



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Mini PC

Test Model: HPPMC20

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	1.024	N/A	Pass
NVNT	1-DH5	2441	BT ANT	1.02	N/A	Pass
NVNT	1-DH5	2480	BT ANT	0.982	N/A	Pass
NVNT	2-DH5	2402	BT ANT	1.278	N/A	Pass
NVNT	2-DH5	2441	BT ANT	1.288	N/A	Pass
NVNT	2-DH5	2480	BT ANT	1.287	N/A	Pass
NVNT	3-DH5	2402	BT ANT	1.297	N/A	Pass
NVNT	3-DH5	2441	BT ANT	1.292	N/A	Pass
NVNT	3-DH5	2480	BT ANT	1.279	N/A	Pass

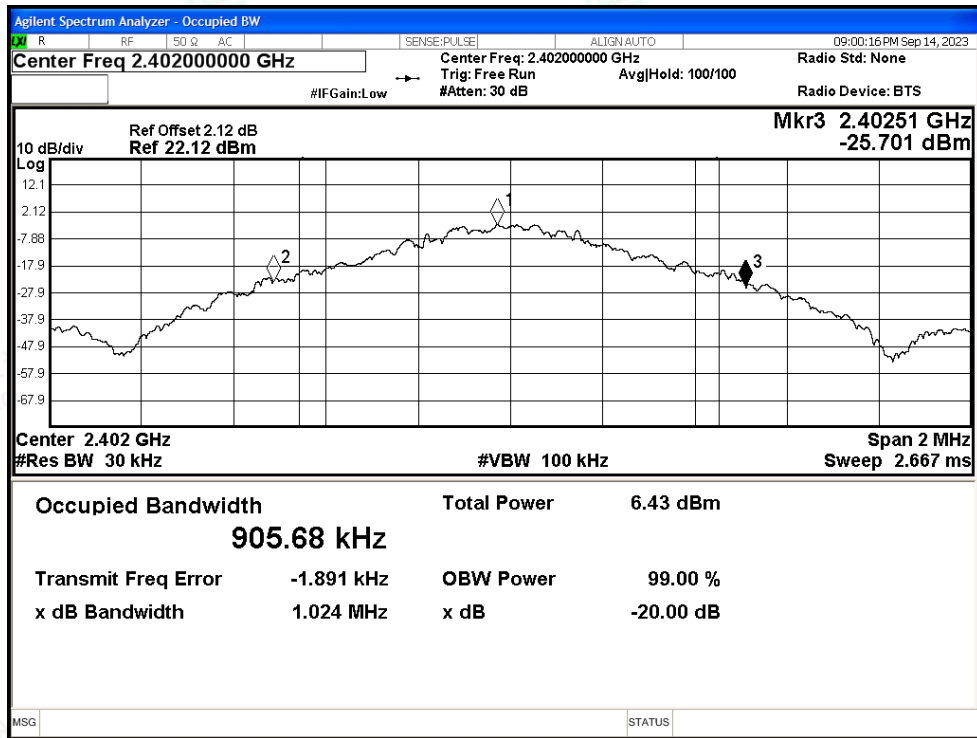


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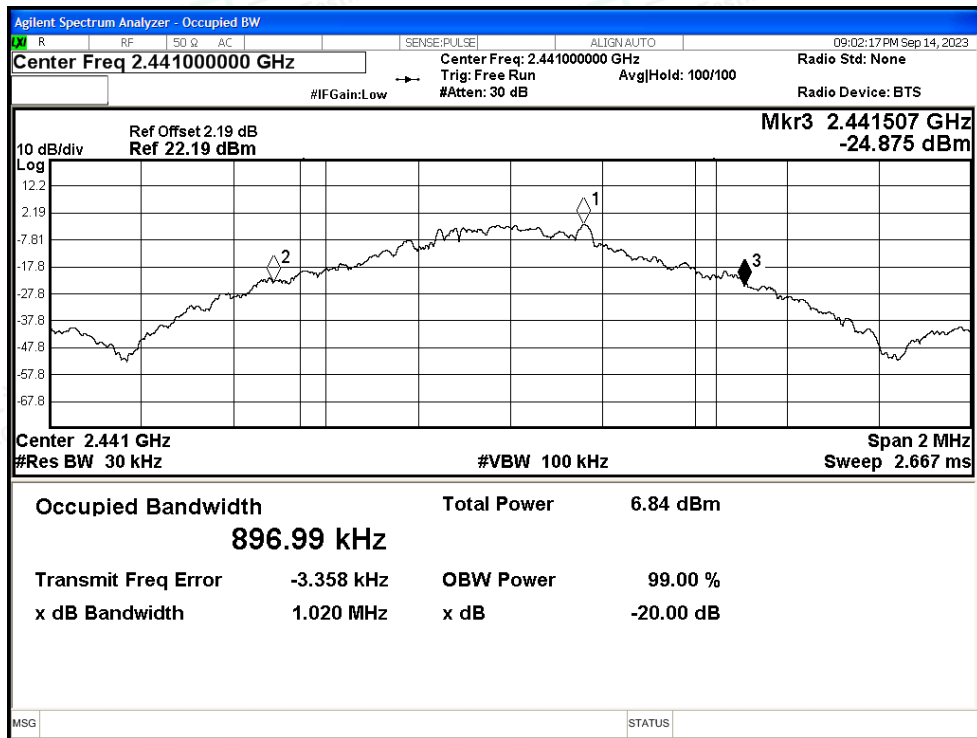


Test Graphs

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

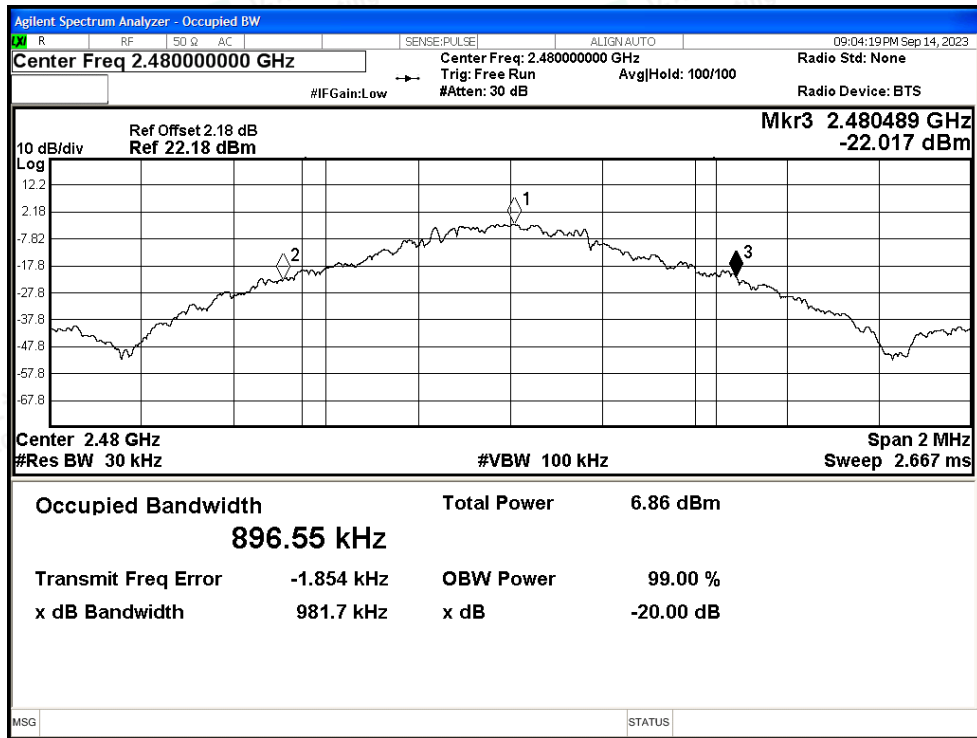


-20dB Bandwidth NVNT 1-DH5 2441MHz BT ANT

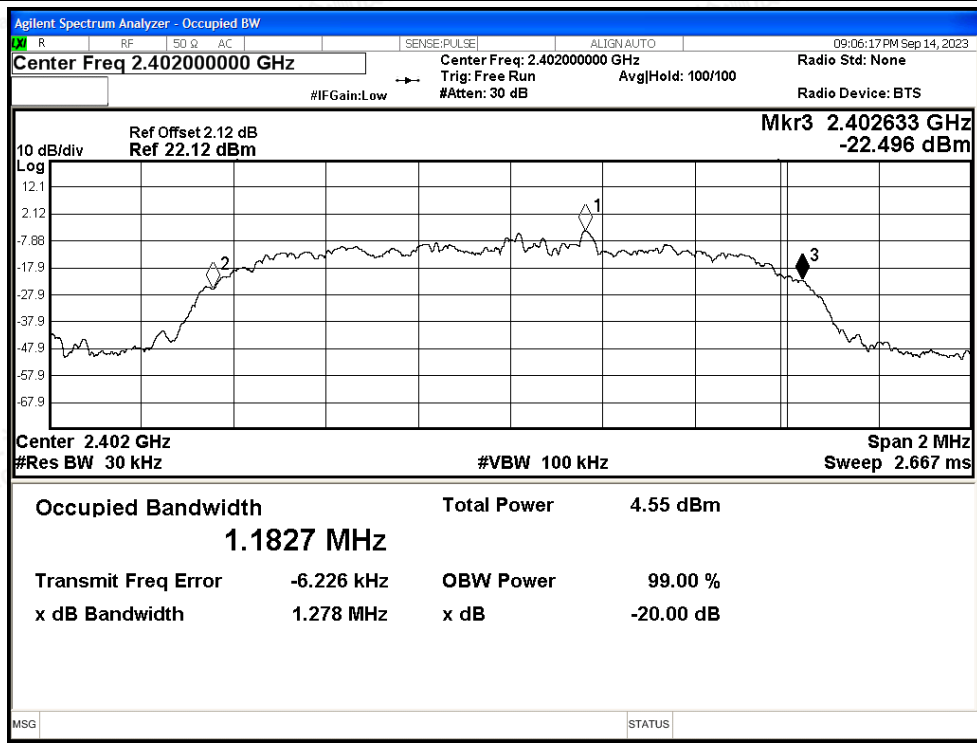




-20dB Bandwidth NVNT 1-DH5 2480MHz BT ANT

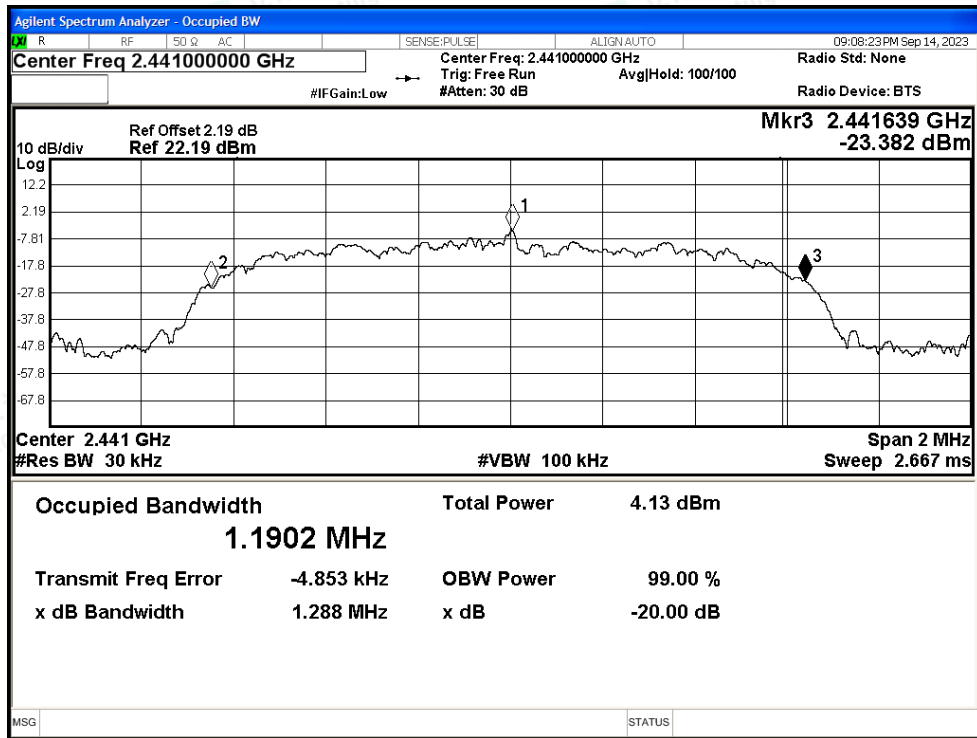


-20dB Bandwidth NVNT 2-DH5 2402MHz BT ANT

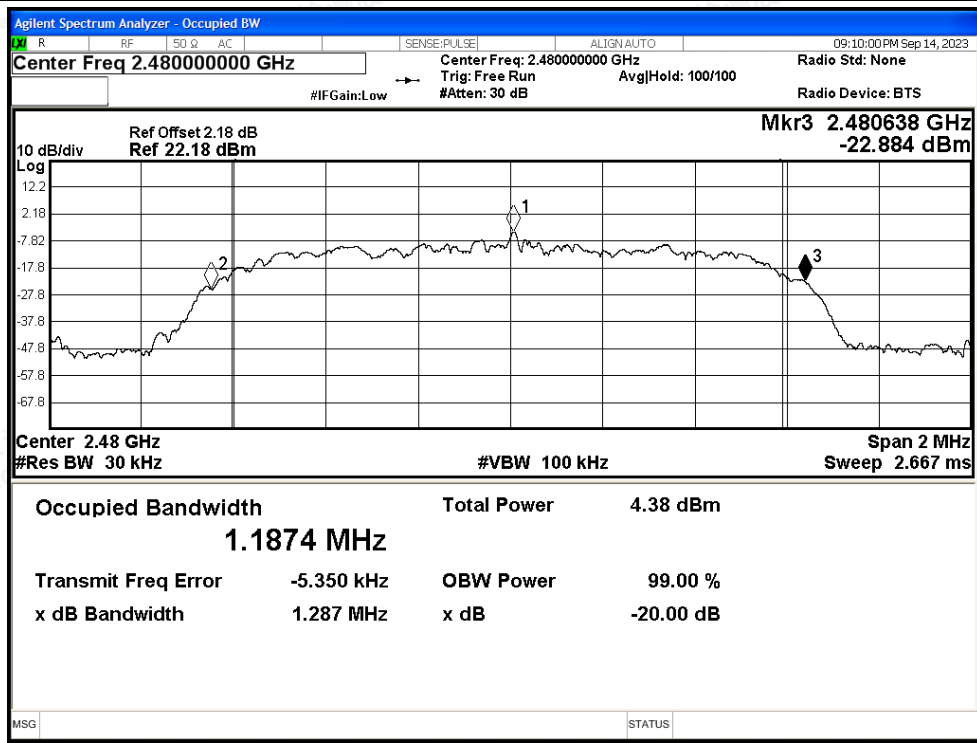




-20dB Bandwidth NVNT 2-DH5 2441MHz BT ANT

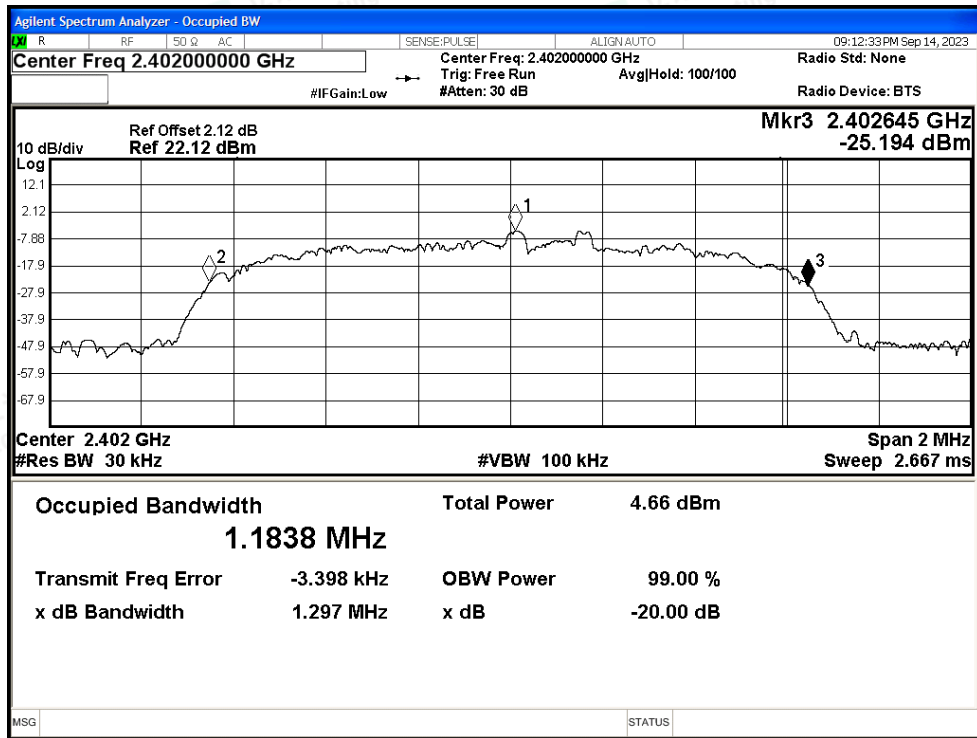


-20dB Bandwidth NVNT 2-DH5 2480MHz BT ANT

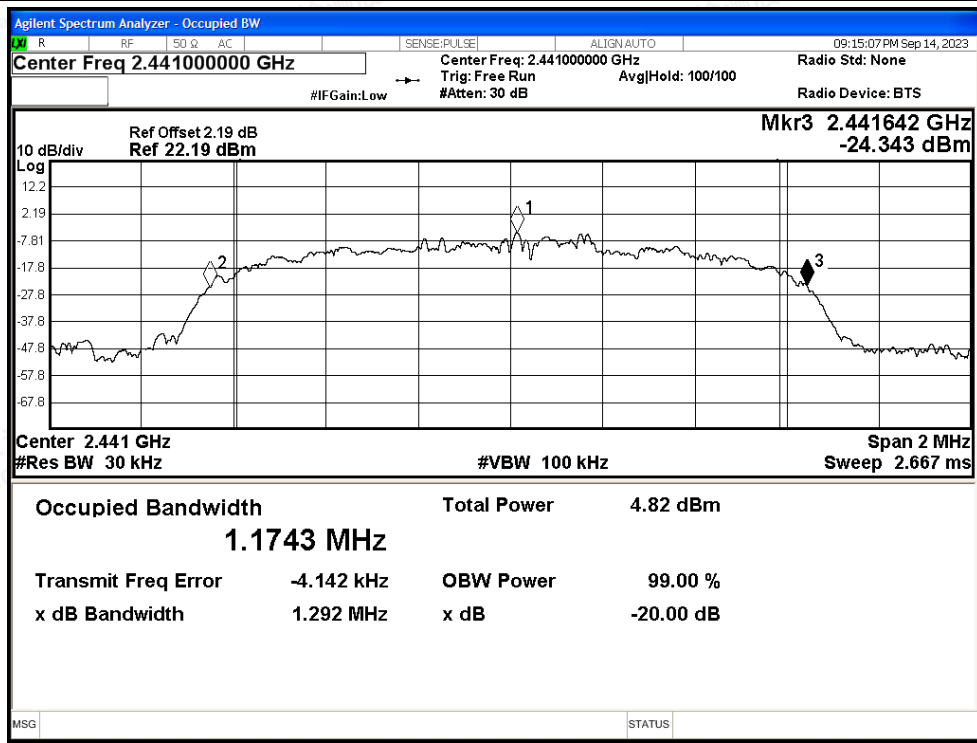


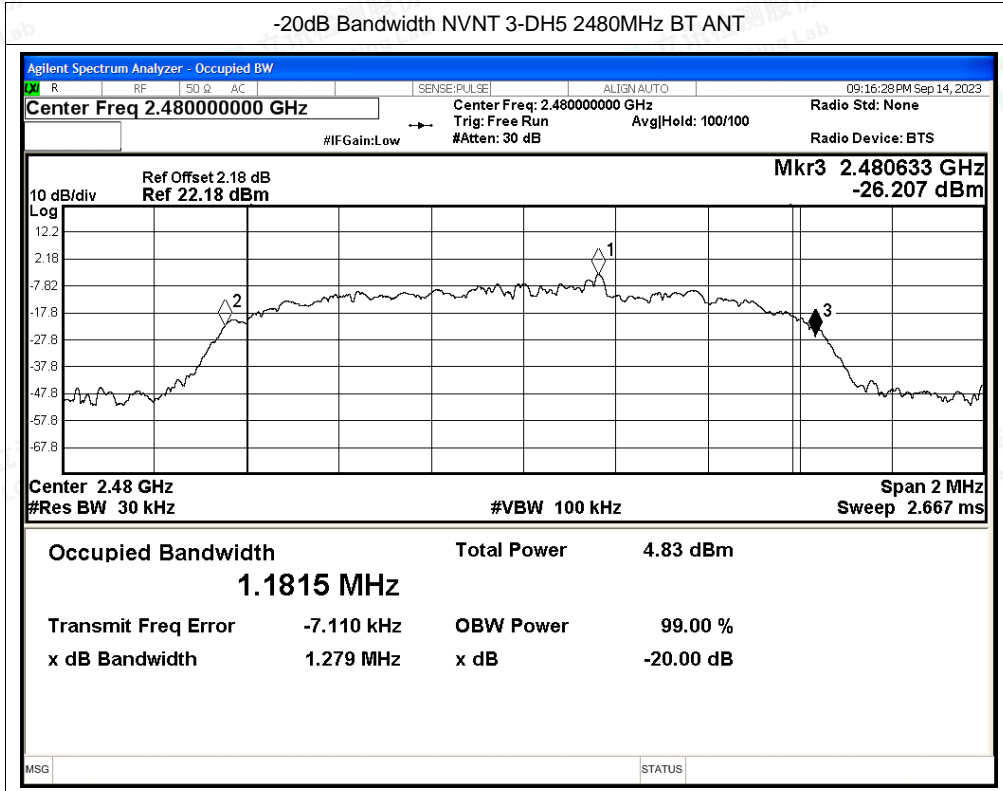


-20dB Bandwidth NVNT 3-DH5 2402MHz BT ANT



-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	0.38	21	Pass
NVNT	1-DH5	2441	BT ANT	0.57	21	Pass
NVNT	1-DH5	2480	BT ANT	0.58	21	Pass
NVNT	2-DH5	2402	BT ANT	0.10	21	Pass
NVNT	2-DH5	2441	BT ANT	0.28	21	Pass
NVNT	2-DH5	2480	BT ANT	0.31	21	Pass
NVNT	3-DH5	2402	BT ANT	0.19	21	Pass
NVNT	3-DH5	2441	BT ANT	0.39	21	Pass
NVNT	3-DH5	2480	BT ANT	0.42	21	Pass

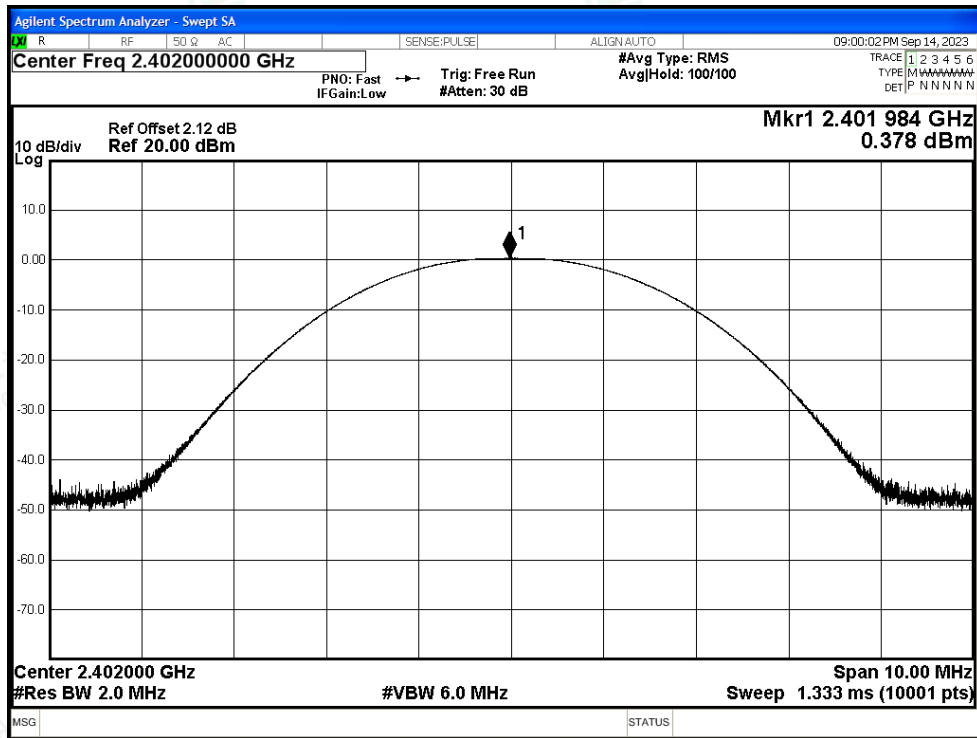


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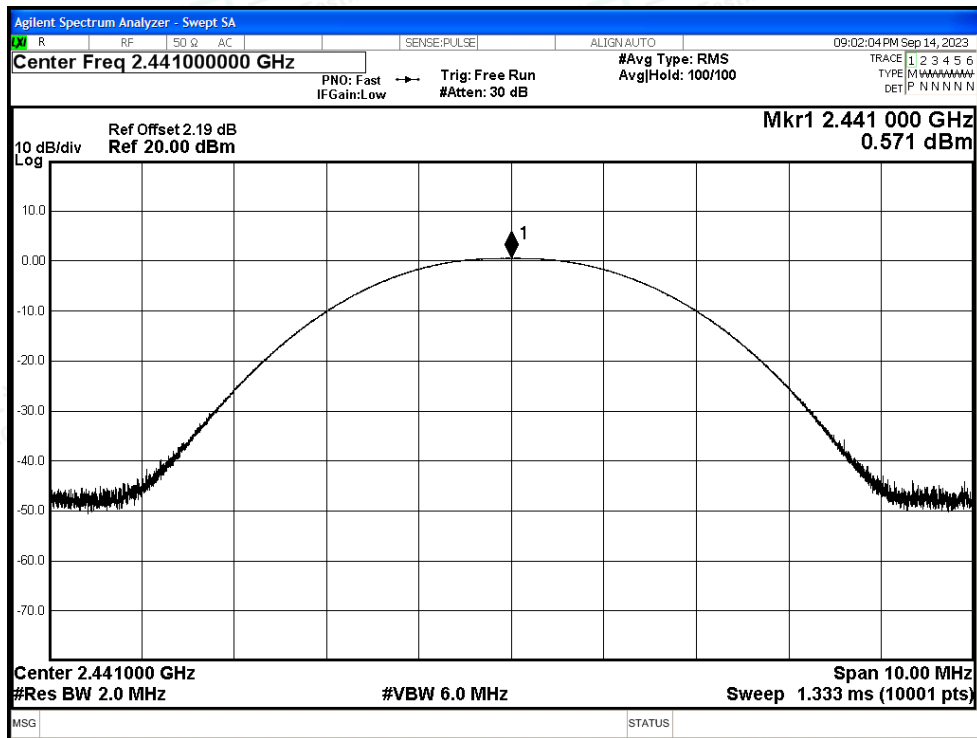


