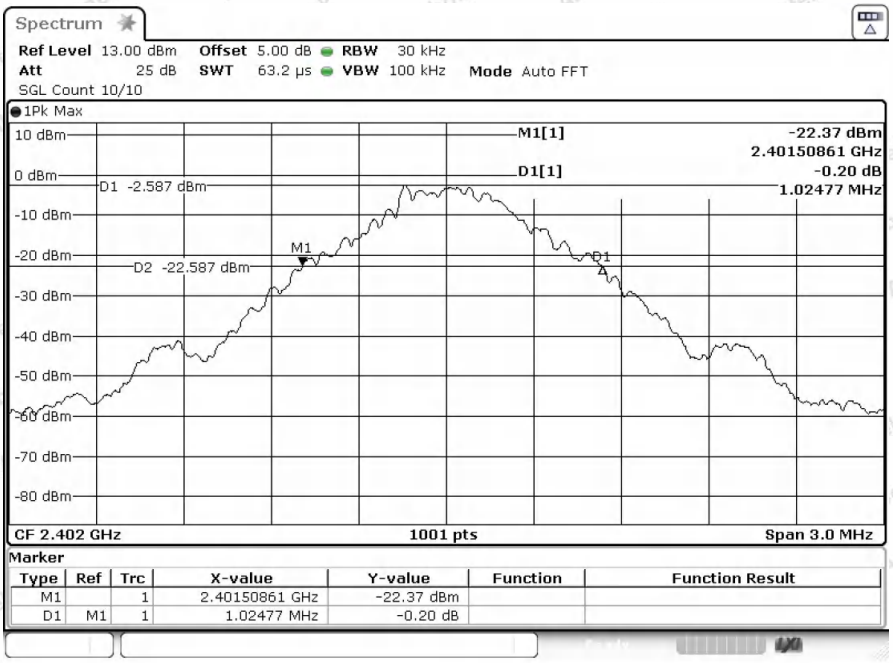
Appendix Test Data

Report No.:	18220WC40076101	Test Sample No.:	1-2-2
Start Test Date:	2024.4.22	Finish Test Date:	2024.4.22
Test Engineer:	Joker Huang	Auditor:	Justin Feng
Temperature:	25.5℃	Relative Humidity:	47%
Pressure:	101kPa		

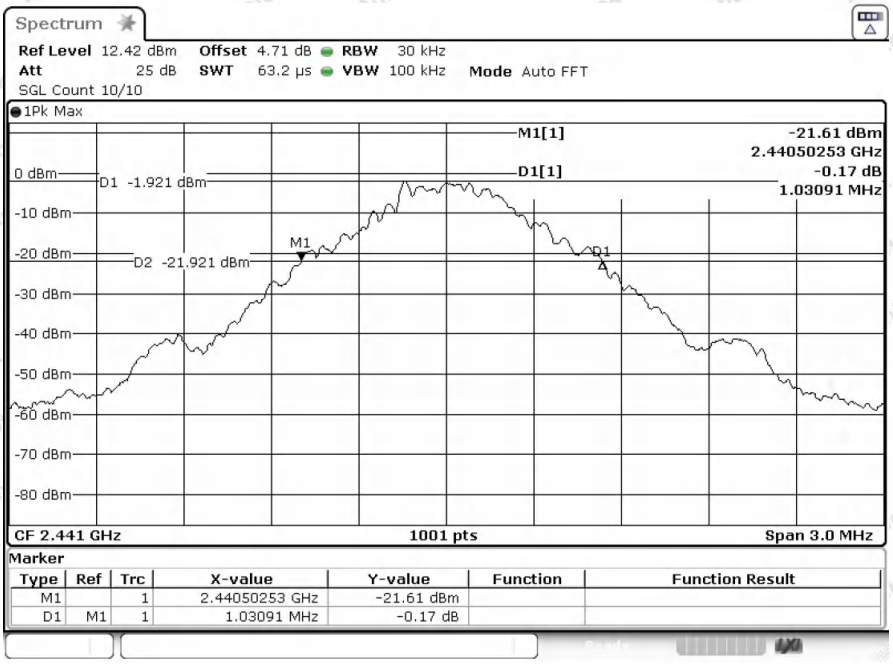
Appendix A: -20dB Bandwidth

Condition	Antenna	Modulation	Frequency (MHz)	-20dB BW(MHz)	if larger than CFS
NVNT	ANT1	1-DH5	2402.00	1.025	Yes
NVNT	ANT1	1-DH5	2441.00	1.031	Yes
NVNT	ANT1	1-DH5	2480.00	1.034	Yes
NVNT	ANT1	2-DH5	2402.00	1.325	Yes
NVNT	ANT1	2-DH5	2441.00	1.328	Yes
NVNT	ANT1	2-DH5	2480.00	1.328	Yes
NVNT	ANT1	3-DH5	2402.00	1.295	Yes
NVNT	ANT1	3-DH5	2441.00	1.289	Yes
NVNT	ANT1	3-DH5	2480.00	1.286	Yes

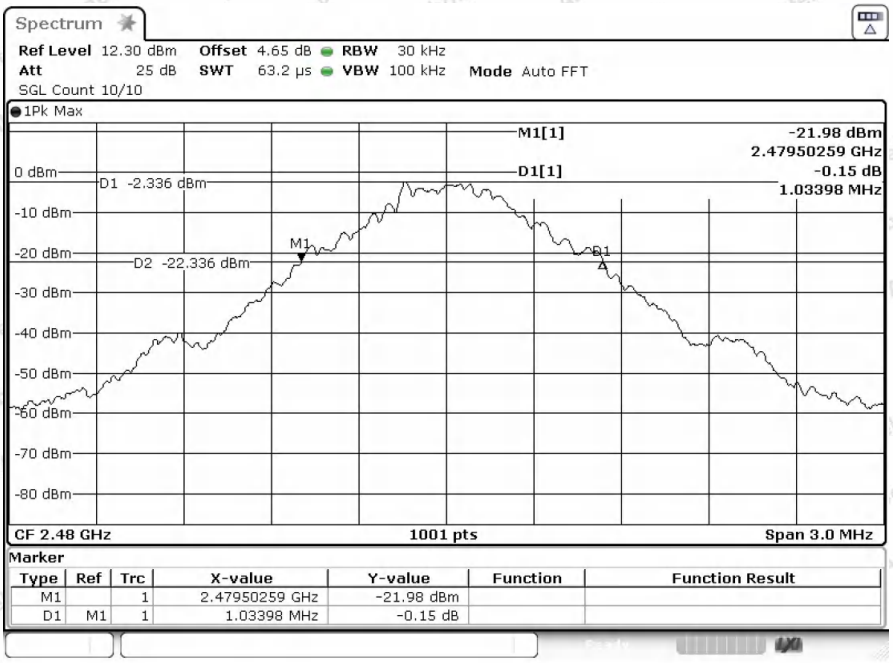
-20dB_Bandwidth_NVNT_ANT1_1-DH5_2402



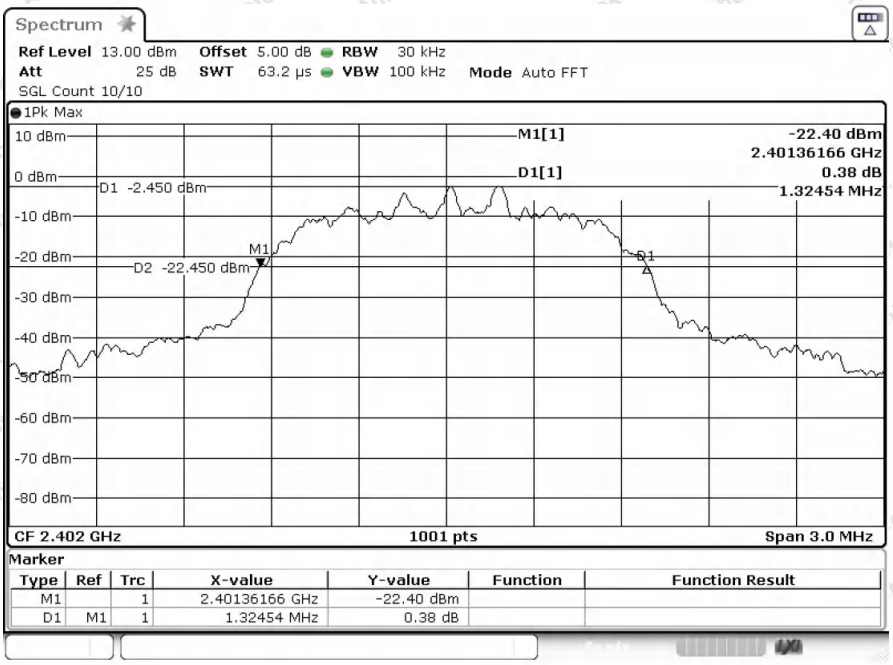
-20dB_Bandwidth_NVNT_ANT1_1-DH5_2441



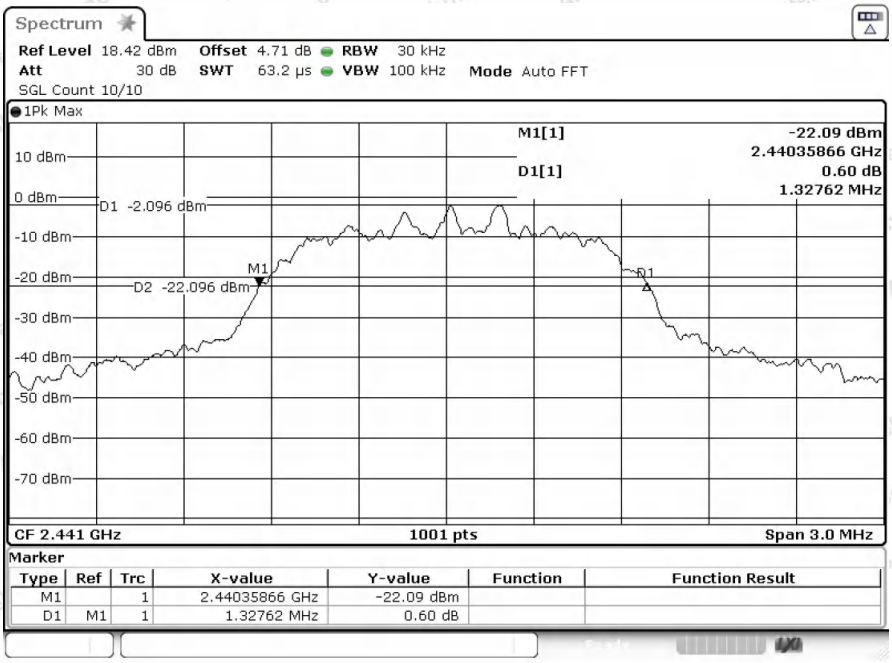
-20dB_Bandwidth_NVNT_ANT1_1-DH5_2480



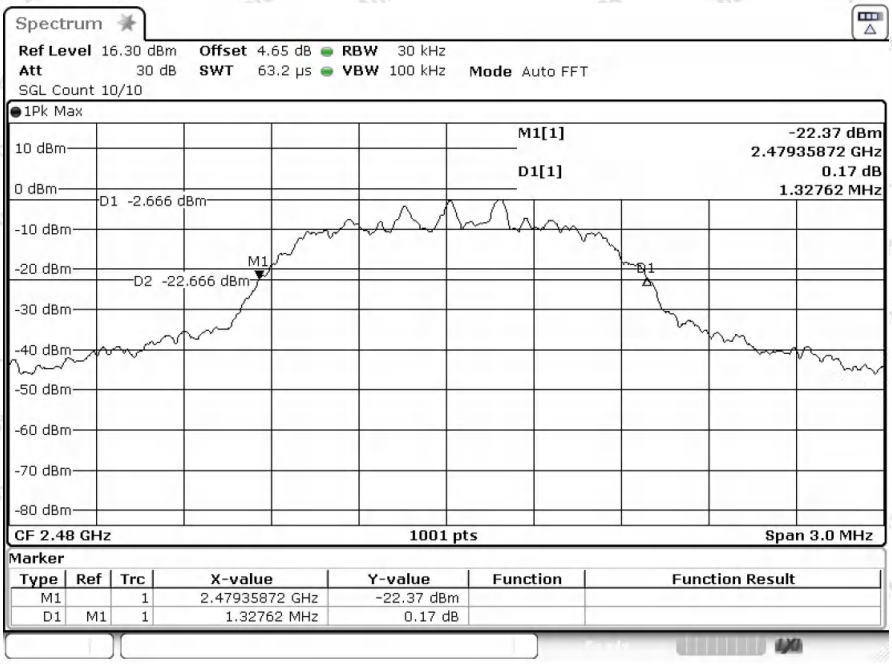
-20dB_Bandwidth_NVNT_ANT1_2-DH5_2402



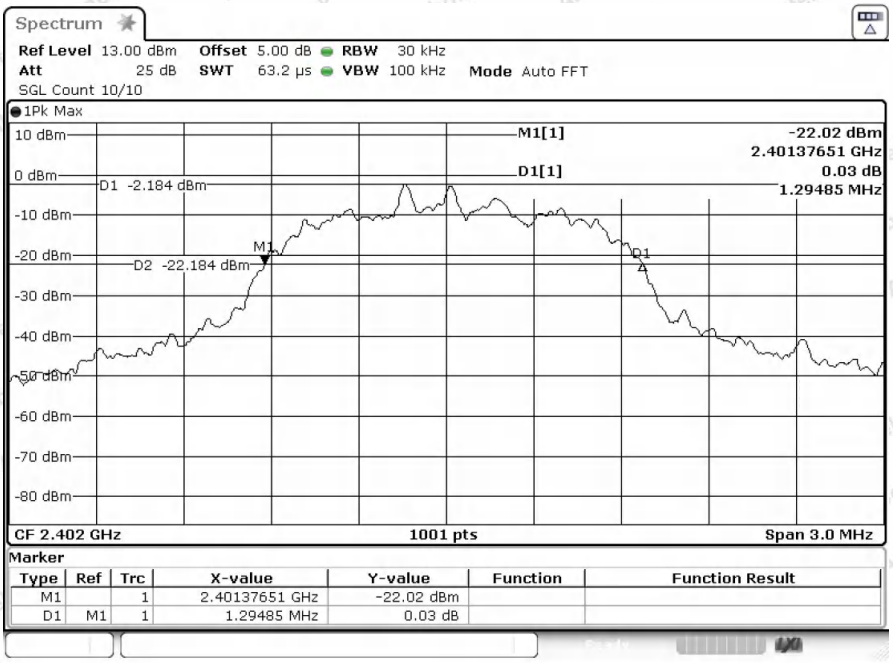
-20dB_Bandwidth_NVNT_ANT1_2-DH5_2441



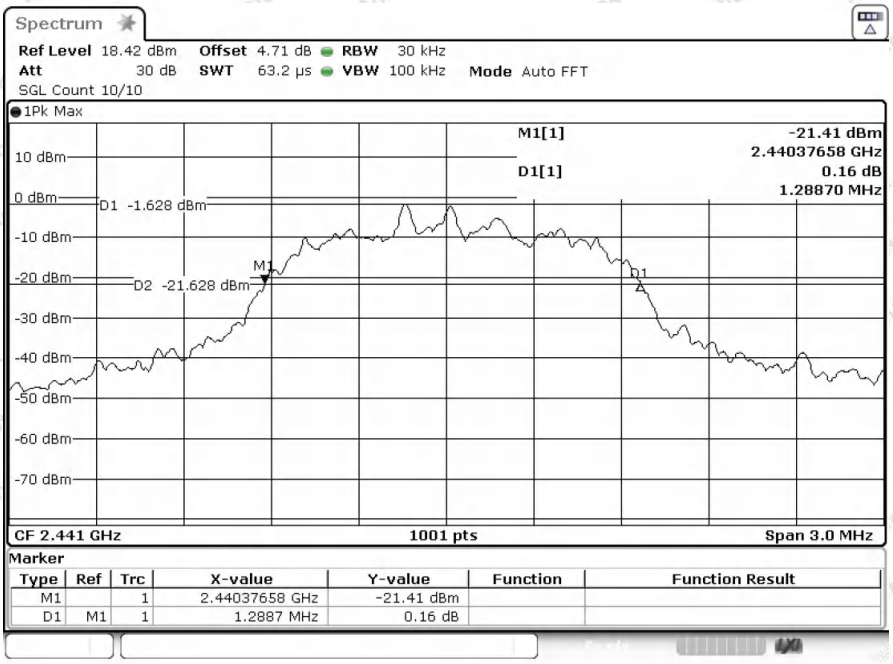
-20dB_Bandwidth_NVNT_ANT1_2-DH5_2480



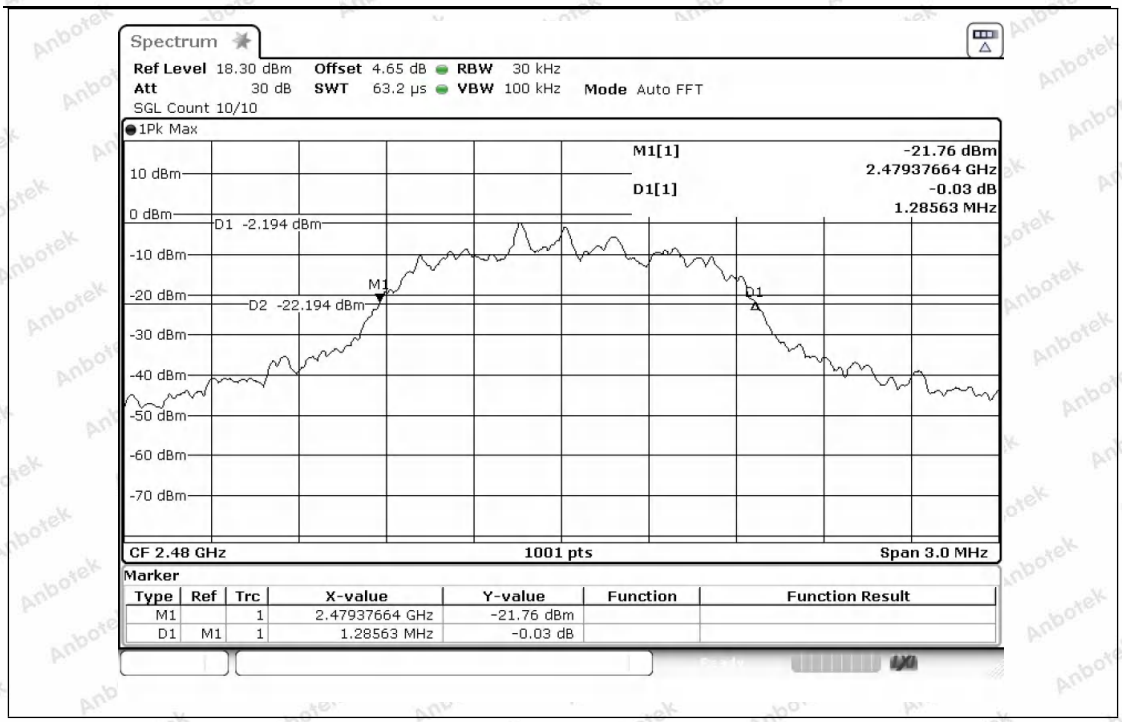
-20dB_Bandwidth_NVNT_ANT1_3-DH5_2402



-20dB_Bandwidth_NVNT_ANT1_3-DH5_2441



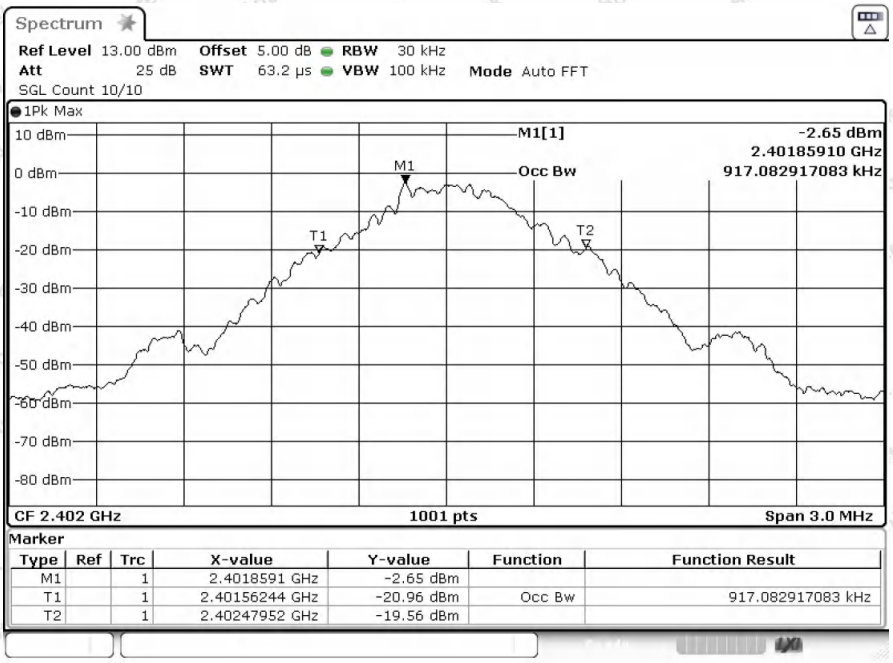
-20dB_Bandwidth_NVNT_ANT1_3-DH5_2480


Spectrum
Ref Level 18.30 dBm Offset 4.65 dB RBW 30 kHz
Att 30 dB SWT 63.2 µs VBW 100 kHz Mode Auto FFT
SGL Count 10/10
1Pk Max
M1[1] -21.76 dBm
2.47937664 GHz
D1[1] -0.03 dB
1.28563 MHz
D1 -2.194 dBm
D2 -22.194 dBm
M1
D1
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
CF 2.48 GHz
1001 pts
Span 3.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 2.47937664 GHz -21.76 dBm
D1 M1 1 1.28563 MHz -0.03 dB

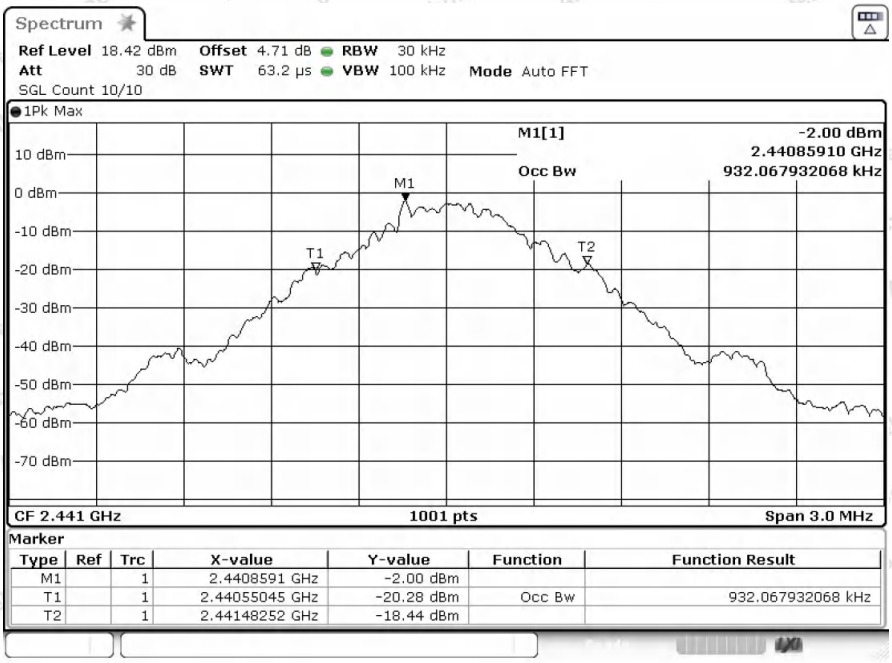
Appendix B: 99% Occupied Bandwidth

Condition	Antenna	Modulation	Frequency (MHz)	99%%BW(MHz)
NVNT	ANT1	1-DH5	2402.00	0.917
NVNT	ANT1	1-DH5	2441.00	0.932
NVNT	ANT1	1-DH5	2480.00	0.947
NVNT	ANT1	2-DH5	2402.00	1.202
NVNT	ANT1	2-DH5	2441.00	1.211
NVNT	ANT1	2-DH5	2480.00	1.226
NVNT	ANT1	3-DH5	2402.00	1.202
NVNT	ANT1	3-DH5	2441.00	1.208
NVNT	ANT1	3-DH5	2480.00	1.214

