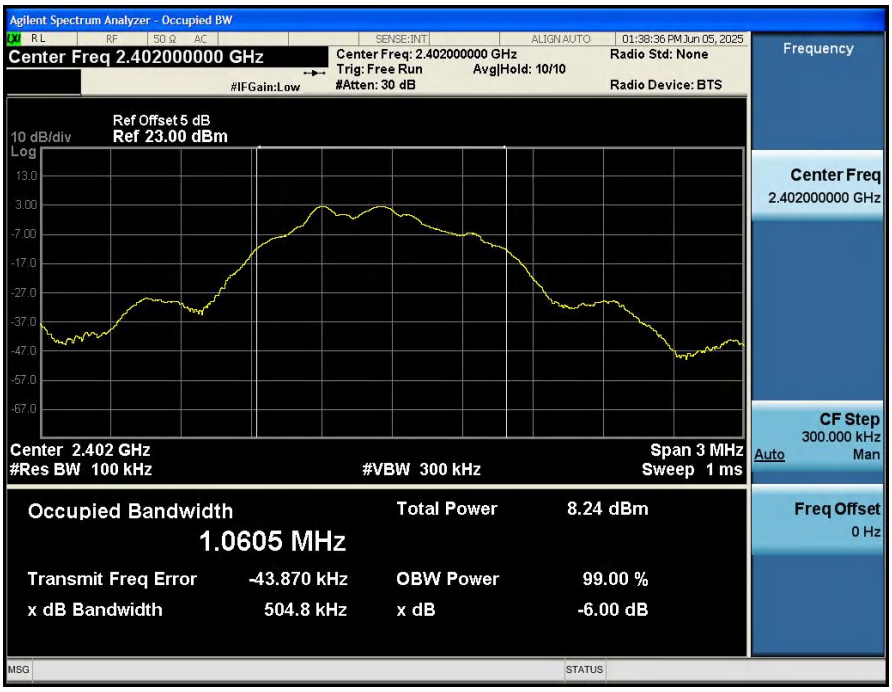
Appendix Test Data

Report No.:	1812C50239812502	Test Sample No.:	1-2-2
Start Test Date:	2025.5.30	Finish Test Date:	2025.6.5
Test Engineer:	Qiangfei Yang	Auditor:	Justin Feng
Temperature:	21.5℃	Relative Humidity:	56%
Pressure:	101kPa		

Appendix A: -6dB Bandwidth

Condition	Antenna	Rate	Frequency (MHz)	-6dB BW(kHz)	limit(kHz)	Result
NVNT	ANT1	1Mbps	2402.00	504.84	500	Pass
NVNT	ANT1	1Mbps	2440.00	507.37	500	Pass
NVNT	ANT1	1Mbps	2480.00	510.98	500	Pass
NVNT	ANT1	2Mbps	2402.00	849.48	500	Pass
NVNT	ANT1	2Mbps	2440.00	839.72	500	Pass
NVNT	ANT1	2Mbps	2480.00	849.92	500	Pass

-6dB_Bandwidth_NVNT_ANT1_1Mbps_2402



-6dB_Bandwidth_NVNT_ANT1_1Mbps_2440

-6dB_Bandwidth_NVNT_ANT1_1Mbps_2480

-6dB_Bandwidth_NVNT_ANT1_2Mbps_2402

-6dB_Bandwidth_NVNT_ANT1_2Mbps_2440

-6dB_Bandwidth_NVNT_ANT1_2Mbps_2480

Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.480000000 GHz
Center Freq: 2.480000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#Atten: 30 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
01:51:10 PM Jun 05, 2025
Frequency
Ref Offset 4.65 dB
10 dB/div
Ref 18.30 dBm
Log
Center Freq
2.480000000 GHz
CF Step
500.000 kHz
Auto
Man
Center 2.48 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 5 MHz
Sweep 1 ms
Occupied Bandwidth
2.0839 MHz
Total Power 8.95 dBm
Transmit Freq Error -33.440 kHz
OBW Power 99.00 %
x dB Bandwidth 849.9 kHz
x dB -6.00 dB
Freq Offset
0 Hz
MSG
STATUS

Appendix B: 99% Occupied Bandwidth

Condition	Antenna	Rate	Frequency (MHz)	99%BW(MHz)
NVNT	ANT1	1Mbps	2402.00	1.005
NVNT	ANT1	1Mbps	2440.00	1.003
NVNT	ANT1	1Mbps	2480.00	1.006
NVNT	ANT1	2Mbps	2402.00	2.004
NVNT	ANT1	2Mbps	2440.00	2.003
NVNT	ANT1	2Mbps	2480.00	2.013