Test Graphs

Power NVNT 1-DH5 2402MHz BT ANT

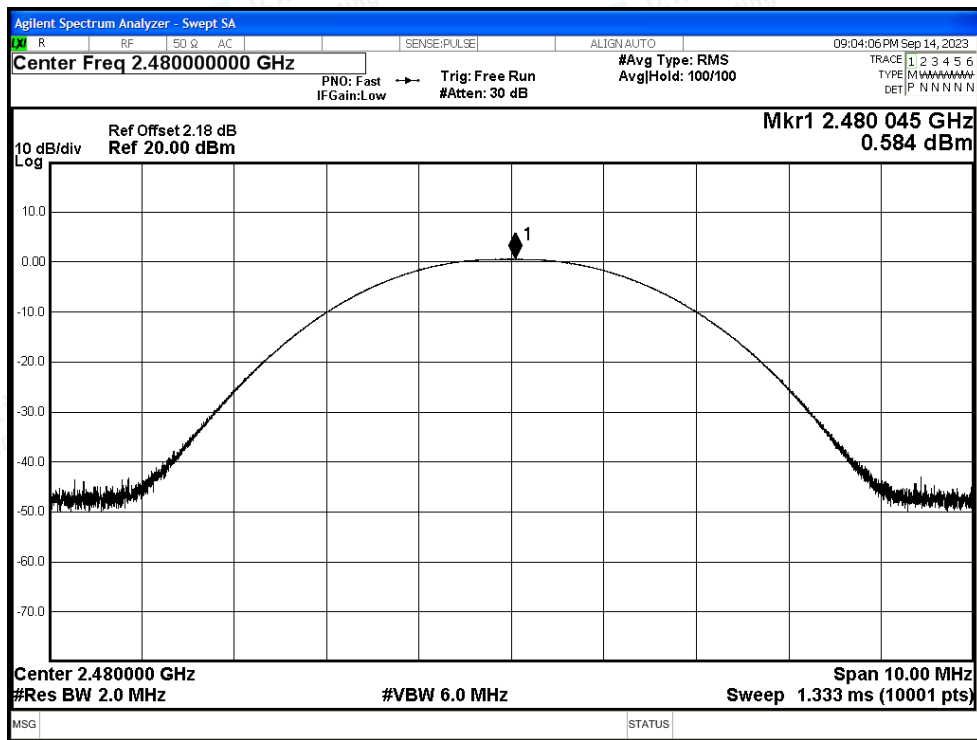


Power NVNT 1-DH5 2441MHz BT ANT

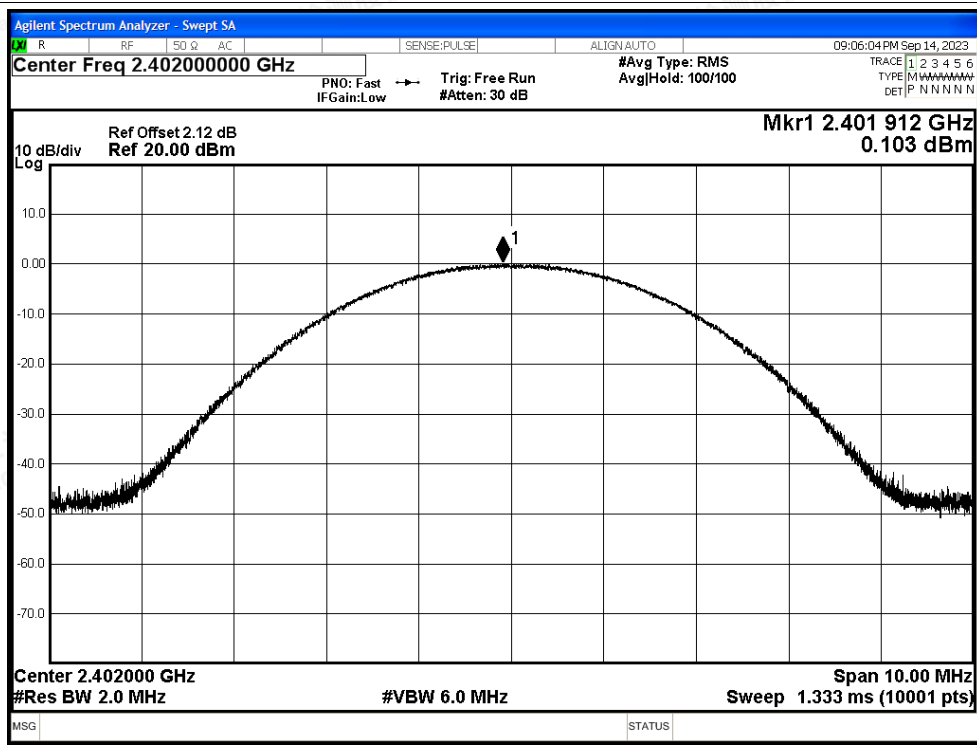




Power NVNT 1-DH5 2480MHz BT ANT

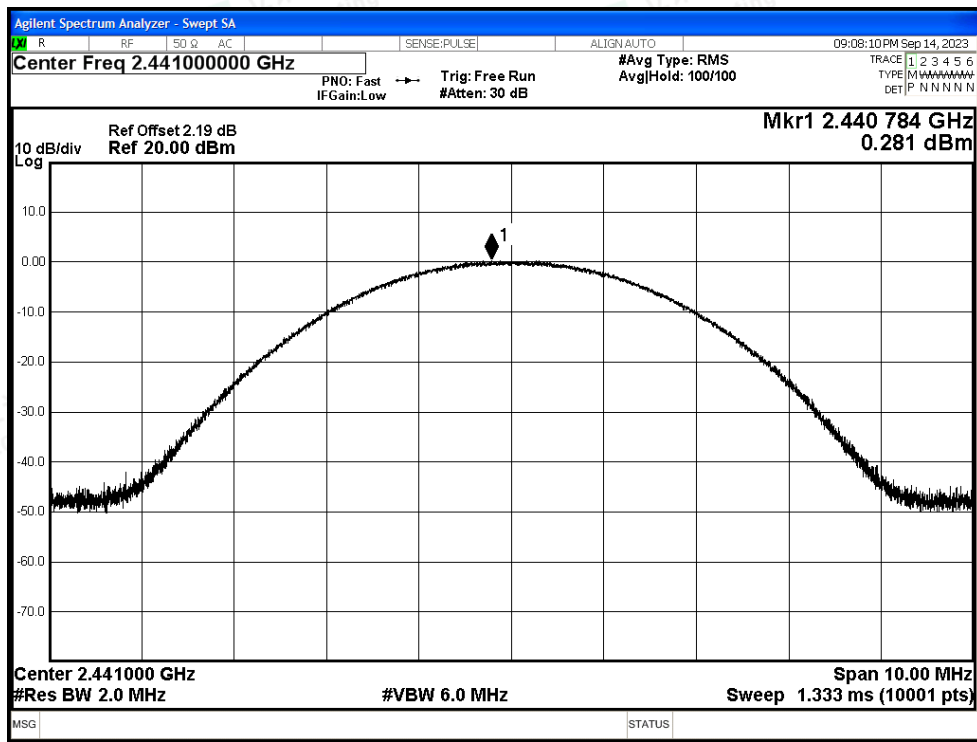


Power NVNT 2-DH5 2402MHz BT ANT

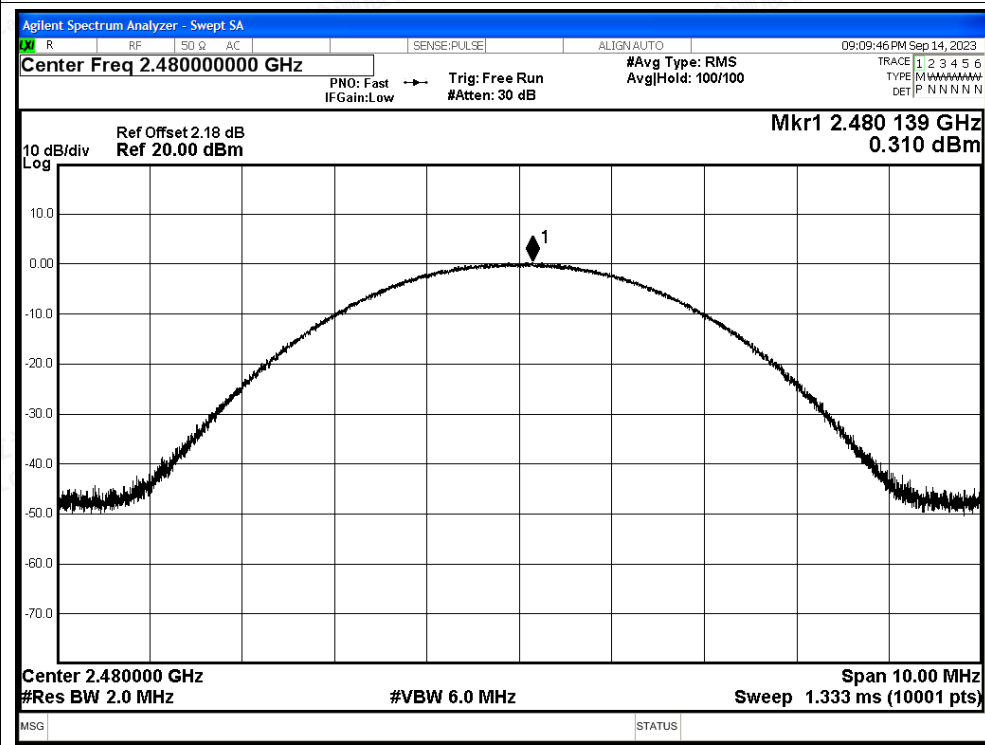




Power NVNT 2-DH5 2441MHz BT ANT

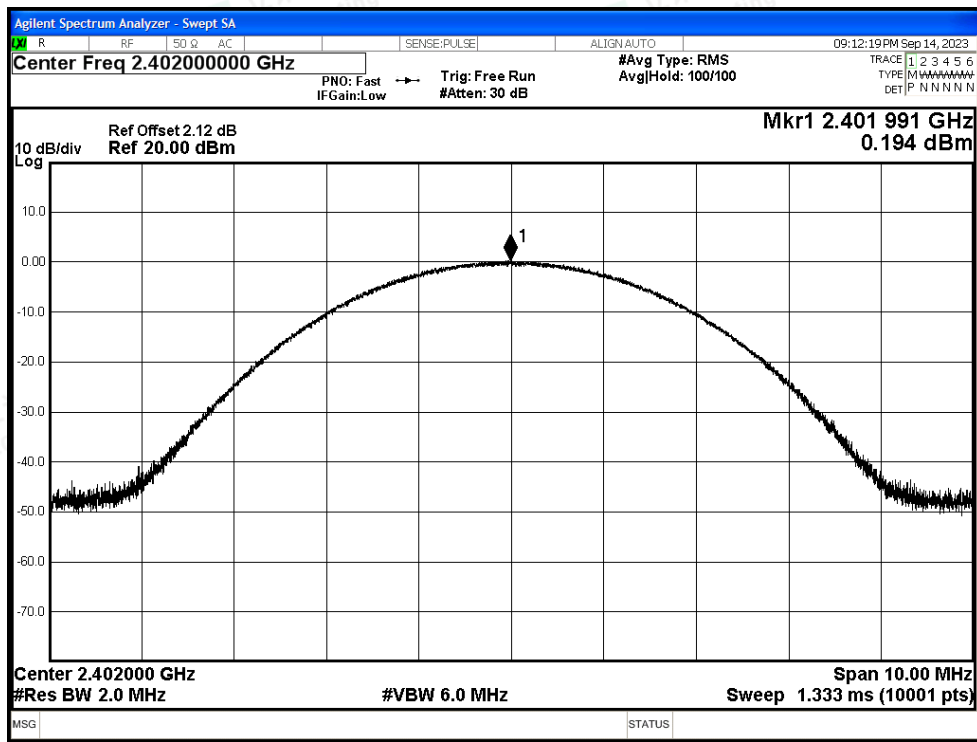


Power NVNT 2-DH5 2480MHz BT ANT

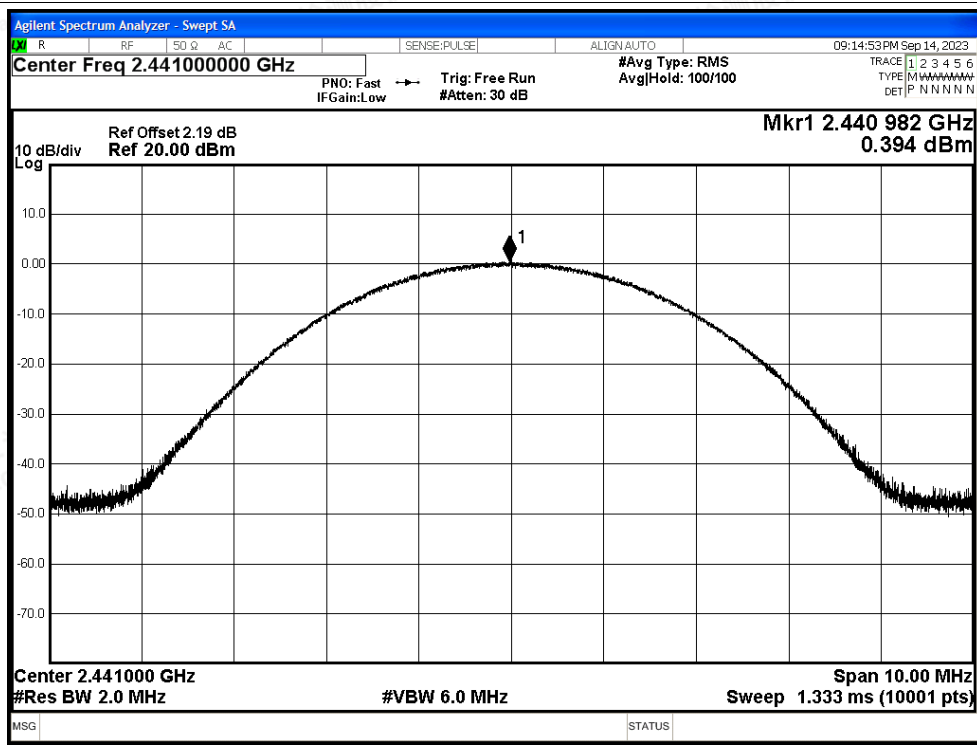


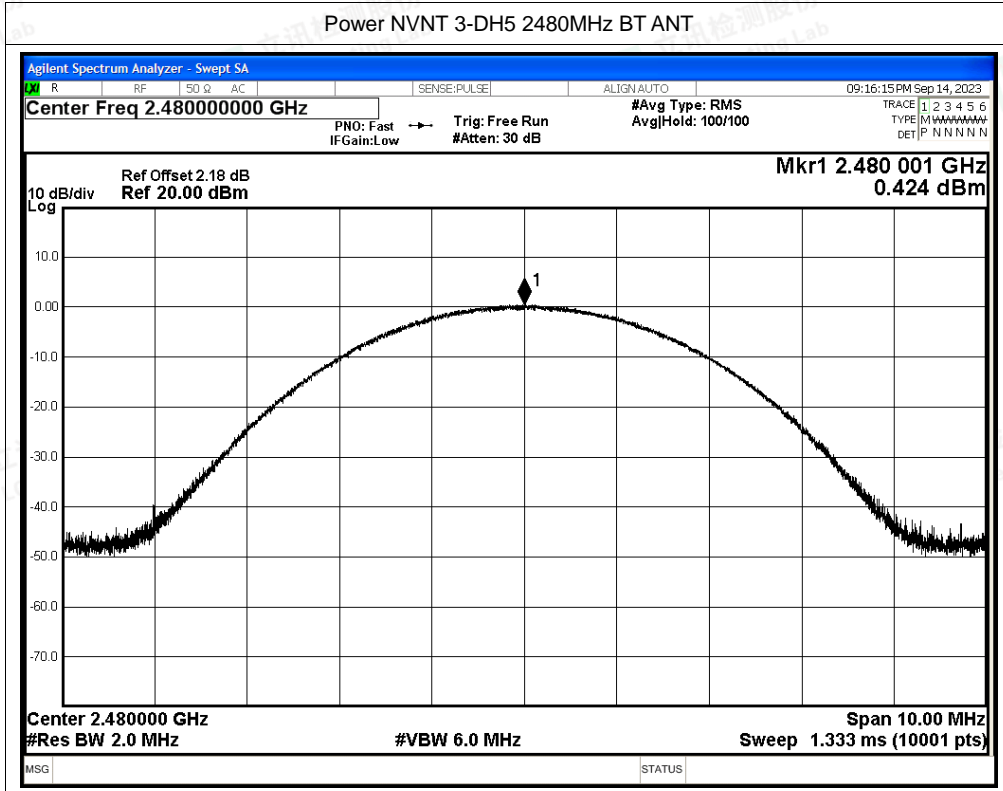


Power NVNT 3-DH5 2402MHz BT ANT



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	2402.006	2402.968	0.962	0.683	Pass
NVNT	2-DH5	BT ANT	2401.838	2403.016	1.178	0.859	Pass
NVNT	3-DH5	BT ANT	2401.816	2403.024	1.208	0.865	Pass

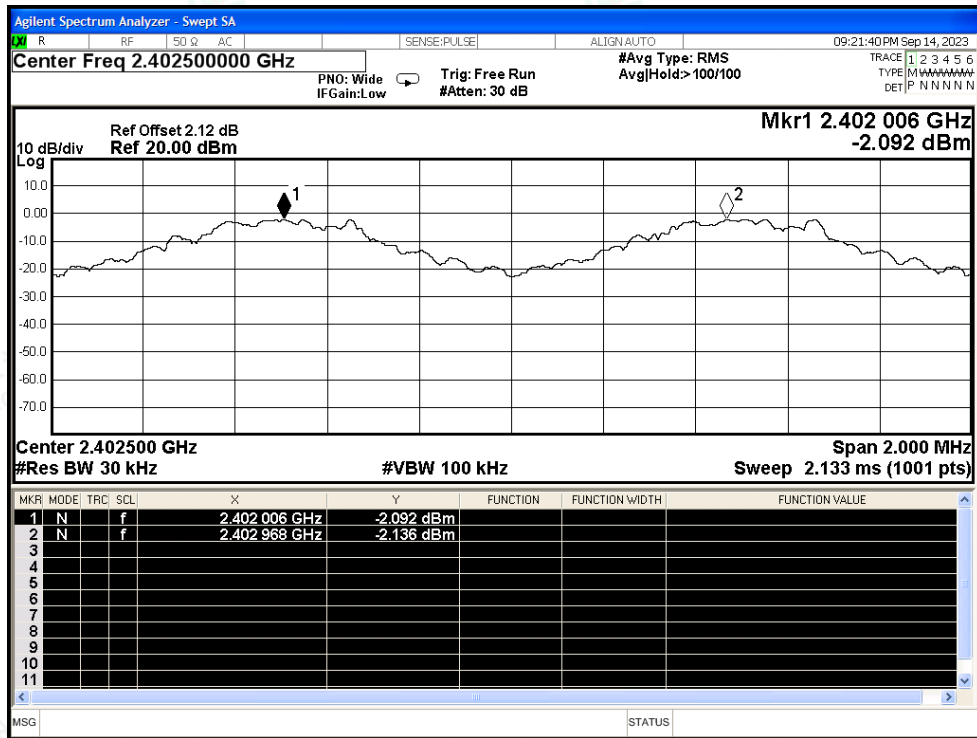


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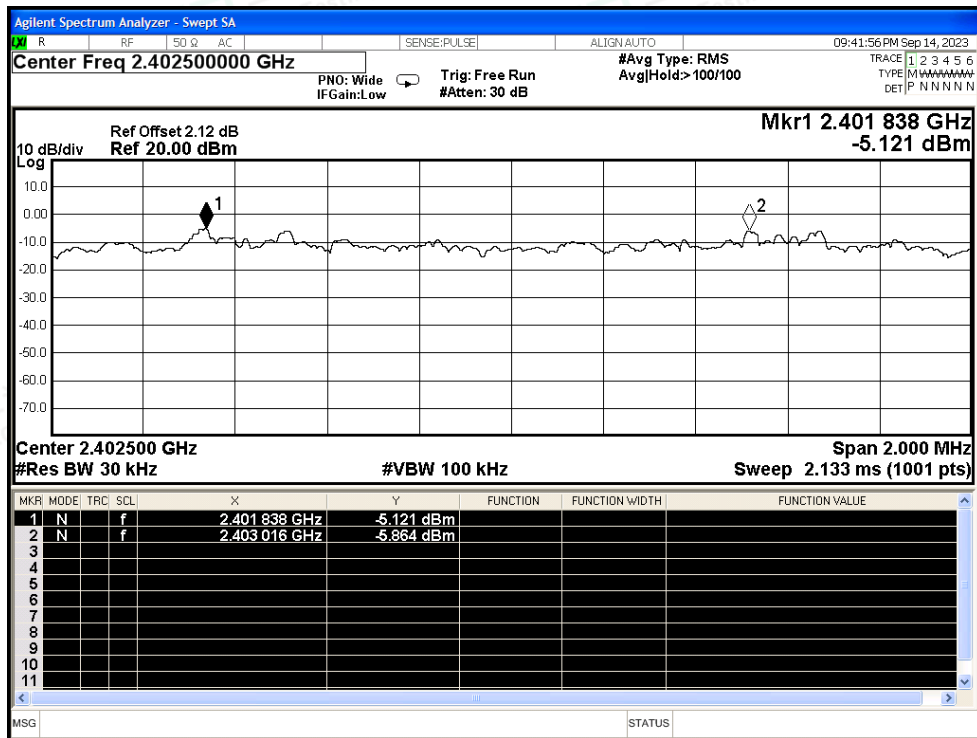


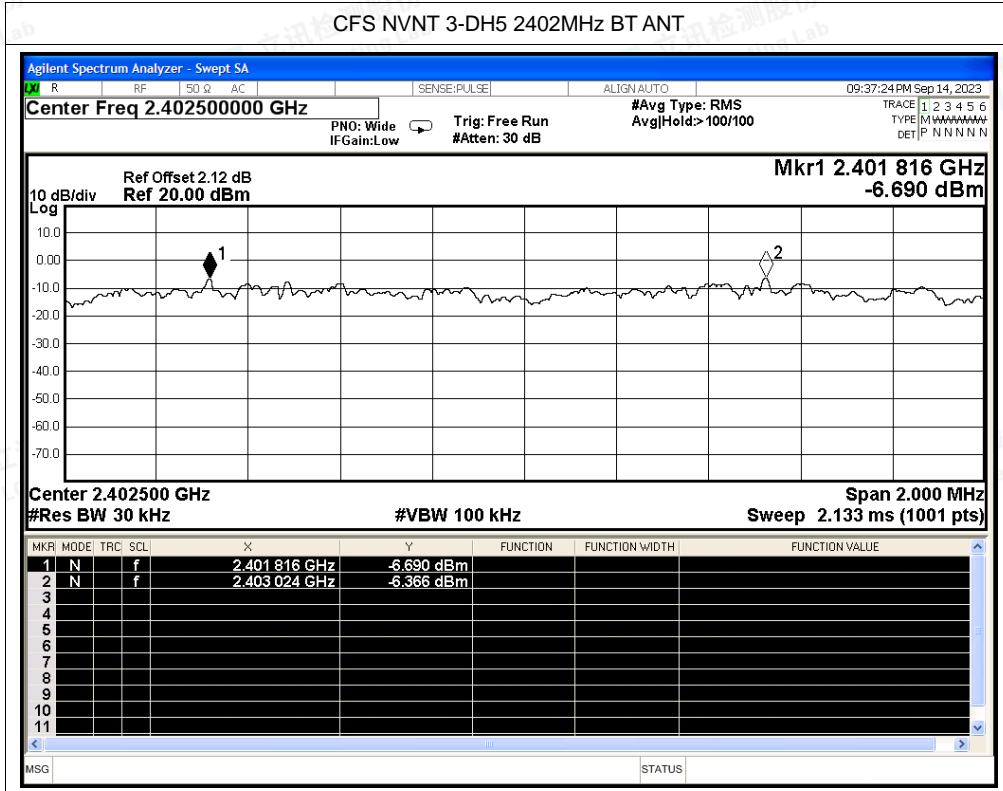
Test Graphs

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	2.882	288.2	100	31600	400	Pass
NVNT	2-DH5	2402	BT ANT	2.88	279.36	97	31600	400	Pass
NVNT	3-DH5	2402	BT ANT	2.887	308.909	107	31600	400	Pass