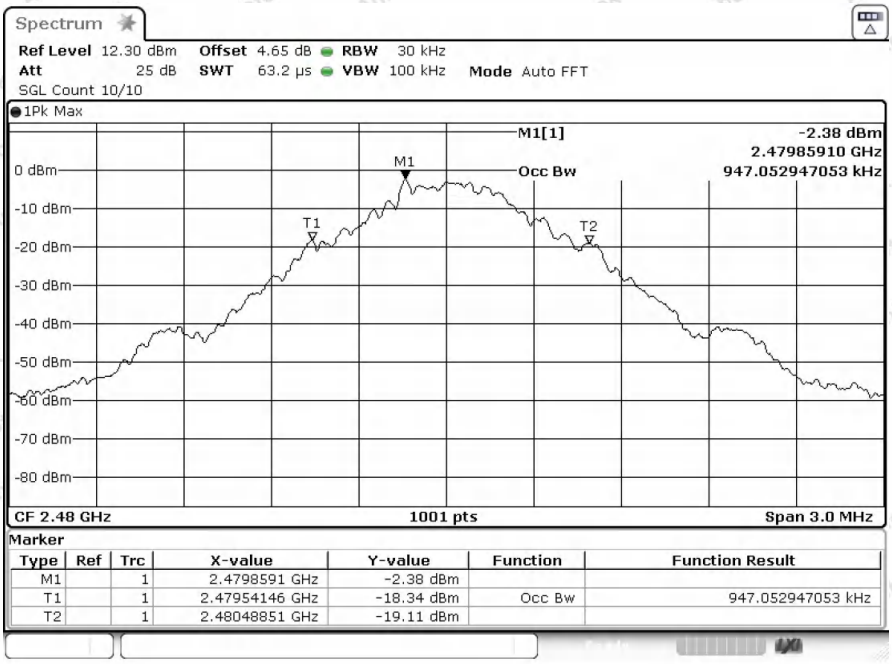
99%_Occupied_Bandwidth_NVNT_ANT1_1-DH5_2402



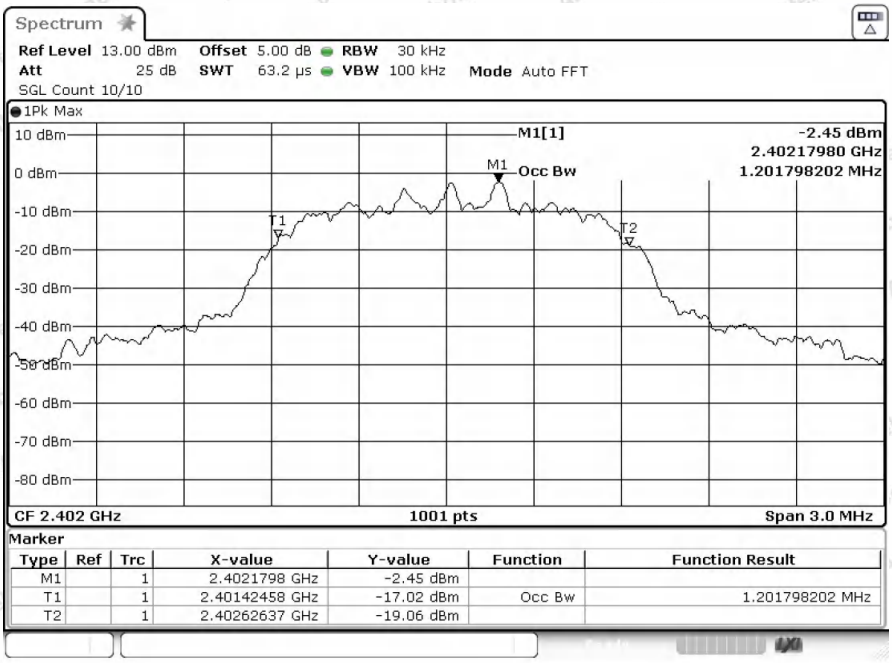
99%_Occupied_Bandwidth_NVNT_ANT1_1-DH5_2441



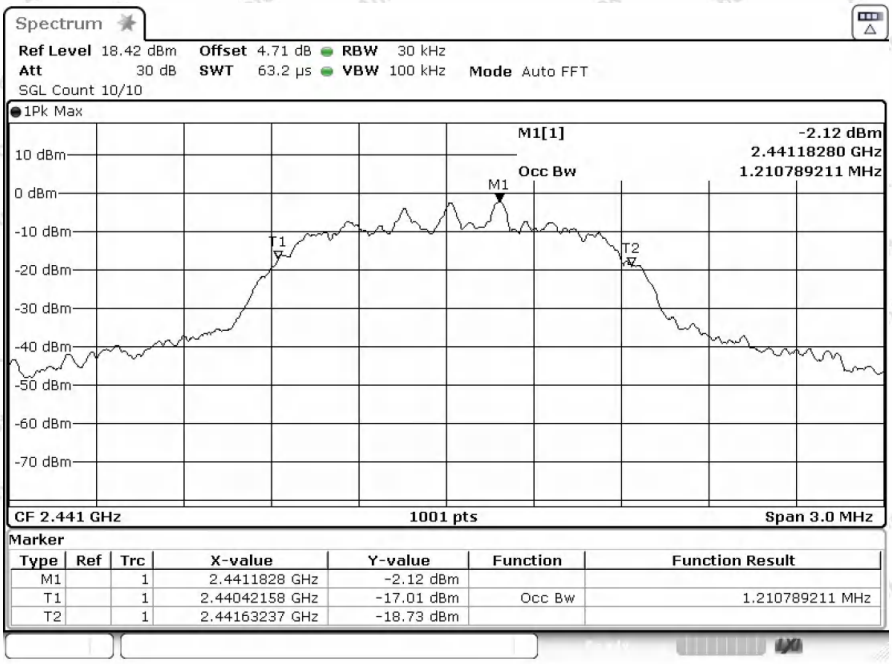
99%_Occupied_Bandwidth_NVNT_ANT1_1-DH5_2480



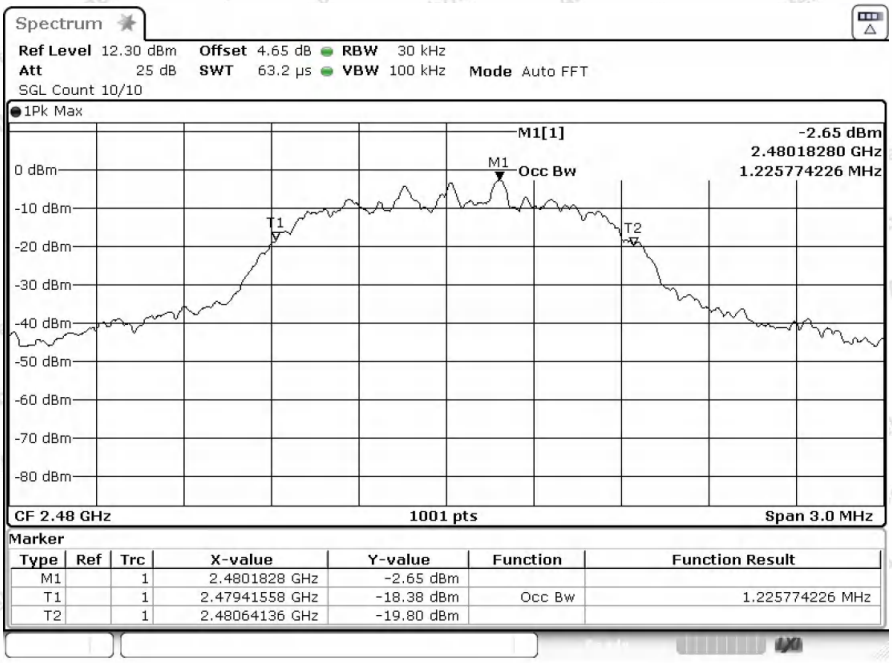
99%_Occupied_Bandwidth_NVNT_ANT1_2-DH5_2402



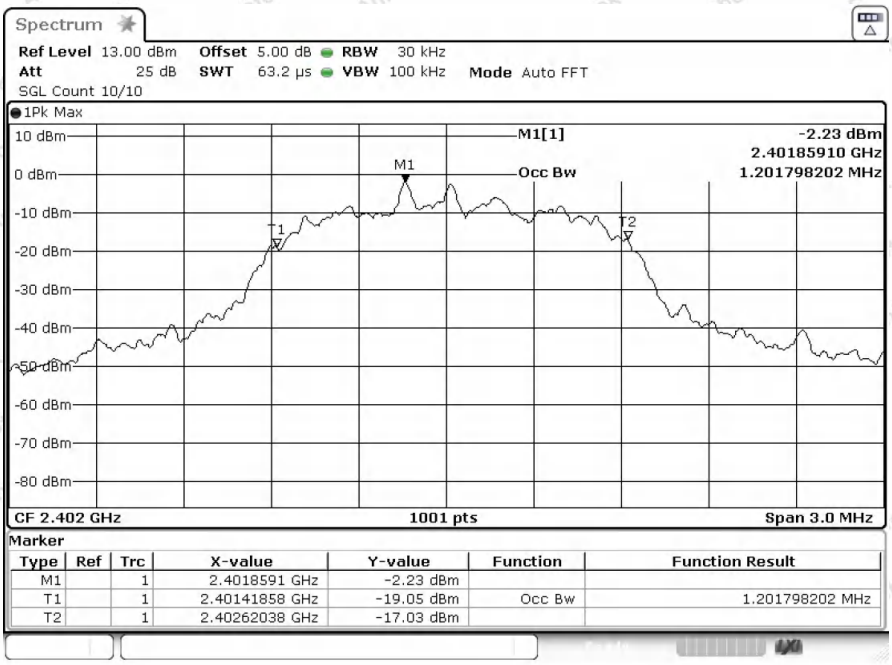
99%_Occupied_Bandwidth_NVNT_ANT1_2-DH5_2441



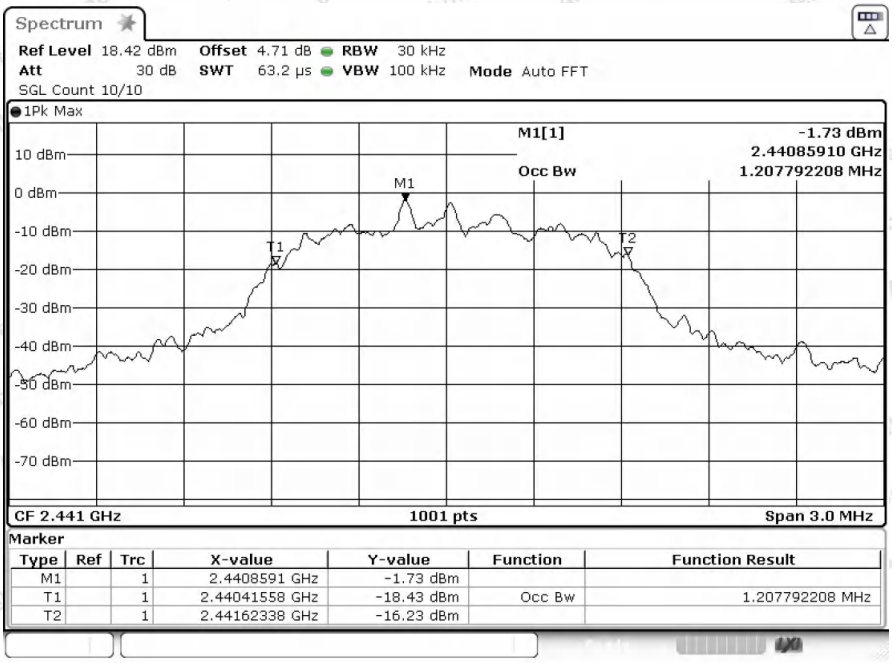
99%_Occupied_Bandwidth_NVNT_ANT1_2-DH5_2480



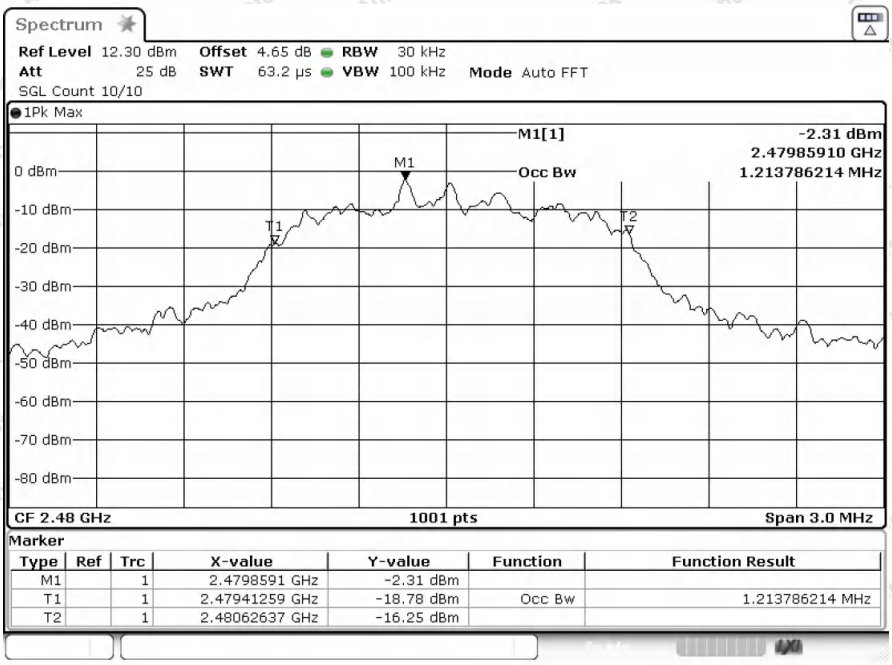
99%_Occupied_Bandwidth_NVNT_ANT1_3-DH5_2402



99%_Occupied_Bandwidth_NVNT_ANT1_3-DH5_2441



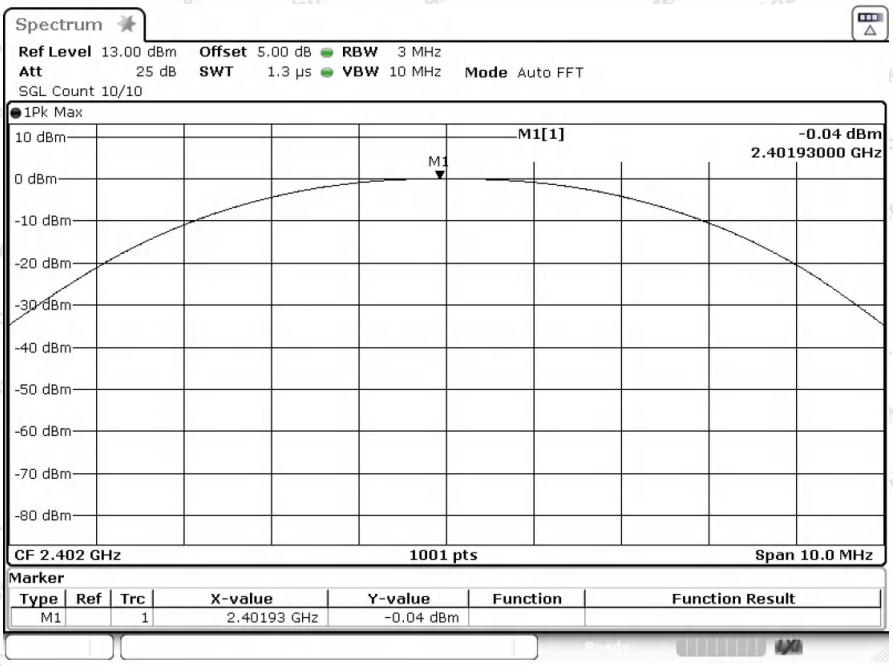
99%_Occupied_Bandwidth_NVNT_ANT1_3-DH5_2480



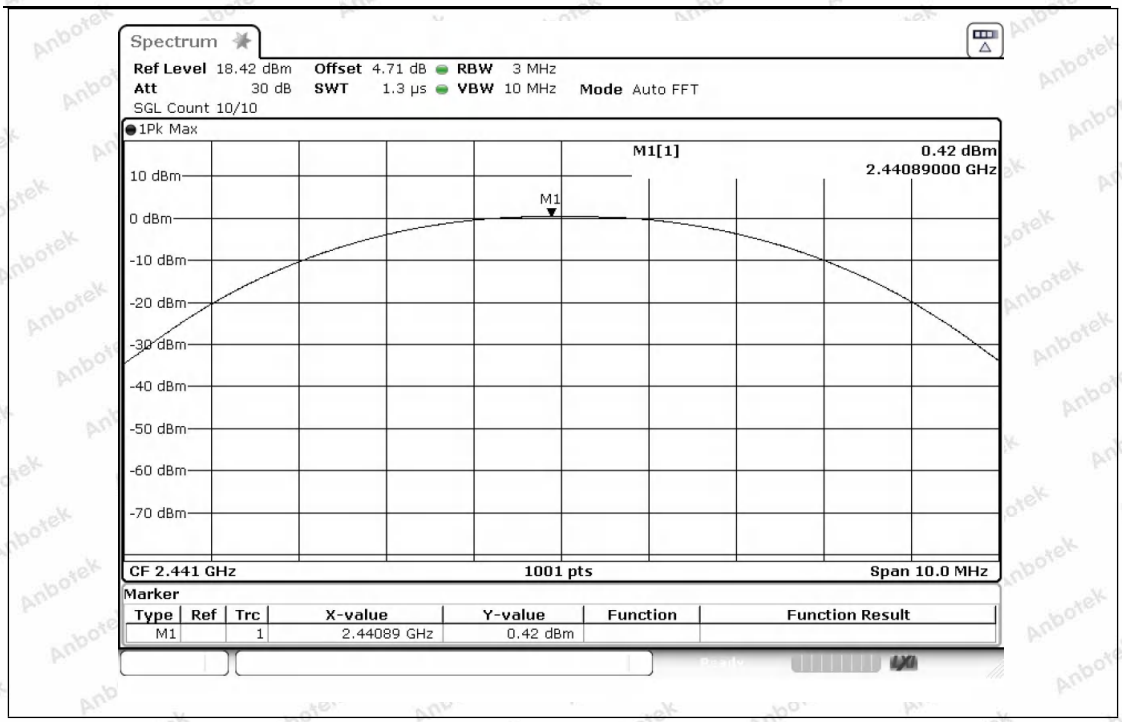
Appendix C: Peak Output Power

Condition	Antenna	Modulation	Frequency (MHz)	Max. Conducted Power(dBm)	Max. Conducted Power(mW)	Limit(mW)	Result
NVNT	ANT1	1-DH5	2402.00	-0.04	0.99	125	Pass
NVNT	ANT1	1-DH5	2441.00	0.42	1.10	125	Pass
NVNT	ANT1	1-DH5	2480.00	0.05	1.01	125	Pass
NVNT	ANT1	2-DH5	2402.00	1.15	1.30	125	Pass
NVNT	ANT1	2-DH5	2441.00	1.34	1.36	125	Pass
NVNT	ANT1	2-DH5	2480.00	0.97	1.25	125	Pass
NVNT	ANT1	3-DH5	2402.00	1.27	1.34	125	Pass
NVNT	ANT1	3-DH5	2441.00	**1.62**	1.45	125	Pass
NVNT	ANT1	3-DH5	2480.00	1.13	1.30	125	Pass

