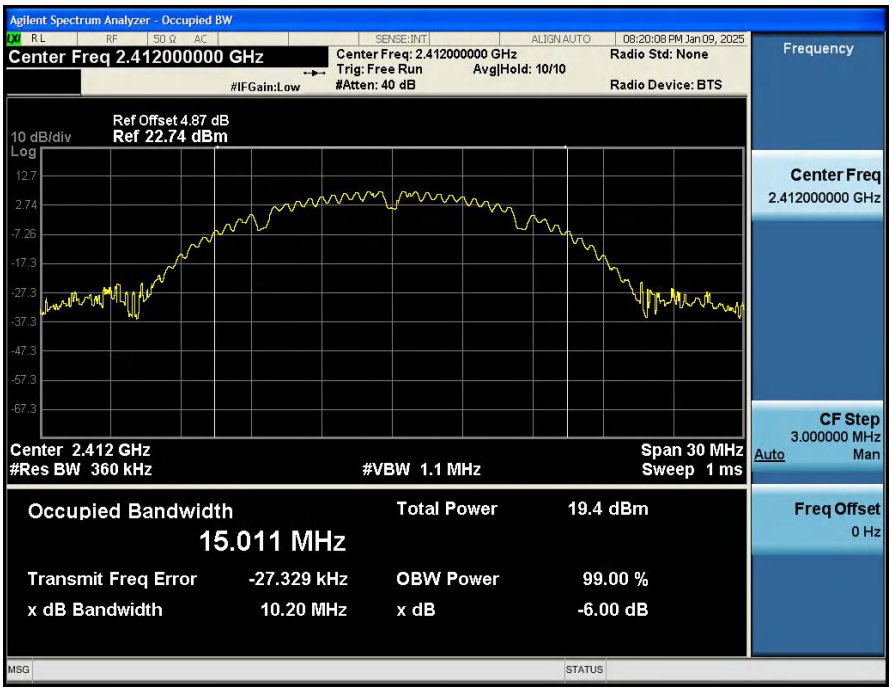
Appendix Test Data

Report No.:	1813C40236112503	Test Sample No.:	1-2-2
Start Test Date:	2024.12.16	Finish Test Date:	2025.1.9
Test Engineer:	Jokes Wang	Auditor:	Justin Feng
Temperature:	24.8℃	Relative Humidity:	50%
Pressure:	101kPa		

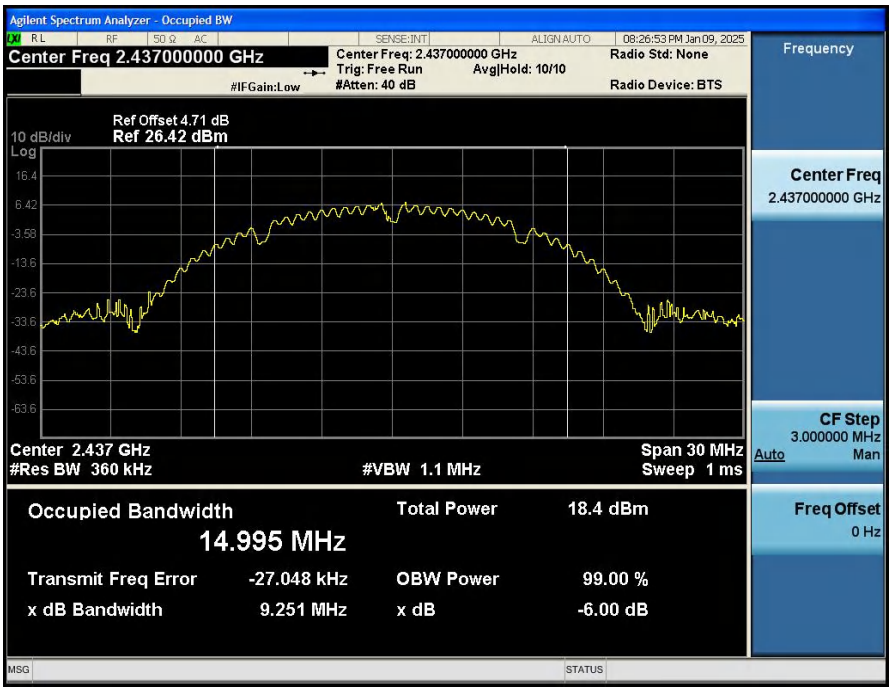
Appendix A: -6dB Bandwidth

Condition	Antenna	Modulation	Frequency (MHz)	-6dB BW(MHz)	limit(kHz)	Result
NVNT	ANT1	802.11b	2412.00	10.20	500	Pass
NVNT	ANT1	802.11b	2437.00	9.25	500	Pass
NVNT	ANT1	802.11b	2462.00	10.20	500	Pass
NVNT	ANT1	802.11g	2412.00	16.60	500	Pass
NVNT	ANT1	802.11g	2437.00	16.60	500	Pass
NVNT	ANT1	802.11g	2462.00	16.62	500	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	17.78	500	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	17.80	500	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	17.89	500	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	36.26	500	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	36.19	500	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	36.32	500	Pass

