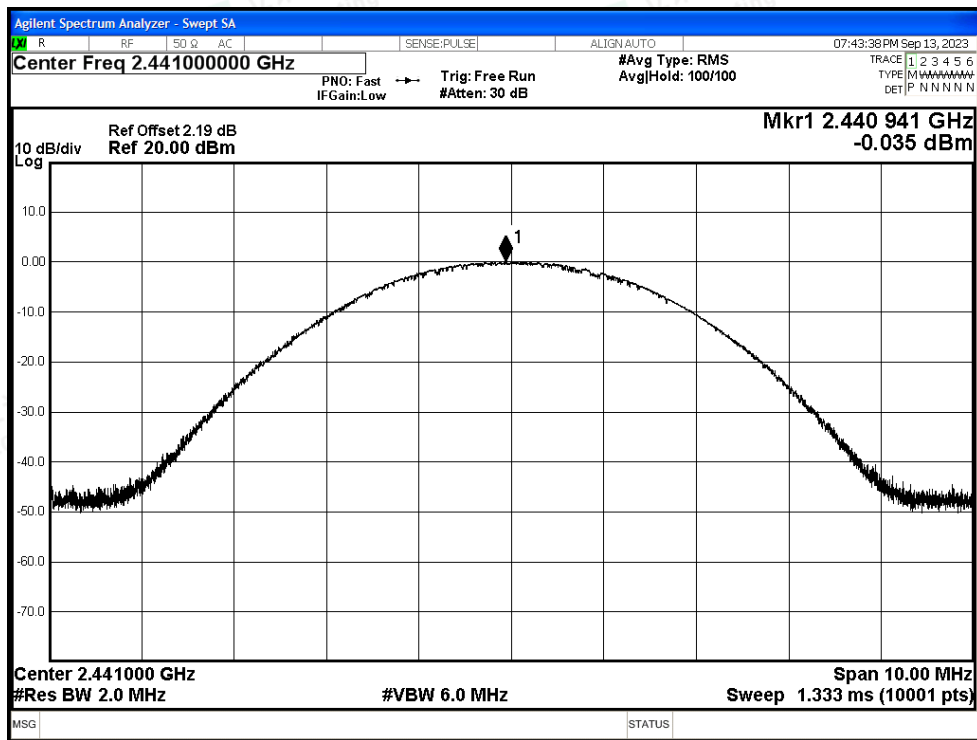


Power NVNT 2-DH5 2402MHz BT ANT

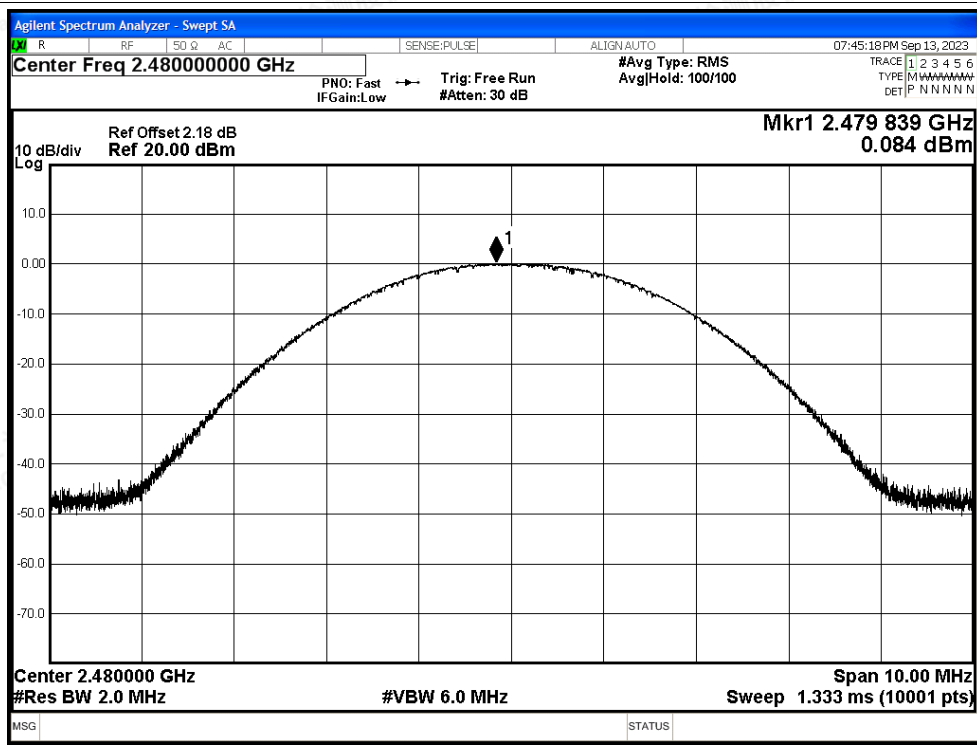




Power NVNT 2-DH5 2441MHz BT ANT

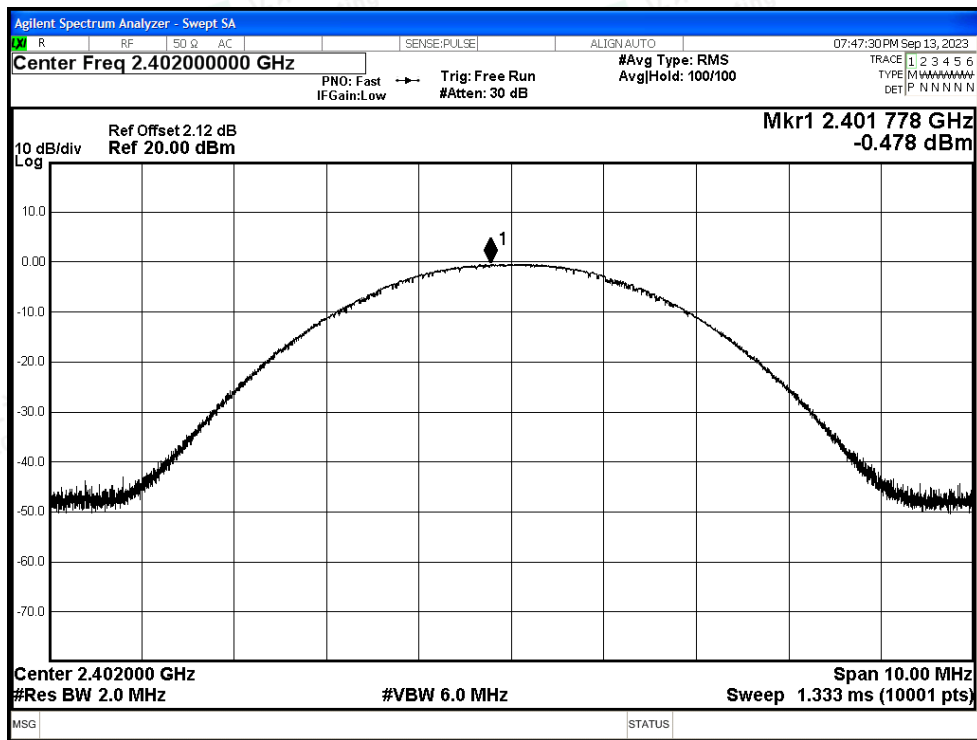


Power NVNT 2-DH5 2480MHz BT ANT

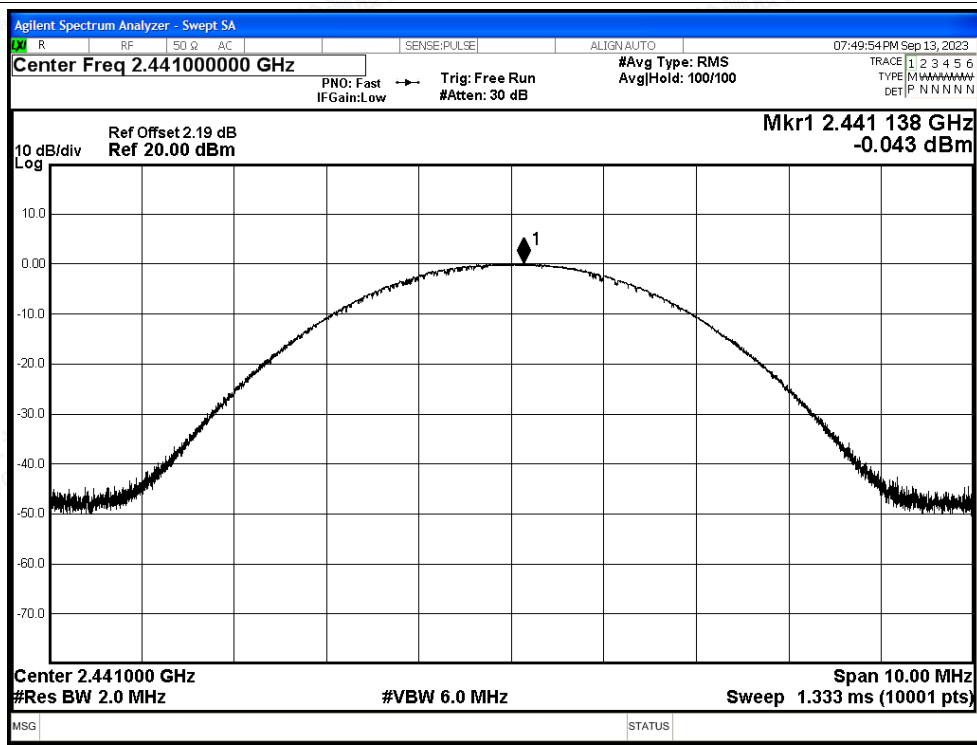


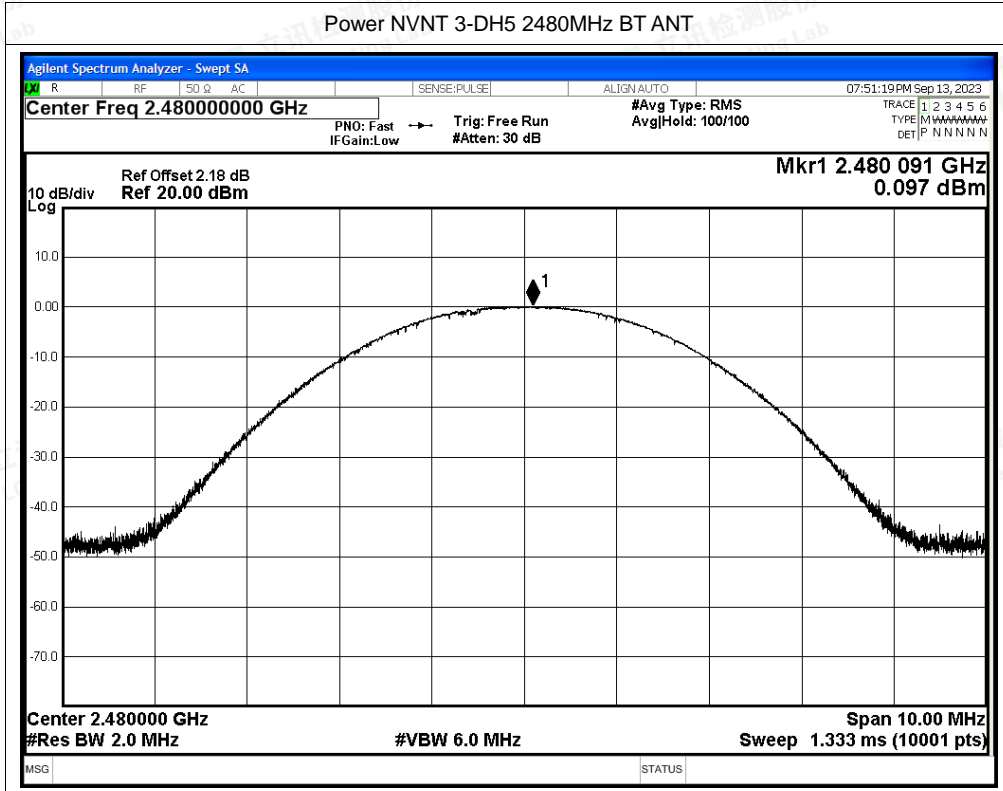


Power NVNT 3-DH5 2402MHz BT ANT



Power NVNT 3-DH5 2441MHz BT ANT







A.3 Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	BT ANT	2401.974	2403.018	1.044	0.565	Pass
NVNT	2-DH5	BT ANT	2401.842	2403.162	1.32	0.846	Pass
NVNT	3-DH5	BT ANT	2402.038	2403.082	1.044	0.859	Pass

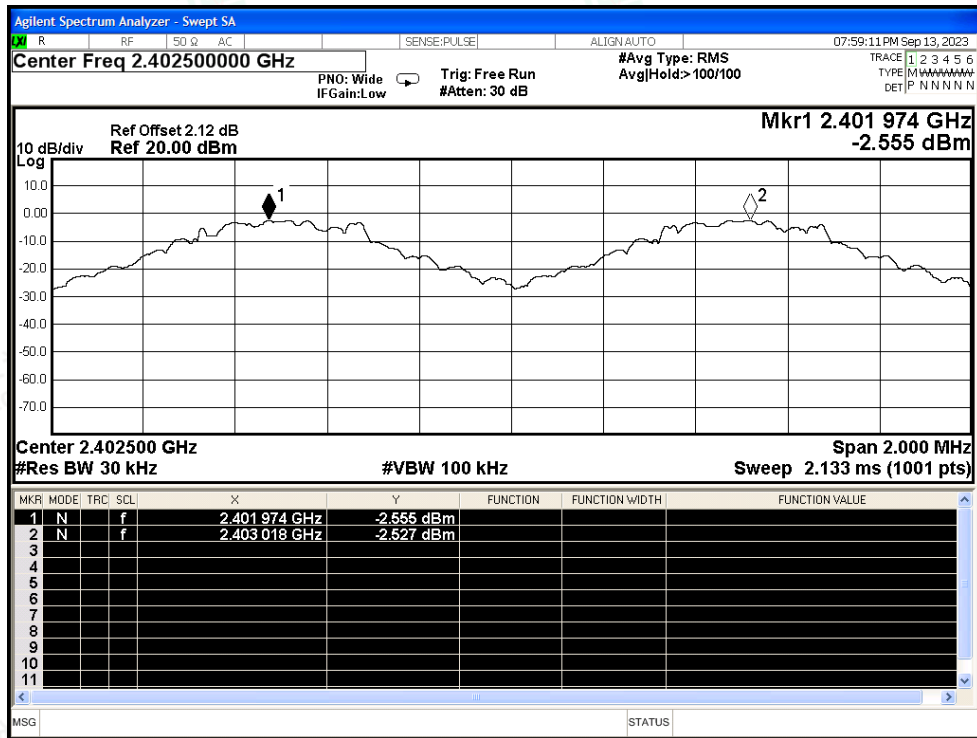


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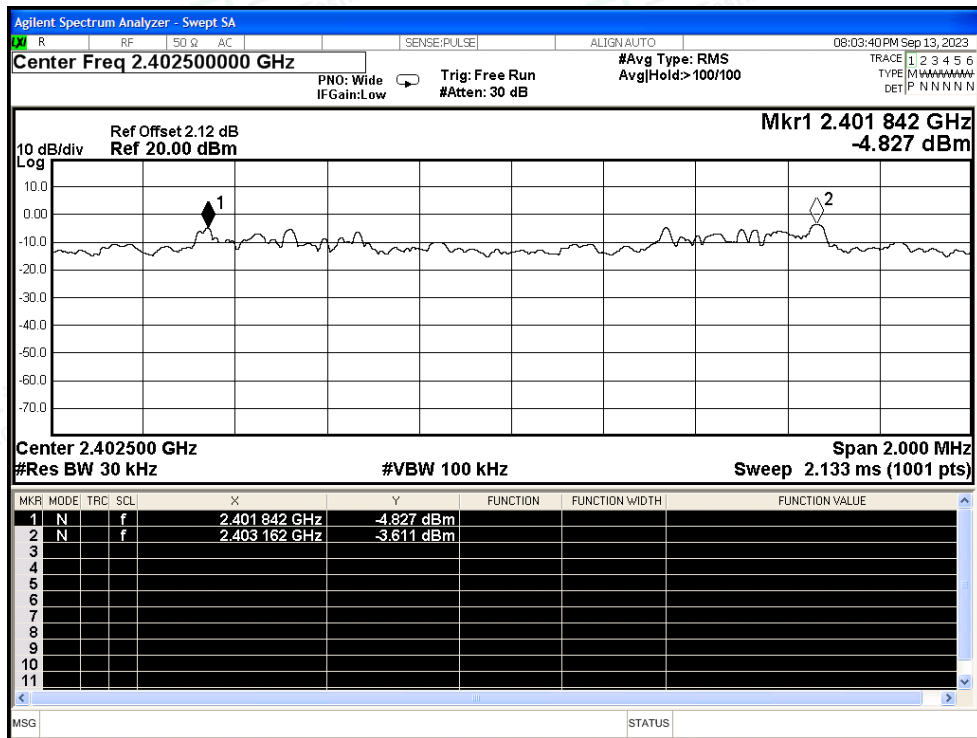


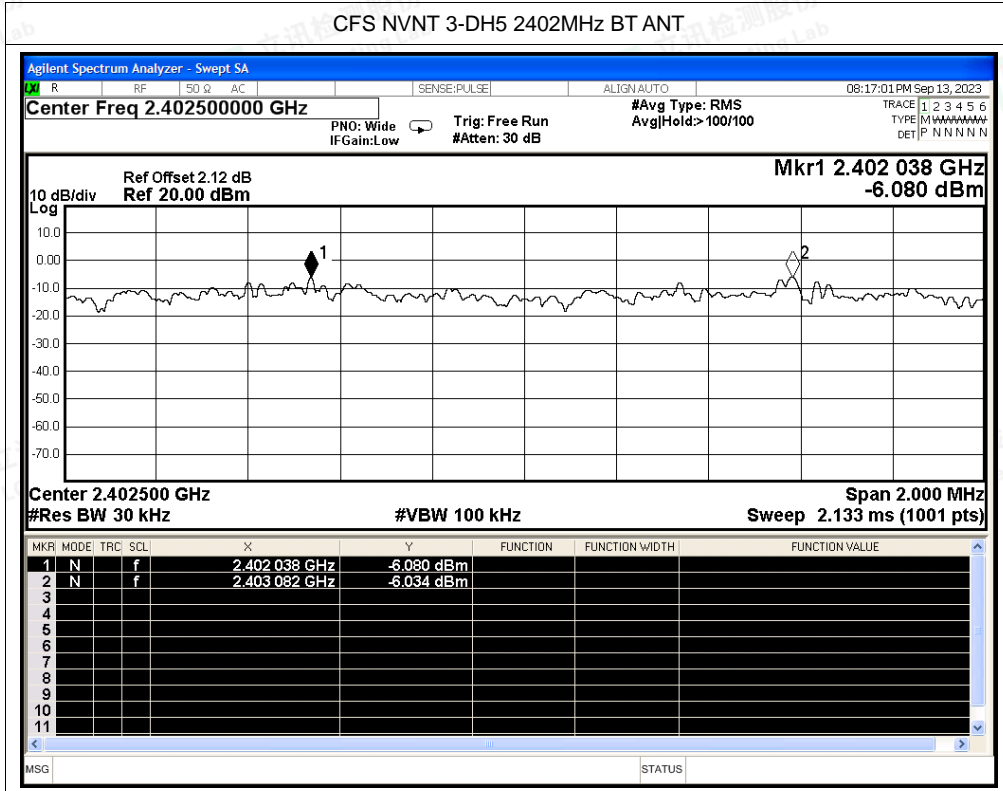
Test Graphs

CFS NVNT 1-DH5 2402MHz BT ANT



CFS NVNT 2-DH5 2402MHz BT ANT







A.4 Dwell Time

Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	BT ANT	2.881	316.91	110	31600	400	Pass
NVNT	2-DH5	2402	BT ANT	2.88	311.04	108	31600	400	Pass
NVNT	3-DH5	2402	BT ANT	2.885	320.235	111	31600	400	Pass