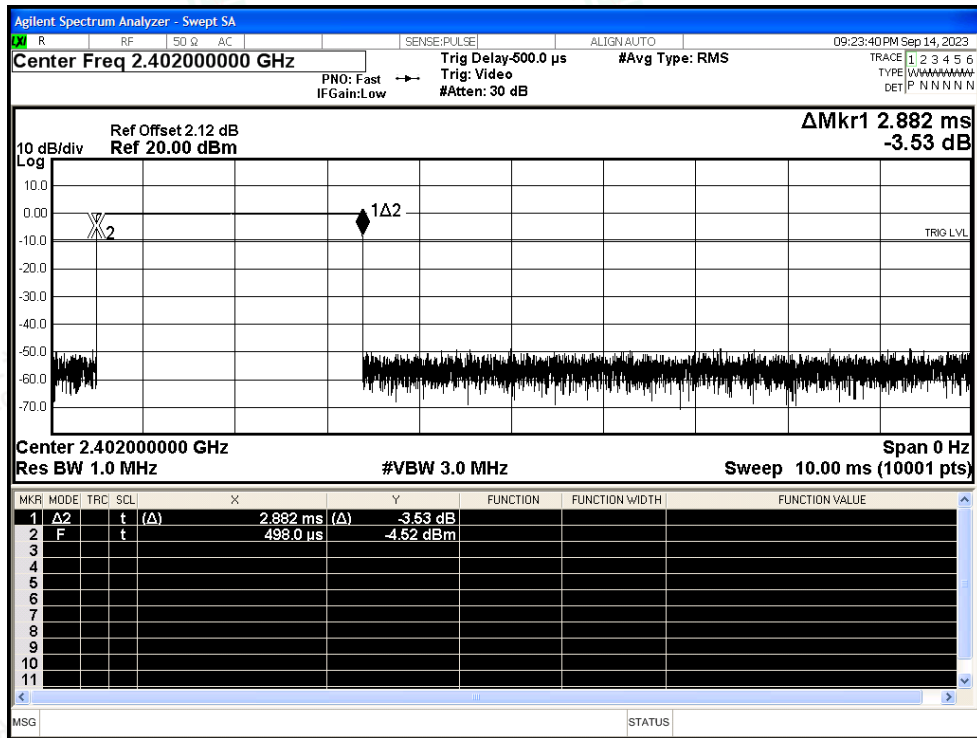


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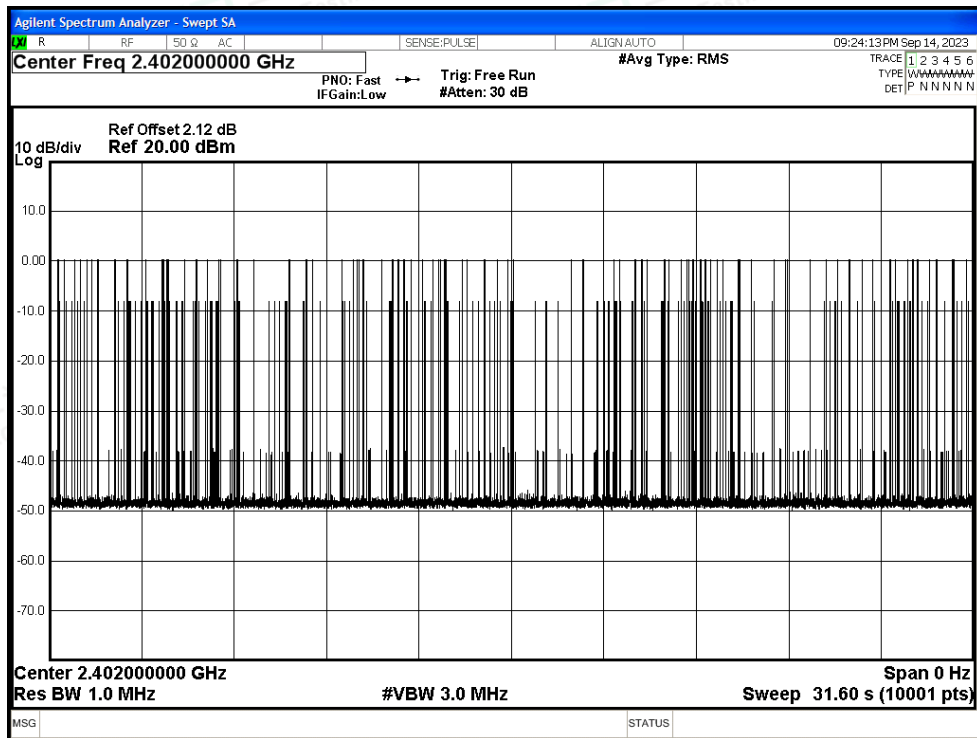


Test Graphs

Dwell NVNT 1-DH5 2402MHz BT ANT One Burst

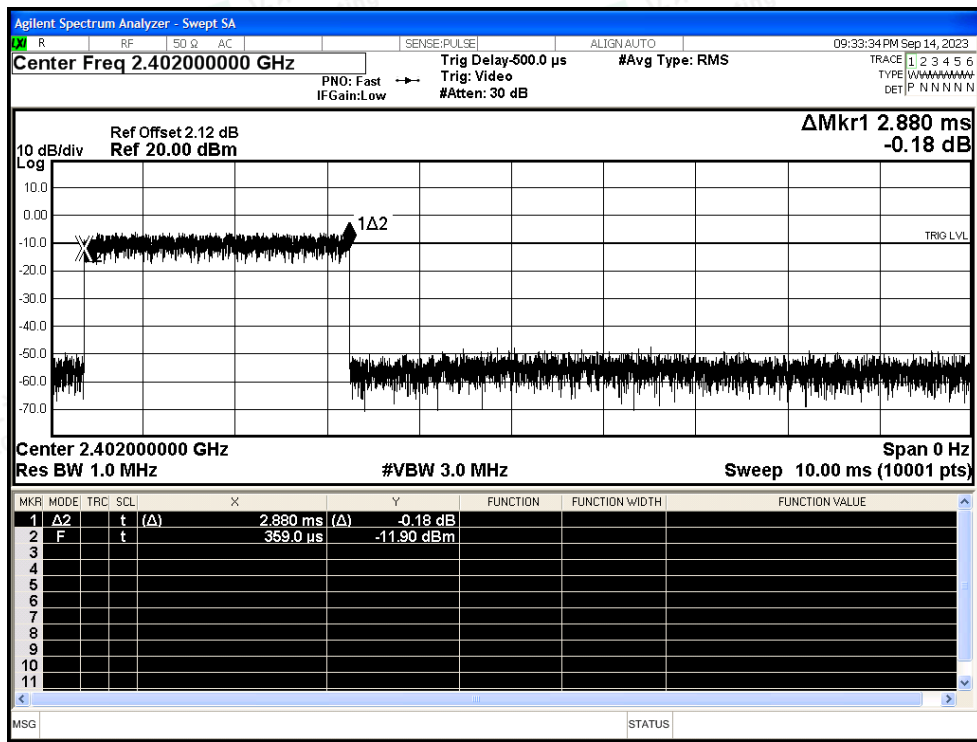


Dwell NVNT 1-DH5 2402MHz BT ANT Accumulated

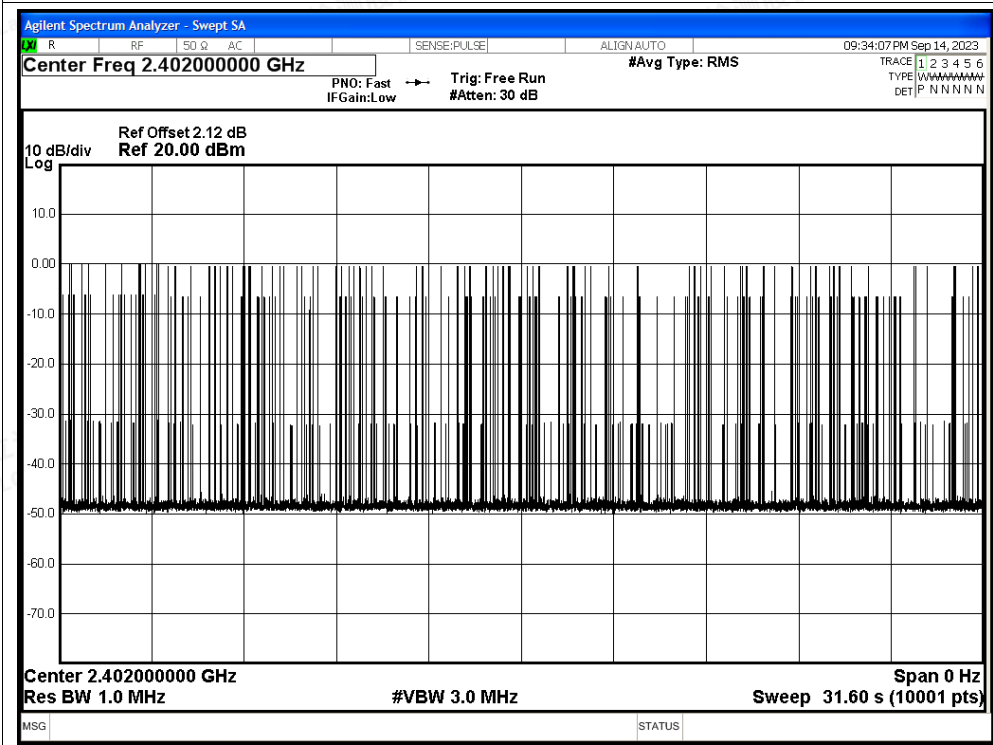




Dwell NVNT 2-DH5 2402MHz BT ANT One Burst

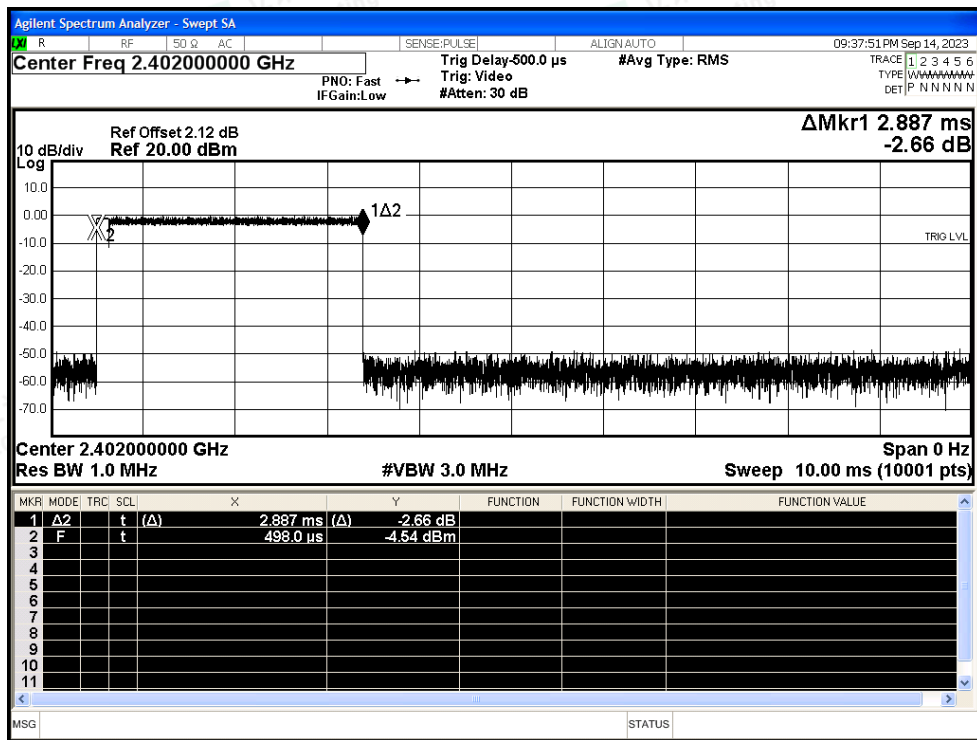


Dwell NVNT 2-DH5 2402MHz BT ANT Accumulated

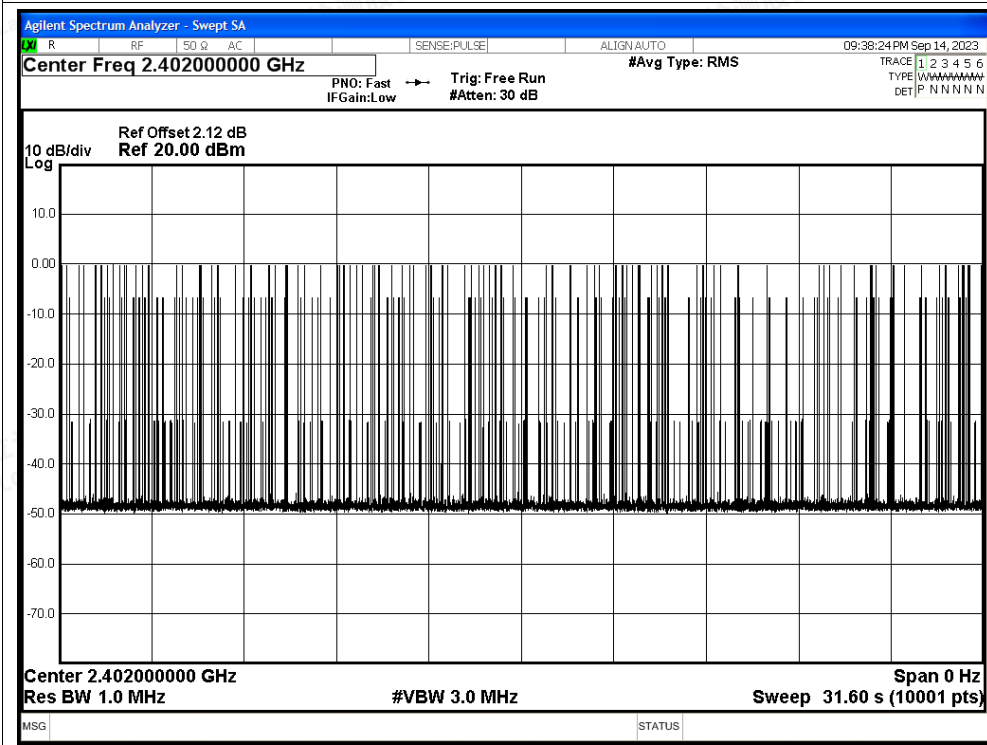




Dwell NVNT 3-DH5 2402MHz BT ANT One Burst



Dwell NVNT 3-DH5 2402MHz BT ANT Accumulated





A.5 Number of Hopping Channel

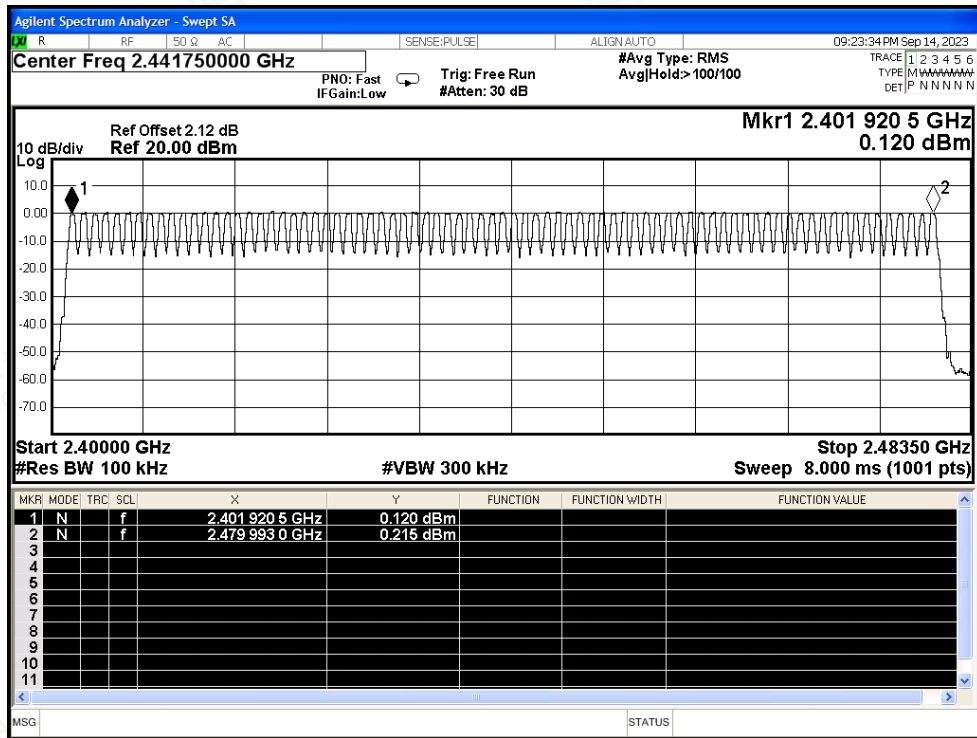
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	BT ANT	79	15	Pass
NVNT	2-DH5	BT ANT	79	15	Pass
NVNT	3-DH5	BT ANT	79	15	Pass



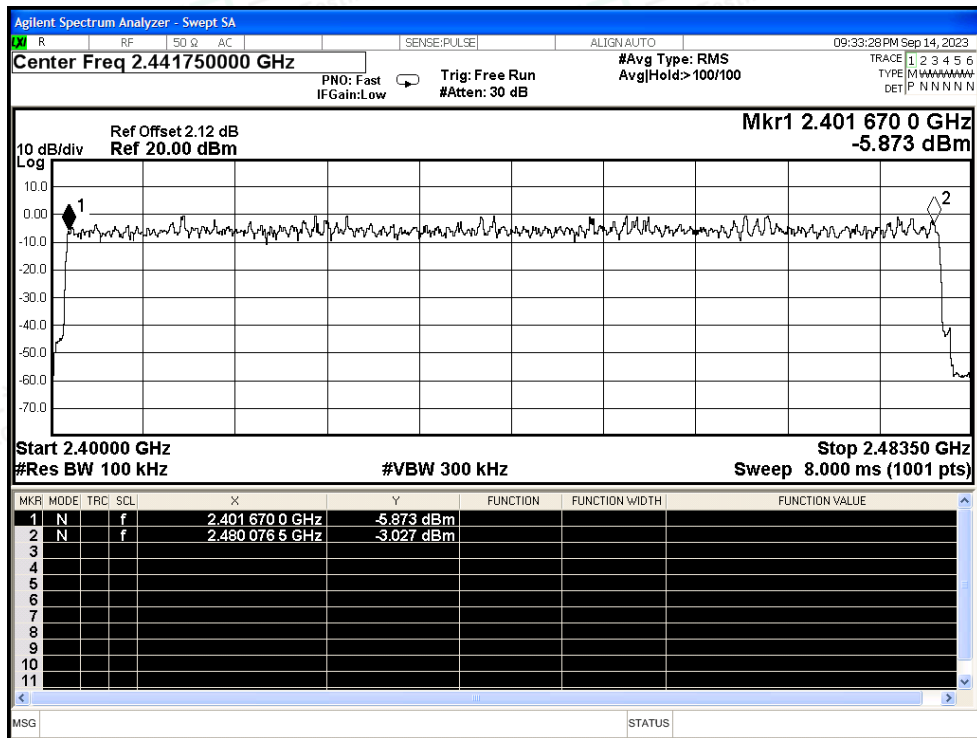


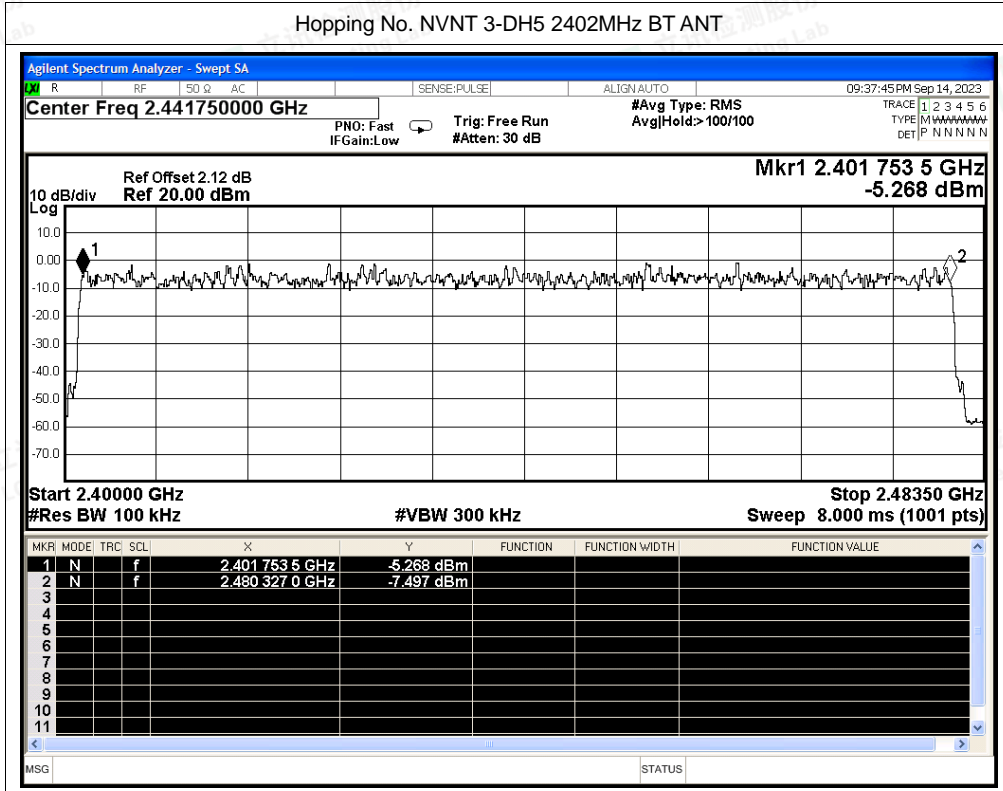
Test Graphs

Hopping No. NVNT 1-DH5 2402MHz BT ANT



Hopping No. NVNT 2-DH5 2402MHz BT ANT







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	-57.12	-20	Pass
NVNT	1-DH5	2480	BT ANT	No-Hopping	-57.38	-20	Pass
NVNT	2-DH5	2402	BT ANT	No-Hopping	-53.95	-20	Pass
NVNT	2-DH5	2480	BT ANT	No-Hopping	-56	-20	Pass
NVNT	3-DH5	2402	BT ANT	No-Hopping	-53.15	-20	Pass
NVNT	3-DH5	2480	BT ANT	No-Hopping	-54.9	-20	Pass

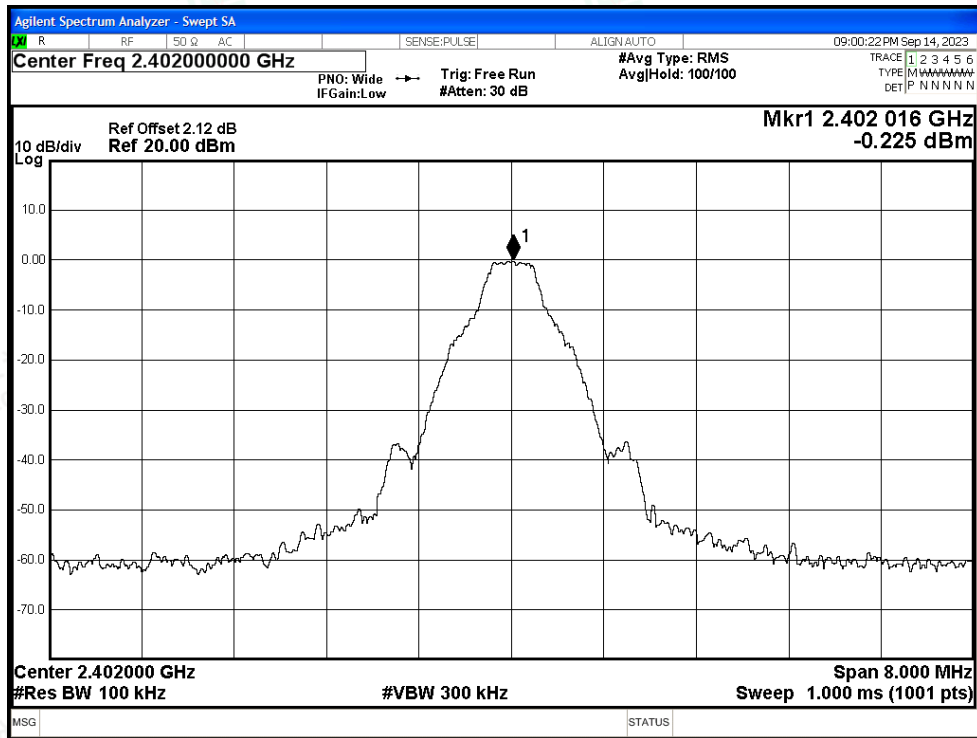


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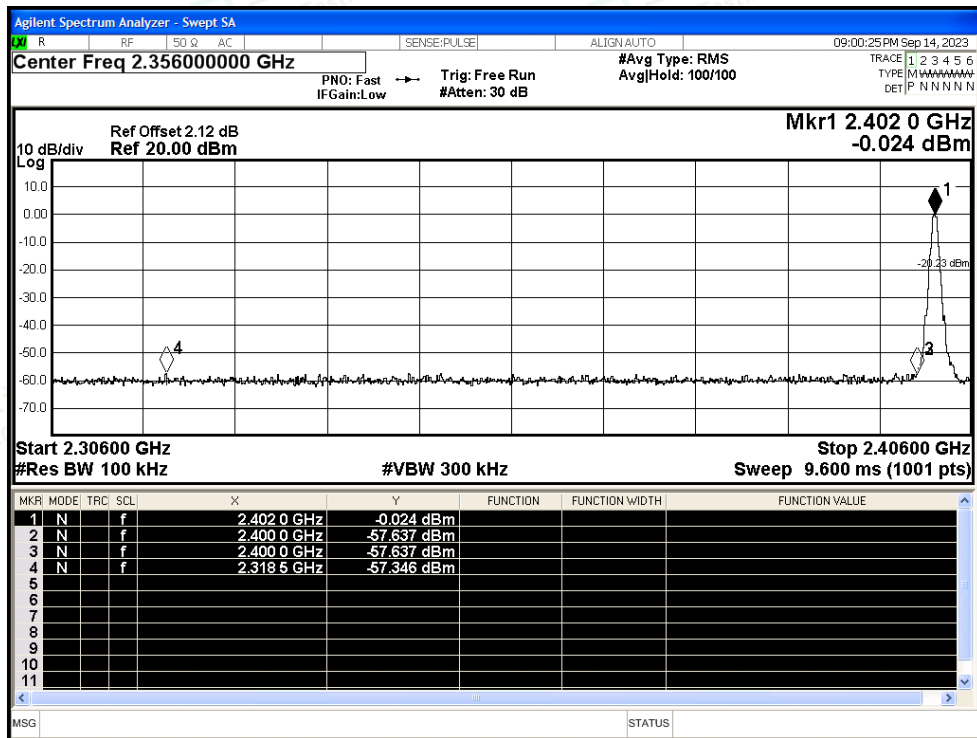