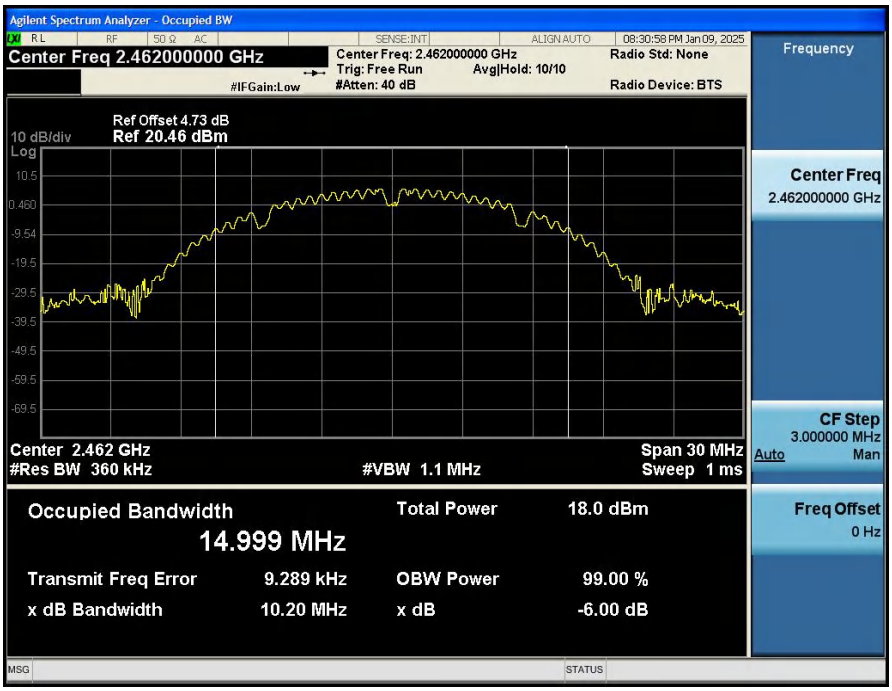
-6dB_Bandwidth_NVNT_ANT1_802_11b_2412



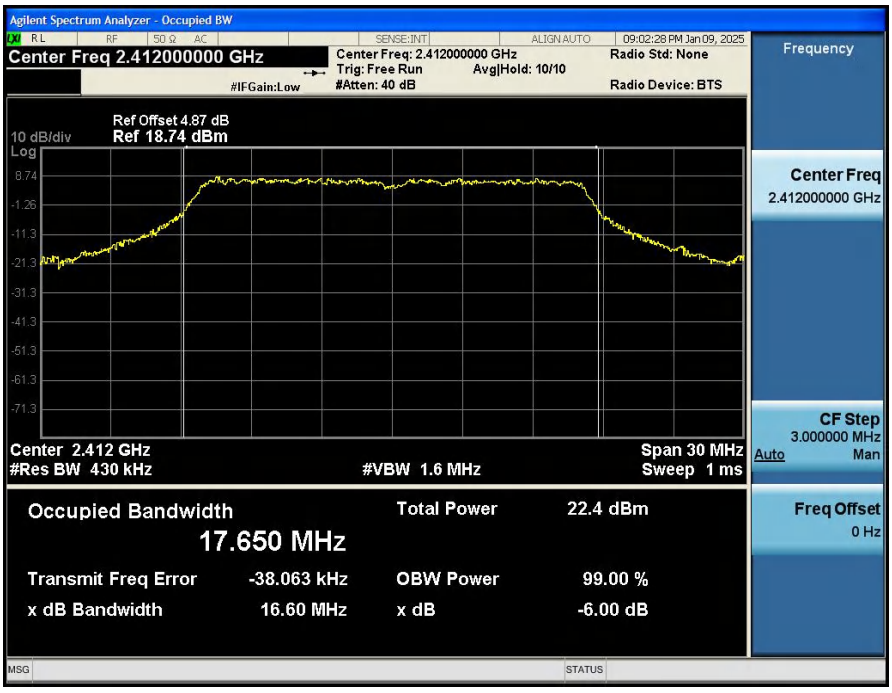
-6dB_Bandwidth_NVNT_ANT1_802_11b_2437



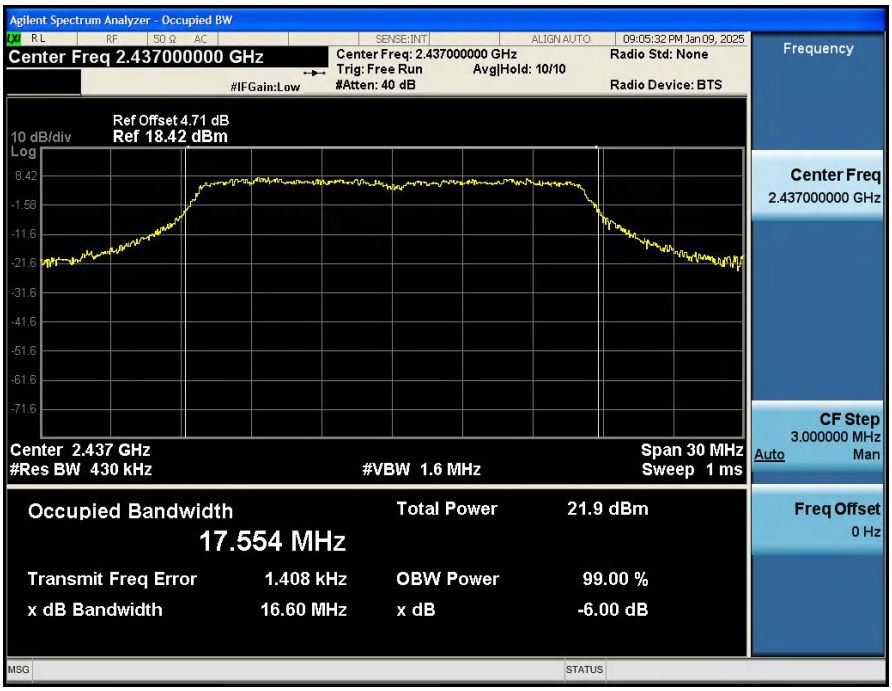
