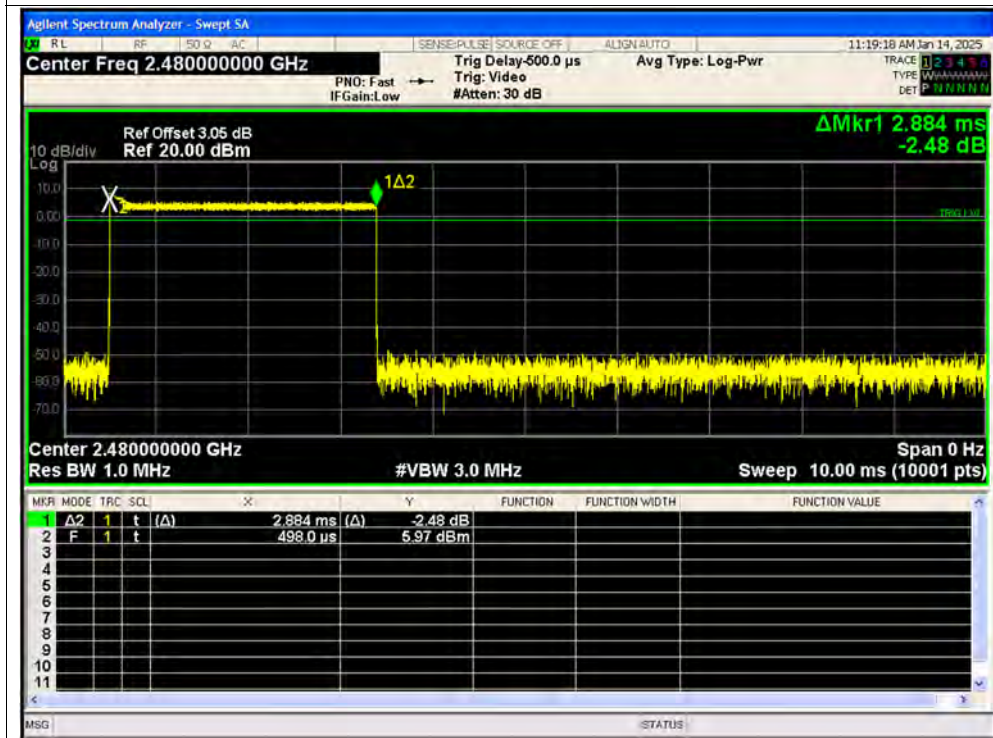
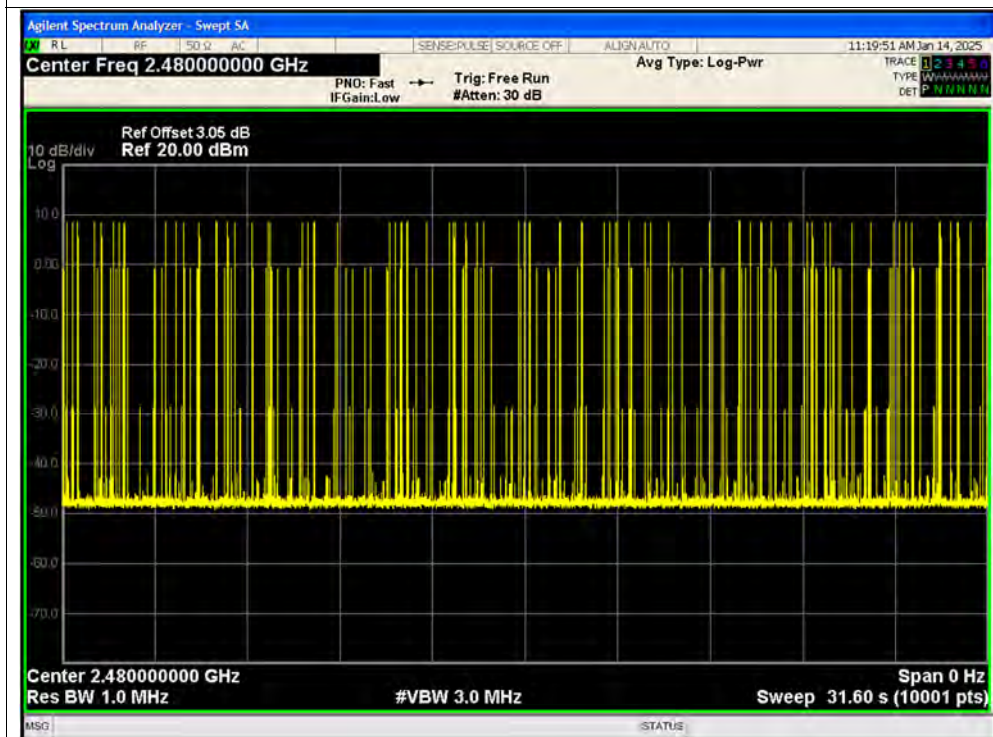




Dwell NVNT 2-DH5 2480MHz Ant1 One Burst SISO

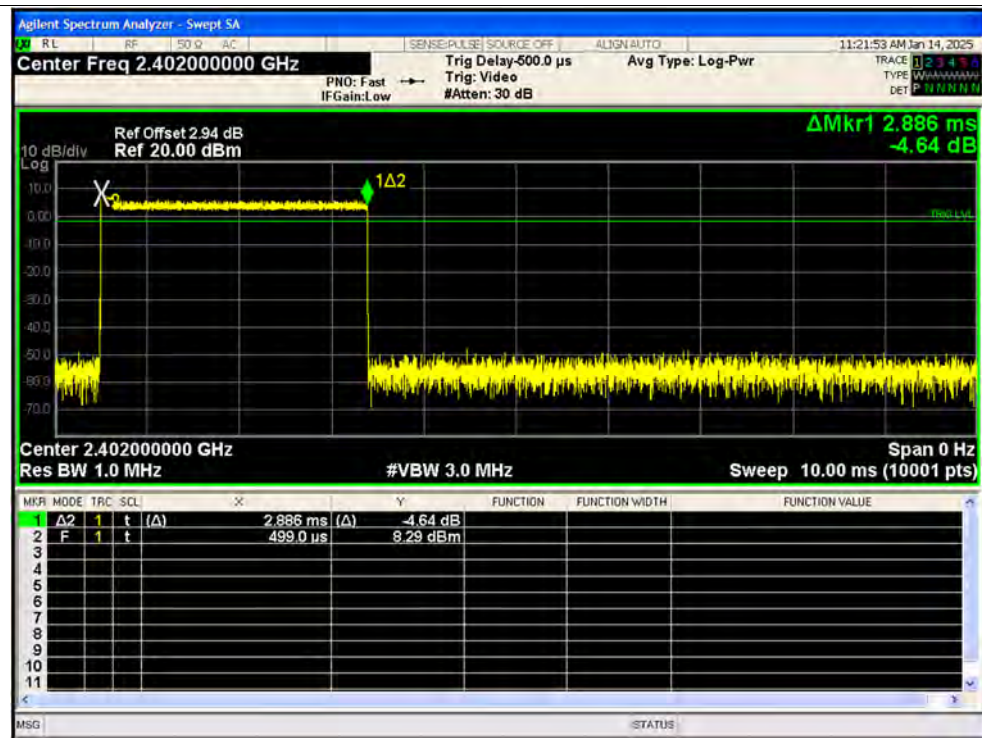


Dwell NVNT 2-DH5 2480MHz Ant1 Accumulated SISO

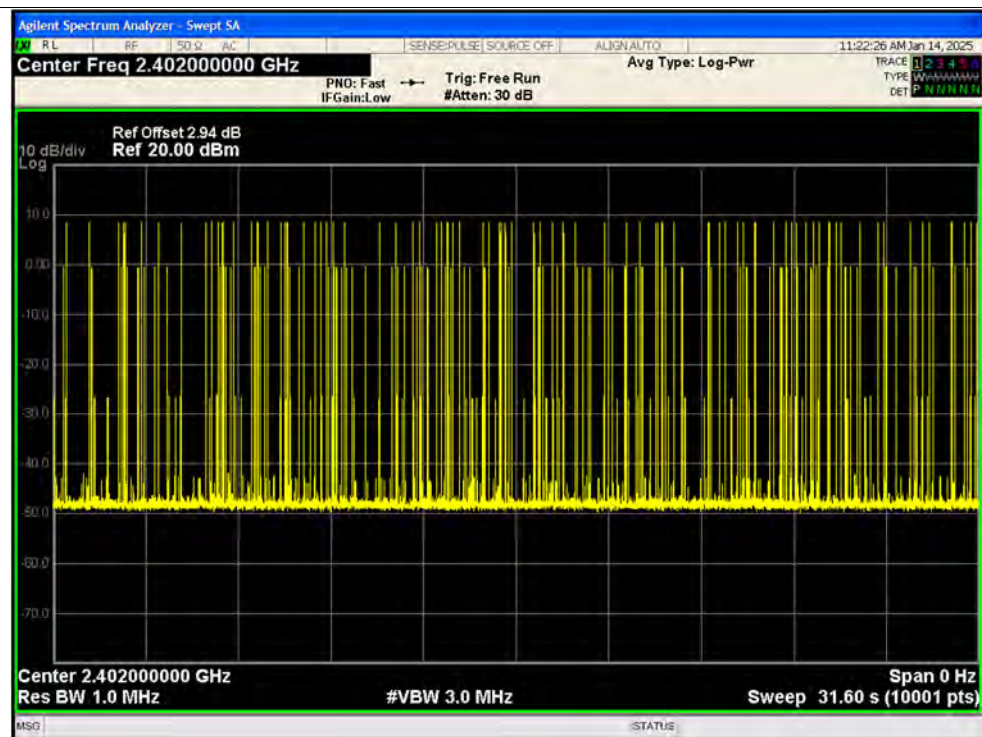




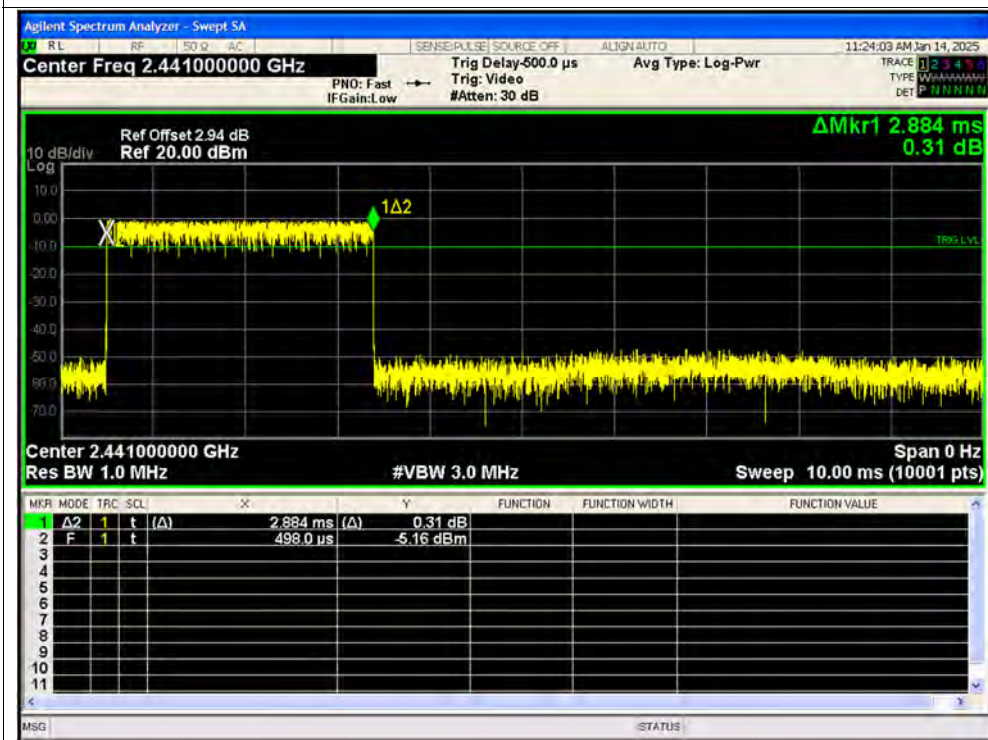
Dwell NVNT 3-DH5 2402MHz Ant1 One Burst SISO



Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated SISO



Dwell NVNT 3-DH5 2441MHz Ant1 One Burst SISO

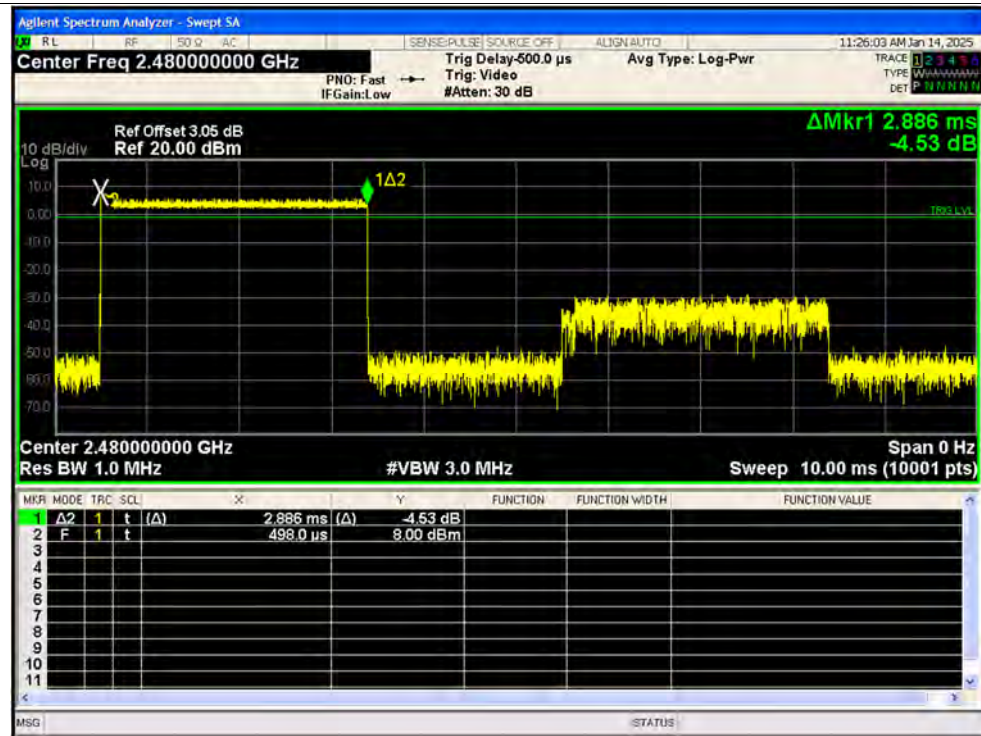


Dwell NVNT 3-DH5 2441MHz Ant1 Accumulated SISO

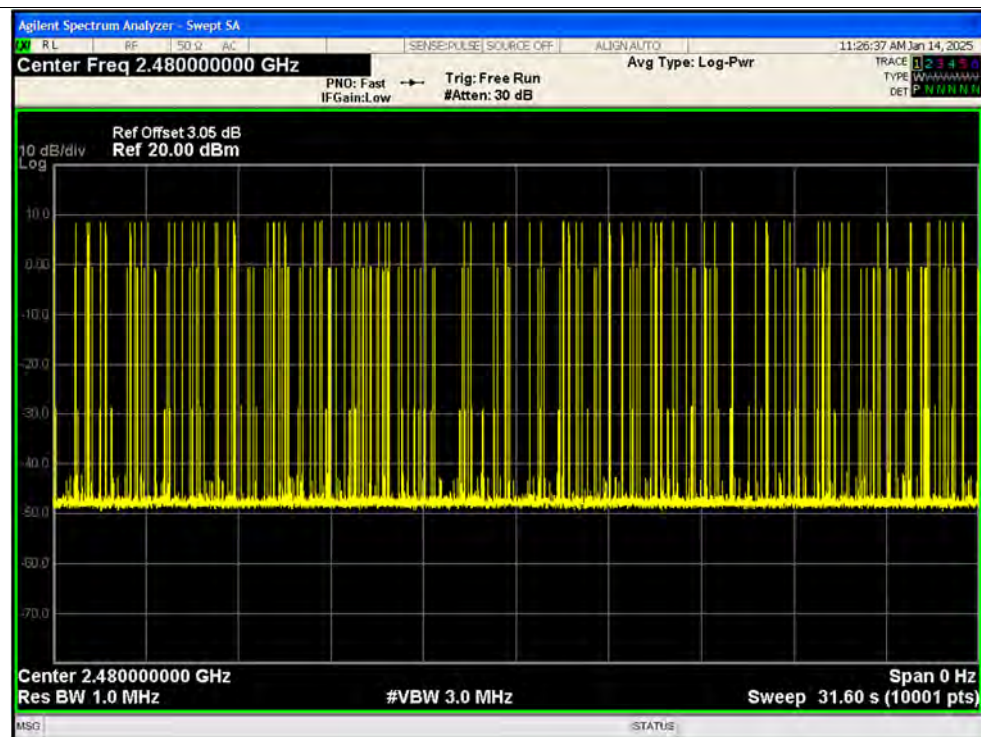




Dwell NVNT 3-DH5 2480MHz Ant1 One Burst SISO



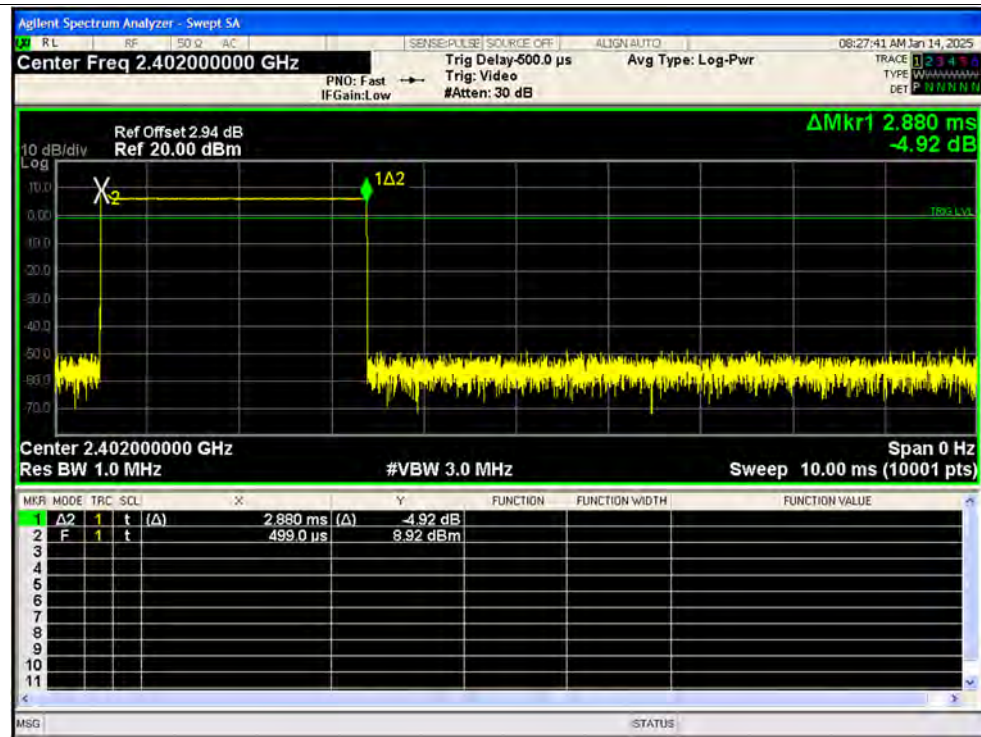
Dwell NVNT 3-DH5 2480MHz Ant1 Accumulated SISO



Right

Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst

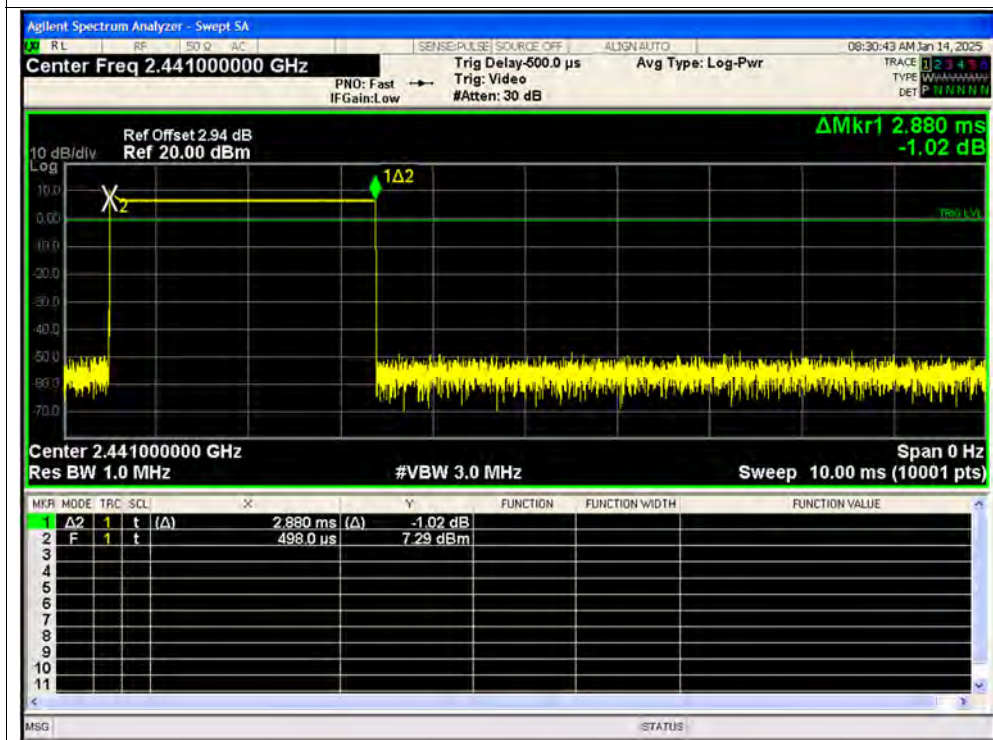


Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated

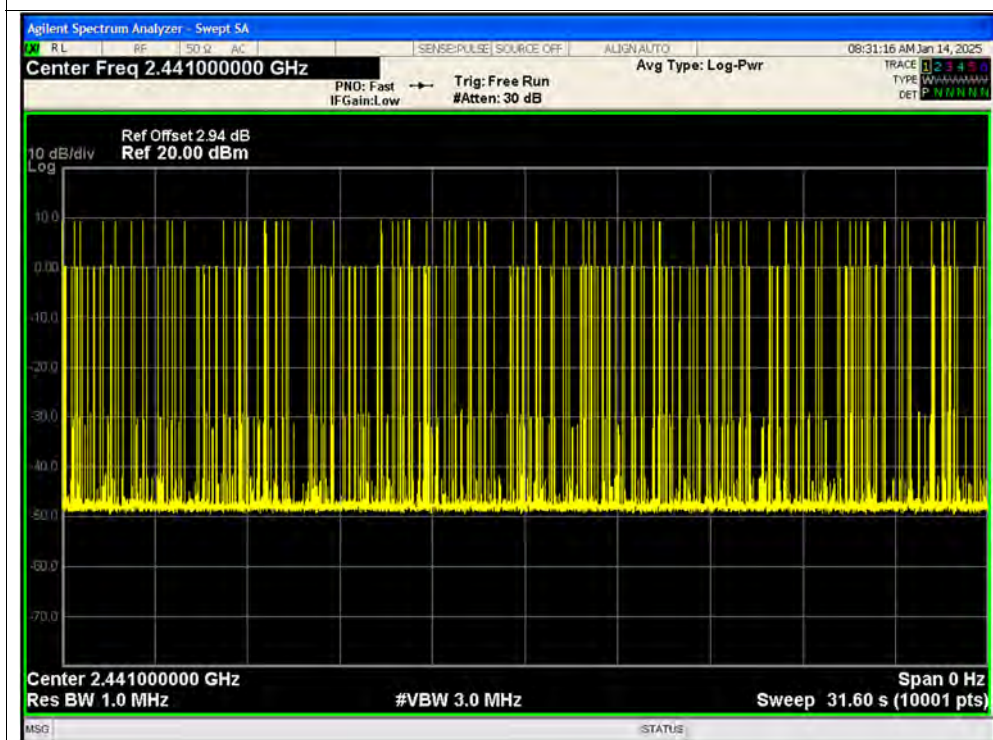




Dwell NVNT 1-DH5 2441MHz Ant1 One Burst

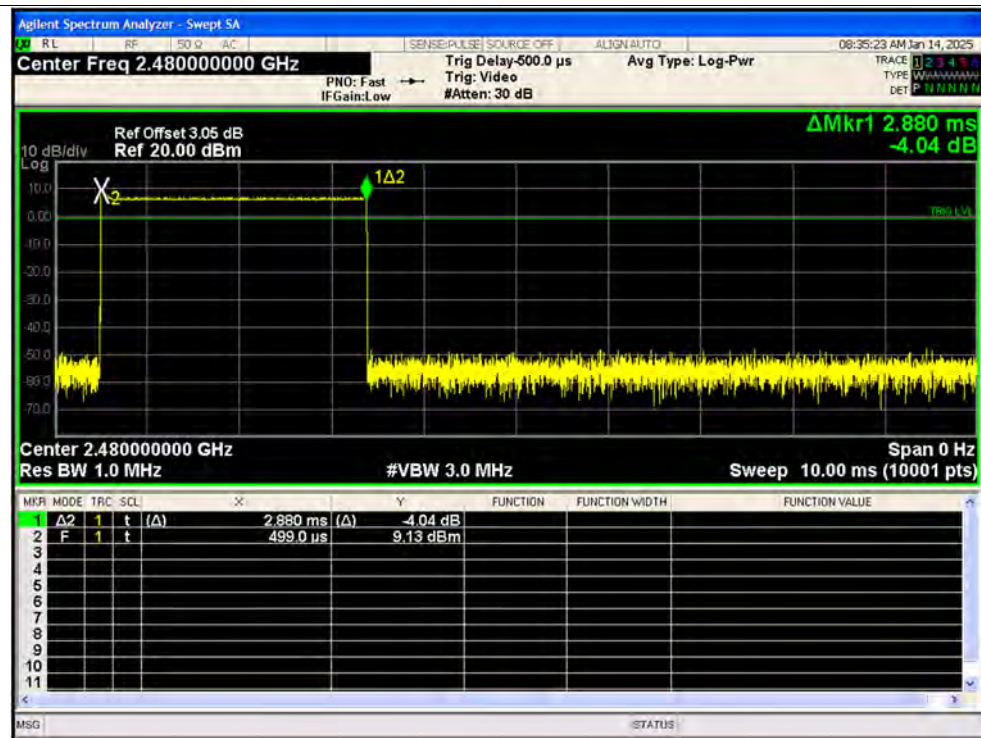


Dwell NVNT 1-DH5 2441MHz Ant1 Accumulated

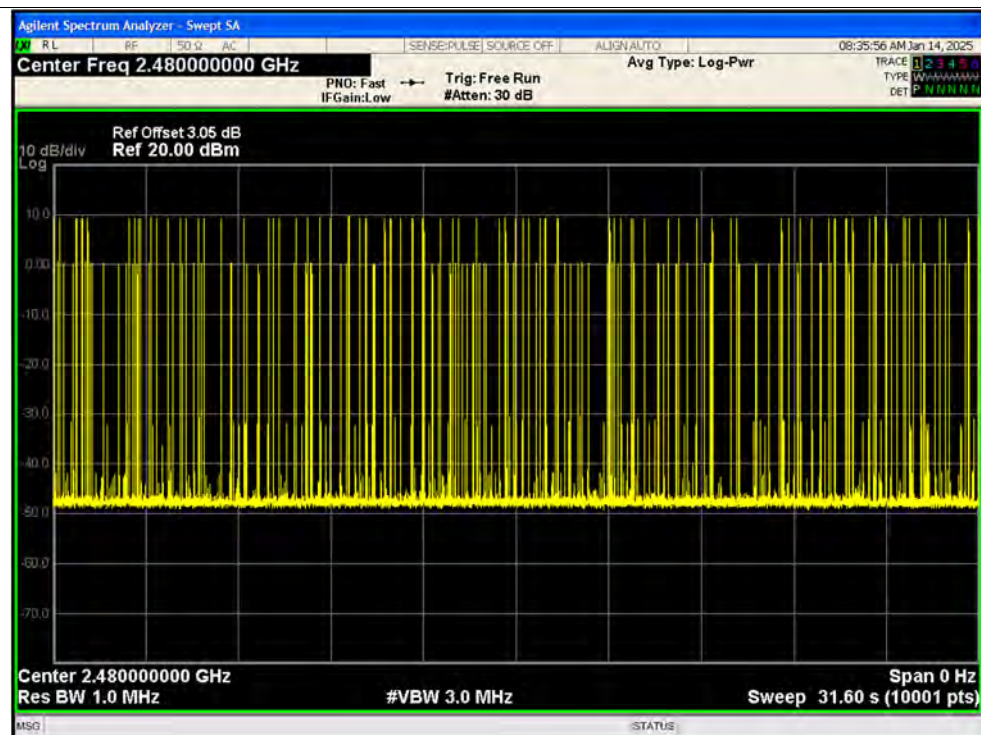




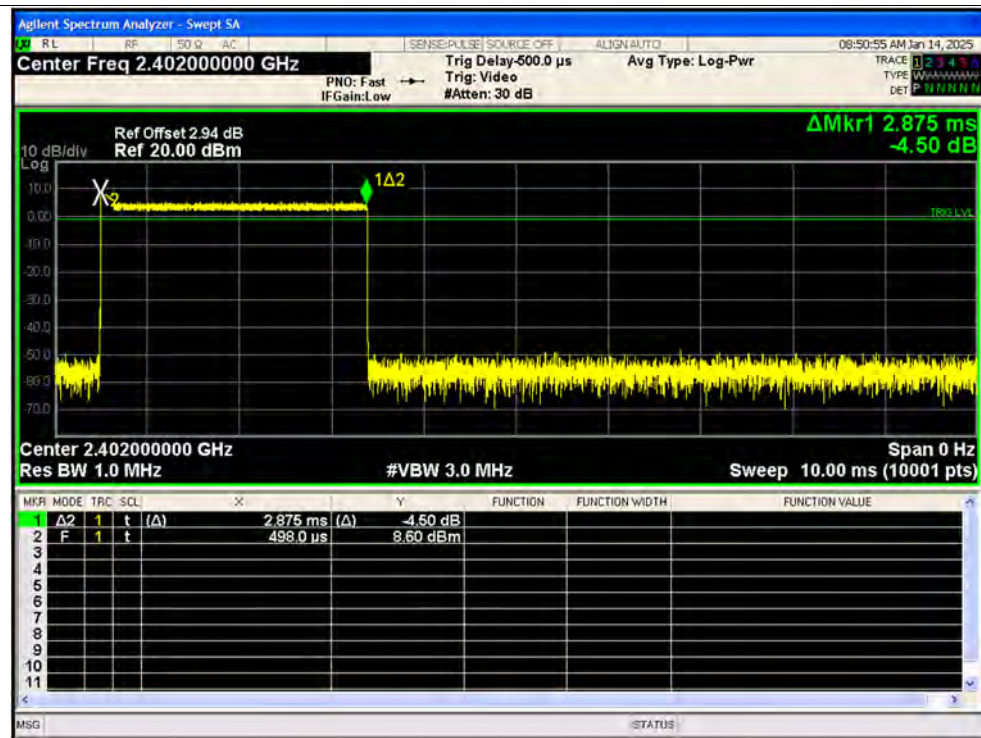
Dwell NVNT 1-DH5 2480MHz Ant1 One Burst



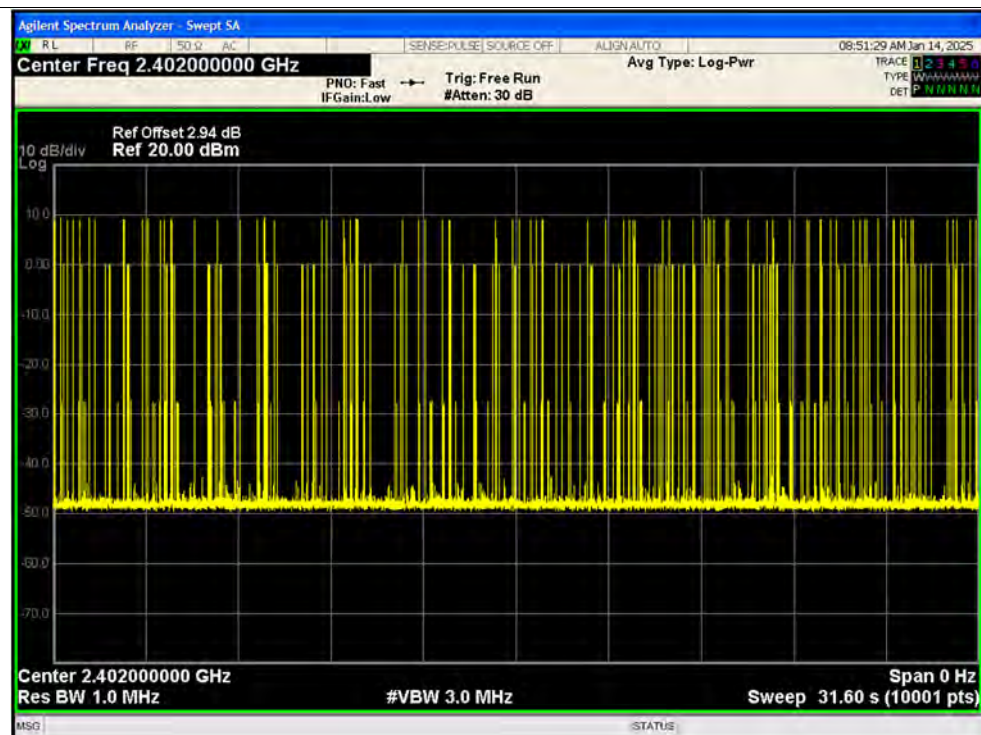
Dwell NVNT 1-DH5 2480MHz Ant1 Accumulated