Test Graphs

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

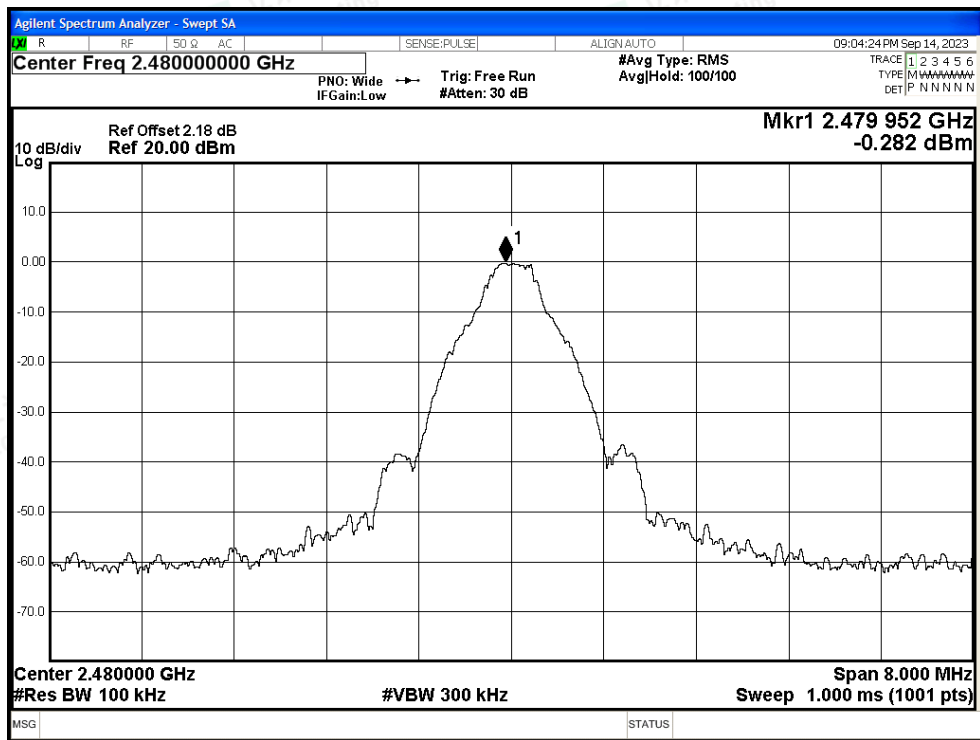


Band Edge NVNT 1-DH5 2402MHz BT ANT No-Hopping Emission

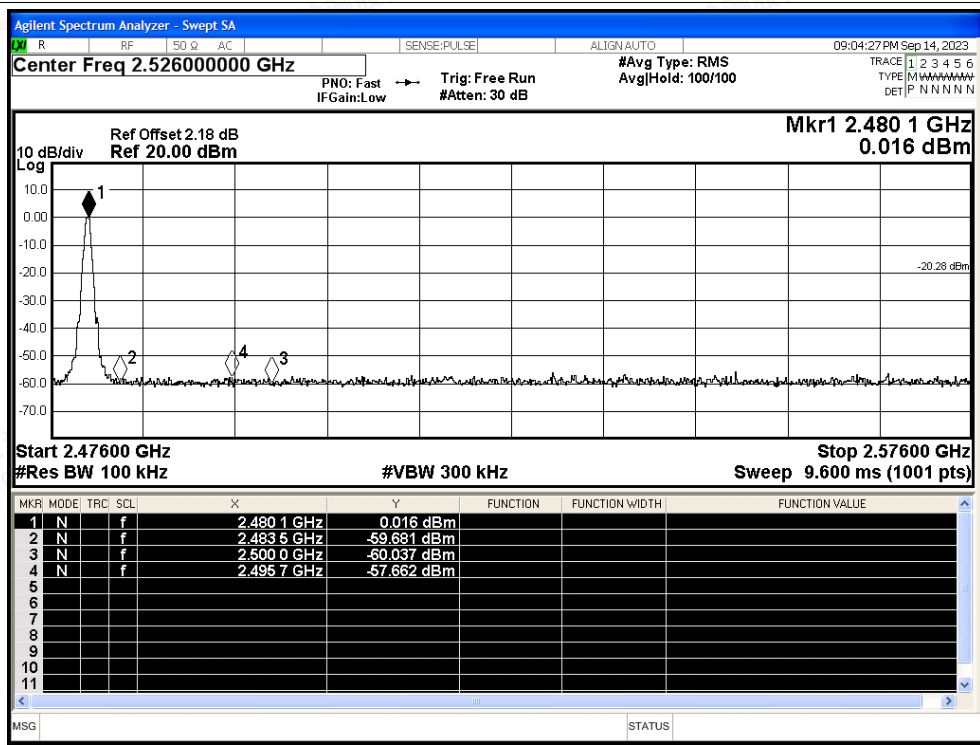




Band Edge NVNT 1-DH5 2480MHz BT ANT No-Hopping Ref

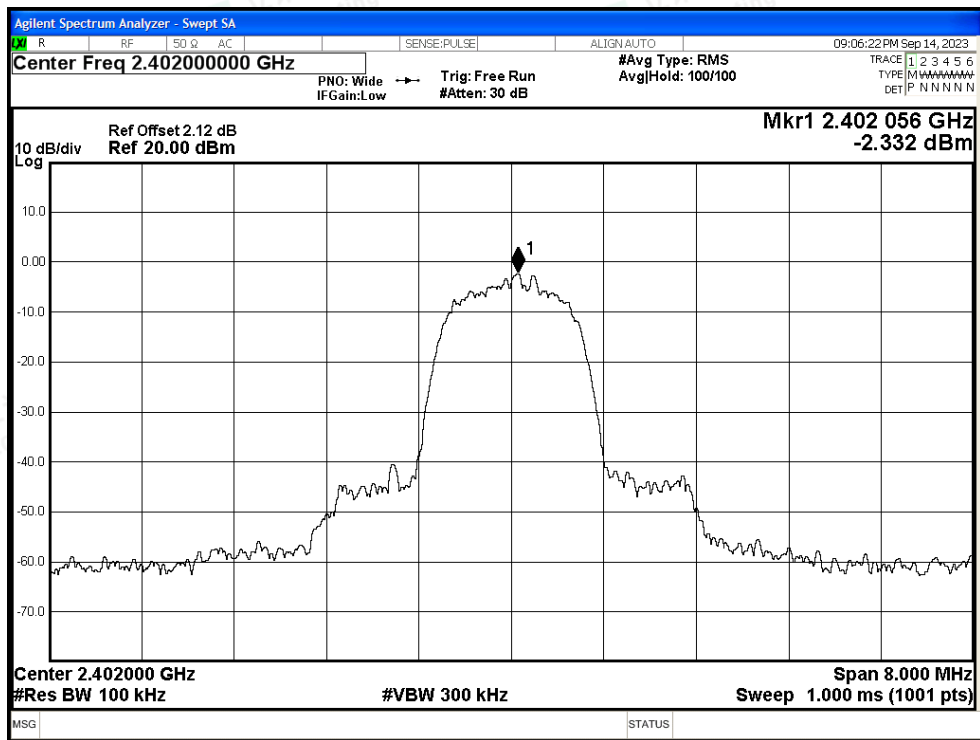


Band Edge NVNT 1-DH5 2480MHz BT ANT No-Hopping Emission

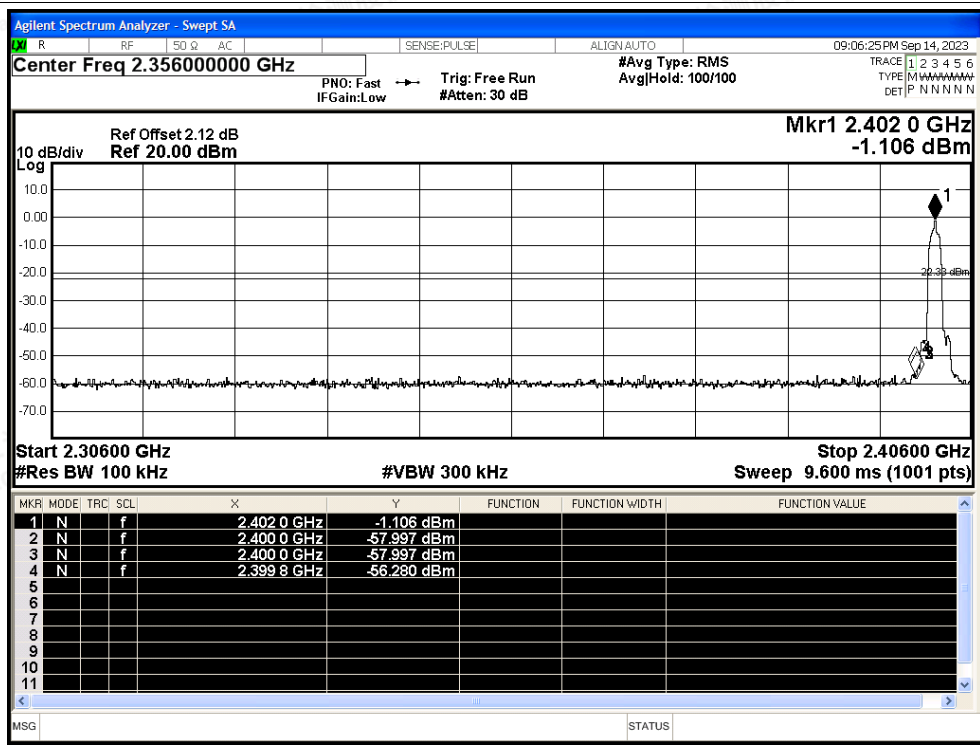




Band Edge NVNT 2-DH5 2402MHz BT ANT No-Hopping Ref

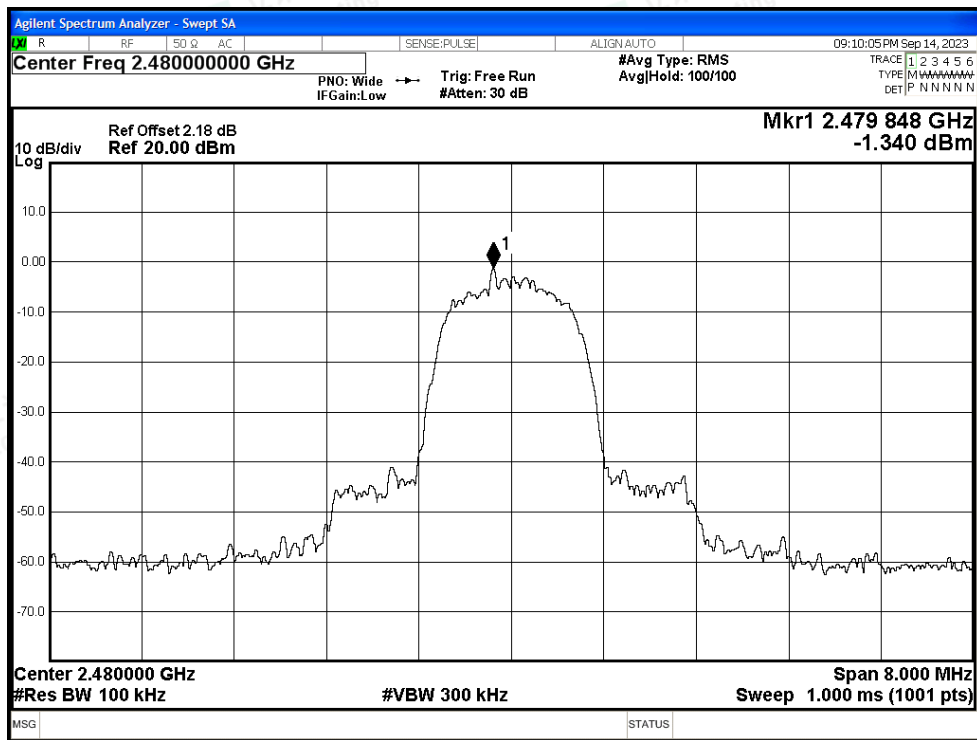


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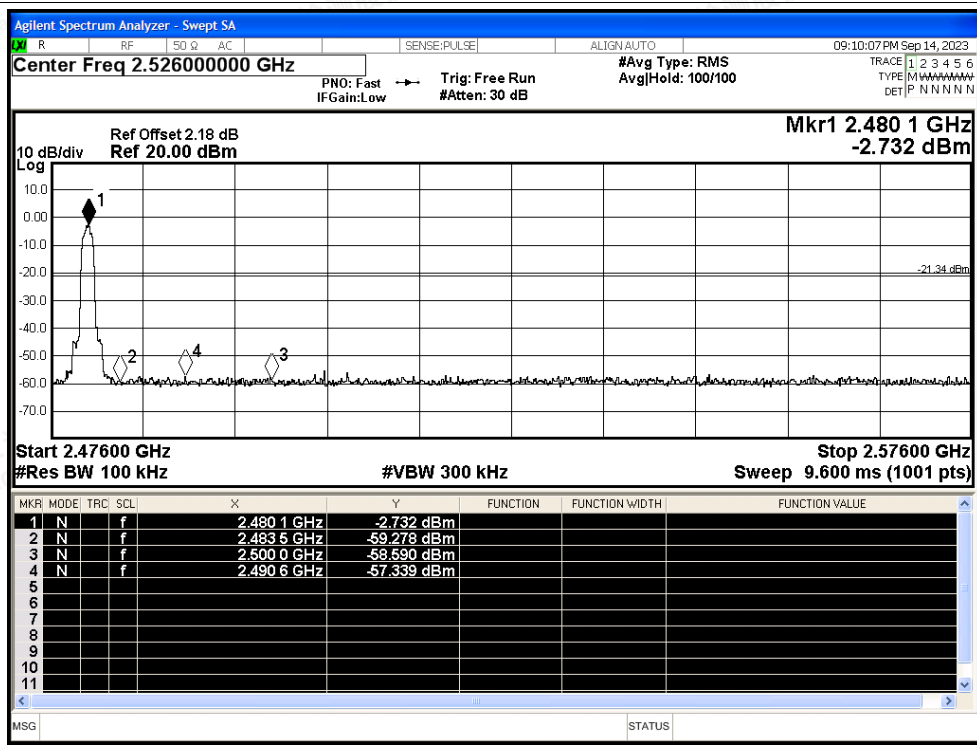




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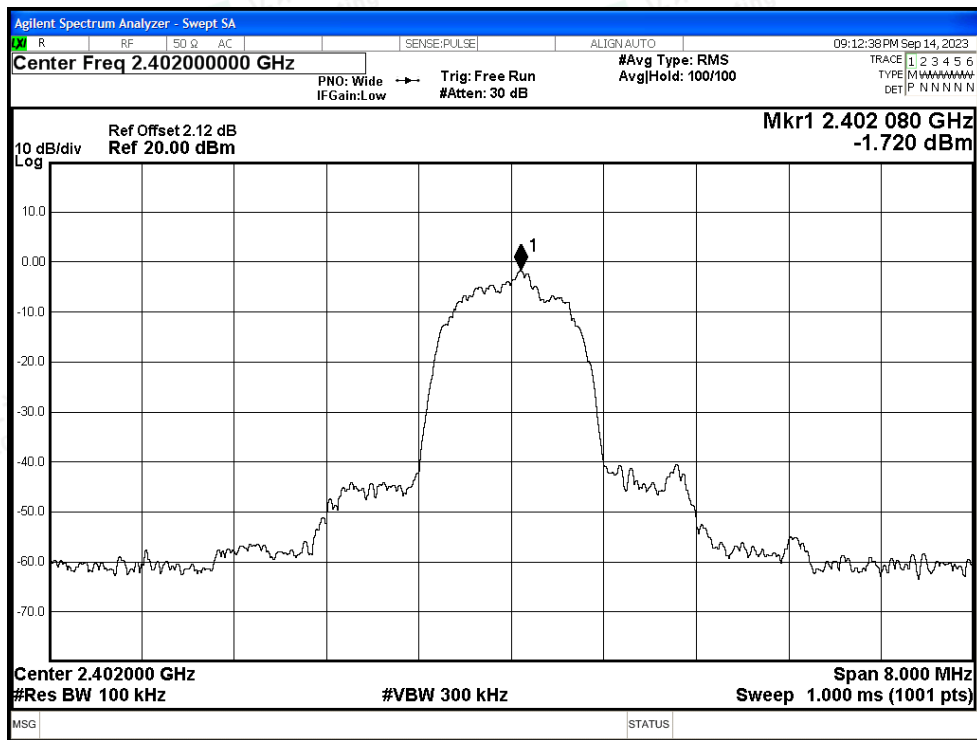


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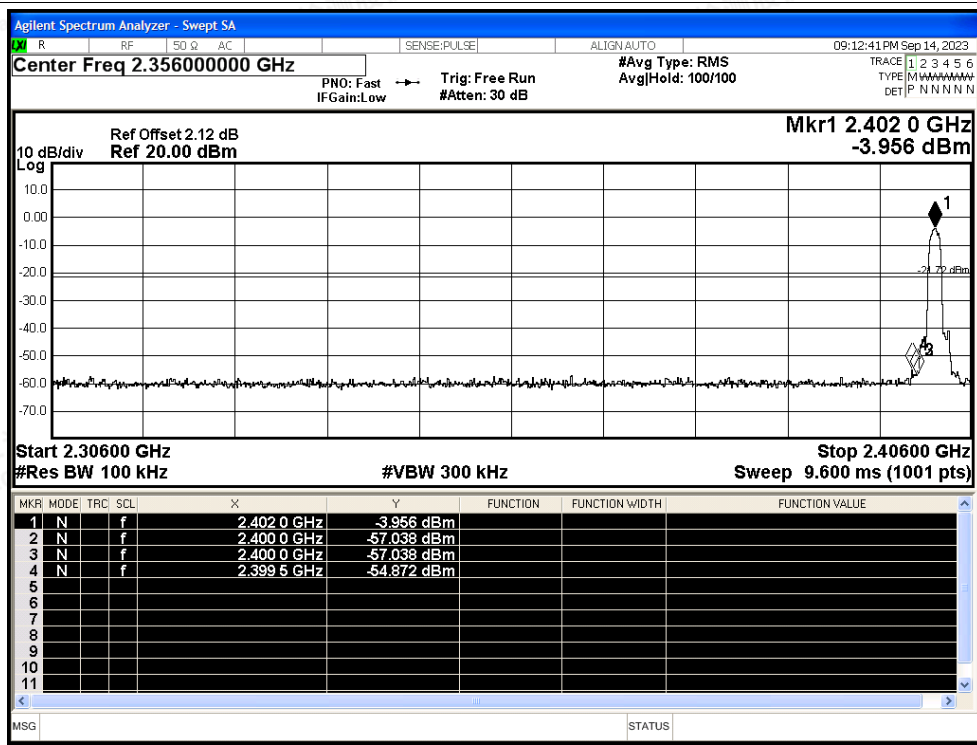




Band Edge NVNT 3-DH5 2402MHz BT ANT No-Hopping Ref

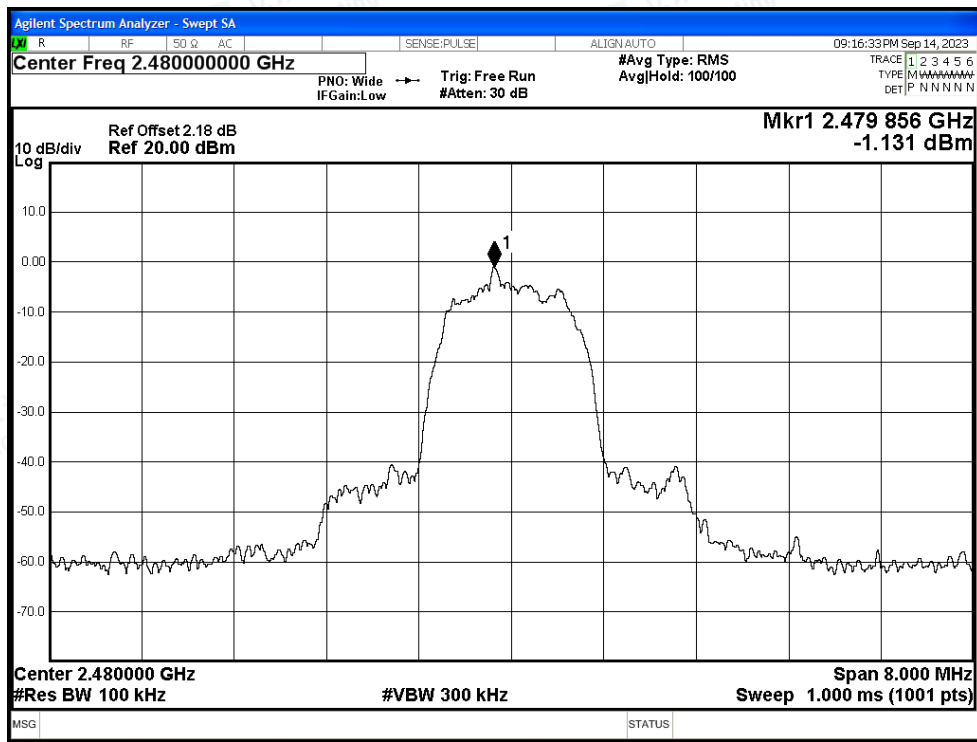


Band Edge NVNT 3-DH5 2402MHz BT ANT No-Hopping Emission

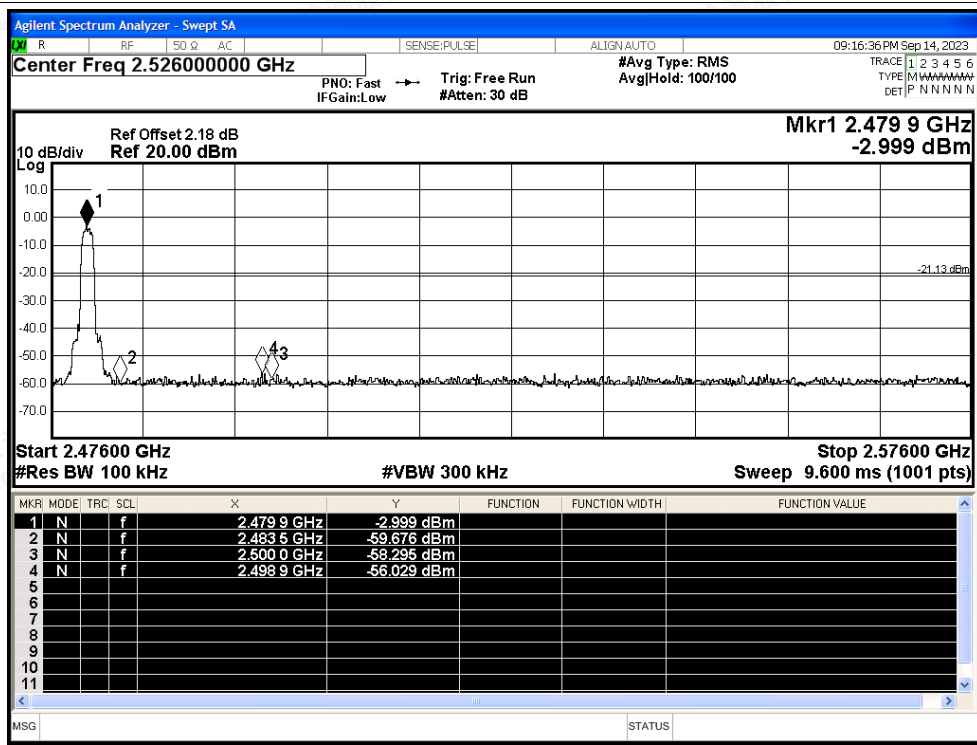




Band Edge NVNT 3-DH5 2480MHz BT ANT No-Hopping Ref



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	-56.16	-20	Pass
NVNT	1-DH5	2480	BT ANT	Hopping	-56.65	-20	Pass
NVNT	2-DH5	2402	BT ANT	Hopping	-53.26	-20	Pass
NVNT	2-DH5	2480	BT ANT	Hopping	-54.65	-20	Pass
NVNT	3-DH5	2402	BT ANT	Hopping	-52.96	-20	Pass
NVNT	3-DH5	2480	BT ANT	Hopping	-54.86	-20	Pass