-6dB_Bandwidth_NVNT_ANT1_802_11b_2462



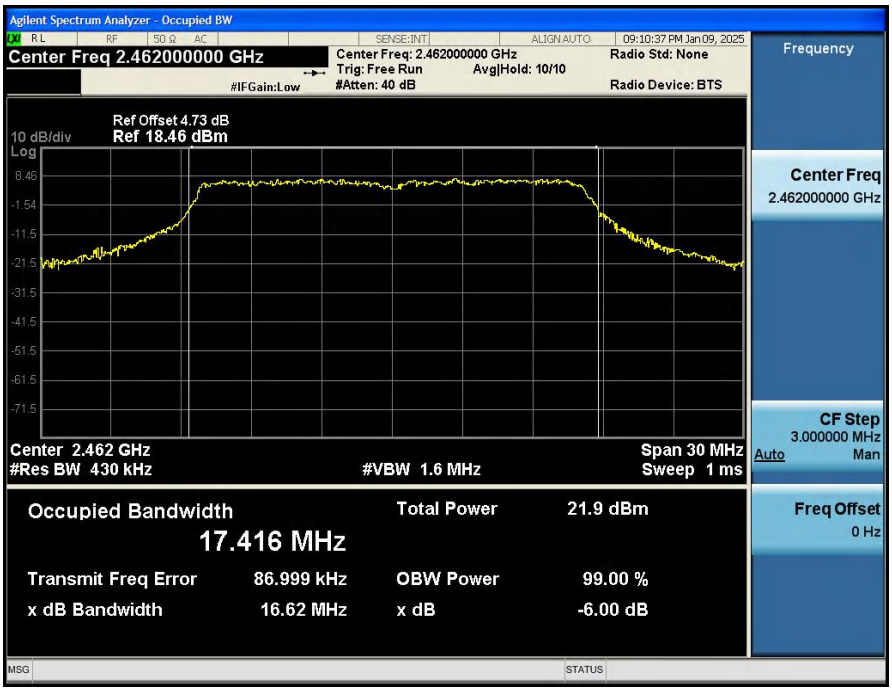
-6dB_Bandwidth_NVNT_ANT1_802_11g_2412



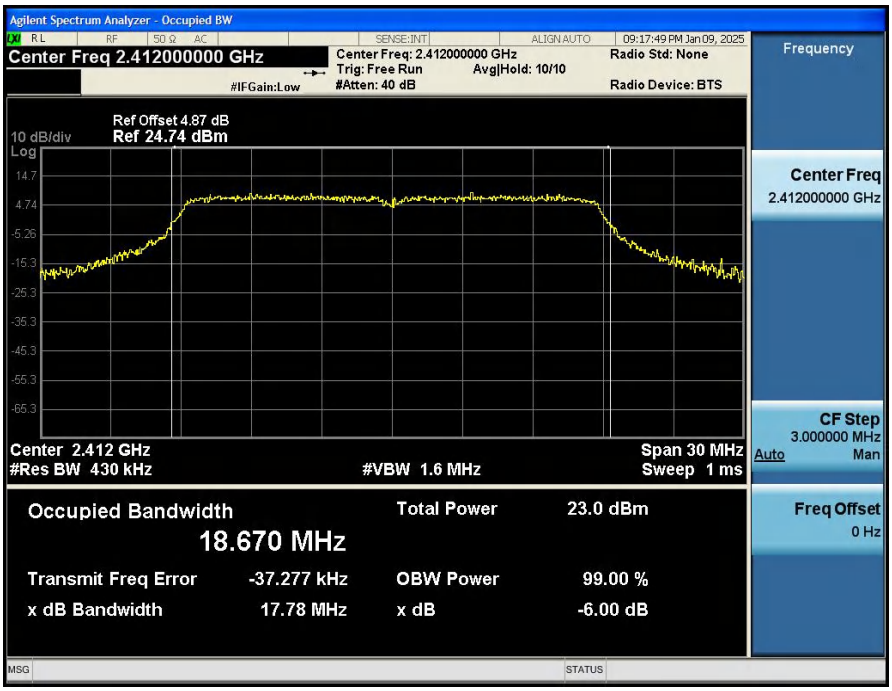