99%_Occupied_Bandwidth_NVNT_ANT1_1Mbps_2402

99%_Occupied_Bandwidth_NVNT_ANT1_1Mbps_2440

99%_Occupied_Bandwidth_NVNT_ANT1_1Mbps_2480

99%_Occupied_Bandwidth_NVNT_ANT1_2Mbps_2402

99%_Occupied_Bandwidth_NVNT_ANT1_2Mbps_2440

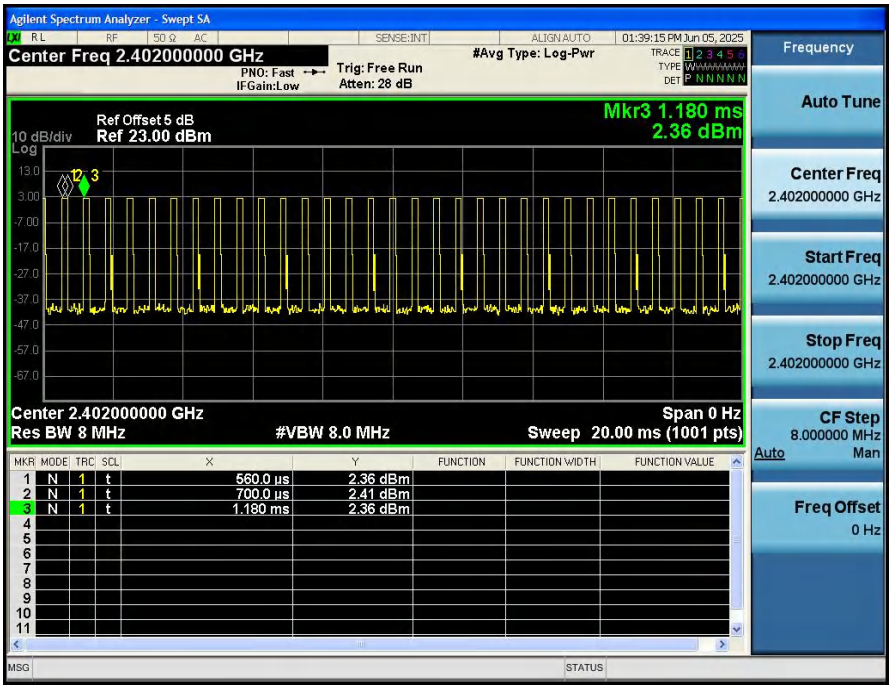
99%_Occupied_Bandwidth_NVNT_ANT1_2Mbps_2480

Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.480000000 GHz
Center Freq: 2.480000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#Atten: 30 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
01:51:31 PM Jun 05, 2025
Frequency
Ref Offset 4.65 dB
10 dB/div
Ref 18.30 dBm
Log
Center Freq
2.480000000 GHz
Center 2.48 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 5 MHz
Sweep 5.333 ms
CF Step
500.000 kHz
Auto
Man
Occupied Bandwidth
2.0130 MHz
Total Power 8.47 dBm
Transmit Freq Error -24.658 kHz
OBW Power 99.00 %
x dB Bandwidth 2.144 MHz
x dB -26.00 dB
Freq Offset
0 Hz
MSG
STATUS

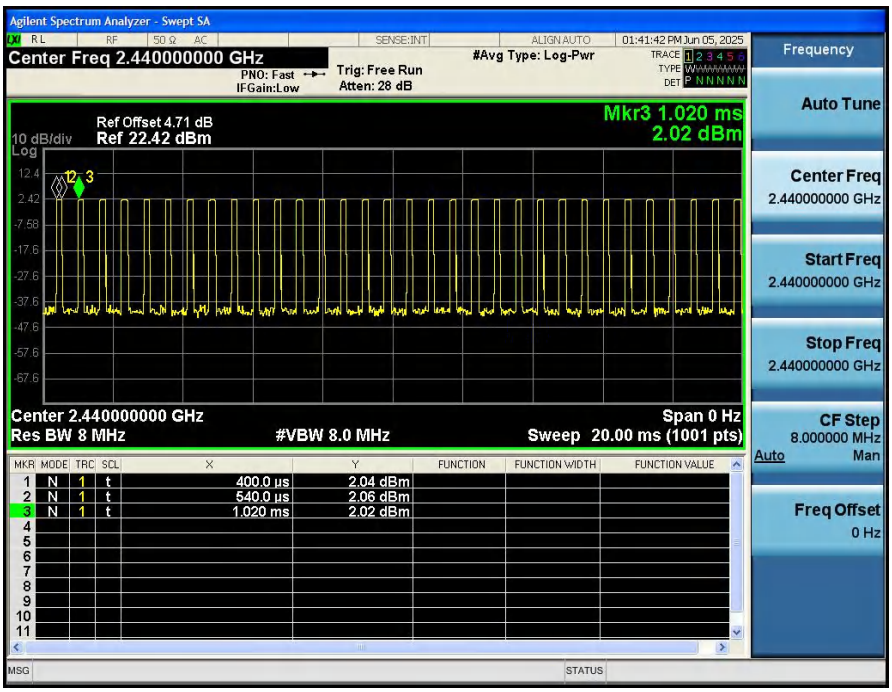
Appendix C: Duty Cycle

Condition	Antenna	Rate	Frequency (MHz)	Dutycycle(%)	Duty_factor
NVNT	ANT1	1Mbps	2402.00	25.81	5.88
NVNT	ANT1	1Mbps	2440.00	22.58	6.46
NVNT	ANT1	1Mbps	2480.00	22.58	6.46
NVNT	ANT1	2Mbps	2402.00	16.13	7.92
NVNT	ANT1	2Mbps	2440.00	18.75	7.27
NVNT	ANT1	2Mbps	2480.00	16.13	7.92