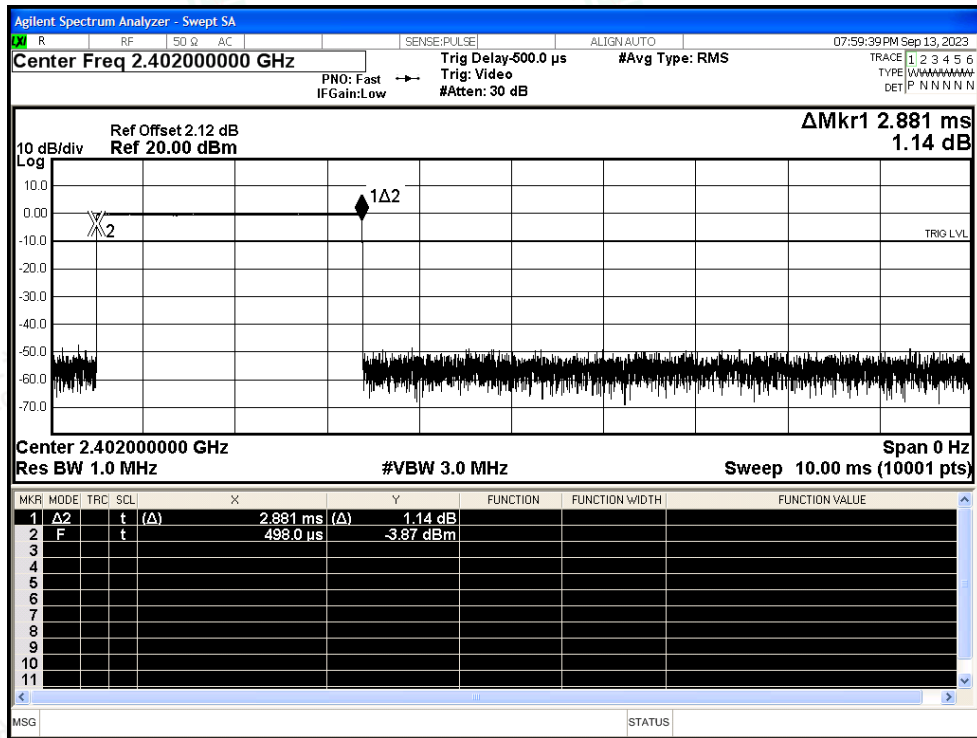


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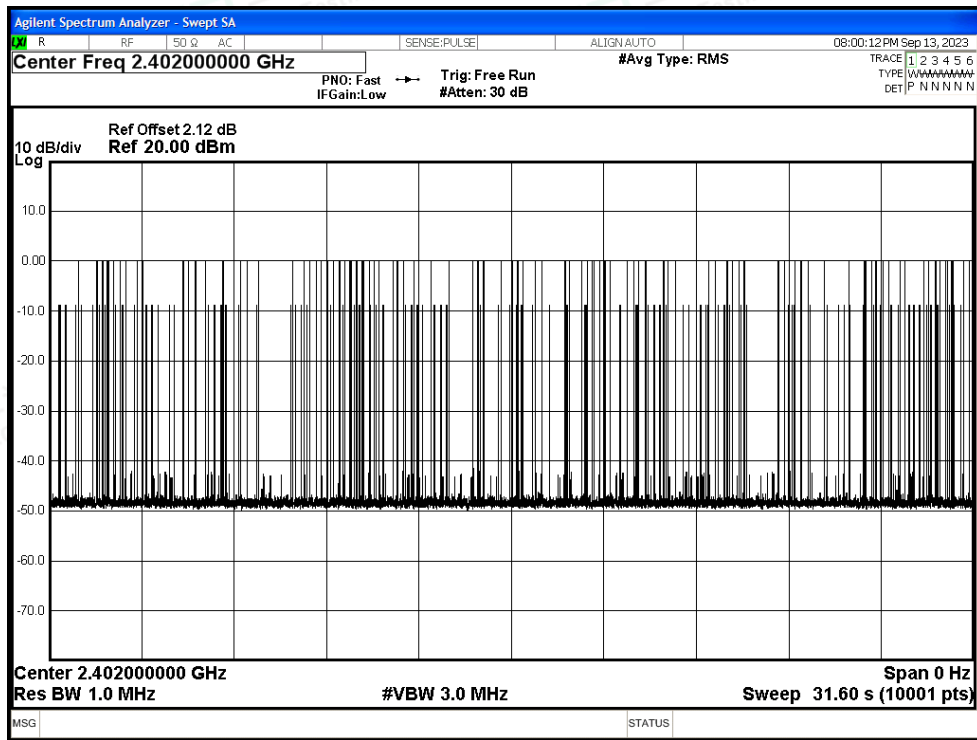


Test Graphs

Dwell NVNT 1-DH5 2402MHz BT ANT One Burst

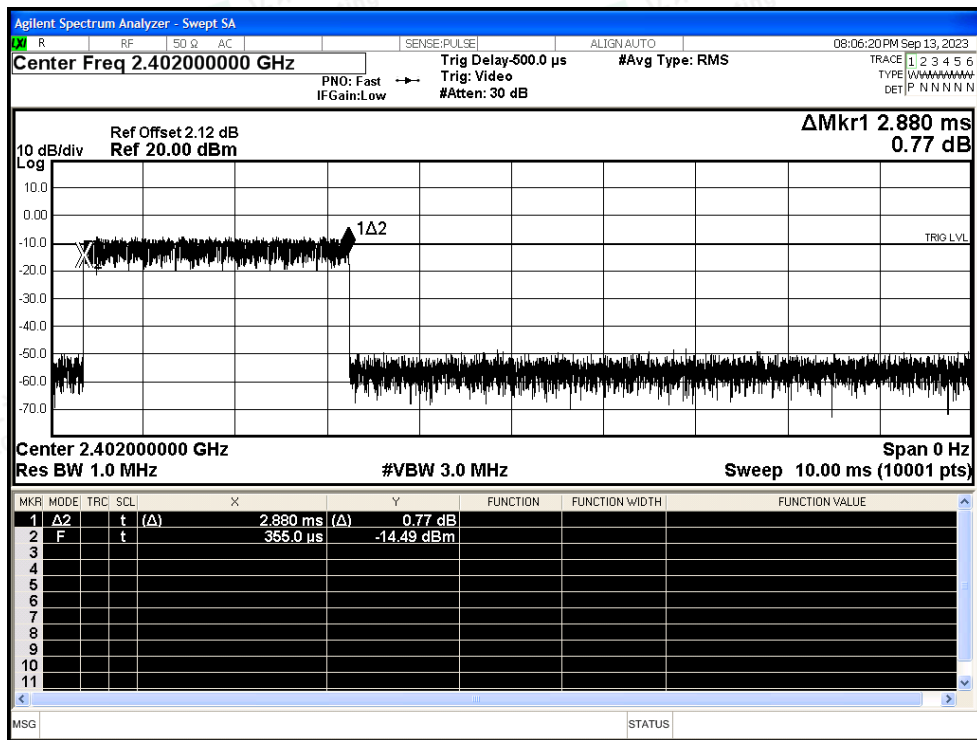


Dwell NVNT 1-DH5 2402MHz BT ANT Accumulated

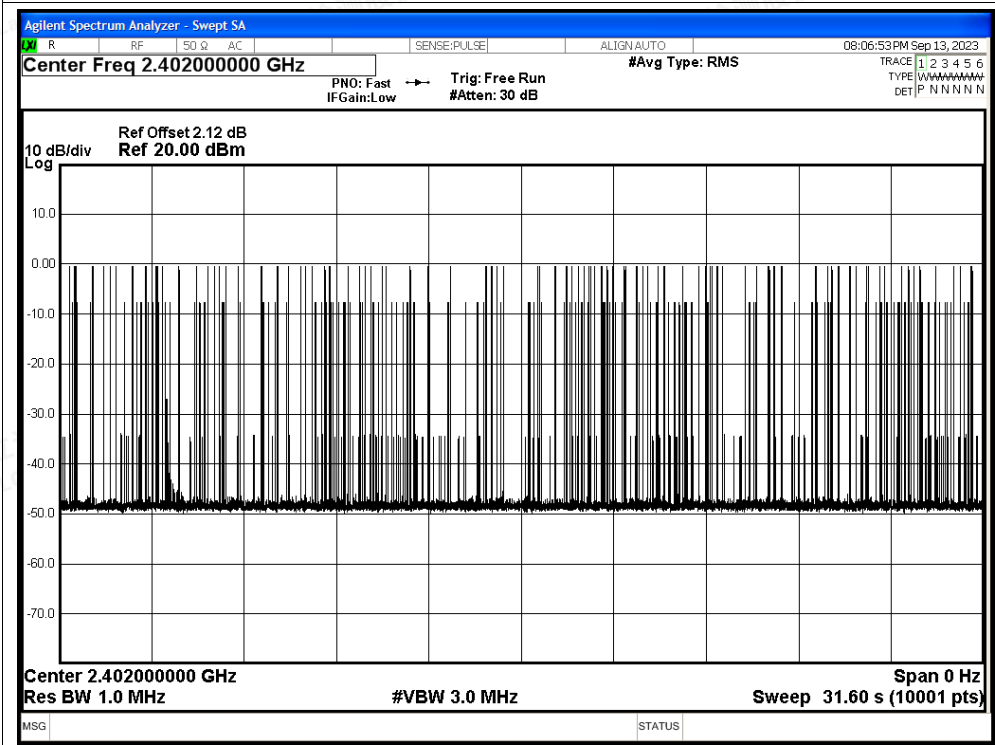




Dwell NVNT 2-DH5 2402MHz BT ANT One Burst

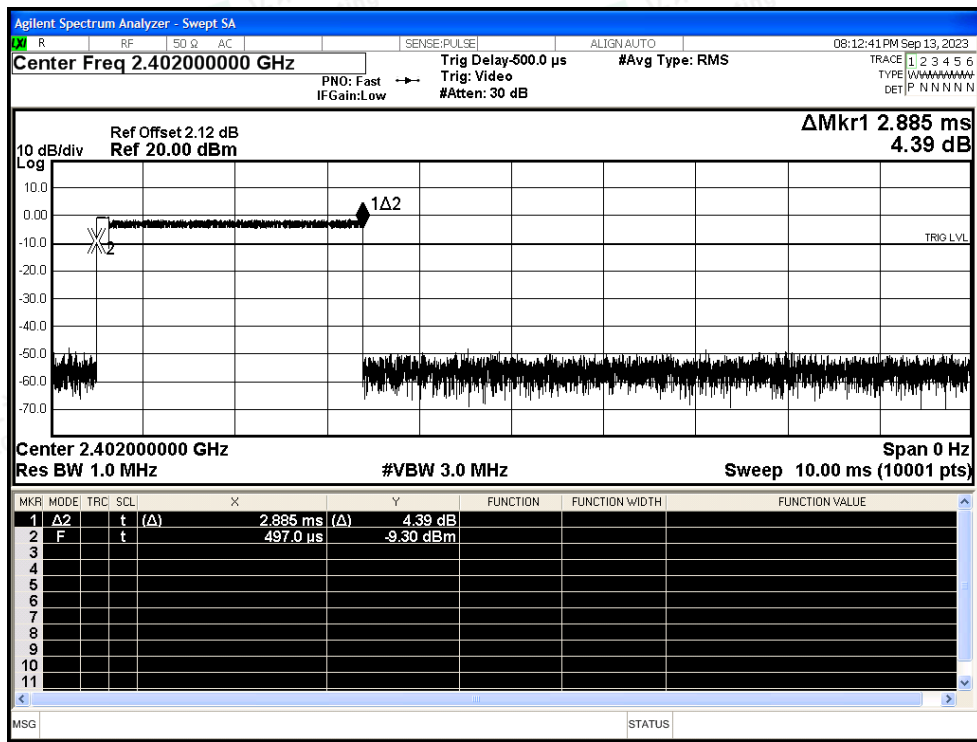


Dwell NVNT 2-DH5 2402MHz BT ANT Accumulated

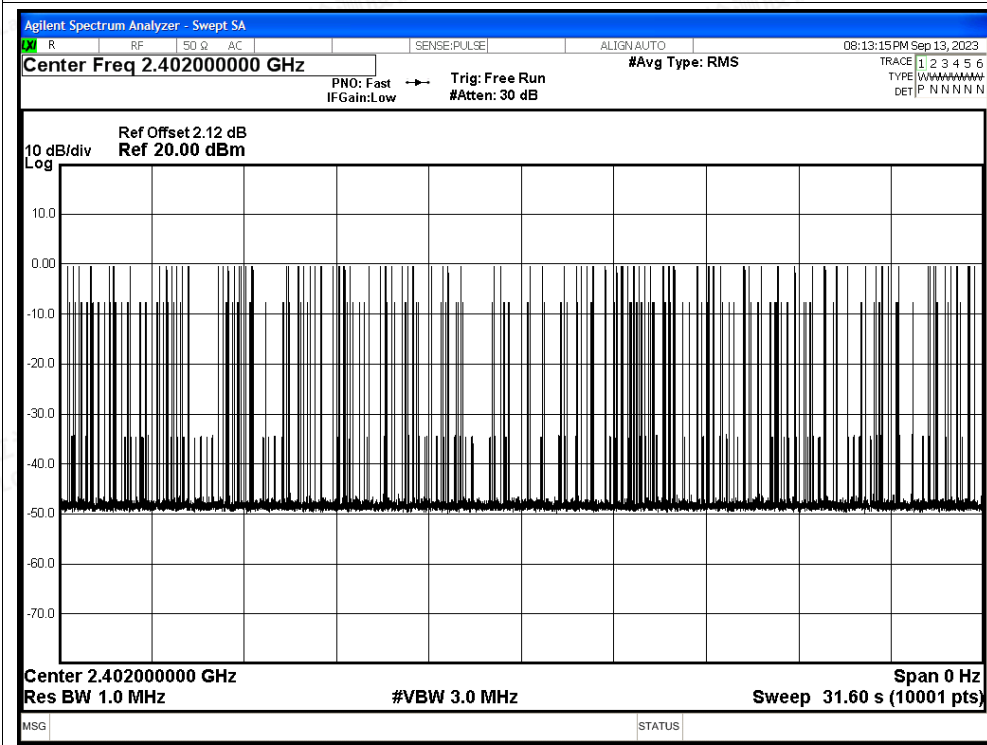




Dwell NVNT 3-DH5 2402MHz BT ANT One Burst



Dwell NVNT 3-DH5 2402MHz BT ANT Accumulated





A.5 Number of Hopping Channel

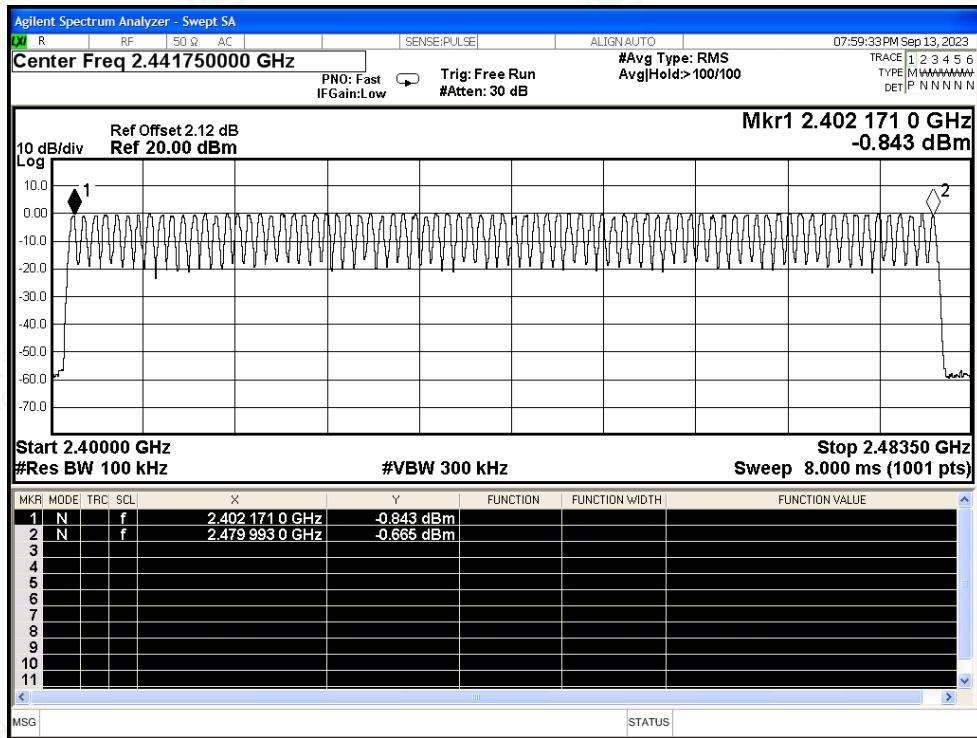
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	BT ANT	79	15	Pass
NVNT	2-DH5	BT ANT	79	15	Pass
NVNT	3-DH5	BT ANT	79	15	Pass



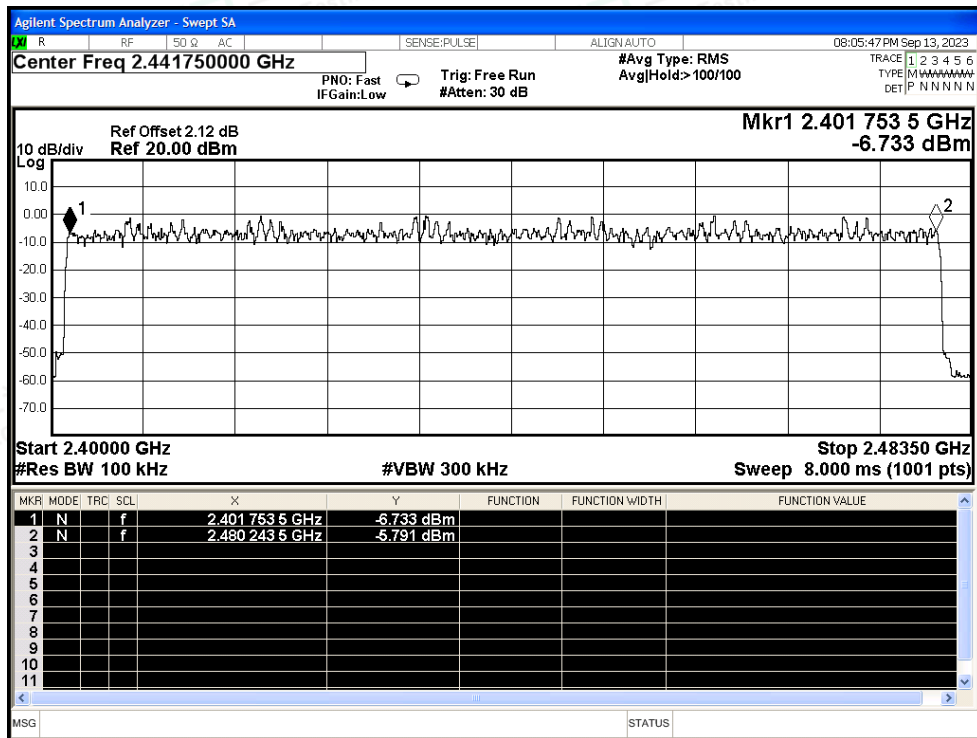


Test Graphs

Hopping No. NVNT 1-DH5 2402MHz BT ANT

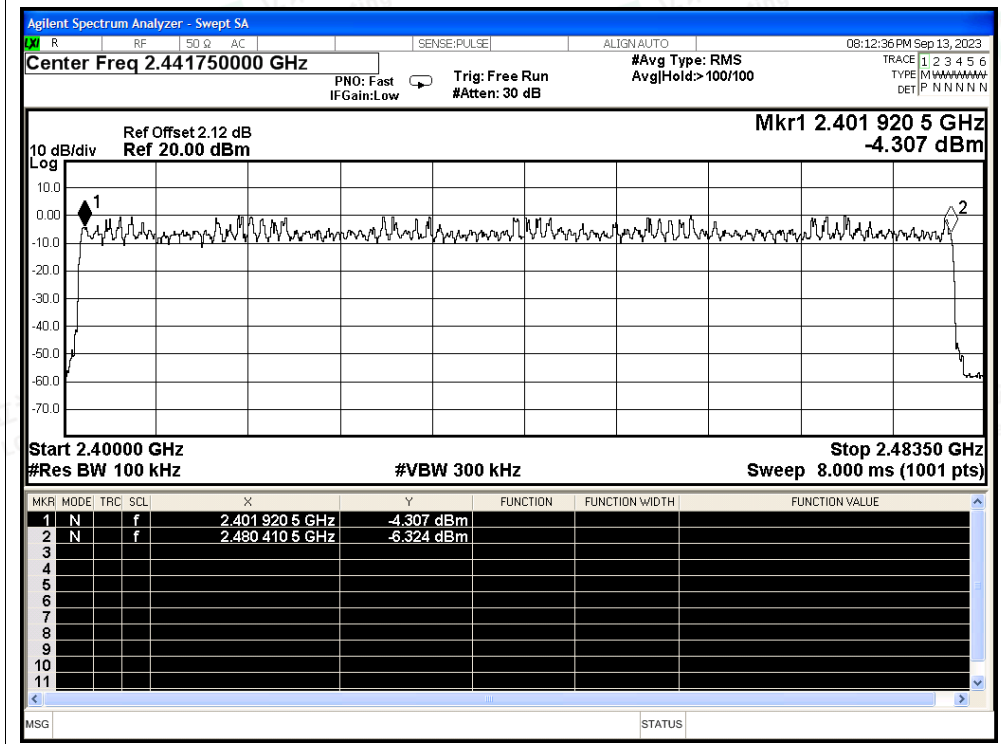


Hopping No. NVNT 2-DH5 2402MHz BT ANT





Hopping No. NVNT 3-DH5 2402MHz BT ANT





A.6 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	BT ANT	No-Hopping	-56.67	-20	Pass
NVNT	1-DH5	2480	BT ANT	No-Hopping	-56.74	-20	Pass
NVNT	2-DH5	2402	BT ANT	No-Hopping	-54.75	-20	Pass
NVNT	2-DH5	2480	BT ANT	No-Hopping	-56.08	-20	Pass
NVNT	3-DH5	2402	BT ANT	No-Hopping	-55.64	-20	Pass
NVNT	3-DH5	2480	BT ANT	No-Hopping	-55.08	-20	Pass