-6dB_Bandwidth_NVNT_ANT1_802_11g_2437



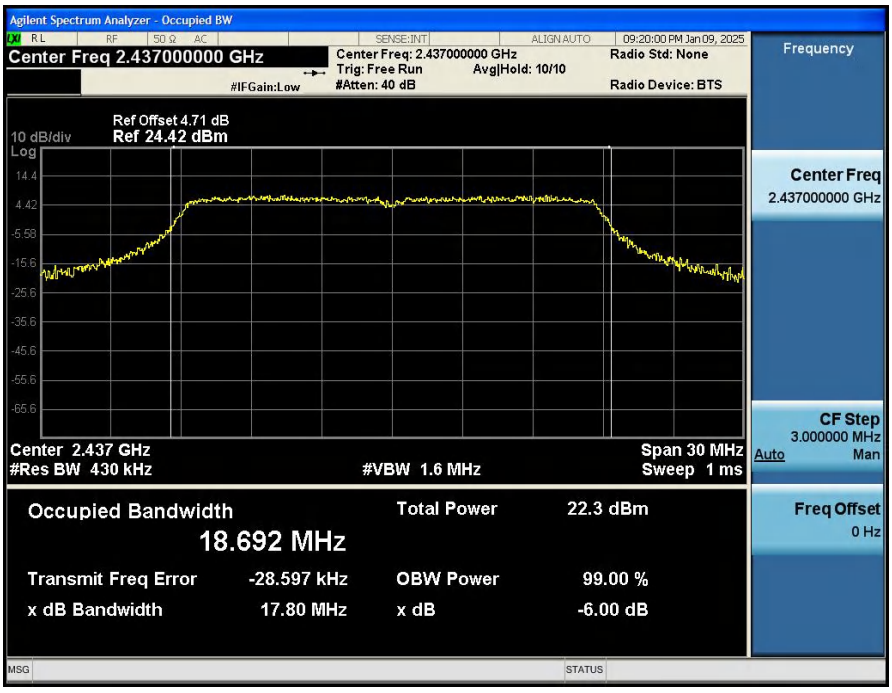
-6dB_Bandwidth_NVNT_ANT1_802_11g_2462



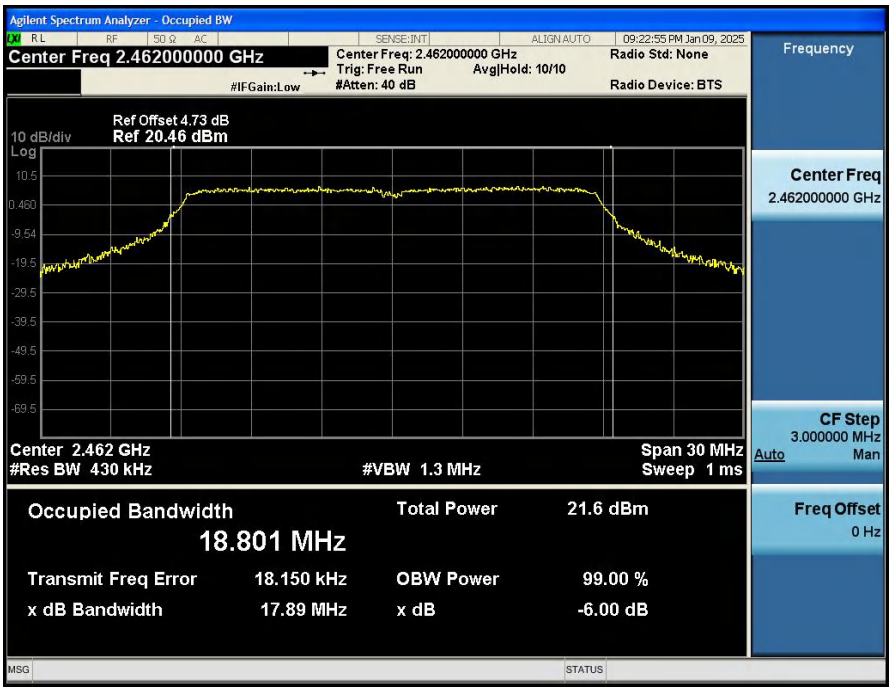
-6dB_Bandwidth_NVNT_ANT1_802_11n(HT20)_2412