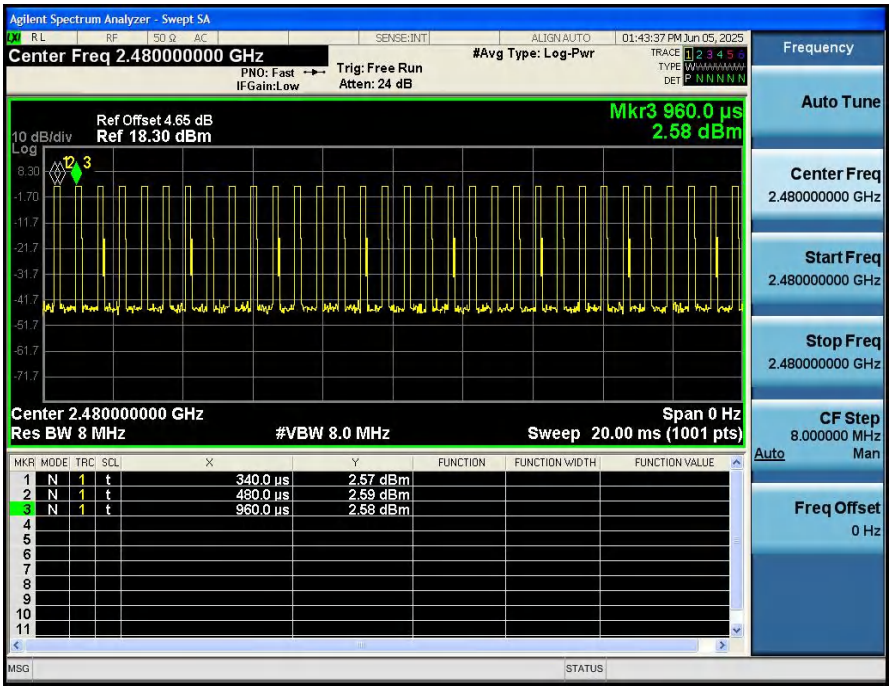
Duty_Cycle_NVNT_ANT1_1Mbps_2402



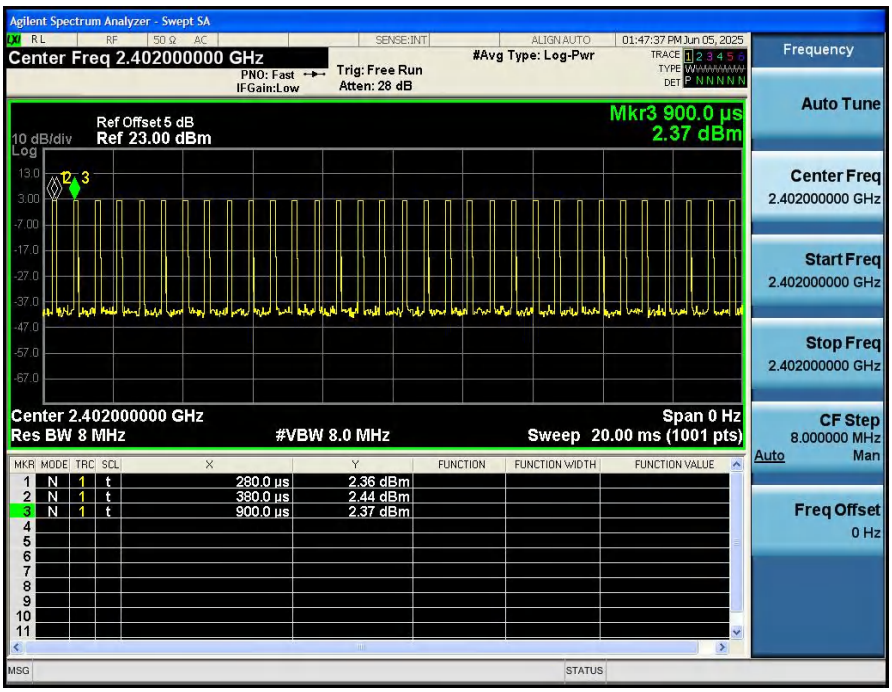
Duty_Cycle_NVNT_ANT1_1Mbps_2440



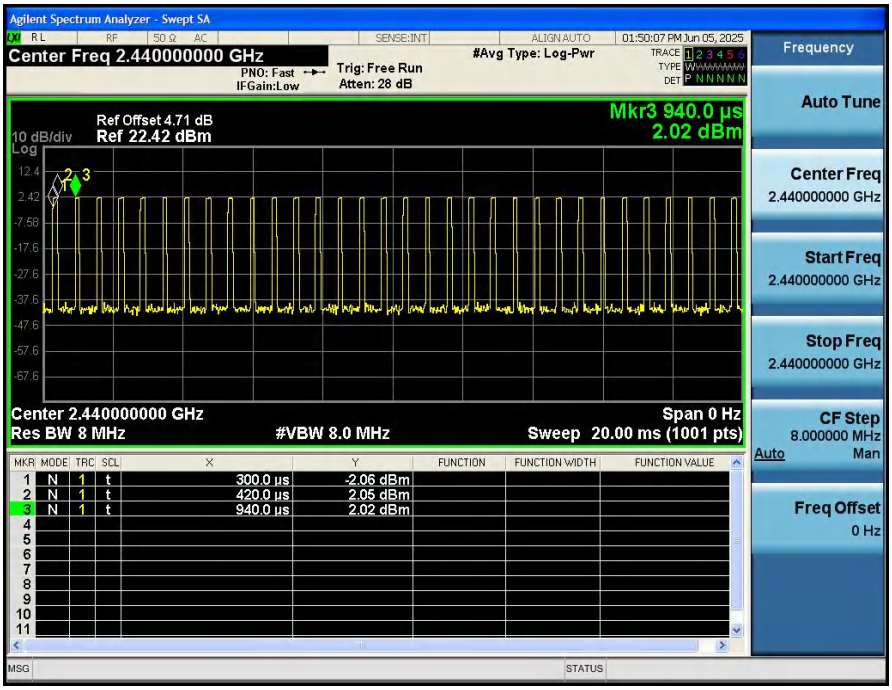
Duty_Cycle_NVNT_ANT1_1Mbps_2480



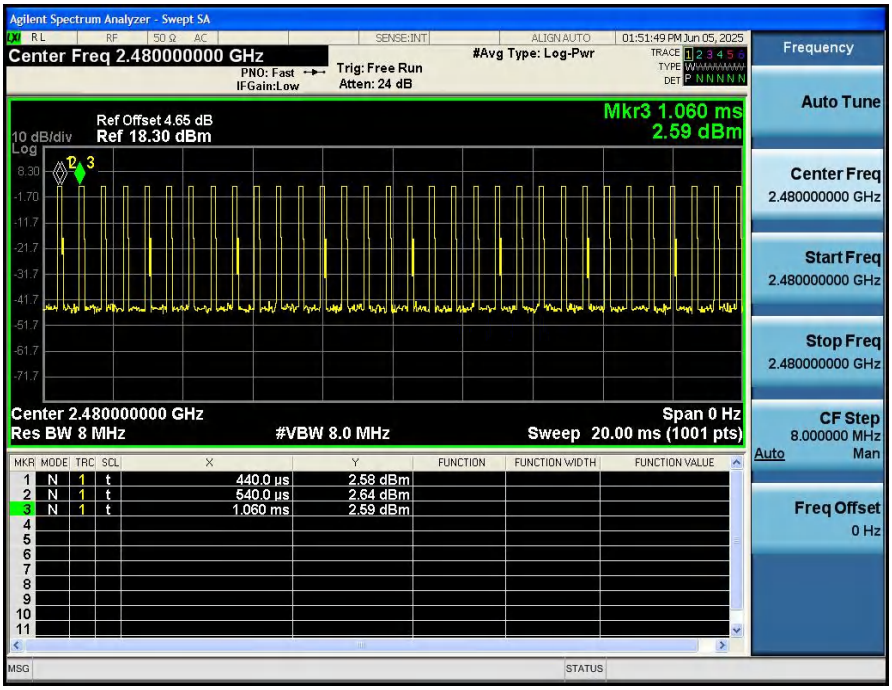
Duty_Cycle_NVNT_ANT1_2Mbps_2402



Duty_Cycle_NVNT_ANT1_2Mbps_2440



Duty_Cycle_NVNT_ANT1_2Mbps_2480


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.480000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 24 dB
#Avg Type: Log-Pwr
01:51:49 PM Jun 05, 2025
Ref Offset 4.65 dB
10 dB/div
Ref 18.30 dBm
Mkr3 1.060 ms
2.59 dBm
Center 2.480000000 GHz
Span 0 Hz
Res BW 8 MHz
#VBW 8.0 MHz
Sweep 20.00 ms (1001 pts)
1 N 1 t 440.0 µs 2.58 dBm
2 N 1 t 540.0 µs 2.64 dBm
3 N 1 t 1.060 ms 2.59 dBm
Frequency
Auto Tune
Center Freq
2.480000000 GHz
Start Freq
2.480000000 GHz
Stop Freq
2.480000000 GHz
CF Step
8.000000 MHz
Auto
Man
Freq Offset
0 Hz

Appendix D: Peak Output Power

Condition	Antenna	Rate	Frequency (MHz)	Max. Conducted Power(dBm)	Max. Conducted Power(mW)	Limit(mW)	Result
NVNT	ANT1	1Mbps	2402.00	2.42	1.75	1000	Pass
NVNT	ANT1	1Mbps	2440.00	2.10	1.62	1000	Pass
NVNT	ANT1	1Mbps	2480.00	2.61	1.82	1000	Pass