Dwell NVNT 2-DH5 2402MHz Ant1 One Burst

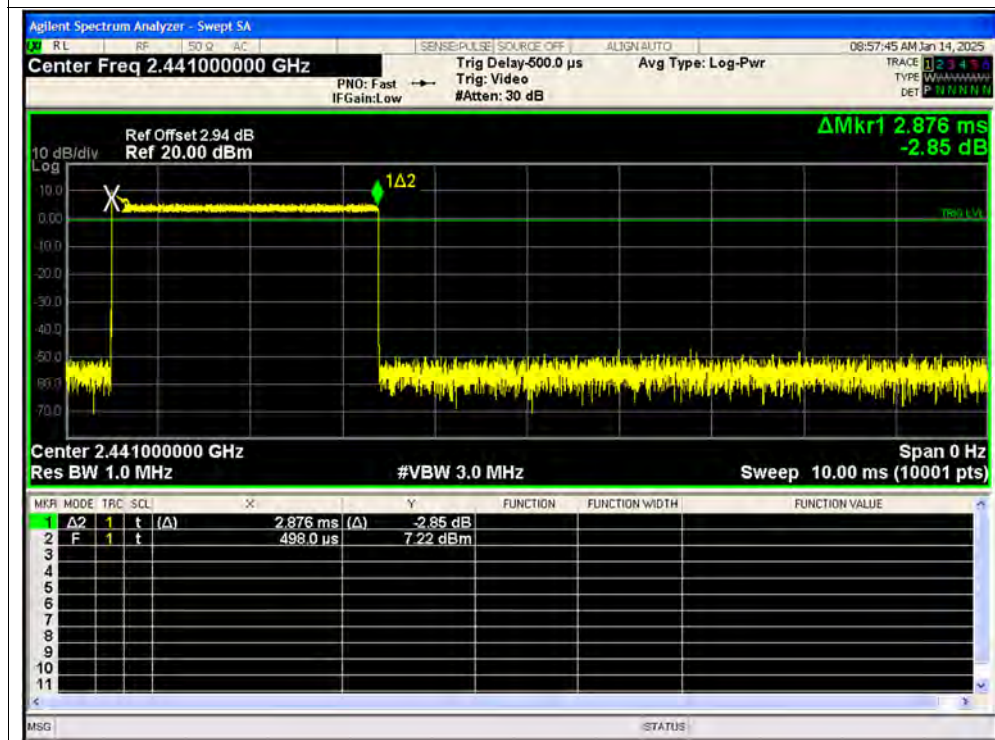


Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated

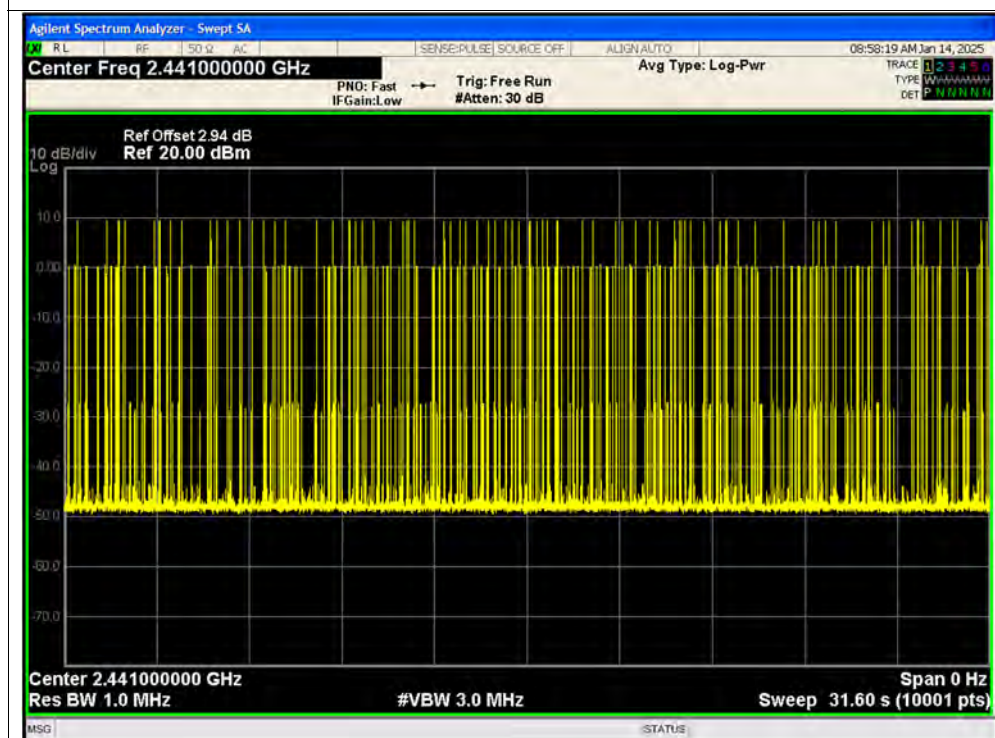




Dwell NVNT 2-DH5 2441MHz Ant1 One Burst

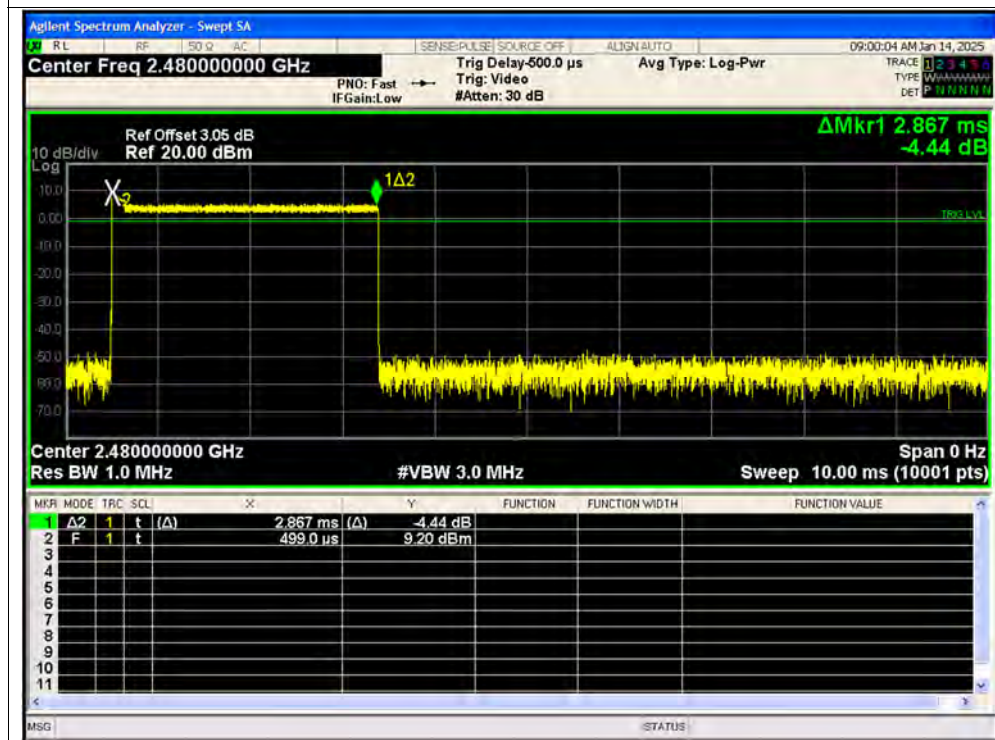


Dwell NVNT 2-DH5 2441MHz Ant1 Accumulated

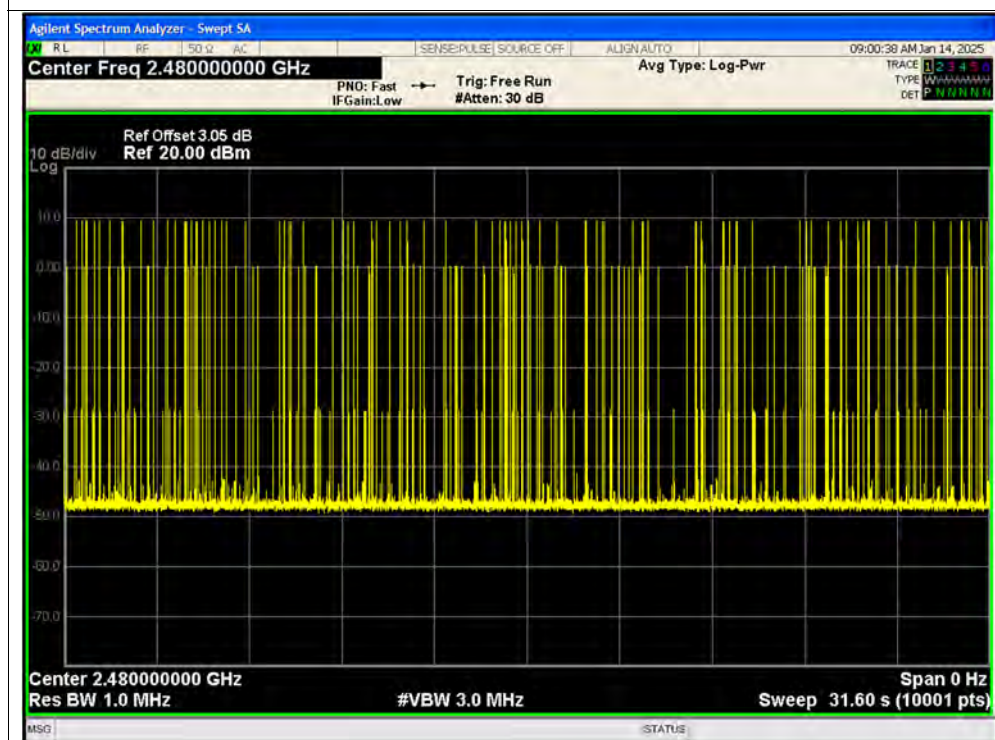




Dwell NVNT 2-DH5 2480MHz Ant1 One Burst

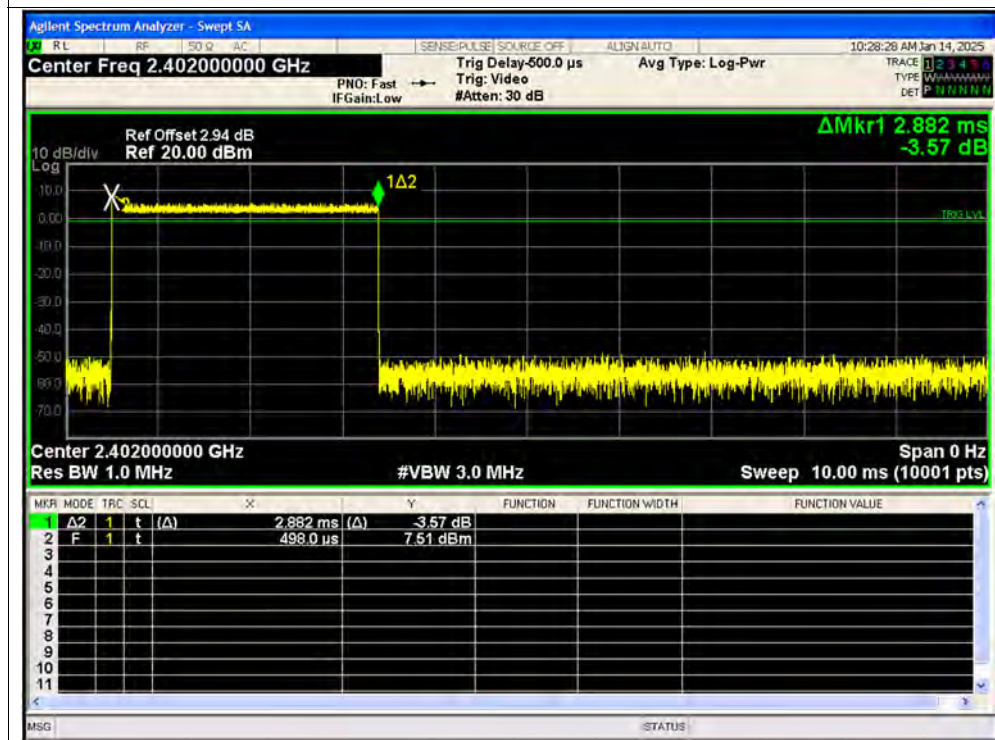


Dwell NVNT 2-DH5 2480MHz Ant1 Accumulated





Dwell NVNT 3-DH5 2402MHz Ant1 One Burst

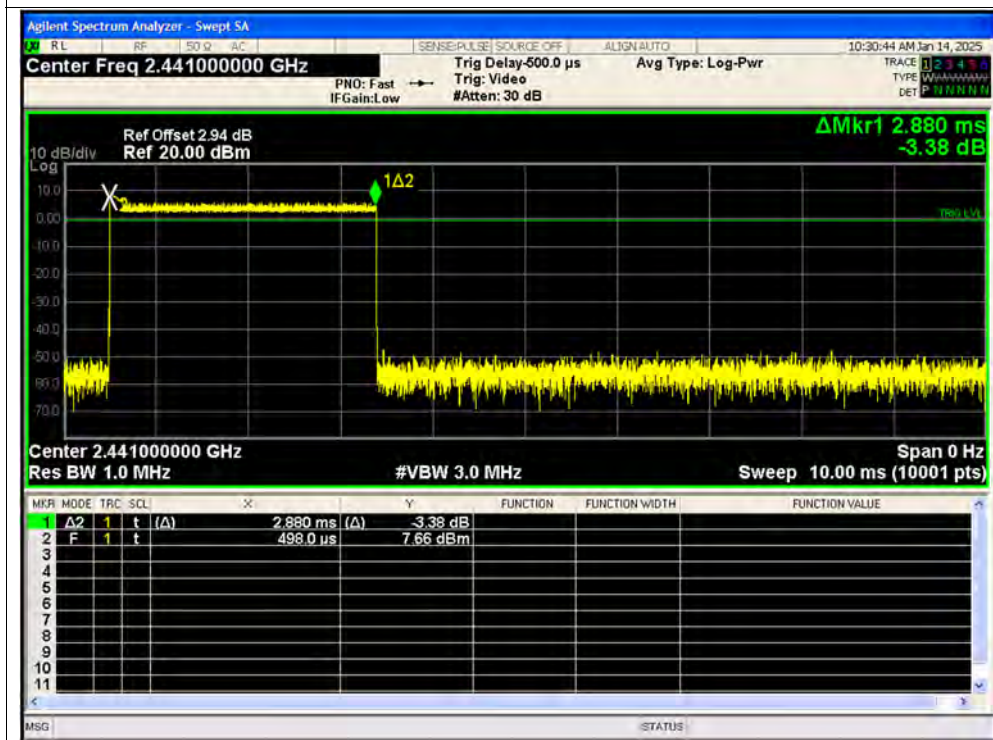


Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated





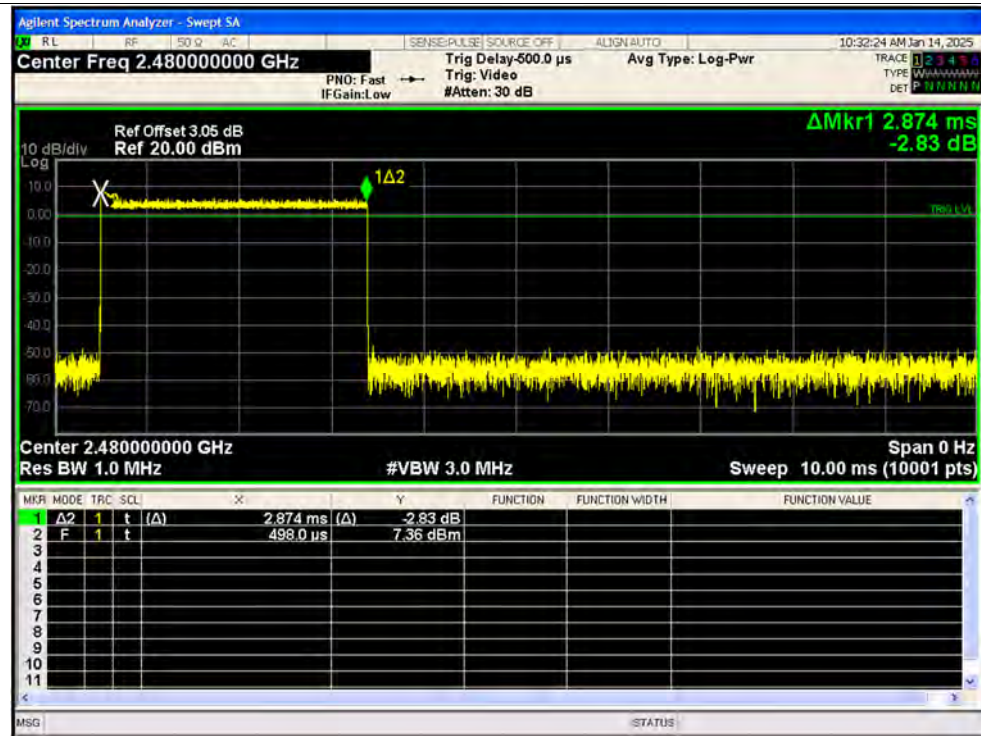
Dwell NVNT 3-DH5 2441MHz Ant1 One Burst



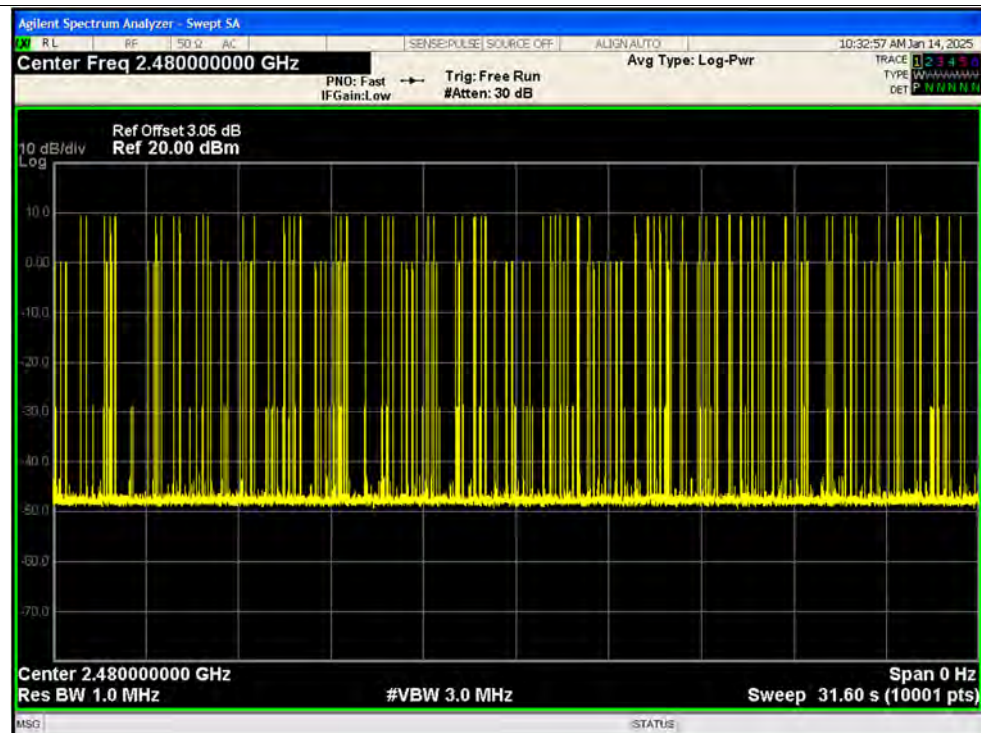
Dwell NVNT 3-DH5 2441MHz Ant1 Accumulated



Dwell NVNT 3-DH5 2480MHz Ant1 One Burst



Dwell NVNT 3-DH5 2480MHz Ant1 Accumulated



**A.8. Conducted Spurious Emissions****Left**

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-57.17	-20	Pass
NVNT	1-DH5	2441	Ant1	-56.9	-20	Pass
NVNT	1-DH5	2480	Ant1	-57.91	-20	Pass
NVNT	2-DH5	2402	Ant1	-57.24	-20	Pass
NVNT	2-DH5	2441	Ant1	-56.28	-20	Pass
NVNT	2-DH5	2480	Ant1	-57.9	-20	Pass
NVNT	3-DH5	2402	Ant1	-57.87	-20	Pass
NVNT	3-DH5	2441	Ant1	-57.2	-20	Pass
NVNT	3-DH5	2480	Ant1	-57.29	-20	Pass

Right

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-59.47	-20	Pass
NVNT	1-DH5	2441	Ant1	-58.82	-20	Pass
NVNT	1-DH5	2480	Ant1	-59.02	-20	Pass
NVNT	2-DH5	2402	Ant1	-59.34	-20	Pass
NVNT	2-DH5	2441	Ant1	-58.36	-20	Pass
NVNT	2-DH5	2480	Ant1	-56.32	-20	Pass
NVNT	3-DH5	2402	Ant1	-58.7	-20	Pass
NVNT	3-DH5	2441	Ant1	-59.58	-20	Pass
NVNT	3-DH5	2480	Ant1	-59	-20	Pass

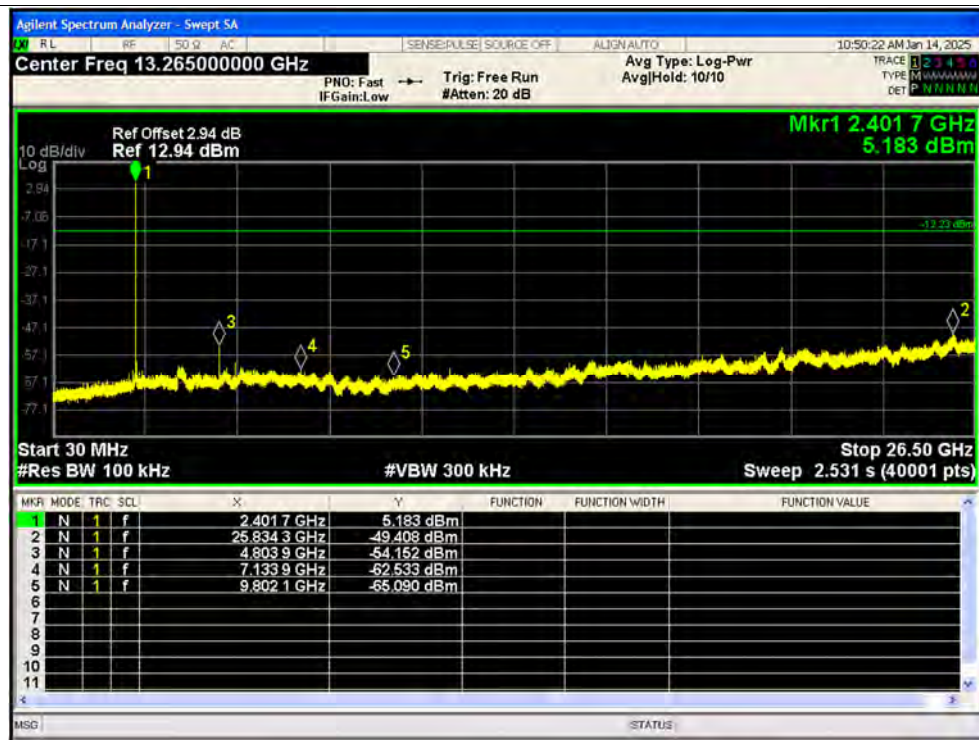
Left

Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref SISO



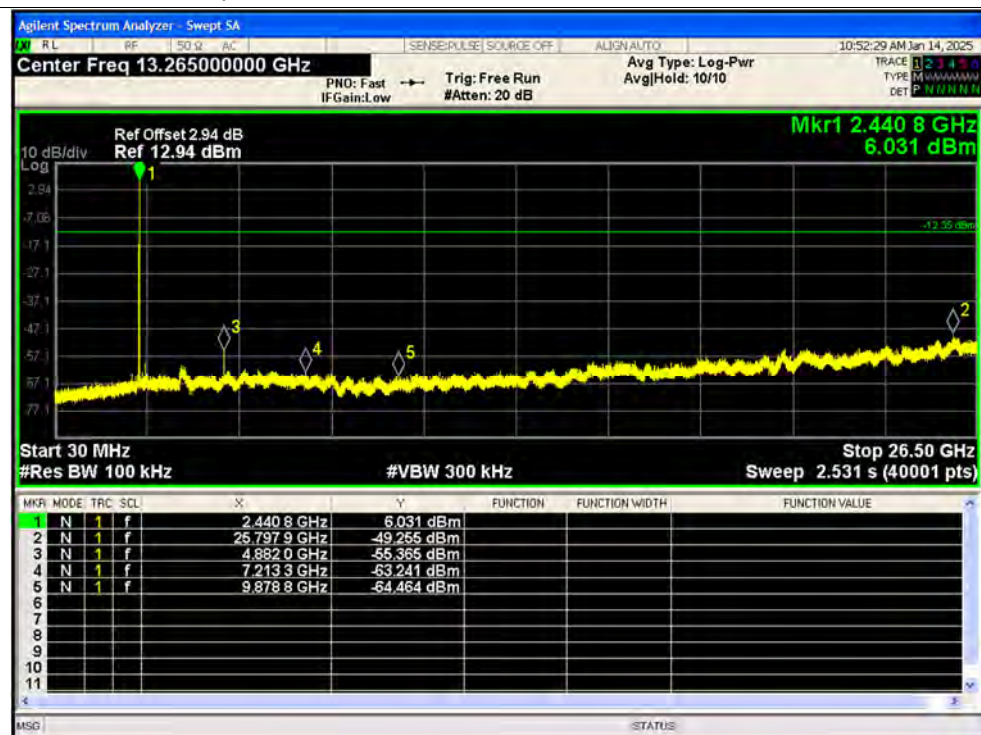
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission SISO



Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref SISO



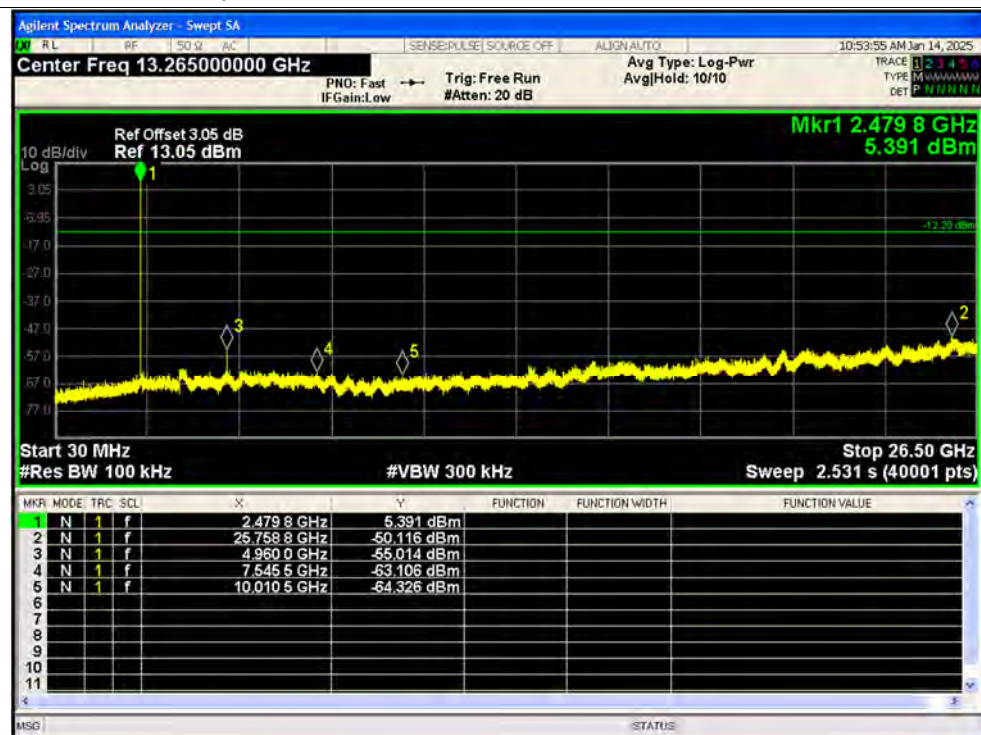
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission SISO



Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref SISO



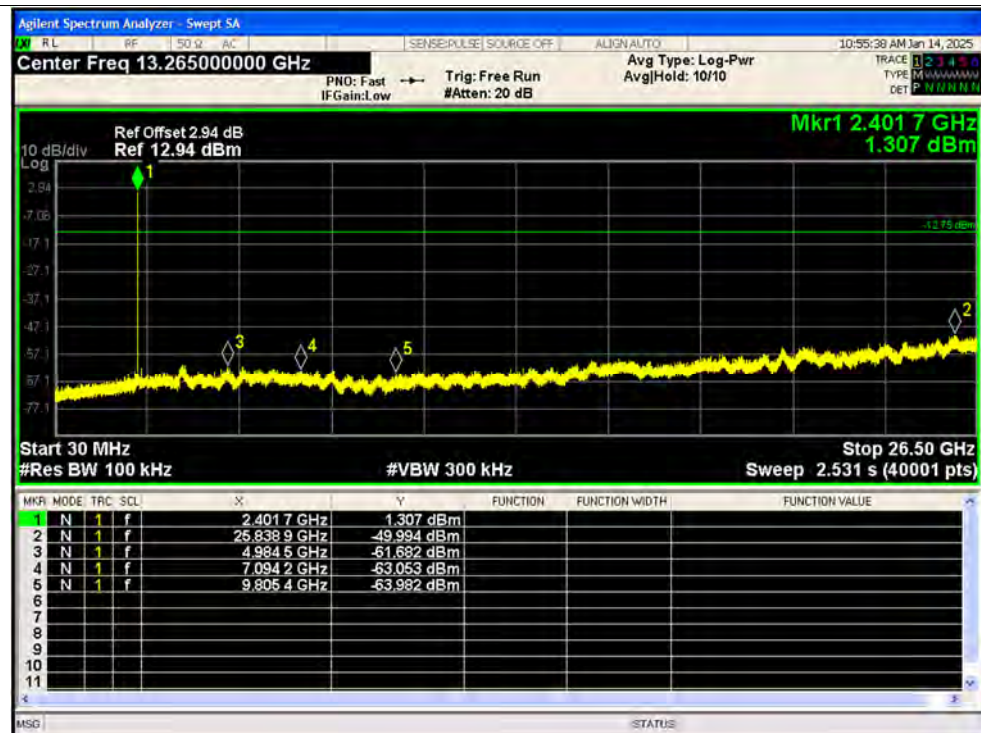
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission SISO



Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref SISO



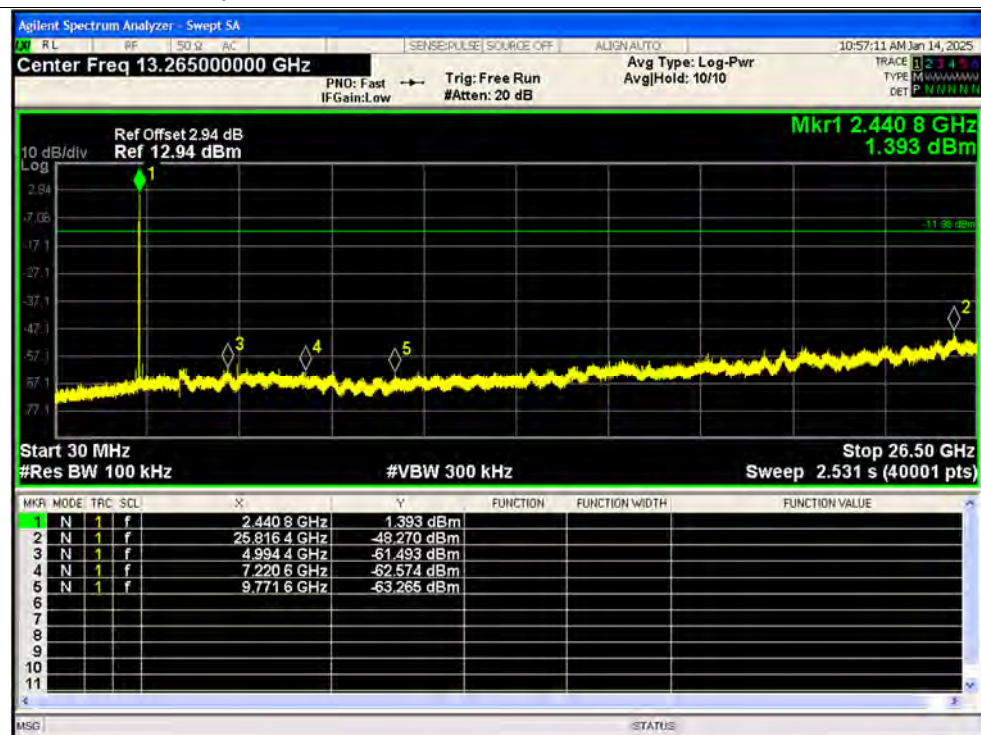
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission SISO



Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref SISO



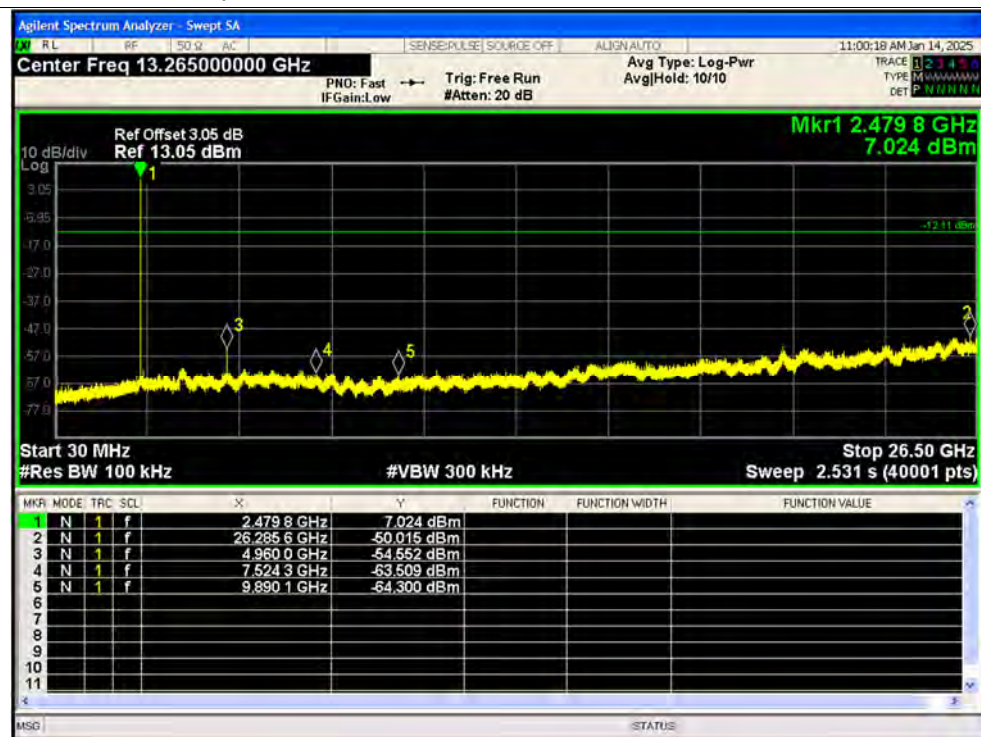
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission SISO



Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref SISO



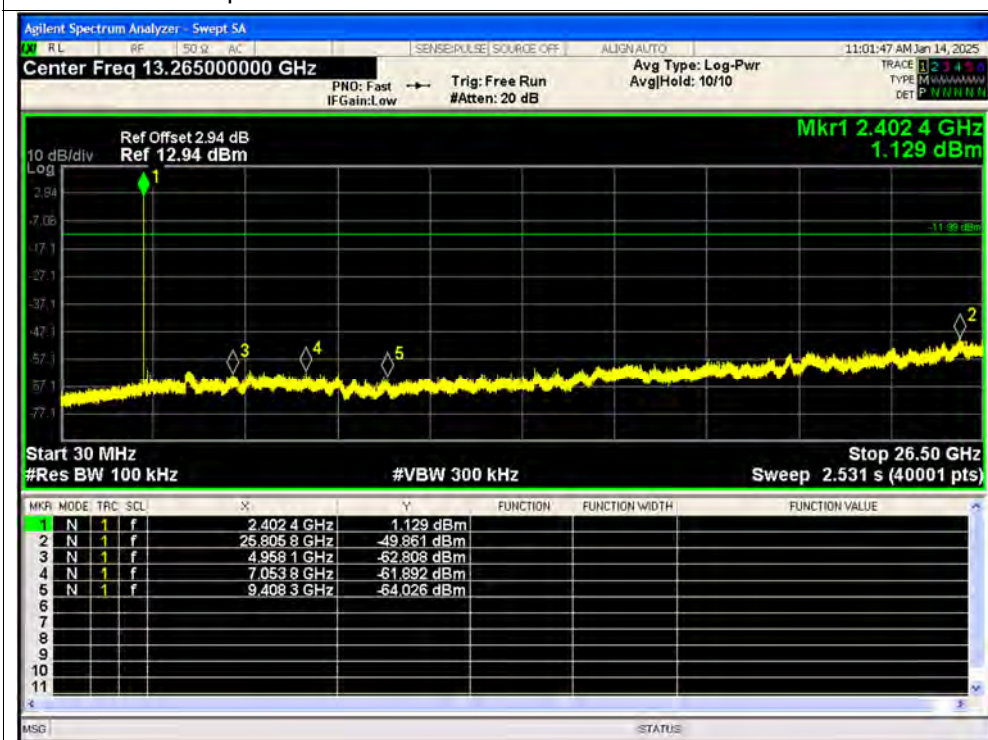
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission SISO



Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref SISO



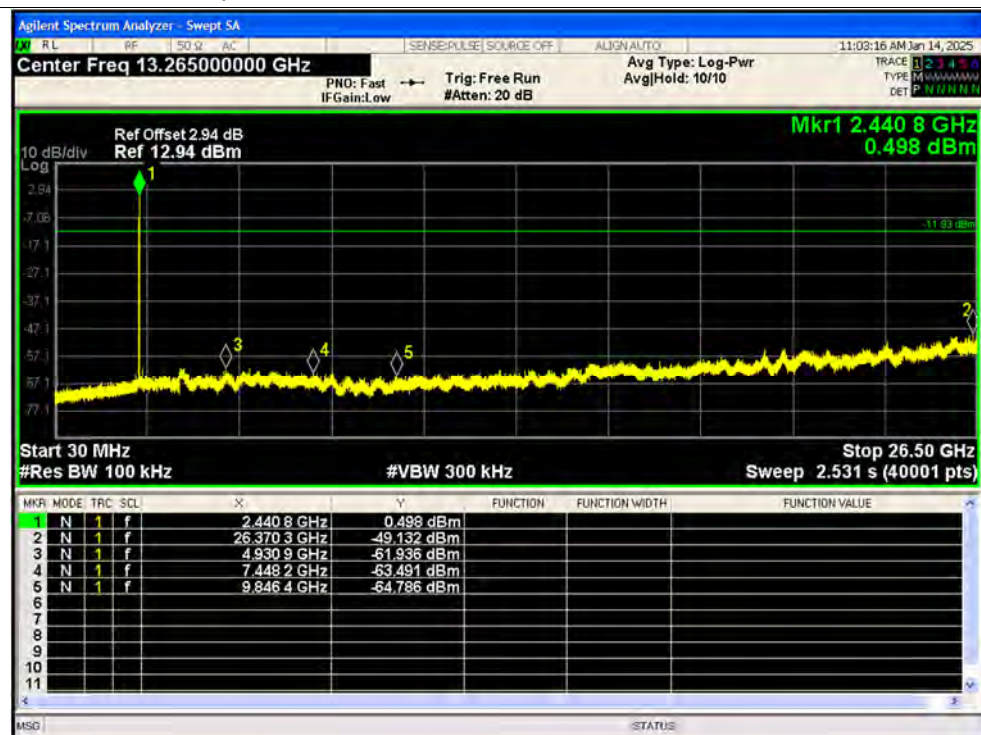
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Emission SISO



Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref SISO



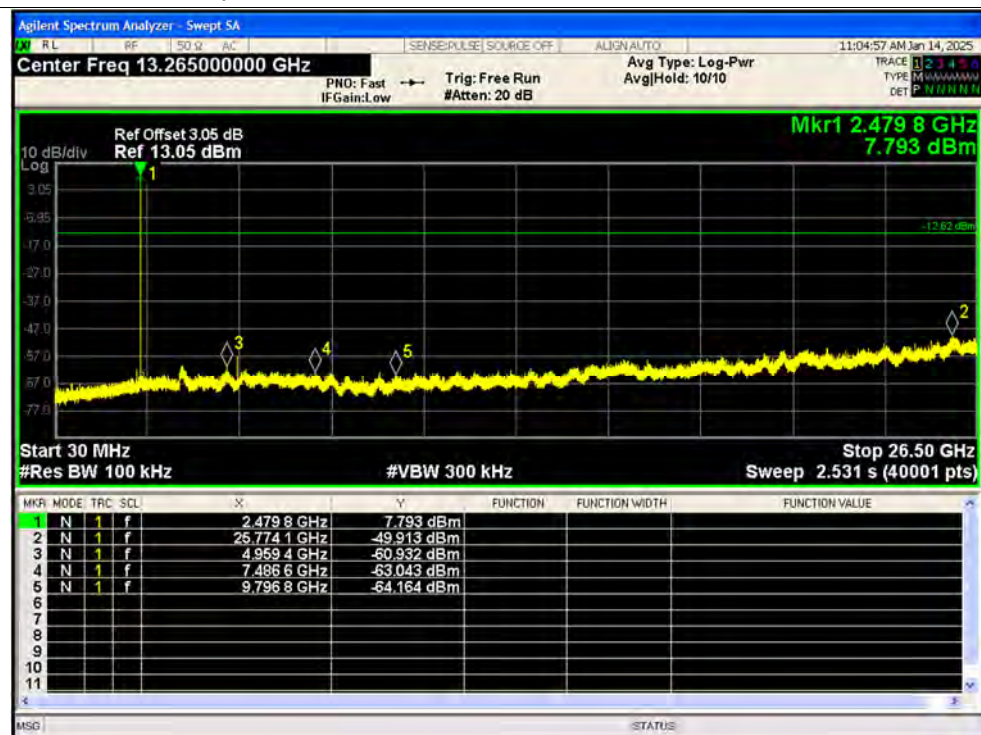
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission SISO



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref SISO



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Emission SISO



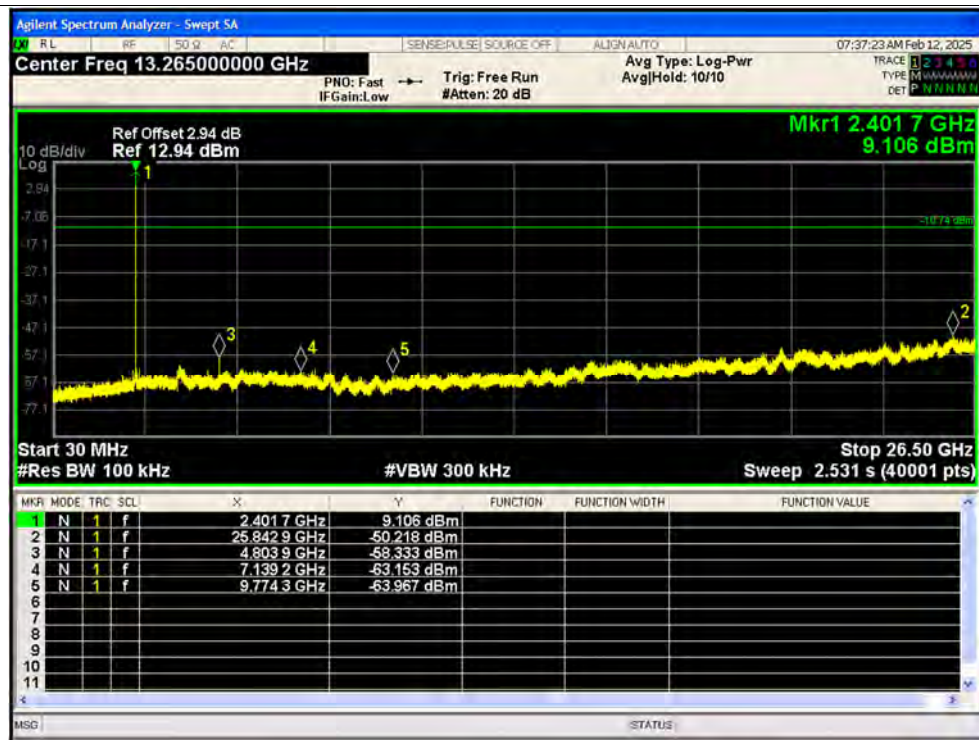
Right

Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref



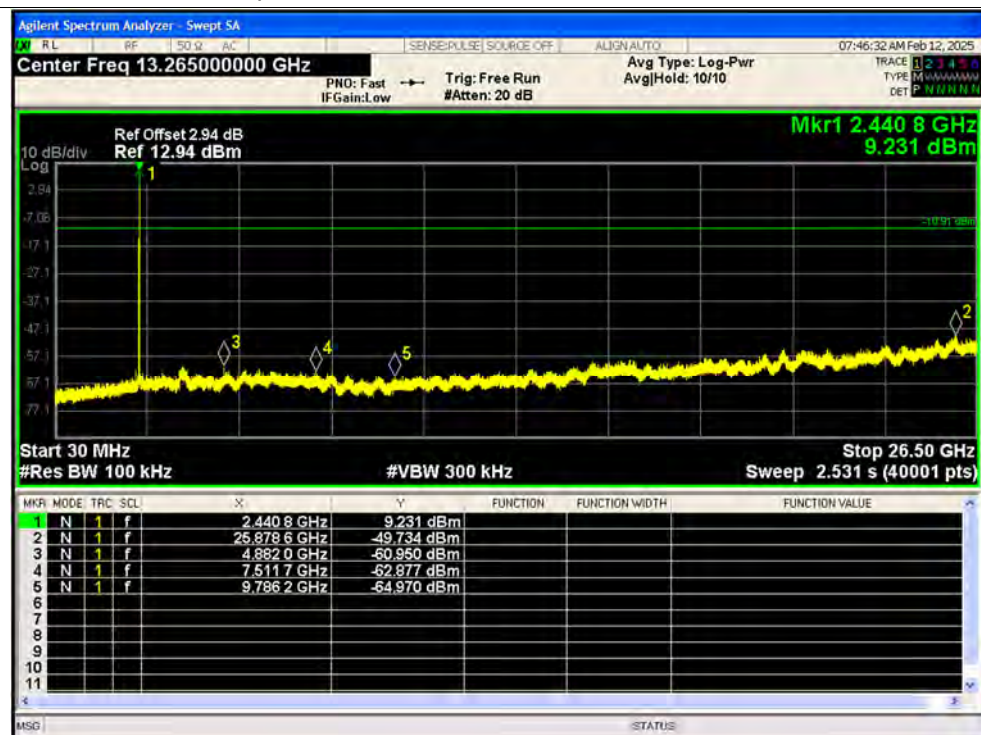
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission



Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



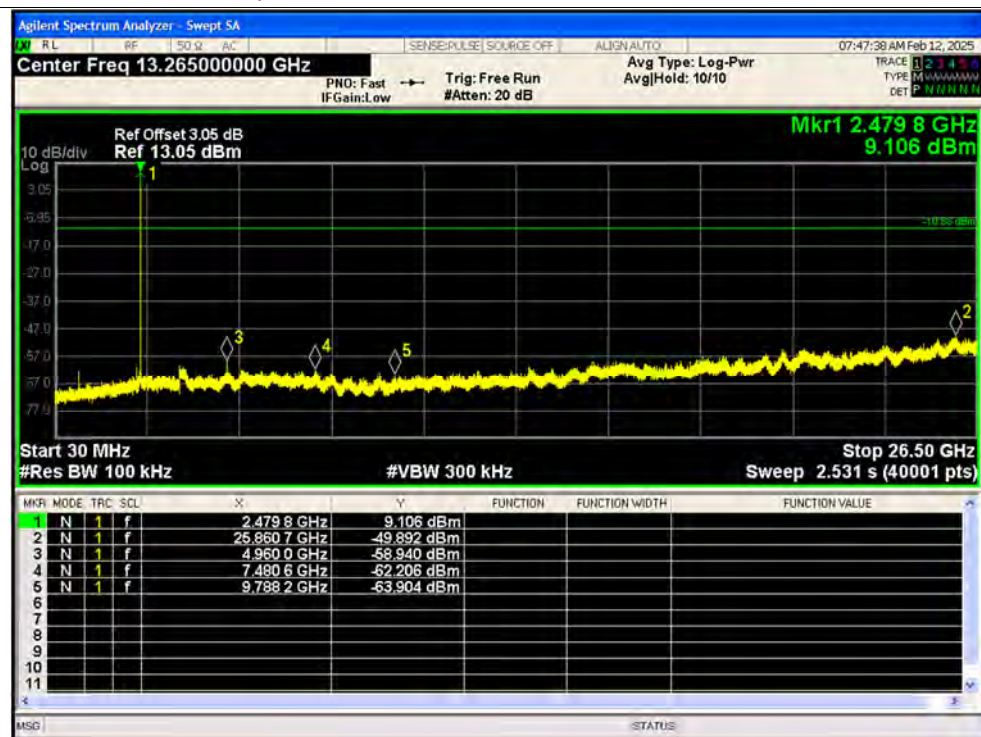
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Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref



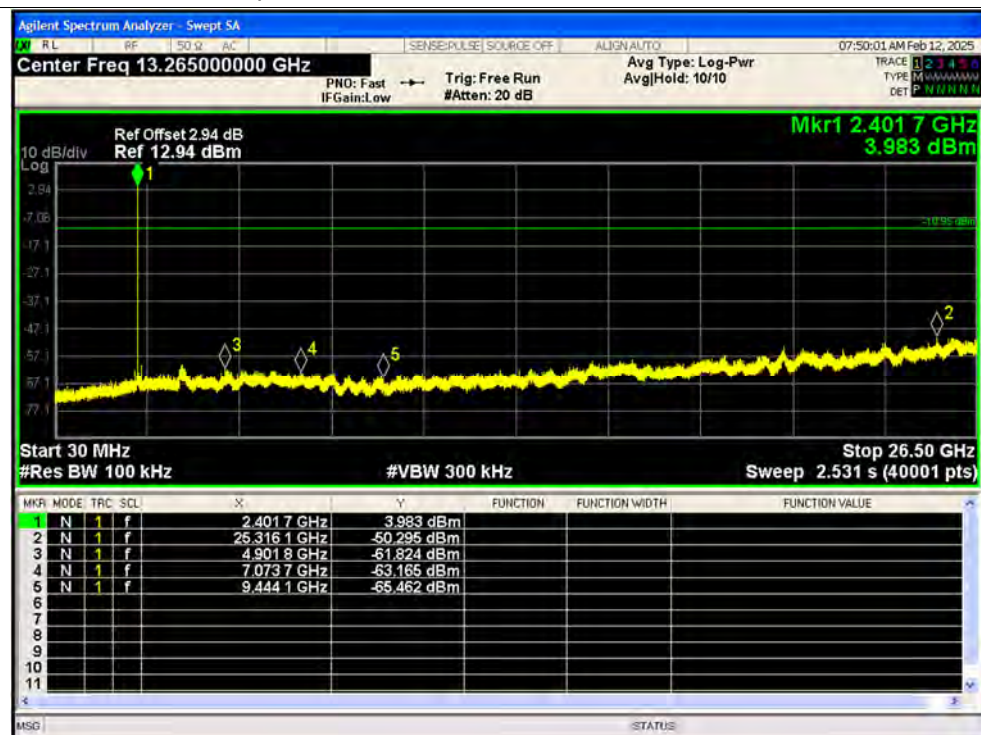
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission



Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref



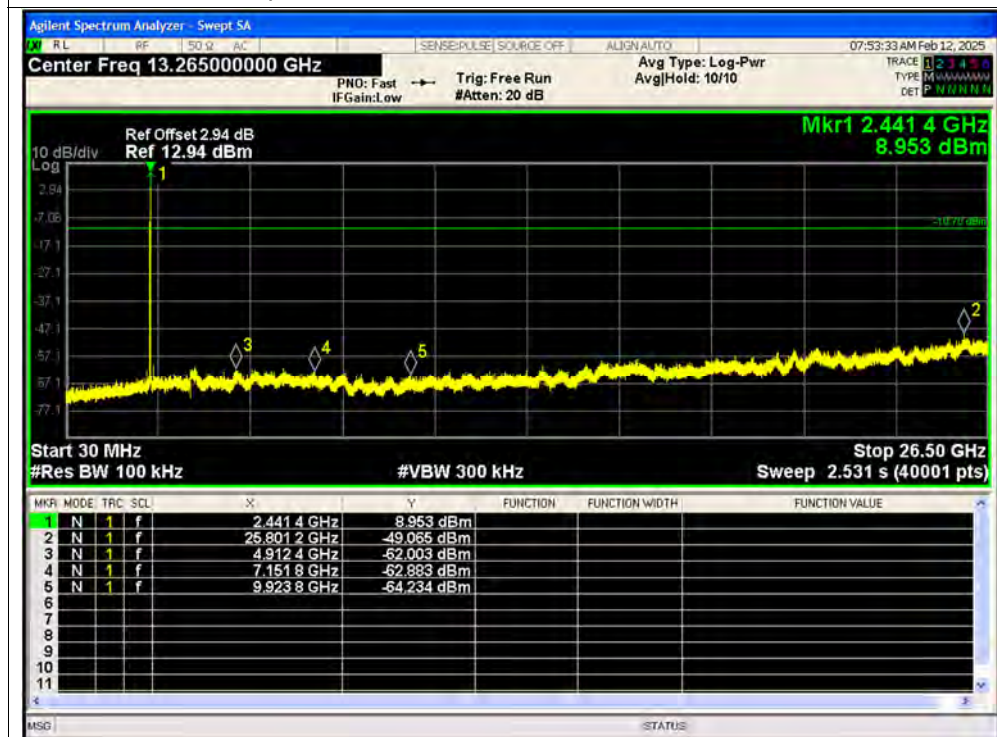
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Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref



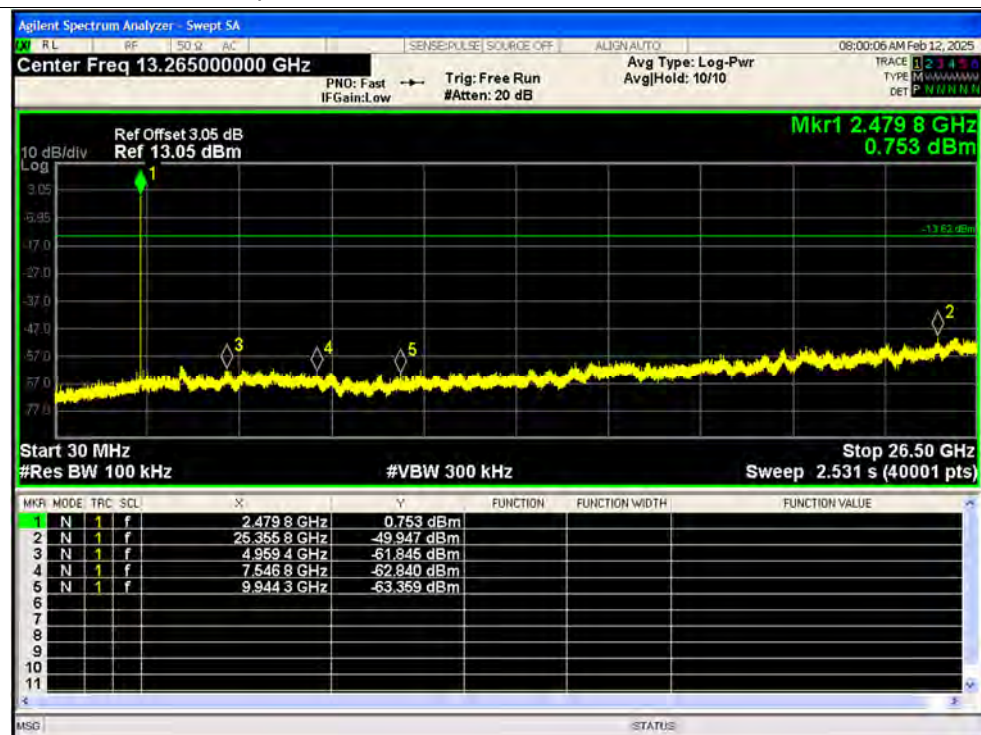
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Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



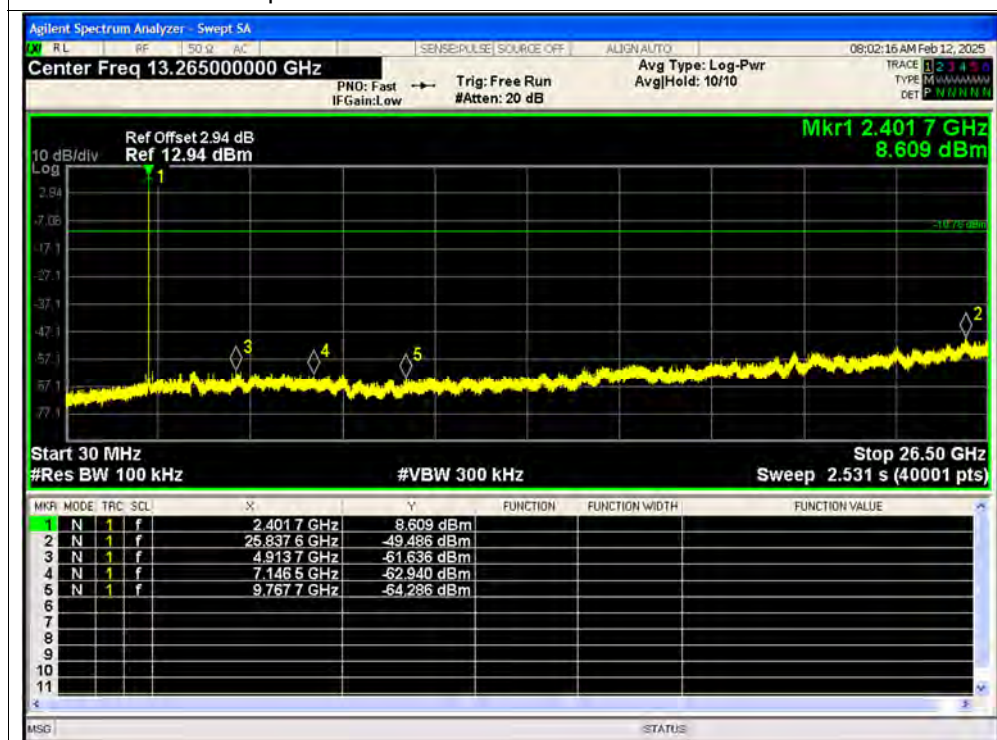
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission



Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref



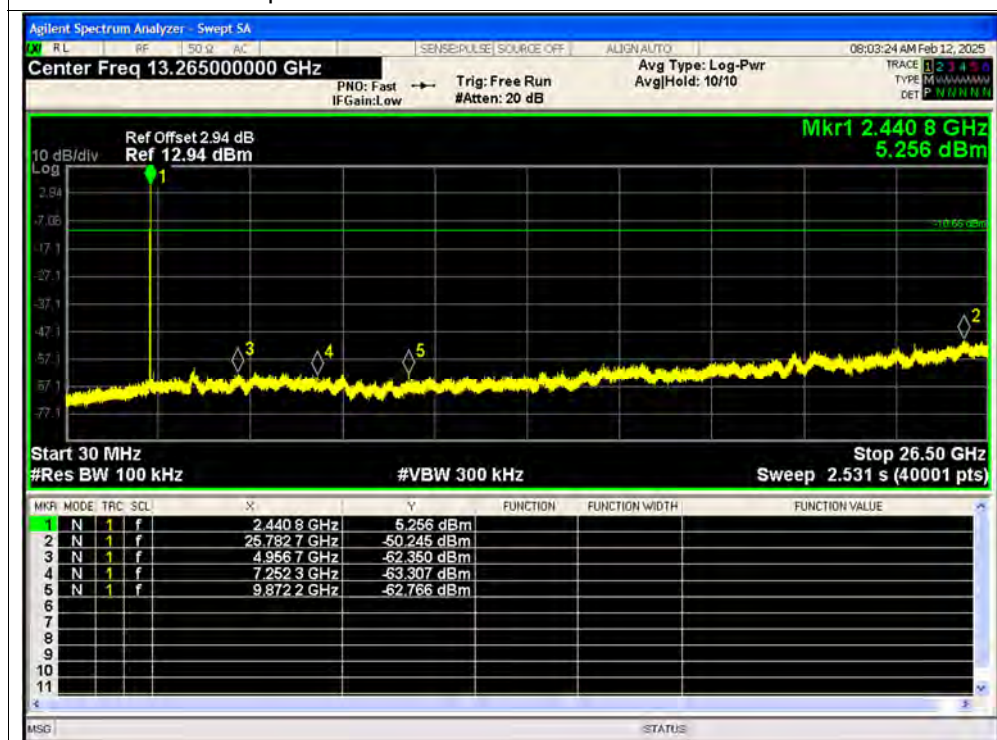
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Emission



Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref



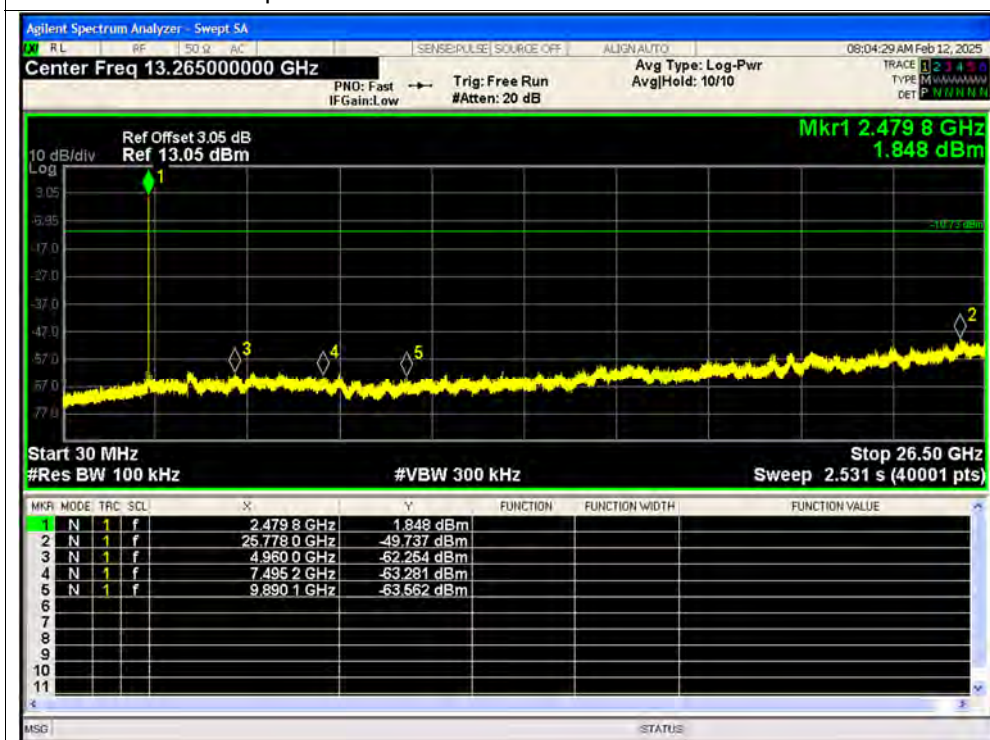
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Emission



**A.9. Band Edge****Left**

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-54.52	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-53.87	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-58.84	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-52.94	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-59.33	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-55.26	-20	Pass
NVNT	1-DH5	2402	Ant1	Hopping	-62.87	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-53.99	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-61.82	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-60.54	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-62.57	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-59.51	-20	Pass

Right

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-57.94	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-60.41	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-62	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-64.9	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-61.91	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-61.38	-20	Pass
NVNT	1-DH5	2402	Ant1	Hopping	-62.84	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-62.5	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-63.18	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-62.39	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-63.36	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-62.22	-20	Pass