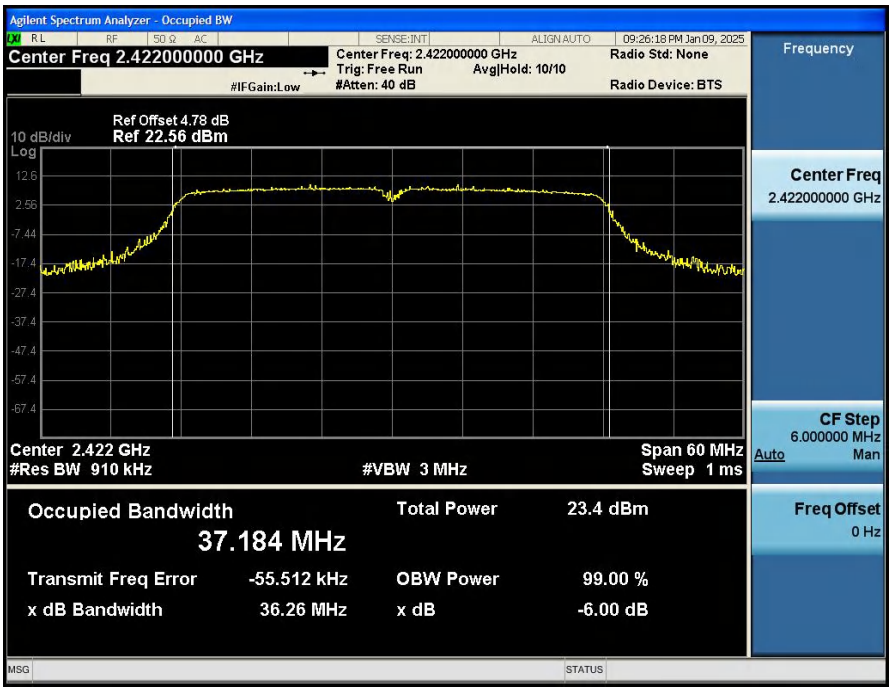
-6dB_Bandwidth_NVNT_ANT1_802_11n(HT20)_2437



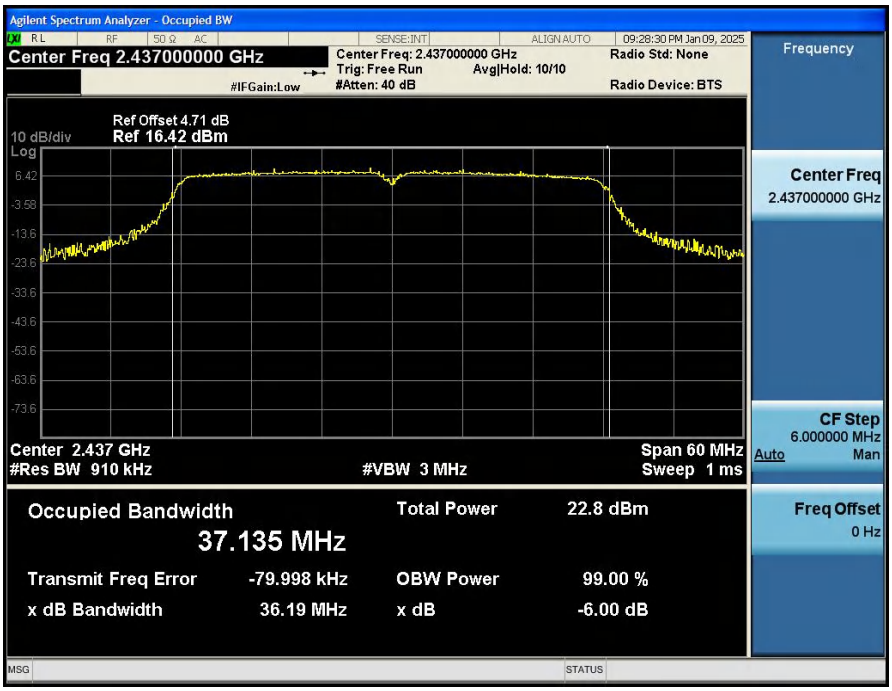
-6dB_Bandwidth_NVNT_ANT1_802_11n(HT20)_2462