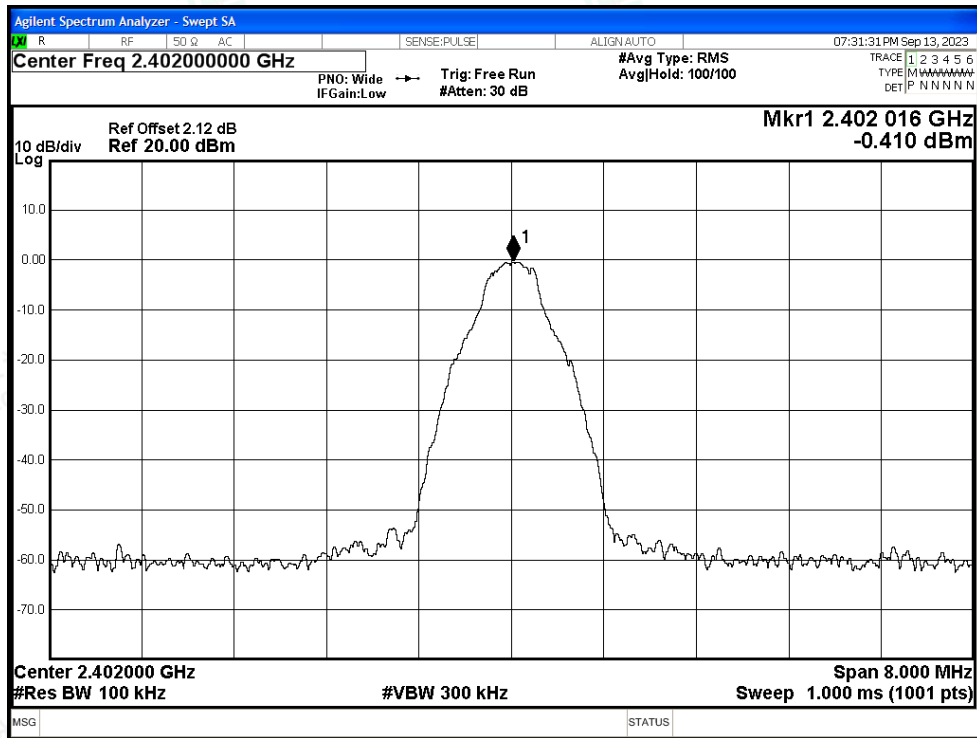


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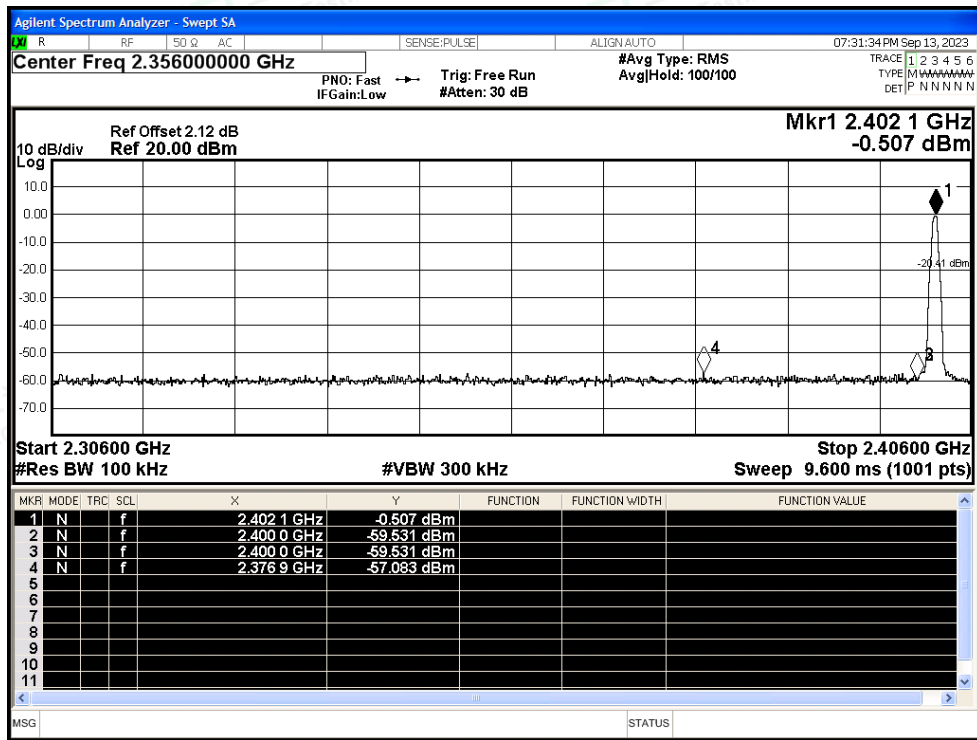


Test Graphs

Band Edge NVNT 1-DH5 2402MHz BT ANT No-Hopping Ref

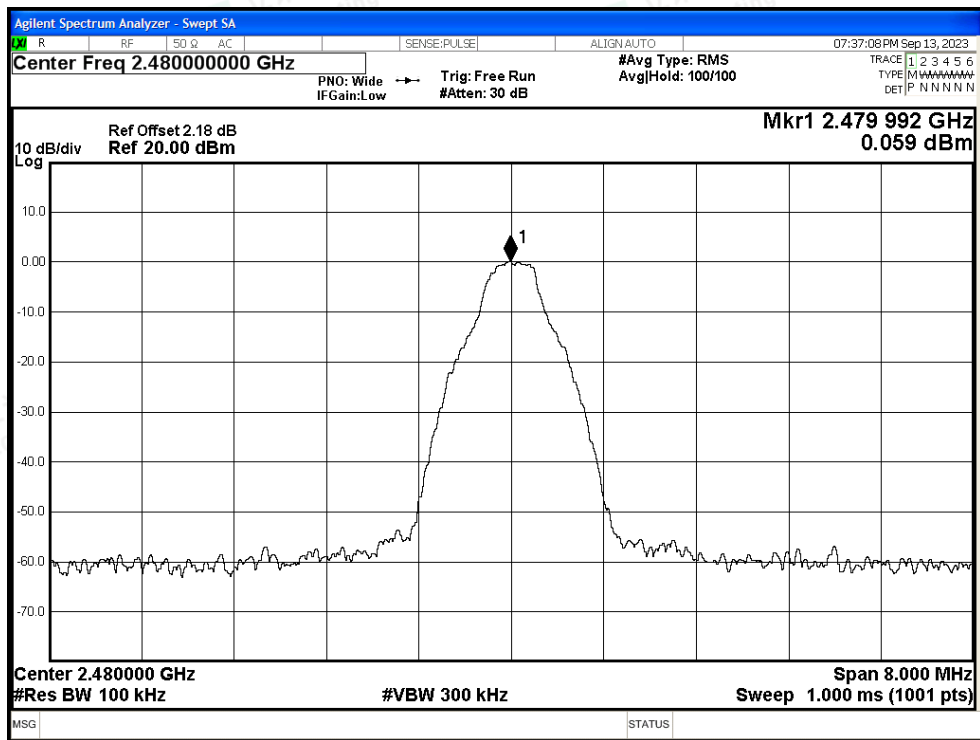


Band Edge NVNT 1-DH5 2402MHz BT ANT No-Hopping Emission

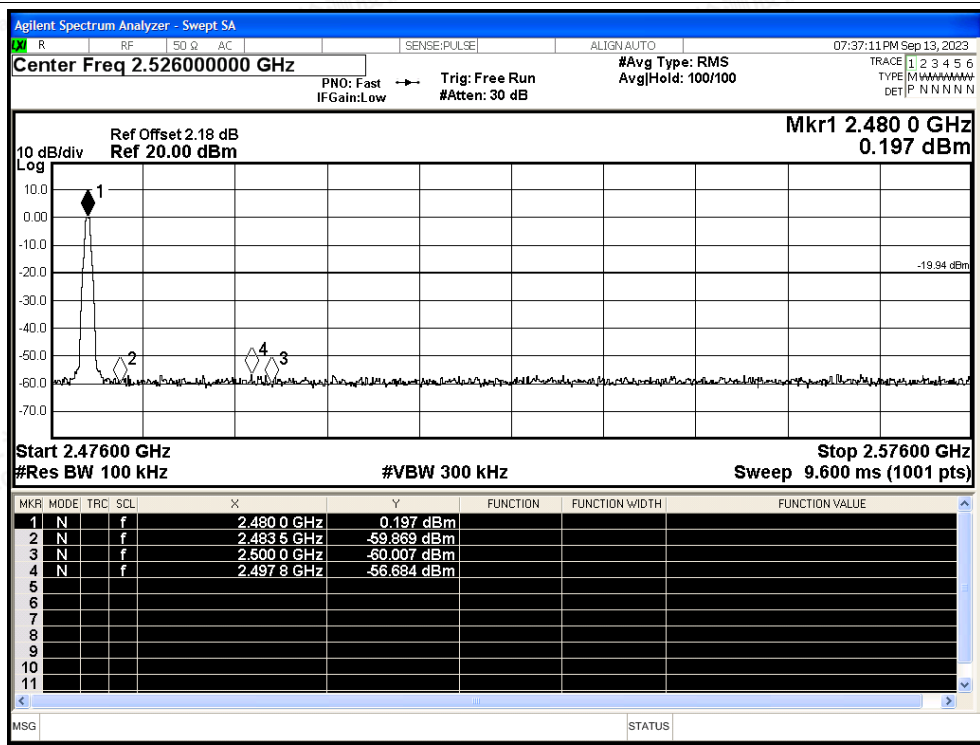




Band Edge NVNT 1-DH5 2480MHz BT ANT No-Hopping Ref

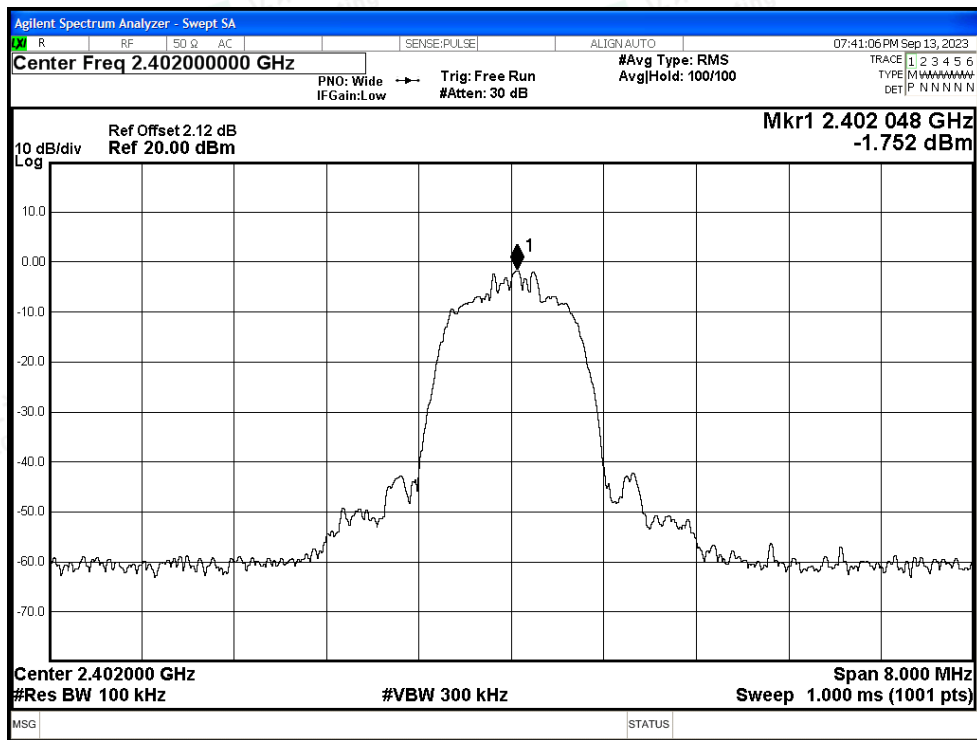


Band Edge NVNT 1-DH5 2480MHz BT ANT No-Hopping Emission

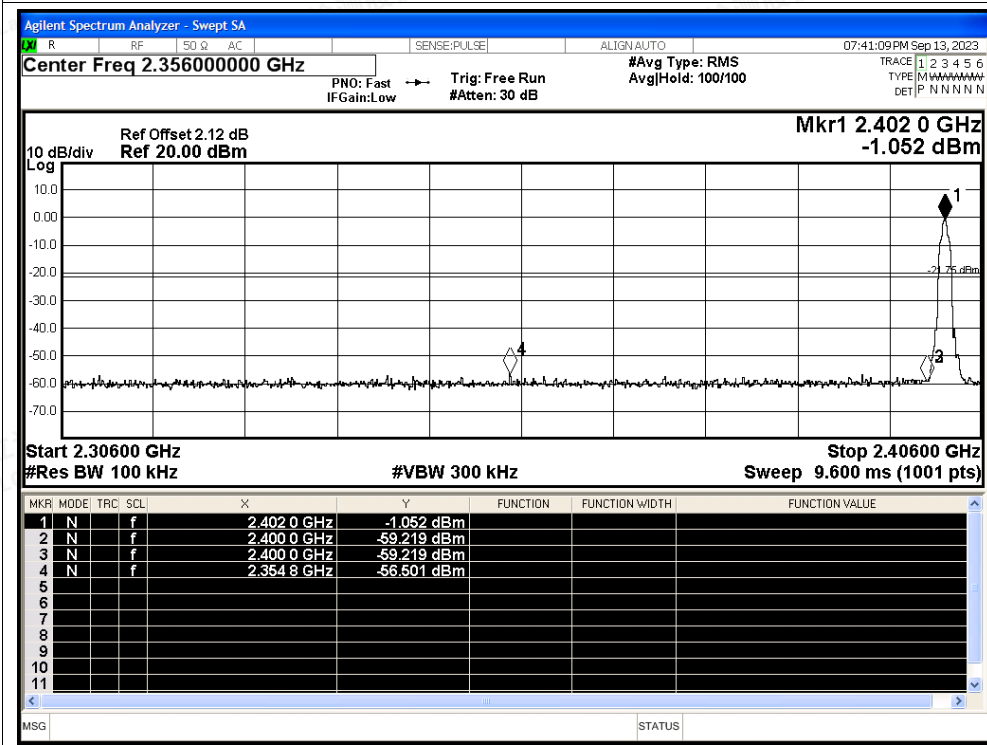




Band Edge NVNT 2-DH5 2402MHz BT ANT No-Hopping Ref

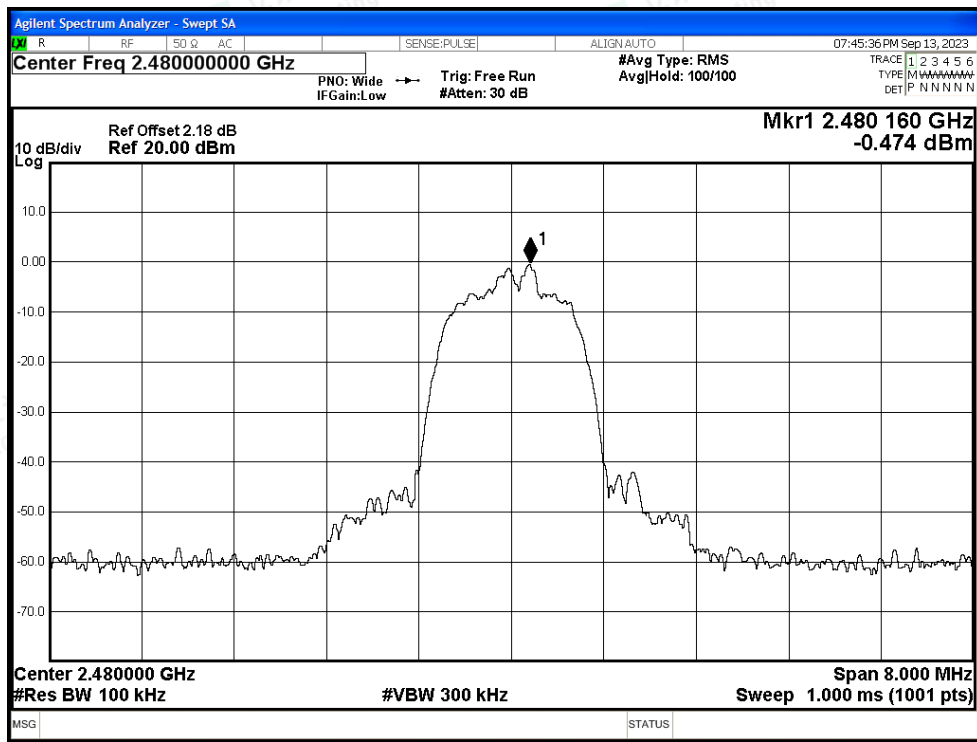


Band Edge NVNT 2-DH5 2402MHz BT ANT No-Hopping Emission

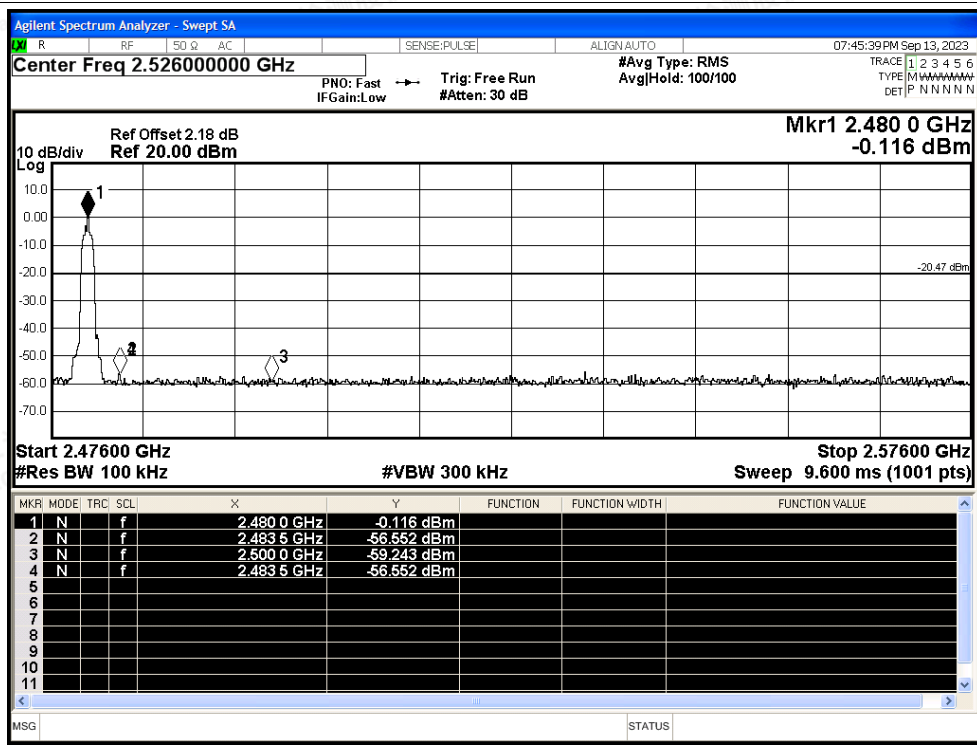




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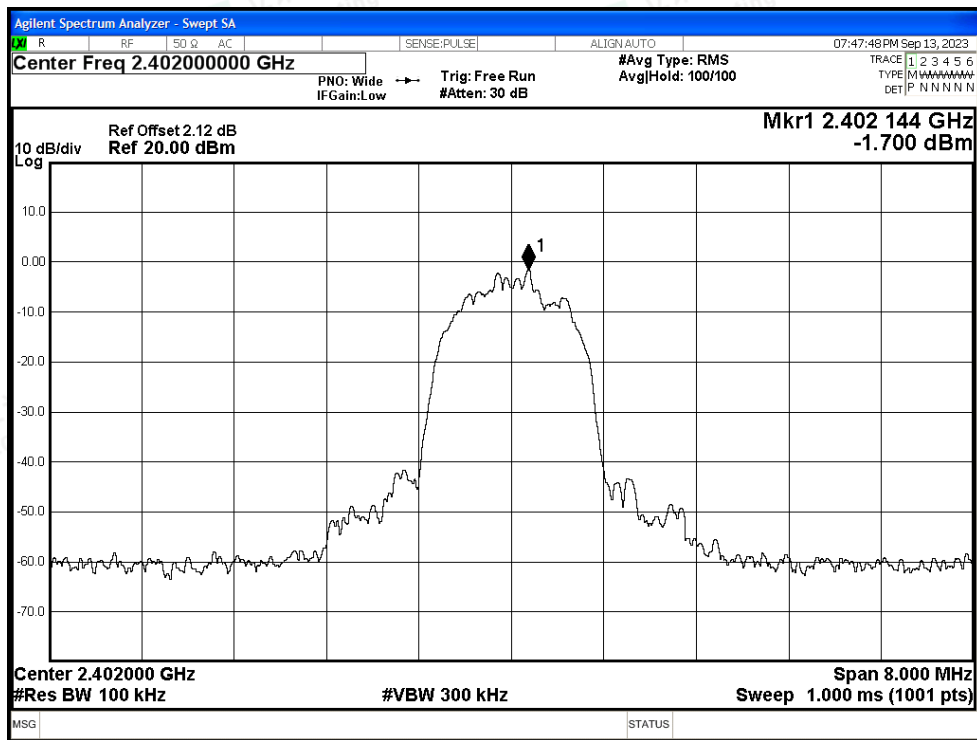