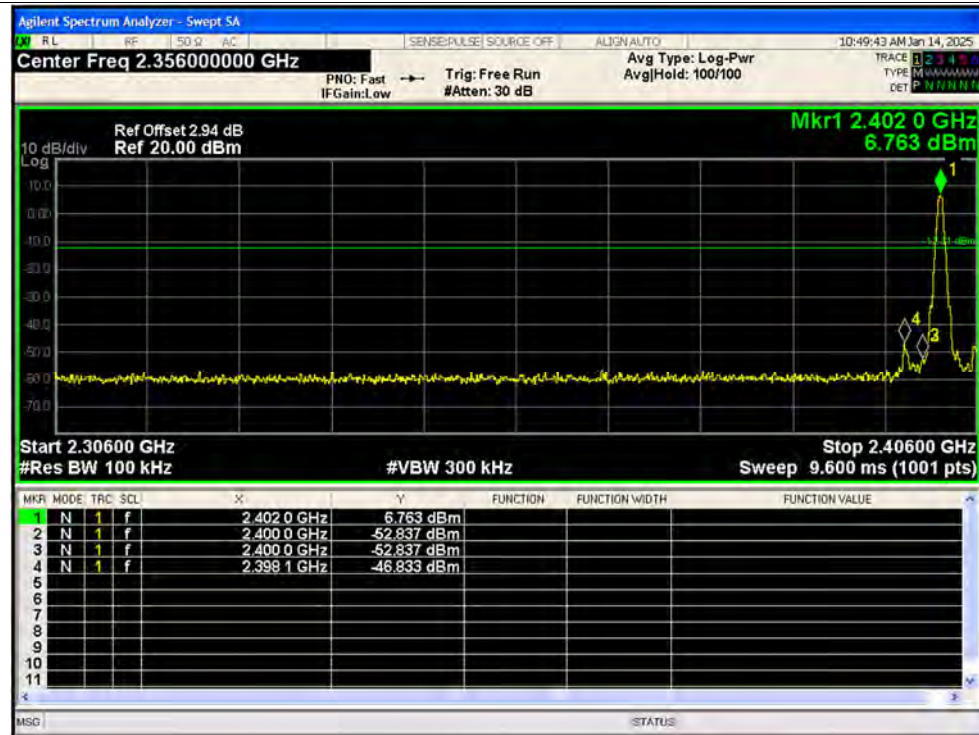
Left

Test Graphs

Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref SISO



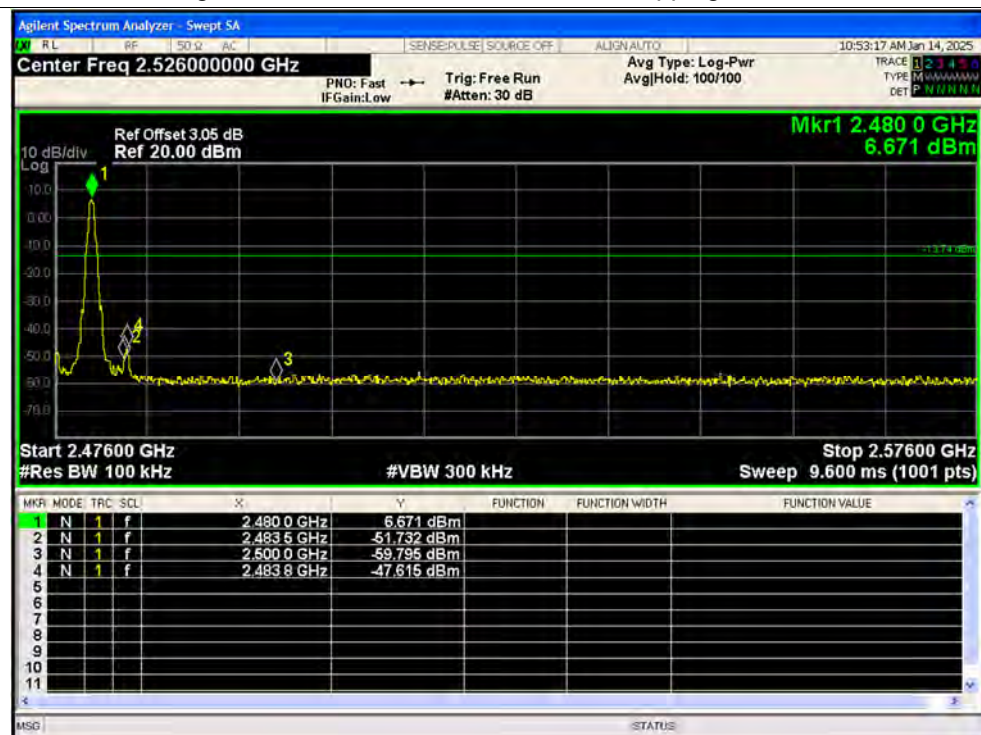
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission SISO



Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref SISO



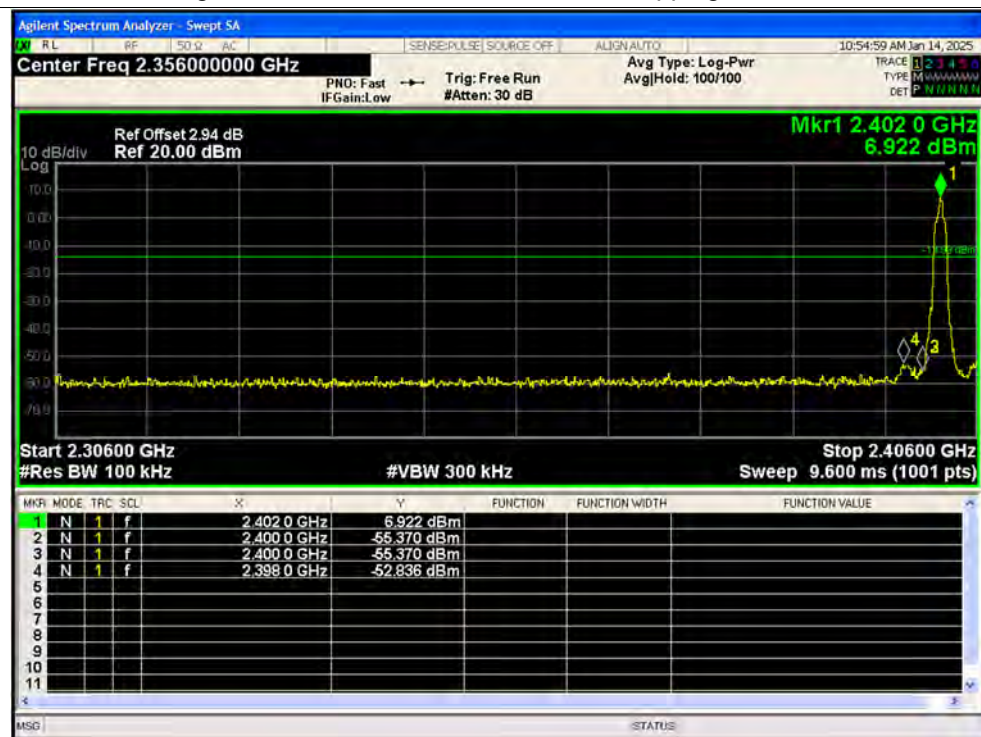
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission SISO



Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref SISO



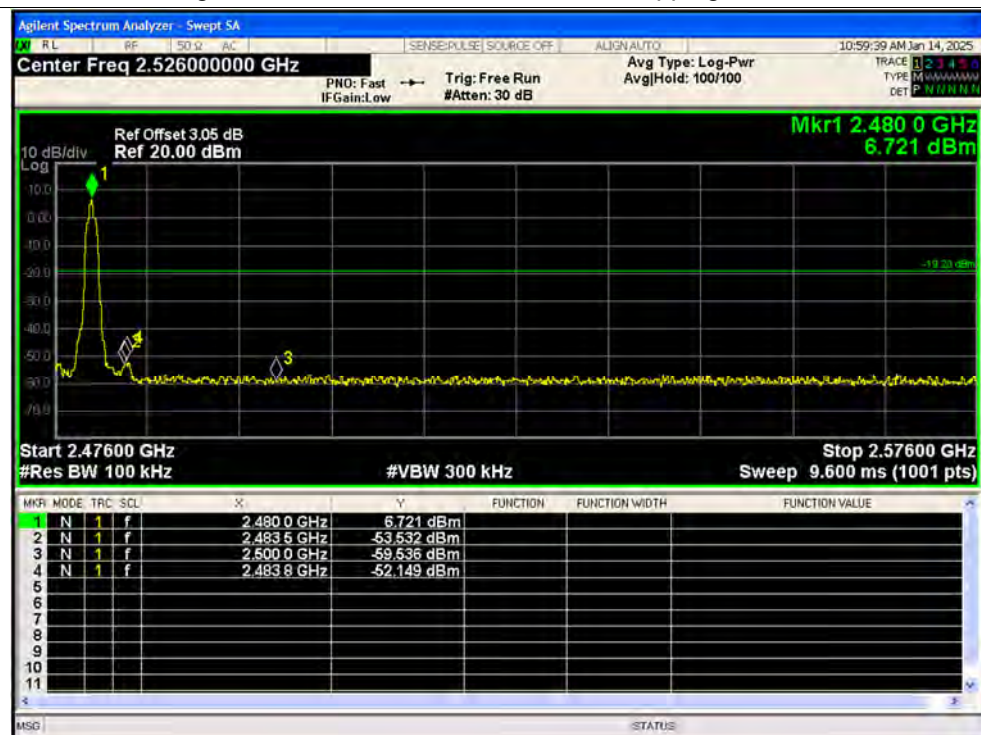
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission SISO



Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref SISO



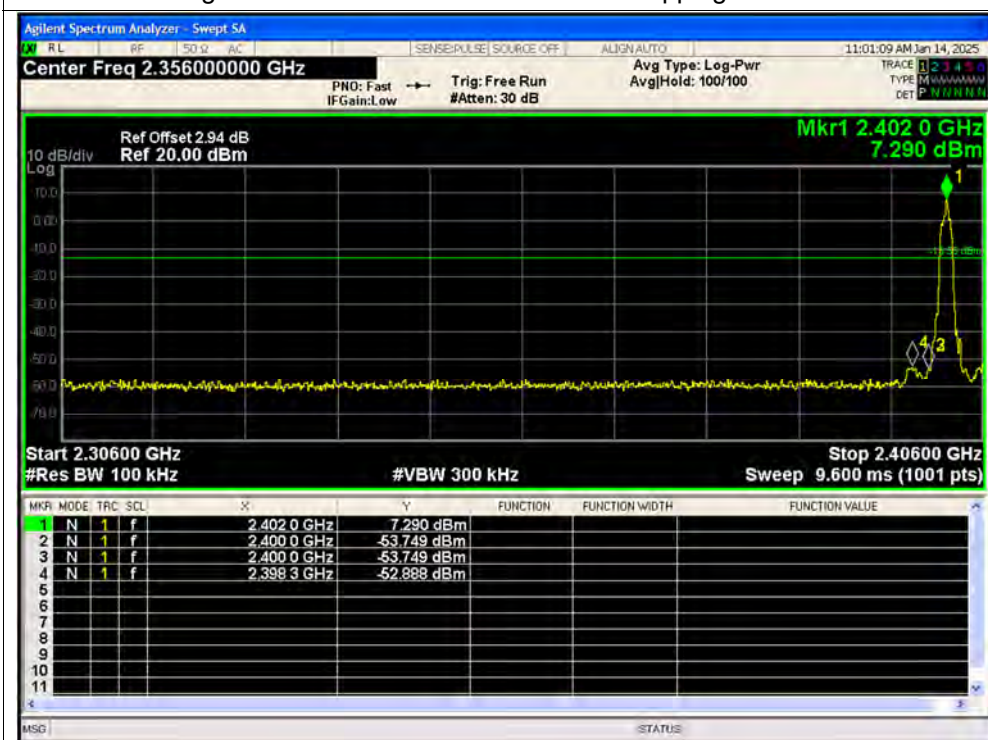
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission SISO



Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref SISO



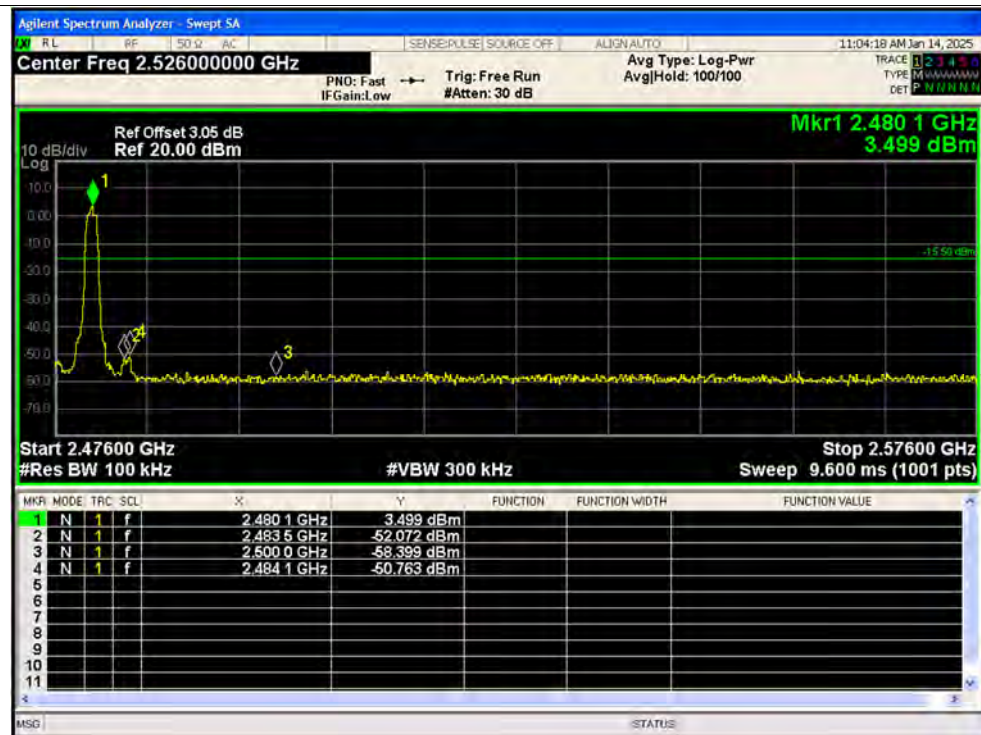
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission SISO



Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref SISO



Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Emission SISO

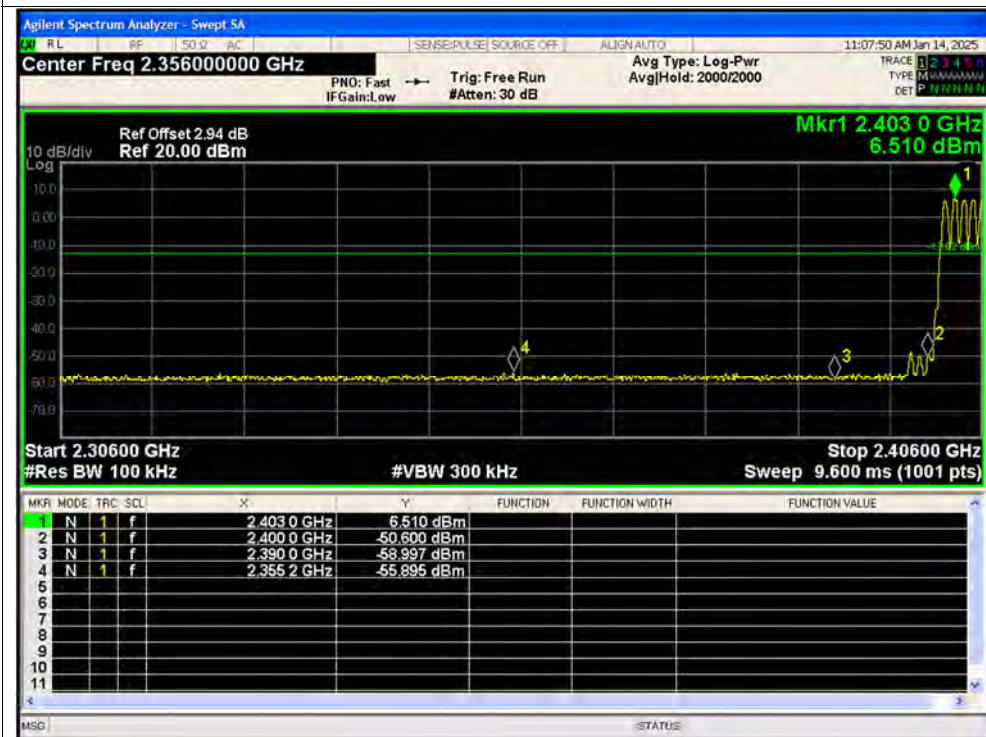


Test Graphs

Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref SISO



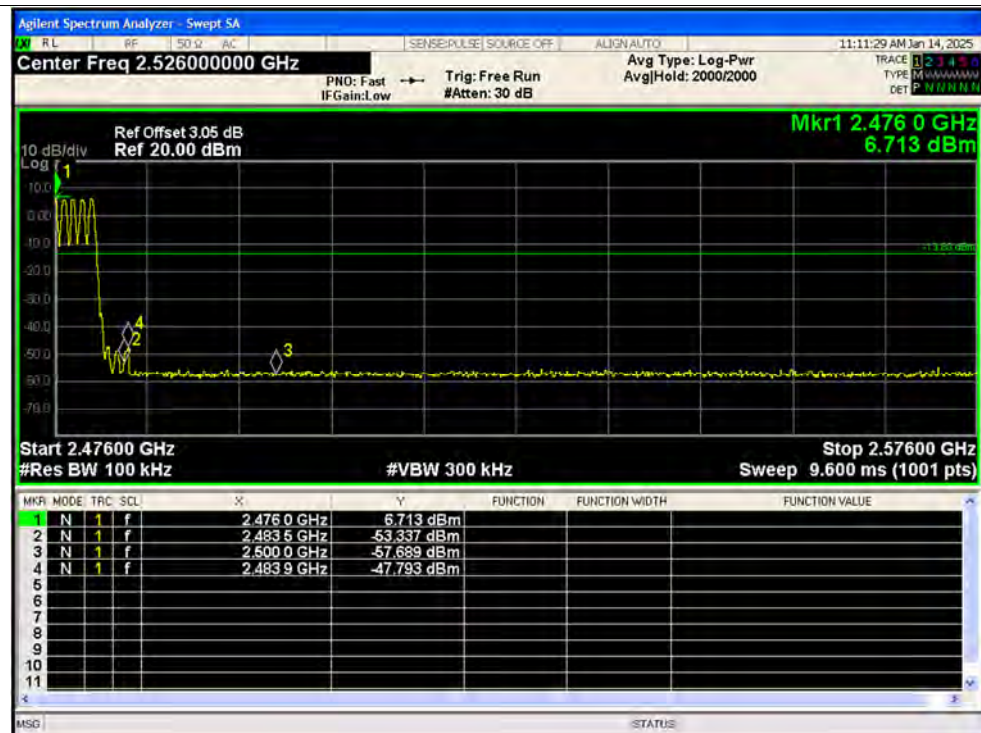
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission SISO



Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref SISO



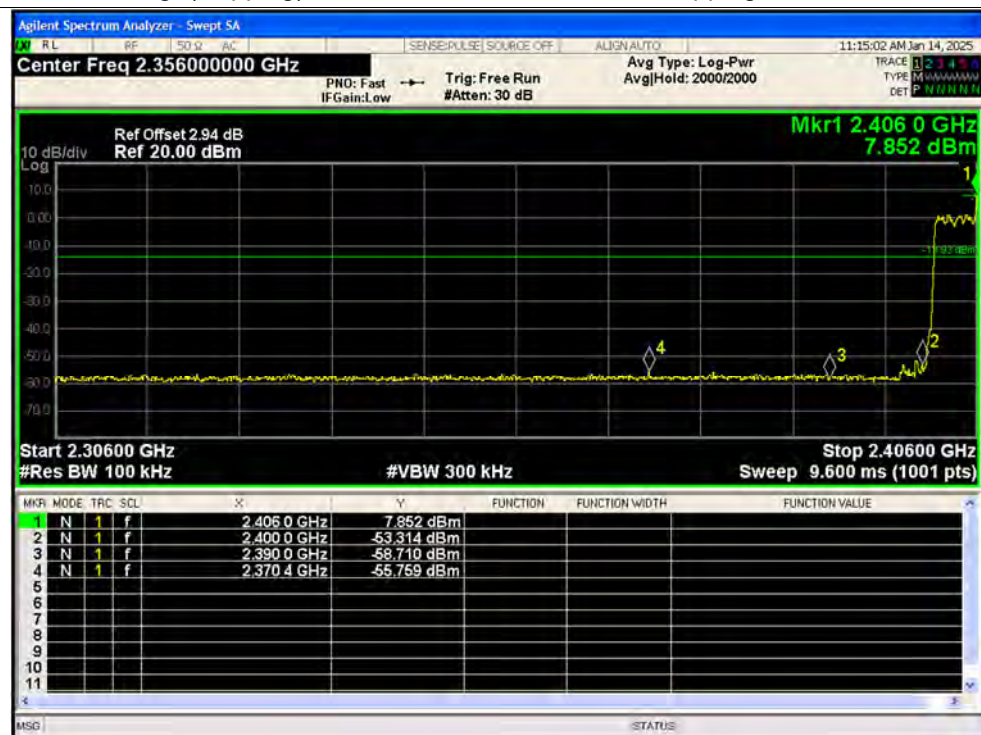
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission SISO



Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref SISO



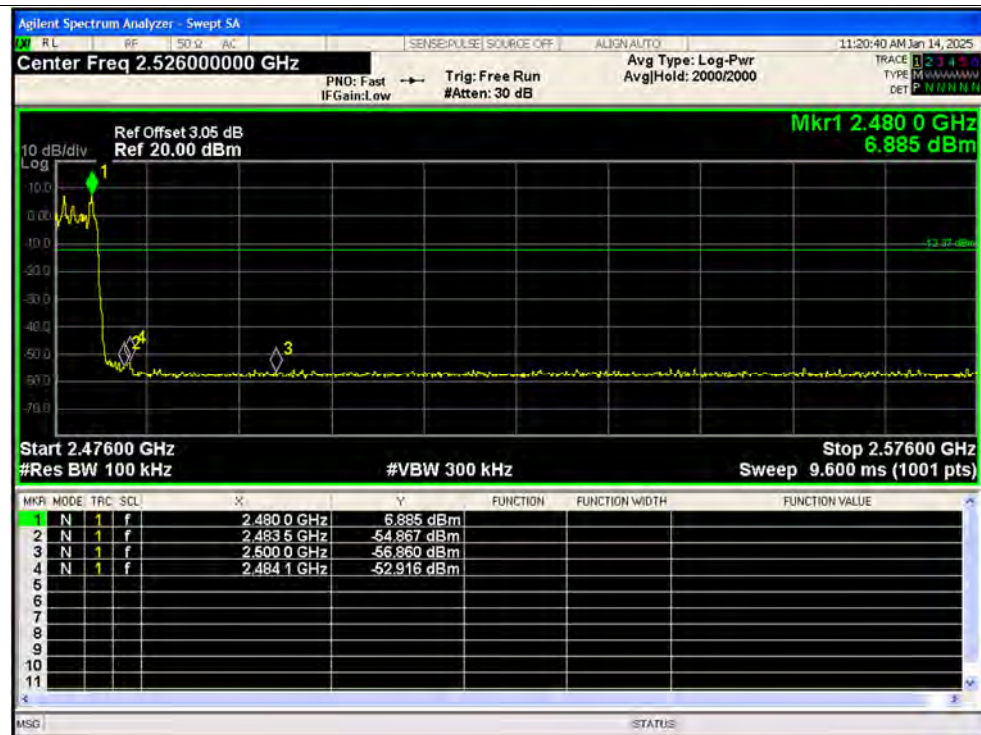
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission SISO



Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref SISO



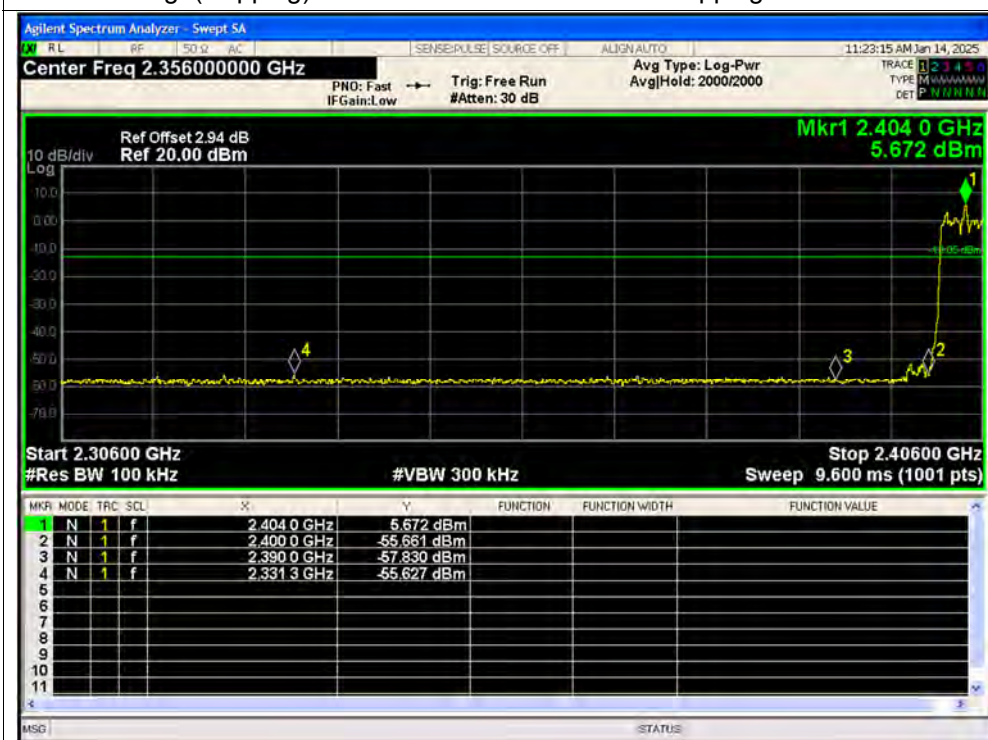
Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Emission SISO



Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Ref SISO



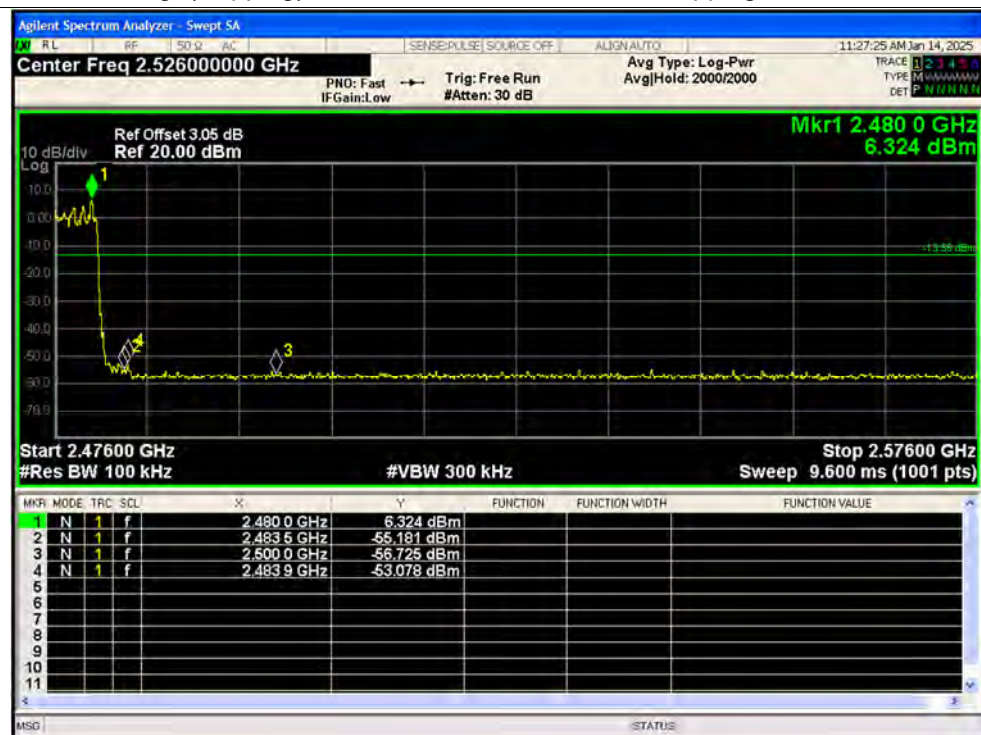
Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Emission SISO



Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Ref SISO



Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Emission SISO



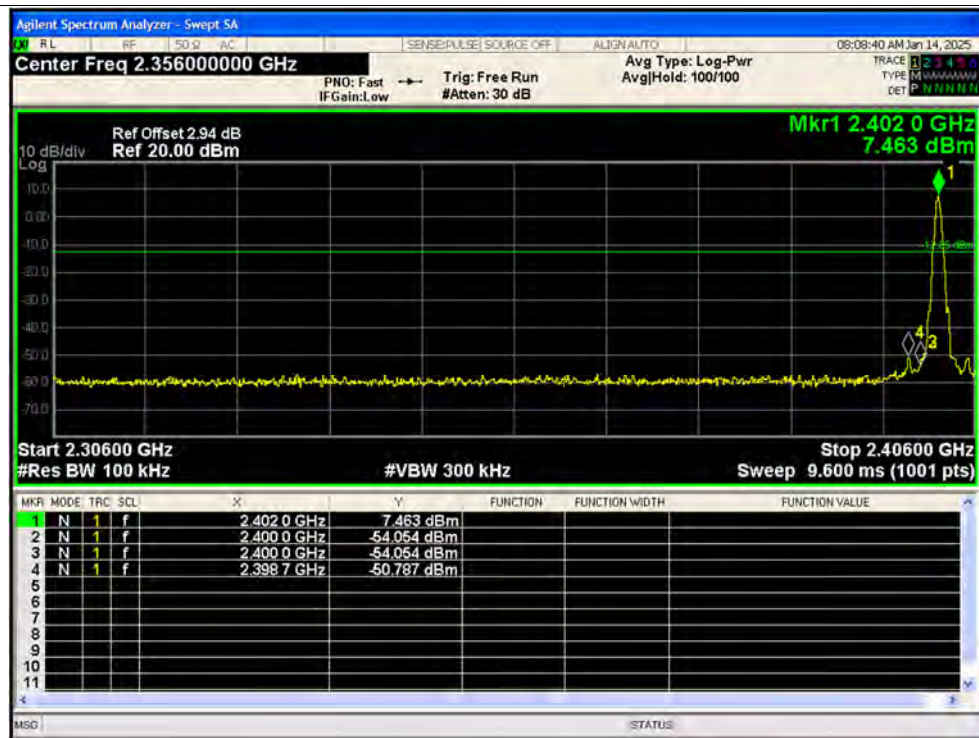
Right

Test Graphs

Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref



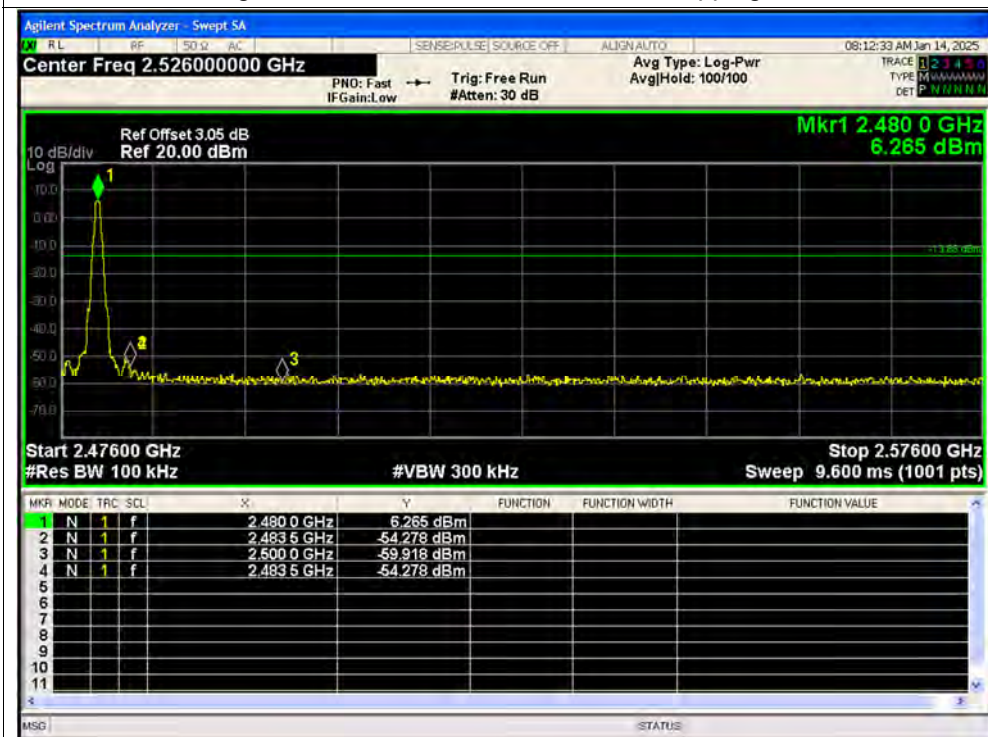
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission



Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref



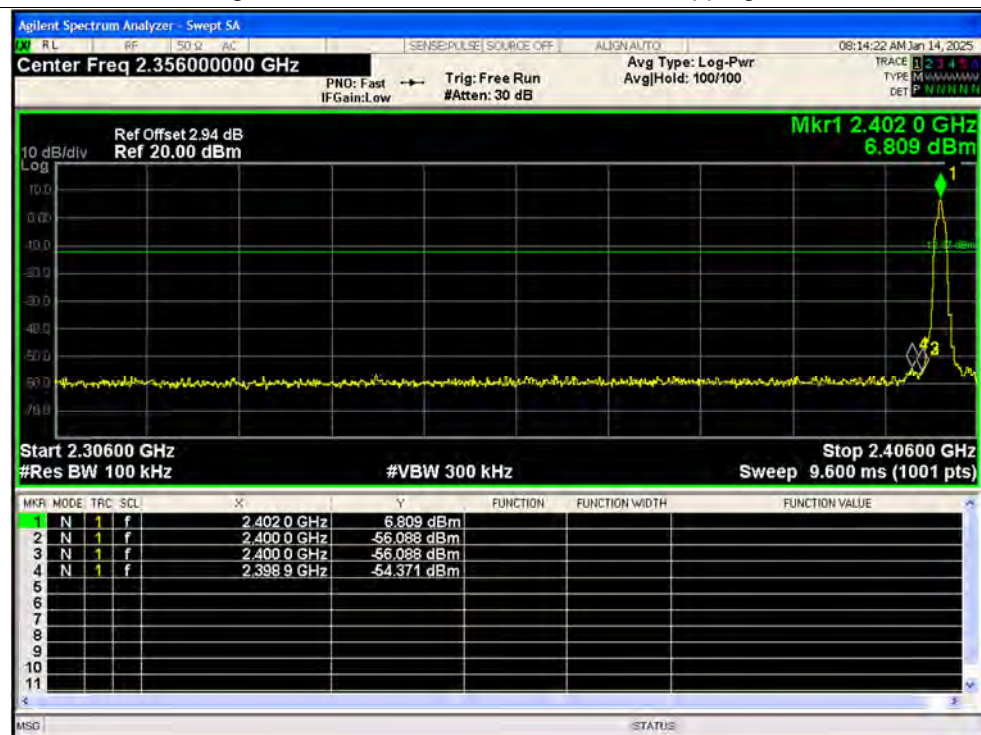
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission



Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref



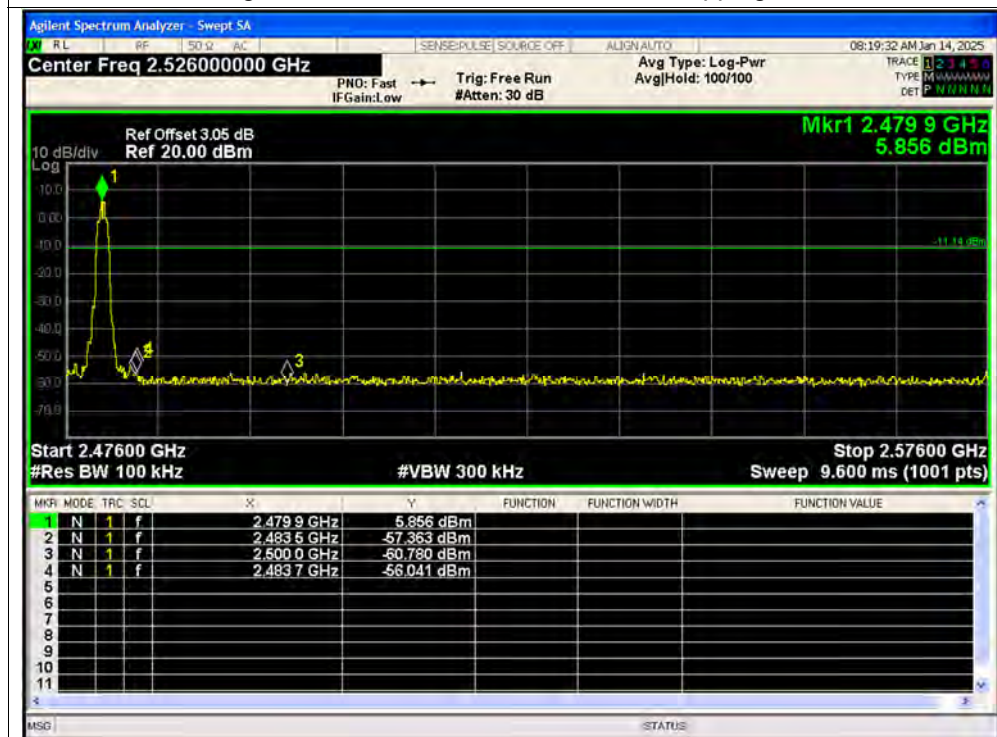
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission



Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref



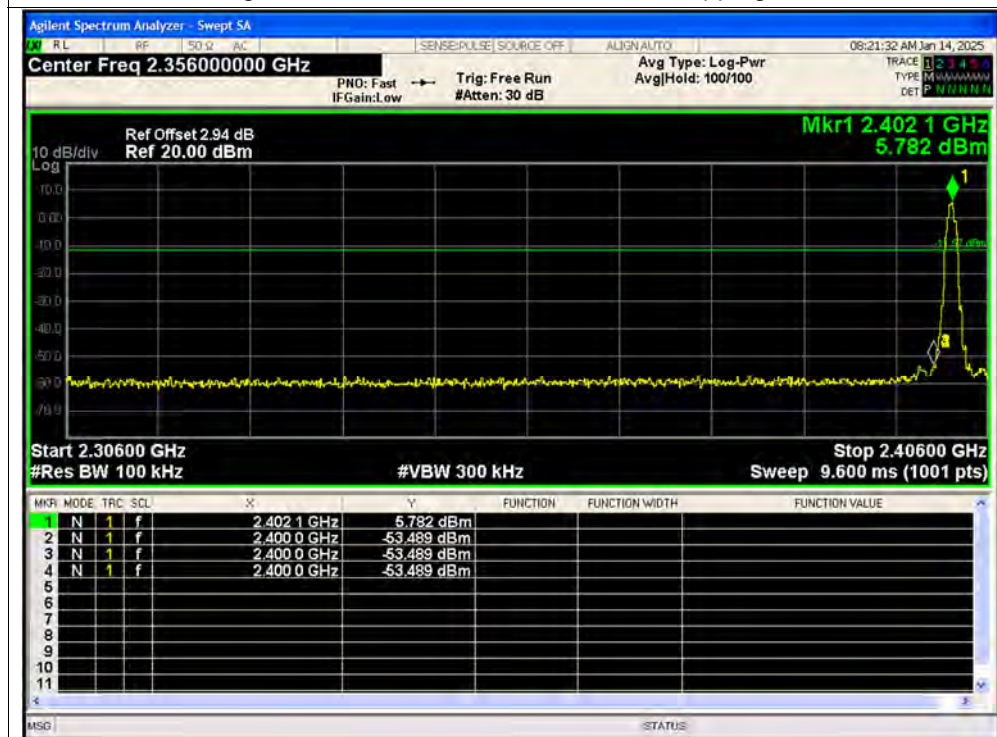
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission



Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref



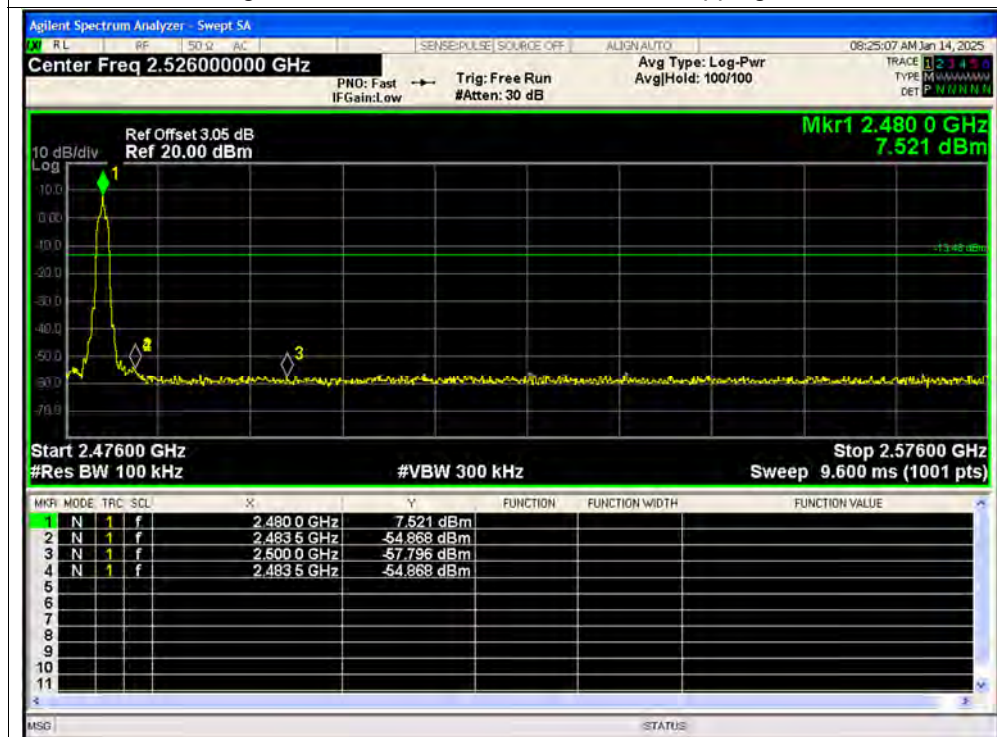
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission



Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref



Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Emission

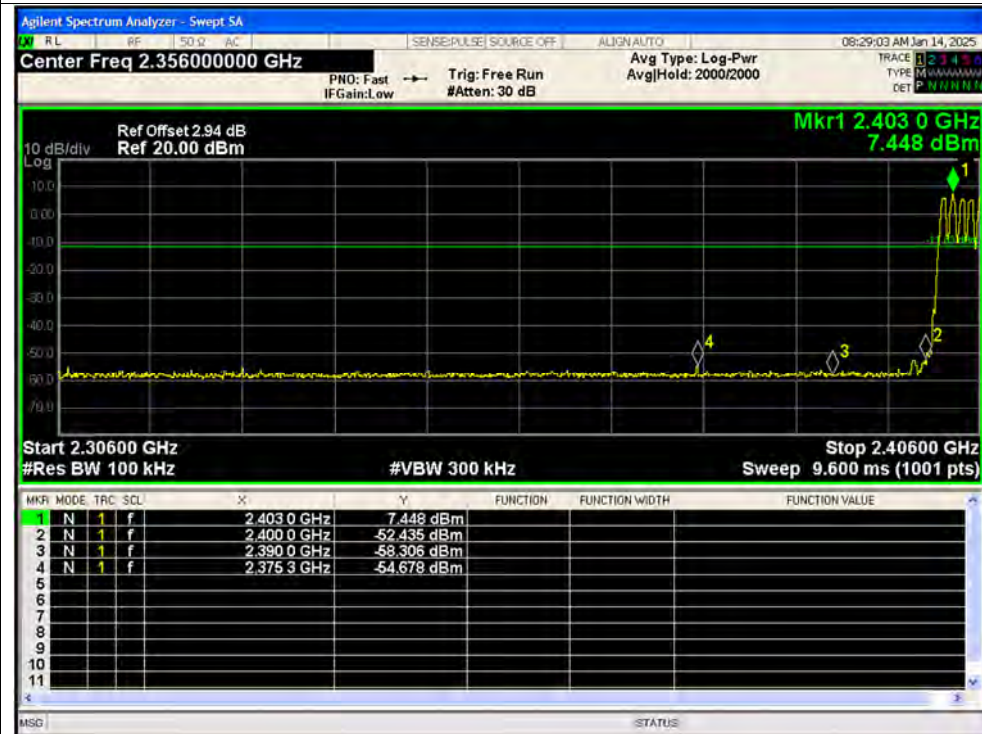


Test Graphs

Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref



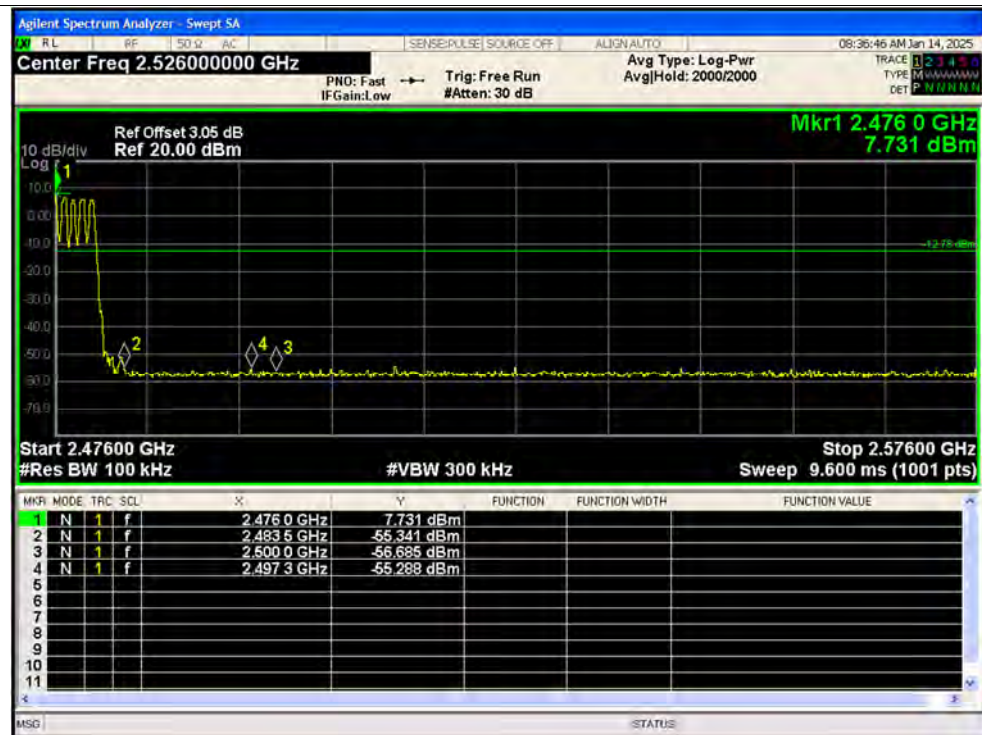
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



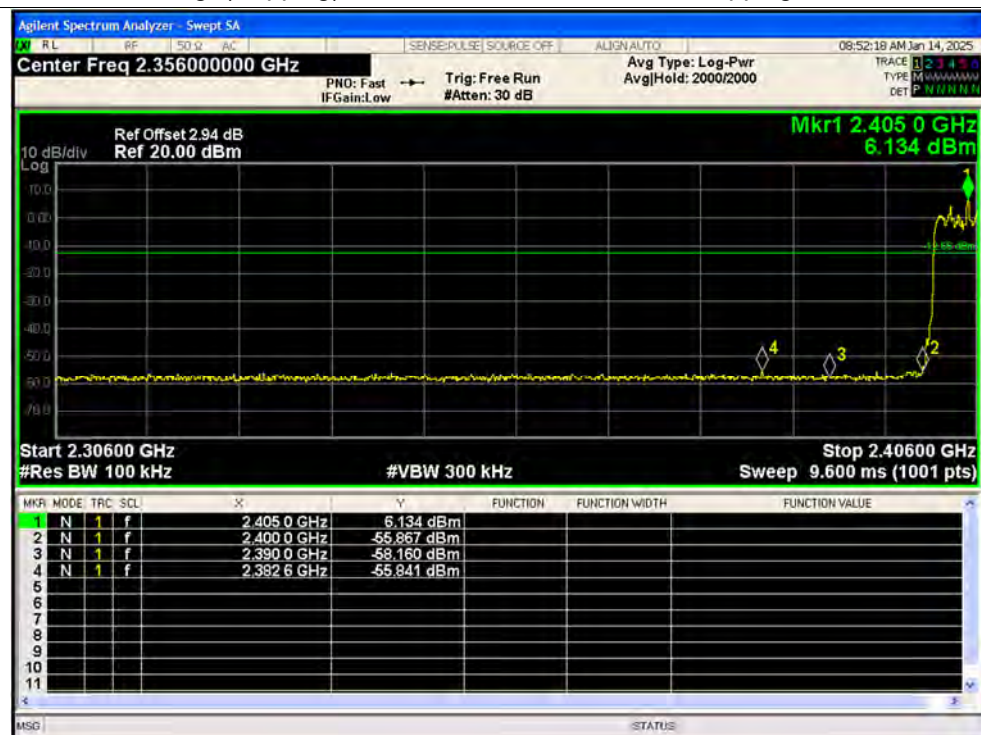
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref



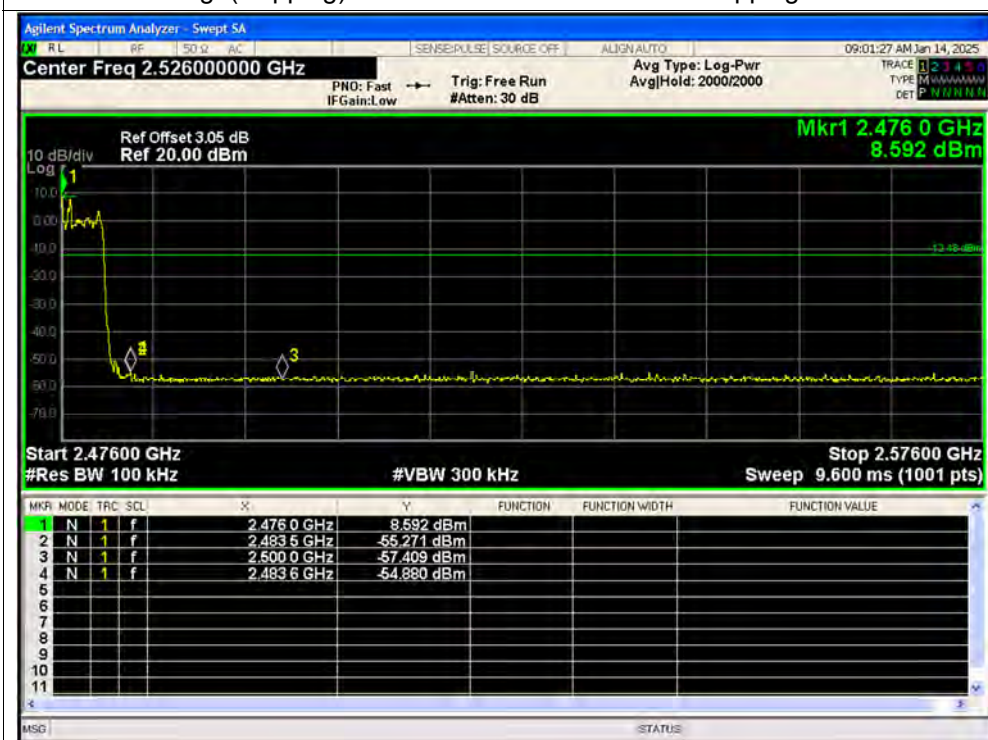
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref



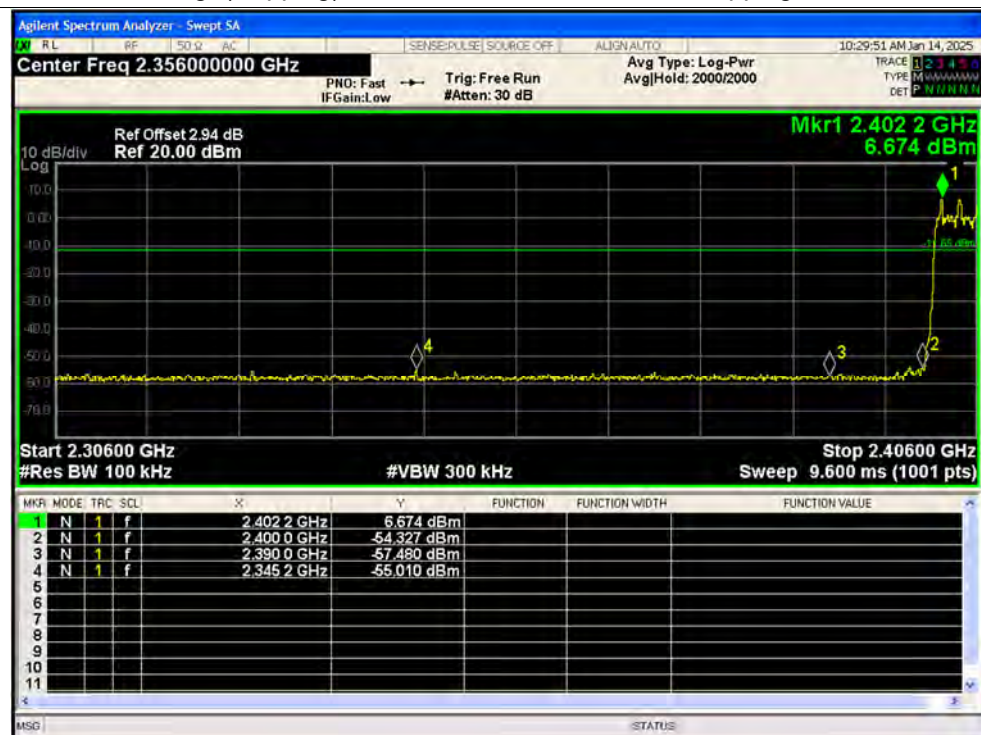
Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Ref



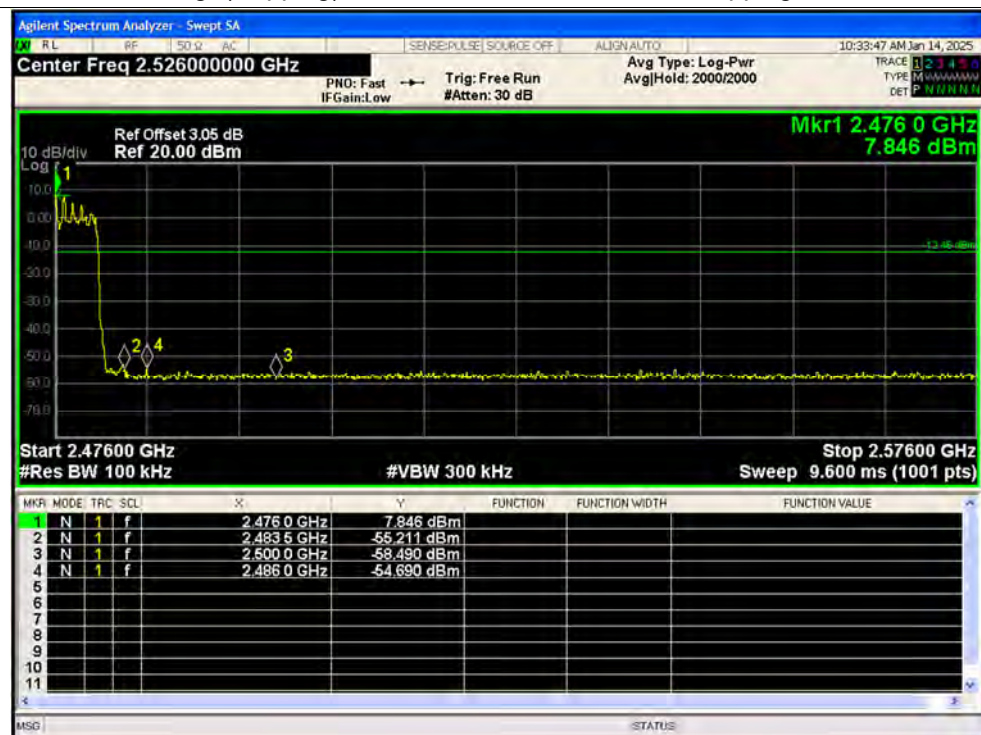
Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Ref



Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Emission





A.10. Conducted Emission

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Set RBW=9kHz, VBW=30kHz. Refer to recorded points and plots below.

Note: Both of the test voltage AC 120V/60Hz and AC 230V/50Hz were considered and tested respectively, only the results of the worst case AC 120V/60Hz were recorded in this report.

A. Test Setup:

Test Mode: EUT+ PC + PC Adapter + USB Cable + BT TX

Test voltage: AC 120V/60Hz

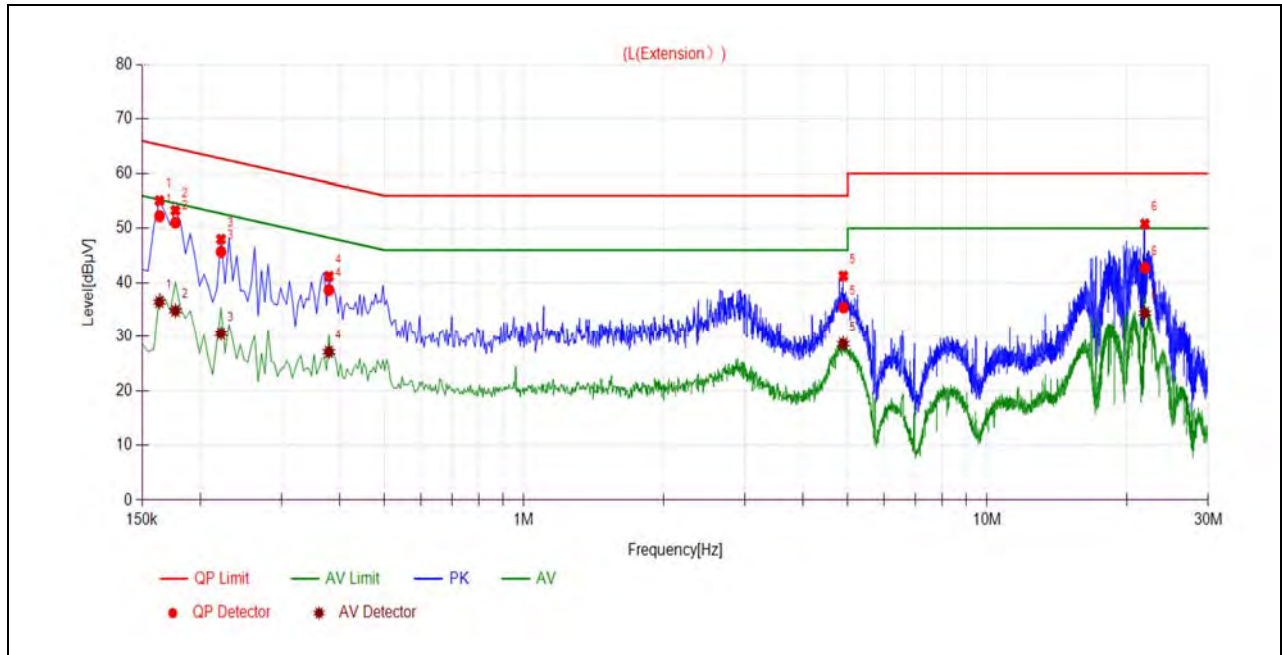
The measurement results are obtained as below:

$$E \text{ [dB}\mu\text{V]} = U_R + L_{\text{Cable loss}} \text{ [dB]} + A_{\text{Factor}}$$

U_R : Receiver Reading

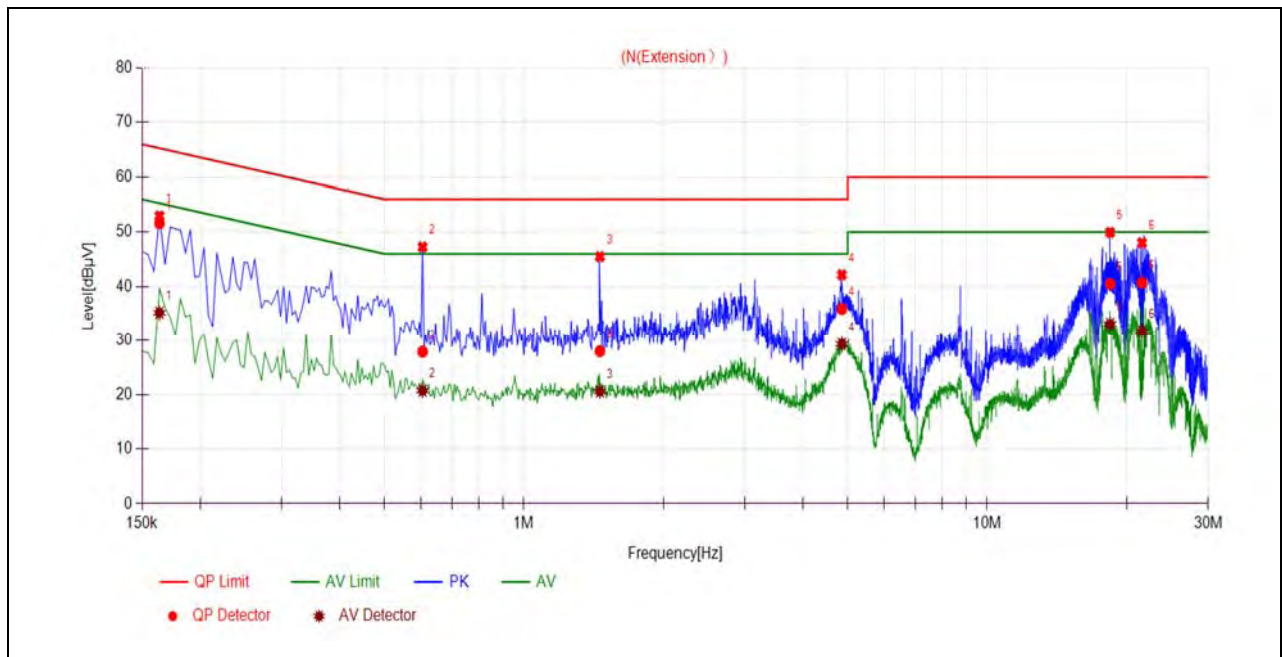
A_{Factor} : Voltage division factor of LISN

B. Test Plot:



(L Phase)

No.	Fre. (MHz)	Emission Level (dBμV)		Limit (dBμV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1635	52.26	36.46	65.28	55.28	Line	PASS
2	0.1770	51.07	34.84	64.63	54.63		PASS
3	0.2220	45.67	30.55	62.74	52.74		PASS
4	0.3795	38.66	27.13	58.29	48.29		PASS
5	4.8925	35.44	28.63	56.00	46.00		PASS
6	21.9038	42.75	34.43	60.00	50.00		PASS



(N Phase)

No.	Fre. (MHz)	Emission Level (dBμV)		Limit (dBμV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1635	51.64	35.19	65.28	55.28	Neutral	PASS
2	0.6045	27.90	20.70	56.00	46.00		PASS
3	1.4595	27.99	20.55	56.00	46.00		PASS
4	4.8575	35.88	29.33	56.00	46.00		PASS
5	18.4295	40.50	33.12	60.00	50.00		PASS
6	21.5856	40.75	31.77	60.00	50.00		PASS

A.11. Restricted Frequency Bands

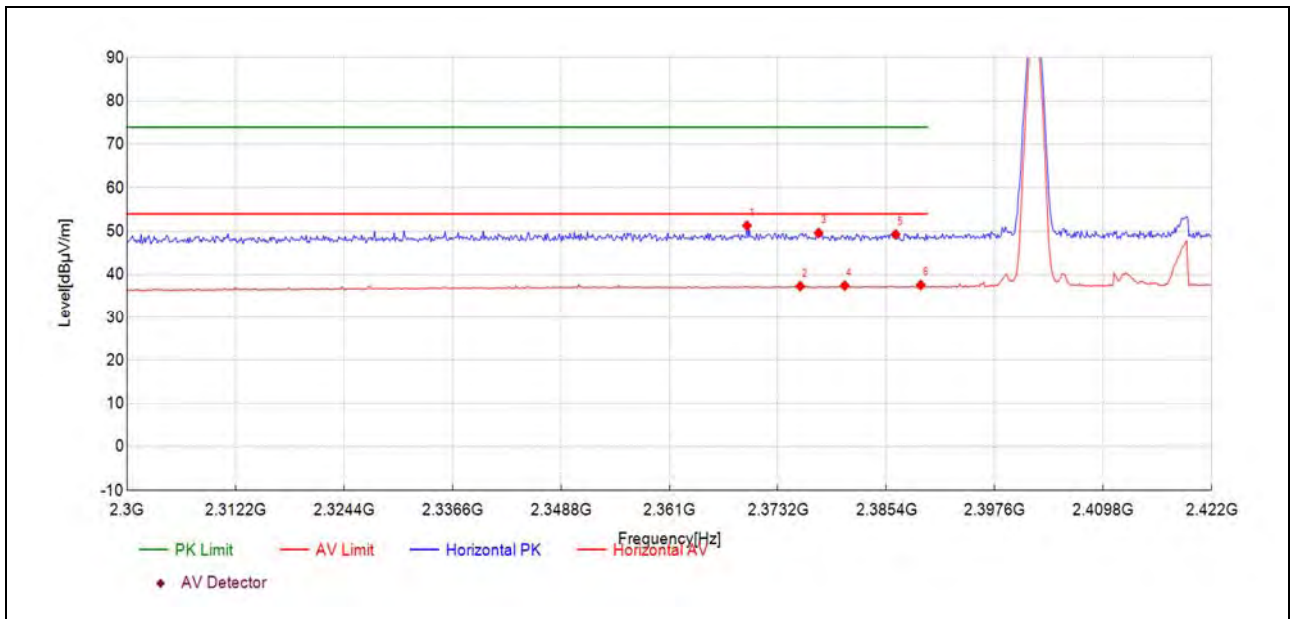
Note 1: Restricted Frequency Bands were performed when antenna was at vertical and horizontal polarity, and only the worse test condition (Horizontal) was recorded in this test report.

Note 2: All test modes were considered and evaluated respectively by performing full test, only the worst data were recorded.