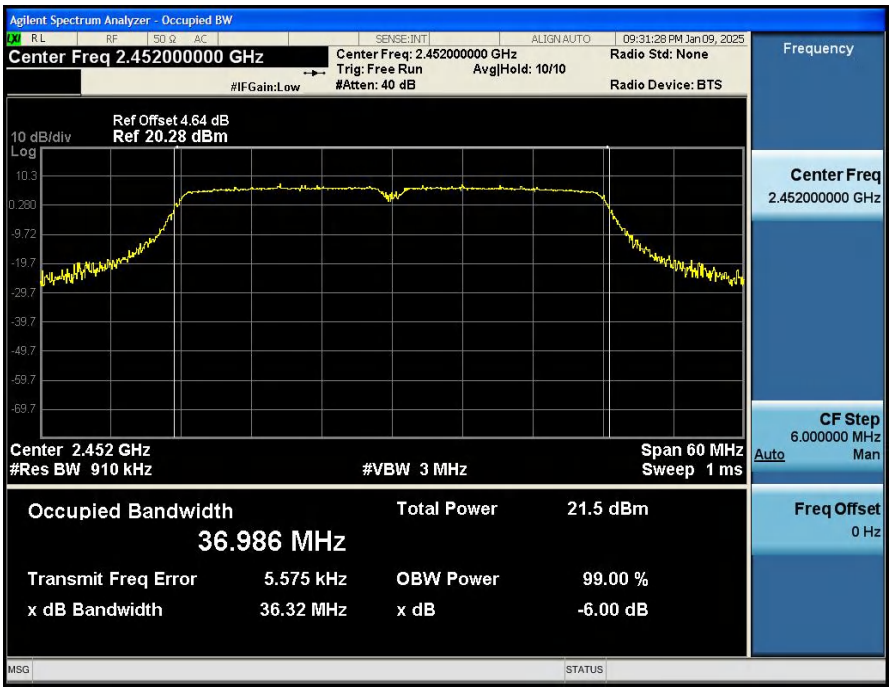
-6dB_Bandwidth_NVNT_ANT1_802_11n(HT40)_2422



-6dB_Bandwidth_NVNT_ANT1_802_11n(HT40)_2437



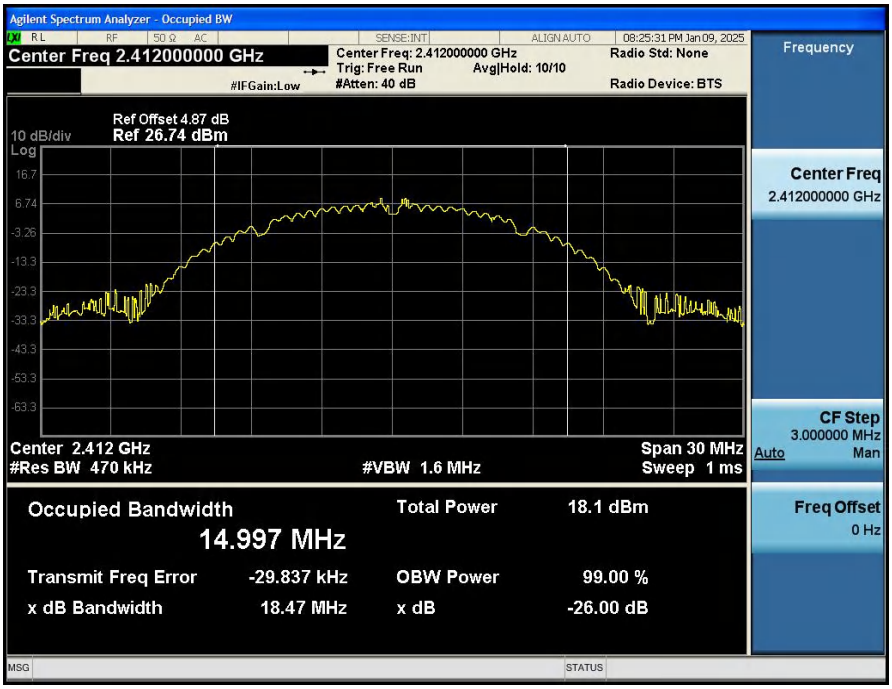
-6dB_Bandwidth_NVNT_ANT1_802_11n(HT40)_2452