Band Edge NVNT 2-DH5 2480MHz BT ANT No-Hopping Emission

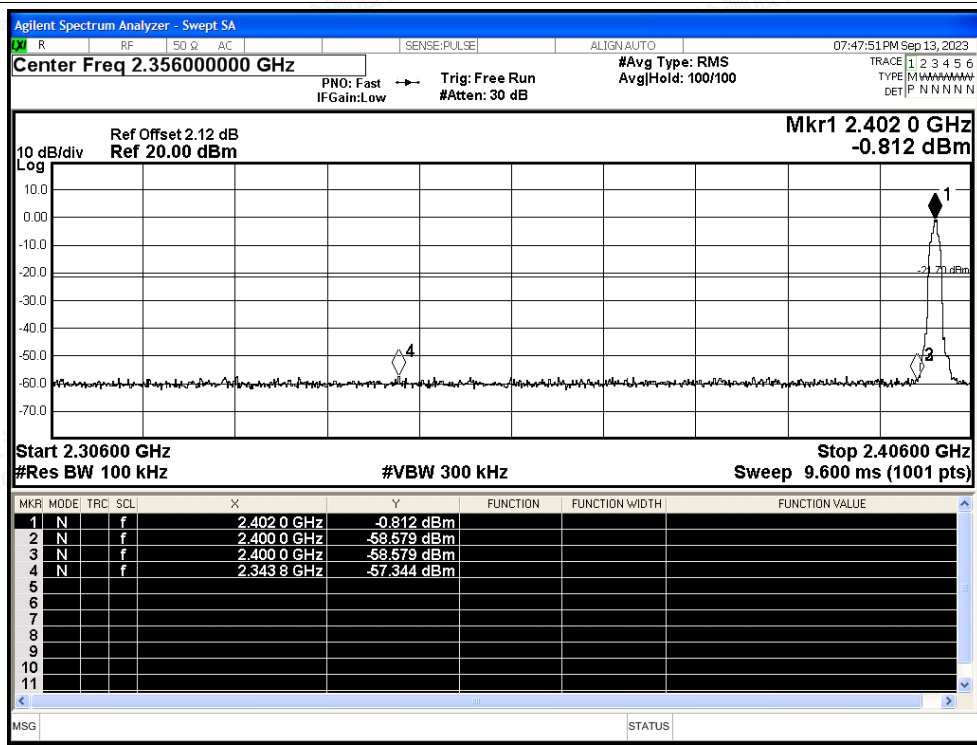




Band Edge NVNT 3-DH5 2402MHz BT ANT No-Hopping Ref

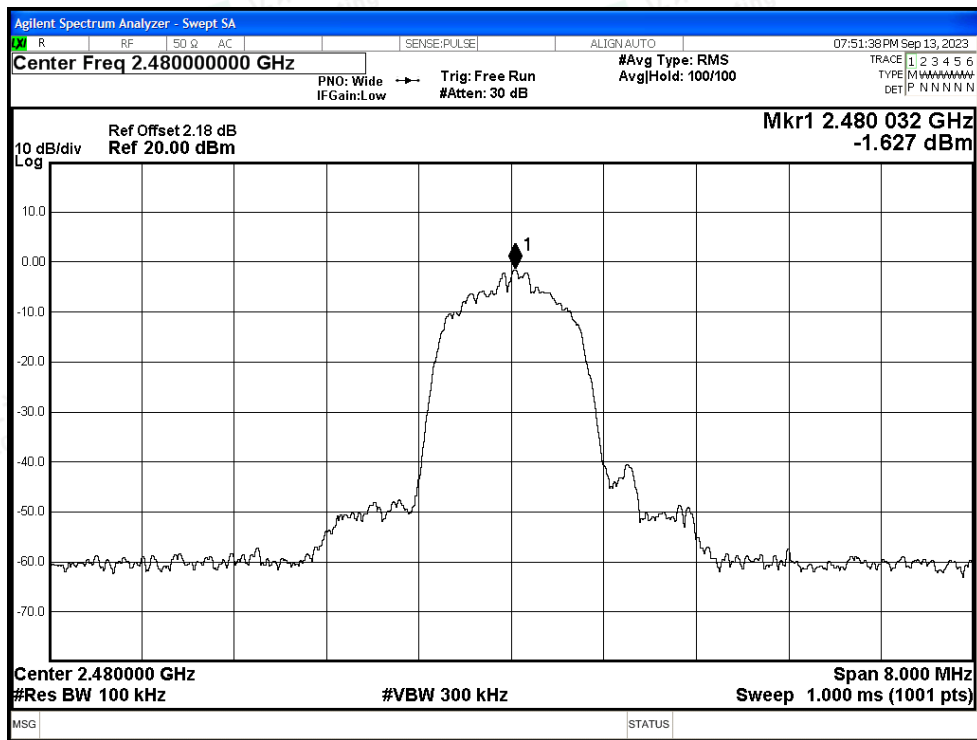


Band Edge NVNT 3-DH5 2402MHz BT ANT No-Hopping Emission

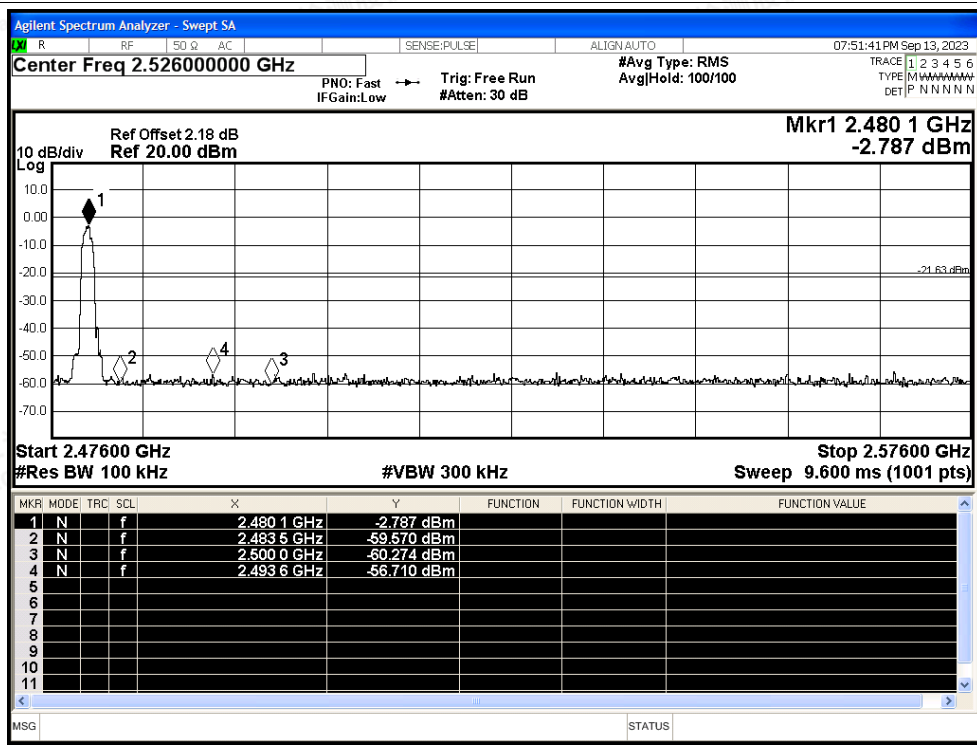




Band Edge NVNT 3-DH5 2480MHz BT ANT No-Hopping Ref



Band Edge NVNT 3-DH5 2480MHz BT ANT No-Hopping Emission





(Hopping)

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	BT ANT	Hopping	-55.42	-20	Pass
NVNT	1-DH5	2480	BT ANT	Hopping	-56.27	-20	Pass
NVNT	2-DH5	2402	BT ANT	Hopping	-55.02	-20	Pass
NVNT	2-DH5	2480	BT ANT	Hopping	-55.16	-20	Pass
NVNT	3-DH5	2402	BT ANT	Hopping	-52.77	-20	Pass
NVNT	3-DH5	2480	BT ANT	Hopping	-53.11	-20	Pass

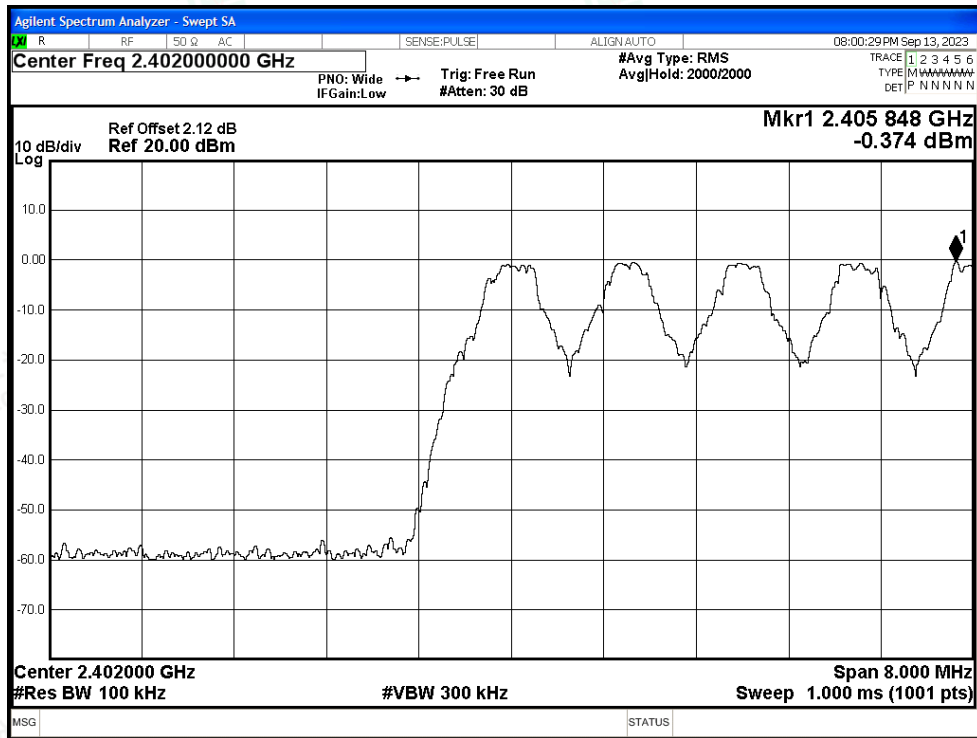


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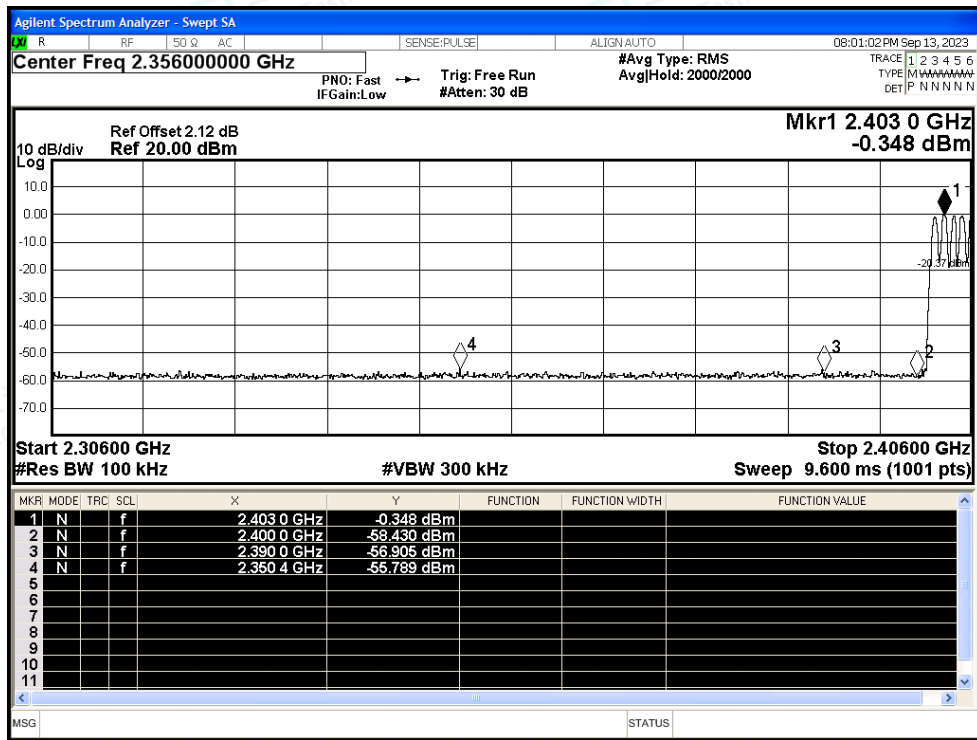