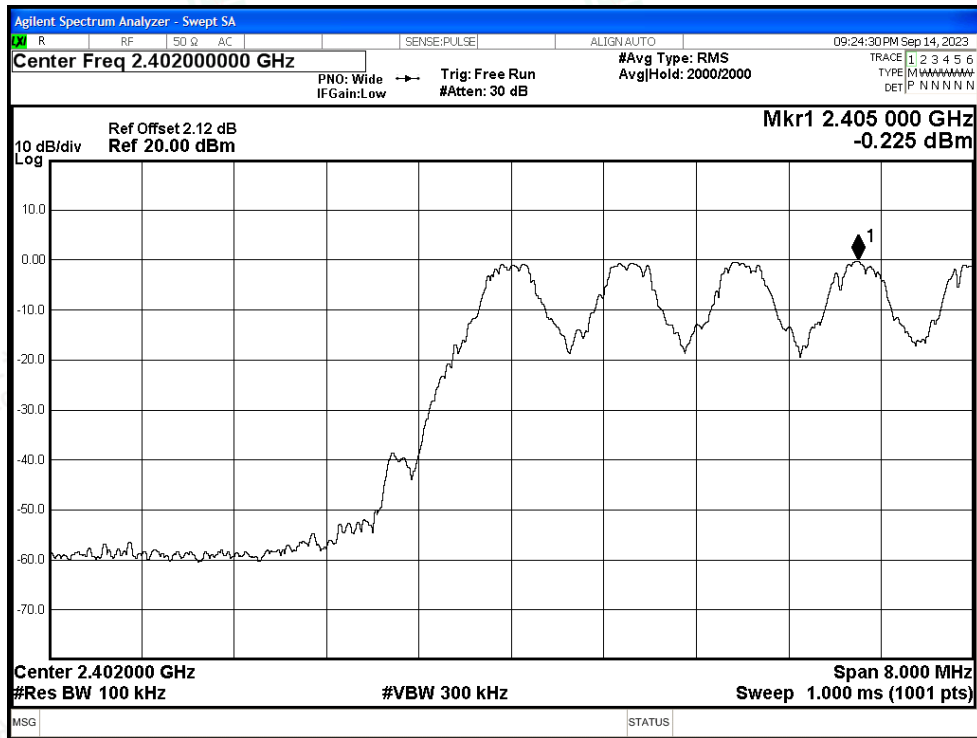


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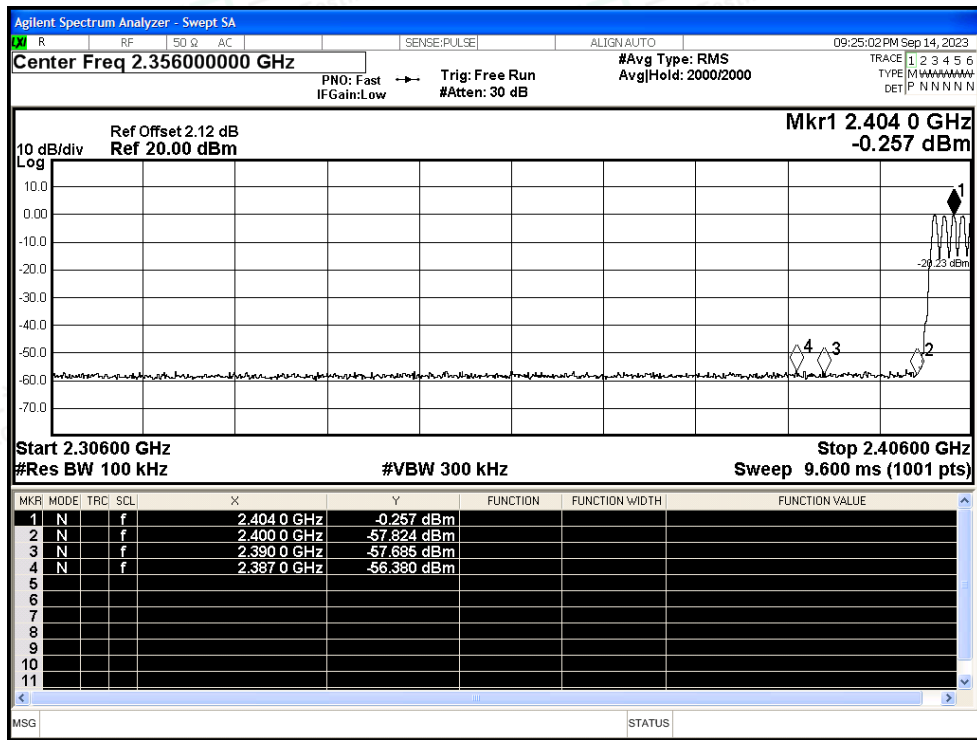