NVNT	ANT1	2Mbps	2402.00	2.49	1.77	1000	Pass
NVNT	ANT1	2Mbps	2440.00	2.12	1.63	1000	Pass
NVNT	ANT1	2Mbps	2480.00	2.63	1.83	1000	Pass

Peak_Output_Power_NVNT_ANT1_1Mbps_2402

Peak_Output_Power_NVNT_ANT1_1Mbps_2440

Peak_Output_Power_NVNT_ANT1_1Mbps_2480

Peak_Output_Power_NVNT_ANT1_2Mbps_2402

Peak_Output_Power_NVNT_ANT1_2Mbps_2440

Peak_Output_Power_NVNT_ANT1_2Mbps_2480

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.480000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 24 dB
#Avg Type: Log-Pwr
Avg|Hold: 10/10
01:52:10 PM Jun 05, 2025
Ref Offset 4.65 dB
10 dB/div
Ref 18.30 dBm
Log
Mkr1 2.479 430 GHz
2.627 dBm
Center 2.480000 GHz
#Res BW 2.0 MHz
#VBW 6.0 MHz
Span 6.000 MHz
Sweep 1.000 ms (1001 pts)
Frequency
Auto Tune
Center Freq
2.480000000 GHz
Start Freq
2.477000000 GHz
Stop Freq
2.483000000 GHz
CF Step
600.000 kHz
Auto
Man
Freq Offset
0 Hz

Appendix E: Power Spectral Density

Condition	Antenna	Rate	Frequency (MHz)	Power Spectral Density(dBm/3kHz)	Limit(dBm/3kHz)	Result
NVNT	ANT1	1Mbps	2402.00	-7.54	8	Pass
NVNT	ANT1	1Mbps	2440.00	-8.32	8	Pass
NVNT	ANT1	1Mbps	2480.00	-7.15	8	Pass
NVNT	ANT1	2Mbps	2402.00	-7.90	8	Pass
NVNT	ANT1	2Mbps	2440.00	-8.73	8	Pass
NVNT	ANT1	2Mbps	2480.00	-7.65	8	Pass