Left

GFSK Mode

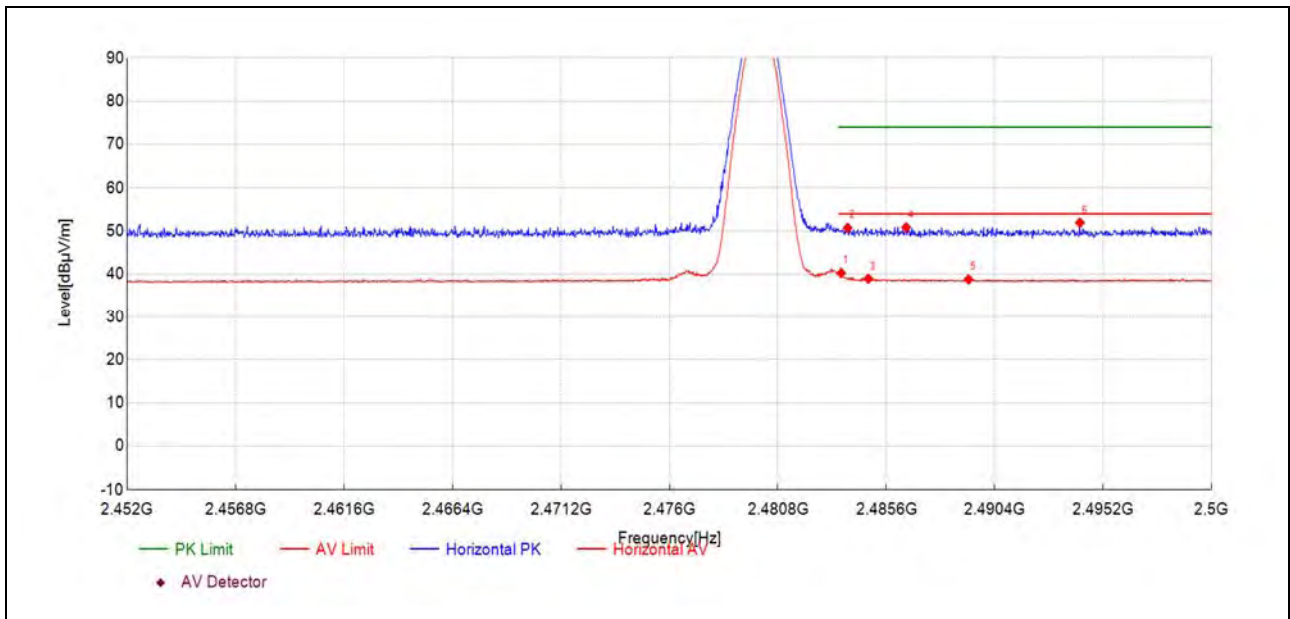
Plot for Channel 0



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2369.73	13.8	51.29	37.470	74.00	22.71	150	19	PK	PASS
2375.72	-0.2	37.32	37.480	54.00	16.68	150	339	AV	PASS
2377.79	12.1	49.60	37.480	74.00	24.40	150	249	PK	PASS
2380.72	0.0	37.44	37.480	54.00	16.56	150	194	AV	PASS
2386.46	11.8	49.28	37.490	74.00	24.72	150	351	PK	PASS
2389.27	0.1	37.59	37.490	54.00	16.41	150	202	AV	PASS
2401.85	60.2	97.75	37.530	-	-	150	261	PK	NA



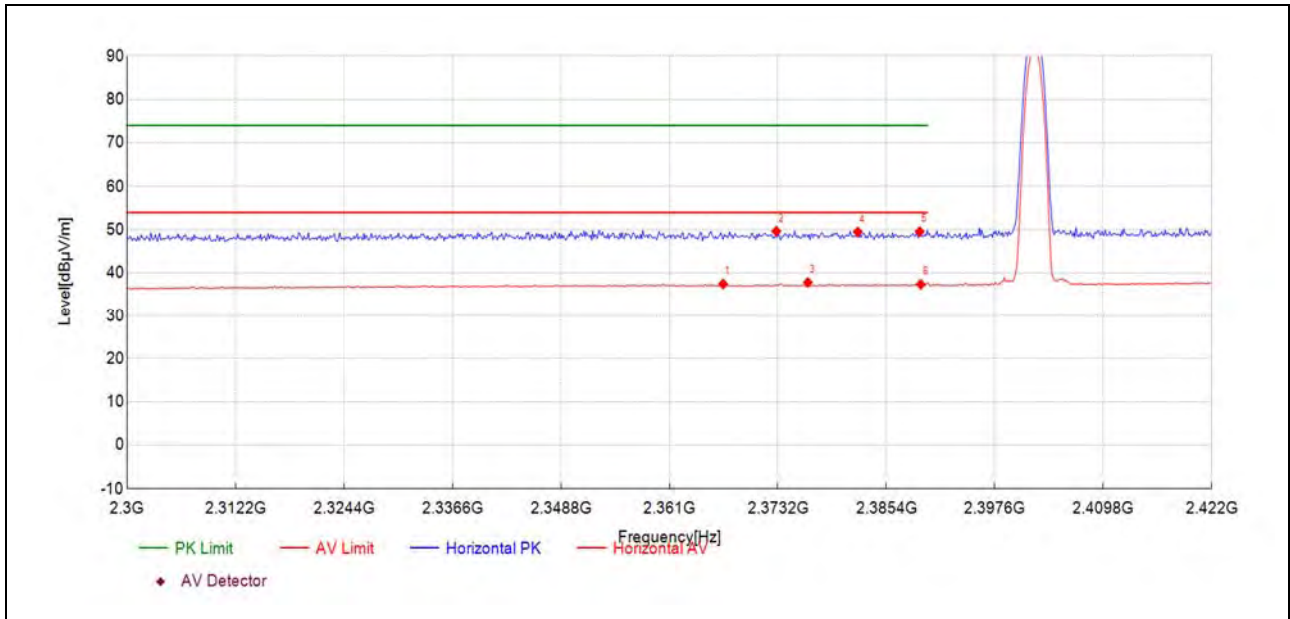
Plot for Channel 78



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2483.60	2.0	40.28	38.280	54.00	13.72	150	252	AV	PASS
2483.89	12.5	50.75	38.270	74.00	23.25	150	96	PK	PASS
2484.80	0.7	38.96	38.270	54.00	15.04	150	248	AV	PASS
2486.48	12.6	50.87	38.270	74.00	23.13	150	87	PK	PASS
2489.24	0.5	38.79	38.260	54.00	15.21	150	248	AV	PASS
2494.17	13.7	51.95	38.260	74.00	22.05	150	48	PK	PASS

**8-DPSK Mode**

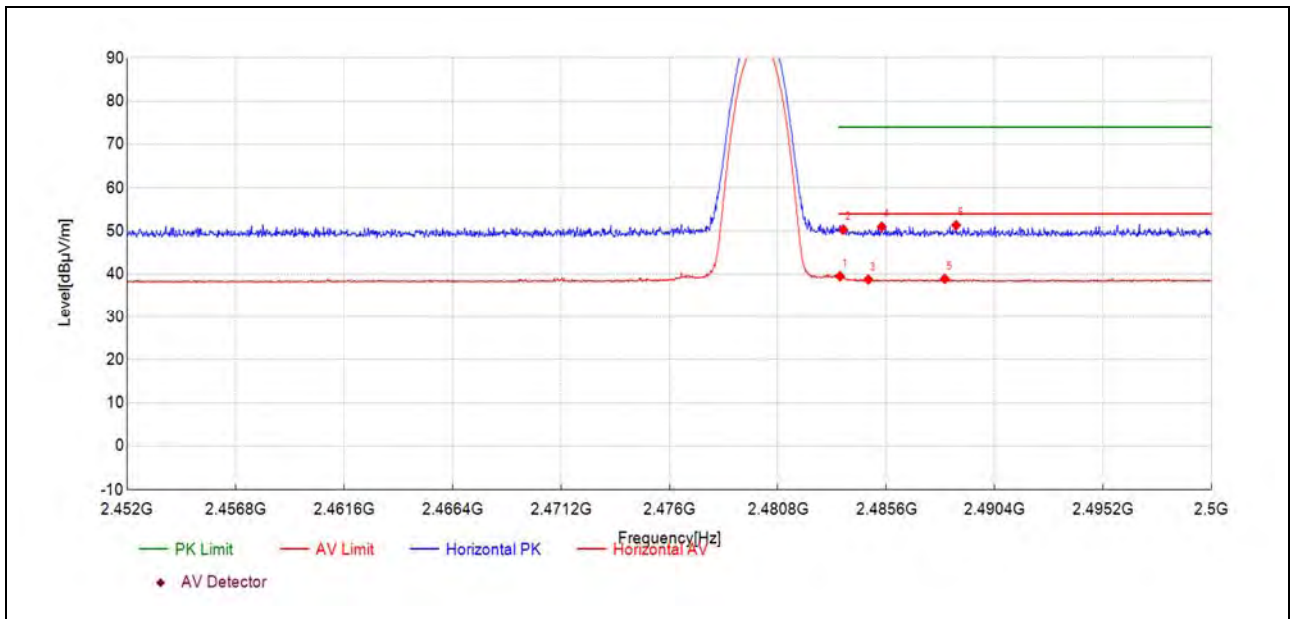
Plot for Channel 0



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2367.05	0.0	37.44	37.470	54.00	16.56	150	179	AV	PASS
2373.03	12.2	49.68	37.480	74.00	24.32	150	9	PK	PASS
2376.57	0.3	37.82	37.480	54.00	16.18	150	157	AV	PASS
2382.19	12.0	49.50	37.480	74.00	24.50	150	358	PK	PASS
2389.15	12.1	49.57	37.490	74.00	24.43	150	284	PK	PASS
2389.27	-0.1	37.36	37.490	54.00	16.64	150	22	AV	PASS



Plot for Channel 78



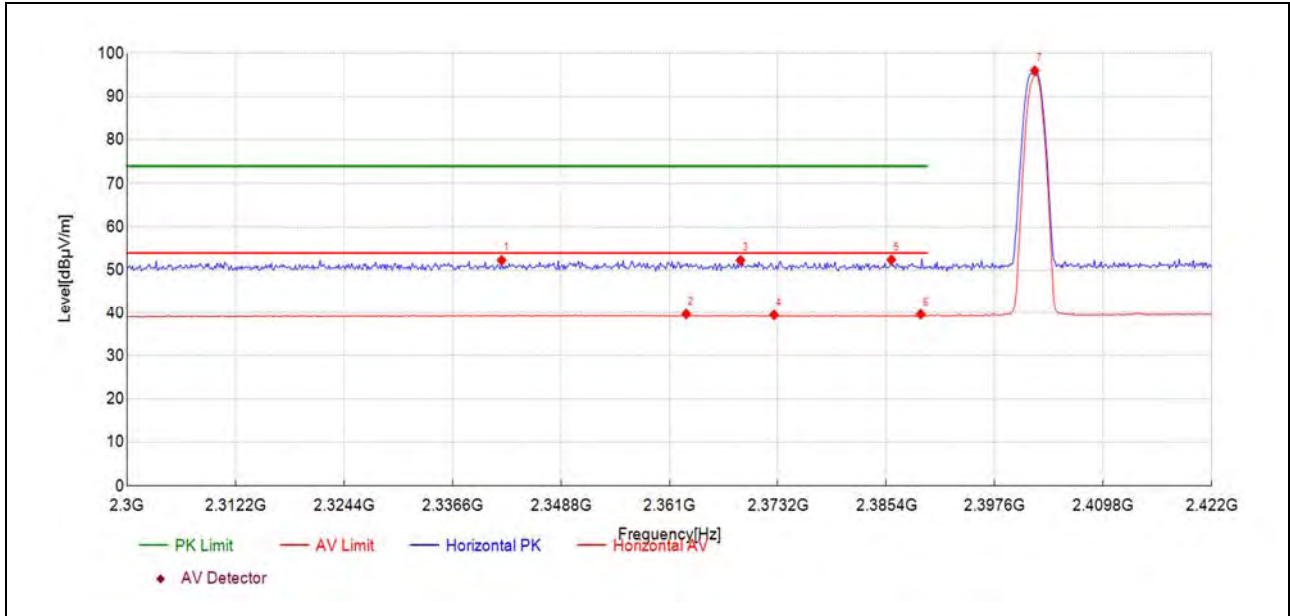
Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2483.55	1.3	39.54	38.280	54.00	14.46	150	251	AV	PASS
2483.70	12.1	50.37	38.280	74.00	23.63	150	325	PK	PASS
2484.80	0.5	38.77	38.270	54.00	15.23	150	246	AV	PASS
2485.40	12.8	51.02	38.270	74.00	22.98	150	199	PK	PASS
2488.19	0.7	38.93	38.270	54.00	15.07	150	251	AV	PASS
2488.69	13.1	51.37	38.270	74.00	22.63	150	0	PK	PASS



Right

GFSK Mode

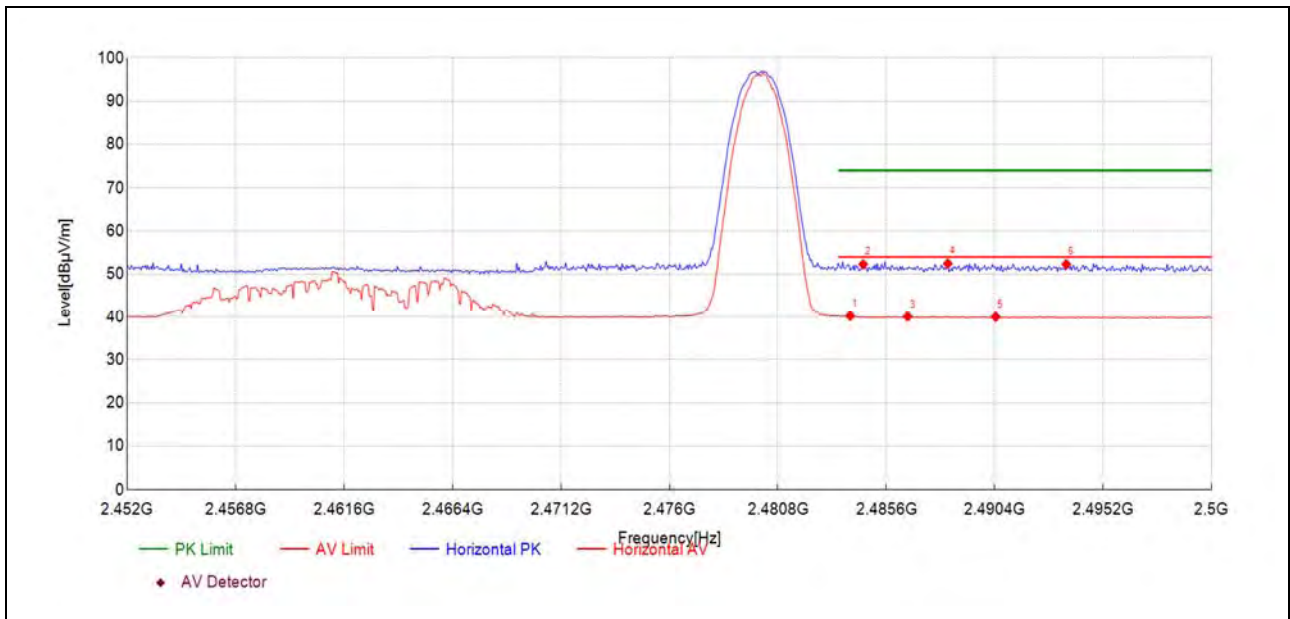
Plot for Channel 0



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2342.13	14.9	52.28	37.390	74.00	21.72	150	354	PK	PASS
2362.89	2.2	39.66	37.470	54.00	14.34	150	45	AV	PASS
2369.00	14.8	52.29	37.470	74.00	21.71	150	72	PK	PASS
2372.78	2.0	39.44	37.480	54.00	14.56	150	54	AV	PASS
2385.97	14.9	52.41	37.490	74.00	21.59	150	349	PK	PASS
2389.27	2.1	39.61	37.490	54.00	14.39	150	86	AV	PASS
2402.09	58.5	96.00	37.540	-	-	150	112	PK	NA



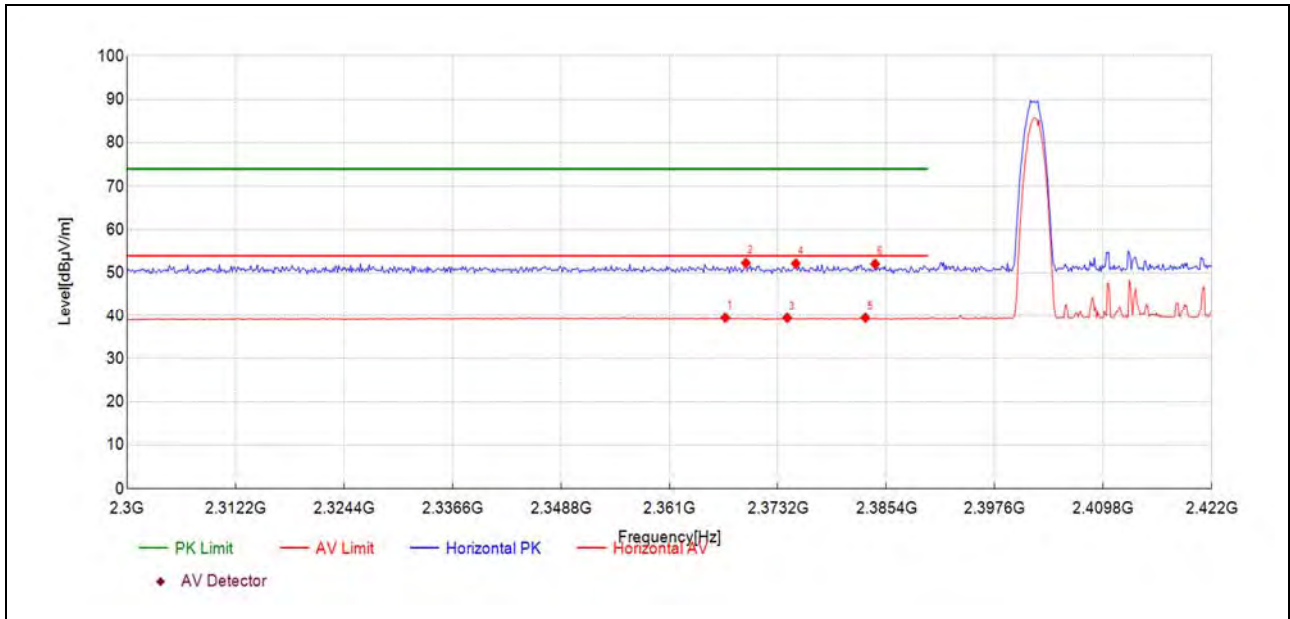
Plot for Channel 78



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2484.00	1.9	40.16	38.270	54.00	13.84	150	121	AV	PASS
2484.58	14.0	52.29	38.270	74.00	21.71	150	170	PK	PASS
2486.55	1.8	40.02	38.270	54.00	13.98	150	117	AV	PASS
2488.32	14.2	52.45	38.270	74.00	21.55	150	183	PK	PASS
2490.44	1.7	39.92	38.270	54.00	14.08	150	148	AV	PASS
2493.56	14.0	52.30	38.260	74.00	21.70	150	9	PK	PASS

**8-DPSK Mode**

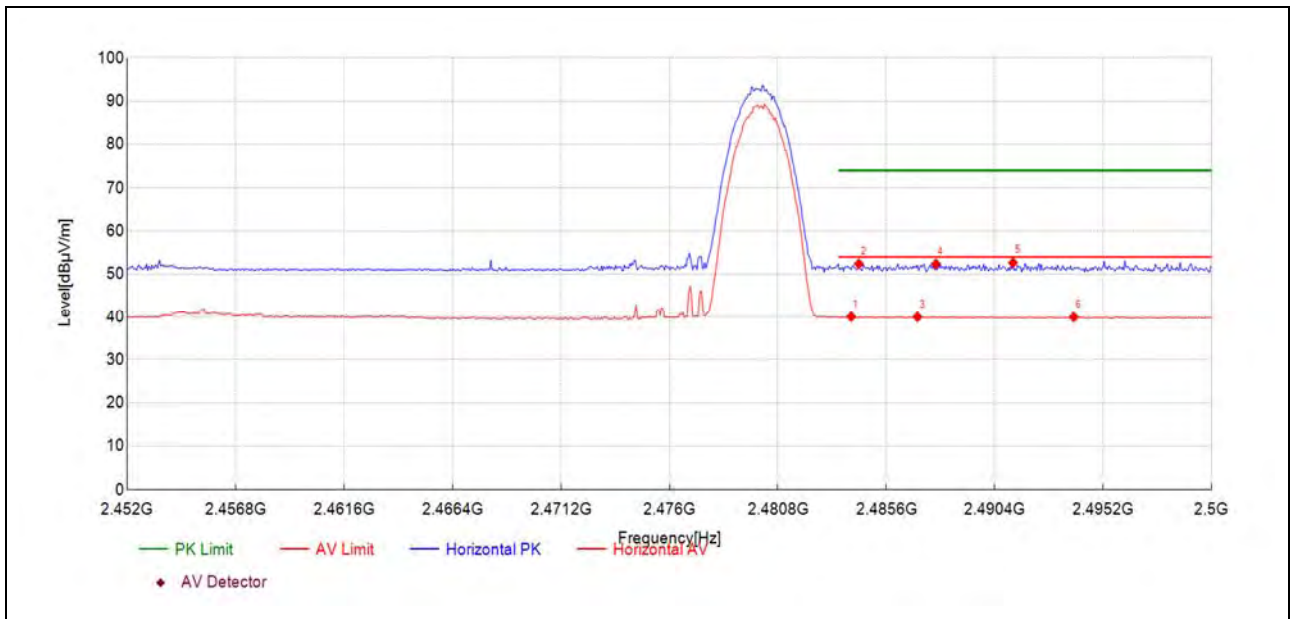
Plot for Channel 0



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2367.29	2.0	39.44	37.470	54.00	14.56	150	118	AV	PASS
2369.61	14.9	52.32	37.470	74.00	21.68	150	28	PK	PASS
2374.25	1.9	39.41	37.480	54.00	14.59	150	154	AV	PASS
2375.23	14.7	52.19	37.480	74.00	21.81	150	257	PK	PASS
2383.04	1.9	39.42	37.480	54.00	14.58	150	118	AV	PASS
2384.14	14.6	52.09	37.490	74.00	21.91	150	185	PK	PASS



Plot for Channel 78



Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
2484.05	1.7	39.95	38.270	54.00	14.05	150	184	AV	PASS
2484.38	14.1	52.39	38.270	74.00	21.61	150	345	PK	PASS
2486.98	1.6	39.90	38.270	54.00	14.10	150	301	AV	PASS
2487.80	14.1	52.38	38.270	74.00	21.62	150	233	PK	PASS
2491.21	14.4	52.65	38.270	74.00	21.35	150	9	PK	PASS
2493.90	1.6	39.87	38.250	54.00	14.13	150	112	AV	PASS



A.12. Radiated Emission

According to ANSI C63.10, because of peak detection will yield amplitudes equal to or greater than amplitudes measured with the quasi-peak (or average) detector, the measurement data from a spectrum analyzer peak detector will represent the worst-case results, if the peak measured value complies with the quasi-peak (or average) limit, it is unnecessary to perform an quasi-peak measurement (or average).

The measurement results are obtained as below:

$$E [\text{dB}\mu\text{V/m}] = U_R + A_T + A_{\text{Factor}} [\text{dB}]; A_T = L_{\text{Cable loss}} [\text{dB}] - G_{\text{preamp}} [\text{dB}]$$

A_T : Total correction Factor except Antenna

U_R : Receiver Reading

G_{preamp} : Preamplifier Gain

A_{Factor} : Antenna Factor at 3m

During the test, the total correction Factor A_T and A_{Factor} were built in test software.

Note1: All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Note2: For the frequency, which started from 9kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

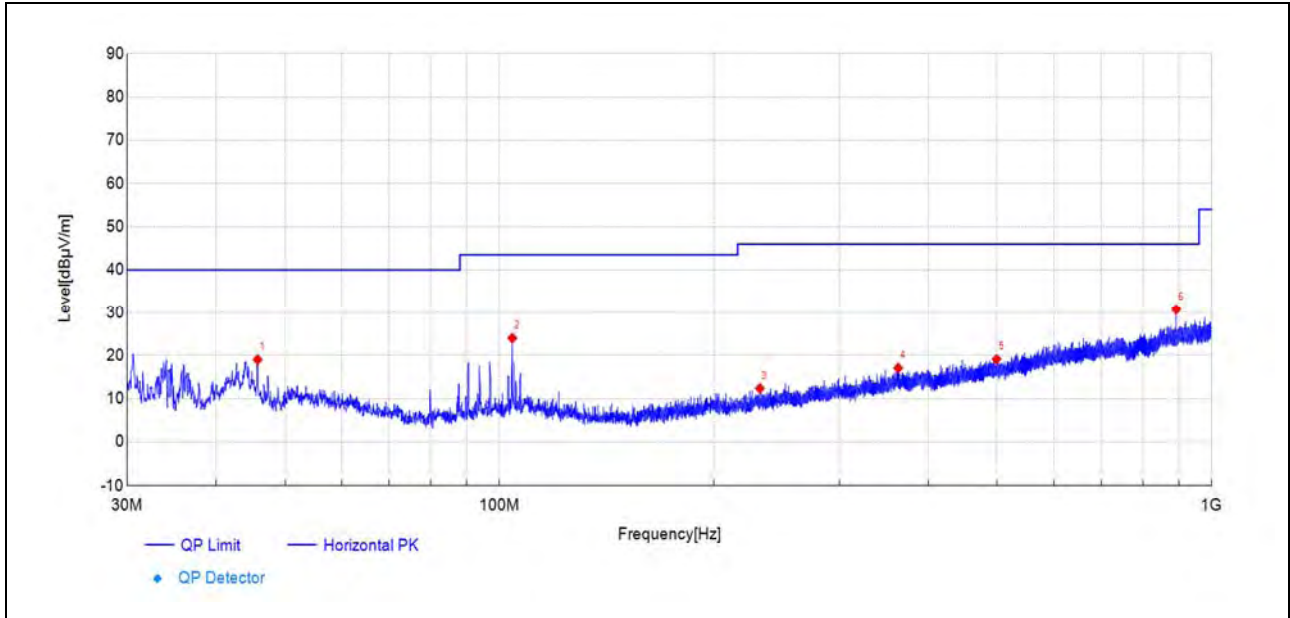
Note3: For the frequency, which started from 18GHz to 10th harmonic of the highest frequency, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

Note 4: All test modes were considered and evaluated respectively by performing full test, only the worst data were recorded.

Left

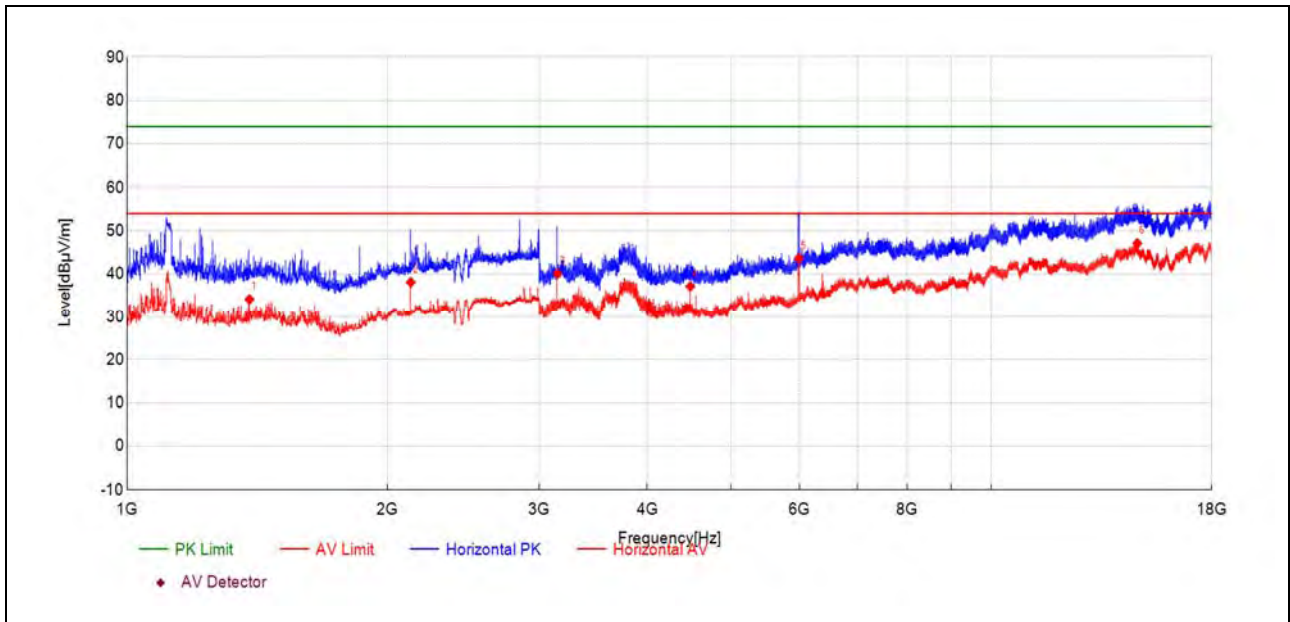
GFSK Mode

Plot for Channel 0



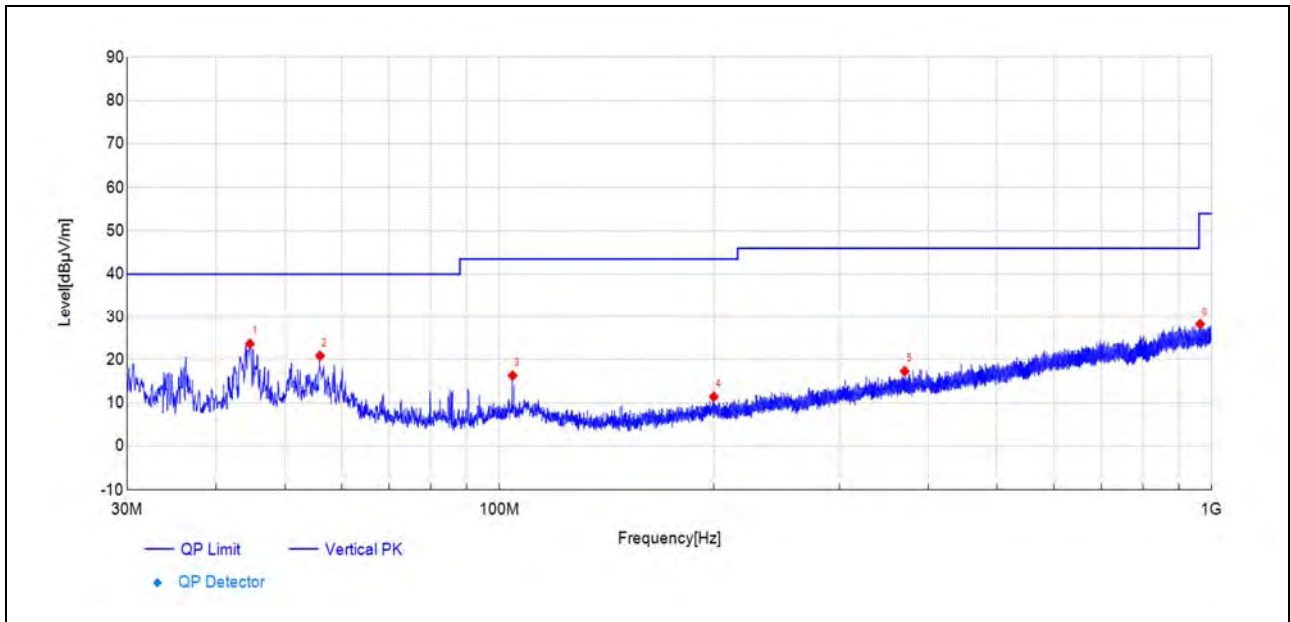
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
45.76	47.4	19.02	-28.380	40.00	20.98	150	321	PK	PASS
104.26	53.6	24.01	-29.540	43.50	19.49	150	360	PK	PASS
232.06	40.3	12.38	-27.940	46.00	33.62	150	347	PK	PASS
362.92	40.5	17.10	-23.410	46.00	28.90	150	9	PK	PASS
498.87	39.5	19.11	-20.430	46.00	26.89	150	311	PK	PASS
891.50	43.3	30.74	-12.540	46.00	15.26	150	162	PK	PASS