Test Graphs

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

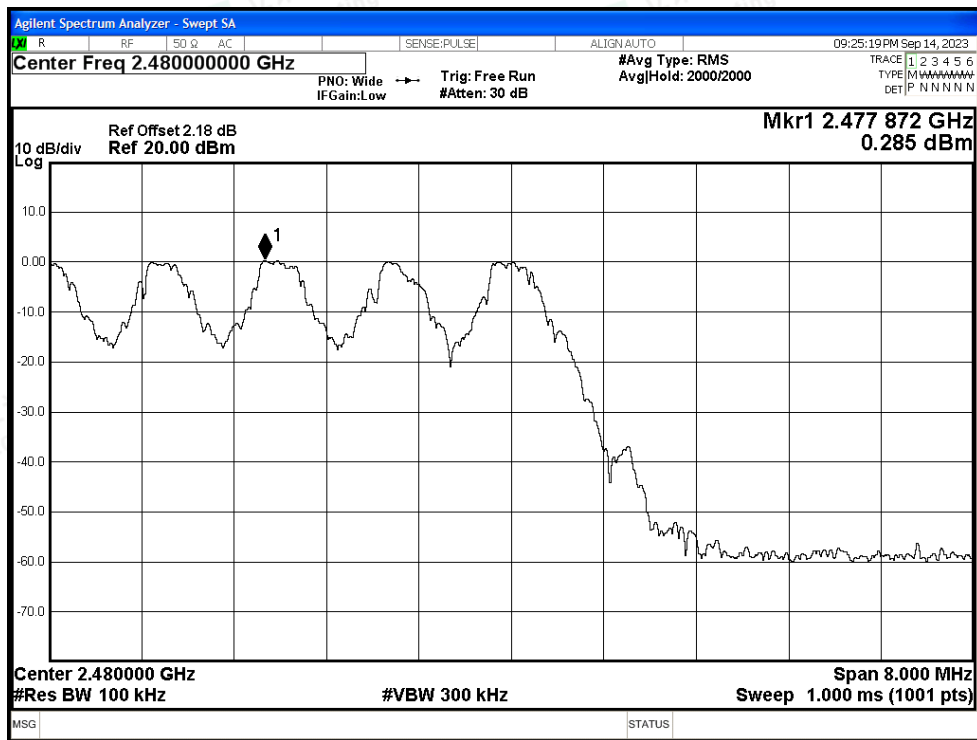


Band Edge(Hopping) NVNT 1-DH5 2402MHz BT ANT Hopping Emission

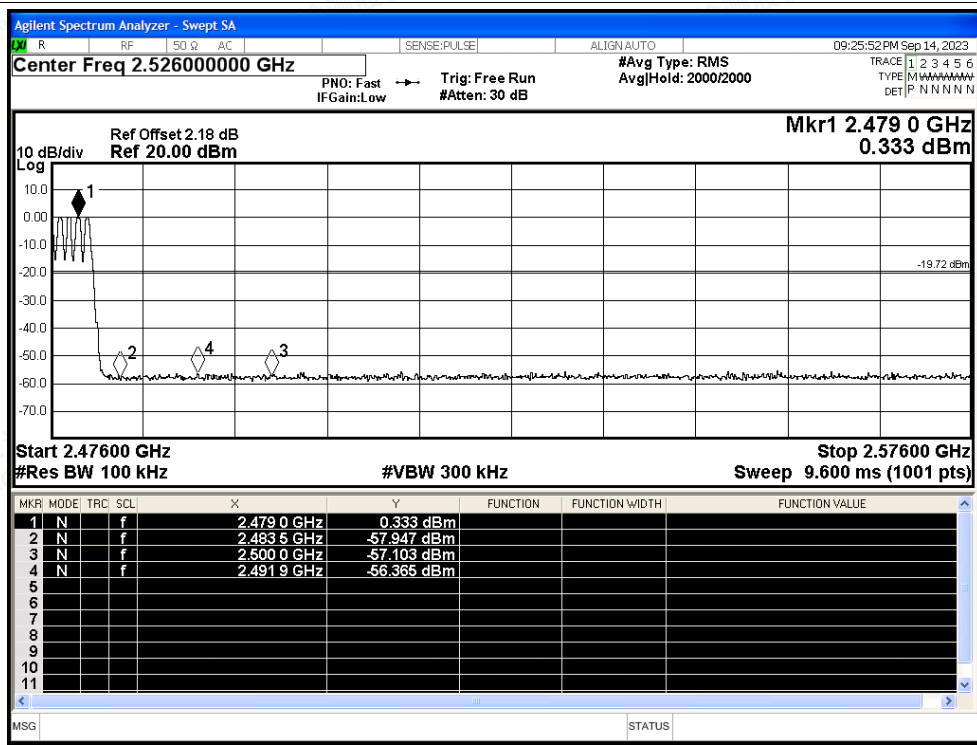




Band Edge(Hopping) NVNT 1-DH5 2480MHz BT ANT Hopping Ref

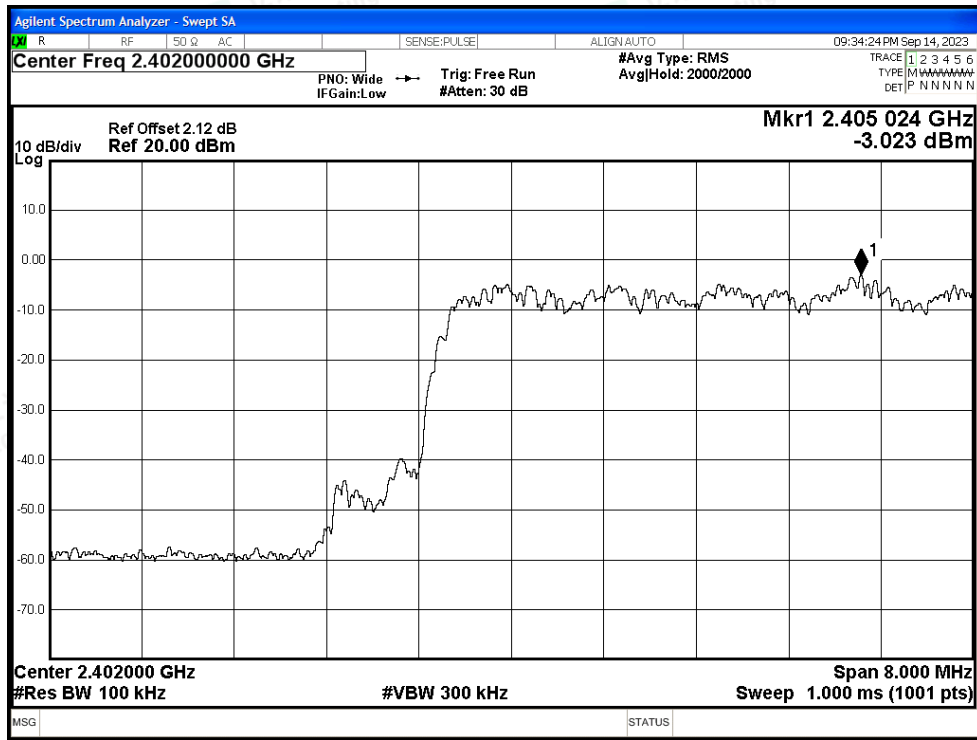


Band Edge(Hopping) NVNT 1-DH5 2480MHz BT ANT Hopping Emission

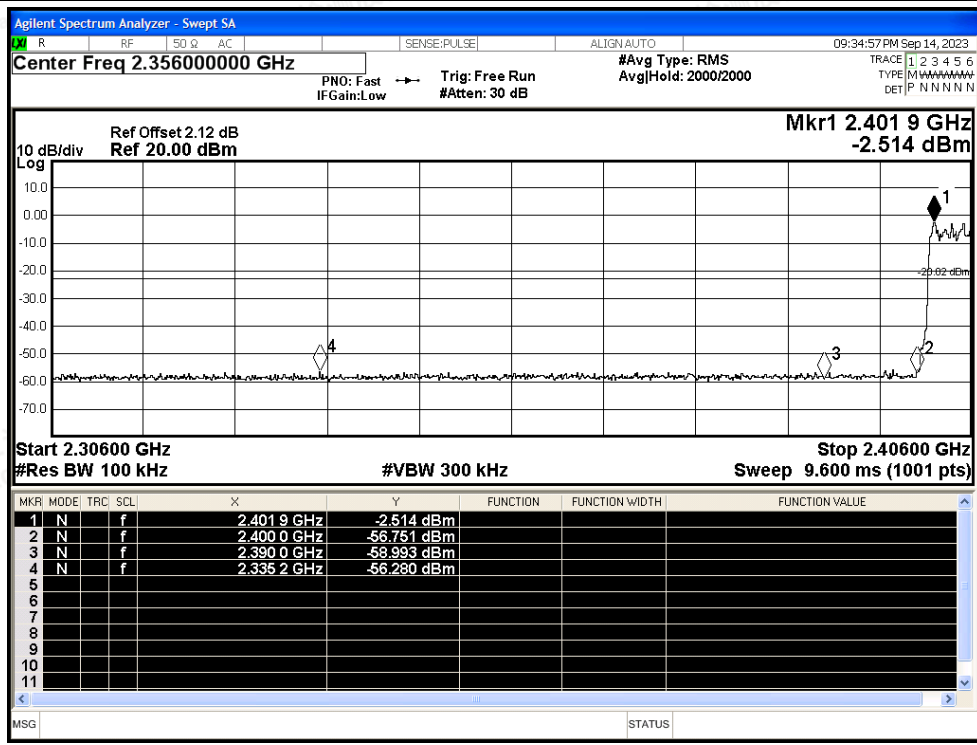




Band Edge(Hopping) NVNT 2-DH5 2402MHz BT ANT Hopping Ref

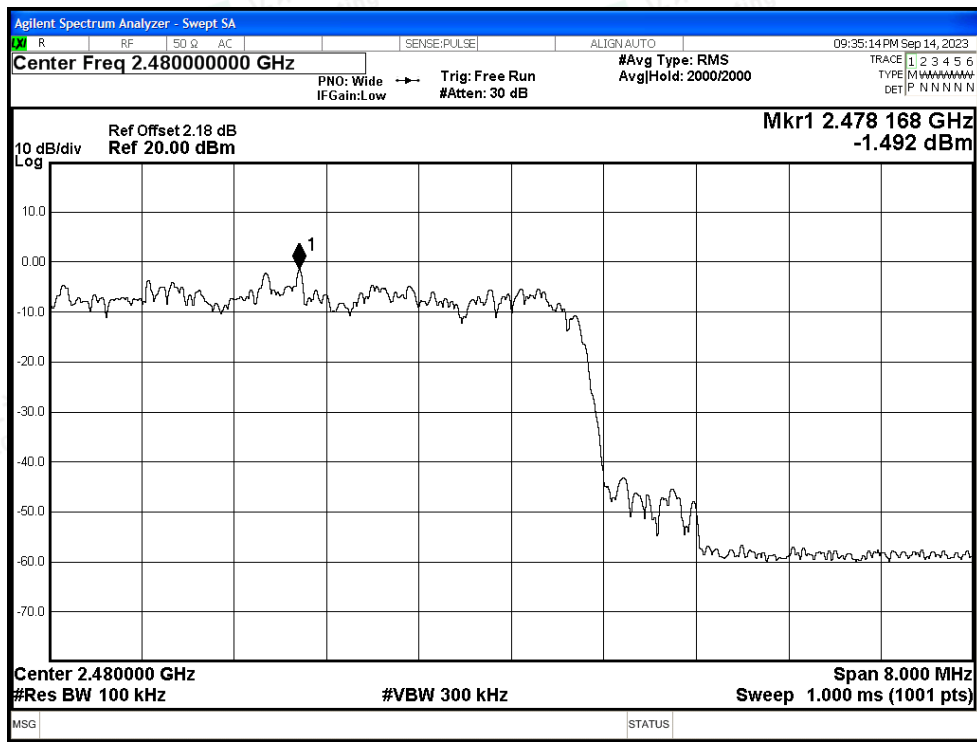


Band Edge(Hopping) NVNT 2-DH5 2402MHz BT ANT Hopping Emission

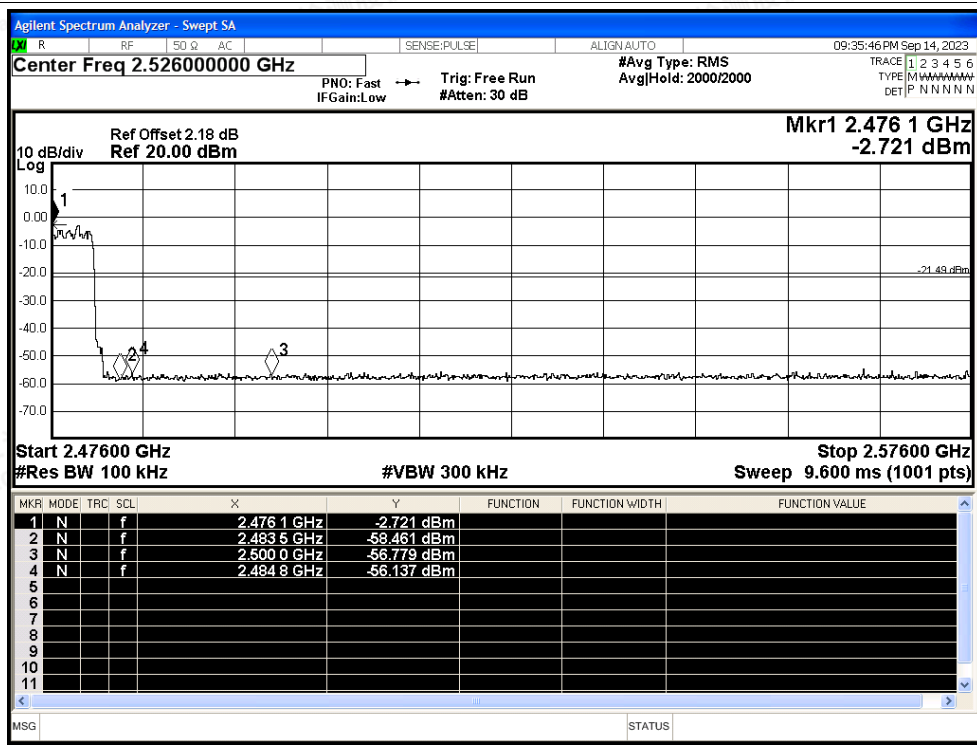




Band Edge(Hopping) NVNT 2-DH5 2480MHz BT ANT Hopping Ref

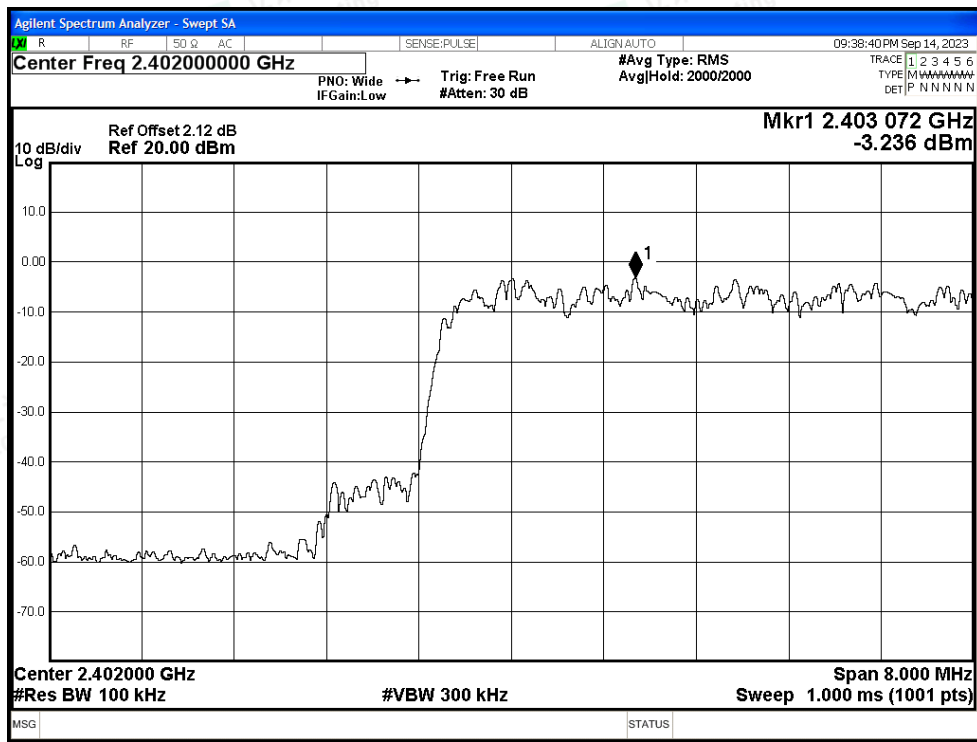


Band Edge(Hopping) NVNT 2-DH5 2480MHz BT ANT Hopping Emission

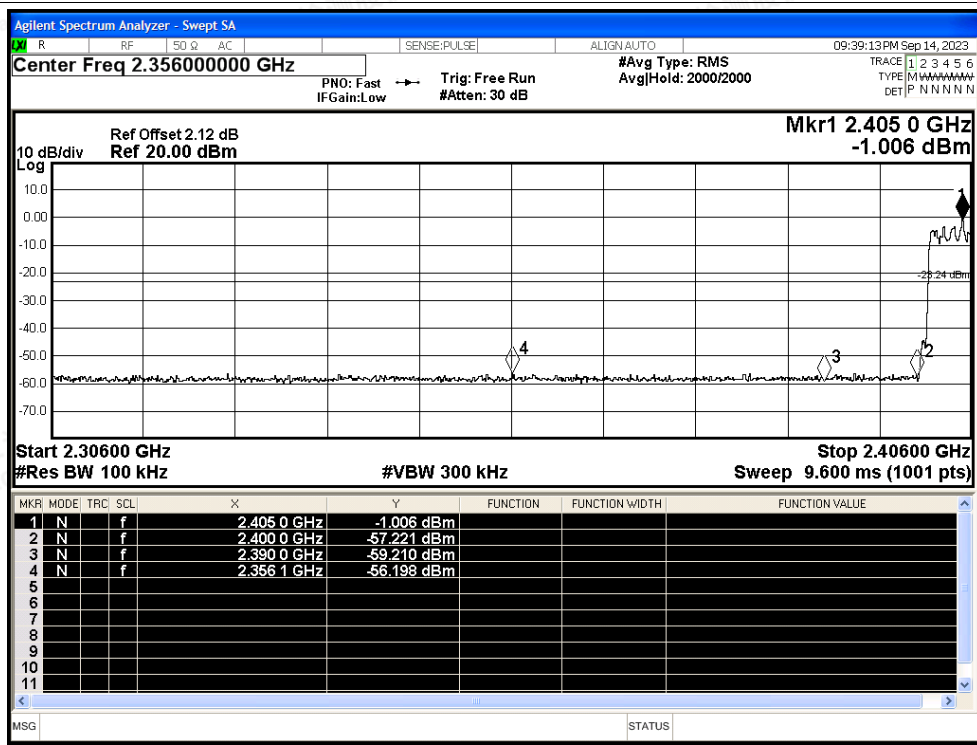




Band Edge(Hopping) NVNT 3-DH5 2402MHz BT ANT Hopping Ref

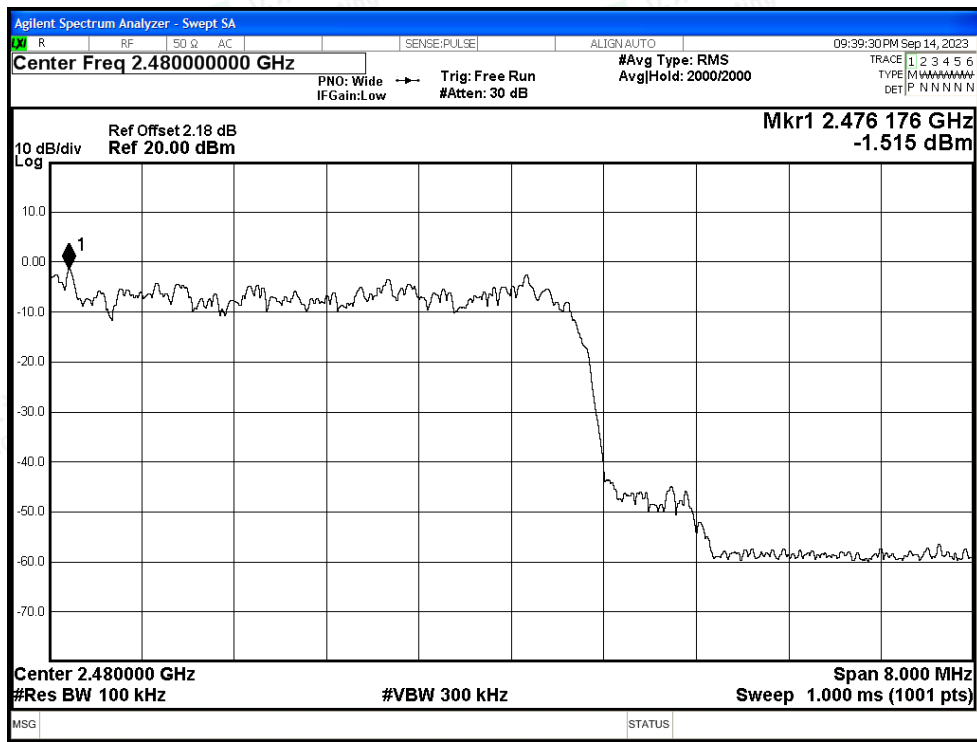


Band Edge(Hopping) NVNT 3-DH5 2402MHz BT ANT Hopping Emission

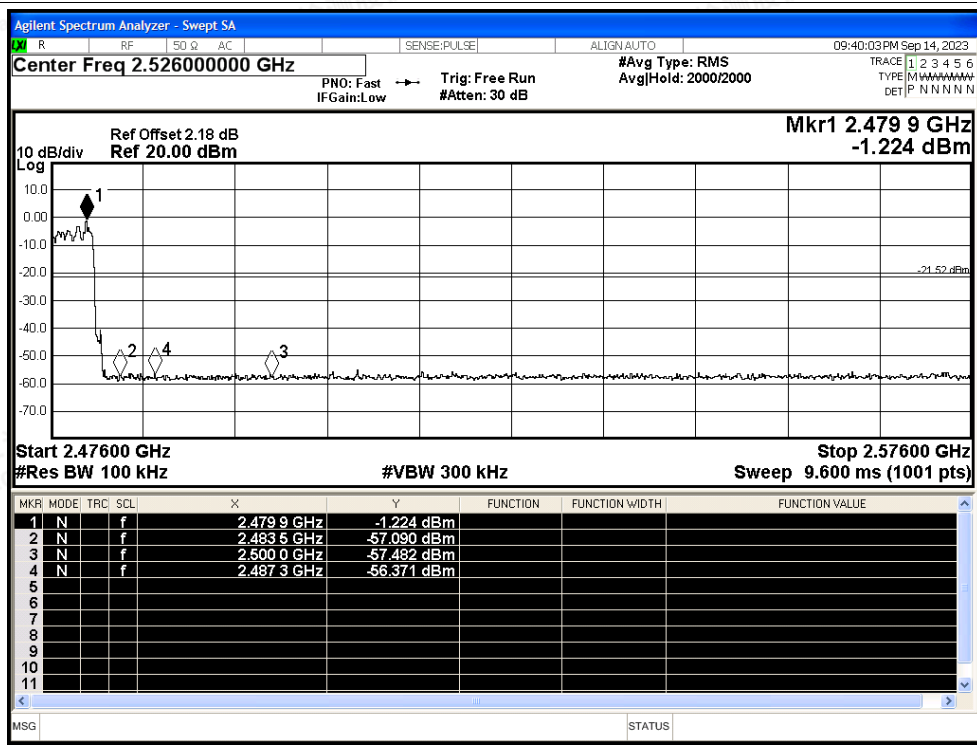




Band Edge(Hopping) NVNT 3-DH5 2480MHz BT ANT Hopping Ref



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	-54.89	-20	Pass
NVNT	1-DH5	2441	BT ANT	-55.6	-20	Pass
NVNT	1-DH5	2480	BT ANT	-55.59	-20	Pass
NVNT	2-DH5	2402	BT ANT	-54.13	-20	Pass
NVNT	2-DH5	2441	BT ANT	-54.78	-20	Pass
NVNT	2-DH5	2480	BT ANT	-54.51	-20	Pass
NVNT	3-DH5	2402	BT ANT	-54.35	-20	Pass
NVNT	3-DH5	2441	BT ANT	-53.81	-20	Pass
NVNT	3-DH5	2480	BT ANT	-54.34	-20	Pass

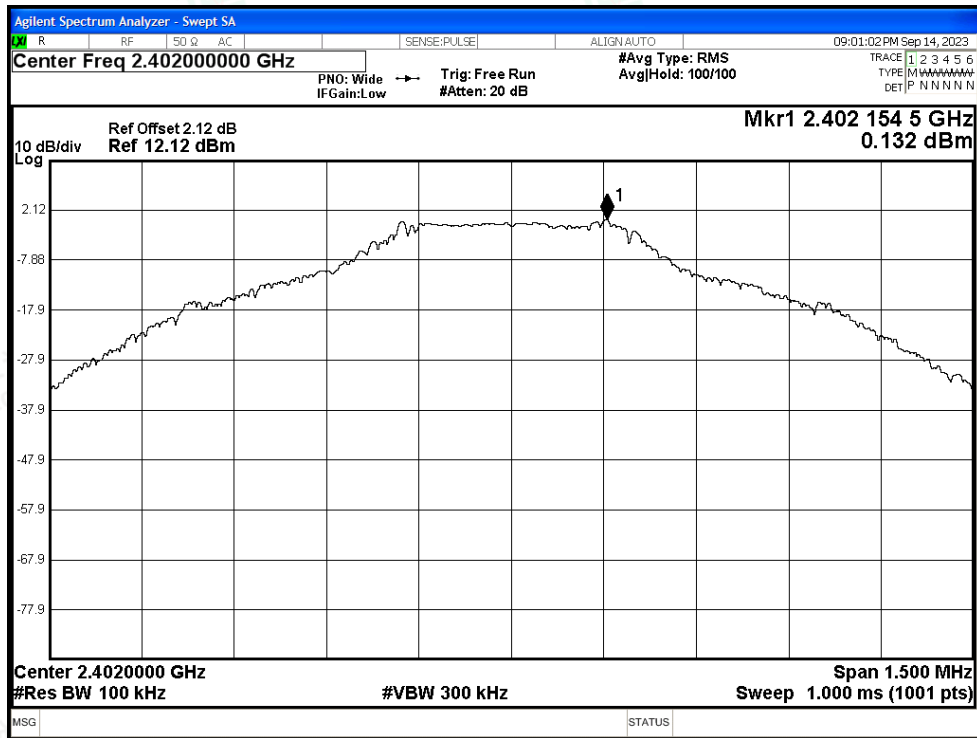


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Scan code to check authenticity

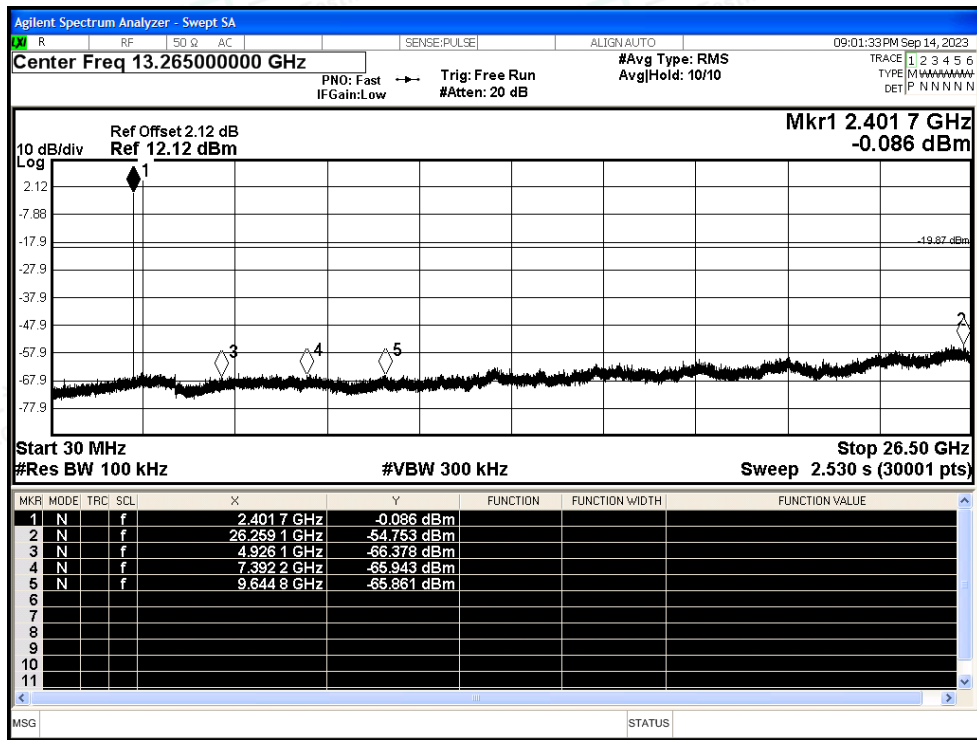


Test Graphs

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

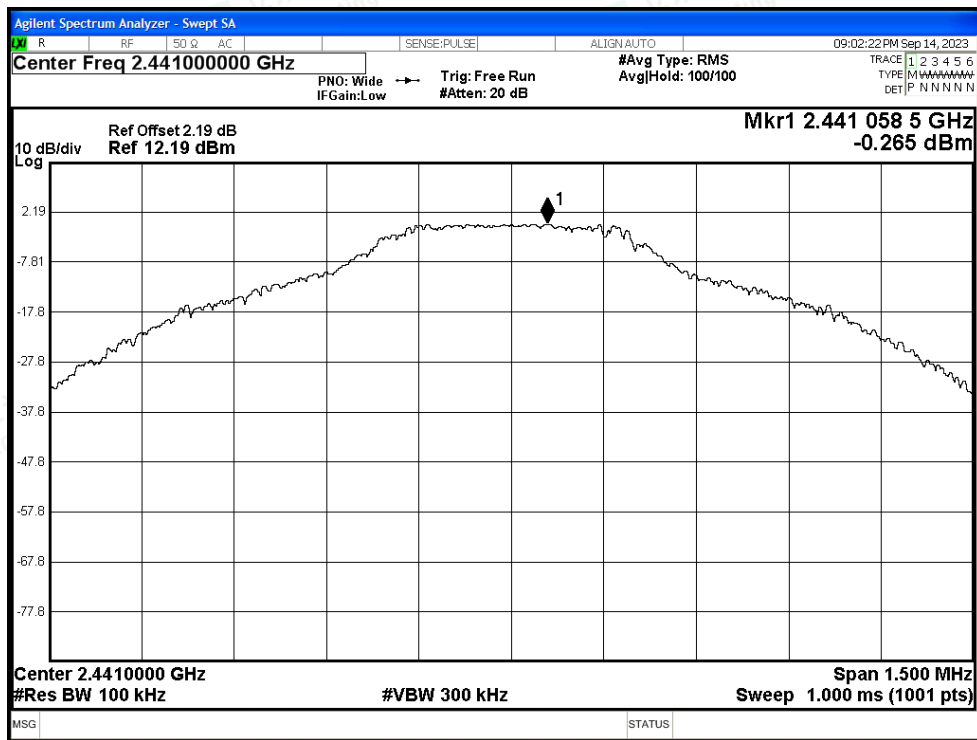


Tx. Spurious NVNT 1-DH5 2402MHz BT ANT Emission

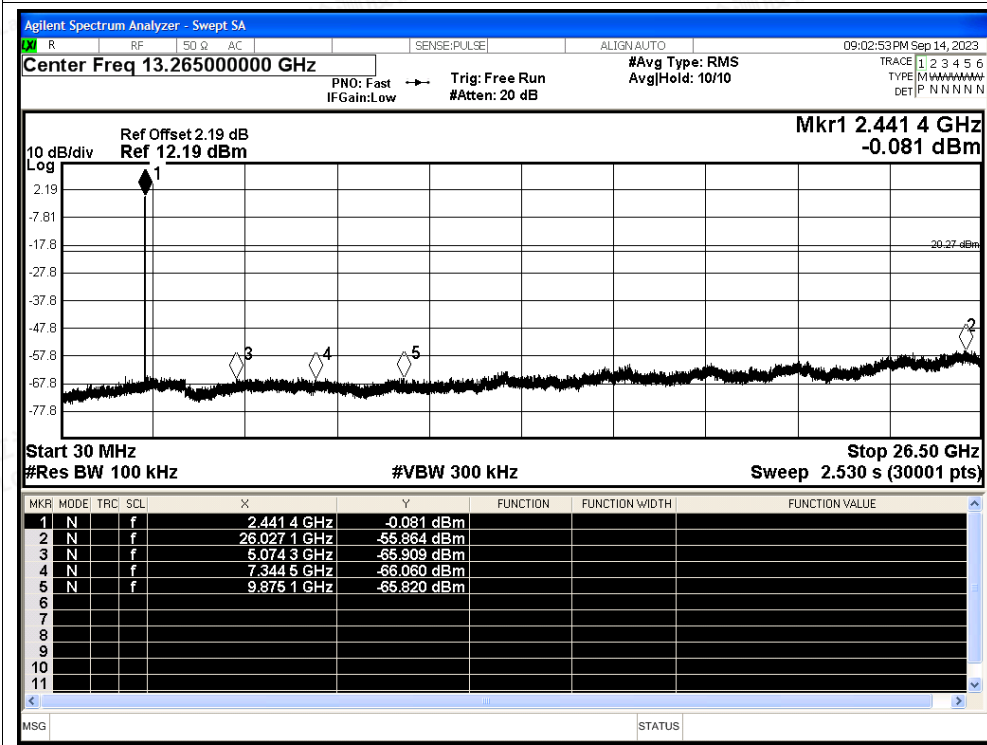




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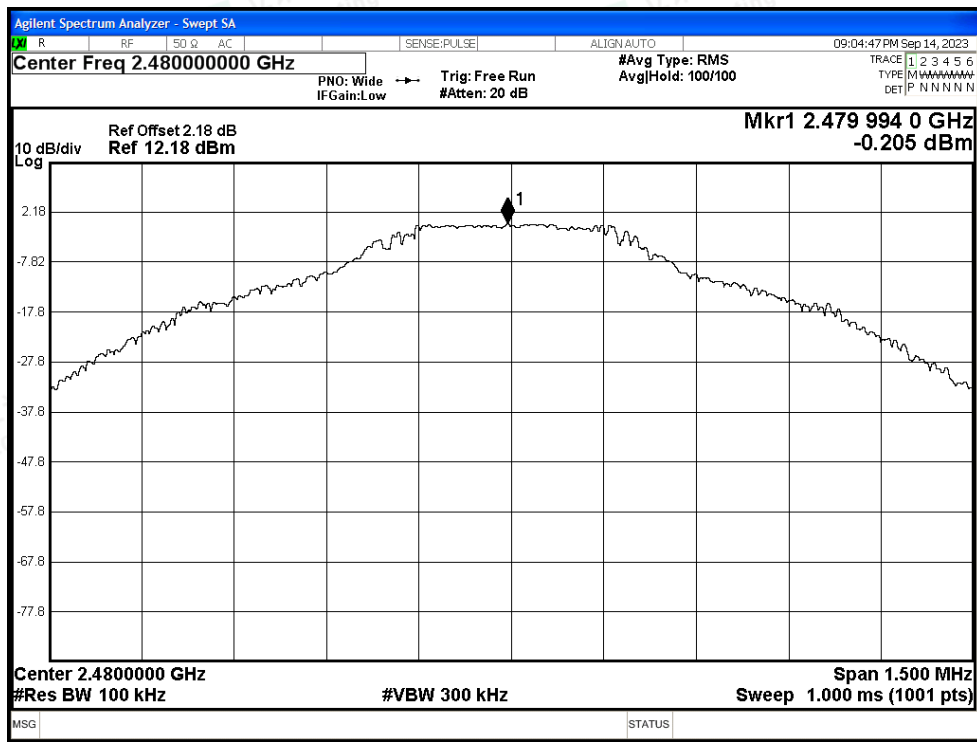


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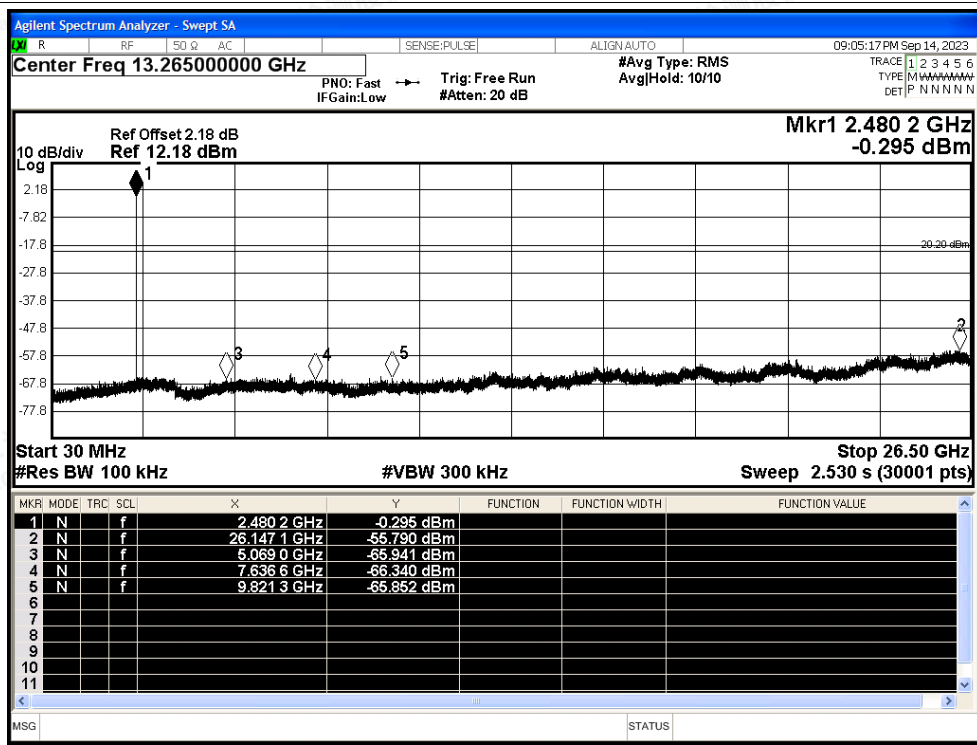




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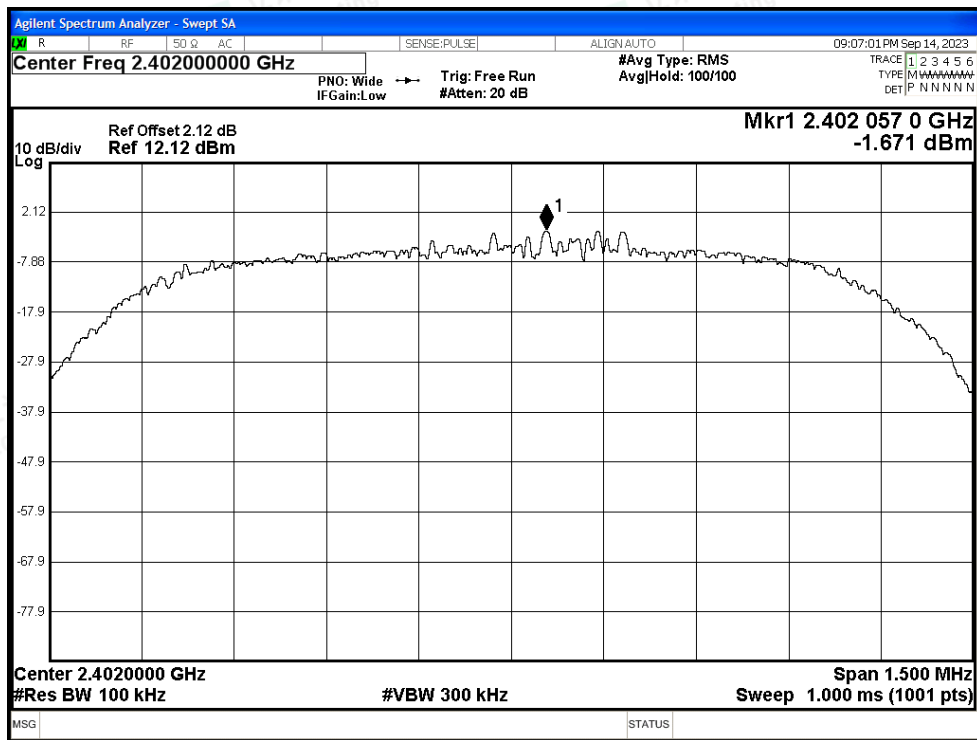


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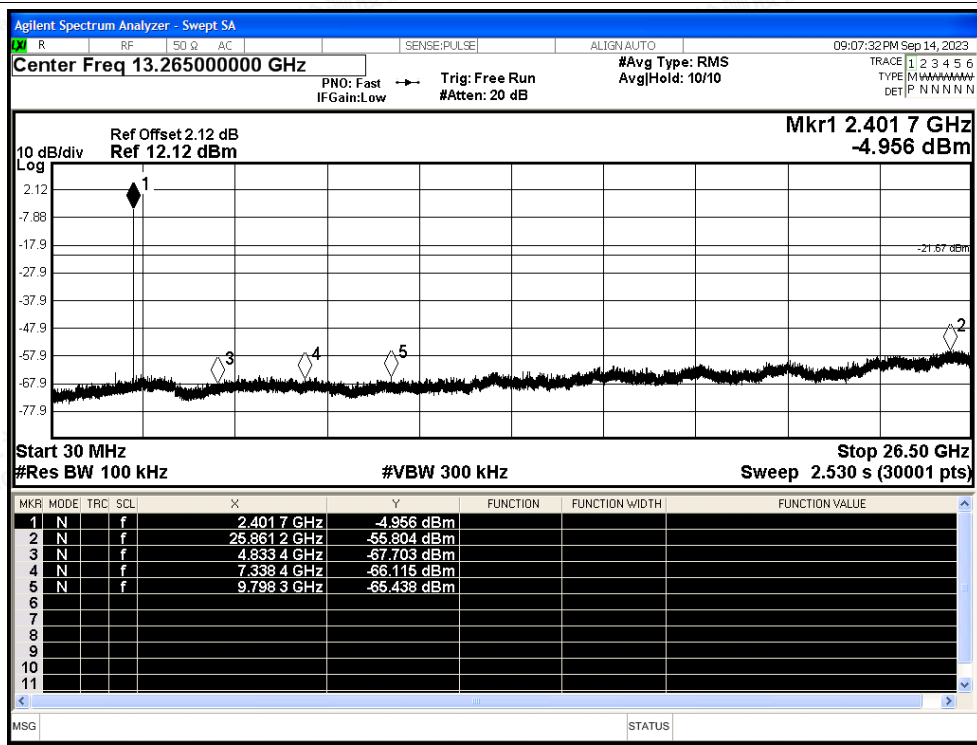




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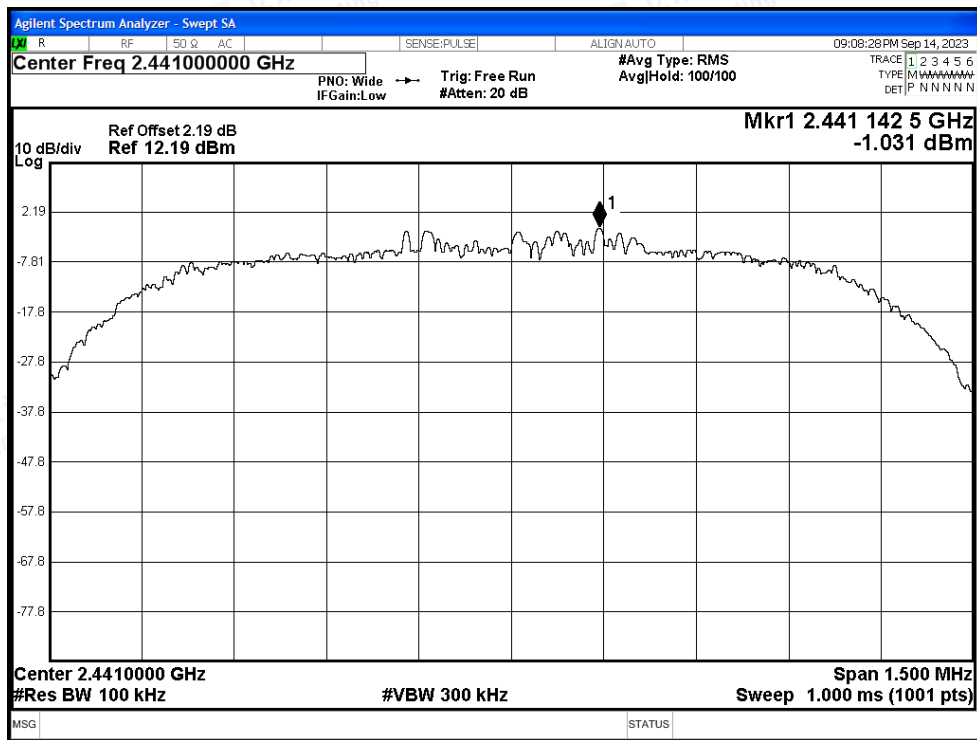