Power_Spectral_Density_NVNT_ANT1_1Mbps_2402

Power_Spectral_Density_NVNT_ANT1_1Mbps_2440

Power_Spectral_Density_NVNT_ANT1_1Mbps_2480

Power_Spectral_Density_NVNT_ANT1_2Mbps_2402

Power_Spectral_Density_NVNT_ANT1_2Mbps_2440

Power_Spectral_Density_NVNT_ANT1_2Mbps_2480

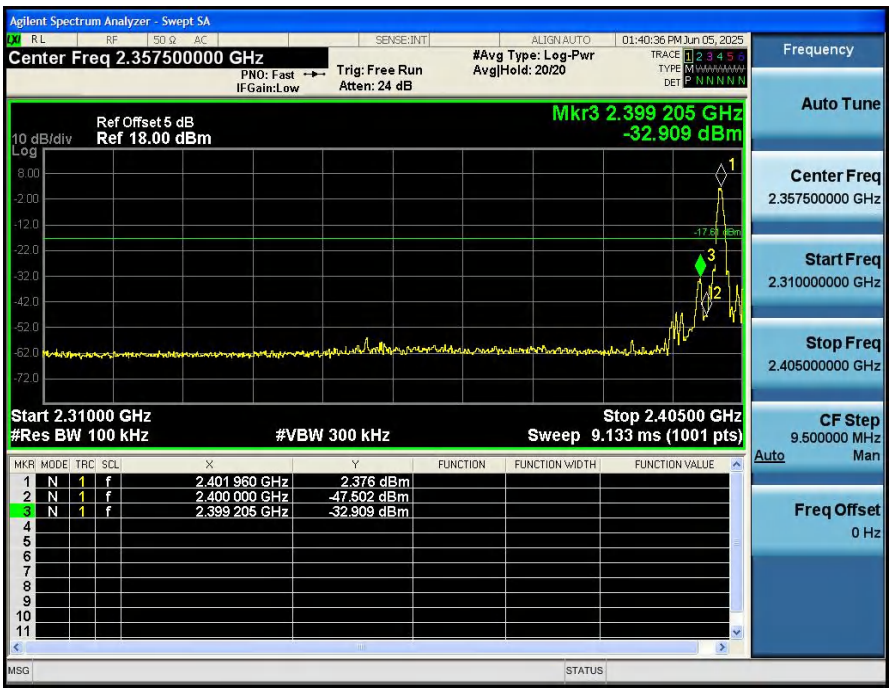
Agilent Spectrum Analyzer - Swept SA
Center Freq 2.480000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
Atten: 14 dB
#Avg Type: Log-Pwr
Avg|Hold: 10/10
01:52:27 PM Jun 05, 2025
Ref Offset 4.65 dB
10 dB/div
Ref 8.30 dBm
Log
Mkr1 2.479 952 GHz
-7.650 dBm
Center 2.480000 GHz
#Res BW 3.0 kHz
#VBW 10 kHz
Span 3.020 MHz
Sweep 318.4 ms (1001 pts)
Frequency
Auto Tune
Center Freq
2.480000000 GHz
Start Freq
2.478490250 GHz
Stop Freq
2.481509750 GHz
CF Step
301.950 kHz
Auto
Man
Freq Offset
0 Hz

Appendix F: Bandedge

Condition	Antenna	Modulation	TX_Frequency (MHz)	Max. Mark_freq(MHz)	Ref_level (dBm)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	1Mbps	2402.00	2399.205	2.391	-32.909	-17.609	Pass
NVNT	ANT1	1Mbps	2480.00	2484.700	2.582	-38.041	-17.418	Pass
NVNT	ANT1	2Mbps	2402.00	2399.965	2.323	-32.004	-17.677	Pass
NVNT	ANT1	2Mbps	2480.00	2485.950	2.587	-38.928	-17.413	Pass

1_Reference_Level_NVNT_ANT1_1Mbps_2402

2_Bandedge_NVNT_ANT1_1Mbps_2402

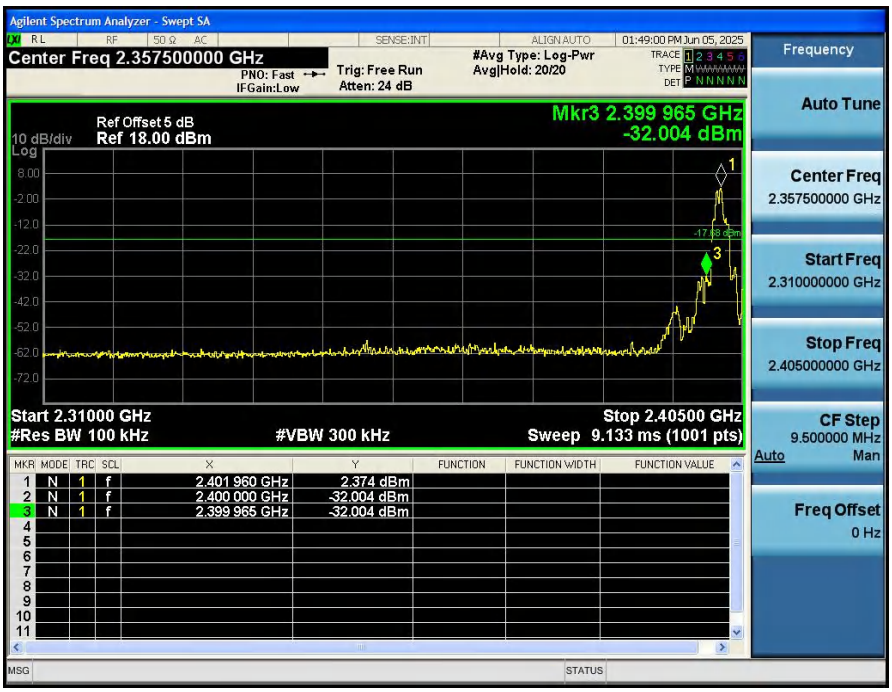


1_Reference_Level_NVNT_ANT1_1Mbps_2480

2_Bandedge_NVNT_ANT1_1Mbps_2480

1_Reference_Level_NVNT_ANT1_2Mbps_2402

2_Bandedge_NVNT_ANT1_2Mbps_2402



1_Reference_Level_NVNT_ANT1_2Mbps_2480

2_Bandedge_NVNT_ANT1_2Mbps_2480

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.487500000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 20 dB
#Avg Type: Log-Pwr
Avg|Hold: 20/20
01:53:12 PM Jun 05, 2025
Ref Offset 4.65 dB
10 dB/div
Ref 13.65 dBm
Log
Mkr3 2.485 950 GHz
-38.928 dBm
-17.41 dBm
Start 2.47500 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.50000 GHz
Sweep 2.400 ms (1001 pts)
1 N 1 f 2.479 950 GHz 2.713 dBm
2 N 1 f 2.483 500 GHz -38.641 dBm
3 N 1 f 2.485 950 GHz -38.928 dBm
Frequency
Auto Tune
Center Freq
2.487500000 GHz
Start Freq
2.475000000 GHz
Stop Freq
2.500000000 GHz
CF Step
2.500000 MHz
Auto
Man
Freq Offset
0 Hz