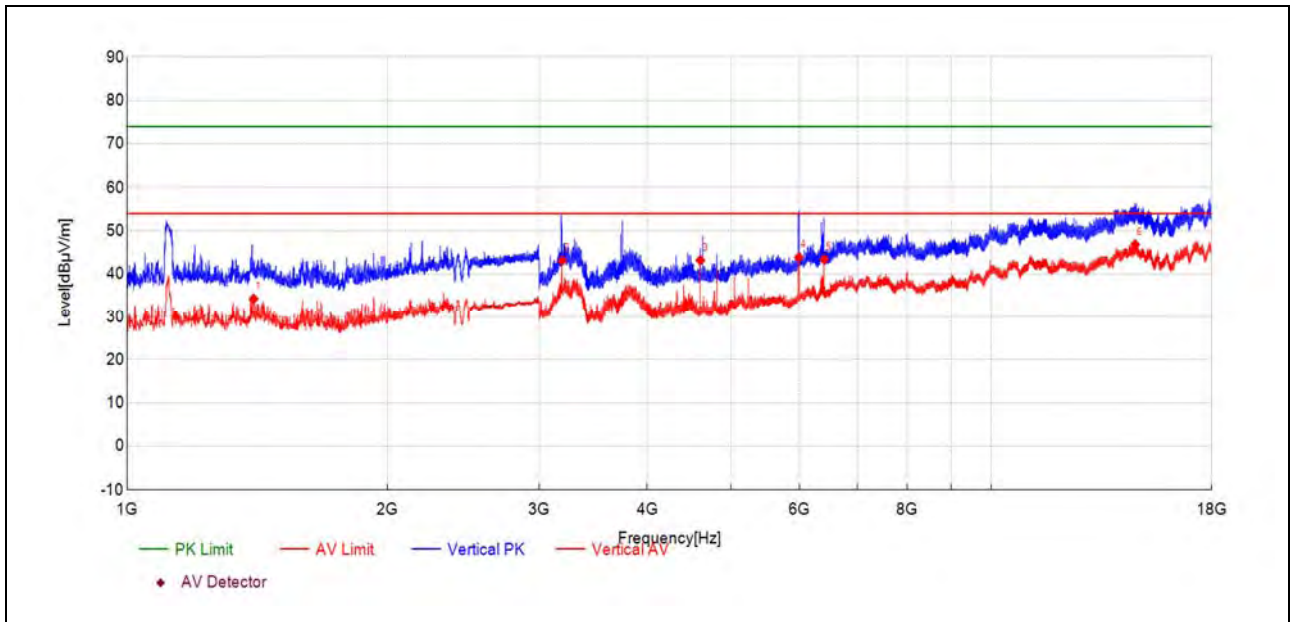
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
1385.86	34.5	34.13	-0.370	54.00	19.87	150	40	AV	PASS
2130.03	34.6	38.10	3.530	54.00	15.90	150	83	AV	PASS
3149.58	50.5	40.11	-10.400	54.00	13.89	150	171	AV	PASS
4485.47	43.8	37.14	-6.640	54.00	16.86	150	146	AV	PASS
5991.94	43.9	43.64	-0.240	54.00	10.36	150	171	AV	PASS
14762.48	27.1	47.12	20.050	54.00	6.88	150	105	AV	PASS



(Antenna Vertical, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
44.65	51.6	23.63	-27.990	40.00	16.37	150	17	PK	PASS
56.00	48.9	20.87	-28.050	40.00	19.13	150	330	PK	PASS
104.35	45.8	16.32	-29.490	43.50	27.18	150	345	PK	PASS
200.00	40.2	11.40	-28.780	43.50	32.10	150	226	PK	PASS
370.68	40.1	17.30	-22.840	46.00	28.70	150	190	PK	PASS
963.24	39.3	28.21	-11.110	54.00	25.79	150	163	PK	PASS

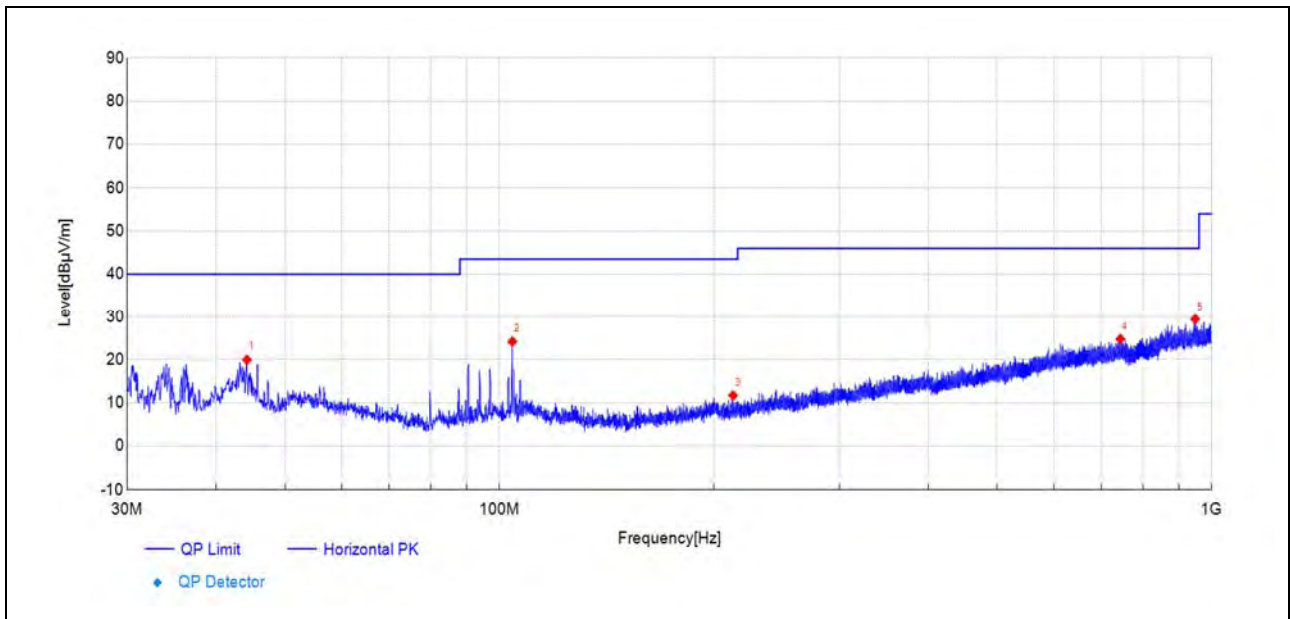


(Antenna Vertical, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
1400.98	34.5	34.26	-0.200	54.00	19.74	150	63	AV	PASS
3189.01	53.9	43.14	-10.750	54.00	10.86	150	167	AV	PASS
4608.05	49.9	43.21	-6.690	54.00	10.79	150	221	AV	PASS
5991.09	44.1	43.88	-0.250	54.00	10.12	150	48	AV	PASS
6410.67	42.3	43.42	1.130	54.00	10.58	150	167	AV	PASS
14680.19	26.3	46.84	20.550	54.00	7.16	150	127	AV	PASS

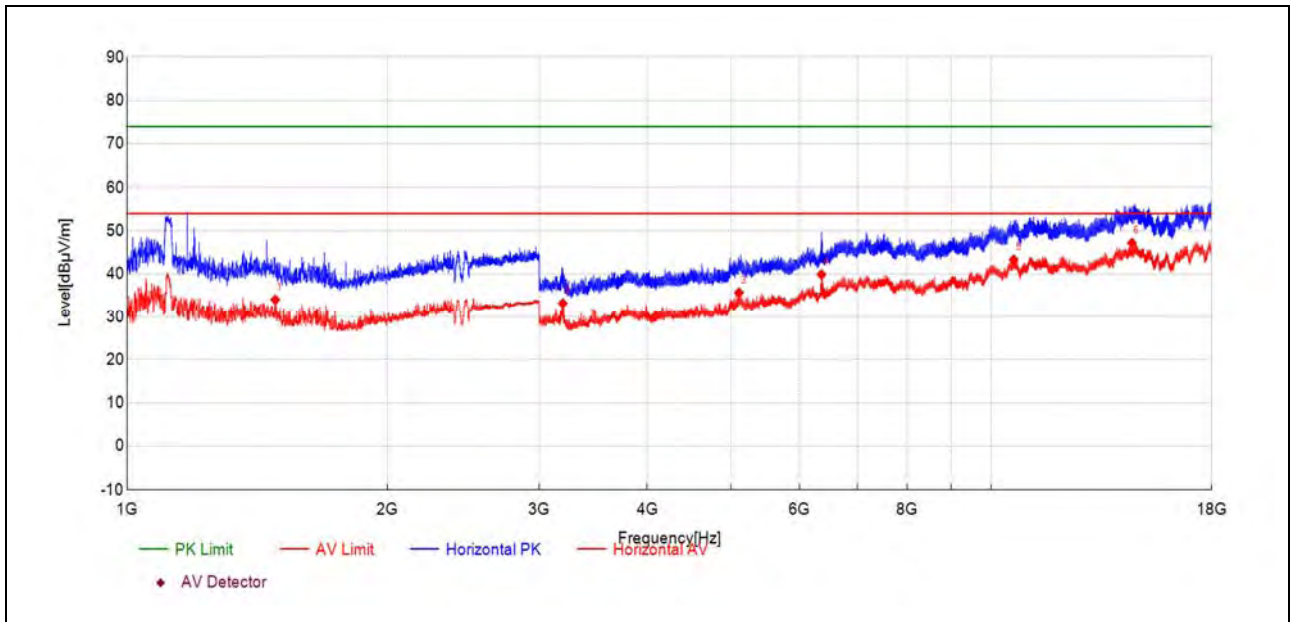


Plot for Channel 39



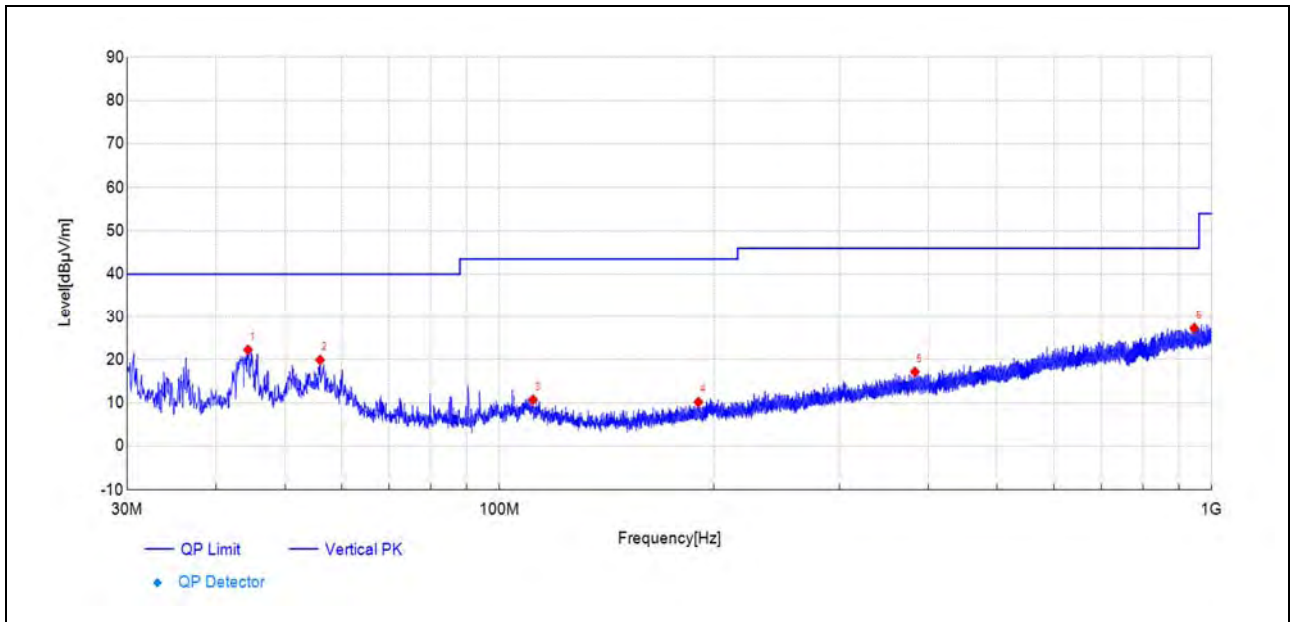
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
44.21	47.8	19.95	-27.870	40.00	20.05	150	13	PK	PASS
104.31	53.7	24.17	-29.520	43.50	19.33	150	196	PK	PASS
212.85	40.8	11.69	-29.140	43.50	31.81	150	260	PK	PASS
744.34	39.7	24.75	-14.930	46.00	21.25	150	191	PK	PASS
948.20	40.4	29.40	-10.990	46.00	16.60	150	24	PK	PASS



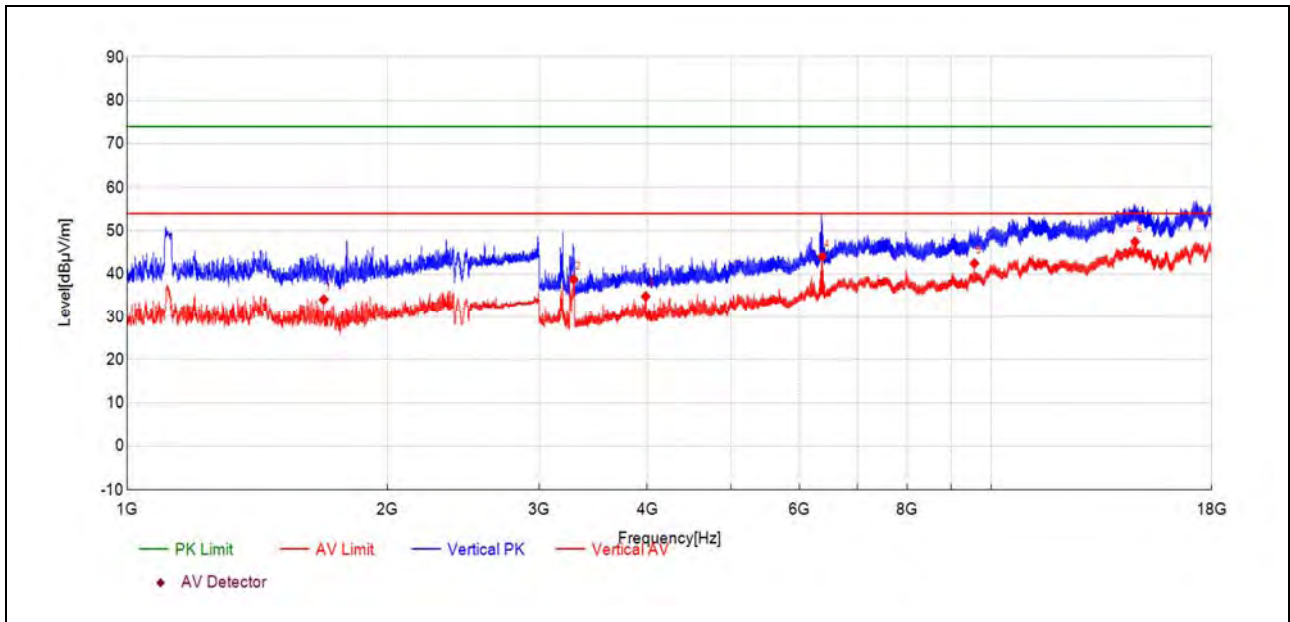
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
1484.11	34.3	34.06	-0.240	54.00	19.94	150	37	AV	PASS
3194.15	44.0	33.19	-10.800	54.00	20.81	150	48	AV	PASS
5107.35	38.9	35.69	-3.230	54.00	18.31	150	48	AV	PASS
6363.10	38.8	39.90	1.150	54.00	14.10	150	88	AV	PASS
10621.07	31.2	43.35	12.170	54.00	10.65	150	291	AV	PASS
14550.33	27.1	47.20	20.070	54.00	6.80	150	305	AV	PASS



(Antenna Vertical, 30MHz to 1GHz)

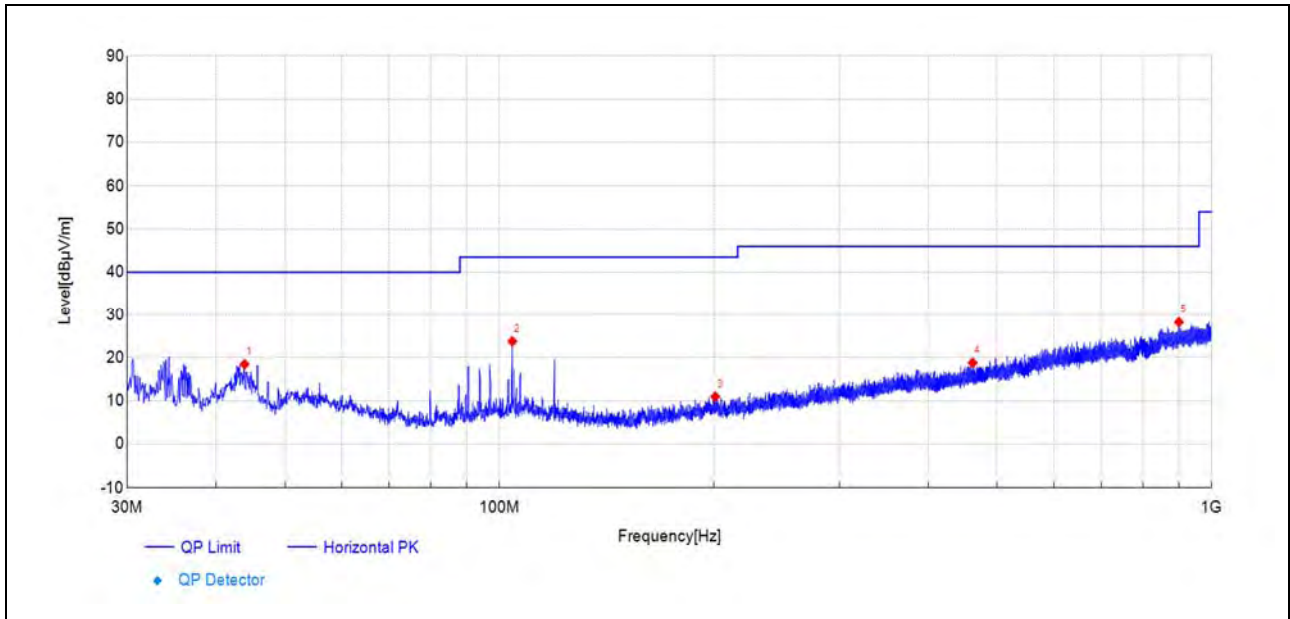
Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
44.36	50.2	22.26	-27.920	40.00	17.74	150	360	PK	PASS
56.00	48.0	19.92	-28.050	40.00	20.08	150	352	PK	PASS
111.48	39.6	10.71	-28.930	43.50	32.79	150	285	PK	PASS
190.25	39.9	10.17	-29.740	43.50	33.33	150	260	PK	PASS
383.05	40.0	17.17	-22.860	46.00	28.83	150	183	PK	PASS
945.00	38.4	27.27	-11.130	46.00	18.73	150	152	PK	PASS



(Antenna Vertical, 1GHz to 18GHz)

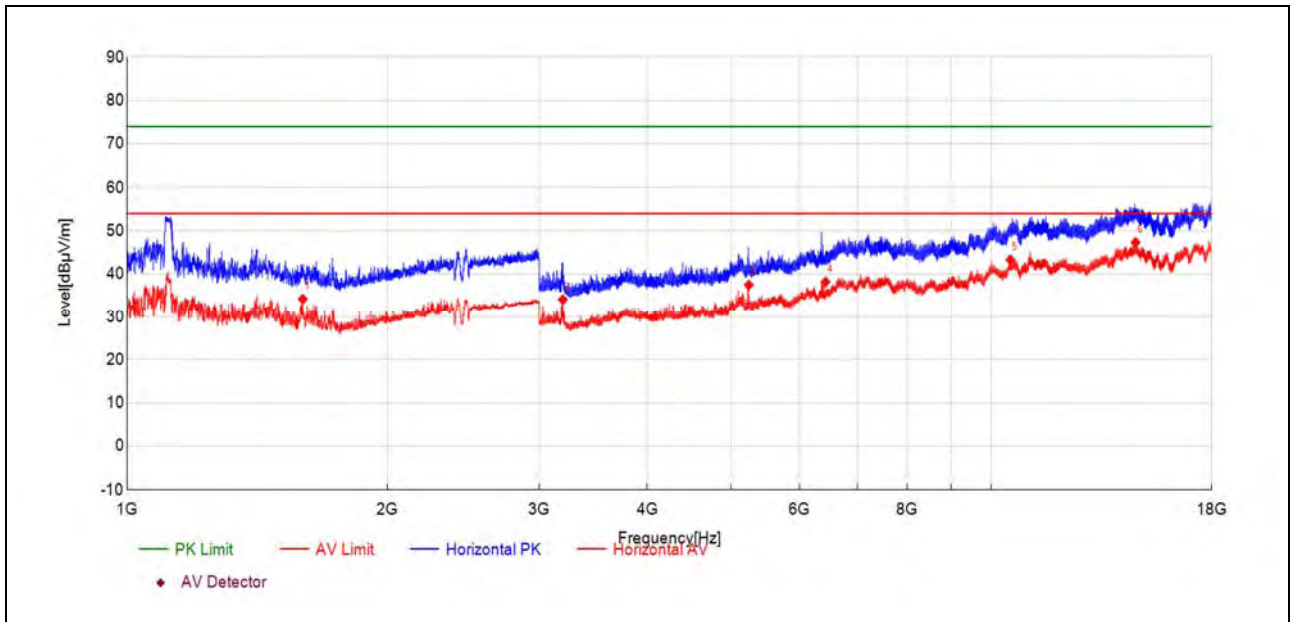
Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
1689.49	33.9	34.08	0.180	54.00	19.92	150	147	AV	PASS
3286.29	49.9	38.78	-11.150	54.00	15.22	150	48	AV	PASS
3983.60	42.9	34.83	-8.020	54.00	19.17	150	103	AV	PASS
6376.81	42.9	44.04	1.100	54.00	9.96	150	143	AV	PASS
9564.62	34.3	42.48	8.180	54.00	11.52	150	76	AV	PASS
14678.05	27.0	47.49	20.540	54.00	6.51	150	263	AV	PASS

Plot for Channel 78



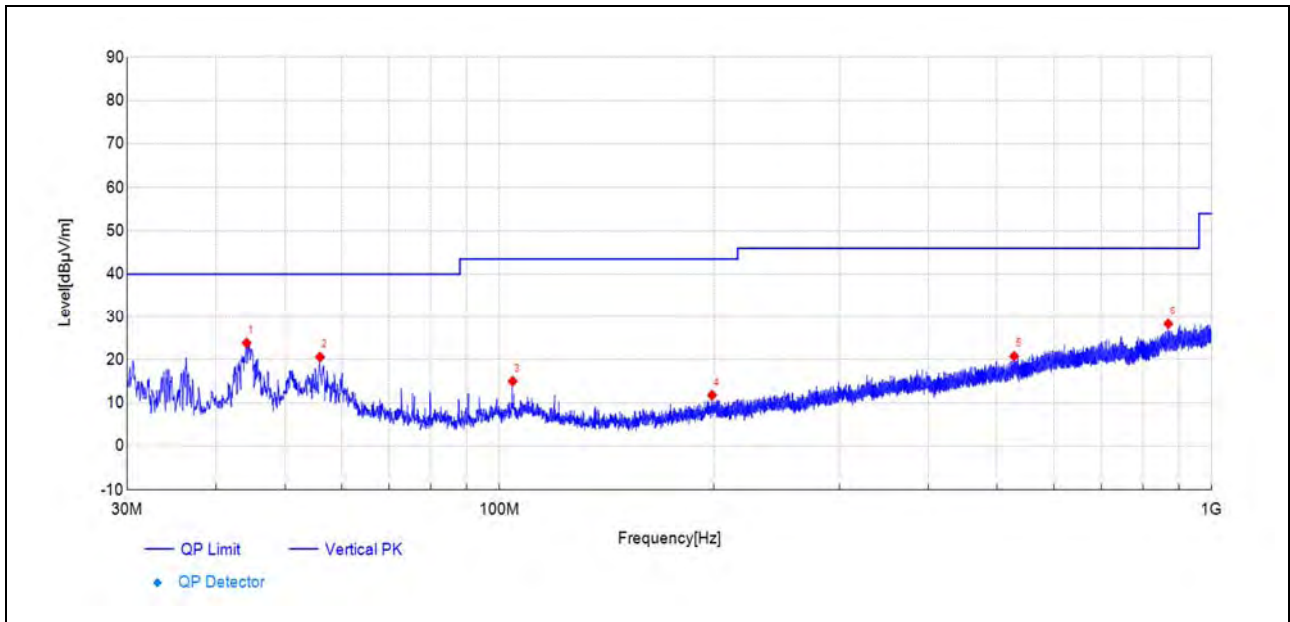
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
43.87	46.3	18.43	-27.850	40.00	21.57	150	174	PK	PASS
104.26	53.3	23.74	-29.540	43.50	19.76	150	300	PK	PASS
200.97	39.8	10.93	-28.900	43.50	32.57	150	331	PK	PASS
461.77	40.4	18.78	-21.610	46.00	27.22	150	185	PK	PASS
899.50	39.9	28.23	-11.650	46.00	17.77	150	253	PK	PASS



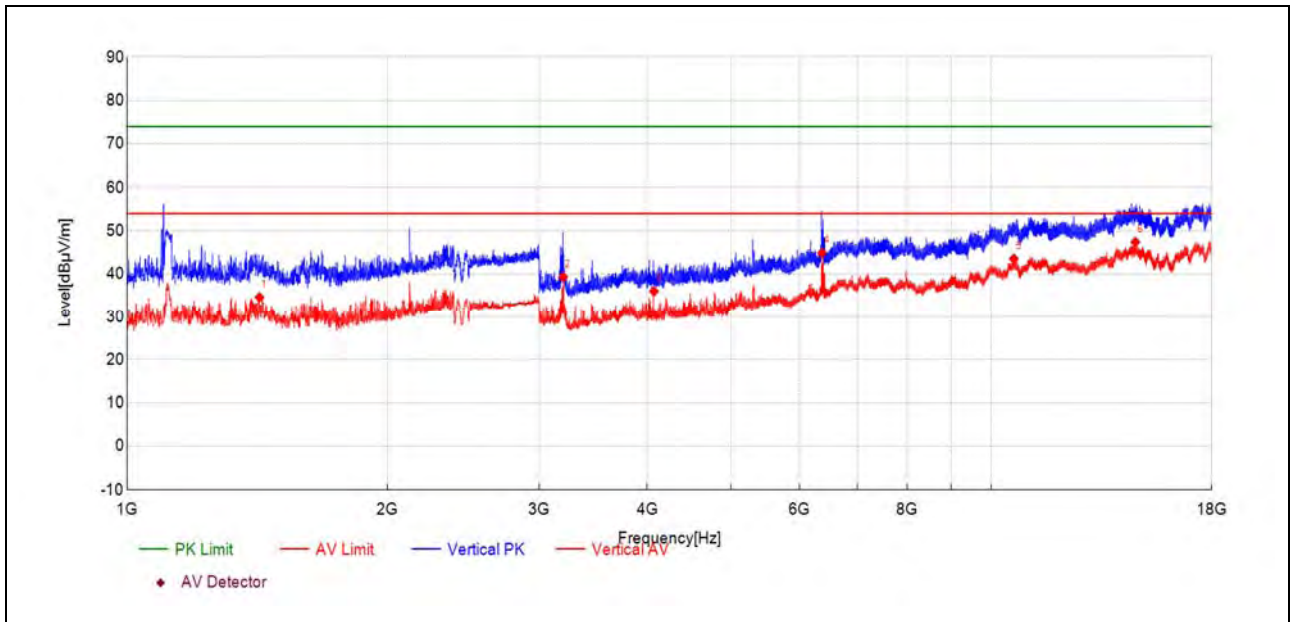
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
1597.47	34.6	34.18	-0.410	54.00	19.82	150	168	AV	PASS
3194.58	44.9	34.07	-10.800	54.00	19.93	150	316	AV	PASS
5243.21	40.4	37.45	-2.950	54.00	16.55	150	129	AV	PASS
6432.53	36.8	38.19	1.390	54.00	15.81	150	224	AV	PASS
10526.79	31.3	43.32	12.030	54.00	10.68	150	316	AV	PASS
14693.05	26.8	47.34	20.590	54.00	6.66	150	144	AV	PASS



(Antenna Vertical, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
44.16	51.7	23.82	-27.860	40.00	16.18	150	351	PK	PASS
56.00	48.7	20.61	-28.050	40.00	19.39	150	340	PK	PASS
104.35	44.5	14.99	-29.490	43.50	28.51	150	246	PK	PASS
198.84	40.7	11.77	-28.950	43.50	31.73	150	105	PK	PASS
528.07	40.0	20.77	-19.270	46.00	25.23	150	13	PK	PASS
869.04	40.7	28.29	-12.430	46.00	17.71	150	308	PK	PASS



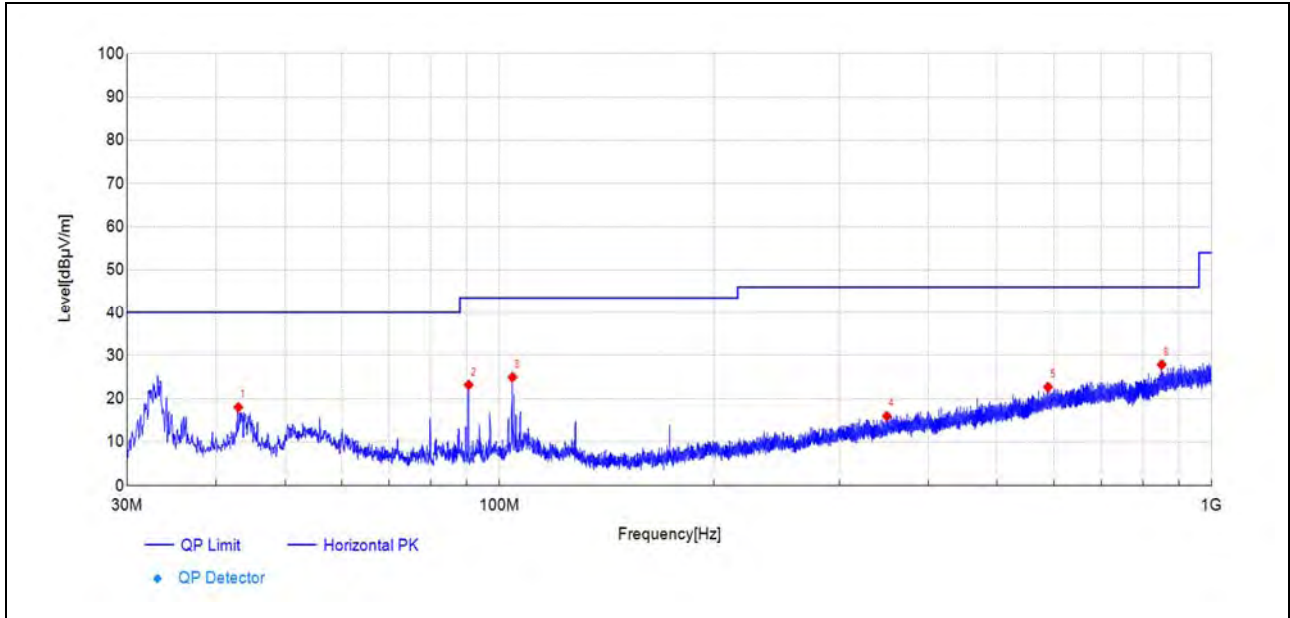
(Antenna Vertical, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
1423.21	34.6	34.63	-0.010	54.00	19.37	150	132	AV	PASS
3197.58	50.2	39.34	-10.830	54.00	14.66	150	276	AV	PASS
4071.89	44.3	36.03	-8.270	54.00	17.97	150	104	AV	PASS
6372.52	43.8	44.92	1.110	54.00	9.08	150	104	AV	PASS
10622.79	31.4	43.55	12.170	54.00	10.45	150	184	AV	PASS
14684.05	26.9	47.42	20.560	54.00	6.58	150	157	AV	PASS