Test Graphs

Band Edge(Hopping) NVNT 1-DH5 2402MHz BT ANT Hopping Ref

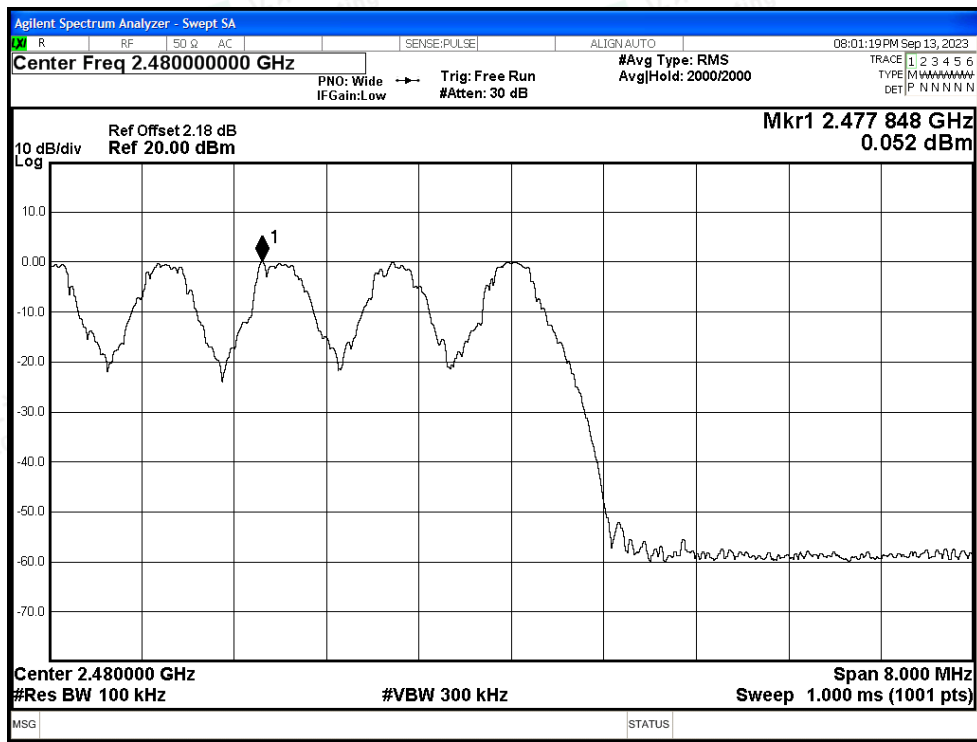


Band Edge(Hopping) NVNT 1-DH5 2402MHz BT ANT Hopping Emission

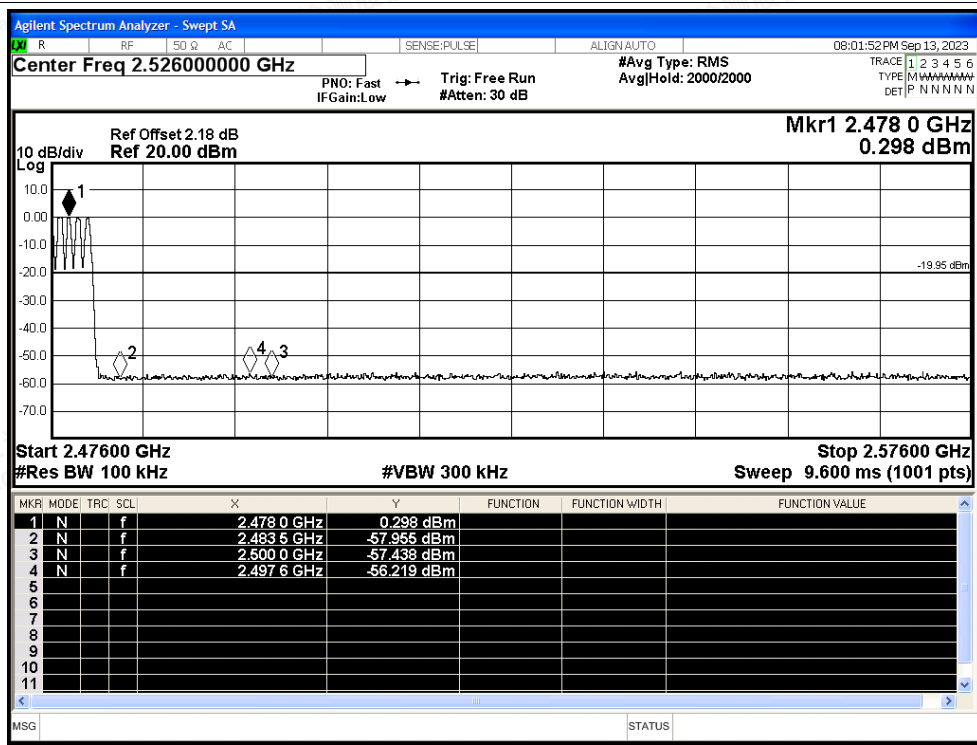




Band Edge(Hopping) NVNT 1-DH5 2480MHz BT ANT Hopping Ref

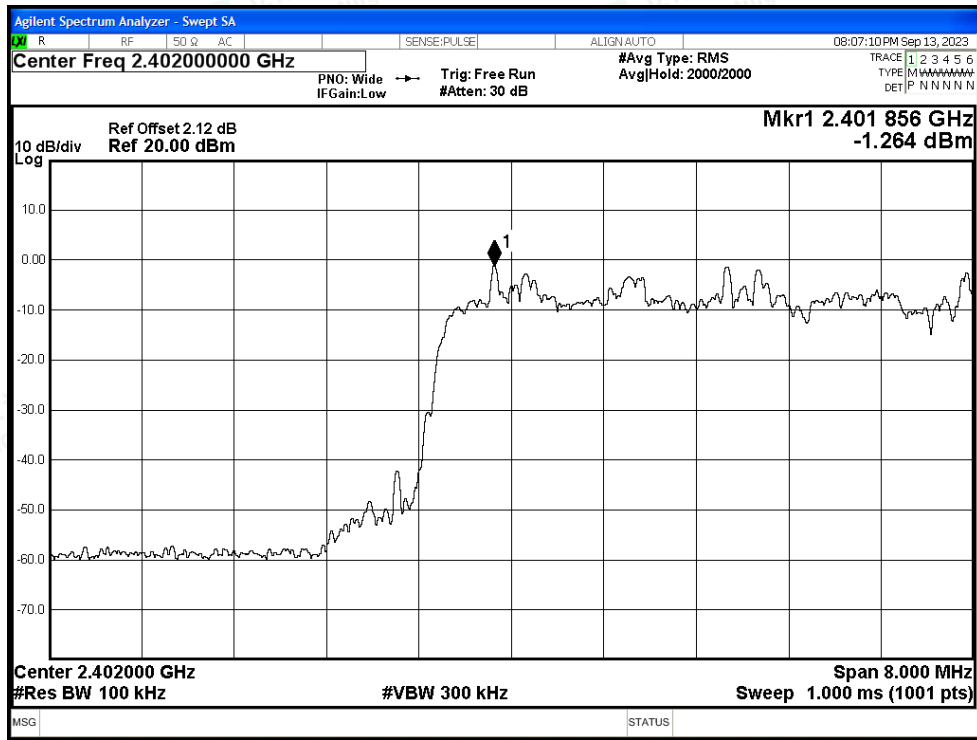


Band Edge(Hopping) NVNT 1-DH5 2480MHz BT ANT Hopping Emission

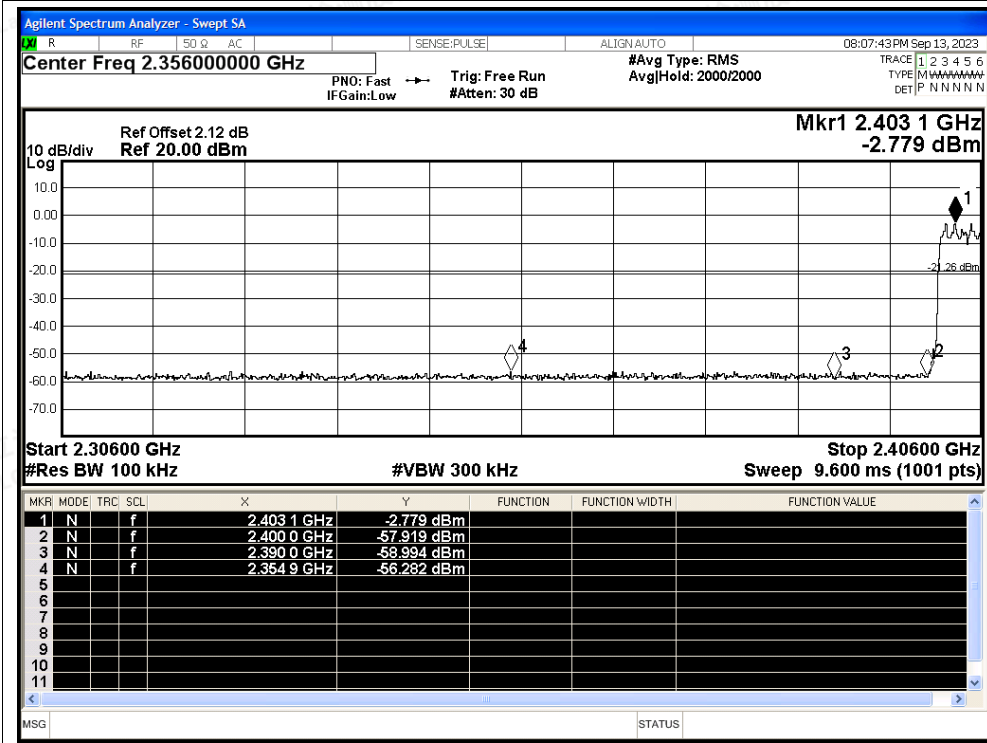




Band Edge(Hopping) NVNT 2-DH5 2402MHz BT ANT Hopping Ref

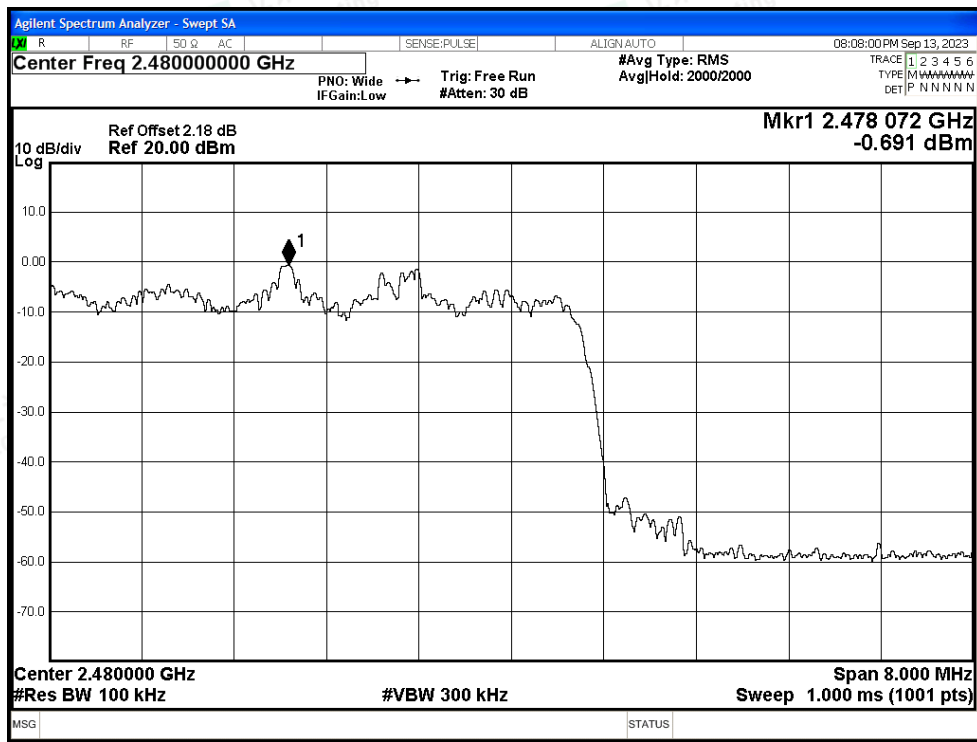


Band Edge(Hopping) NVNT 2-DH5 2402MHz BT ANT Hopping Emission

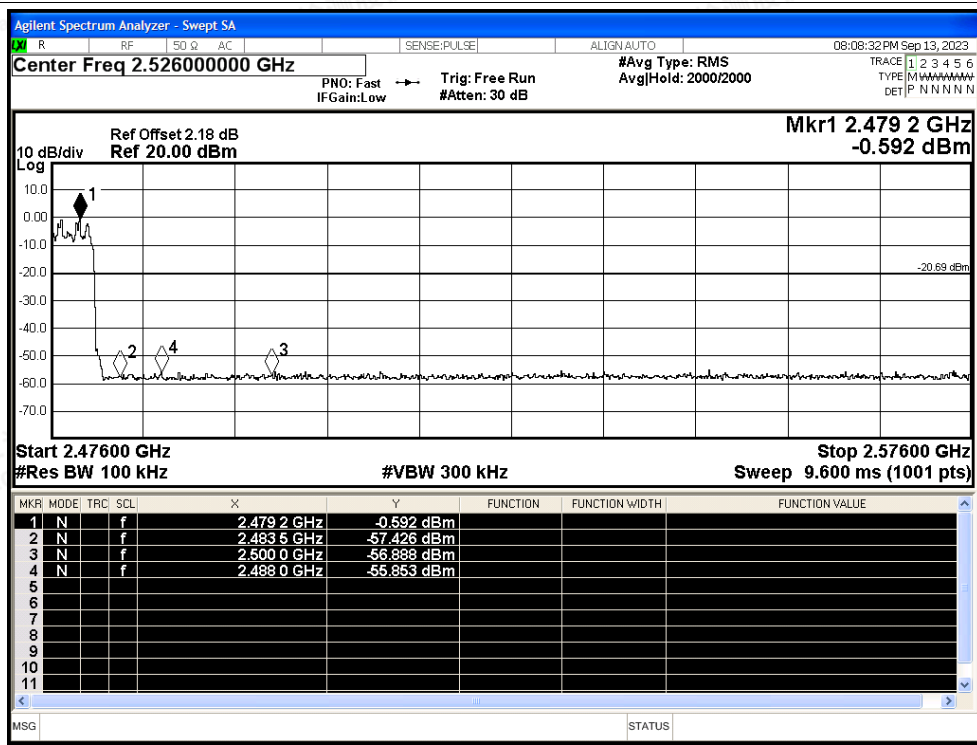




Band Edge(Hopping) NVNT 2-DH5 2480MHz BT ANT Hopping Ref

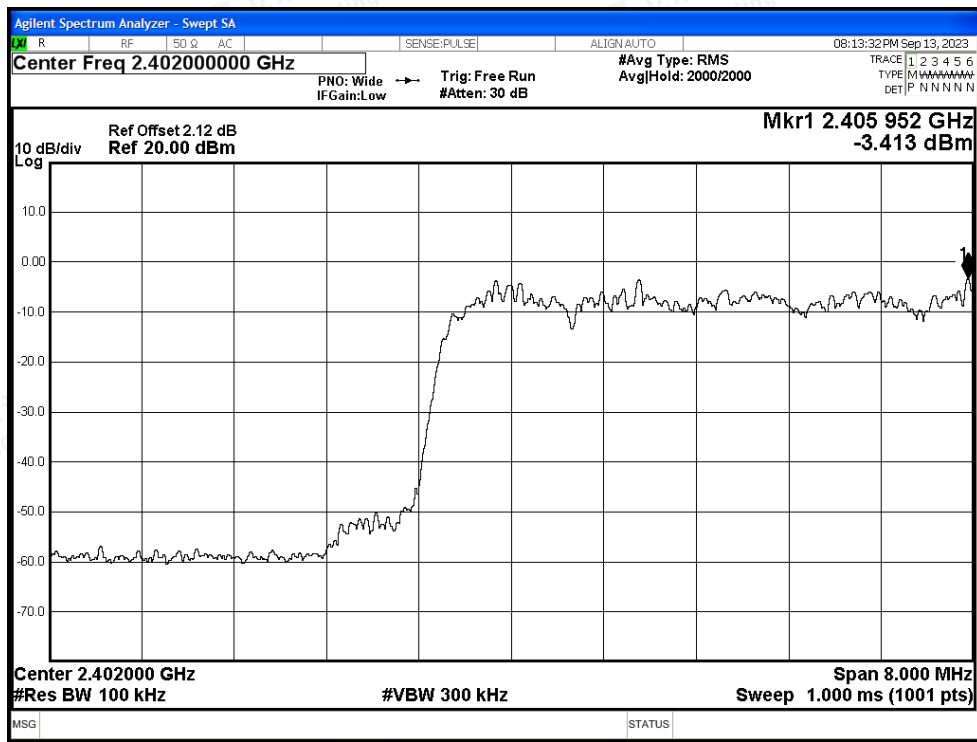


Band Edge(Hopping) NVNT 2-DH5 2480MHz BT ANT Hopping Emission

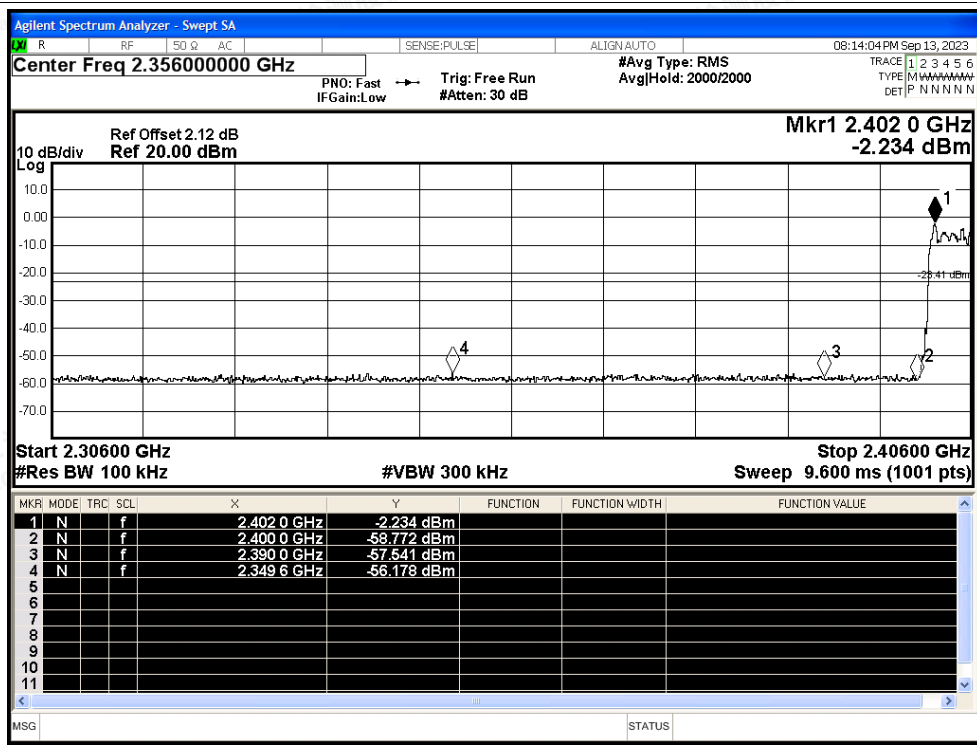




Band Edge(Hopping) NVNT 3-DH5 2402MHz BT ANT Hopping Ref

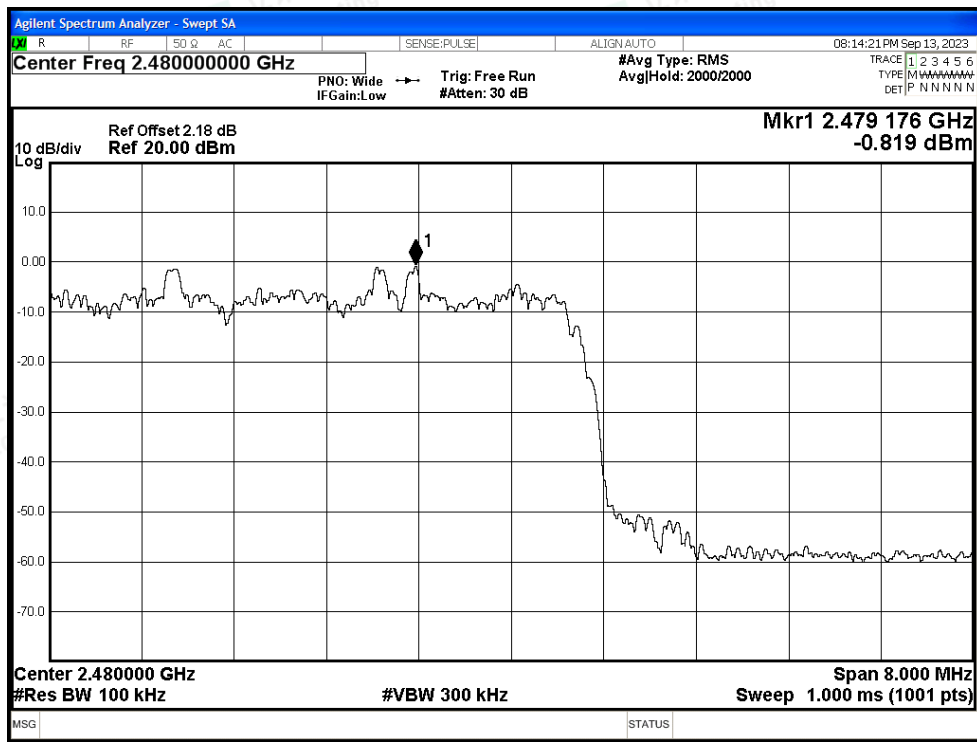


Band Edge(Hopping) NVNT 3-DH5 2402MHz BT ANT Hopping Emission

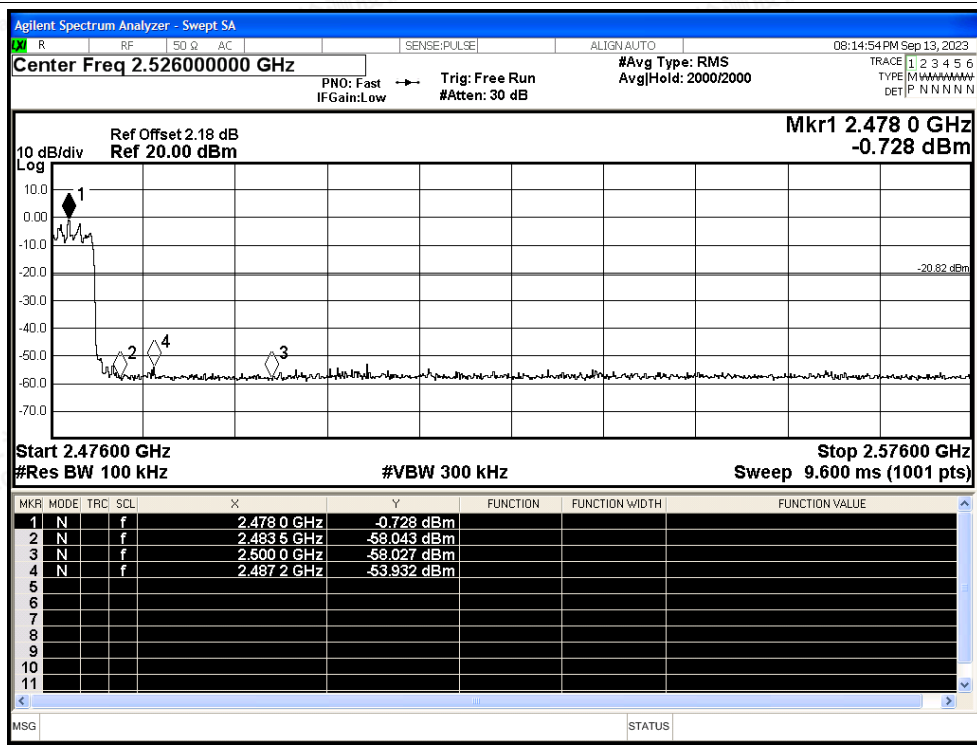




Band Edge(Hopping) NVNT 3-DH5 2480MHz BT ANT Hopping Ref



Band Edge(Hopping) NVNT 3-DH5 2480MHz BT ANT Hopping Emission





A.7 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	BT ANT	-54.58	-20	Pass
NVNT	1-DH5	2441	BT ANT	-53.76	-20	Pass
NVNT	1-DH5	2480	BT ANT	-55.02	-20	Pass
NVNT	2-DH5	2402	BT ANT	-54	-20	Pass
NVNT	2-DH5	2441	BT ANT	-53.91	-20	Pass
NVNT	2-DH5	2480	BT ANT	-53.98	-20	Pass
NVNT	3-DH5	2402	BT ANT	-54.4	-20	Pass
NVNT	3-DH5	2441	BT ANT	-54.07	-20	Pass
NVNT	3-DH5	2480	BT ANT	-55.4	-20	Pass

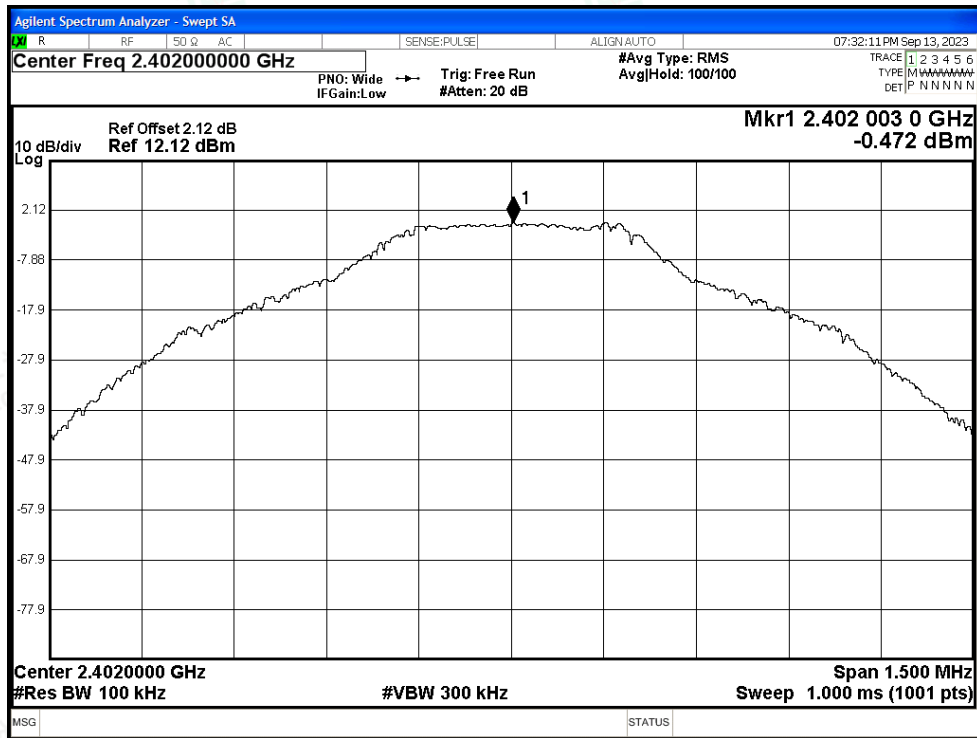


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Scan code to check authenticity