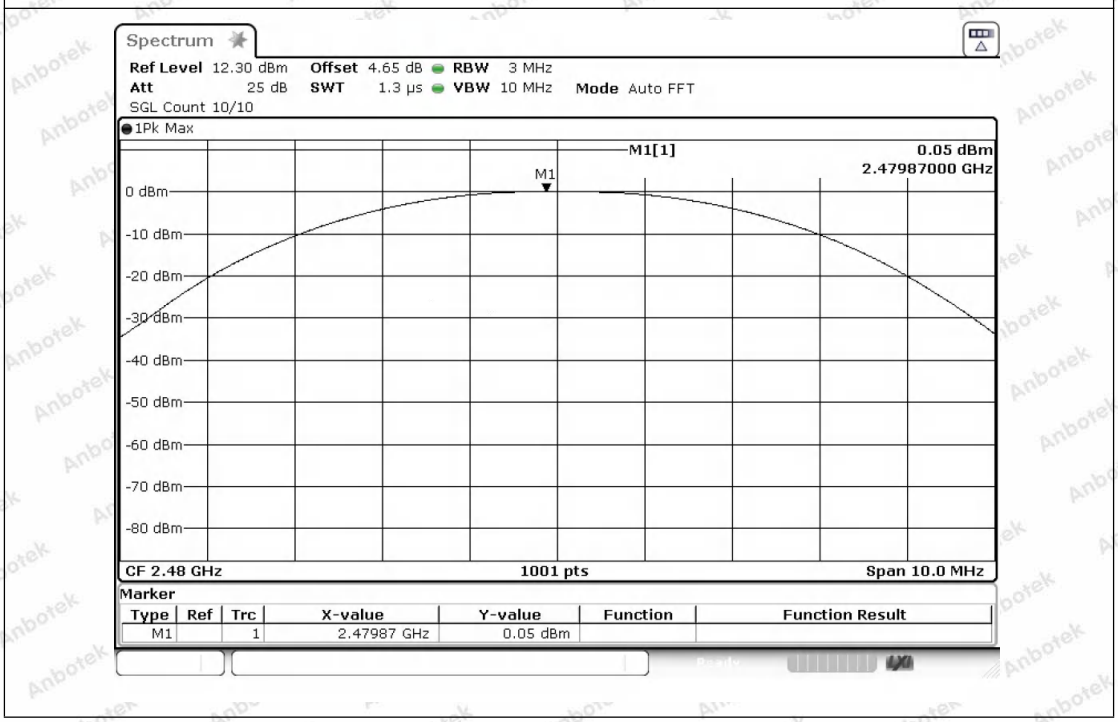
Peak_Output_Power_NVNT_ANT1_1-DH5_2402



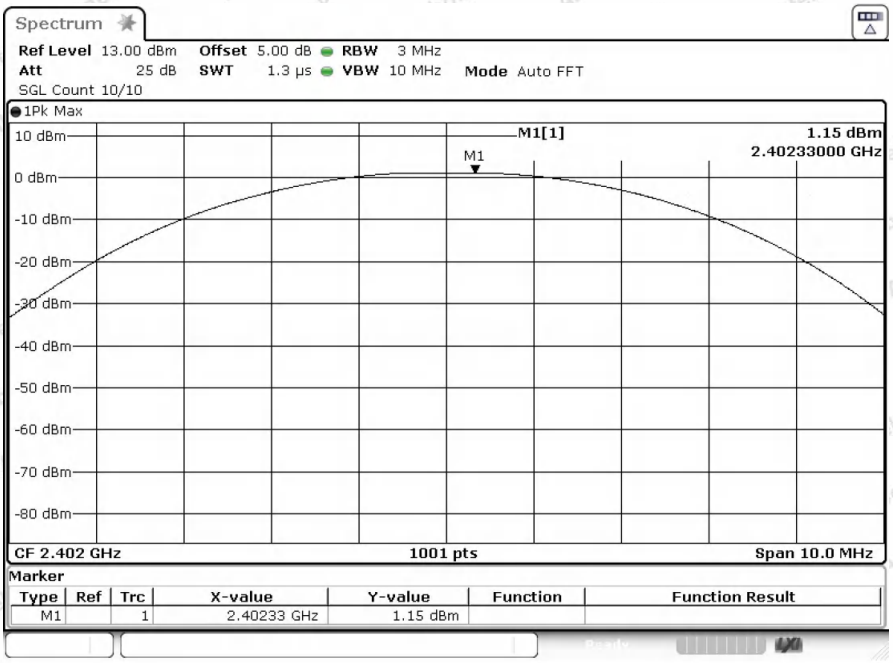
Peak_Output_Power_NVNT_ANT1_1-DH5_2441



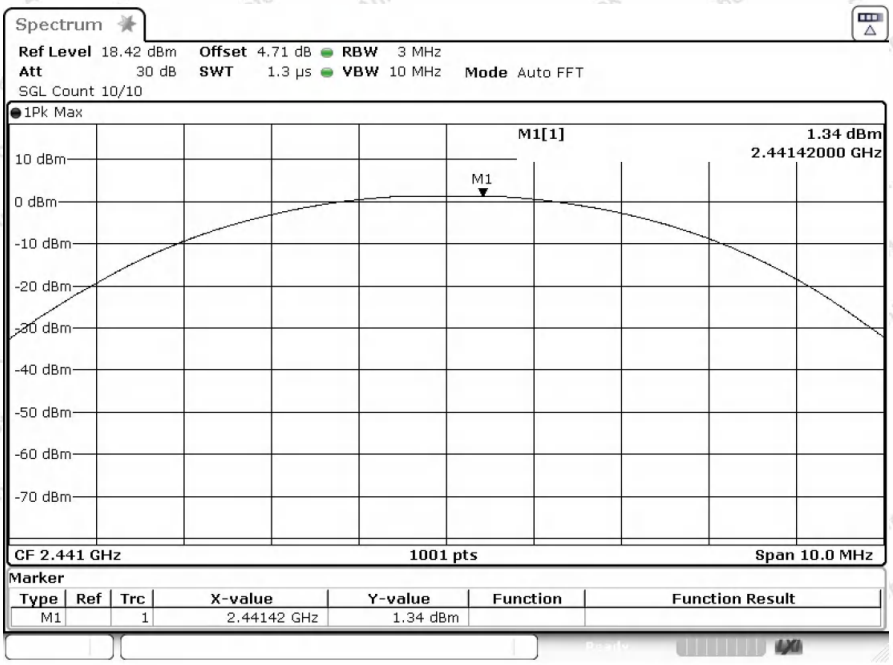
Peak_Output_Power_NVNT_ANT1_1-DH5_2480



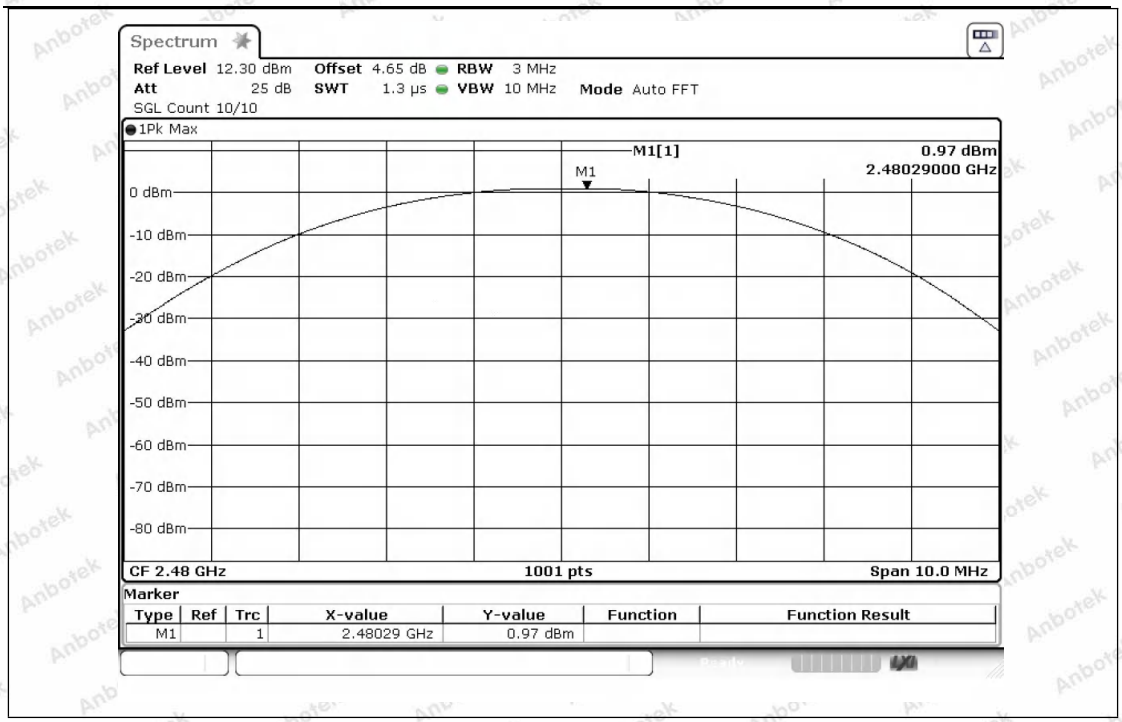
Peak_Output_Power_NVNT_ANT1_2-DH5_2402



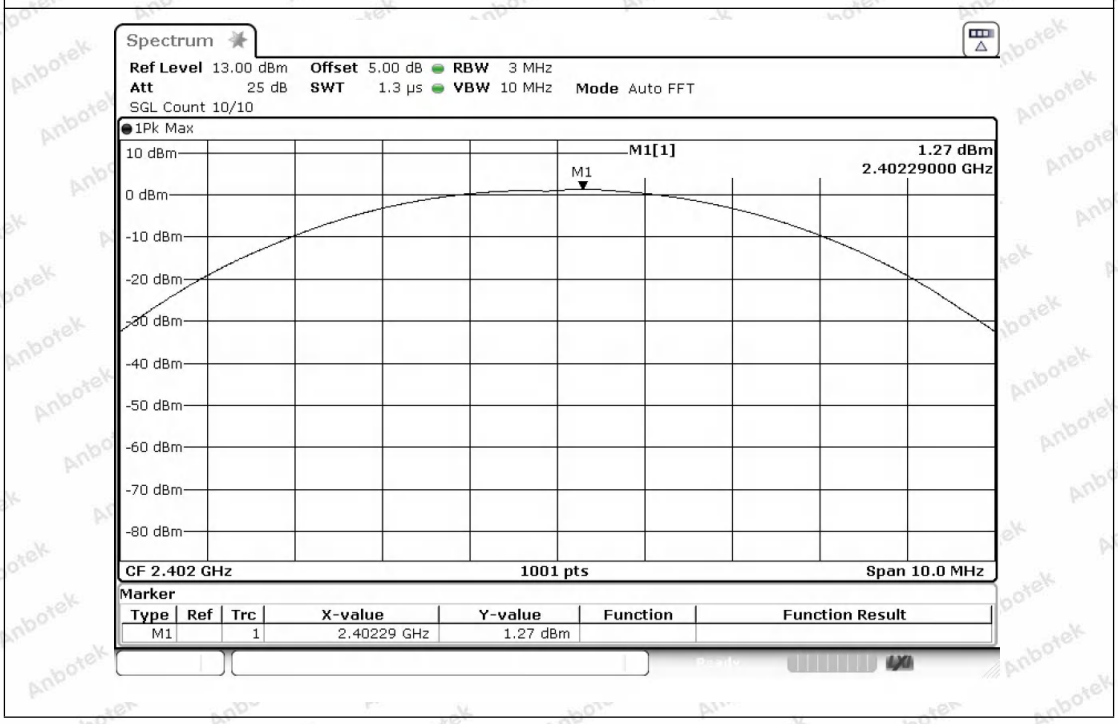
Peak_Output_Power_NVNT_ANT1_2-DH5_2441



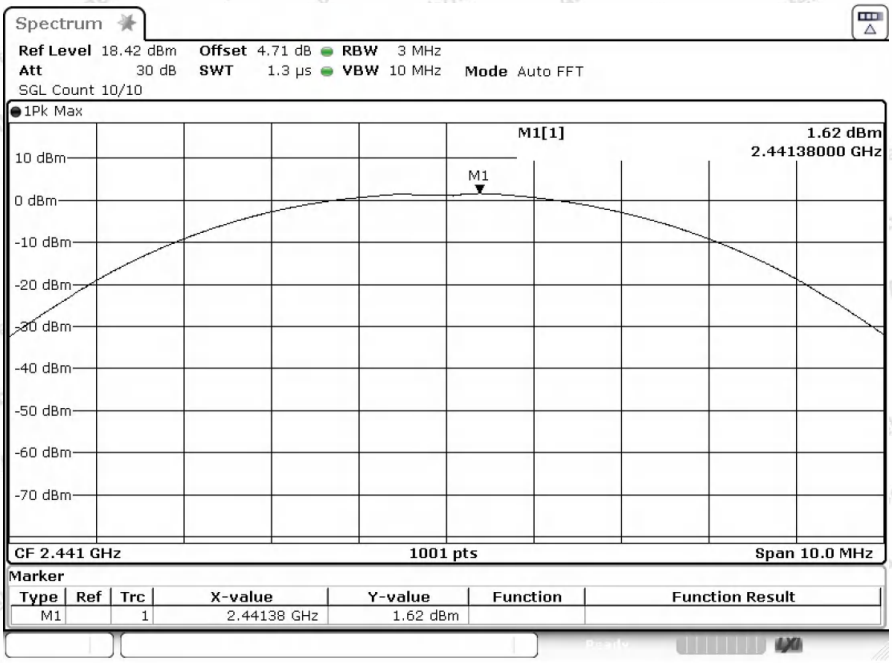
Peak_Output_Power_NVNT_ANT1_2-DH5_2480



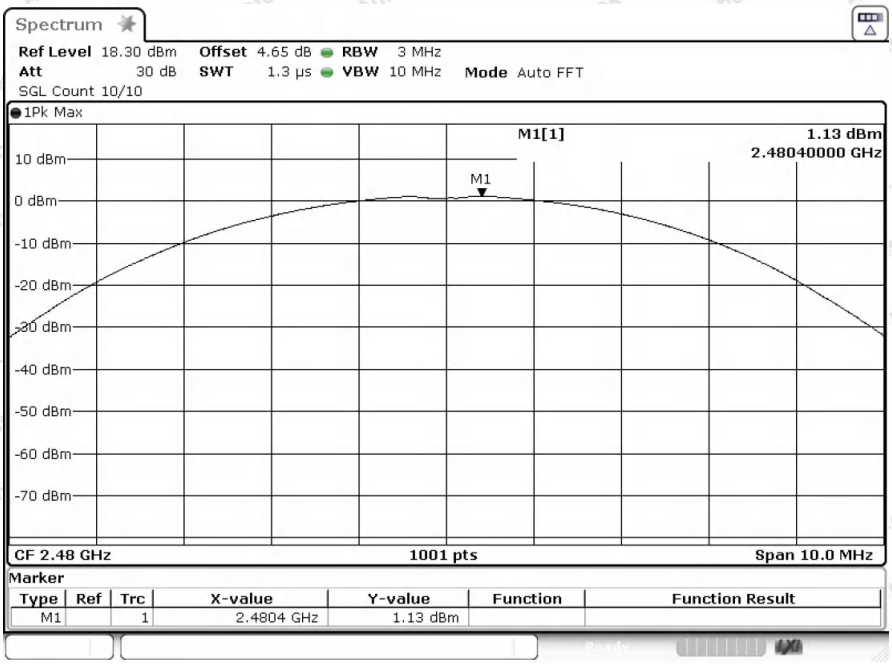
Peak_Output_Power_NVNT_ANT1_3-DH5_2402



Peak_Output_Power_NVNT_ANT1_3-DH5_2441



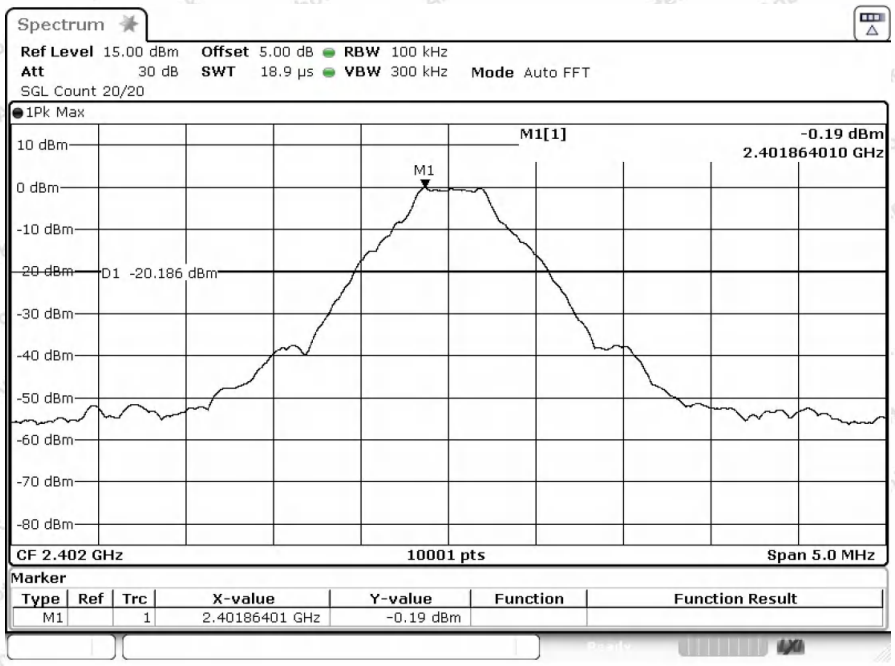
Peak_Output_Power_NVNT_ANT1_3-DH5_2480



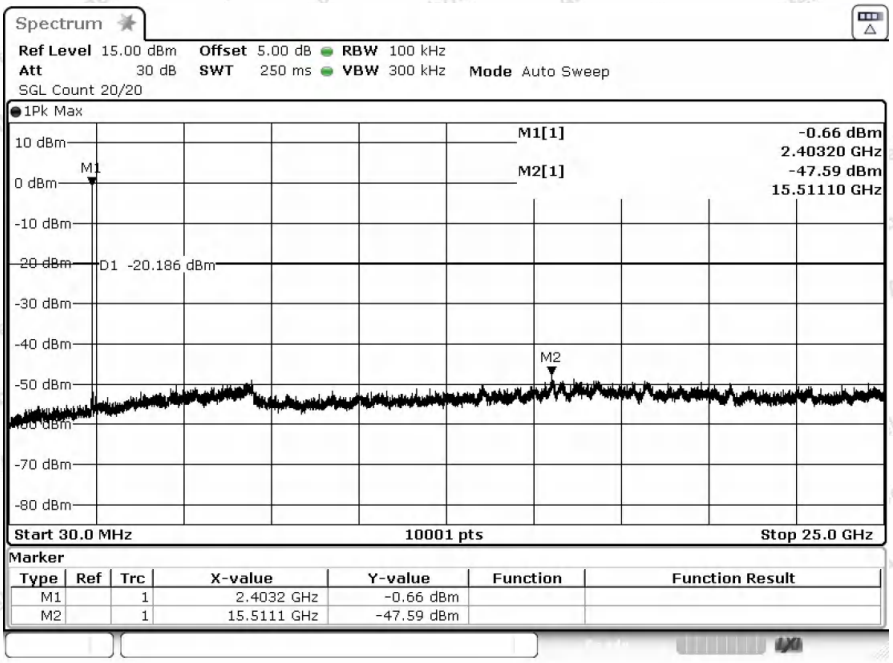
Appendix D: Spurious Emissions

Condition	Antenna	Modulation	TX Mode	Spurious MAX.Value(dBm)	Limit	Result
NVNT	ANT1	1-DH5	2402.00	-47.590	-20.186	Pass
NVNT	ANT1	1-DH5	2441.00	-43.455	-19.834	Pass
NVNT	ANT1	1-DH5	2480.00	-50.628	-20.230	Pass
NVNT	ANT1	2-DH5	2402.00	-42.596	-19.715	Pass
NVNT	ANT1	2-DH5	2441.00	-43.153	-19.439	Pass
NVNT	ANT1	2-DH5	2480.00	-43.483	-19.977	Pass
NVNT	ANT1	3-DH5	2402.00	-48.770	-20.076	Pass
NVNT	ANT1	3-DH5	2441.00	-43.160	-19.594	Pass
NVNT	ANT1	3-DH5	2480.00	-41.733	-20.071	Pass

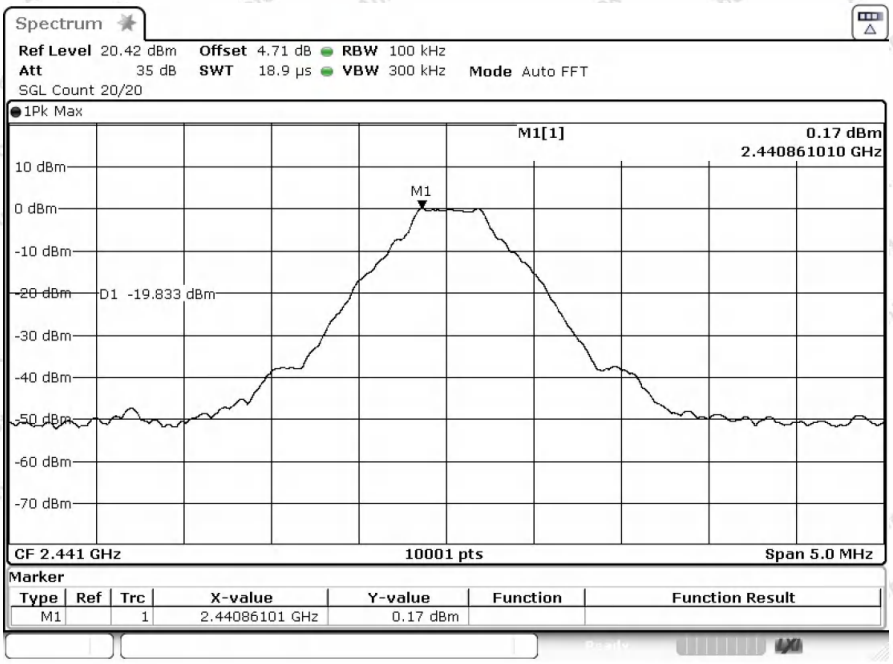
1_Reference_Level_NVNT_ANT1_1-DH5_2402



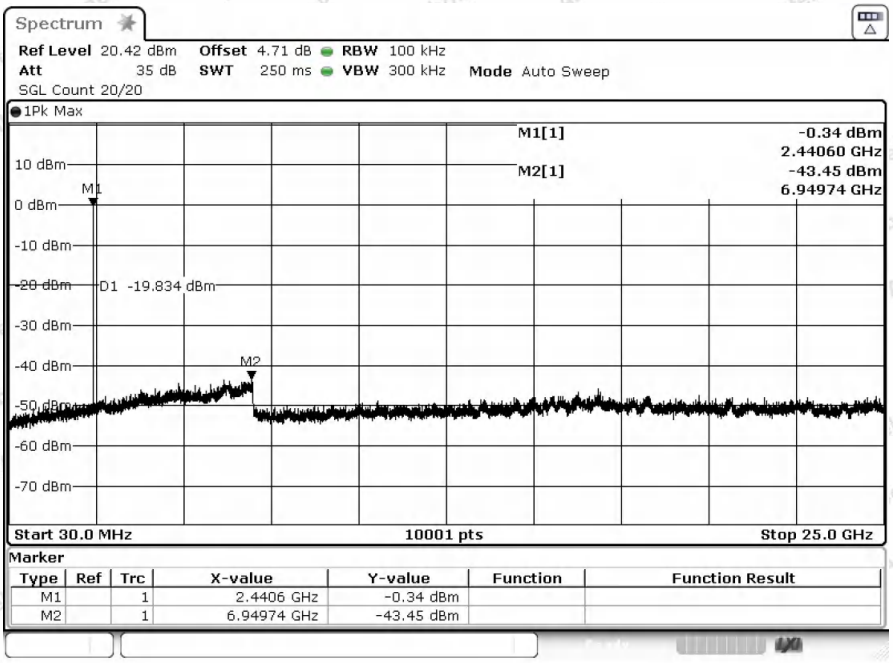
2_Spurious_Emissions_NVNT_ANT1_1-DH5_2402



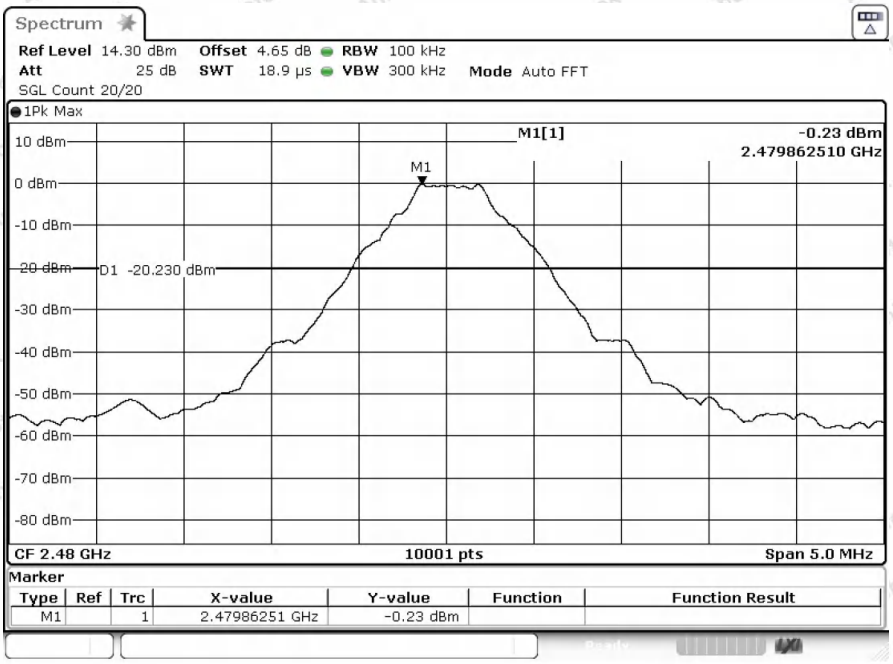
1_Reference_Level_NVNT_ANT1_1-DH5_2441



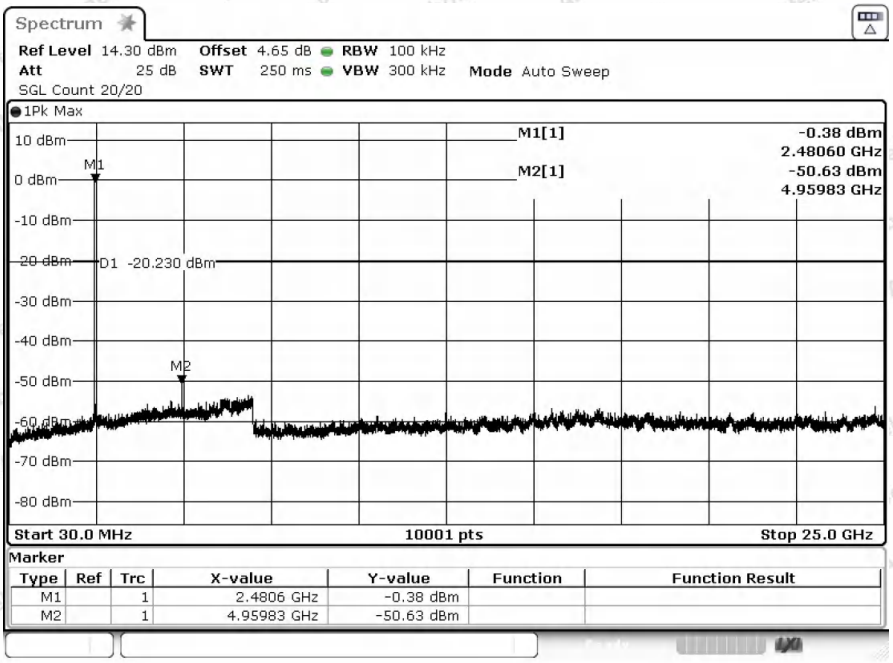
2_Spurious_Emissions_NVNT_ANT1_1-DH5_2441