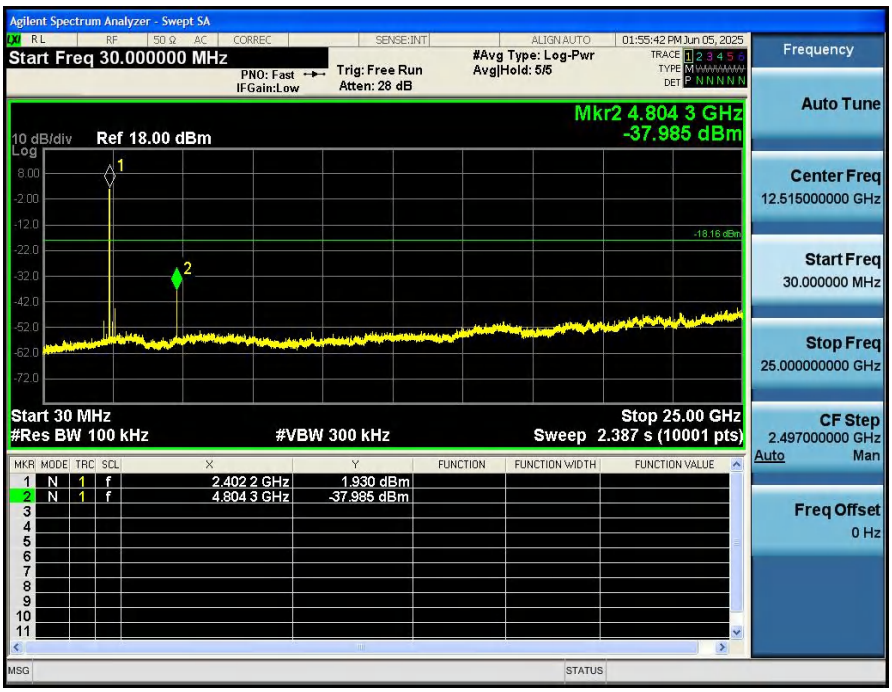
Appendix G: Spurious Emission

Condition	Antenna	Modulation	TX_Frequency (MHz)	Ref_level(dBm)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	1Mbps	2402.00	1.845	-37.985	-18.155	Pass
NVNT	ANT1	1Mbps	2440.00	1.572	-40.717	-18.428	Pass
NVNT	ANT1	1Mbps	2480.00	2.422	-38.438	-17.578	Pass
NVNT	ANT1	2Mbps	2402.00	2.244	-38.482	-17.756	Pass
NVNT	ANT1	2Mbps	2440.00	1.757	-39.478	-18.243	Pass
NVNT	ANT1	2Mbps	2480.00	2.470	-45.405	-17.530	Pass

Note:Regarding the spurious emissions from 30MHz to 26.5GHz, the cable lose and attenuator factors have been set in the 'Input Correction' of the Spectrum Analyzer during the test.