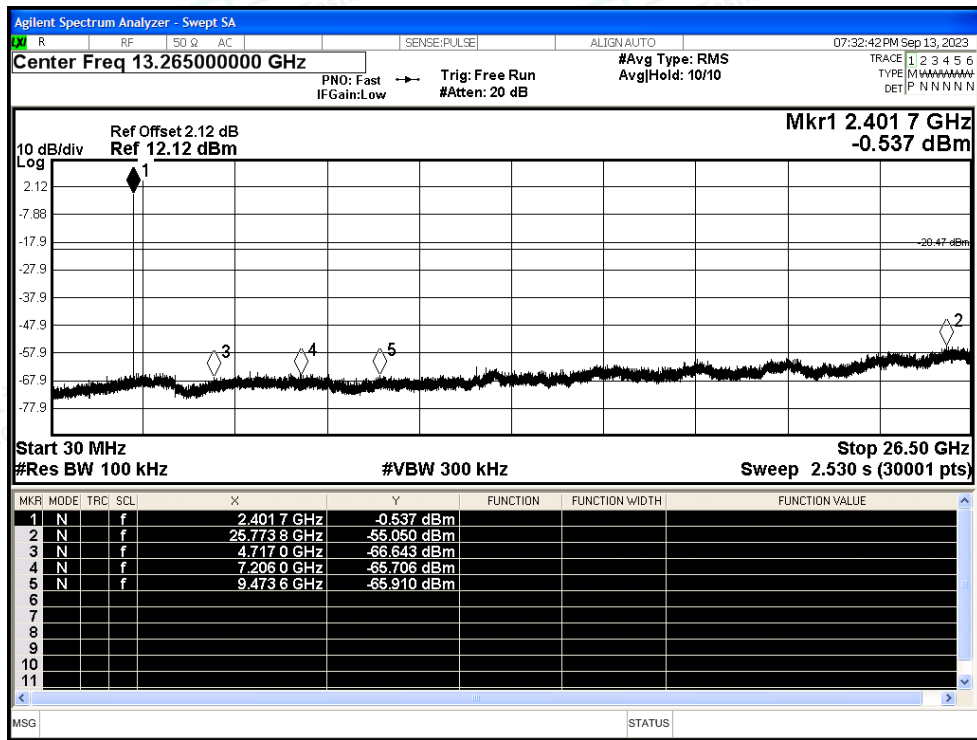


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz BT ANT Ref

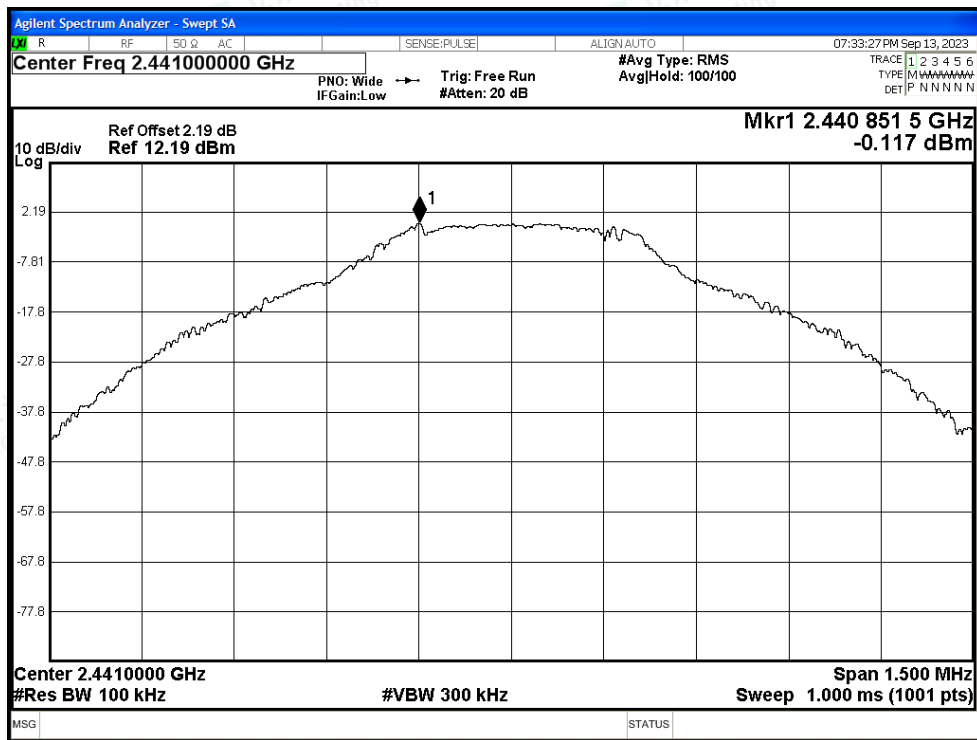


Tx. Spurious NVNT 1-DH5 2402MHz BT ANT Emission

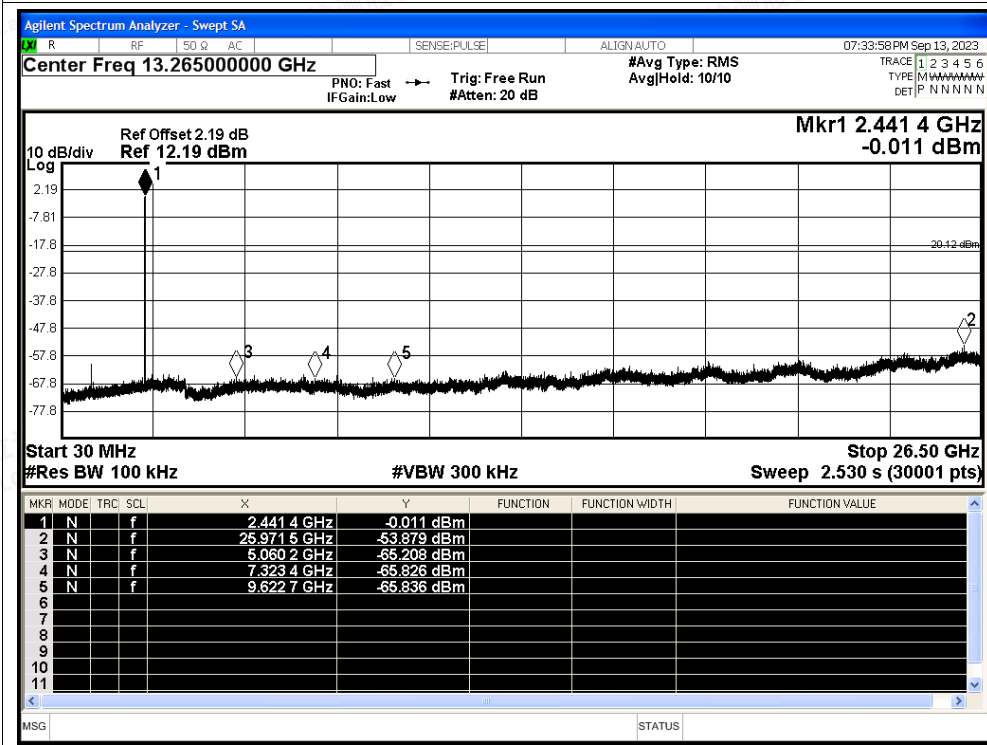




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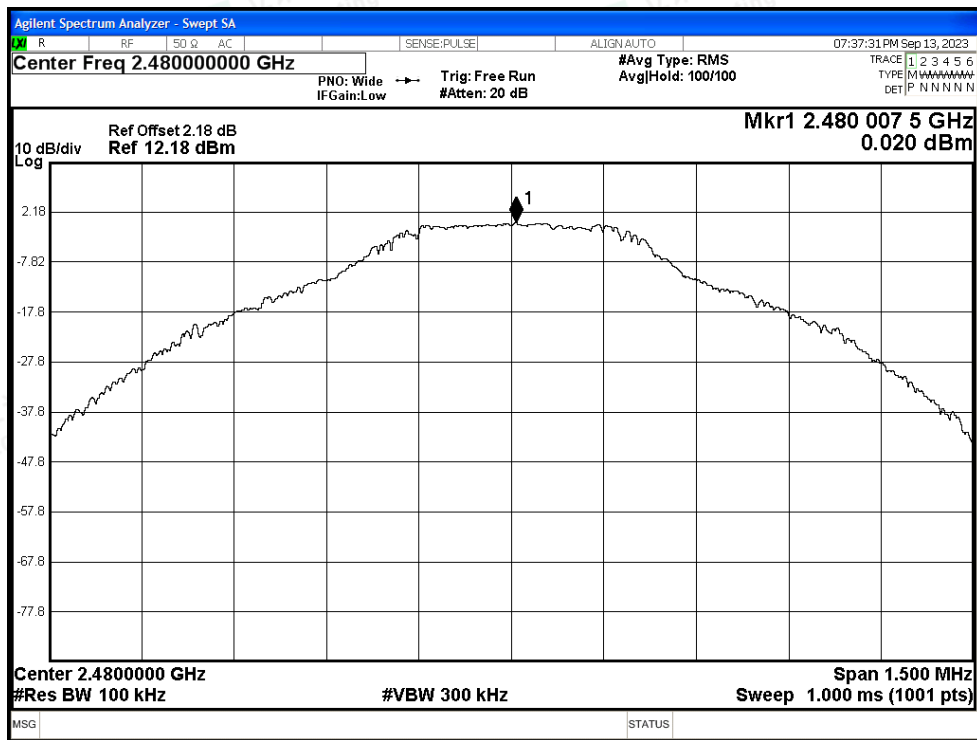


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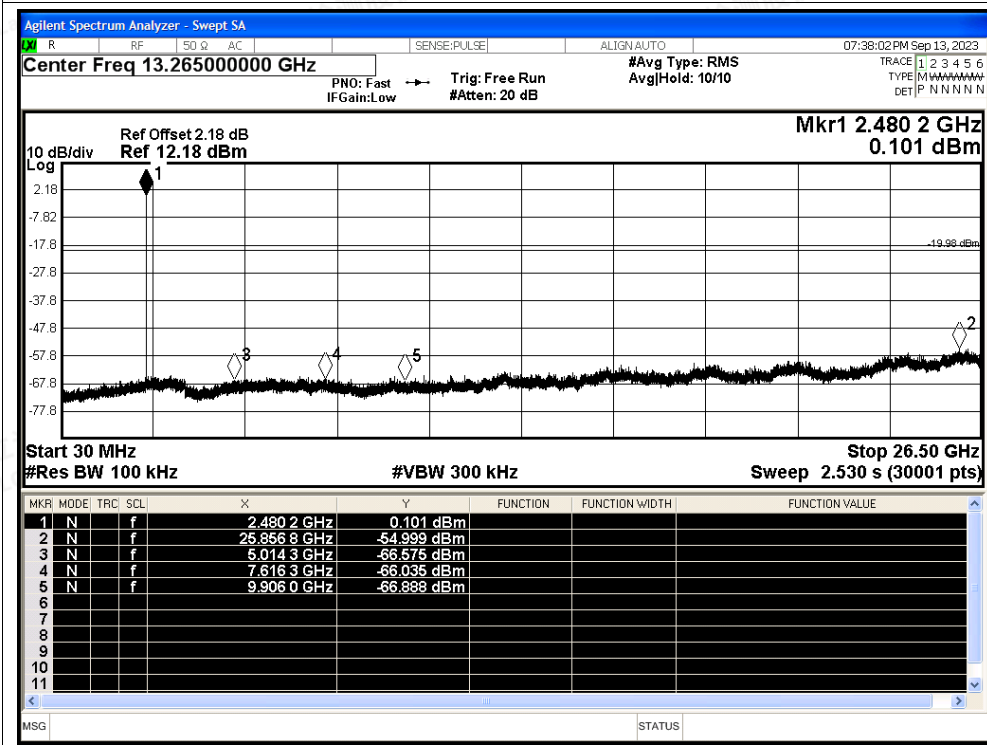




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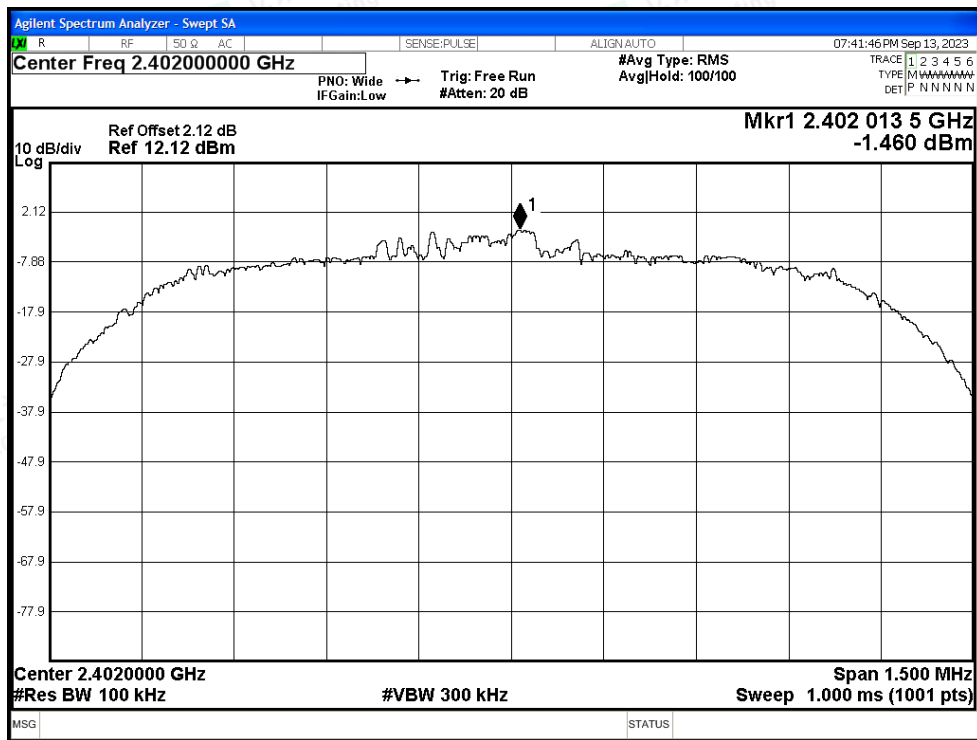


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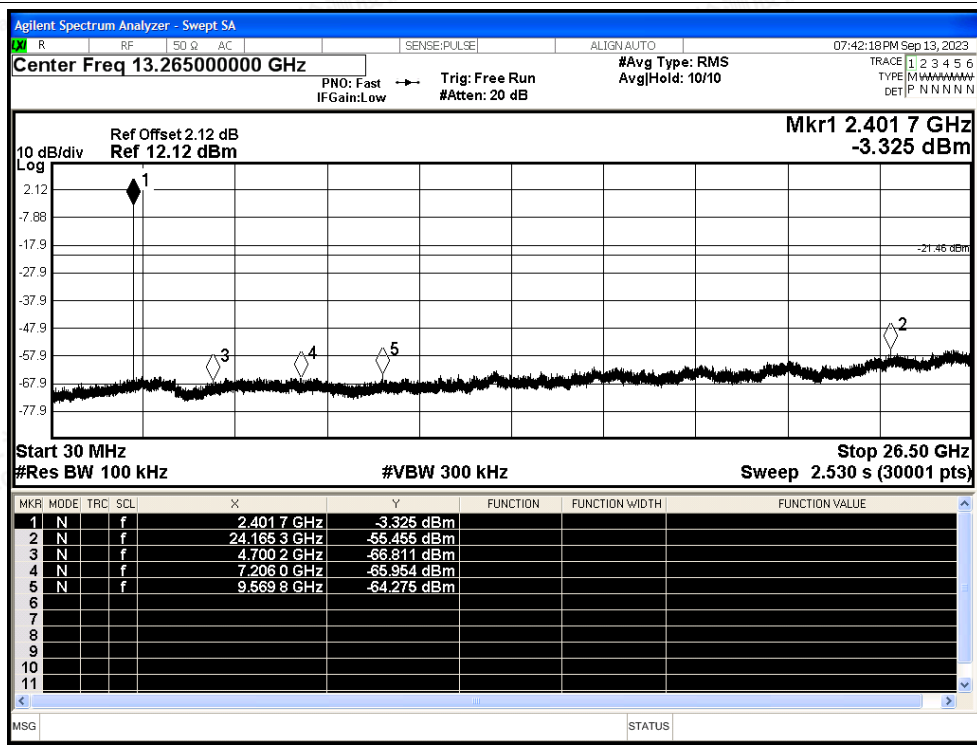




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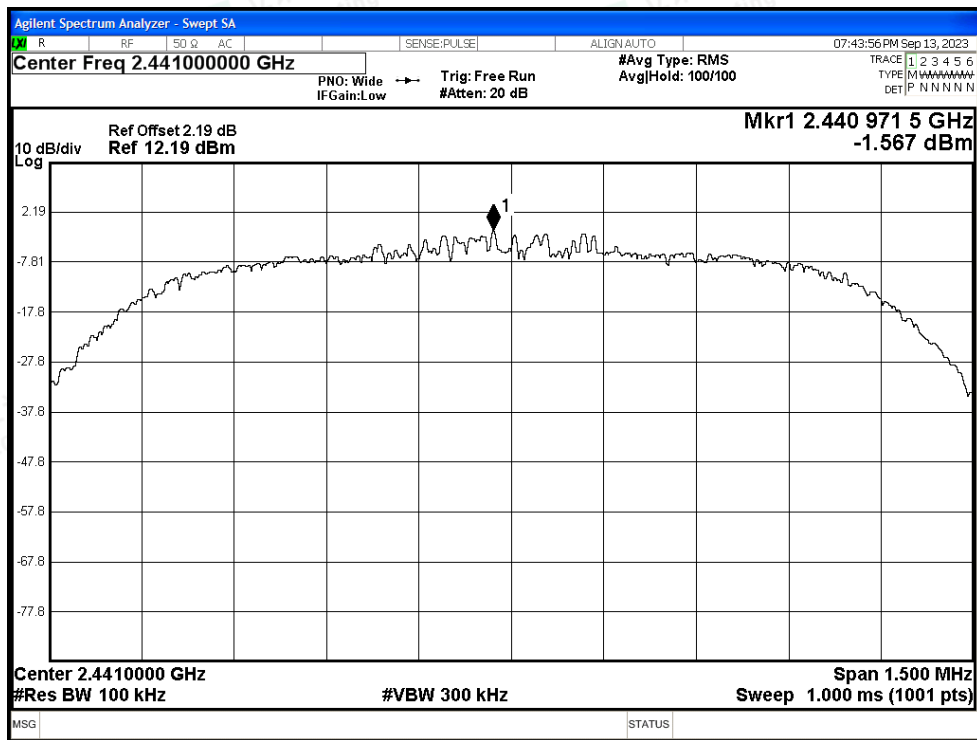


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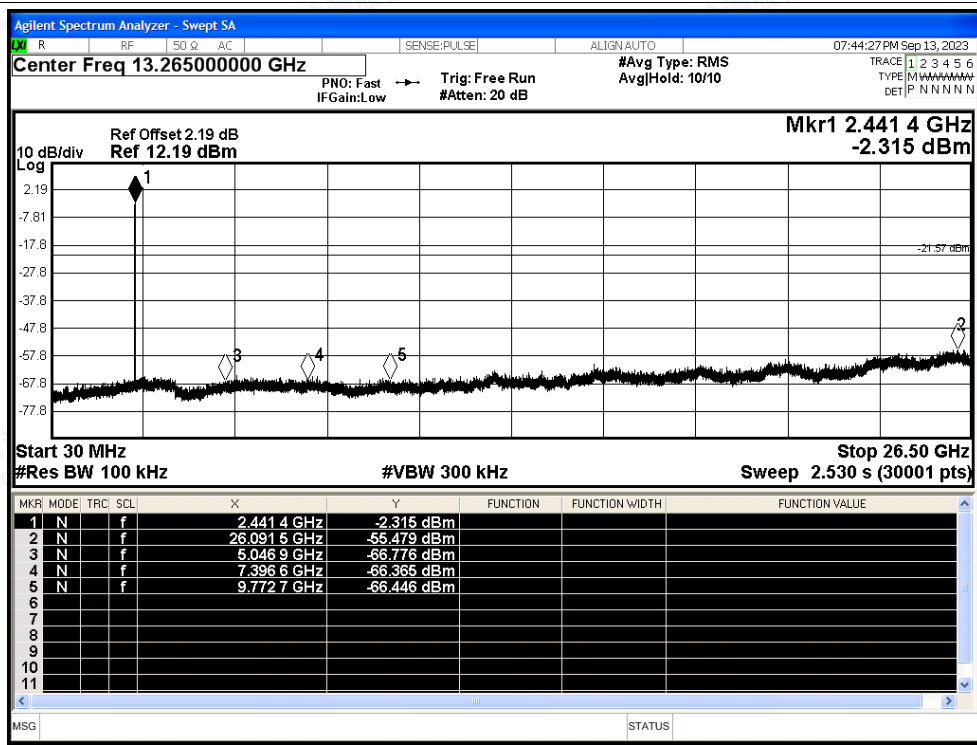