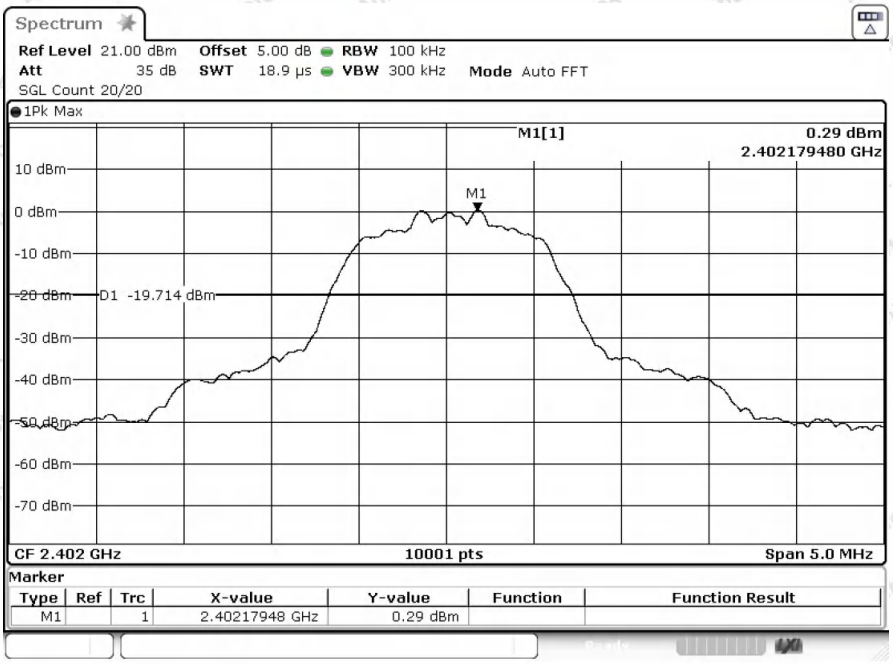
1_Reference_Level_NVNT_ANT1_1-DH5_2480



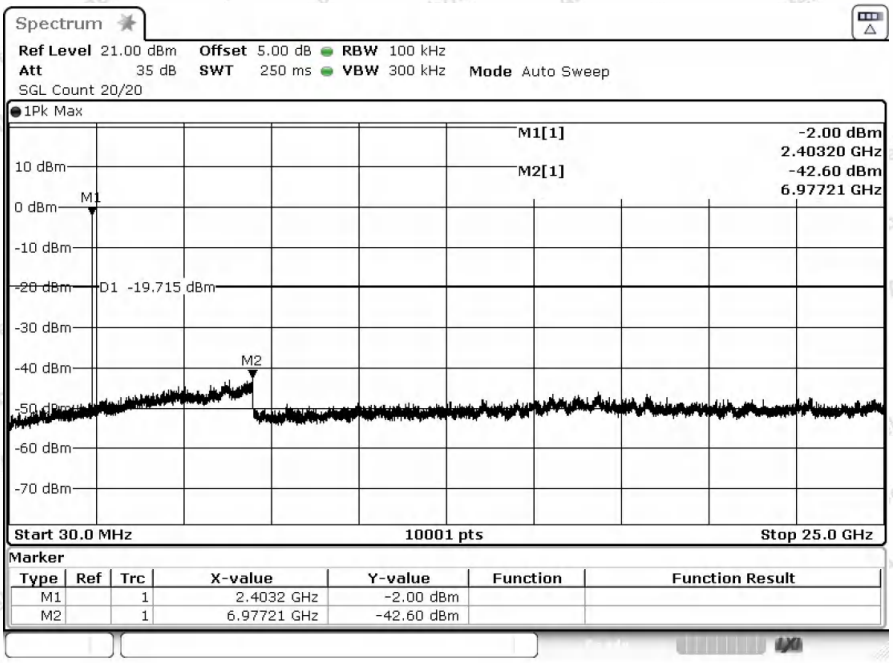
2_Spurious_Emissions_NVNT_ANT1_1-DH5_2480



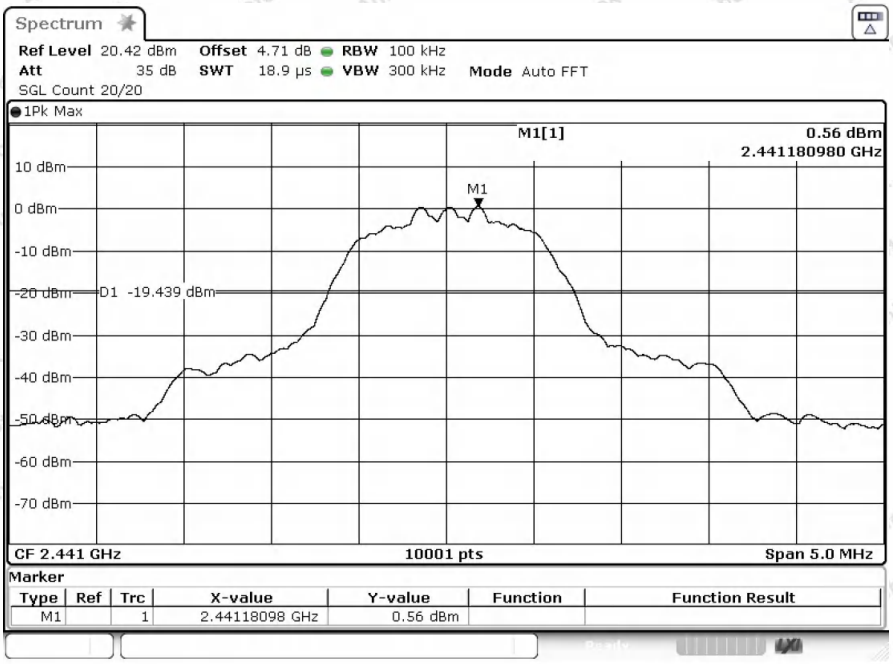
1_Reference_Level_NVNT_ANT1_2-DH5_2402



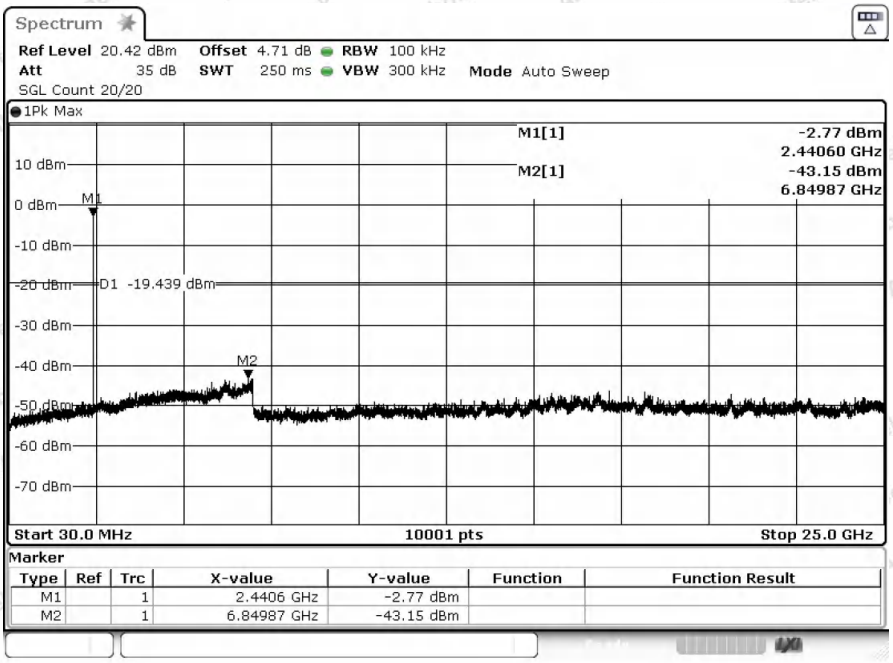
2_Spurious_Emissions_NVNT_ANT1_2-DH5_2402



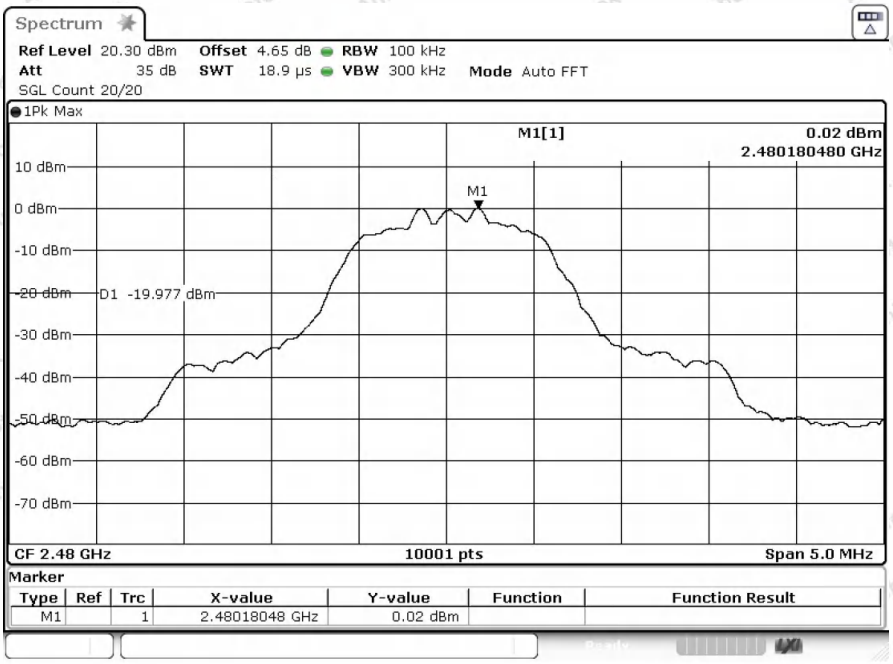
1_Reference_Level_NVNT_ANT1_2-DH5_2441



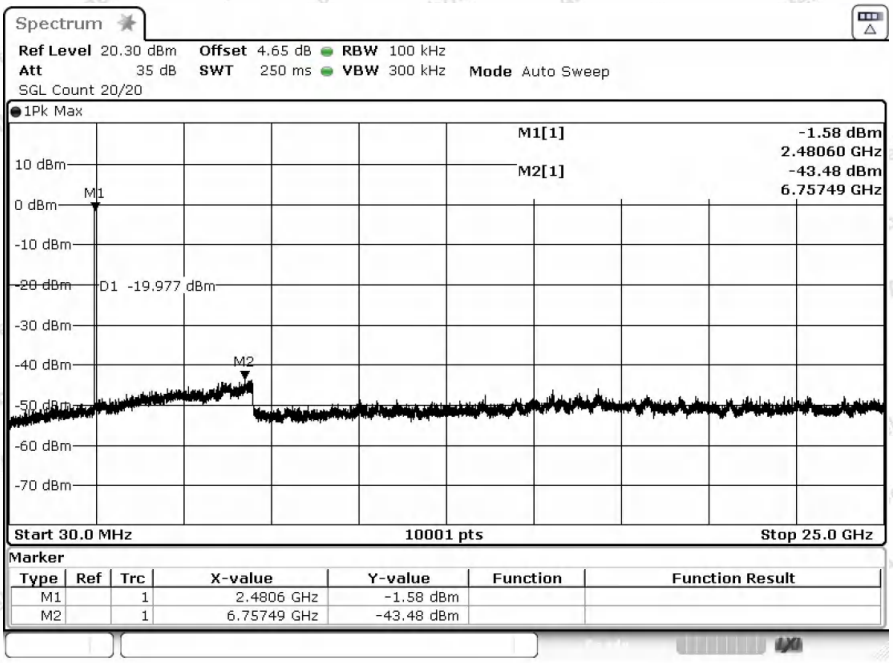
2_Spurious_Emissions_NVNT_ANT1_2-DH5_2441



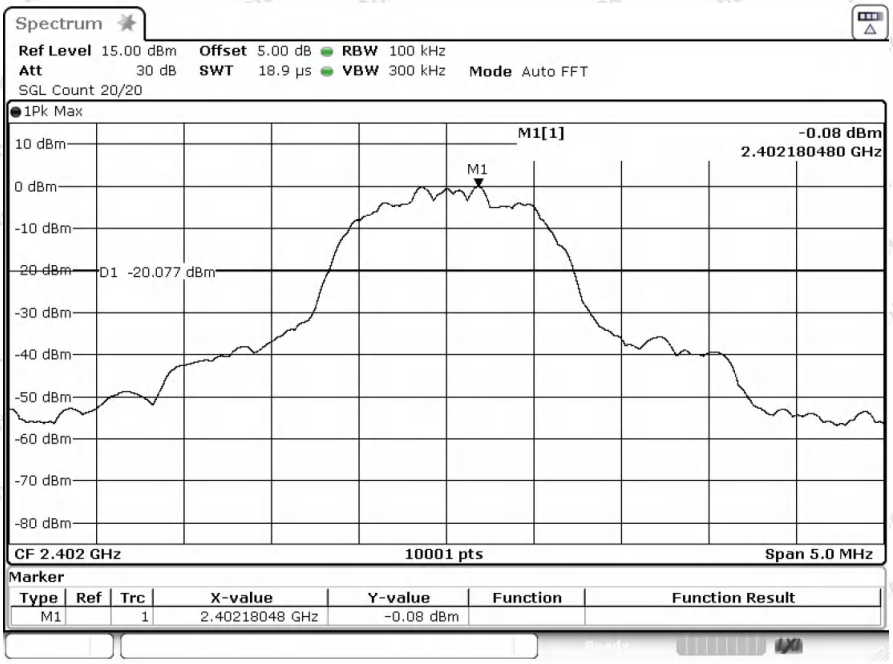
1_Reference_Level_NVNT_ANT1_2-DH5_2480



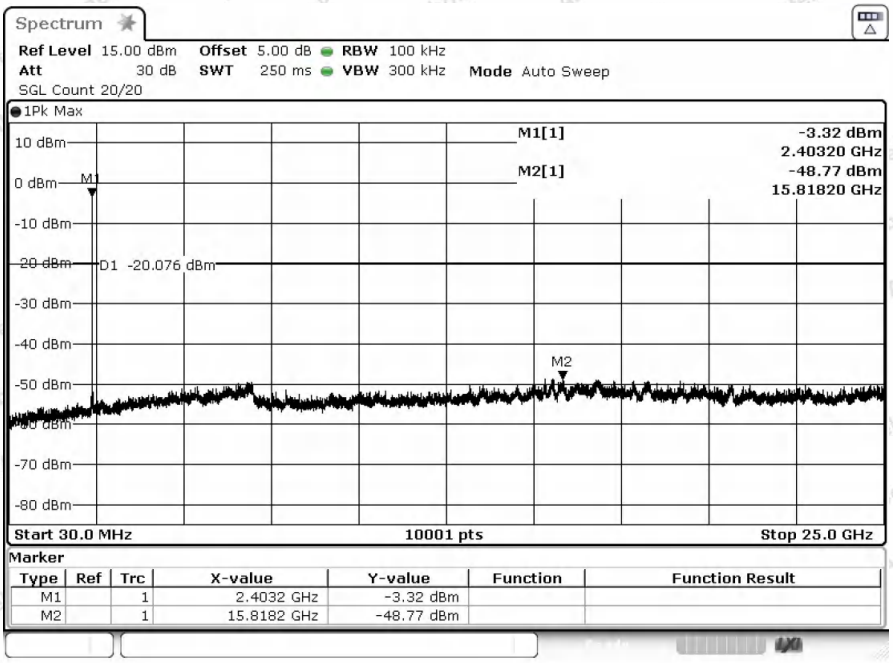
2_Spurious_Emissions_NVNT_ANT1_2-DH5_2480



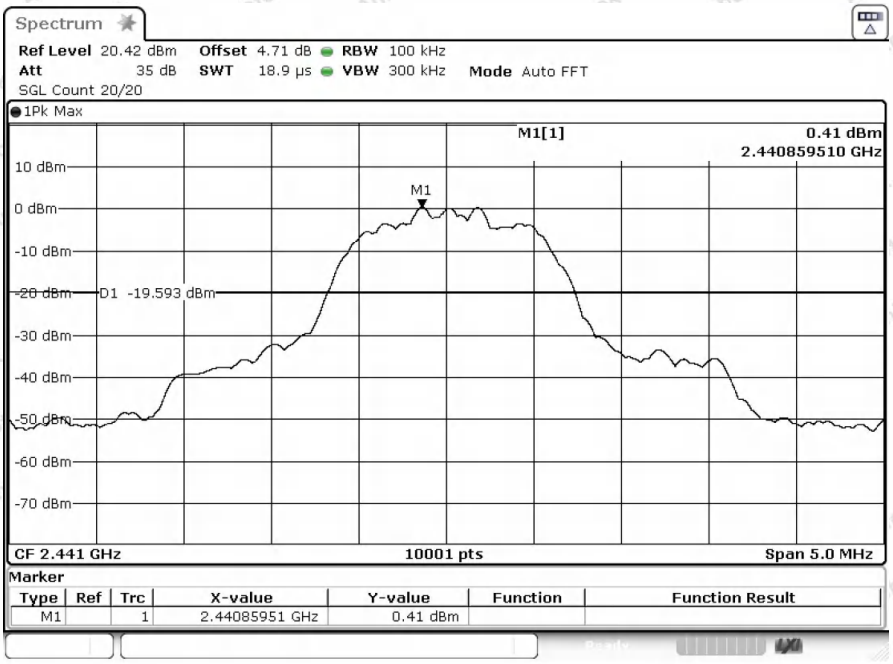
1_Reference_Level_NVNT_ANT1_3-DH5_2402



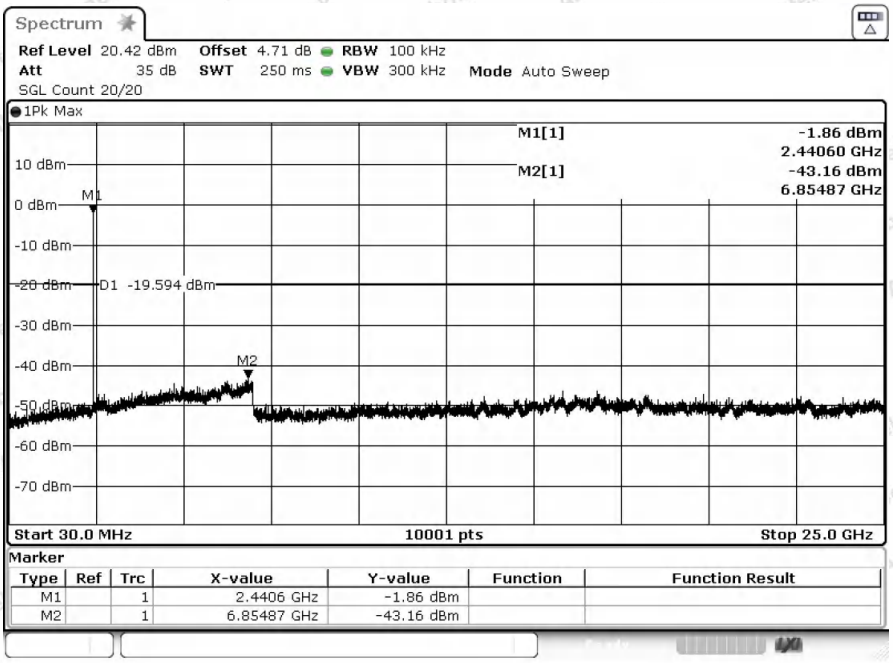
2_Spurious_Emissions_NVNT_ANT1_3-DH5_2402



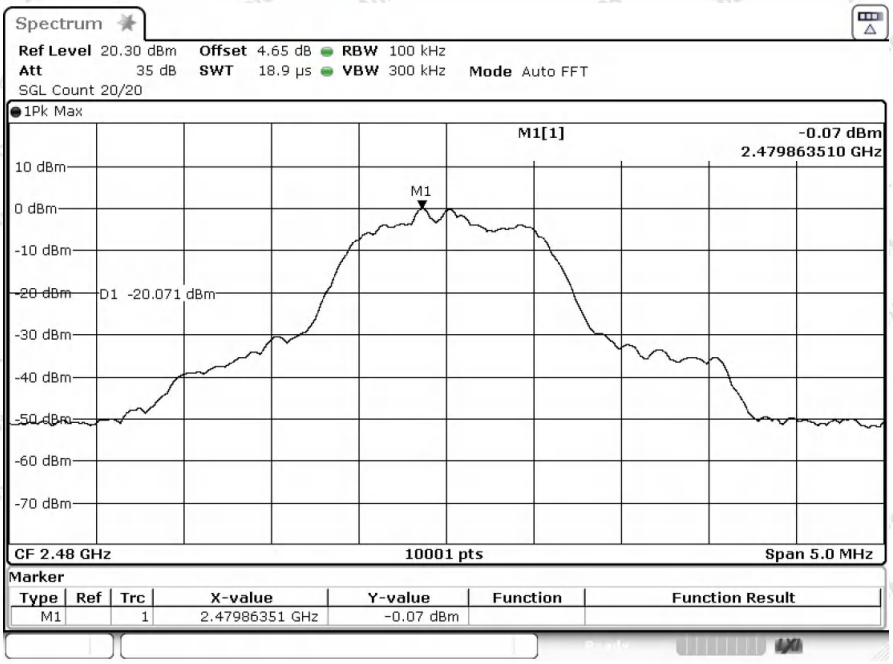
1_Reference_Level_NVNT_ANT1_3-DH5_2441



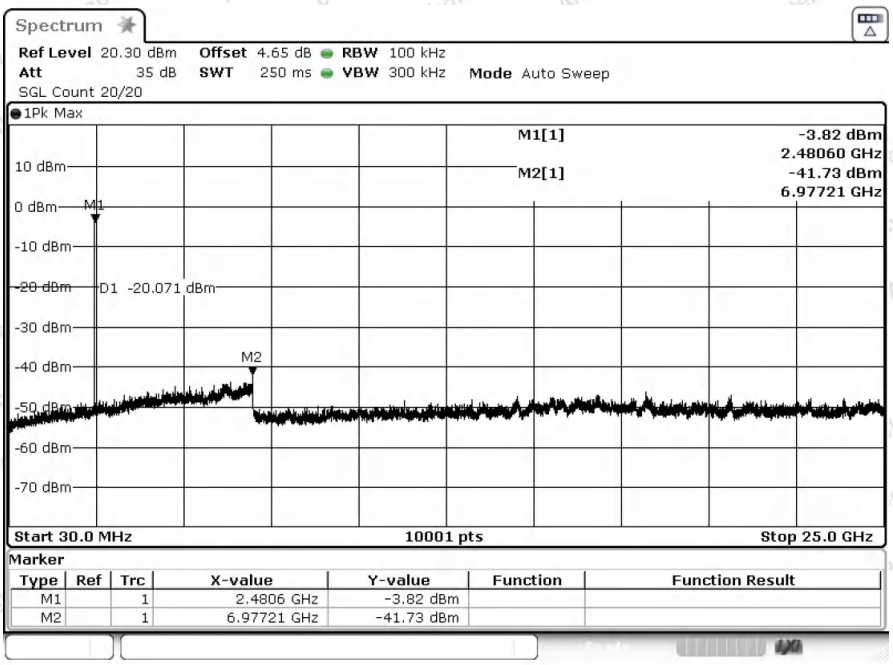
2_Spurious_Emissions_NVNT_ANT1_3-DH5_2441



1_Reference_Level_NVNT_ANT1_3-DH5_2480



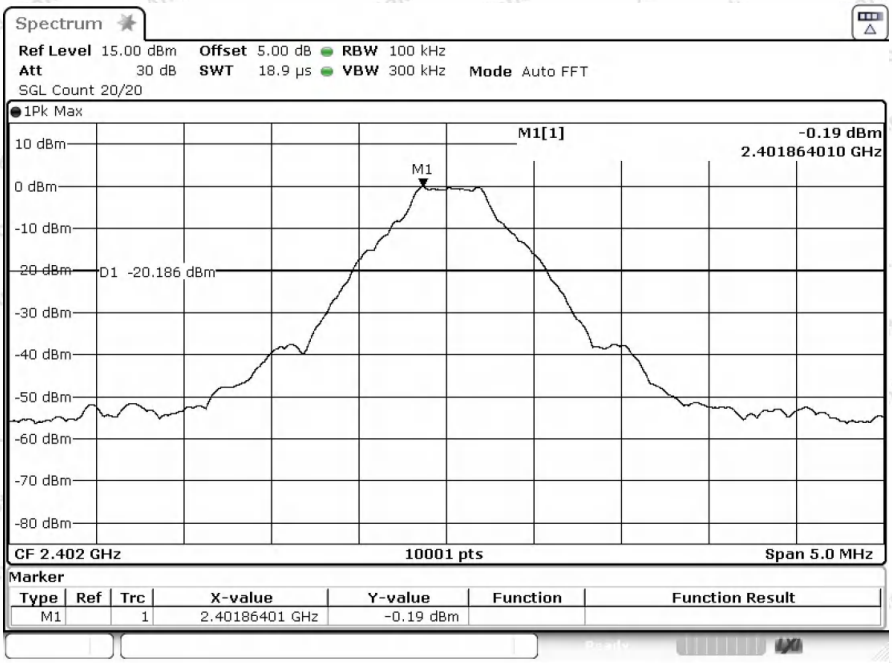
2_Spurious_Emissions_NVNT_ANT1_3-DH5_2480