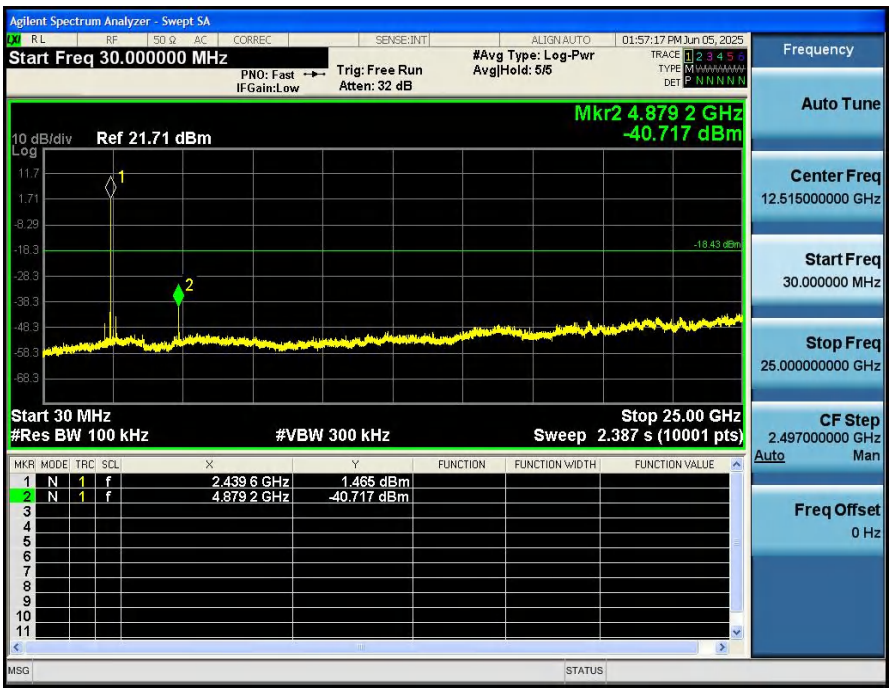
1_Reference_Level_NVNT_ANT1_1Mbps_2402

2_Spurious_Emission_NVNT_ANT1_1Mbps_2402

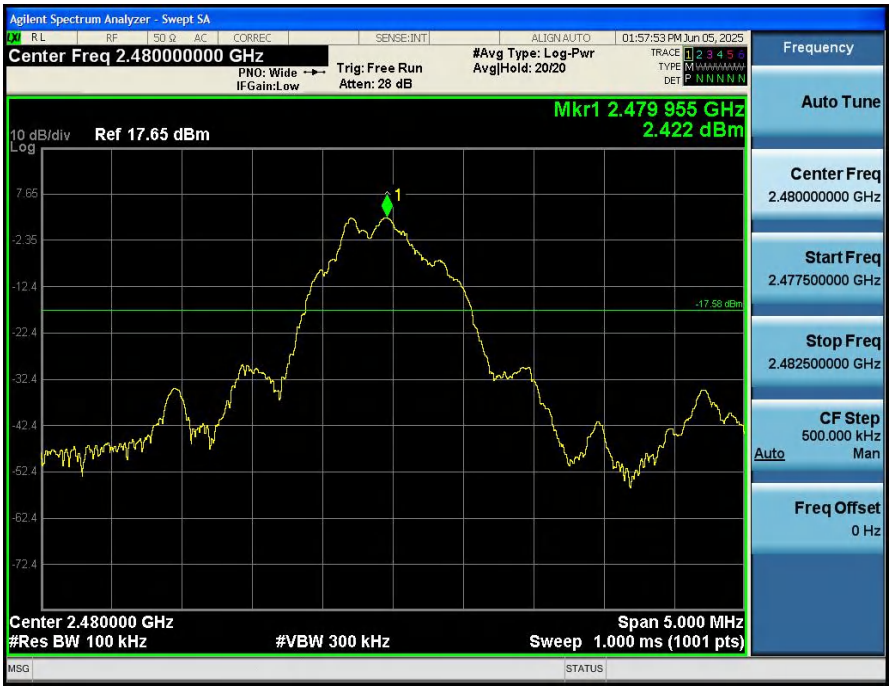


1_Reference_Level_NVNT_ANT1_1Mbps_2440

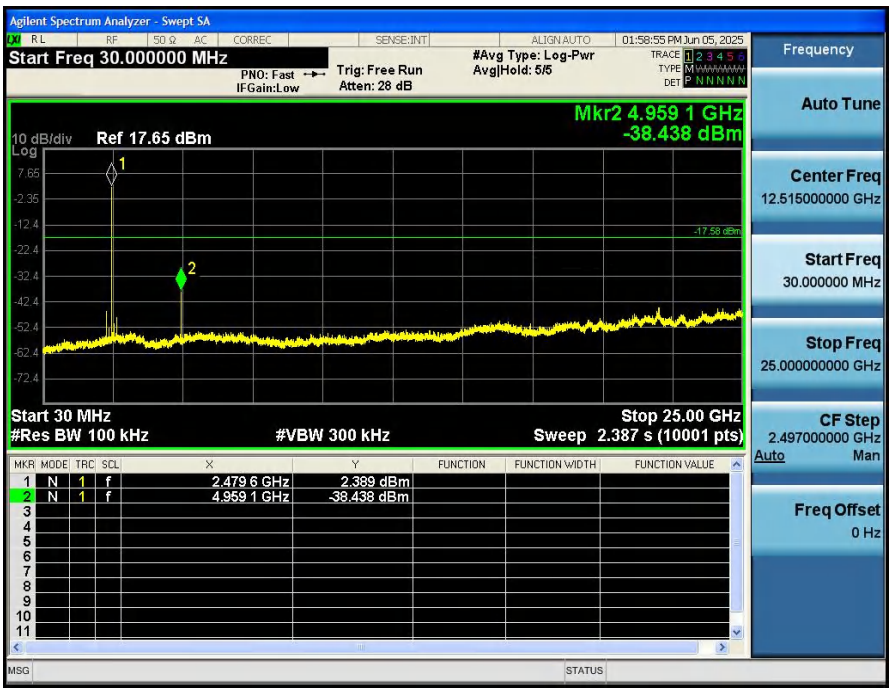
2_Spurious_Emission_NVNT_ANT1_1Mbps_2440