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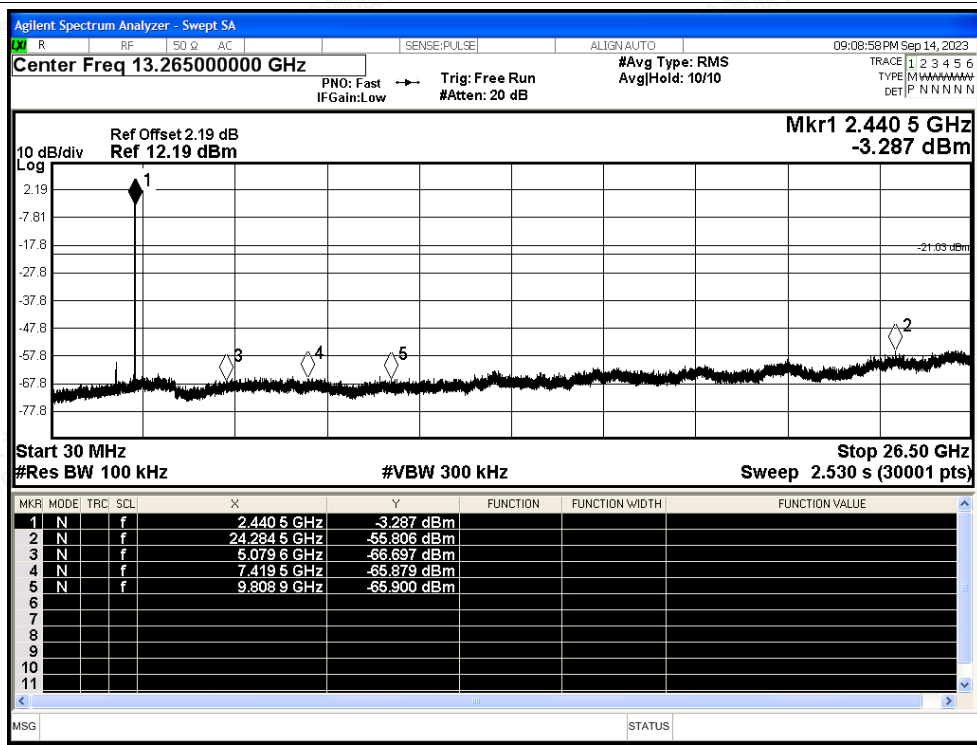




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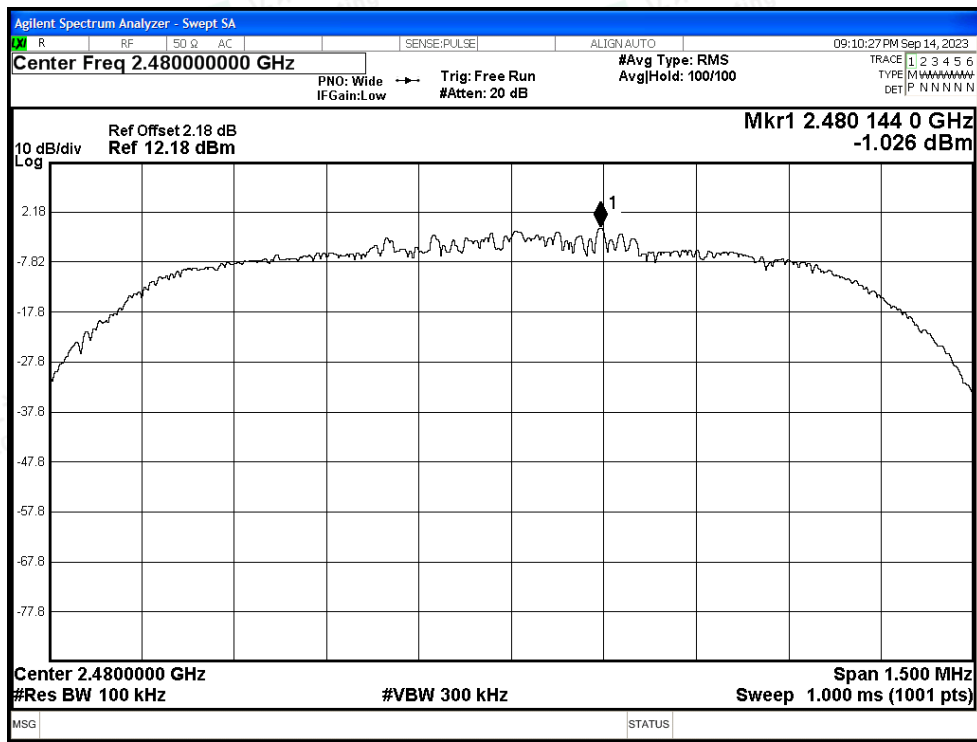


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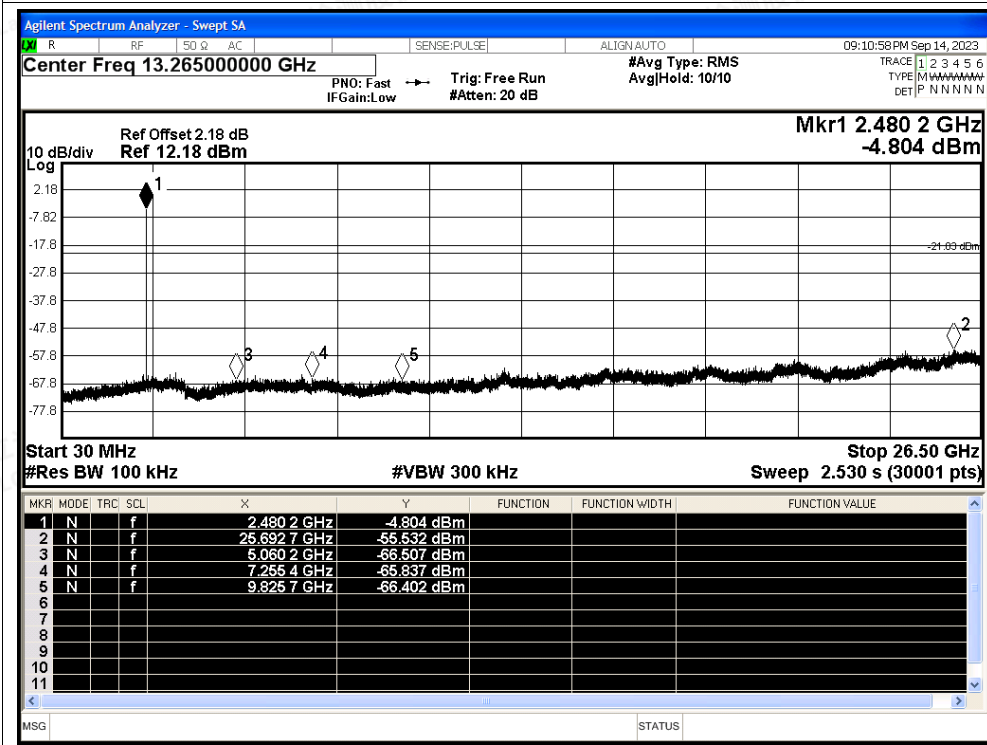




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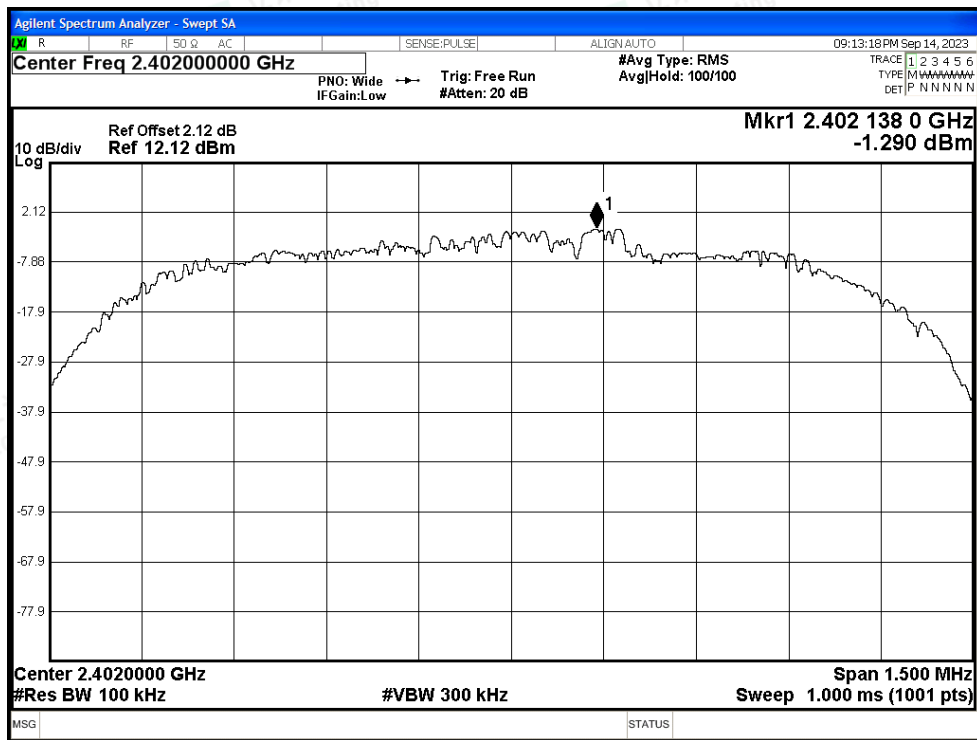


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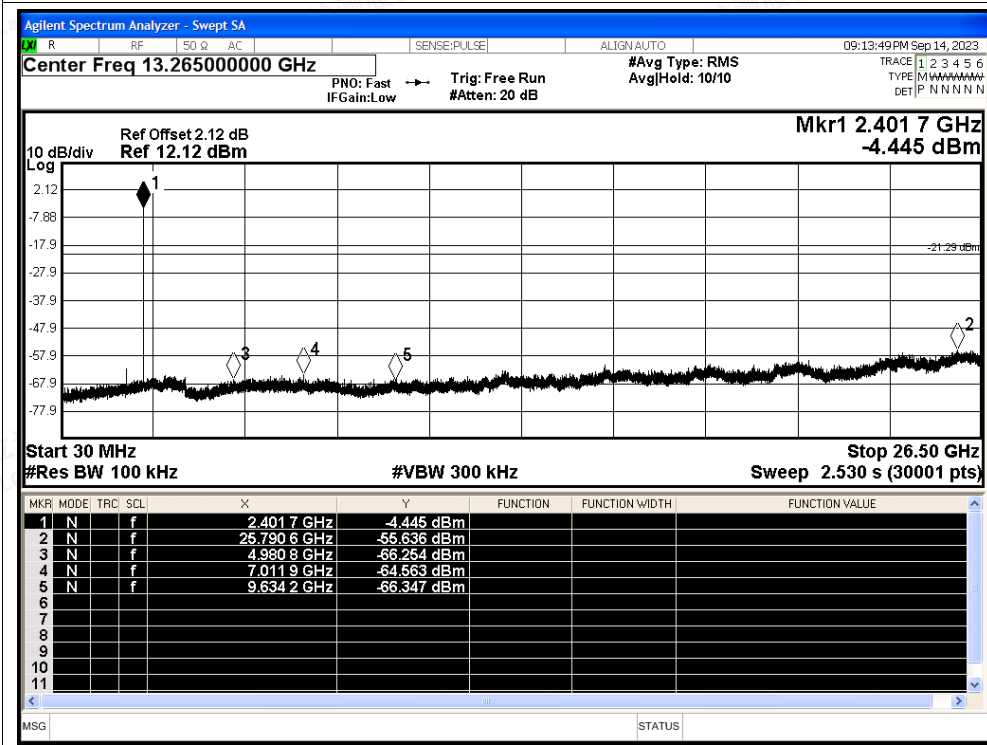




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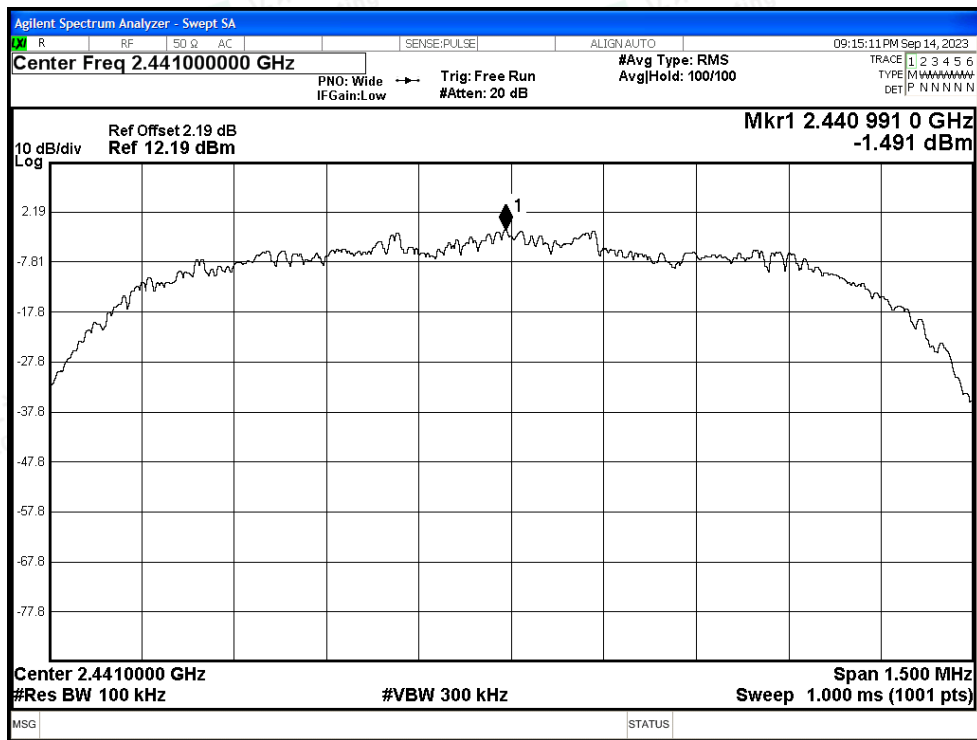


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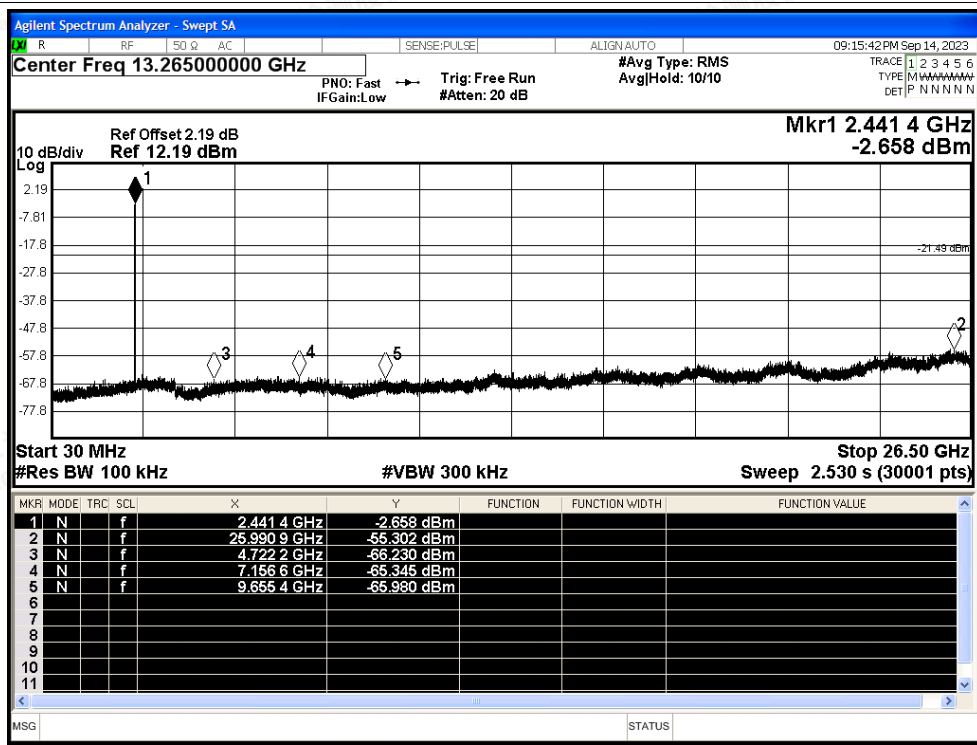




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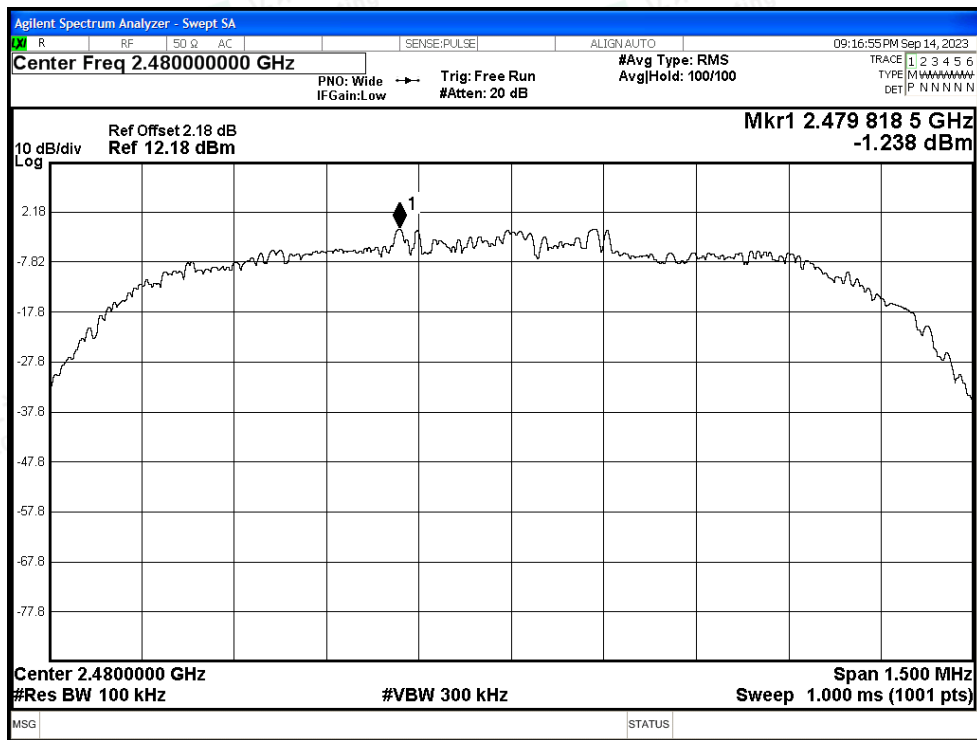


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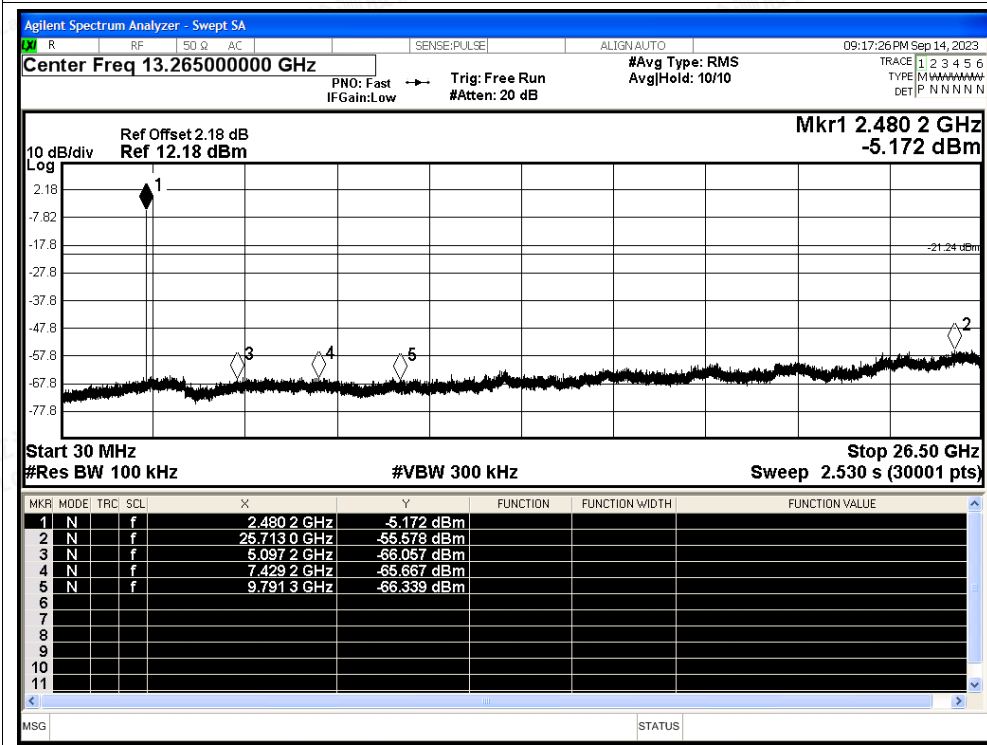




Tx. Spurious NVNT 3-DH5 2480MHz BT ANT Ref



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	-50.84	2	46.42	Peak	74	Pass
NVNT	1-DH5	2402	BT ANT	No-Hopping	2310	-57.89	2	39.37	Average	54	Pass
NVNT	1-DH5	2402	BT ANT	No-Hopping	2360.784	-47.36	2	49.9	Peak	74	Pass
NVNT	1-DH5	2402	BT ANT	No-Hopping	2384.304	-57.37	2	39.89	Average	54	Pass
NVNT	1-DH5	2402	BT ANT	No-Hopping	2390	-51.44	2	45.82	Peak	74	Pass
NVNT	1-DH5	2402	BT ANT	No-Hopping	2390	-57.46	2	39.8	Average	54	Pass
NVNT	1-DH5	2480	BT ANT	No-Hopping	2483.5	-50.79	2	46.47	Peak	74	Pass
NVNT	1-DH5	2480	BT ANT	No-Hopping	2483.5	-55.73	2	41.53	Average	54	Pass
NVNT	1-DH5	2480	BT ANT	No-Hopping	2492.344	-47.26	2	50	Peak	74	Pass
NVNT	1-DH5	2480	BT ANT	No-Hopping	2483.512	-55.73	2	41.53	Average	54	Pass
NVNT	1-DH5	2480	BT ANT	No-Hopping	2500	-48.63	2	48.63	Peak	74	Pass
NVNT	1-DH5	2480	BT ANT	No-Hopping	2500	-57.24	2	40.02	Average	54	Pass
NVNT	2-DH5	2402	BT ANT	No-Hopping	2310	-50.67	2	46.59	Peak	74	Pass
NVNT	2-DH5	2402	BT ANT	No-Hopping	2310	-57.93	2	39.33	Average	54	Pass
NVNT	2-DH5	2402	BT ANT	No-Hopping	2322.864	-47.52	2	49.74	Peak	74	Pass
NVNT	2-DH5	2402	BT ANT	No-Hopping	2388.912	-57.37	2	39.89	Average	54	Pass
NVNT	2-DH5	2402	BT ANT	No-Hopping	2390	-50.5	2	46.76	Peak	74	Pass
NVNT	2-DH5	2402	BT ANT	No-Hopping	2390	-57.54	2	39.72	Average	54	Pass
NVNT	2-DH5	2480	BT ANT	No-Hopping	2483.5	-50.29	2	46.97	Peak	74	Pass
NVNT	2-DH5	2480	BT ANT	No-Hopping	2483.5	-55.65	2	41.61	Average	54	Pass
NVNT	2-DH5	2480	BT ANT	No-Hopping	2498.584	-47.27	2	49.99	Peak	74	Pass
NVNT	2-DH5	2480	BT ANT	No-Hopping	2483.512	-55.65	2	41.61	Average	54	Pass
NVNT	2-DH5	2480	BT ANT	No-Hopping	2500	-48.37	2	48.89	Peak	74	Pass
NVNT	2-DH5	2480	BT ANT	No-Hopping	2500	-57.17	2	40.09	Average	54	Pass
NVNT	3-DH5	2402	BT ANT	No-Hopping	2310	-52.19	2	45.07	Peak	74	Pass
NVNT	3-DH5	2402	BT ANT	No-Hopping	2310	-57.9	2	39.36	Average	54	Pass
NVNT	3-DH5	2402	BT ANT	No-Hopping	2348.496	-47.42	2	49.84	Peak	74	Pass
NVNT	3-DH5	2402	BT ANT	No-Hopping	2389.776	-57.38	2	39.88	Average	54	Pass
NVNT	3-DH5	2402	BT ANT	No-Hopping	2390	-47.66	2	49.6	Peak	74	Pass
NVNT	3-DH5	2402	BT ANT	No-Hopping	2390	-57.54	2	39.72	Average	54	Pass
NVNT	3-DH5	2480	BT ANT	No-Hopping	2483.5	-49.29	2	47.97	Peak	74	Pass
NVNT	3-DH5	2480	BT ANT	No-Hopping	2483.5	-55.6	2	41.66	Average	54	Pass
NVNT	3-DH5	2480	BT ANT	No-Hopping	2489.992	-47.39	2	49.87	Peak	74	Pass
NVNT	3-DH5	2480	BT ANT	No-Hopping	2483.512	-55.6	2	41.66	Average	54	Pass
NVNT	3-DH5	2480	BT ANT	No-Hopping	2500	-50.2	2	47.06	Peak	74	Pass
NVNT	3-DH5	2480	BT ANT	No-Hopping	2500	-57.06	2	40.2	Average	54	Pass