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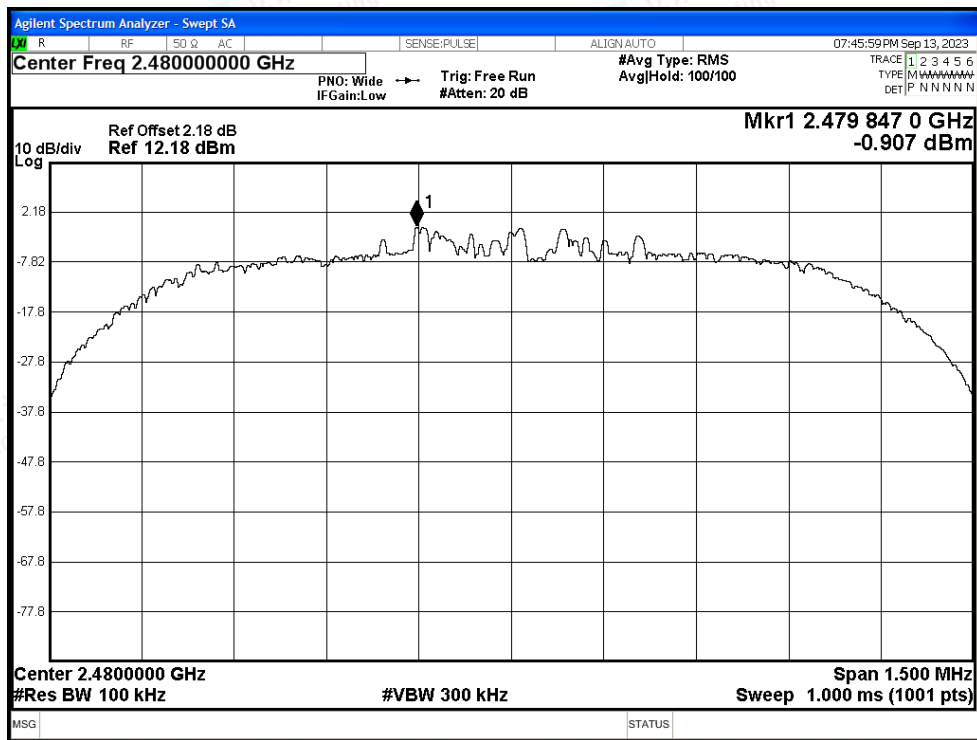


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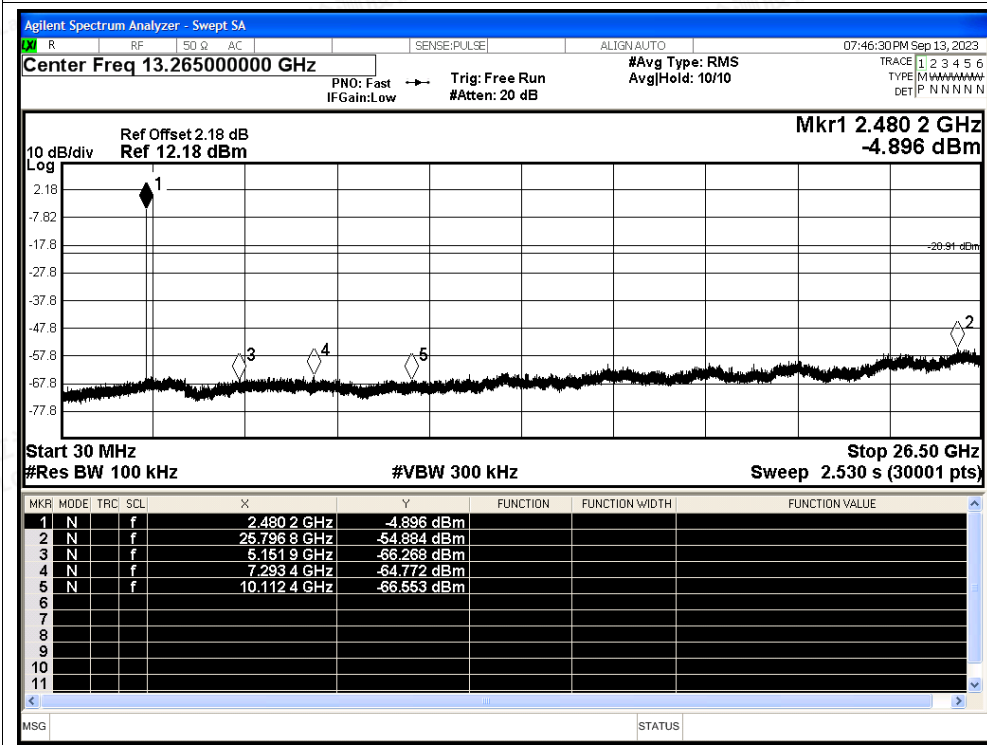




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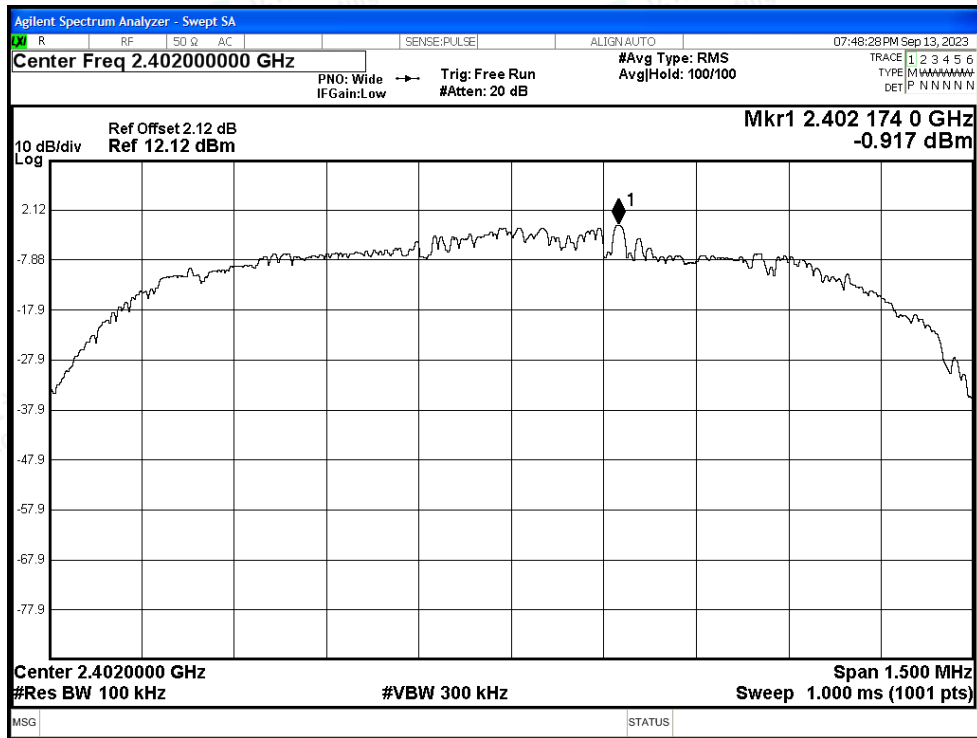


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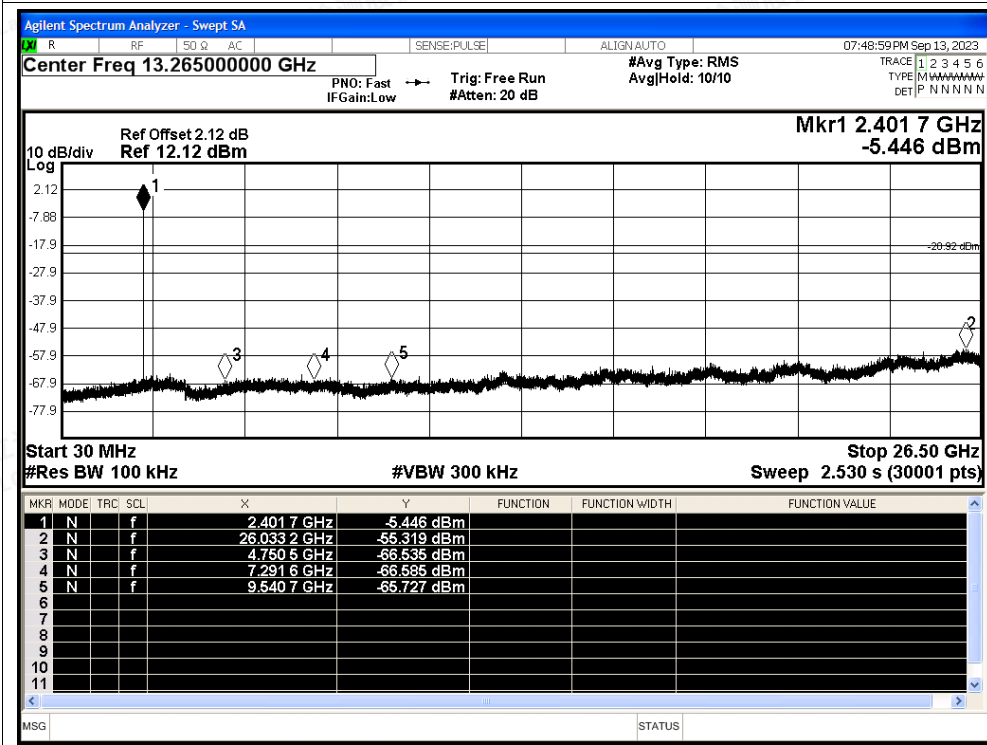




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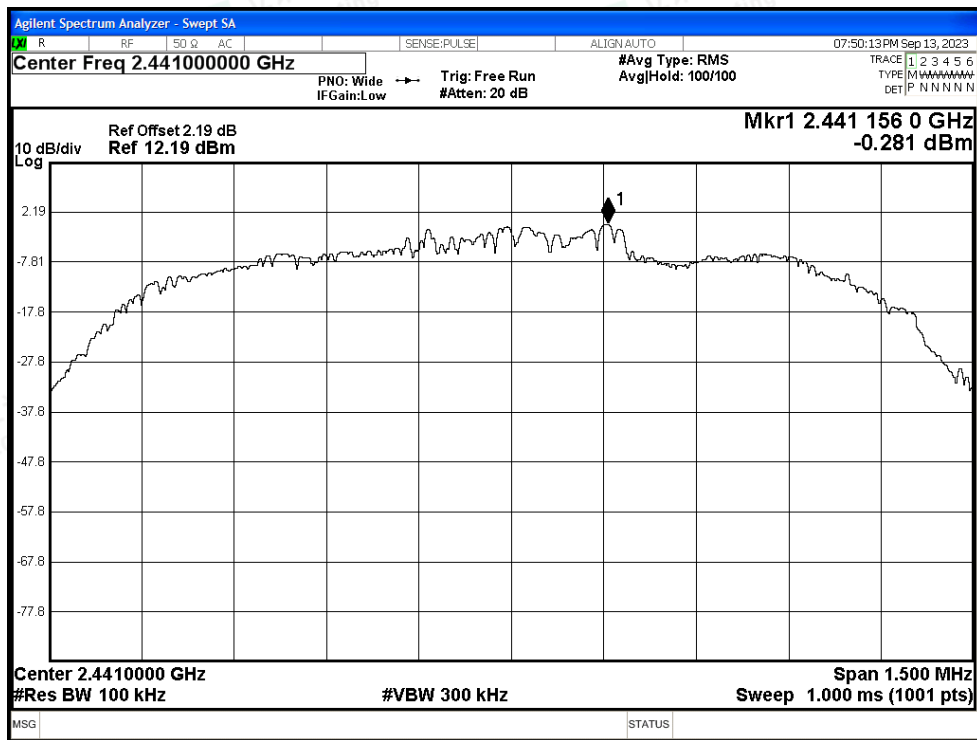


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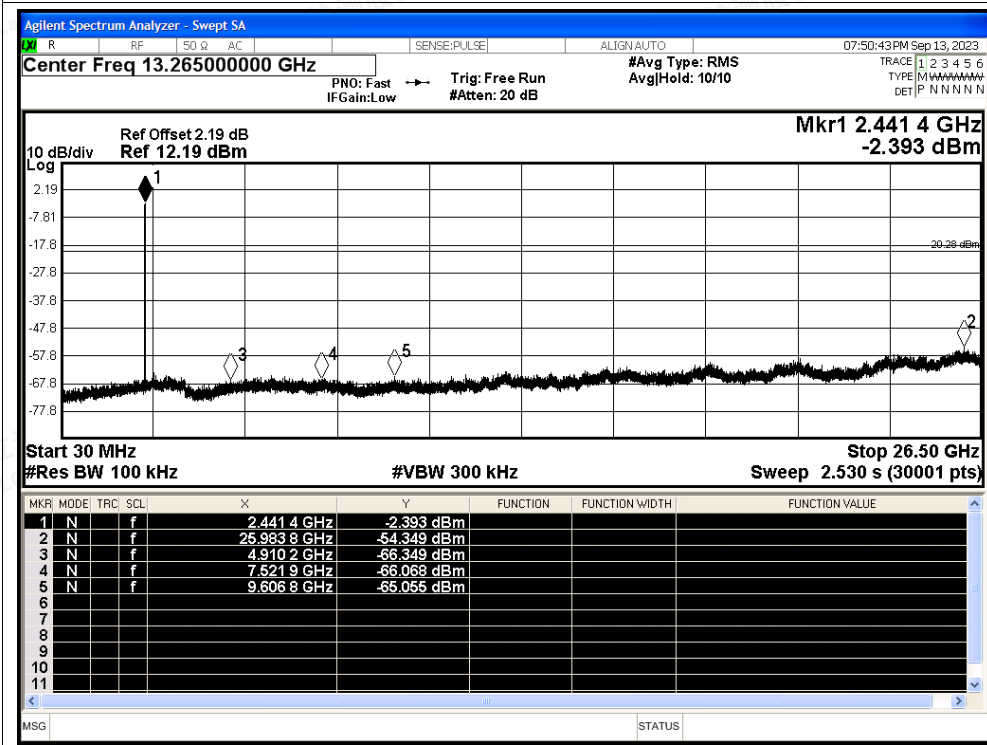




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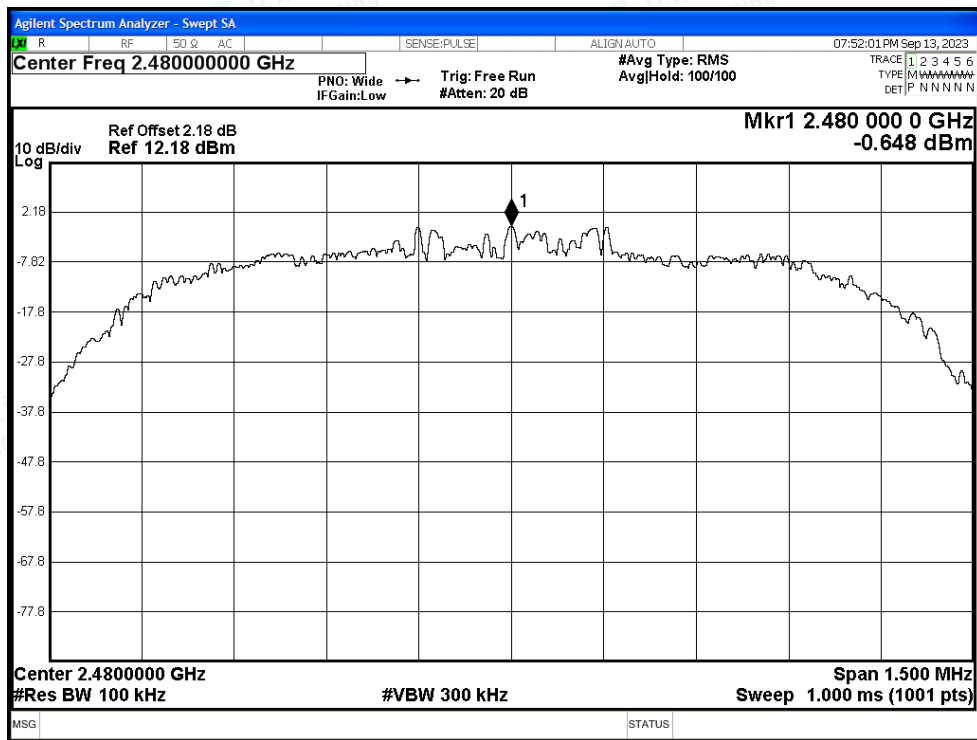


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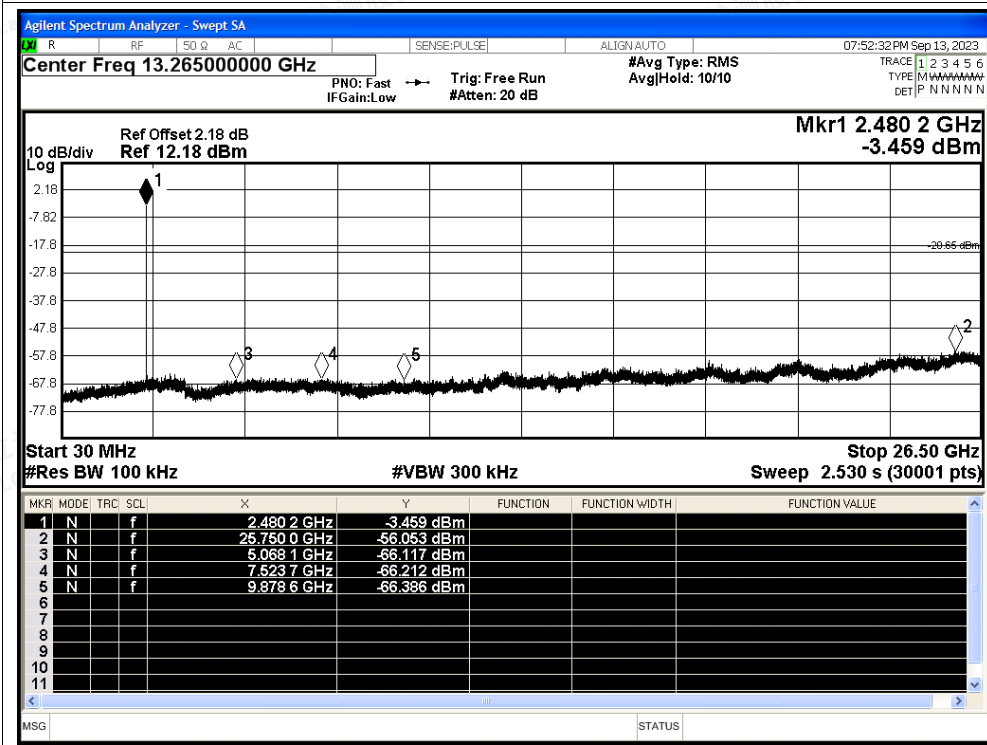