Spectrum
Ref Level 20.30 dBm Offset 4.65 dB RBW 100 kHz
Att 35 dB SWT 250 ms VBW 300 kHz Mode Auto Sweep
SGL Count 20/20
1Pk Max
M1[1] -3.82 dBm 2.48060 GHz
M2[1] -41.73 dBm 6.97721 GHz
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
M1
D1 -20.071 dBm
M2
Start 30.0 MHz 10001 pts Stop 25.0 GHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 2.4806 GHz -3.82 dBm
M2 1 6.97721 GHz -41.73 dBm

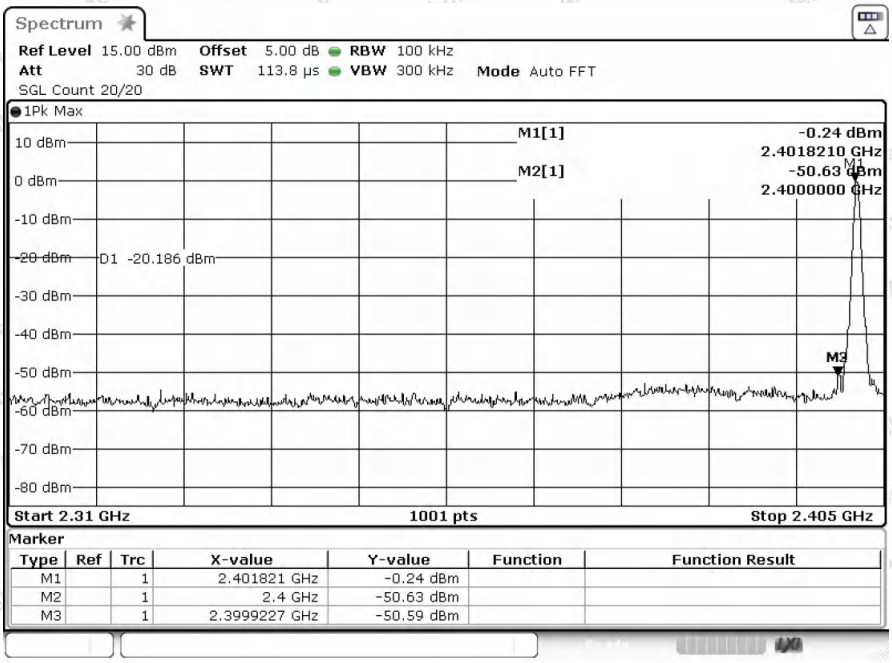
Appendix E: Bandedge

Condition	Antenna	Modulation	TX Mode	Bandedge MAX.Value	Limit	Result
NVNT	ANT1	1-DH5	2402.00	-50.594	-20.186	Pass
NVNT	ANT1	1-DH5	Hopping_LCH	-53.200	-19.472	Pass
NVNT	ANT1	1-DH5	2480.00	-54.245	-20.230	Pass
NVNT	ANT1	1-DH5	Hopping_HCH	-47.822	-19.788	Pass
NVNT	ANT1	2-DH5	2402.00	-48.600	-19.715	Pass
NVNT	ANT1	2-DH5	Hopping_LCH	-54.039	-18.970	Pass
NVNT	ANT1	2-DH5	2480.00	-48.438	-19.977	Pass
NVNT	ANT1	2-DH5	Hopping_HCH	-53.368	-19.363	Pass
NVNT	ANT1	3-DH5	2402.00	-52.861	-20.076	Pass
NVNT	ANT1	3-DH5	Hopping_LCH	-53.109	-19.253	Pass
NVNT	ANT1	3-DH5	2480.00	-48.401	-20.071	Pass
NVNT	ANT1	3-DH5	Hopping_HCH	-53.457	-19.425	Pass

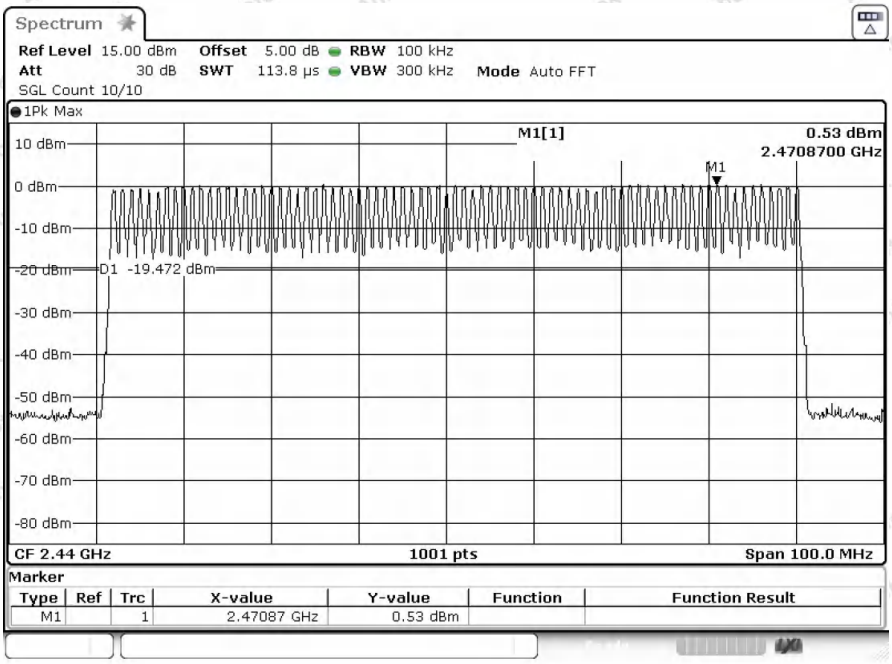
1_Reference_Level_NVNT_ANT1_1-DH5_2402



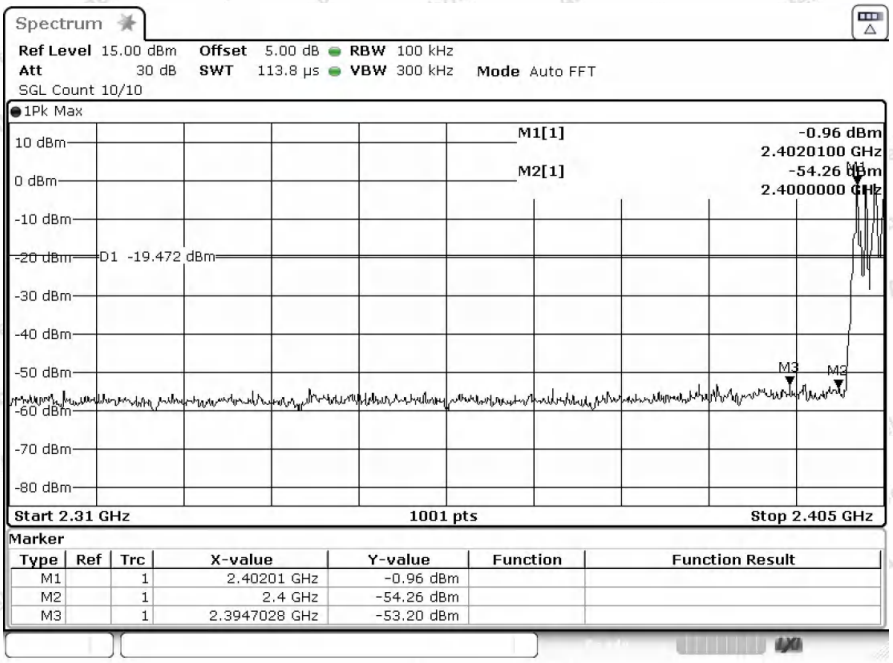
2_Bandedge_NVNT_ANT1_1-DH5_2402



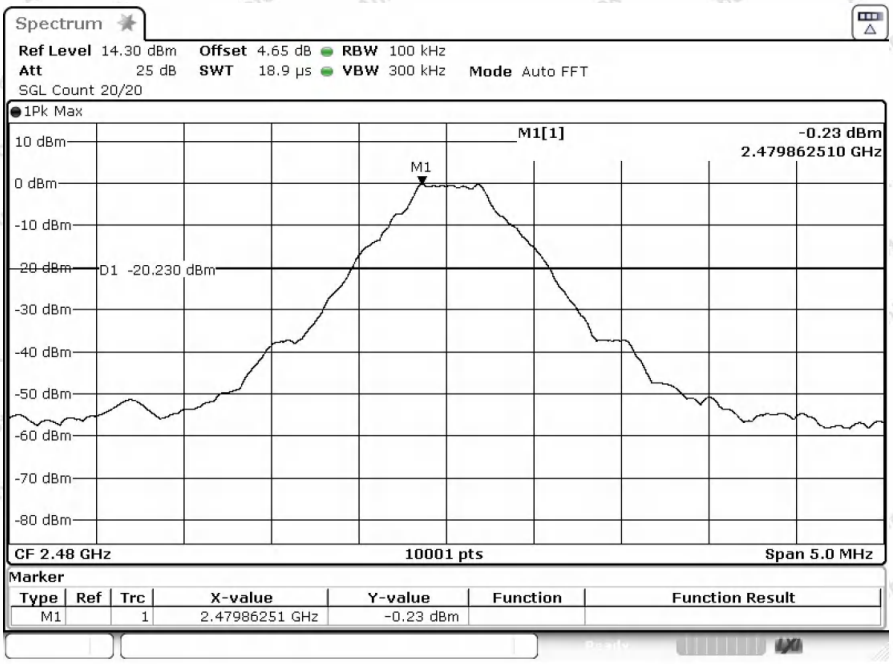
1_Reference_Level_Hopping_NVNT_ANT1_1-DH5_Hopping



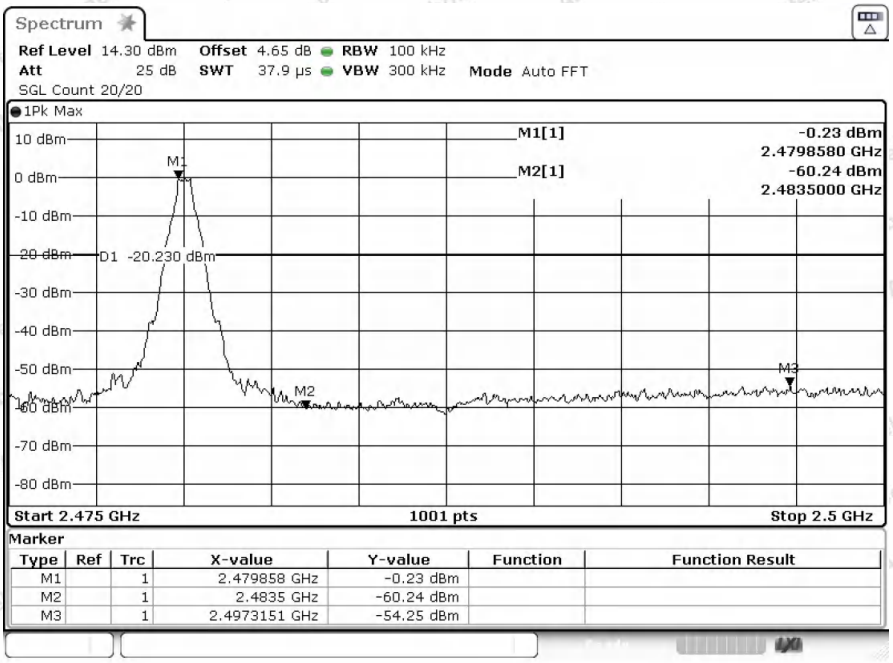
2_Band_Edge_(Hopping)_NVNT_ANT1_1-DH5_Hopping



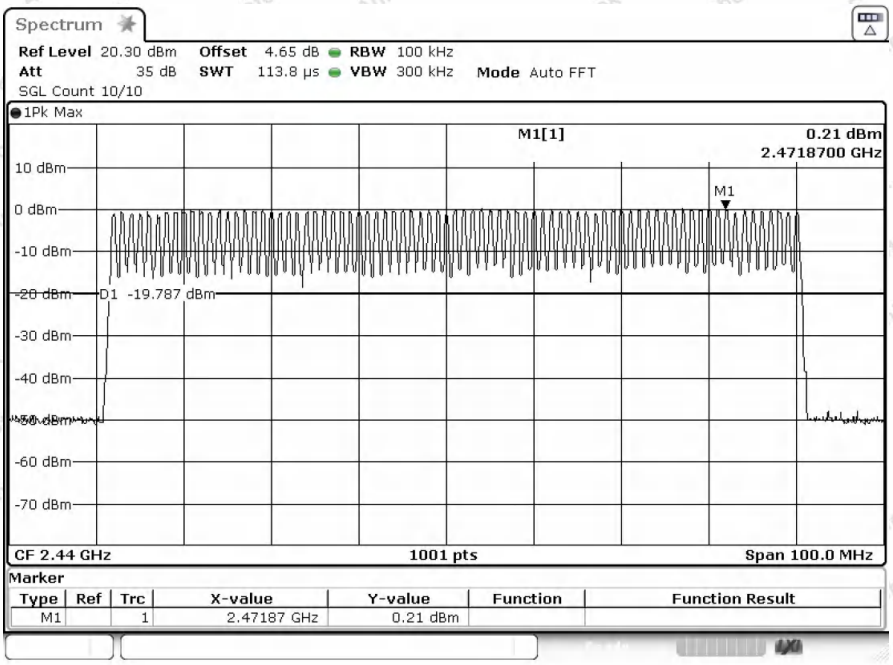
1_Reference_Level_NVNT_ANT1_1-DH5_2480



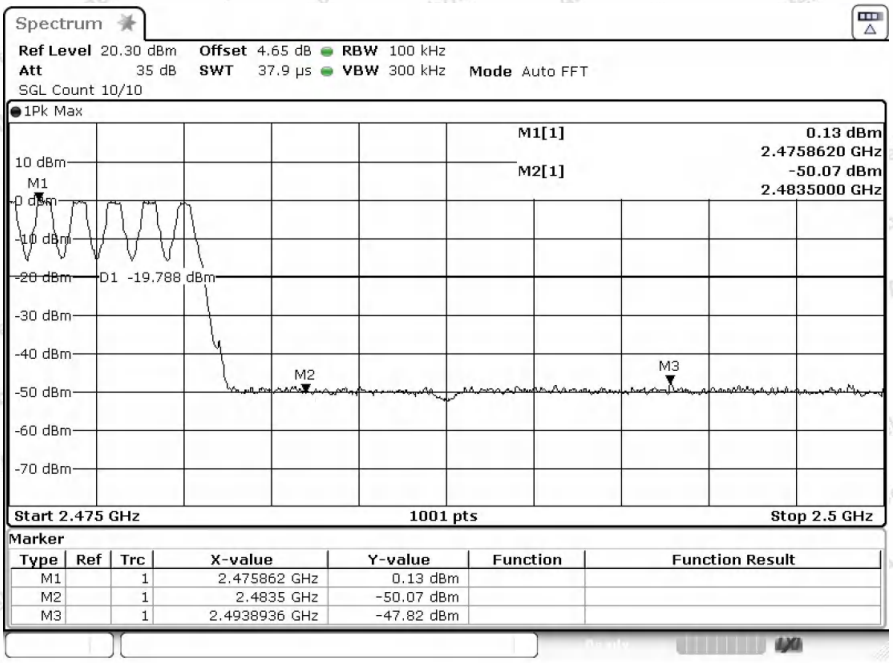
2_Bandedge_NVNT_ANT1_1-DH5_2480



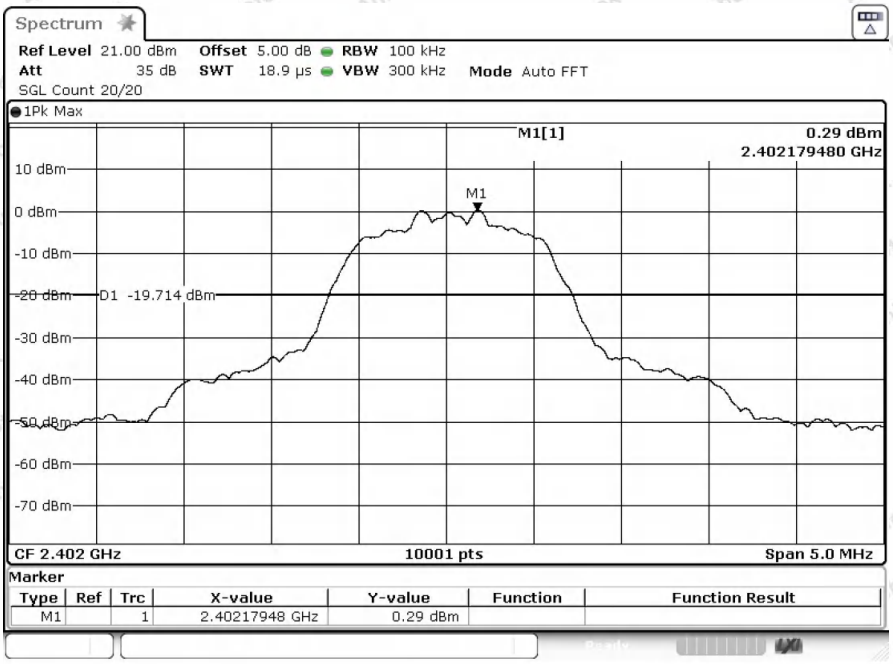
1_Reference_Level_Hopping_NVNT_ANT1_1-DH5_Hopping



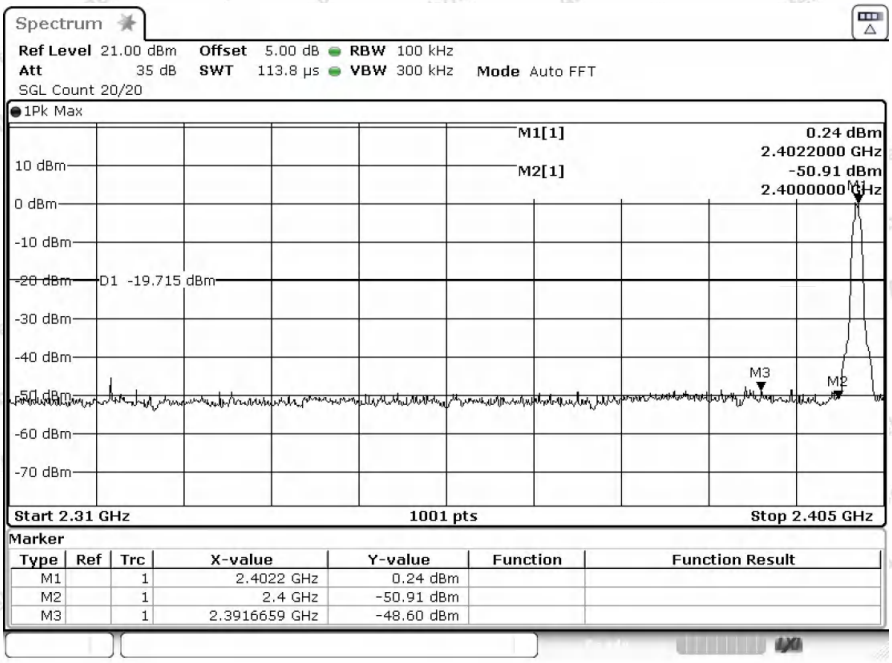
2_Band_Edge_(Hopping)_NVNT_ANT1_1-DH5_Hopping



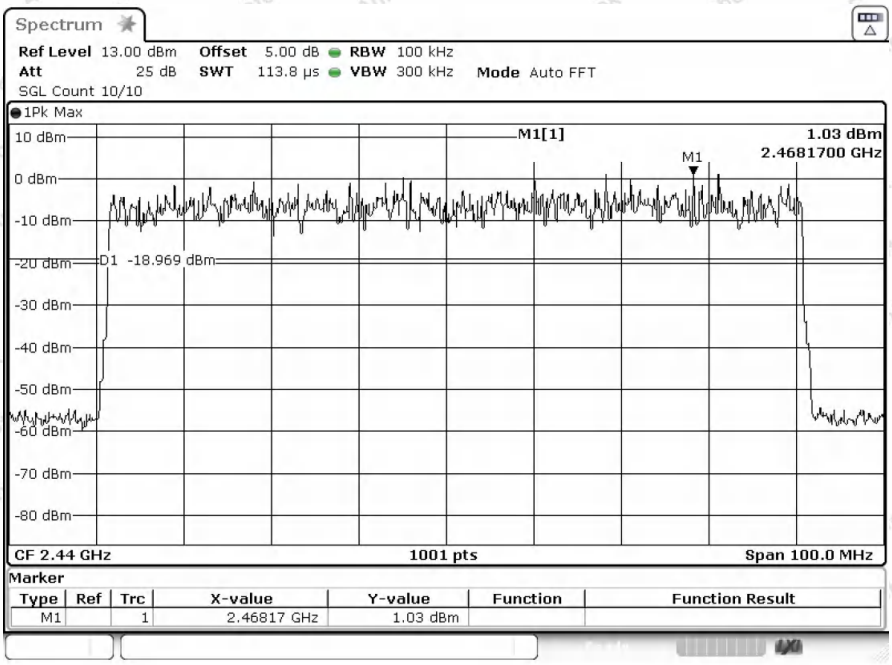
1_Reference_Level_NVNT_ANT1_2-DH5_2402



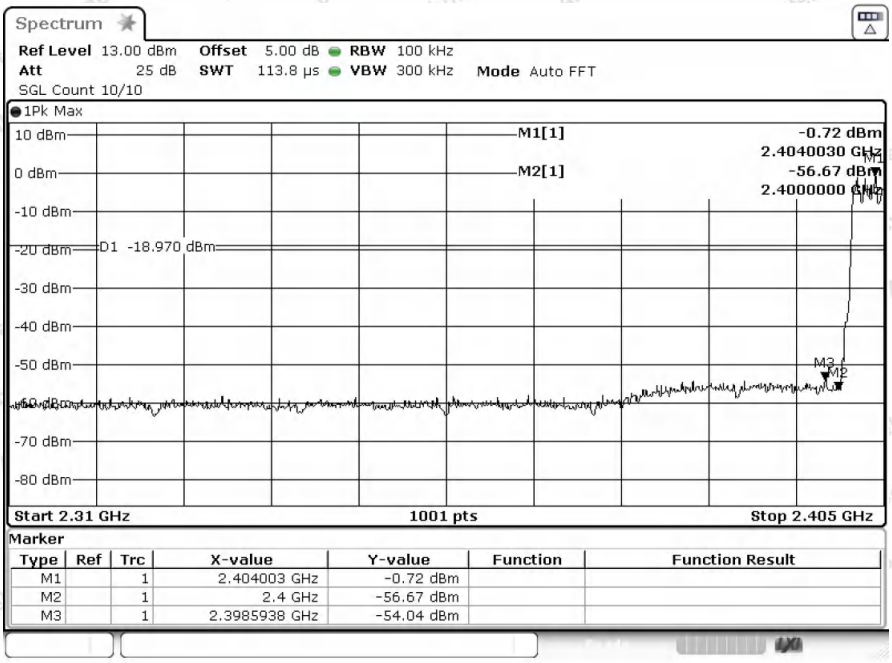
2_Bandedge_NVNT_ANT1_2-DH5_2402



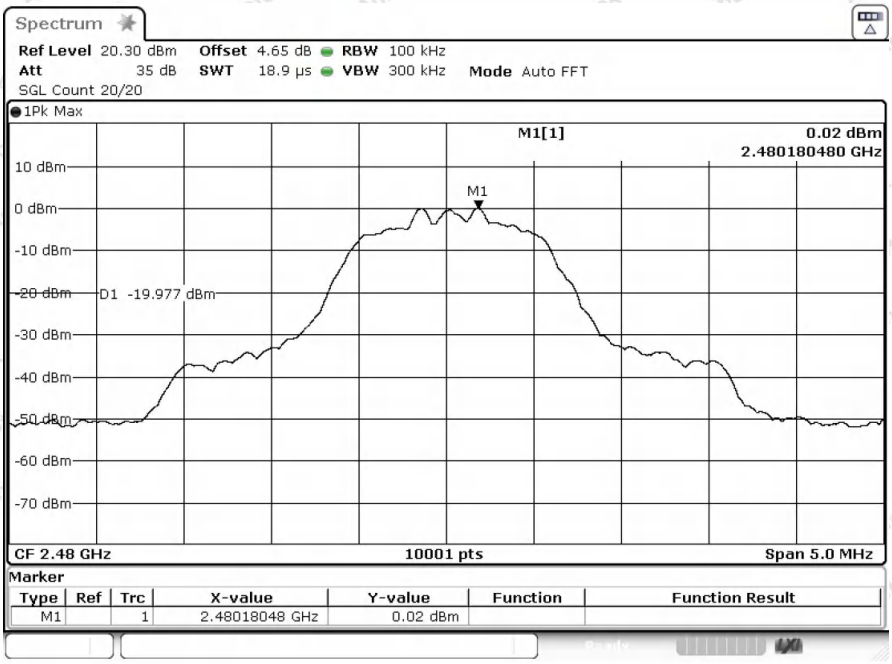
1_Reference_Level_Hopping_NVNT_ANT1_2-DH5_Hopping