1_Reference_Level_NVNT_ANT1_1Mbps_2480

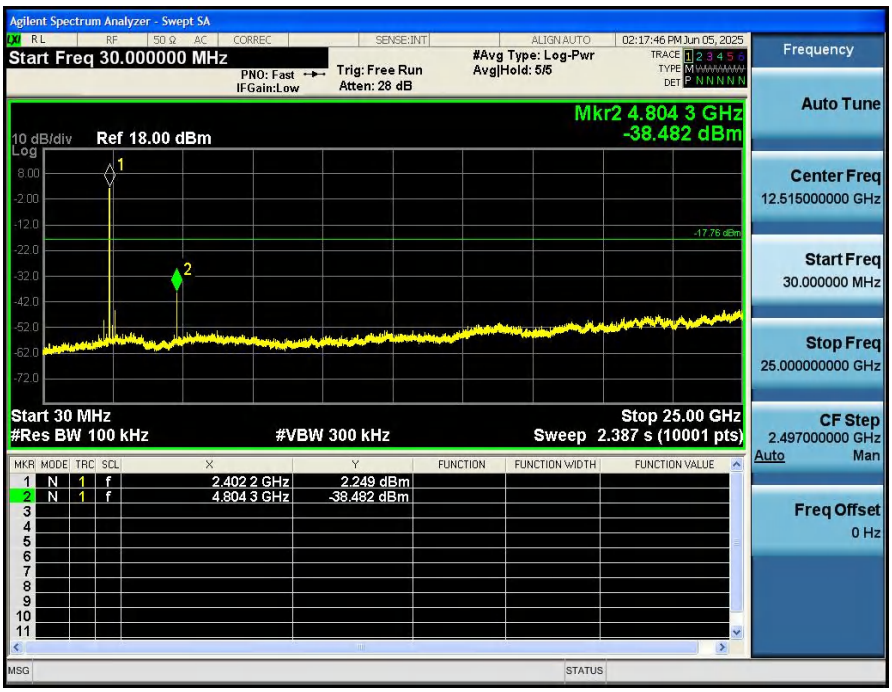


2_Spurious_Emission_NVNT_ANT1_1Mbps_2480



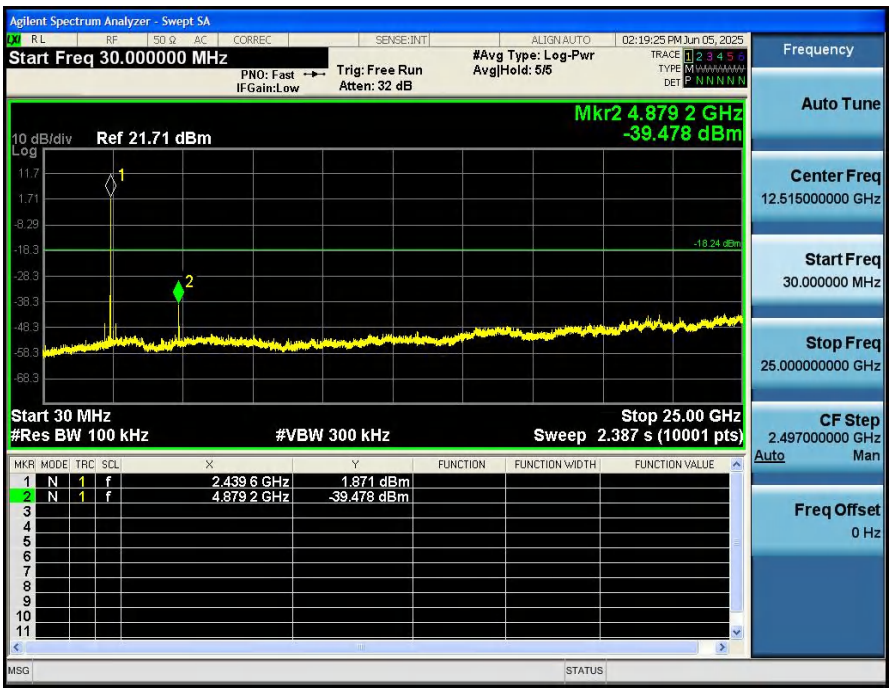
1_Reference_Level_NVNT_ANT1_2Mbps_2402

2_Spurious_Emission_NVNT_ANT1_2Mbps_2402



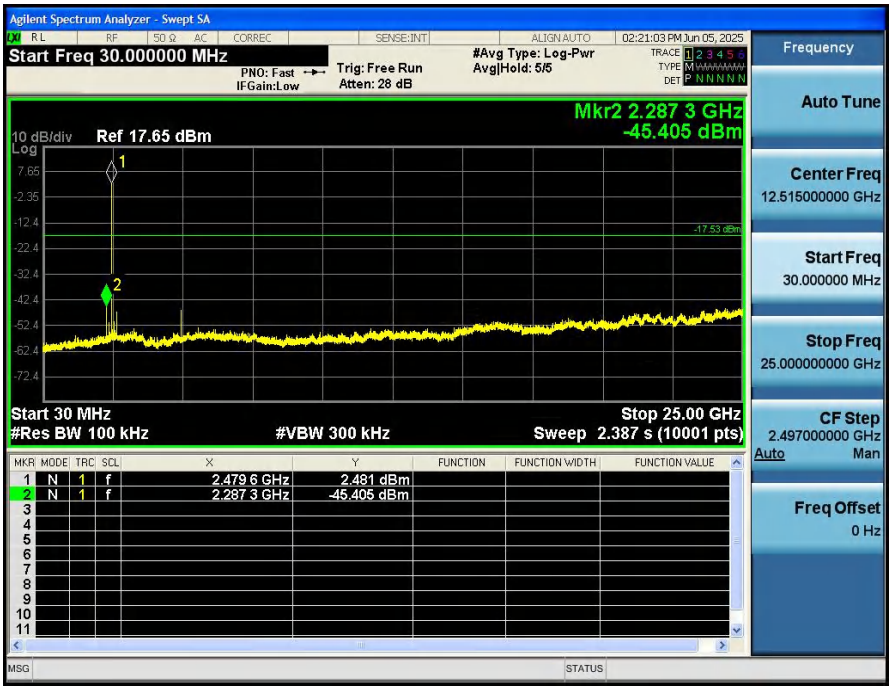
1_Reference_Level_NVNT_ANT1_2Mbps_2440

2_Spurious_Emission_NVNT_ANT1_2Mbps_2440



1_Reference_Level_NVNT_ANT1_2Mbps_2480

2_Spurious_Emission_NVNT_ANT1_2Mbps_2480


Agilent Spectrum Analyzer - Swept SA
Start Freq 30.000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 28 dB
#Avg Type: Log-Pwr
Avg|Hold: 5/5
02:21:03 PM Jun 05, 2025
Mkr2 2.287 3 GHz
-45.405 dBm
10 dB/div
Ref 17.65 dBm
Log
-17.53 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.387 s (10001 pts)
1 N 1 f 2.479 6 GHz 2.481 dBm
2 N 1 f 2.287 3 GHz -45.405 dBm
Frequency
Auto Tune
Center Freq
12.515000000 GHz
Start Freq
30.000000 MHz
Stop Freq
25.000000000 GHz
CF Step
2.497000000 GHz
Auto
Man
Freq Offset
0 Hz

---END---