Tx. Spurious NVNT 3-DH5 2480MHz BT ANT Ref



Tx. Spurious NVNT 3-DH5 2480MHz BT ANT Emission





A.8 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-DH5	2402	BT ANT	No-Hopping	2310	-51.73	2.41	45.91	Peak	74	Pass
NVNT	1-DH5	2402	BT ANT	No-Hopping	2310	-57.71	2.41	39.93	Average	54	Pass
NVNT	1-DH5	2402	BT ANT	No-Hopping	2358.096	-47.65	2.41	49.99	Peak	74	Pass
NVNT	1-DH5	2402	BT ANT	No-Hopping	2388.144	-54.72	2.41	42.92	Average	54	Pass
NVNT	1-DH5	2402	BT ANT	No-Hopping	2390	-49.4	2.41	48.24	Peak	74	Pass
NVNT	1-DH5	2402	BT ANT	No-Hopping	2390	-57.44	2.41	40.20	Average	54	Pass
NVNT	1-DH5	2480	BT ANT	No-Hopping	2483.5	-49.29	2.41	48.35	Peak	74	Pass
NVNT	1-DH5	2480	BT ANT	No-Hopping	2483.5	-55.82	2.41	41.82	Average	54	Pass
NVNT	1-DH5	2480	BT ANT	No-Hopping	2496.232	-46.98	2.41	50.66	Peak	74	Pass
NVNT	1-DH5	2480	BT ANT	No-Hopping	2483.512	-55.82	2.41	41.82	Average	54	Pass
NVNT	1-DH5	2480	BT ANT	No-Hopping	2500	-48.83	2.41	48.81	Peak	74	Pass
NVNT	1-DH5	2480	BT ANT	No-Hopping	2500	-57.14	2.41	40.50	Average	54	Pass
NVNT	2-DH5	2402	BT ANT	No-Hopping	2310	-50.57	2.41	47.07	Peak	74	Pass
NVNT	2-DH5	2402	BT ANT	No-Hopping	2310	-57.82	2.41	39.82	Average	54	Pass
NVNT	2-DH5	2402	BT ANT	No-Hopping	2385.36	-47.53	2.41	50.11	Peak	74	Pass
NVNT	2-DH5	2402	BT ANT	No-Hopping	2388.336	-57.22	2.41	40.42	Average	54	Pass
NVNT	2-DH5	2402	BT ANT	No-Hopping	2390	-51.16	2.41	46.48	Peak	74	Pass
NVNT	2-DH5	2402	BT ANT	No-Hopping	2390	-57.42	2.41	40.22	Average	54	Pass
NVNT	2-DH5	2480	BT ANT	No-Hopping	2483.5	-49.66	2.41	47.98	Peak	74	Pass
NVNT	2-DH5	2480	BT ANT	No-Hopping	2483.5	-55.68	2.41	41.96	Average	54	Pass
NVNT	2-DH5	2480	BT ANT	No-Hopping	2496.16	-46.71	2.41	50.93	Peak	74	Pass
NVNT	2-DH5	2480	BT ANT	No-Hopping	2483.512	-55.68	2.41	41.96	Average	54	Pass
NVNT	2-DH5	2480	BT ANT	No-Hopping	2500	-50.34	2.41	47.30	Peak	74	Pass
NVNT	2-DH5	2480	BT ANT	No-Hopping	2500	-57.13	2.41	40.51	Average	54	Pass
NVNT	3-DH5	2402	BT ANT	No-Hopping	2310	-49.59	2.41	48.05	Peak	74	Pass
NVNT	3-DH5	2402	BT ANT	No-Hopping	2310	-57.9	2.41	39.74	Average	54	Pass
NVNT	3-DH5	2402	BT ANT	No-Hopping	2335.44	-46.69	2.41	50.95	Peak	74	Pass
NVNT	3-DH5	2402	BT ANT	No-Hopping	2389.584	-57.29	2.41	40.35	Average	54	Pass
NVNT	3-DH5	2402	BT ANT	No-Hopping	2390	-50.59	2.41	47.05	Peak	74	Pass
NVNT	3-DH5	2402	BT ANT	No-Hopping	2390	-57.33	2.41	40.31	Average	54	Pass
NVNT	3-DH5	2480	BT ANT	No-Hopping	2483.5	-50.12	2.41	47.52	Peak	74	Pass
NVNT	3-DH5	2480	BT ANT	No-Hopping	2483.5	-55.66	2.41	41.98	Average	54	Pass
NVNT	3-DH5	2480	BT ANT	No-Hopping	2483.752	-46.71	2.41	50.93	Peak	74	Pass
NVNT	3-DH5	2480	BT ANT	No-Hopping	2483.512	-55.66	2.41	41.98	Average	54	Pass
NVNT	3-DH5	2480	BT ANT	No-Hopping	2500	-48.74	2.41	48.90	Peak	74	Pass
NVNT	3-DH5	2480	BT ANT	No-Hopping	2500	-57.13	2.41	40.51	Average	54	Pass

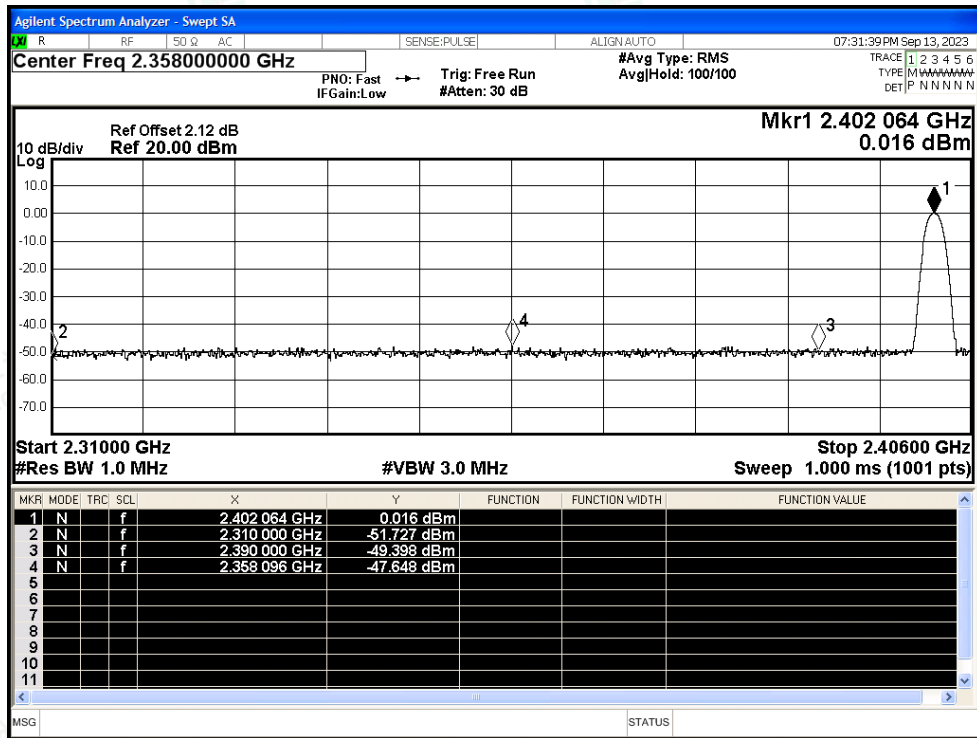


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 Scan code to check authenticity

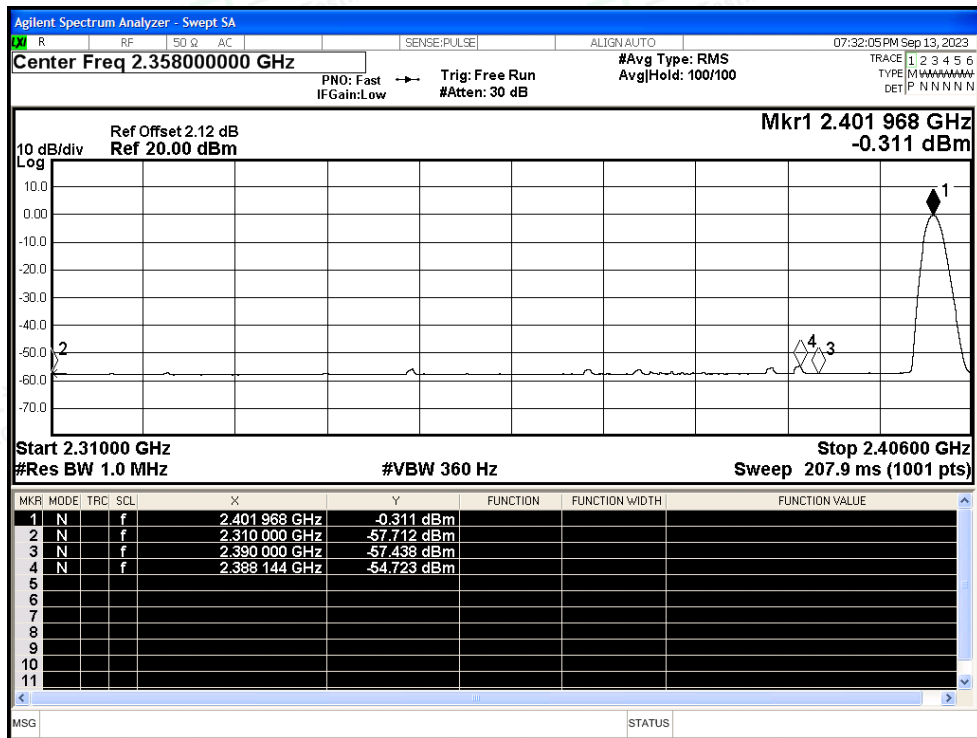


Test Graphs

Restrict Band NVNT 1-DH5 2402MHz BT ANT No-Hopping Peak

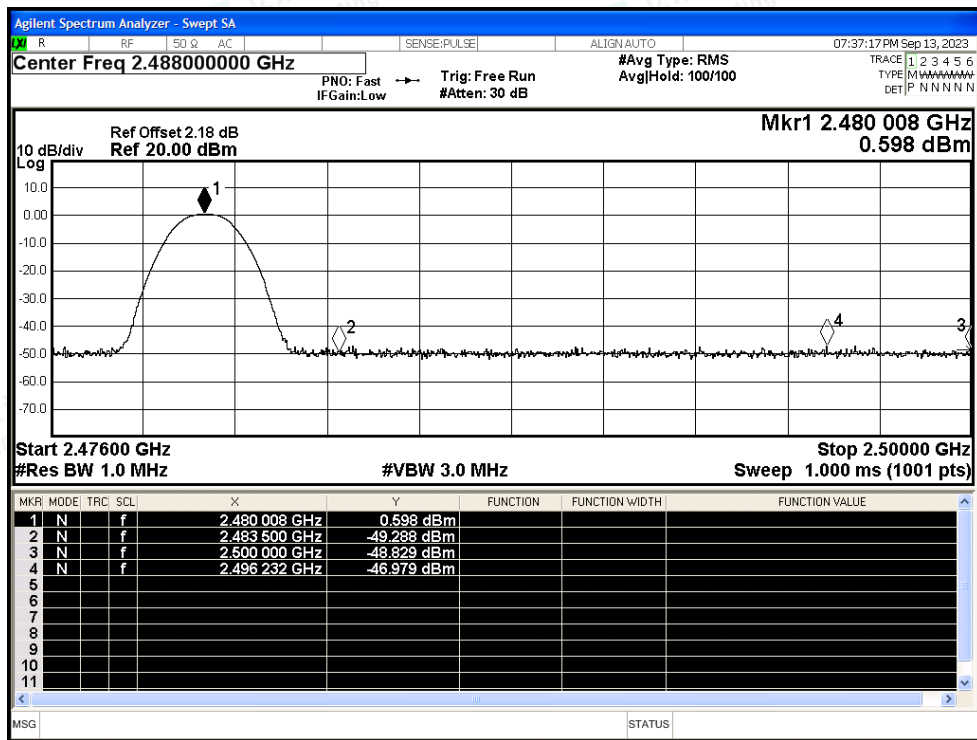


Restrict Band NVNT 1-DH5 2402MHz BT ANT No-Hopping Average

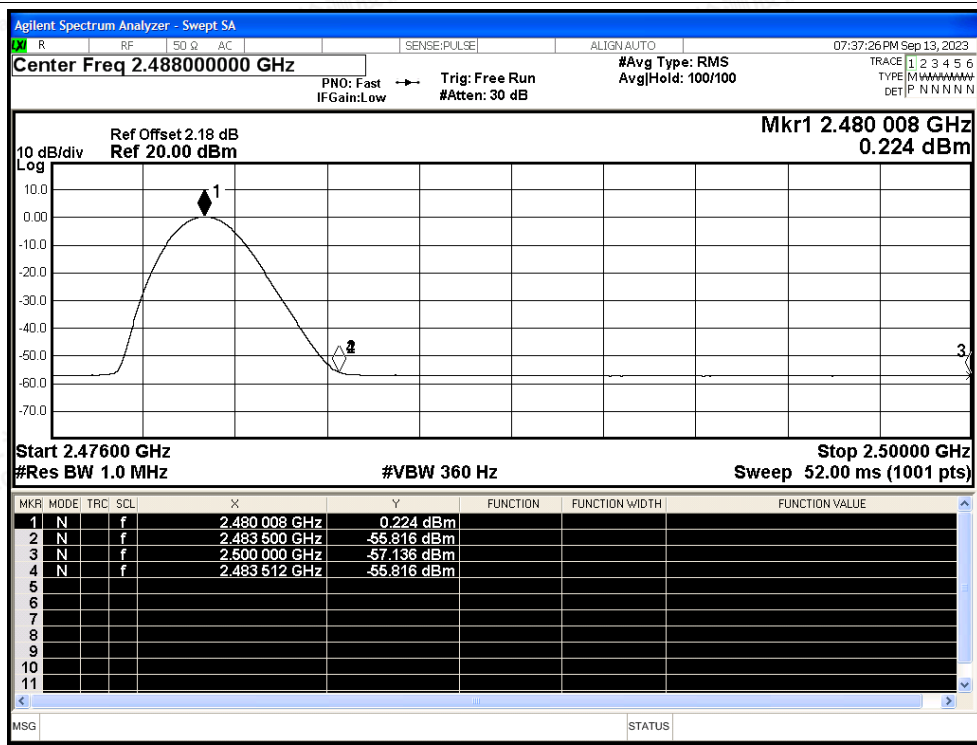




Restrict Band NVNT 1-DH5 2480MHz BT ANT No-Hopping Peak

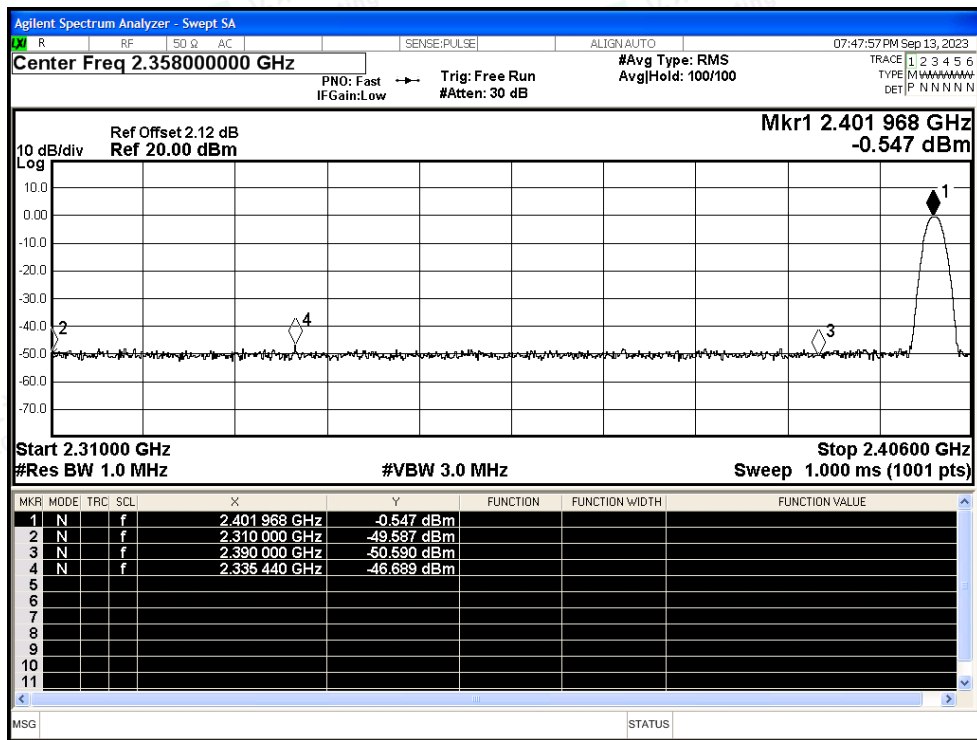


Restrict Band NVNT 1-DH5 2480MHz BT ANT No-Hopping Average

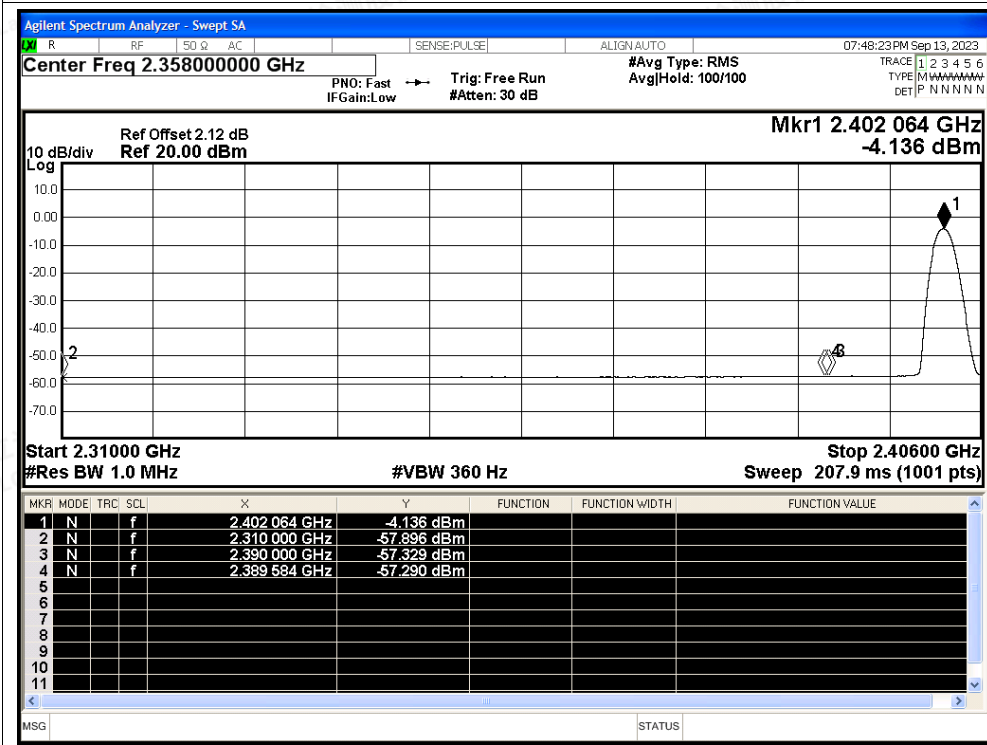




Restrict Band NVNT 3-DH5 2402MHz BT ANT No-Hopping Peak

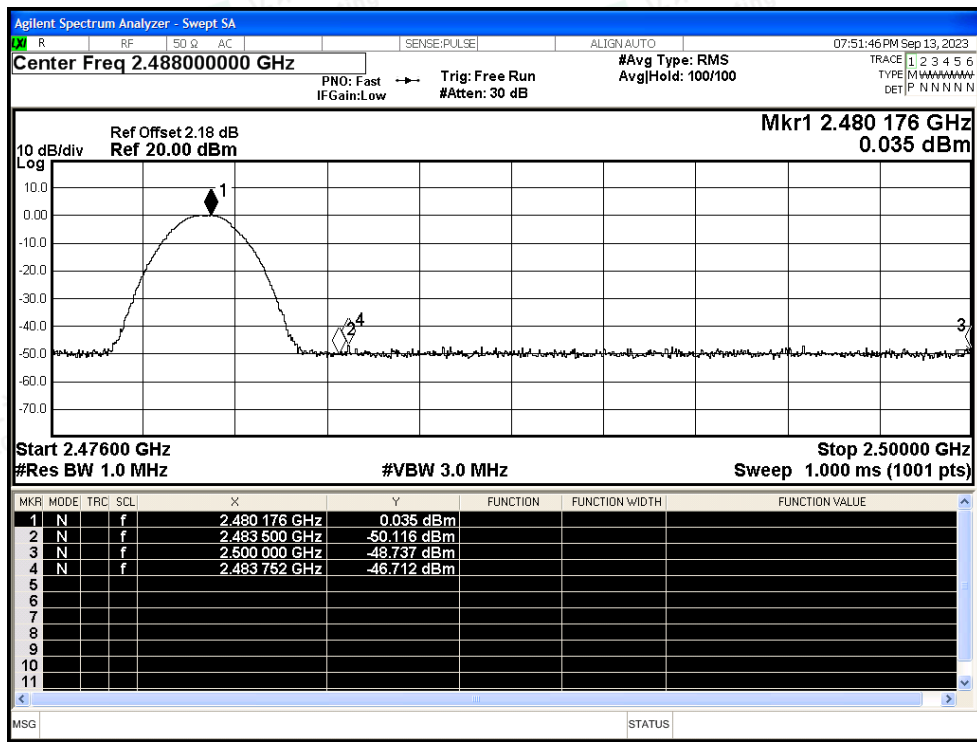


Restrict Band NVNT 3-DH5 2402MHz BT ANT No-Hopping Average





Restrict Band NVNT 3-DH5 2480MHz BT ANT No-Hopping Peak



Restrict Band NVNT 3-DH5 2480MHz BT ANT No-Hopping Average