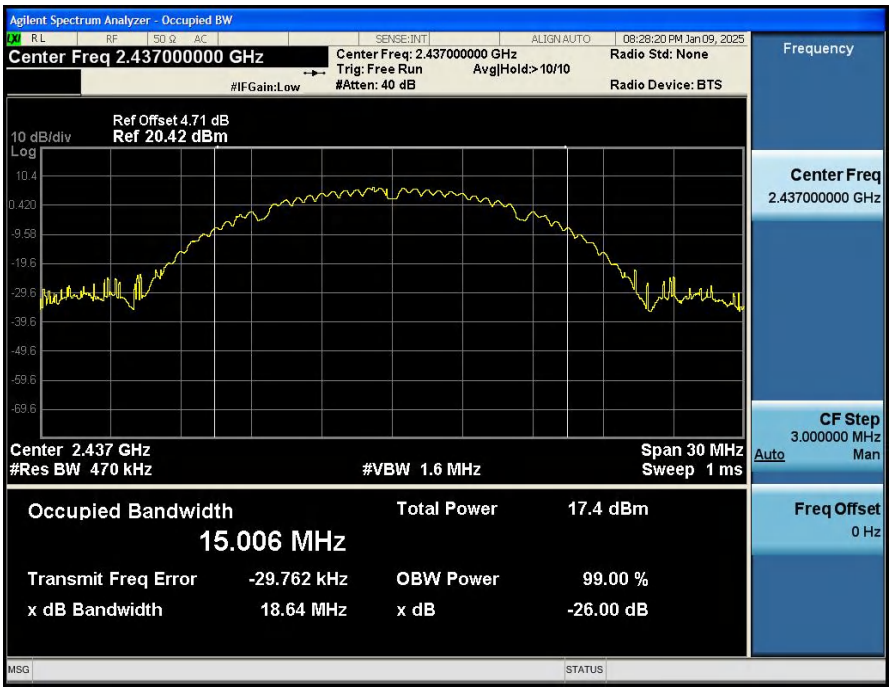
Appendix B: 99% Occupied Bandwidth

Condition	Antenna	Modulation	Frequency (MHz)	99%BW(MHz)
NVNT	ANT1	802.11b	2412.00	14.997
NVNT	ANT1	802.11b	2437.00	15.006
NVNT	ANT1	802.11b	2462.00	15.006
NVNT	ANT1	802.11g	2412.00	18.059
NVNT	ANT1	802.11g	2437.00	17.988
NVNT	ANT1	802.11g	2462.00	17.682
NVNT	ANT1	802.11n(HT20)	2412.00	19.293
NVNT	ANT1	802.11n(HT20)	2437.00	19.191
NVNT	ANT1	802.11n(HT20)	2462.00	19.133
NVNT	ANT1	802.11n(HT40)	2422.00	37.265
NVNT	ANT1	802.11n(HT40)	2437.00	37.240
NVNT	ANT1	802.11n(HT40)	2452.00	37.165

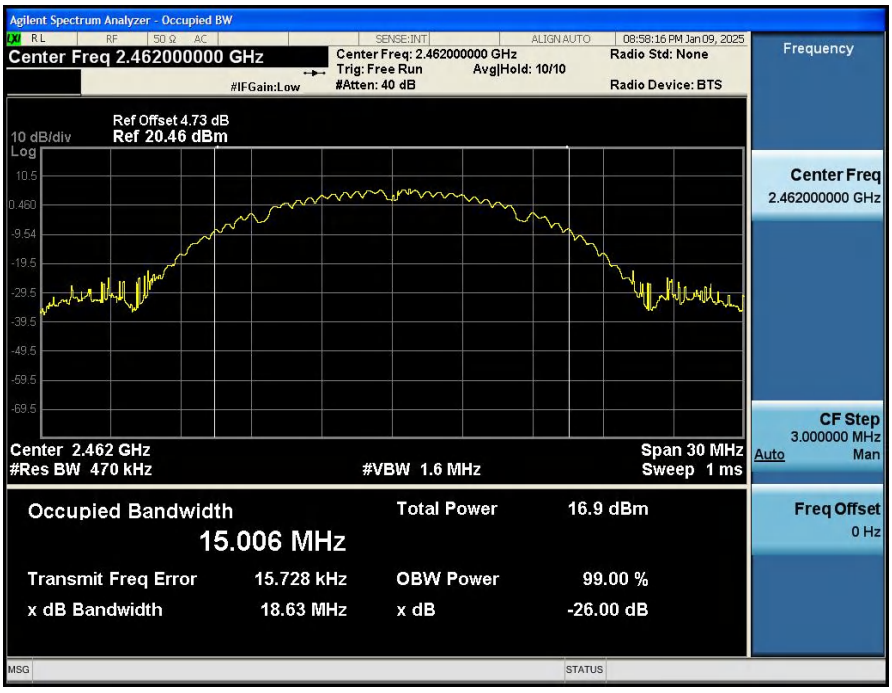
99%_Occupied_Bandwidth_NVNT_ANT1_802_11b_2412



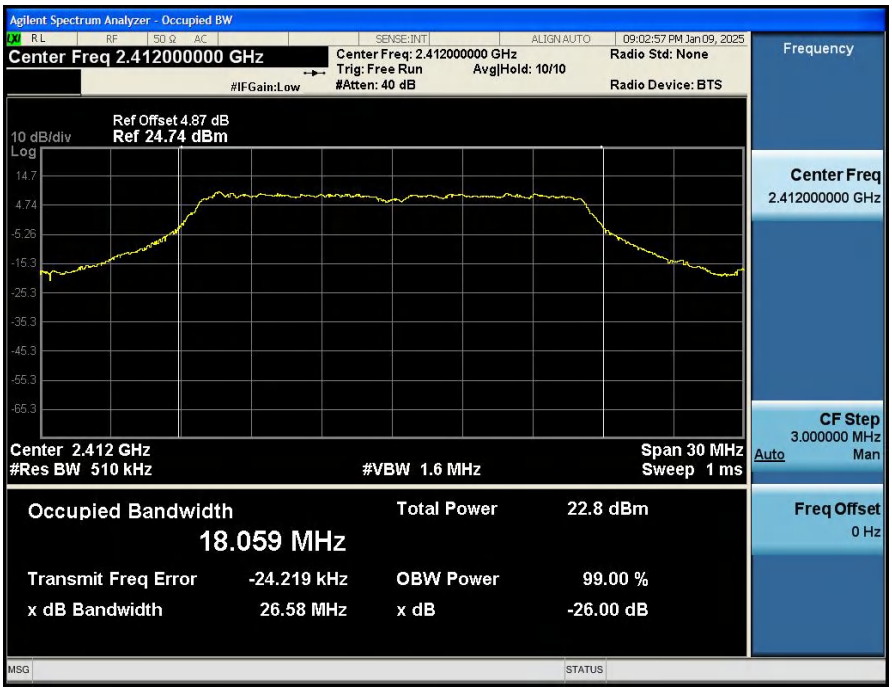
99%_Occupied_Bandwidth_NVNT_ANT1_802_11b_2437