Right

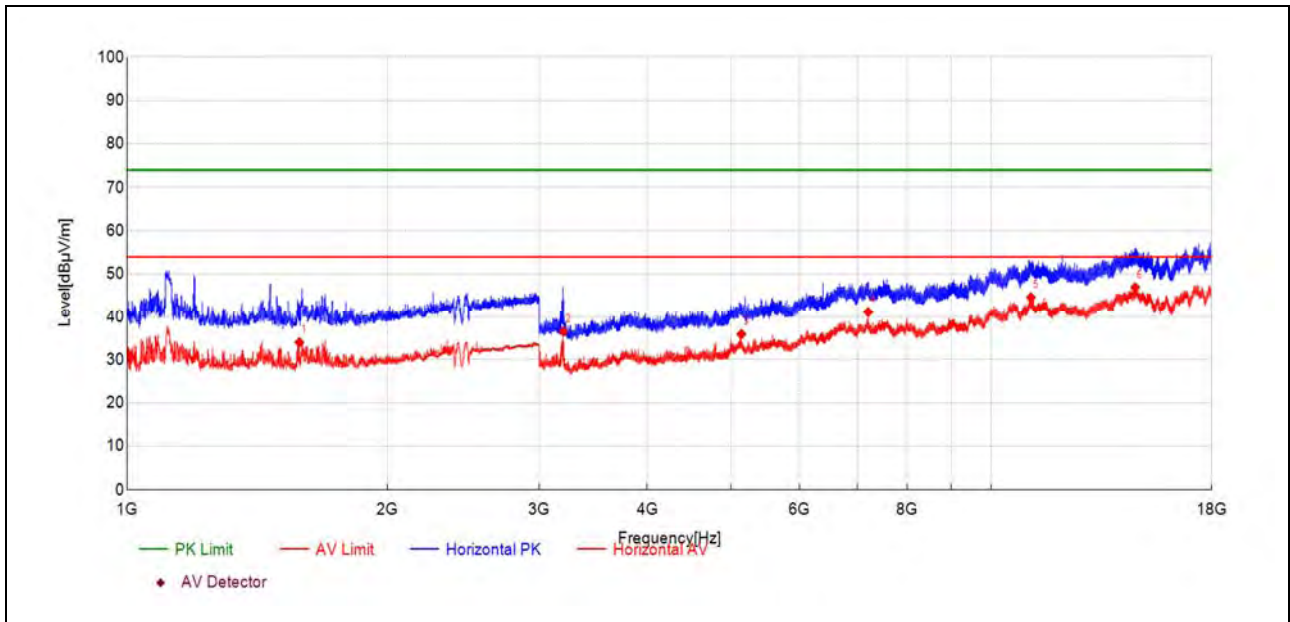
GFSK Mode

Plot for Channel 0



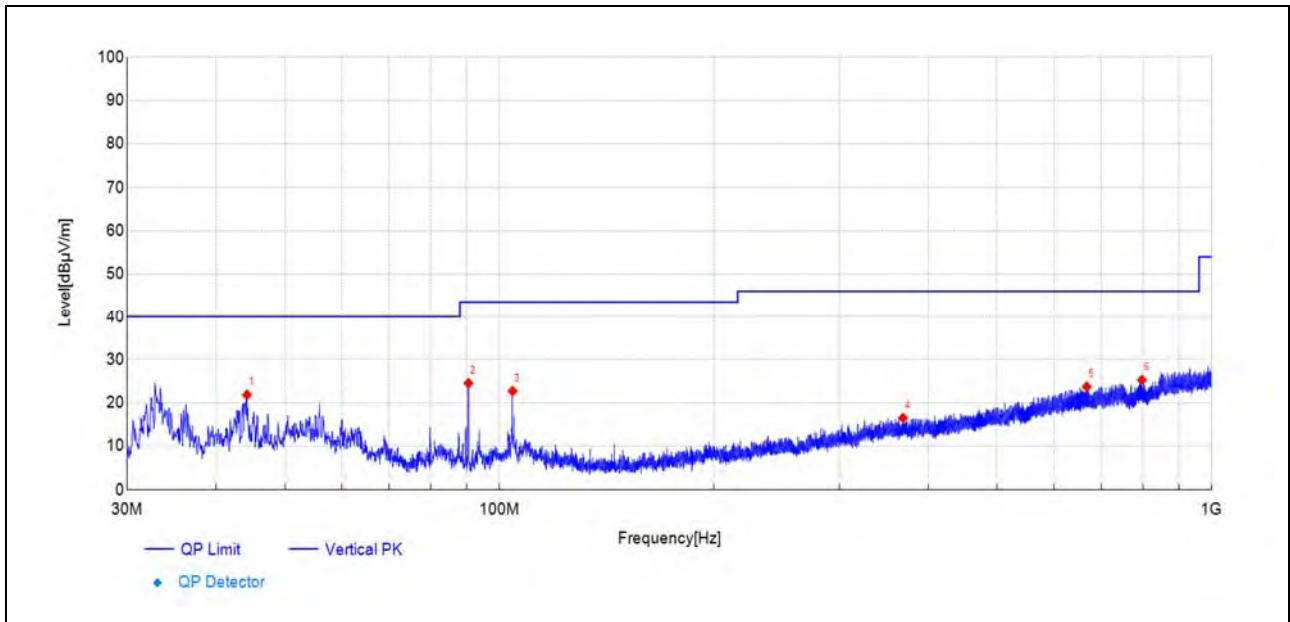
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
43.00	46.1	18.01	-28.040	40.00	21.99	150	73	PK	PASS
90.53	54.6	23.18	-31.450	43.50	20.32	150	73	PK	PASS
104.31	54.5	24.94	-29.520	43.50	18.56	150	78	PK	PASS
349.87	39.9	15.97	-23.900	46.00	30.03	150	67	PK	PASS
589.09	40.0	22.69	-17.260	46.00	23.31	150	47	PK	PASS
850.66	40.5	27.87	-12.620	46.00	18.13	150	93	PK	PASS



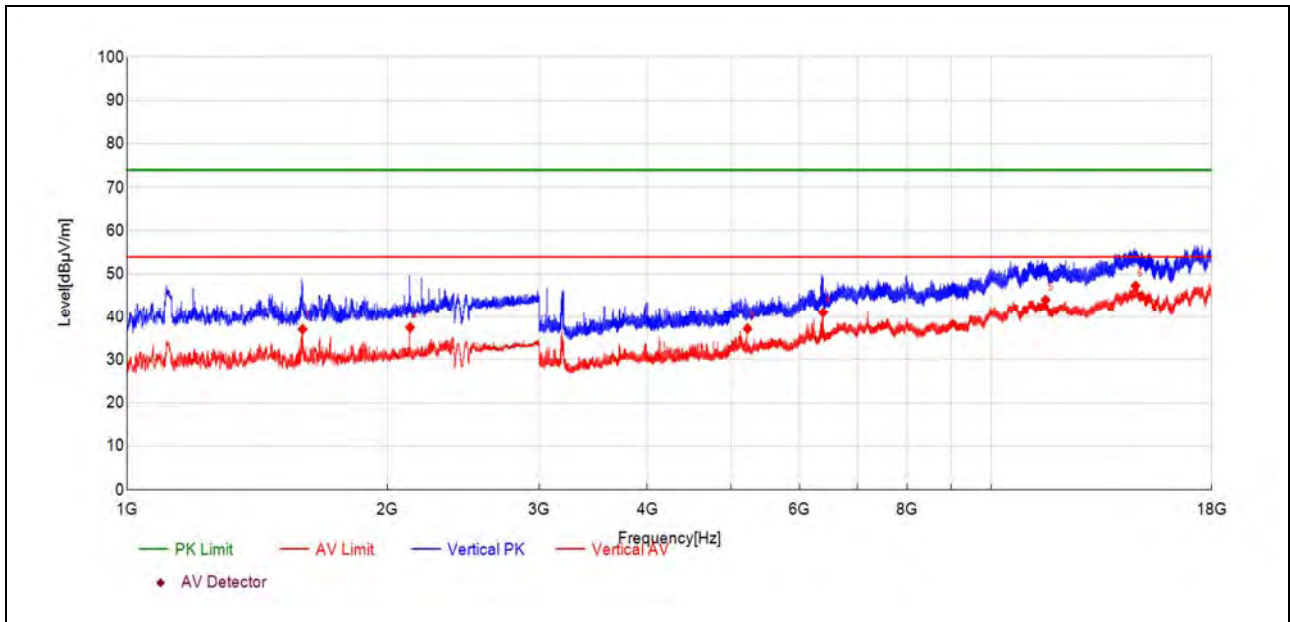
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
1582.80	34.5	33.99	-0.550	54.00	20.01	150	180	AV	PASS
3199.72	47.4	36.53	-10.850	54.00	17.47	150	56	AV	PASS
5139.92	38.6	35.91	-2.700	54.00	18.09	150	0	AV	PASS
7206.55	36.1	41.12	5.020	54.00	12.88	150	255	AV	PASS
11118.66	30.6	44.57	13.970	54.00	9.43	150	150	AV	PASS
14678.91	26.4	46.90	20.540	54.00	7.10	150	203	AV	PASS



(Antenna Vertical, 30MHz to 1GHz)

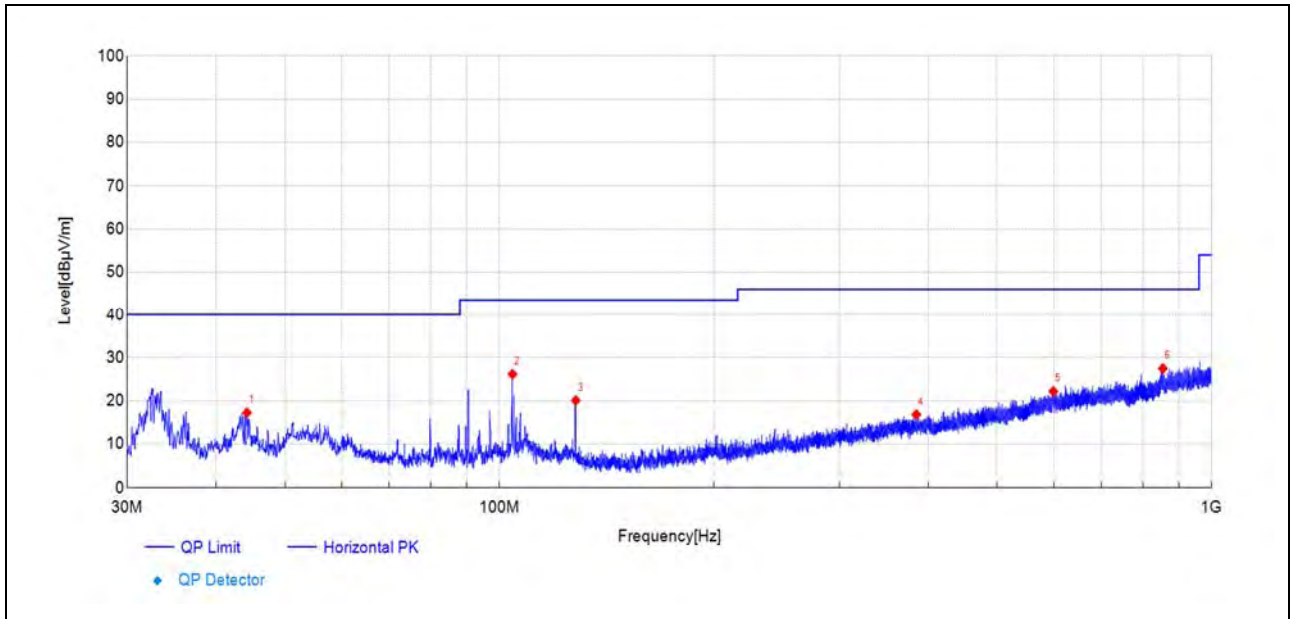
Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
44.21	49.7	21.85	-27.870	40.00	18.15	150	351	PK	PASS
90.48	56.0	24.53	-31.470	43.50	18.97	150	330	PK	PASS
104.35	52.2	22.71	-29.490	43.50	20.79	150	173	PK	PASS
368.74	39.4	16.50	-22.930	46.00	29.50	150	199	PK	PASS
667.66	40.0	23.73	-16.230	46.00	22.27	150	275	PK	PASS
798.23	39.8	25.28	-14.540	46.00	20.72	150	0	PK	PASS



(Antenna Vertical, 1GHz to 18GHz)

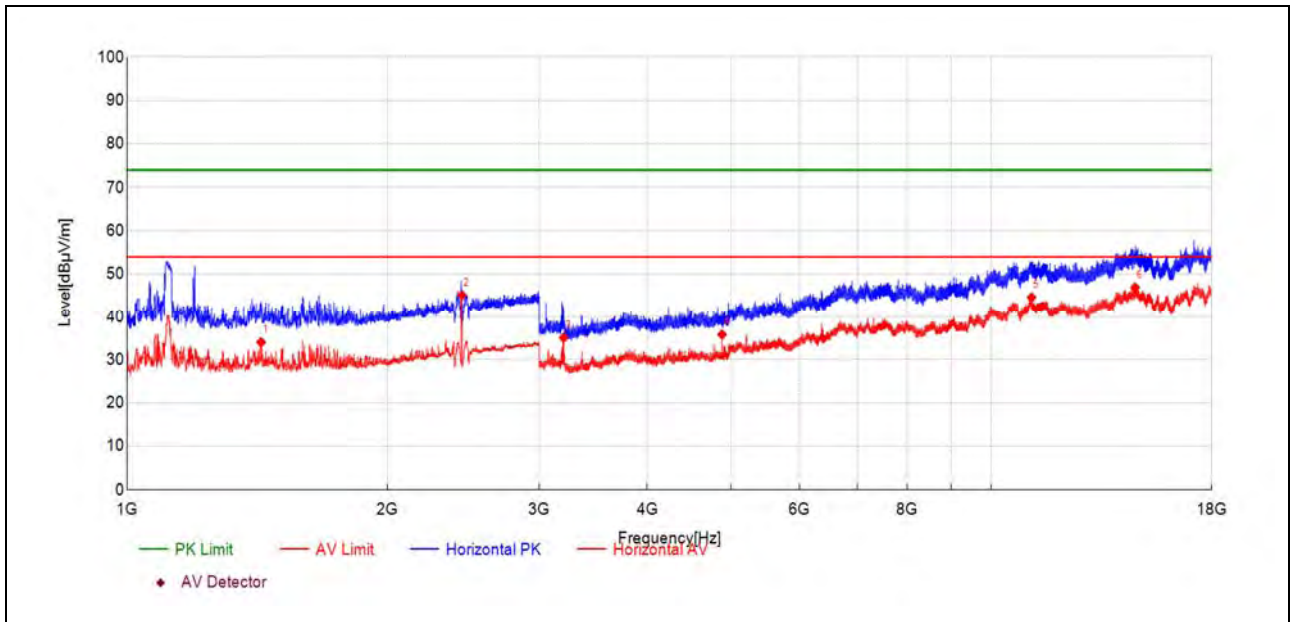
Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
1596.58	37.5	37.03	-0.420	54.00	16.97	150	168	AV	PASS
2126.03	34.0	37.46	3.490	54.00	16.54	150	89	AV	PASS
5224.78	40.4	37.18	-3.250	54.00	16.82	150	193	AV	PASS
6389.67	40.0	41.00	1.040	54.00	13.00	150	86	AV	PASS
11562.24	29.6	44.00	14.410	54.00	10.00	150	258	AV	PASS
14693.05	26.7	47.27	20.590	54.00	6.73	150	86	AV	PASS

Plot for Channel 39



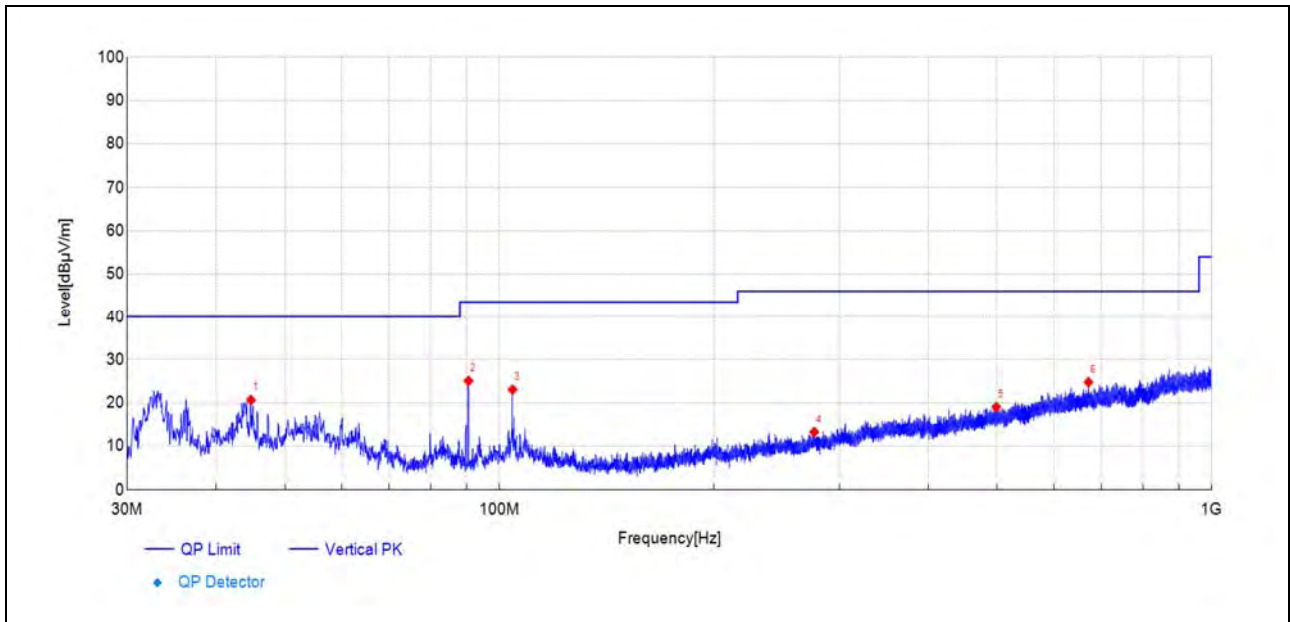
(Antenna Horizontal, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
44.21	45.1	17.24	-27.870	40.00	22.76	150	112	PK	PASS
104.31	55.7	26.14	-29.520	43.50	17.36	150	77	PK	PASS
127.97	51.8	20.07	-31.710	43.50	23.43	150	163	PK	PASS
384.84	39.4	16.83	-22.610	46.00	29.17	150	122	PK	PASS
599.37	39.1	22.19	-16.950	46.00	23.81	150	61	PK	PASS
853.86	40.0	27.47	-12.510	46.00	18.53	150	203	PK	PASS



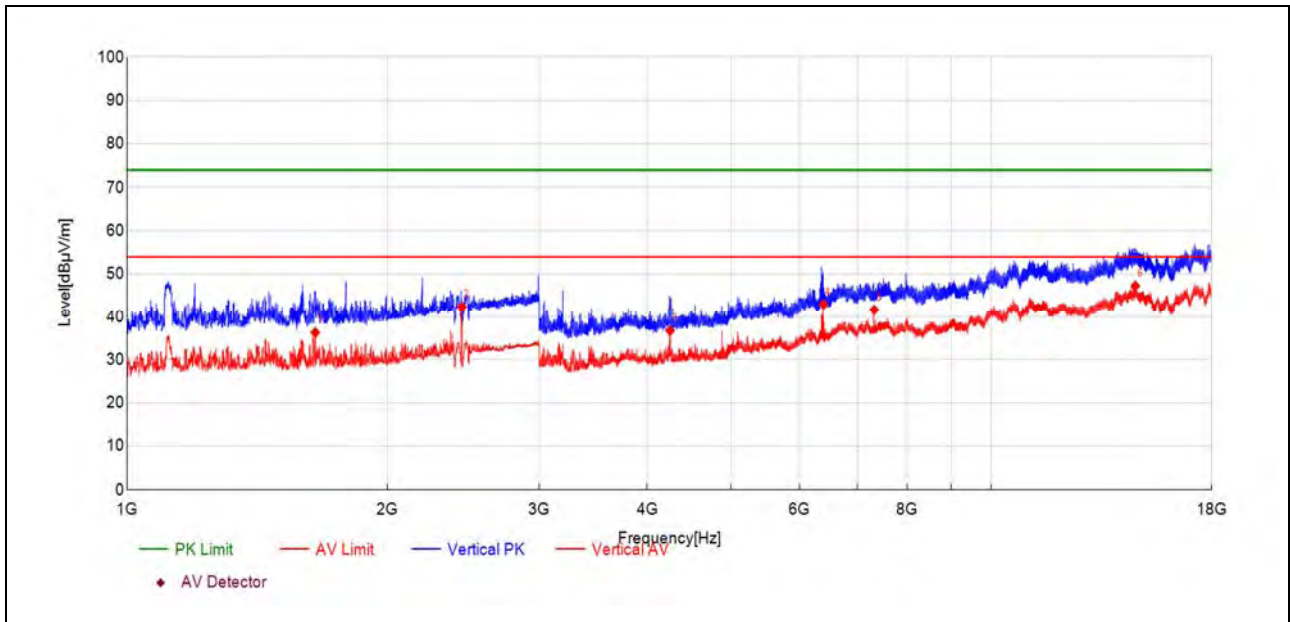
(Antenna Horizontal, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
1429.43	34.0	34.01	0.050	54.00	19.99	150	139	AV	PASS
2441.65	39.3	45.11	5.840	-	-	150	171	AV	PASS
3202.29	46.0	35.10	-10.870	54.00	18.90	150	307	AV	PASS
4882.34	40.8	35.81	-5.020	54.00	18.19	150	200	AV	PASS
11137.52	30.7	44.57	13.850	54.00	9.43	150	12	AV	PASS
14674.19	26.4	46.88	20.530	54.00	7.12	150	254	AV	PASS



(Antenna Vertical, 30MHz to 1GHz)

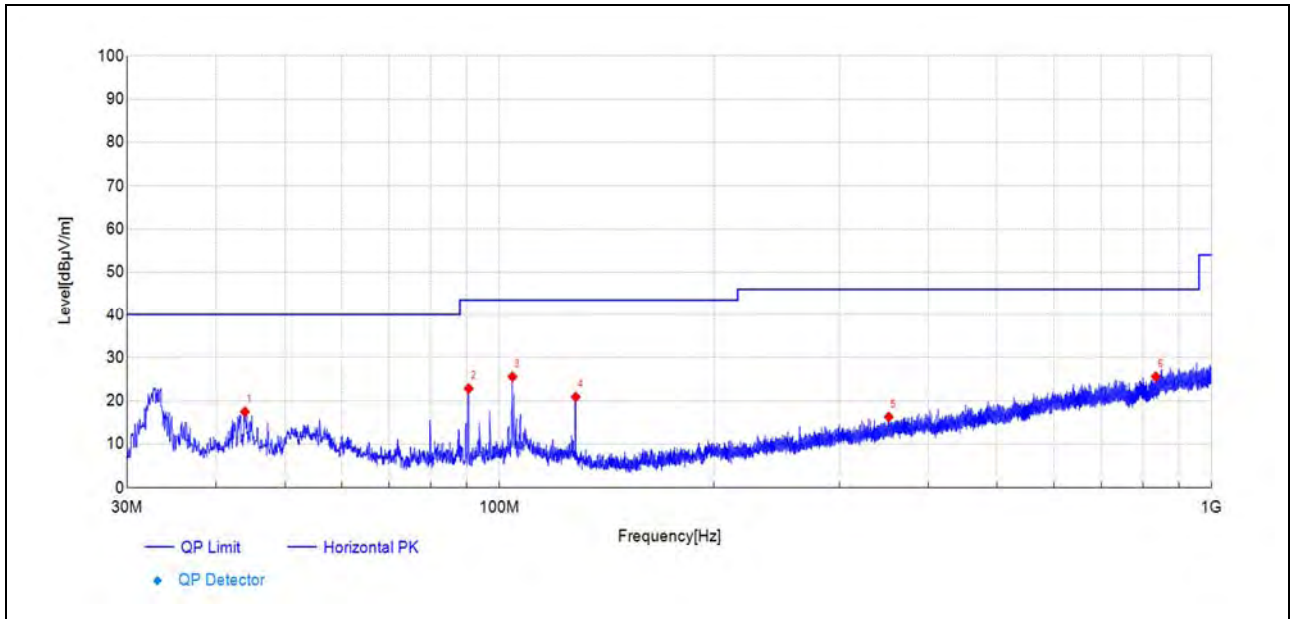
Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
44.79	48.7	20.64	-28.040	40.00	19.36	150	300	PK	PASS
90.48	56.5	25.06	-31.470	43.50	18.44	150	352	PK	PASS
104.35	52.5	23.05	-29.490	43.50	20.45	150	131	PK	PASS
276.68	39.4	13.25	-26.160	46.00	32.75	150	9	PK	PASS
498.34	39.5	19.03	-20.440	46.00	26.97	150	203	PK	PASS
671.40	41.0	24.80	-16.240	46.00	21.20	150	40	PK	PASS



(Antenna Vertical, 1GHz to 18GHz)

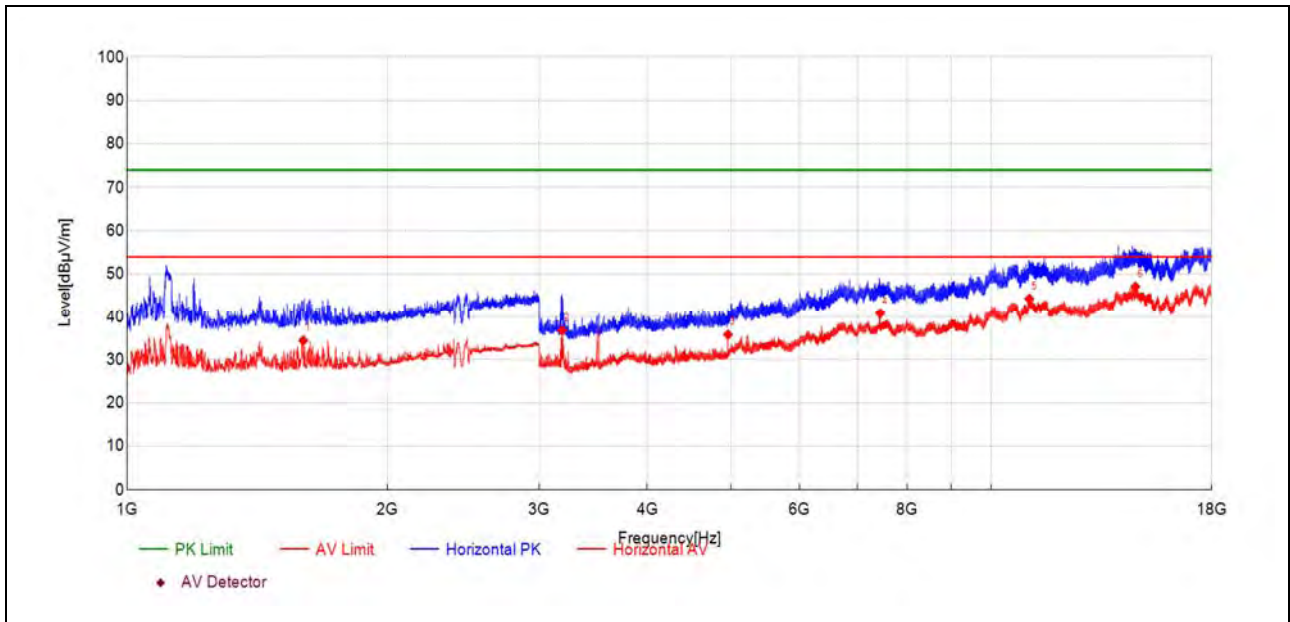
Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
1651.70	36.3	36.28	-0.060	54.00	17.72	150	150	AV	PASS
2441.21	36.5	42.31	5.840	-	-	150	225	AV	NA
4250.18	43.9	36.74	-7.180	54.00	17.26	150	216	AV	PASS
6397.38	41.9	42.94	1.020	54.00	11.06	150	351	AV	PASS
7323.55	37.3	41.61	4.300	54.00	12.39	150	324	AV	PASS
14681.91	26.7	47.23	20.550	54.00	6.77	150	191	AV	PASS

Plot for Channel 78



(Antenna Horizontal, 30MHz to 1GHz)

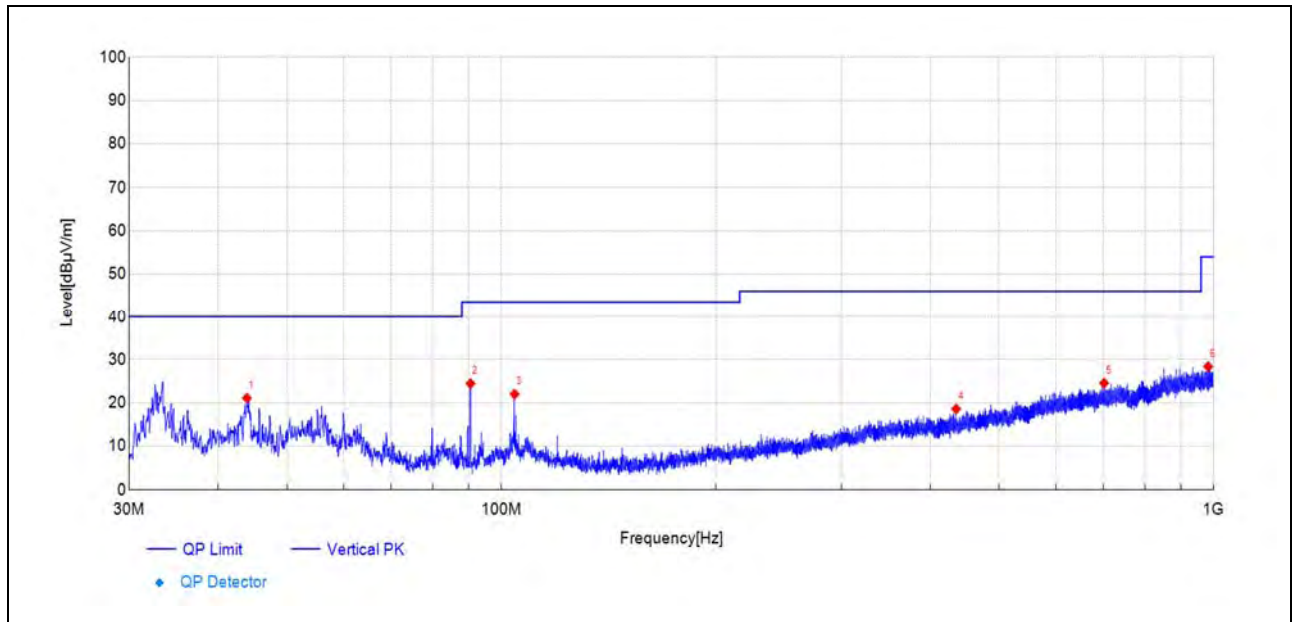
Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
43.92	45.3	17.47	-27.840	40.00	22.53	150	207	PK	PASS
90.53	54.3	22.83	-31.450	43.50	20.67	150	124	PK	PASS
104.31	55.1	25.55	-29.520	43.50	17.95	150	238	PK	PASS
127.93	52.6	20.87	-31.690	43.50	22.63	150	78	PK	PASS
352.01	40.1	16.27	-23.790	46.00	29.73	150	99	PK	PASS
834.36	39.4	25.58	-13.830	46.00	20.42	150	119	PK	PASS



(Antenna Horizontal, 1GHz to 18GHz)

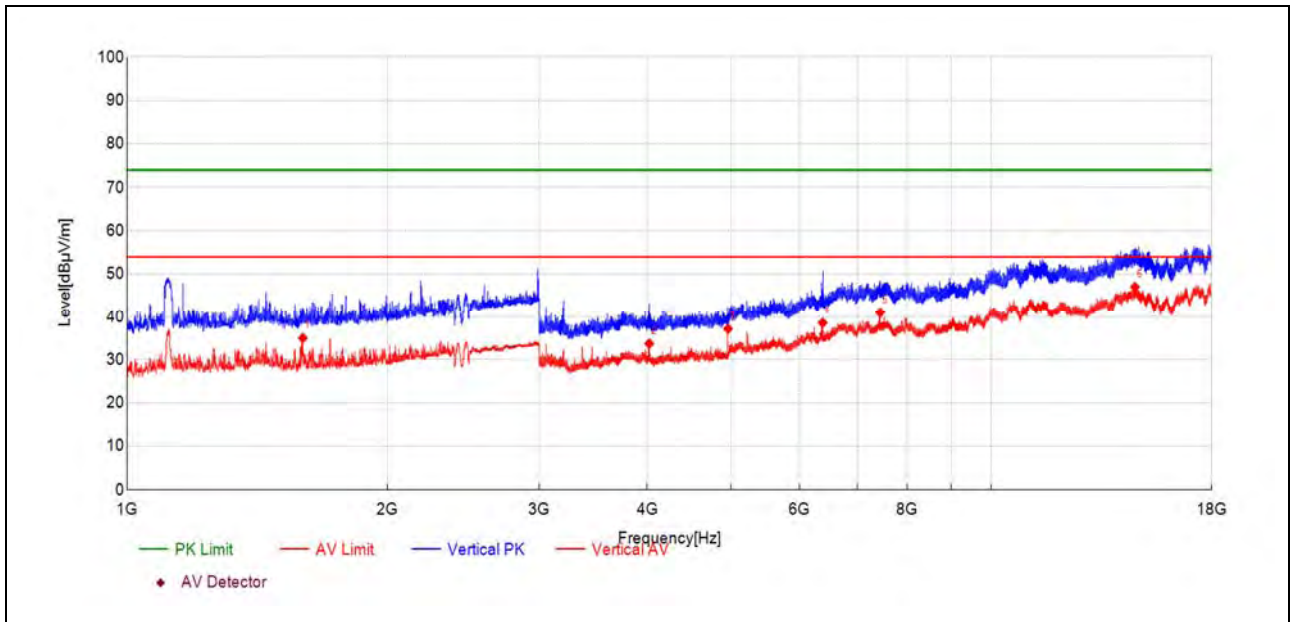
Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
1599.24	34.8	34.42	-0.390	54.00	19.58	150	9	AV	PASS
3189.01	47.5	36.78	-10.750	54.00	17.22	150	94	AV	PASS
4960.34	40.4	35.80	-4.610	54.00	18.20	150	174	AV	PASS
7440.56	36.2	40.81	4.630	54.00	13.19	150	256	AV	PASS
11071.09	30.6	44.26	13.710	54.00	9.74	150	80	AV	PASS
14688.33	26.5	47.07	20.570	54.00	6.93	150	351	AV	PASS





(Antenna Vertical, 30MHz to 1GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
43.92	48.9	21.09	-27.840	40.00	18.91	150	57	PK	PASS
90.48	55.9	24.45	-31.470	43.50	19.05	150	284	PK	PASS
104.35	51.5	22.01	-29.490	43.50	21.49	150	233	PK	PASS
434.85	40.7	18.57	-22.120	46.00	27.43	150	310	PK	PASS
701.71	40.2	24.56	-15.680	46.00	21.44	150	192	PK	PASS
982.10	39.6	28.39	-11.230	54.00	25.61	150	310	PK	PASS



(Antenna Vertical, 1GHz to 18GHz)

Fre. (MHz)	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Verdict
1597.47	35.4	34.98	-0.410	54.00	19.02	150	193	AV	PASS
4021.31	41.9	33.70	-8.210	54.00	20.30	150	117	AV	PASS
4960.77	41.8	37.17	-4.600	54.00	16.83	150	256	AV	PASS
6383.67	37.5	38.55	1.070	54.00	15.45	150	130	AV	PASS
7440.98	36.4	40.99	4.630	54.00	13.01	150	321	AV	PASS
14671.19	26.5	46.98	20.530	54.00	7.02	150	9	AV	PASS



————— END OF REPORT —————