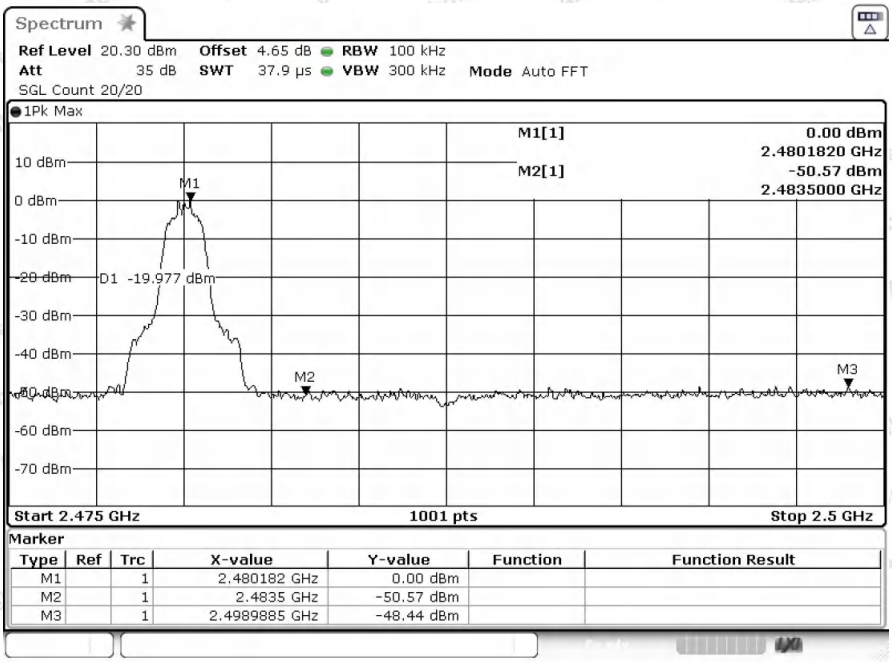
2_Band_Edge_(Hopping)_NVNT_ANT1_2-DH5_Hopping



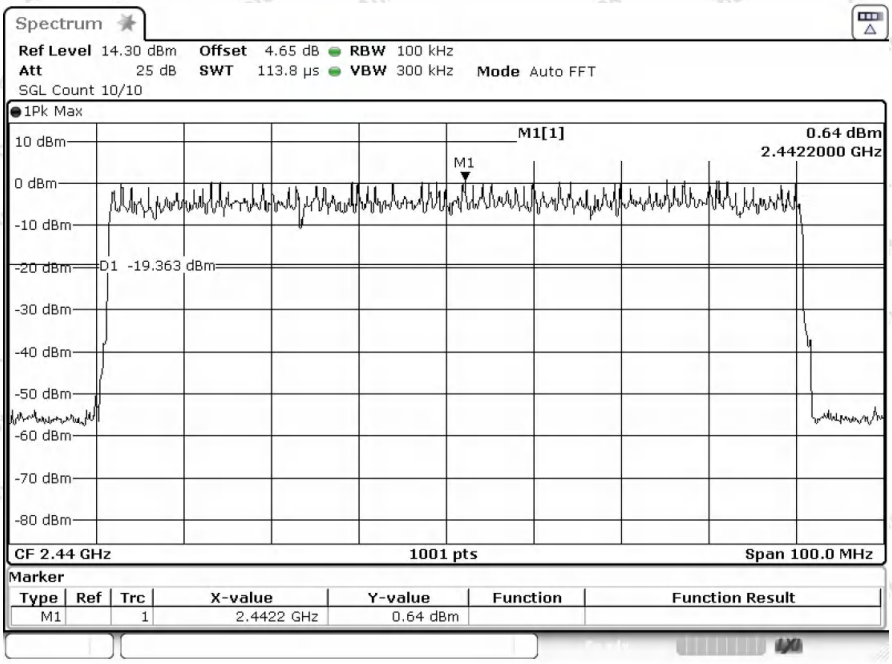
1_Reference_Level_NVNT_ANT1_2-DH5_2480



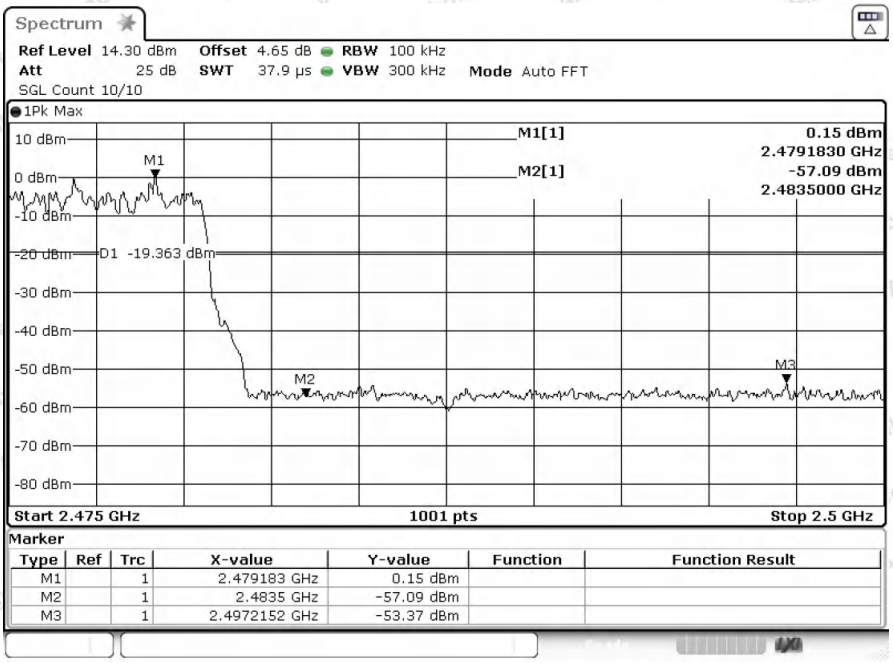
2_Bandedge_NVNT_ANT1_2-DH5_2480



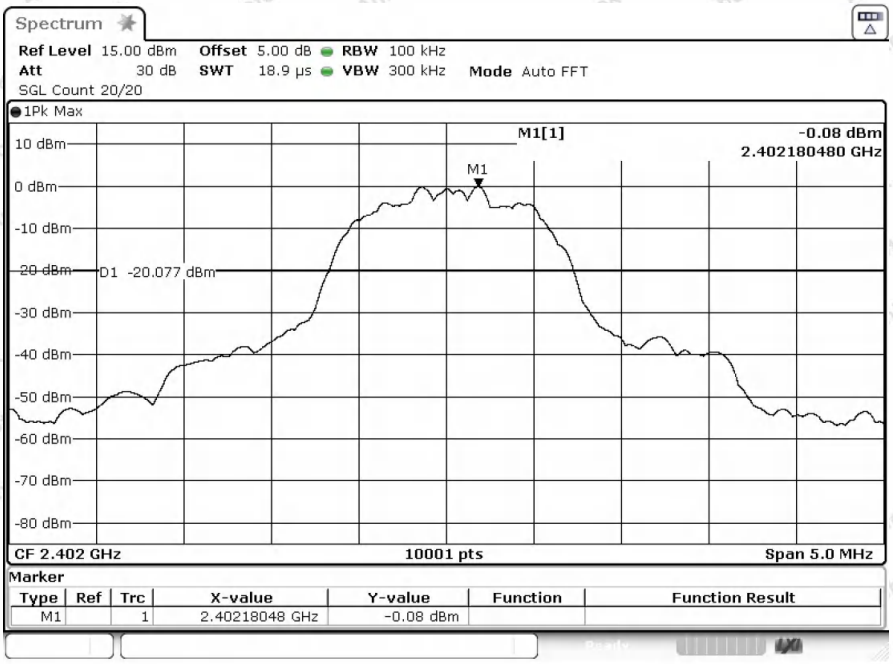
1_Reference_Level_Hopping_NVNT_ANT1_2-DH5_Hopping



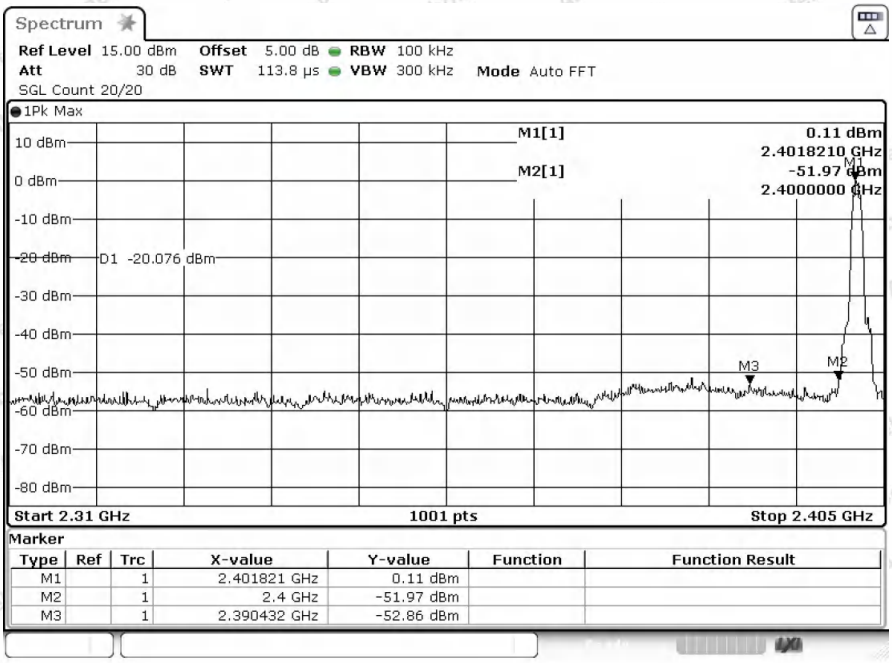
2_Band_Edge_(Hopping)_NVNT_ANT1_2-DH5_Hopping



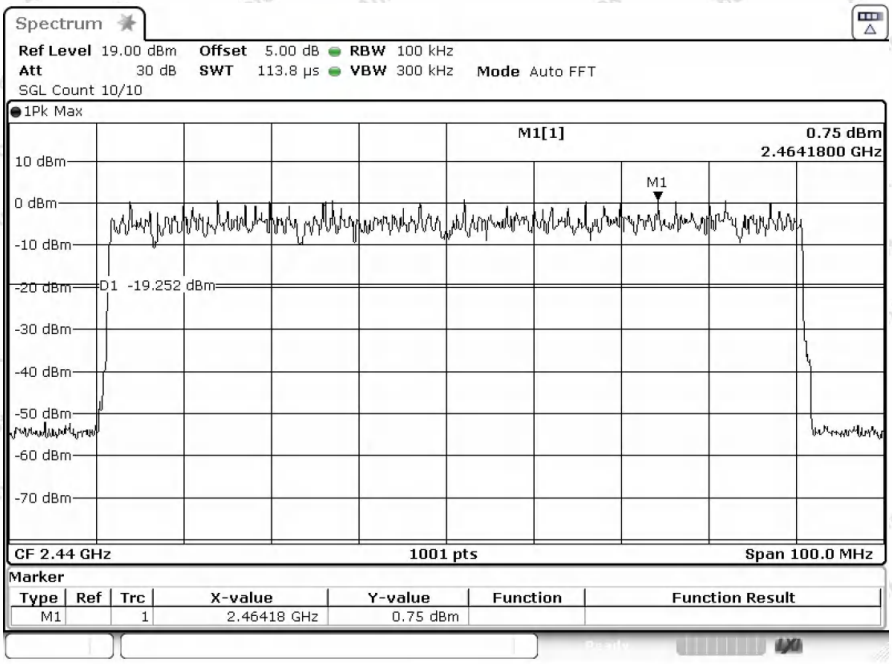
1_Reference_Level_NVNT_ANT1_3-DH5_2402



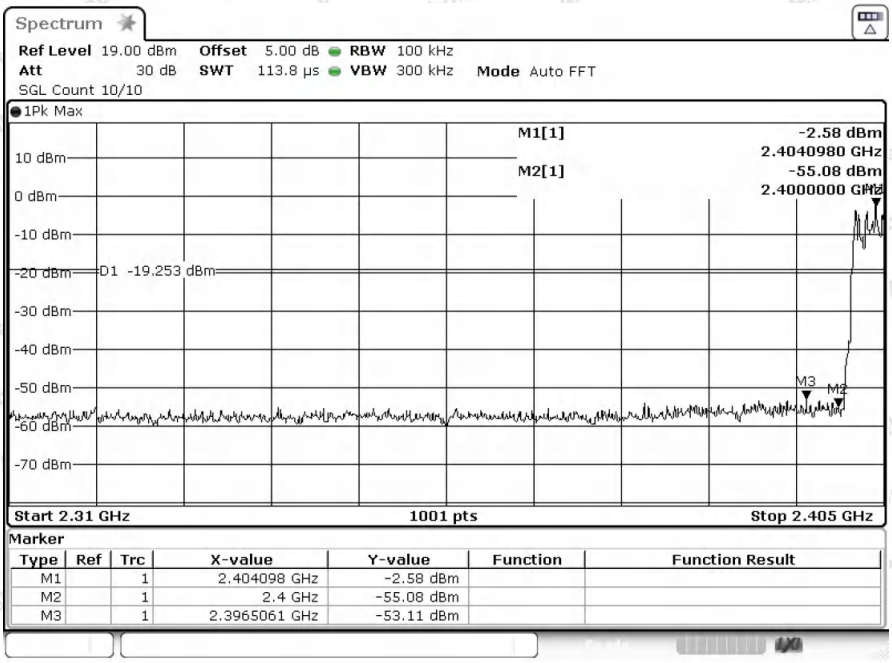
2_Bandedge_NVNT_ANT1_3-DH5_2402



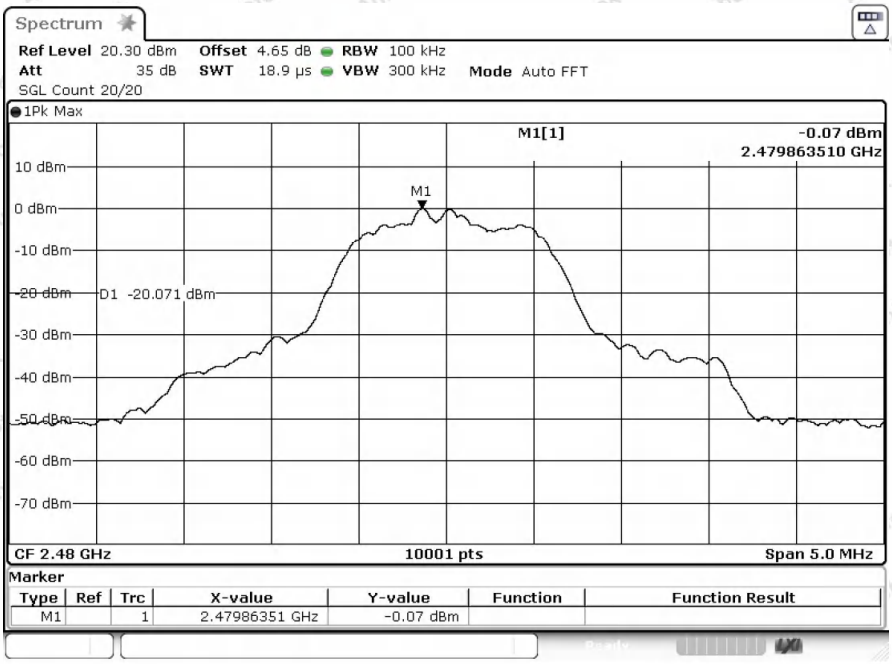
1_Reference_Level_Hopping_NVNT_ANT1_3-DH5_Hopping



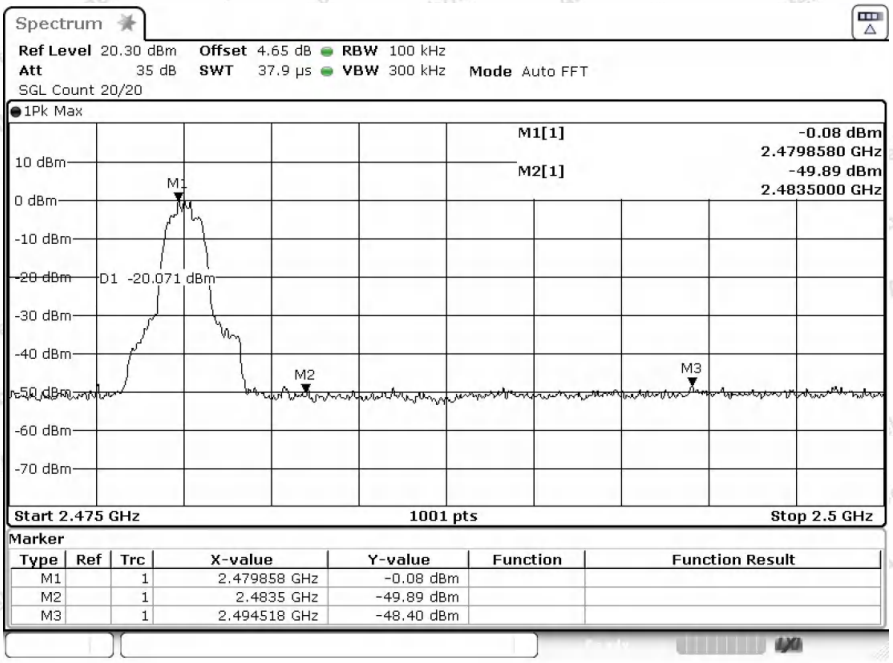
2_Band_Edge_(Hopping)_NVNT_ANT1_3-DH5_Hopping



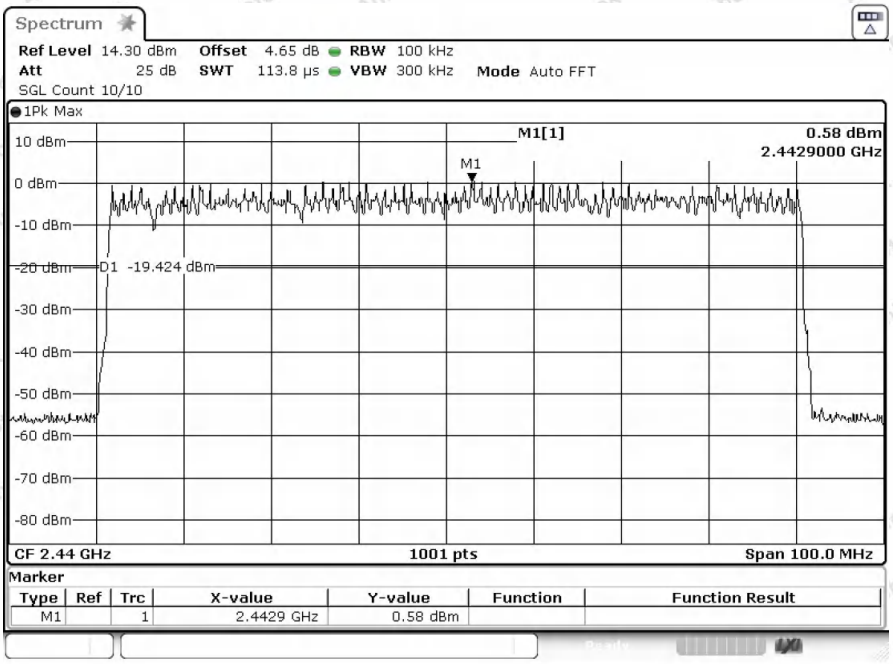
1_Reference_Level_NVNT_ANT1_3-DH5_2480



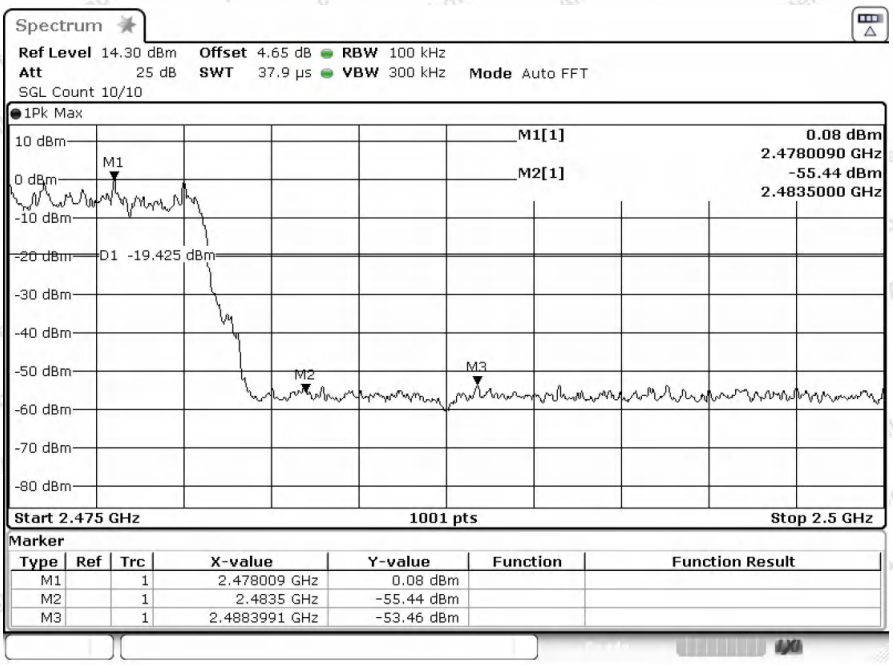
2_Bandedge_NVNT_ANT1_3-DH5_2480



1_Reference_Level_Hopping_NVNT_ANT1_3-DH5_Hopping



2_Band_Edge_(Hopping)_NVNT_ANT1_3-DH5_Hopping



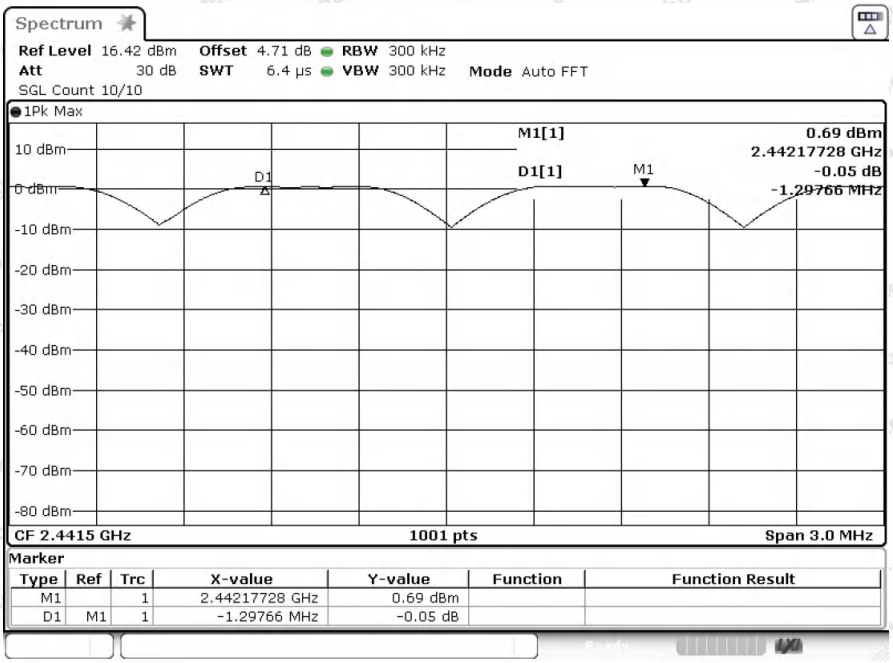
Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.478009 GHz	0.08 dBm		
M2		1	2.4835 GHz	-55.44 dBm		
M3		1	2.4883991 GHz	-53.46 dBm		