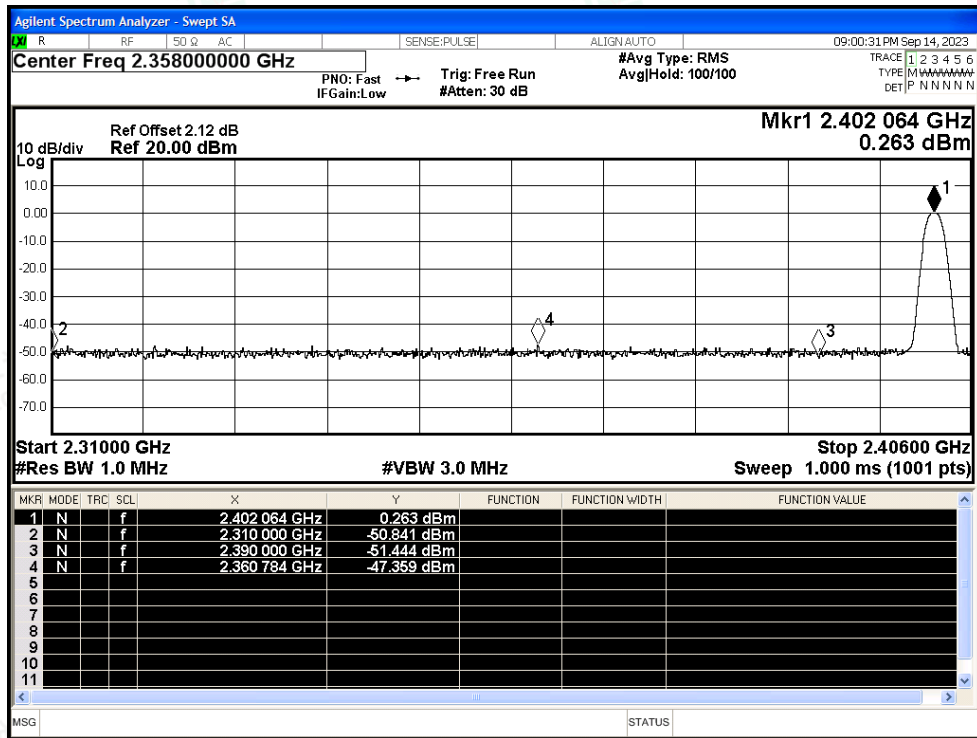


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 Scan code to check authenticity

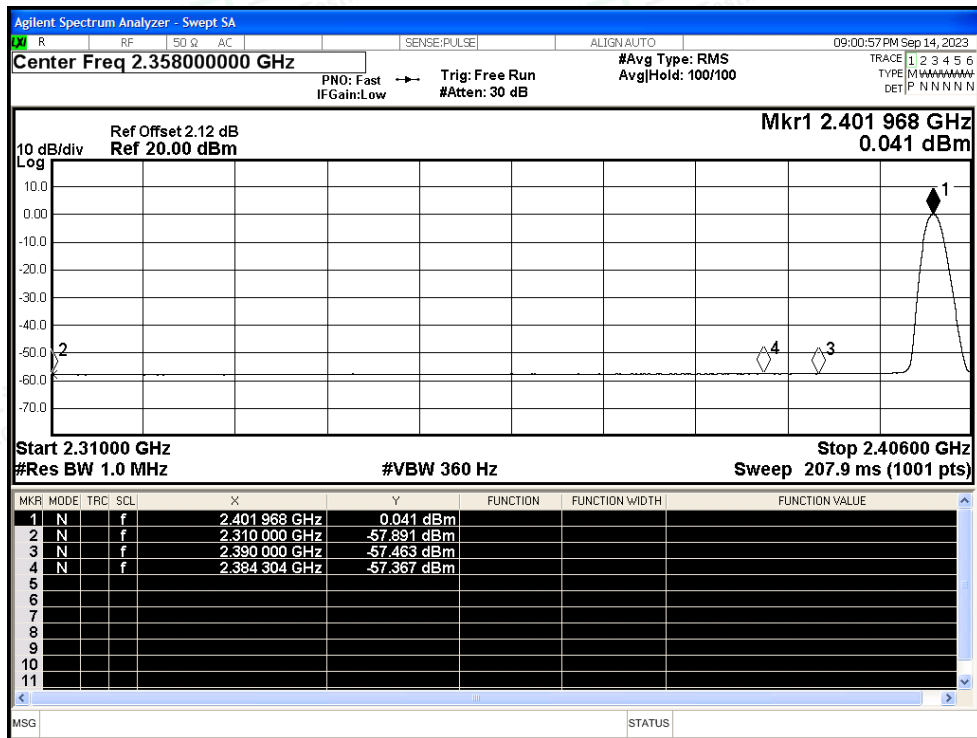


Test Graphs

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

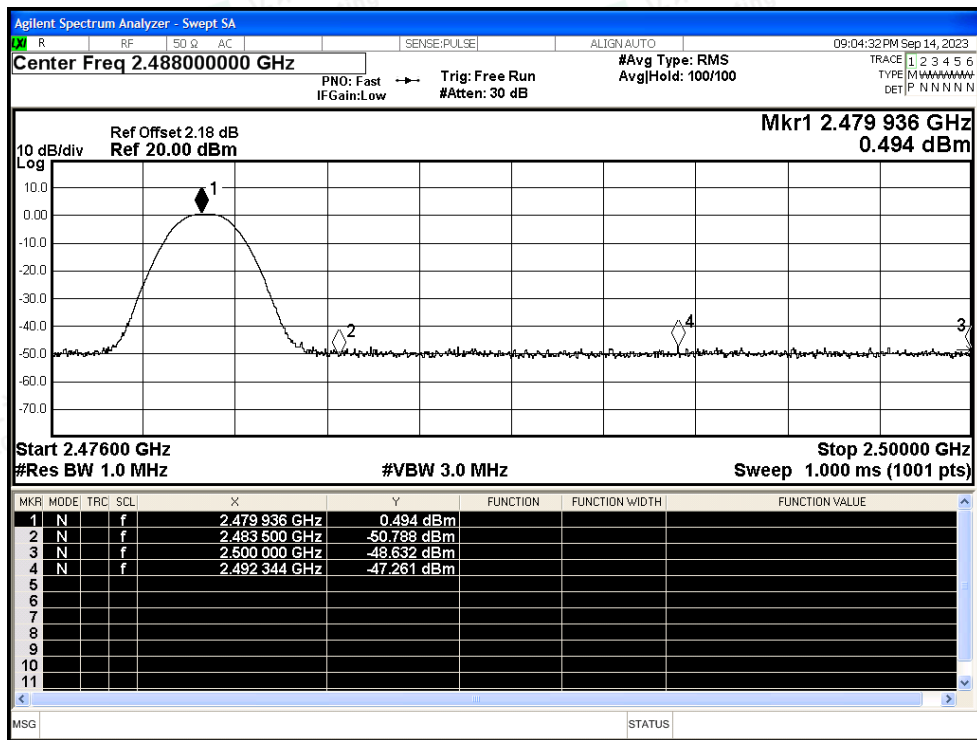


Restrict Band NVNT 1-DH5 2402MHz BT ANT No-Hopping Average

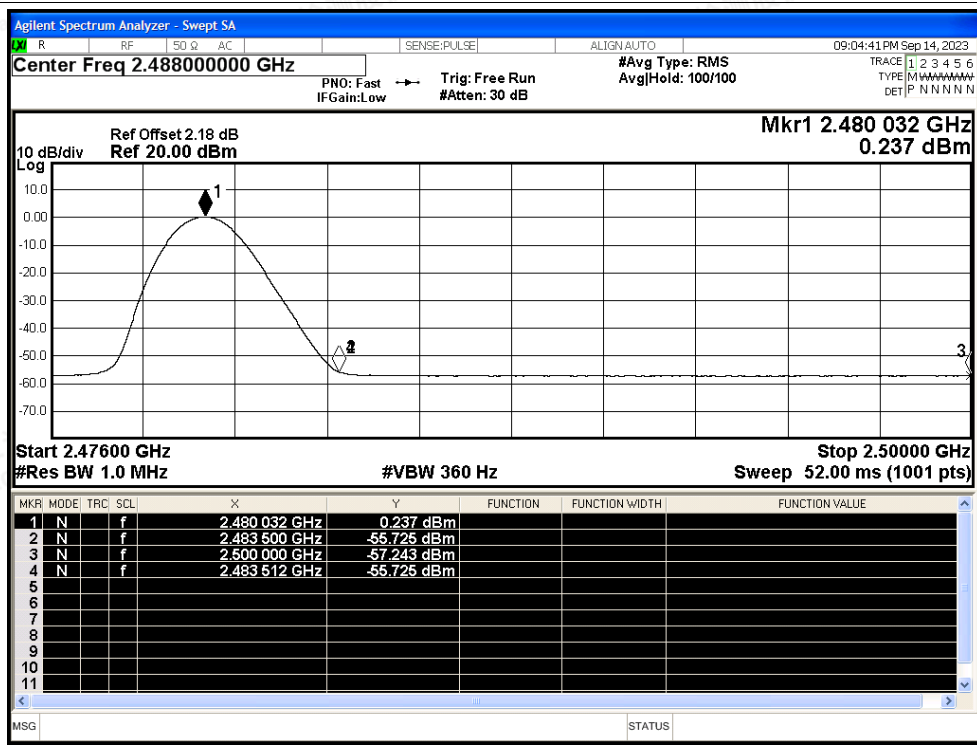




Restrict Band NVNT 1-DH5 2480MHz BT ANT No-Hopping Peak

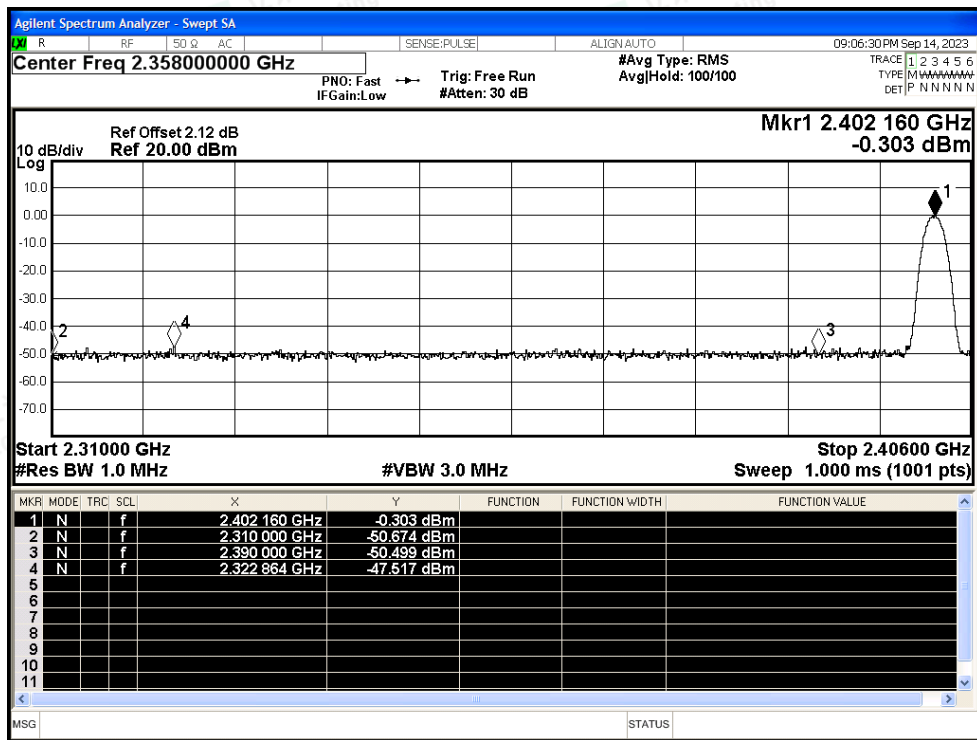


Restrict Band NVNT 1-DH5 2480MHz BT ANT No-Hopping Average

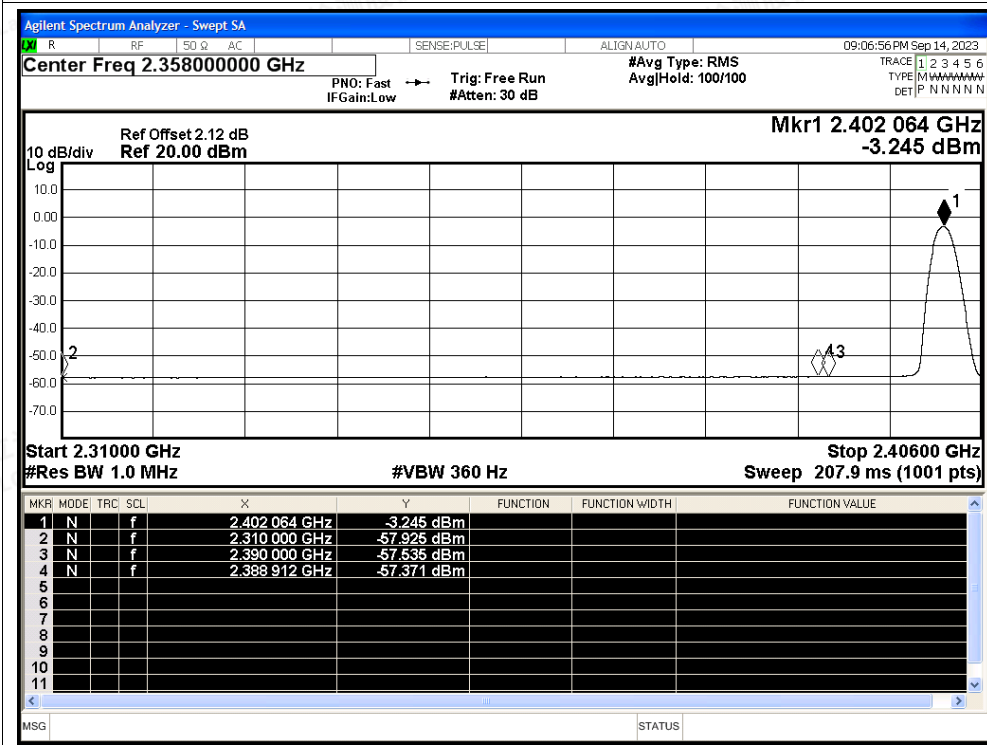




Restrict Band NVNT 2-DH5 2402MHz BT ANT No-Hopping Peak

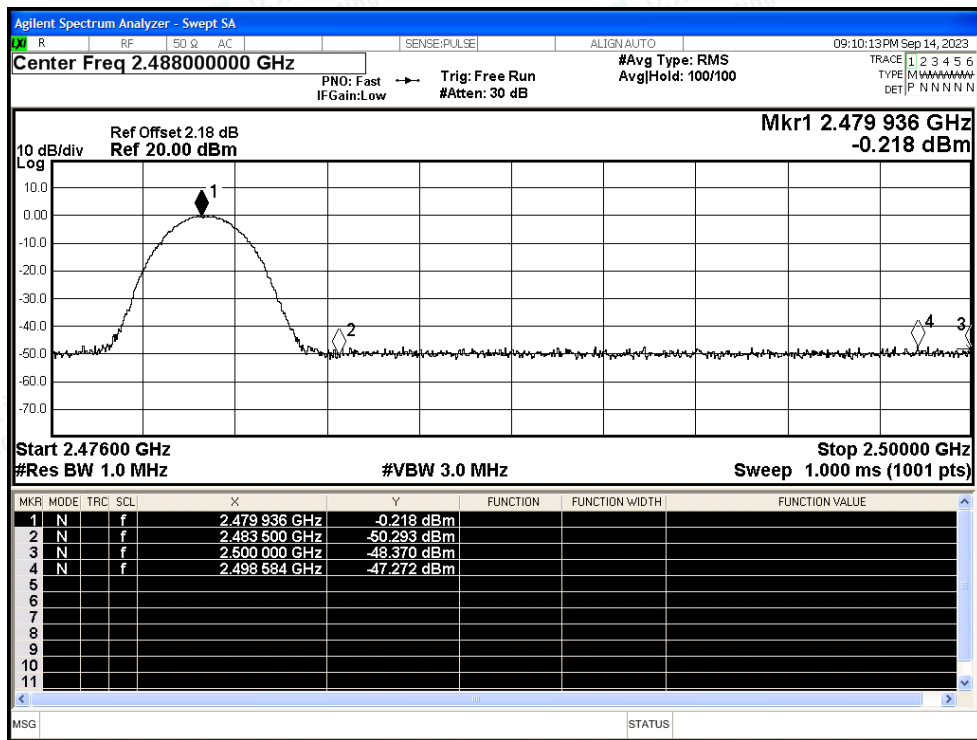


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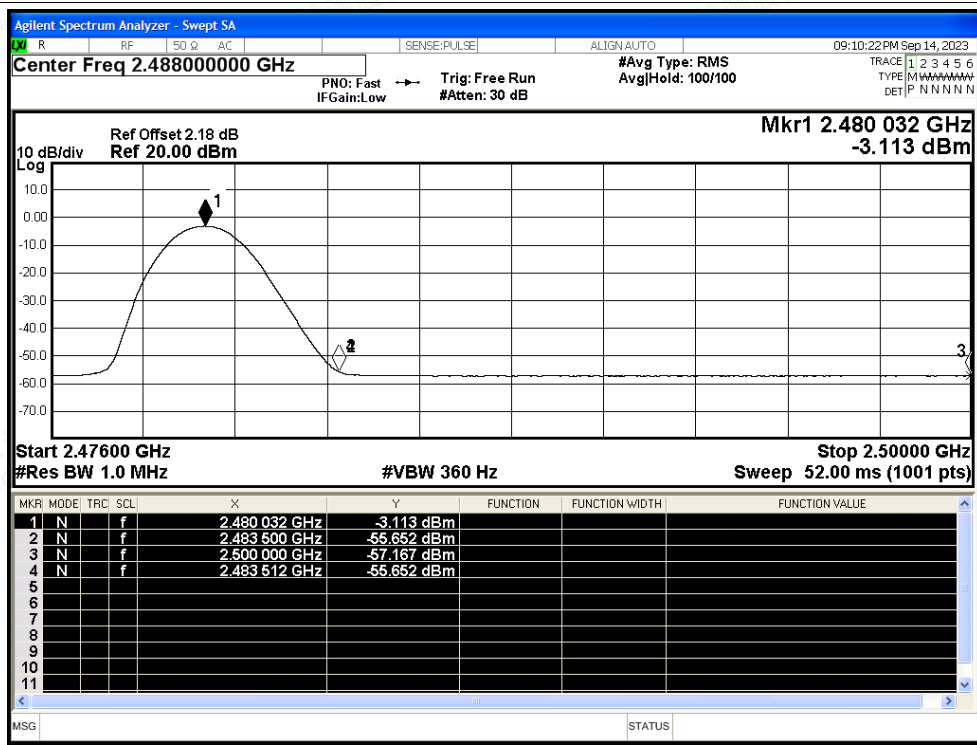




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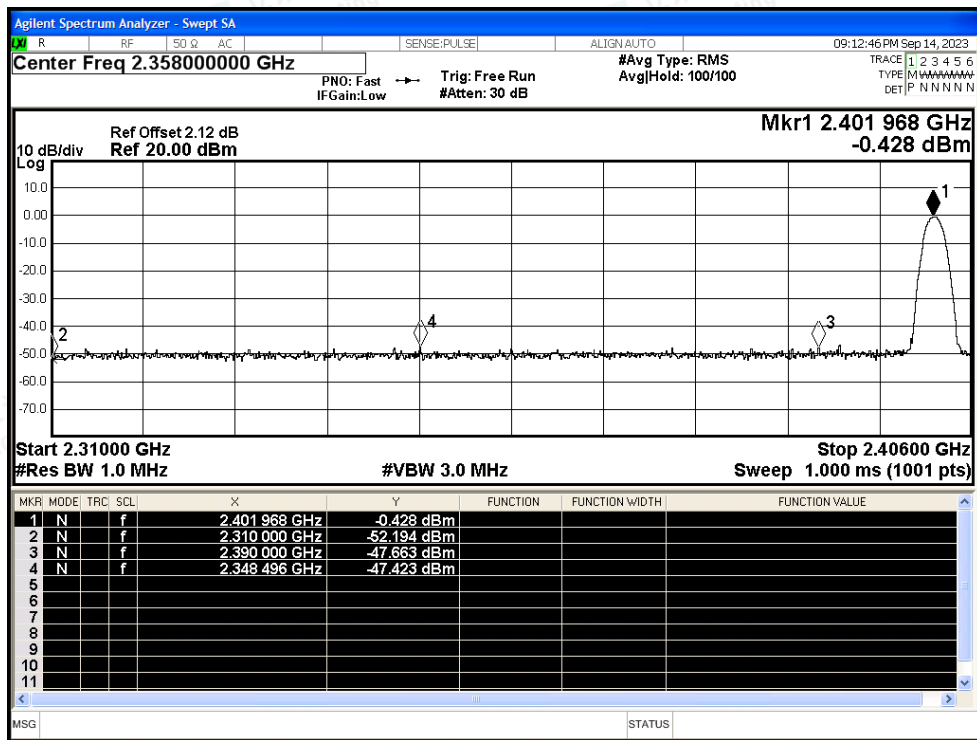


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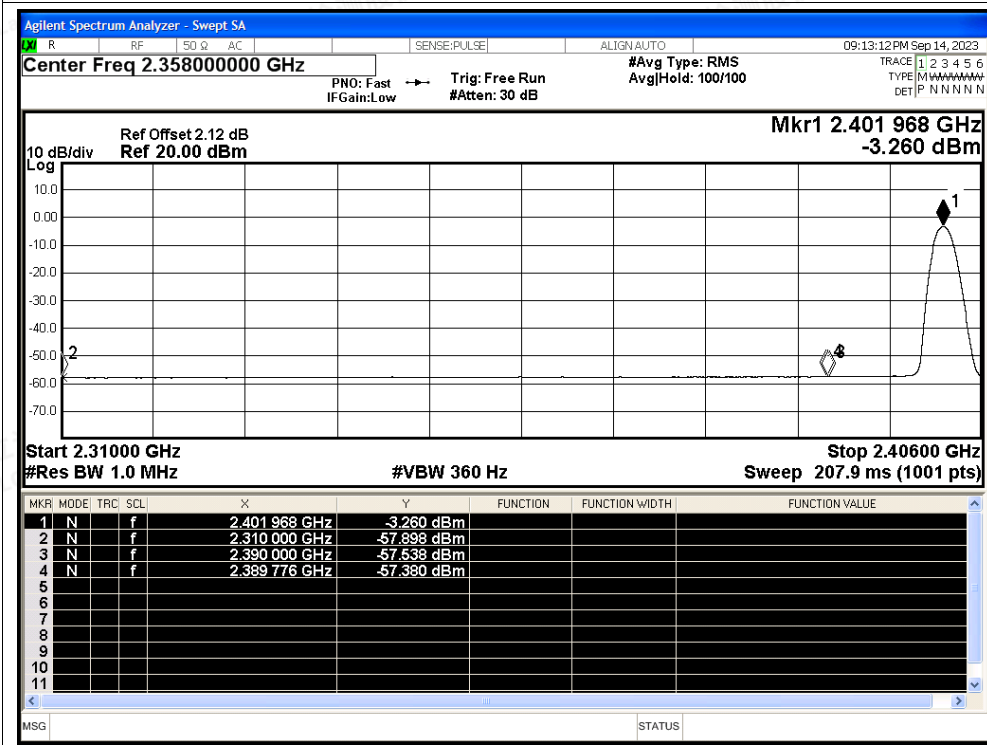




Restrict Band NVNT 3-DH5 2402MHz BT ANT No-Hopping Peak

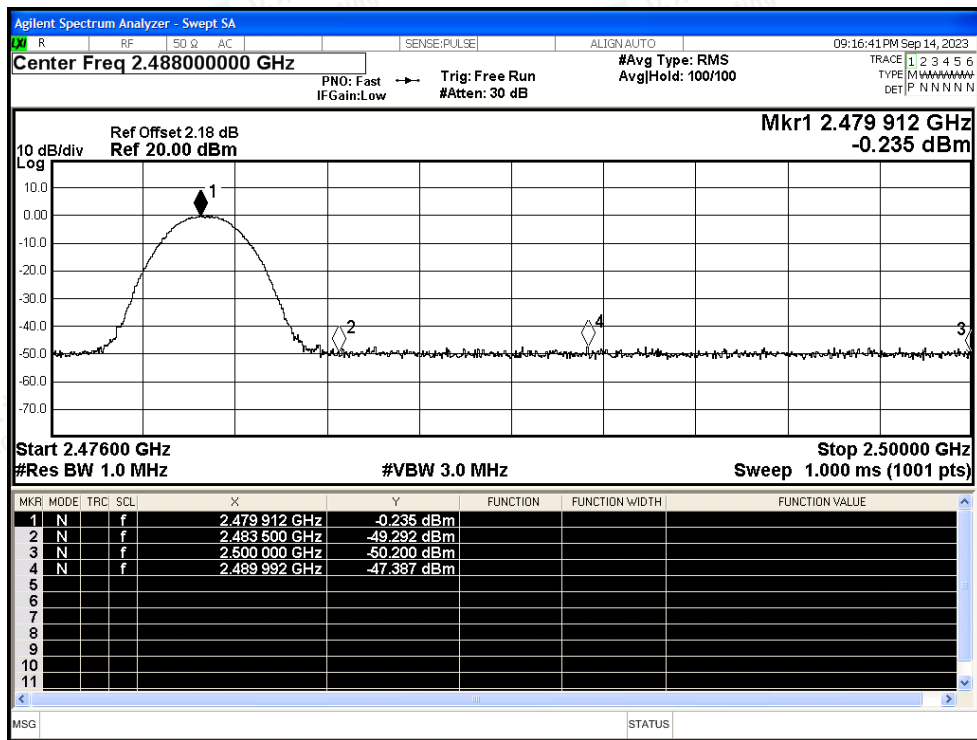


Restrict Band NVNT 3-DH5 2402MHz BT ANT No-Hopping Average





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



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