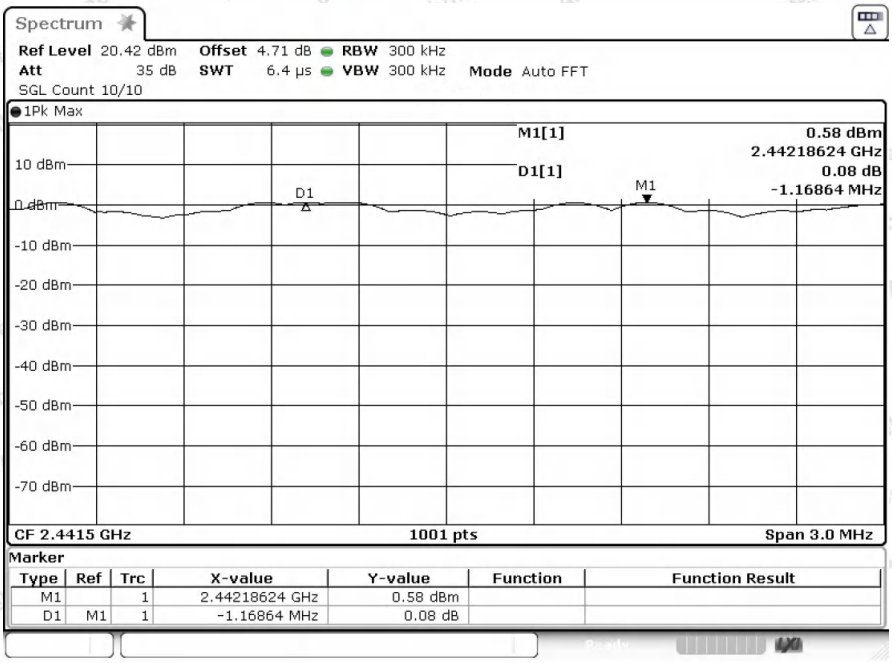
Appendix F: Carrier Frequencies Separation (Hopping)

Condition	Antenna	Modulation	Frequency(MHz)	Hopping NO.0 (MHz)	Hopping NO.1 (MHz)	Carrier Frequencies Separation(MHz)	Limit(MHz)	Result
NVNT	ANT1	1-DH5	2441.00	2440.880	2442.177	1.30	0.687	Pass
NVNT	ANT1	2-DH5	2441.00	2441.018	2442.186	1.17	0.885	Pass
NVNT	ANT1	3-DH5	2441.00	2440.844	2441.944	1.10	0.859	Pass

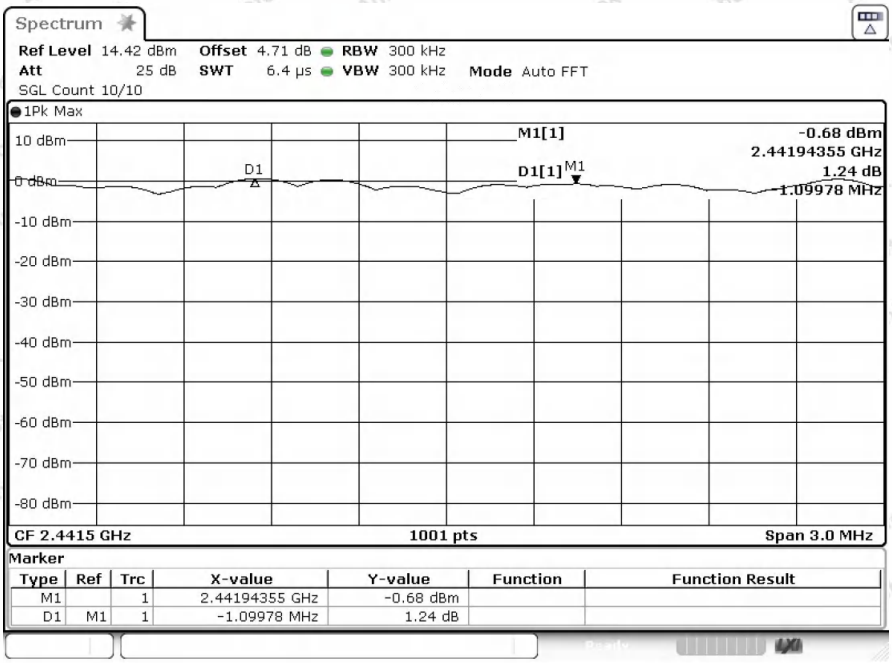
Carrier_Frequencies_Separation_(Hopping)_NVNT_ANT1_1-DH5_Hopping



Carrier_Frequencies_Separation_(Hopping)_NVNT_ANT1_2-DH5_Hopping



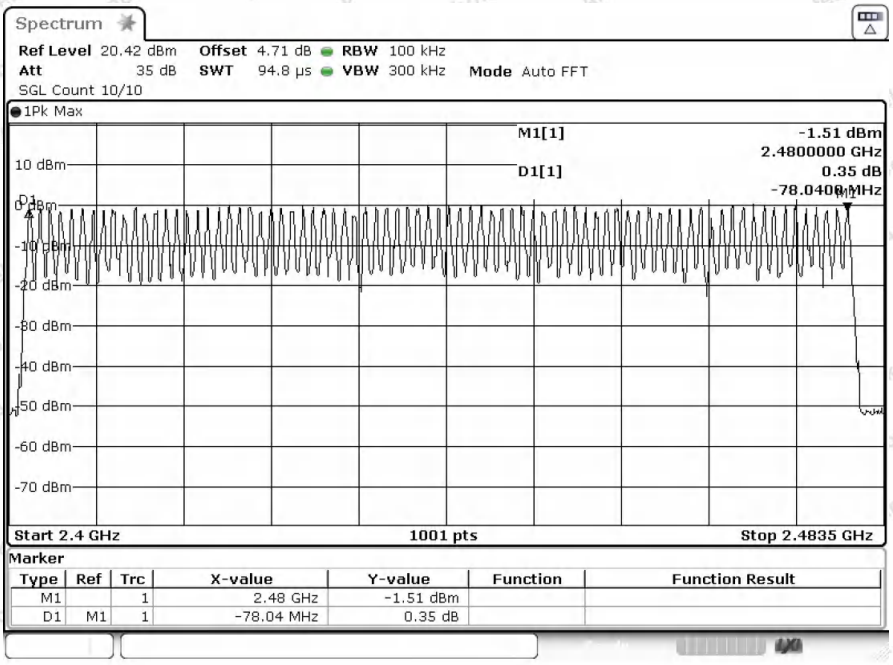
Carrier_Frequencies_Separation_(Hopping)_NVNT_ANT1_3-DH5_Hopping



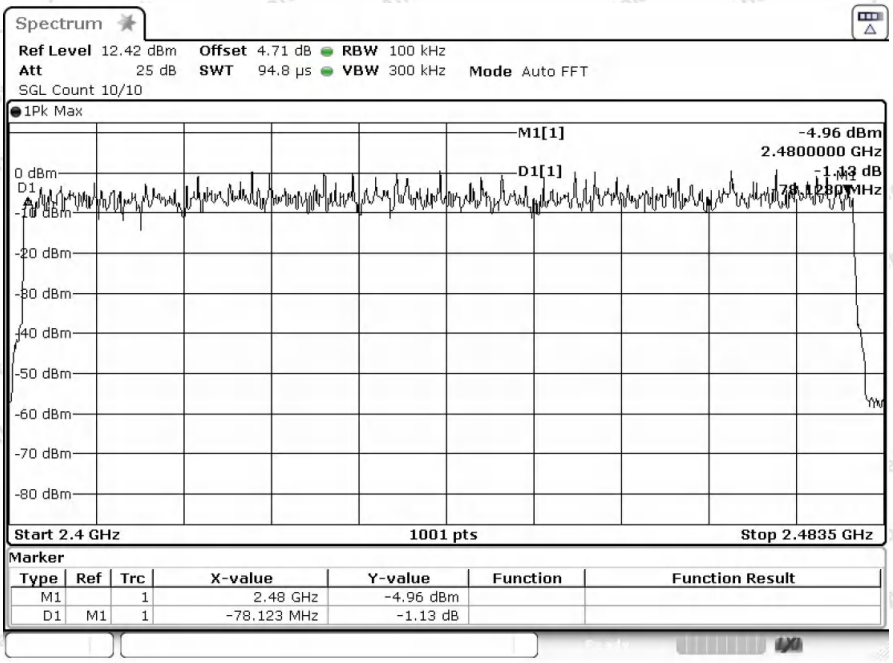
Appendix G: Number of Hopping Channel (Hopping)

Condition	Antenna	Modulation	Hopping Num	Limit	Result
NVNT	ANT1	1-DH5	79	15	Pass
NVNT	ANT1	2-DH5	79	15	Pass
NVNT	ANT1	3-DH5	79	15	Pass

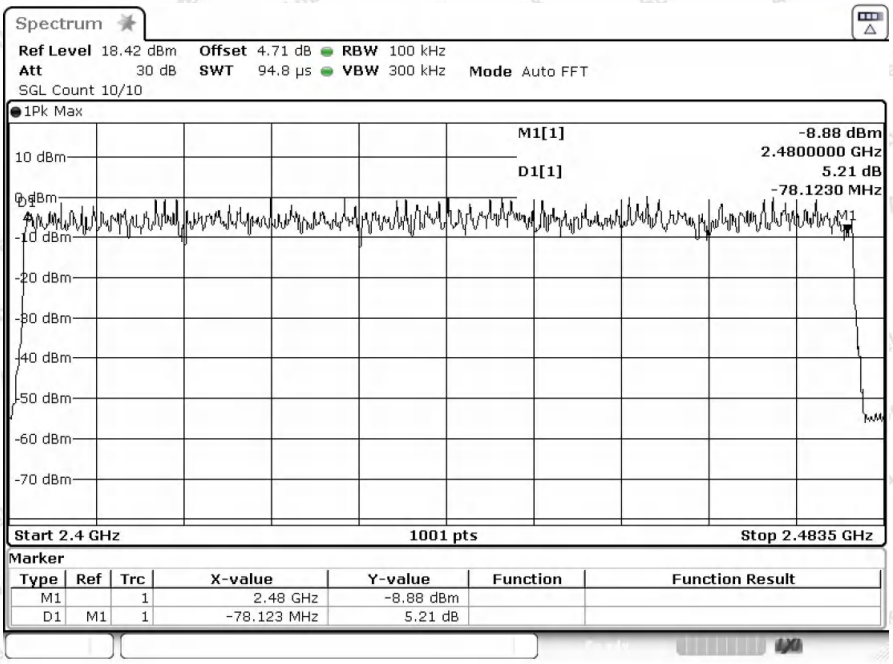
Number_of_Hopping_Channel_(Hopping)_NVNT_ANT1_1-DH5_Hopping



Number_of_Hopping_Channel_(Hopping)_NVNT_ANT1_2-DH5_Hopping



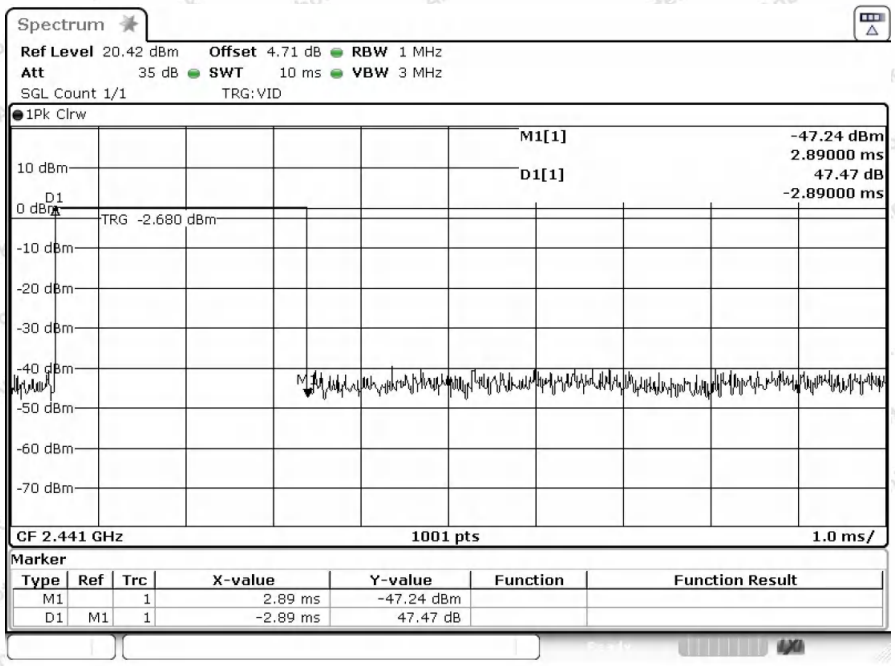
Number_of_Hopping_Channel_(Hopping)_NVNT_ANT1_3-DH5_Hopping



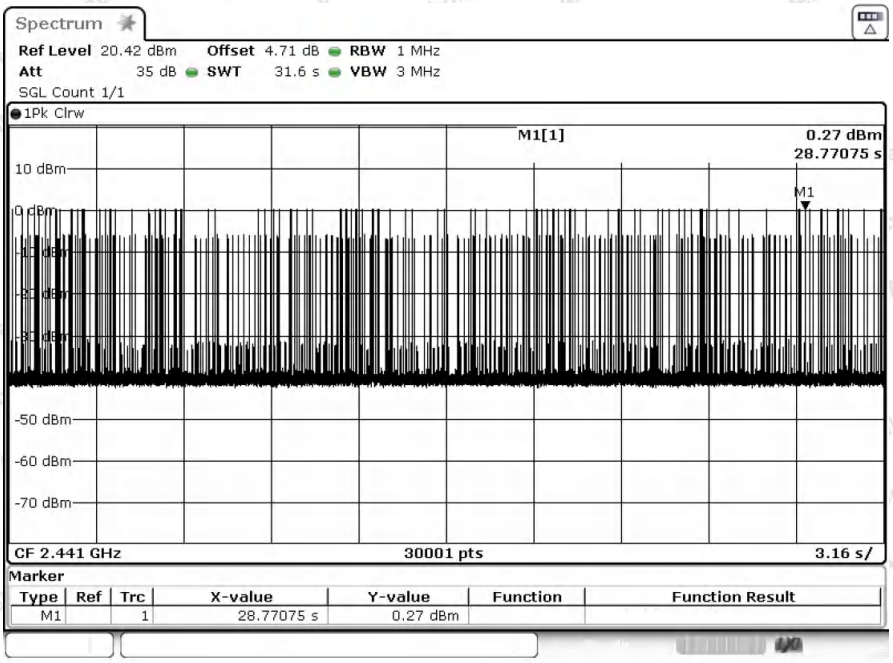
Appendix H: Dwell Time (Hopping)

Condition	Antenna	Packet Type	Pulse Time(ms)	Hops	Dwell Time(ms)	Limit(s)	Result
NVNT	ANT1	1-DH5	2.890	103.00	297.670	0.40	Pass
NVNT	ANT1	2-DH5	2.900	102.00	295.800	0.40	Pass
NVNT	ANT1	3-DH5	2.900	99.00	287.100	0.40	Pass
NVNT	ANT1	1-DH1	0.380	319.00	121.220	0.40	Pass
NVNT	ANT1	1-DH3	1.650	157.00	259.050	0.40	Pass
NVNT	ANT1	2-DH1	0.390	319.00	124.410	0.40	Pass
NVNT	ANT1	2-DH3	1.640	169.00	277.160	0.40	Pass
NVNT	ANT1	3-DH1	0.400	317.00	126.800	0.40	Pass
NVNT	ANT1	3-DH3	1.650	160.00	264.000	0.40	Pass

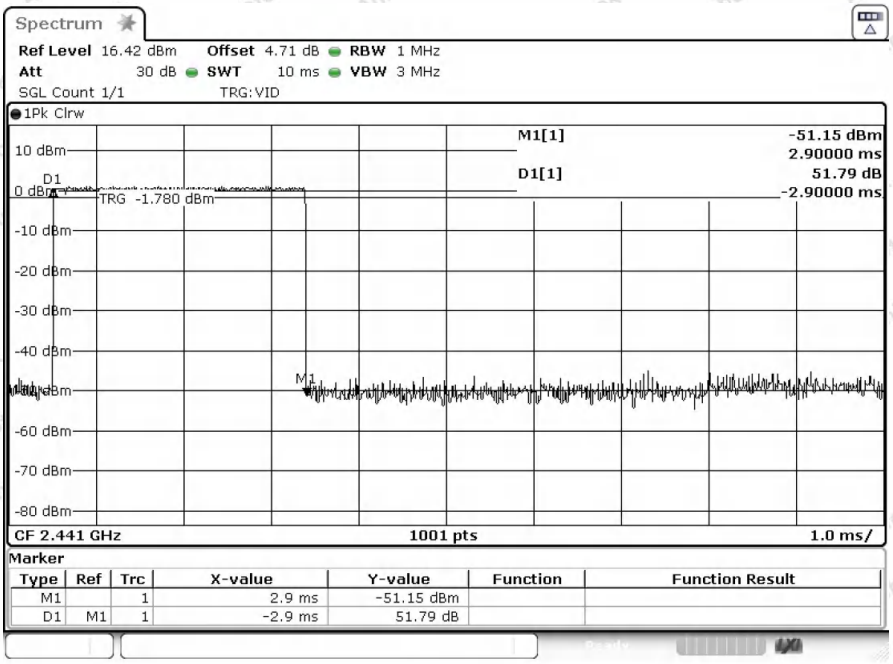
Dwell_Time_(Hopping)_NVNT_ANT1_1-DH5_2441_One_Burst_Time



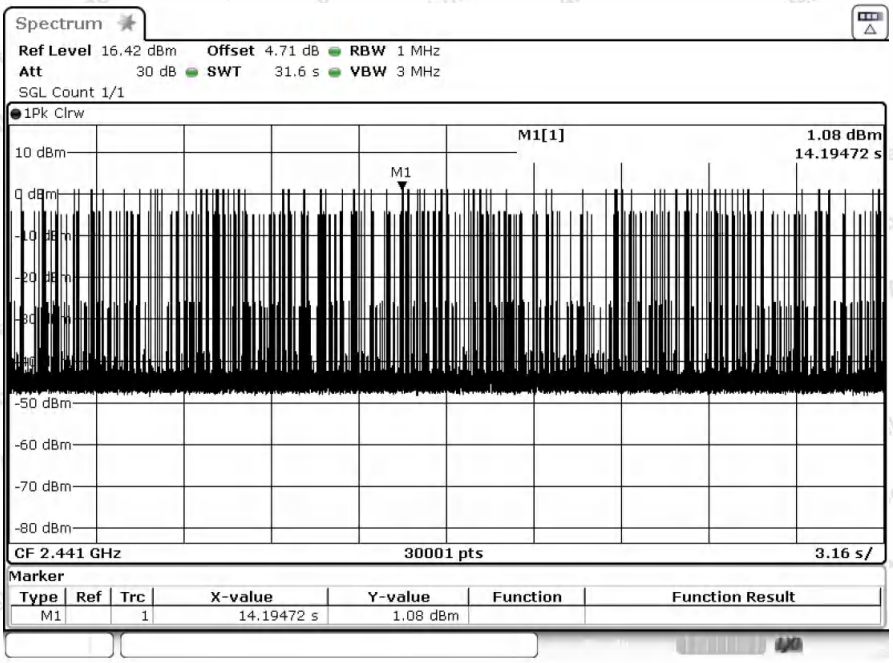
Dwell_Time_(Hopping)_NVNT_ANT1_1-DH5_2441_Accumulated



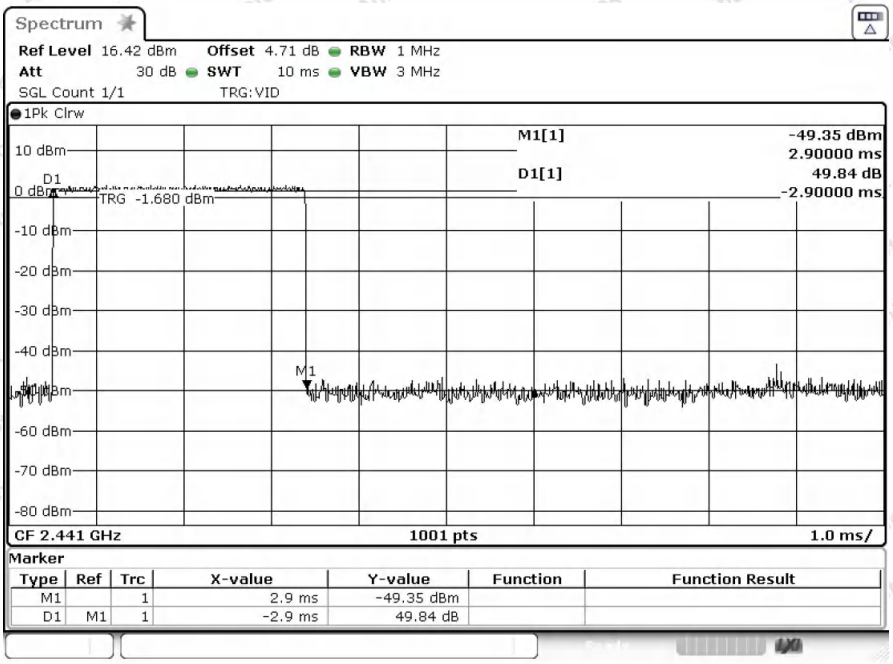
Dwell_Time_(Hopping)_NVNT_ANT1_2-DH5_2441_One_Burst_Time



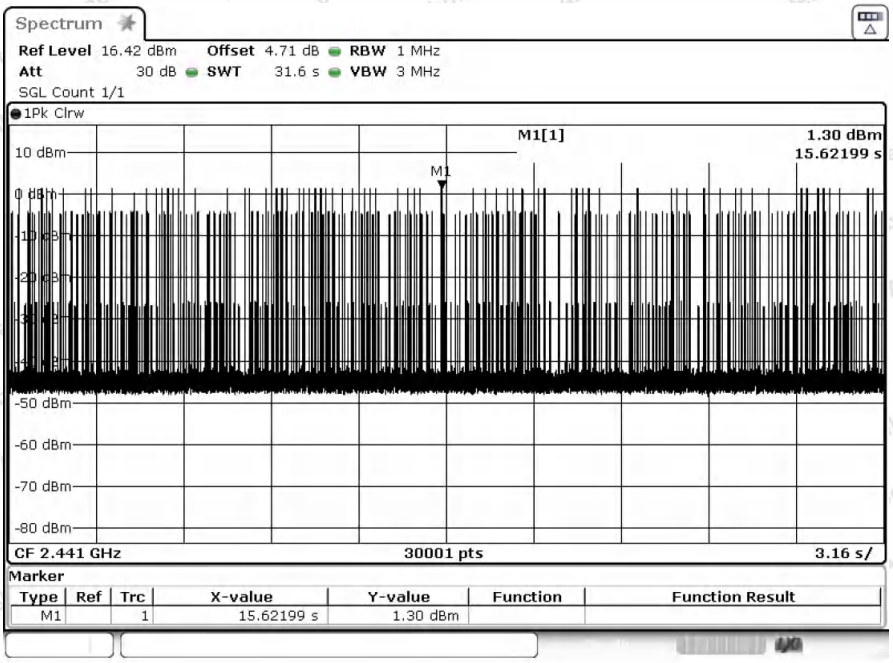
Dwell_Time_(Hopping)_NVNT_ANT1_2-DH5_2441_Accumulated



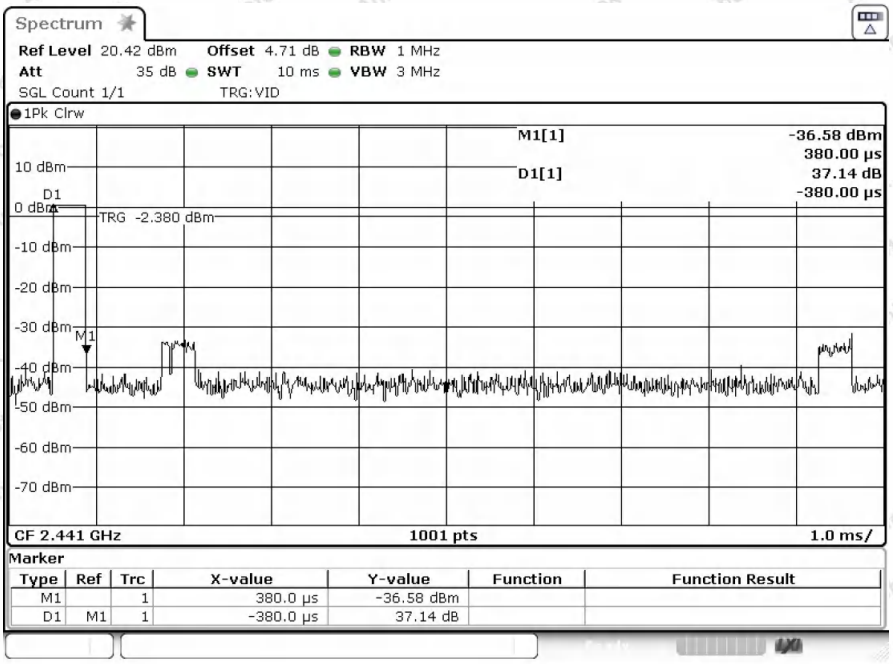
Dwell_Time_(Hopping)_NVNT_ANT1_3-DH5_2441_One_Burst_Time



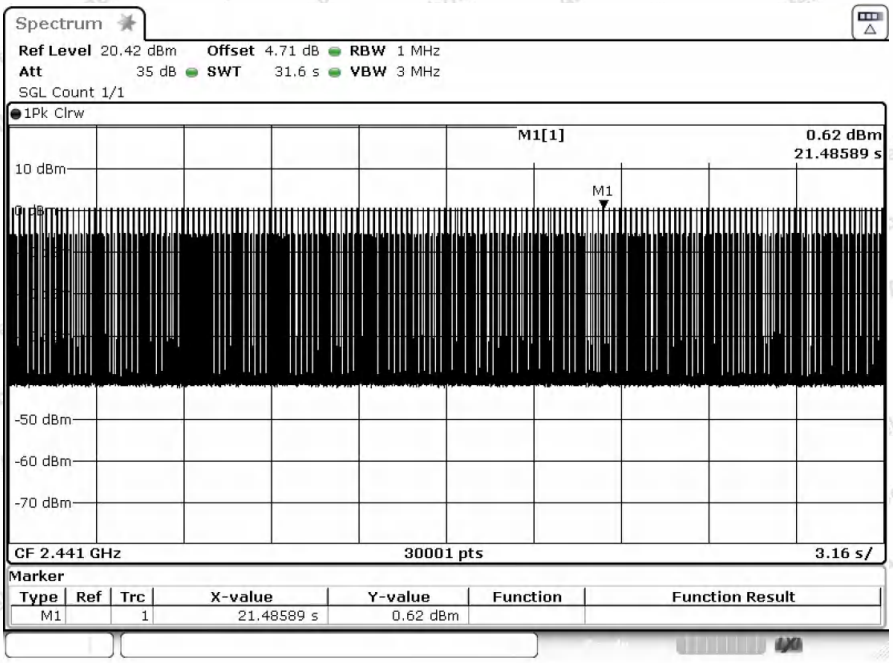
Dwell_Time_(Hopping)_NVNT_ANT1_3-DH5_2441_Accumulated



Dwell_Time_(Hopping)_NVNT_ANT1_1-DH1_2441_One_Burst_Time



Dwell_Time_(Hopping)_NVNT_ANT1_1-DH1_2441_Accumulated



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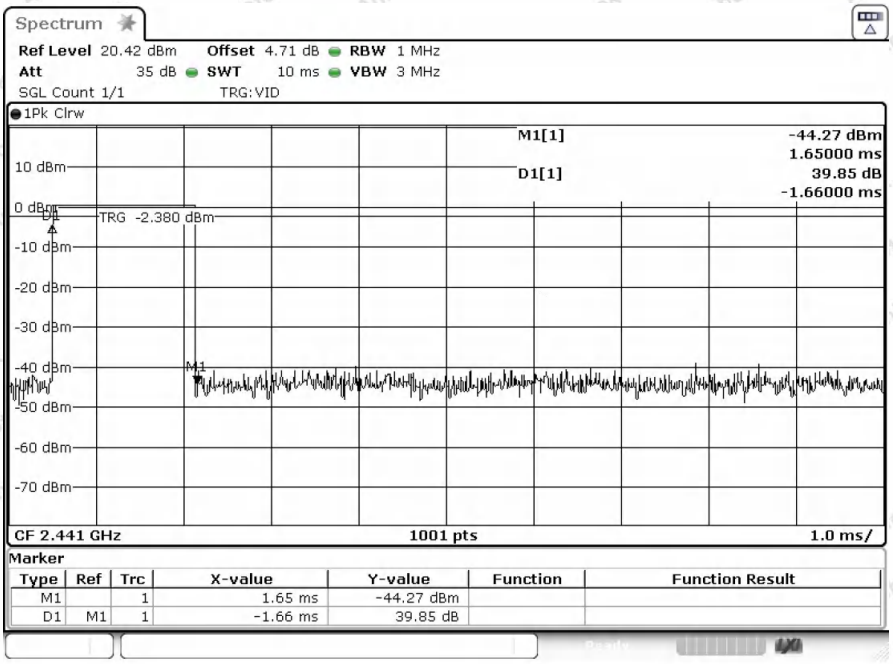
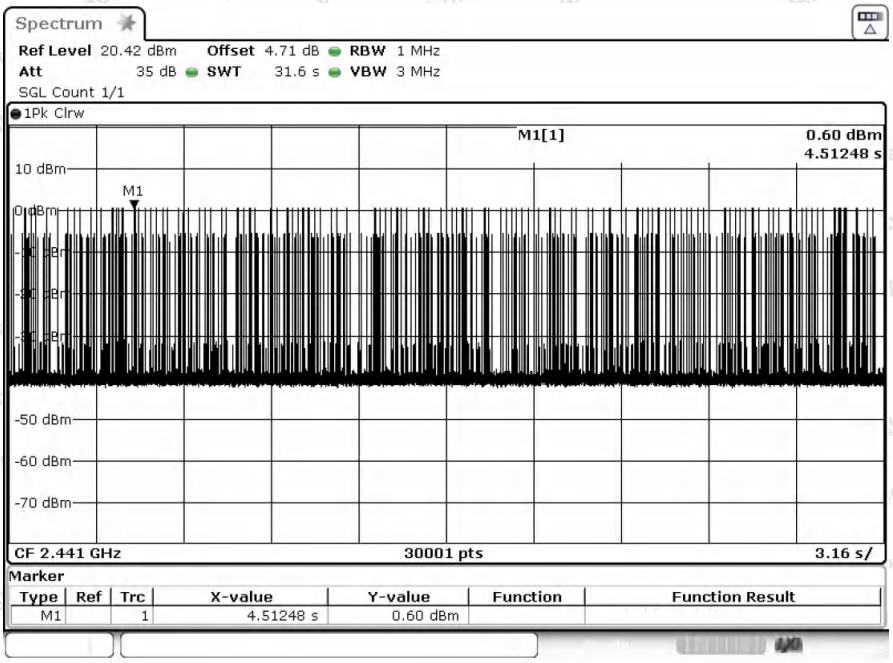


Dwell_Time_(Hopping)_NVNT_ANT1_1-DH3_2441_Accumulated



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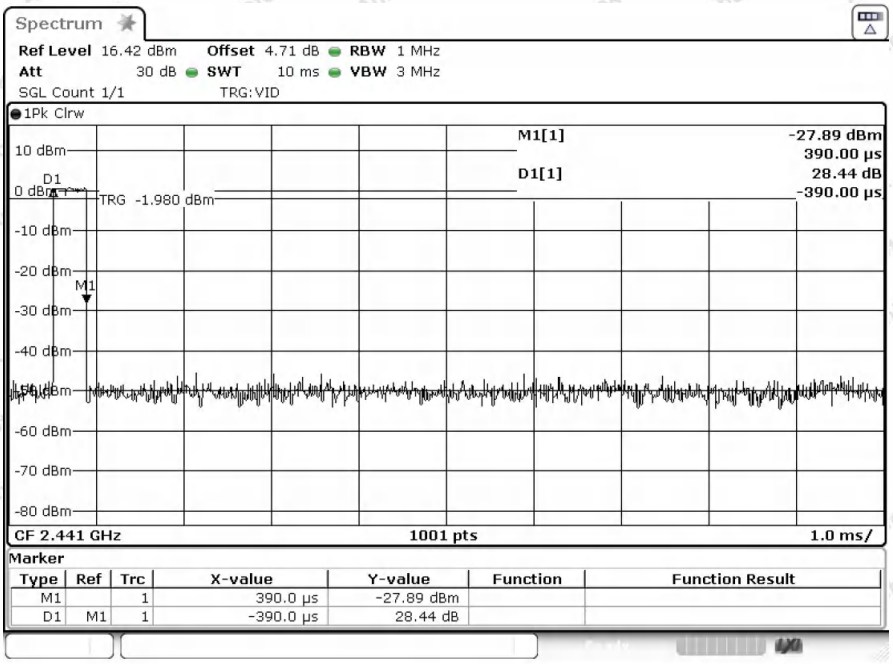

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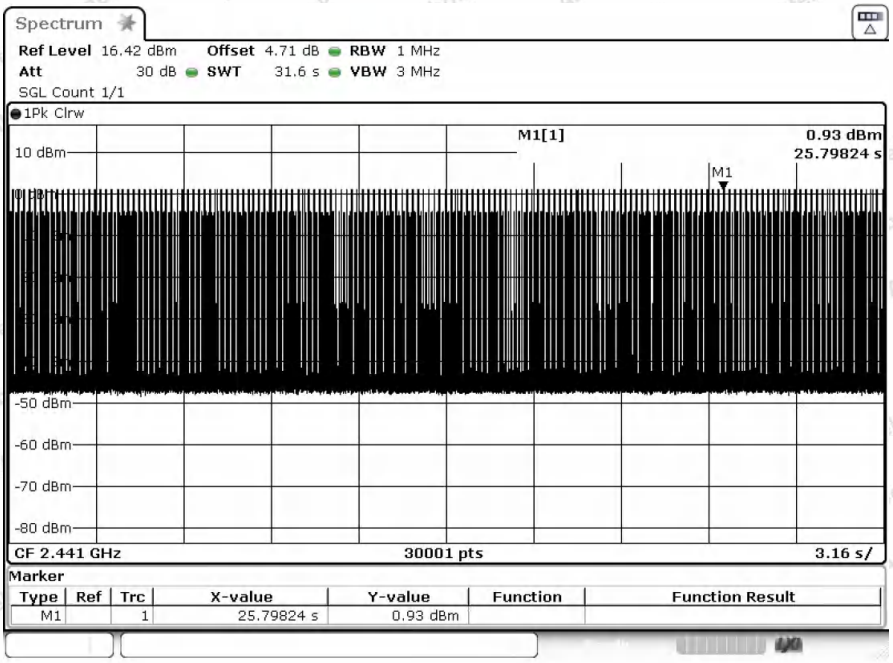

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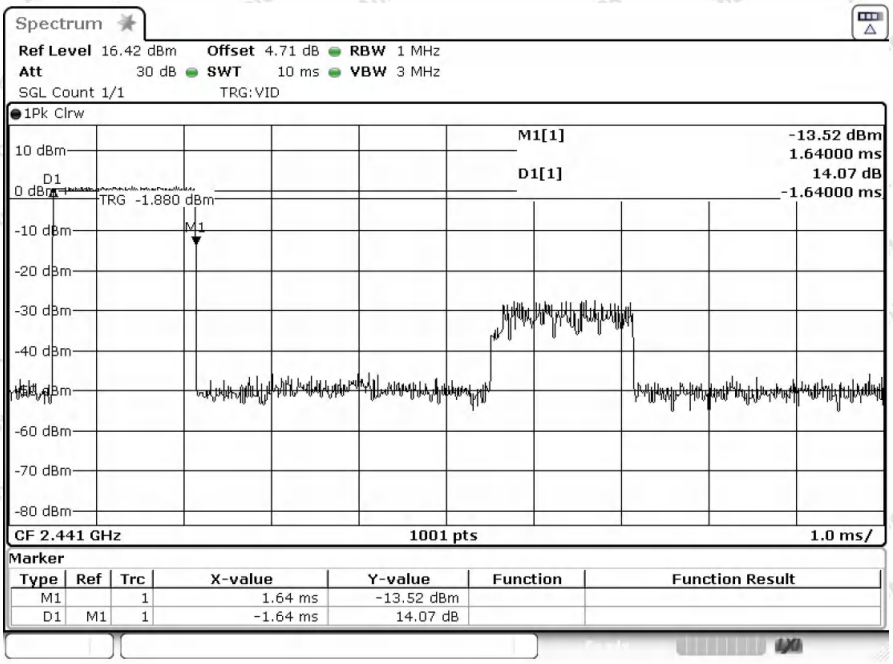
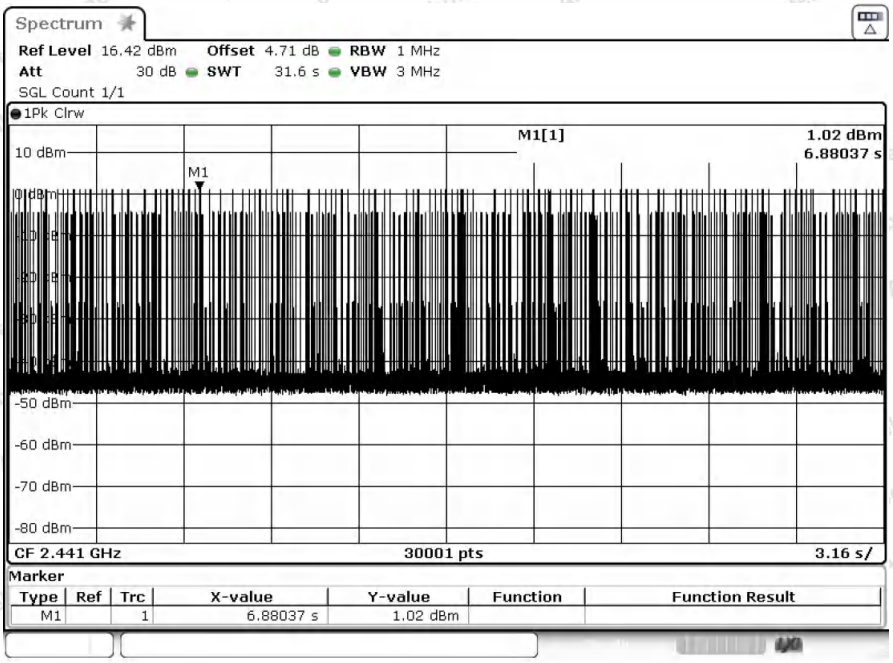
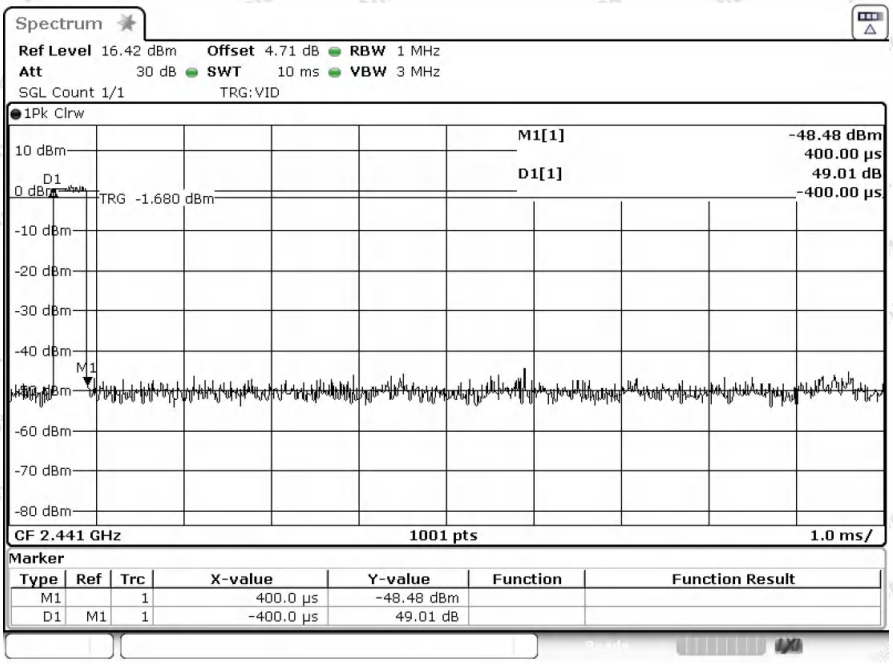


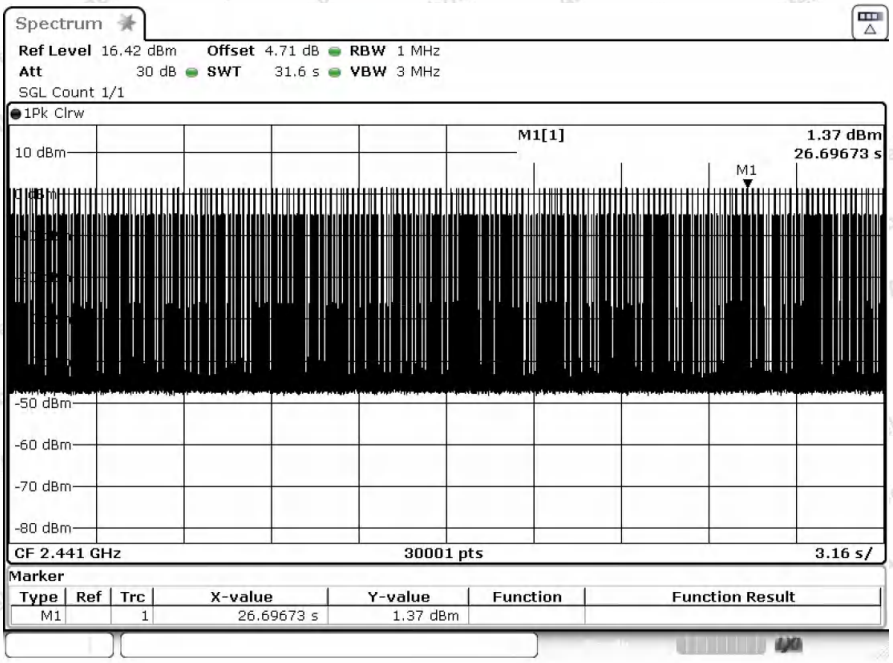
Dwell_Time_(Hopping)_NVNT_ANT1_2-DH3_2441_Accumulated



Dwell_Time_(Hopping)_NVNT_ANT1_3-DH1_2441_One_Burst_Time



Dwell_Time_(Hopping)_NVNT_ANT1_3-DH1_2441_Accumulated



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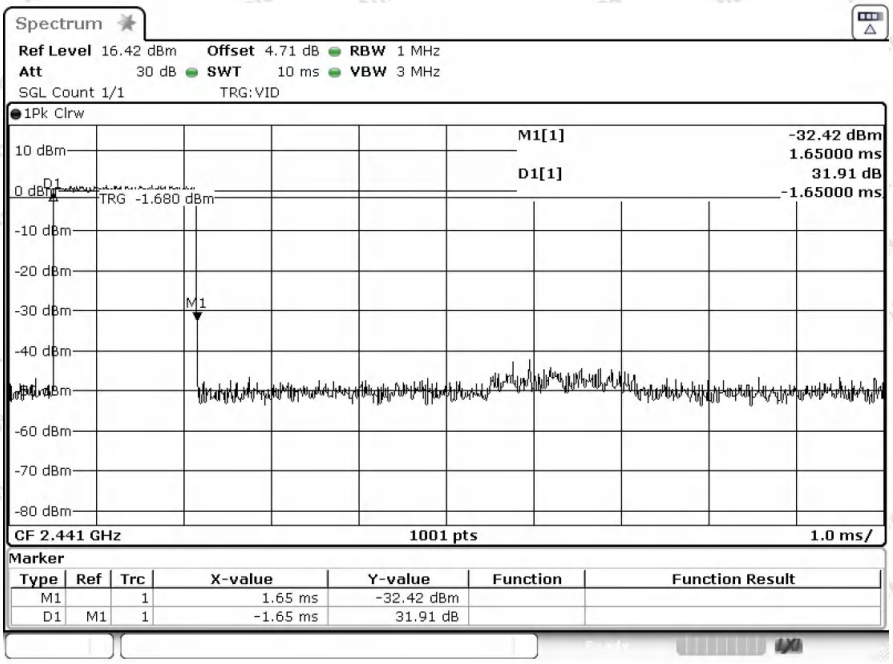
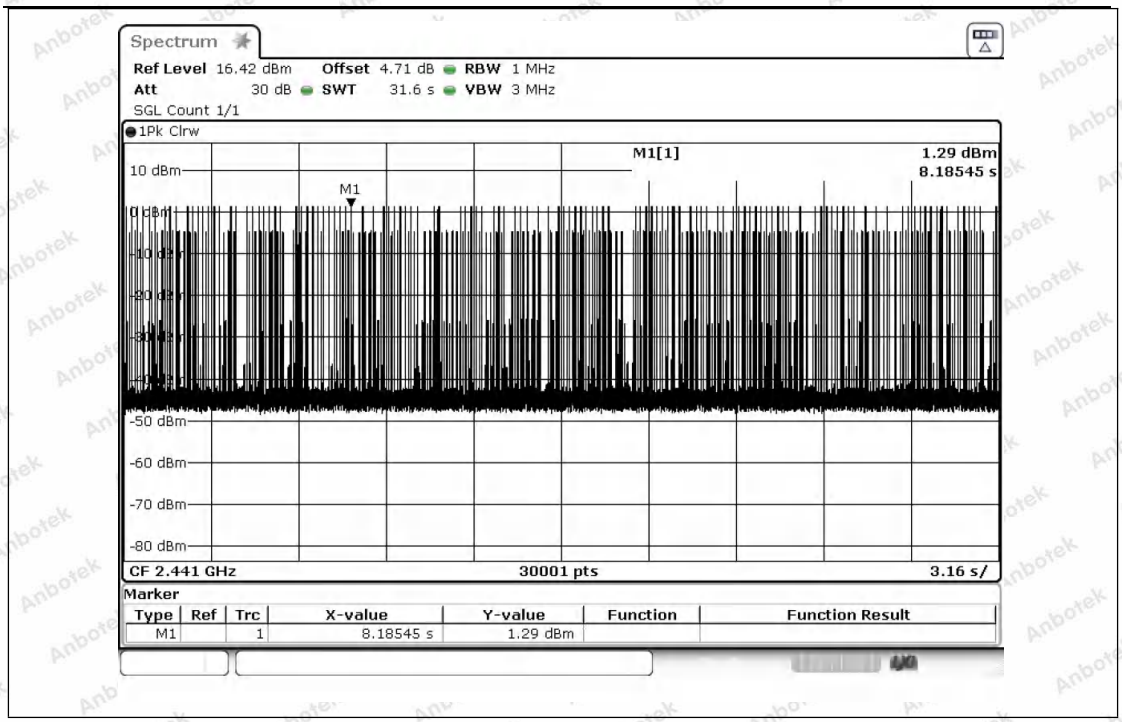


Dwell_Time_(Hopping)_NVNT_ANT1_3-DH3_2441_Accumulated


Spectrum
Ref Level 16.42 dBm Offset 4.71 dB RBW 1 MHz
Att 30 dB SWT 31.6 s VBW 3 MHz
SGL Count 1/1
1Pk Clrw
M1[1] 1.29 dBm
8.18545 s
10 dBm
M1
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
CF 2.441 GHz
30001 pts
3.16 s/
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 8.18545 s 1.29 dBm

---End---