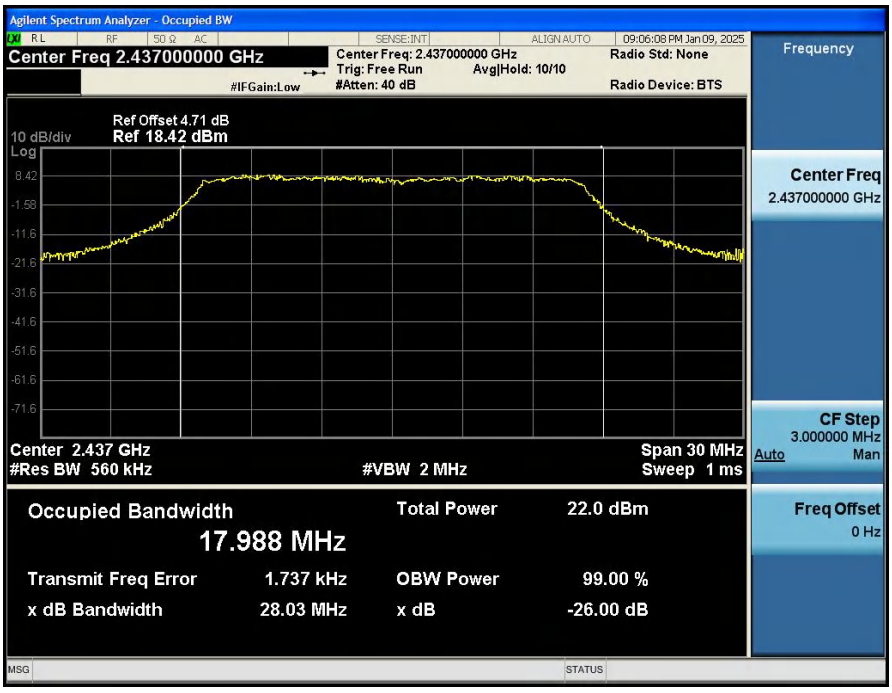
99%_Occupied_Bandwidth_NVNT_ANT1_802_11b_2462



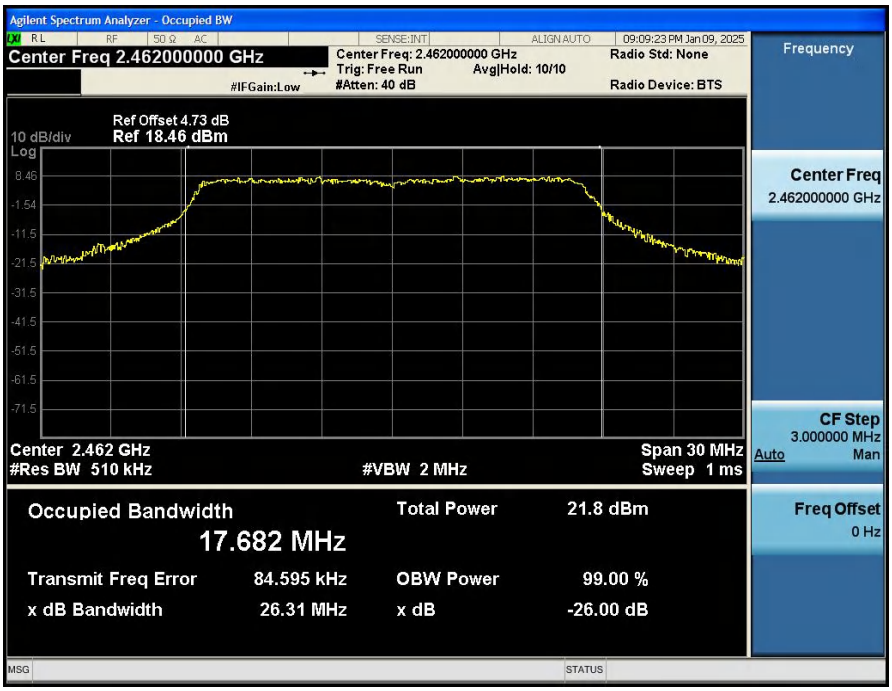
99%_Occupied_Bandwidth_NVNT_ANT1_802_11g_2412



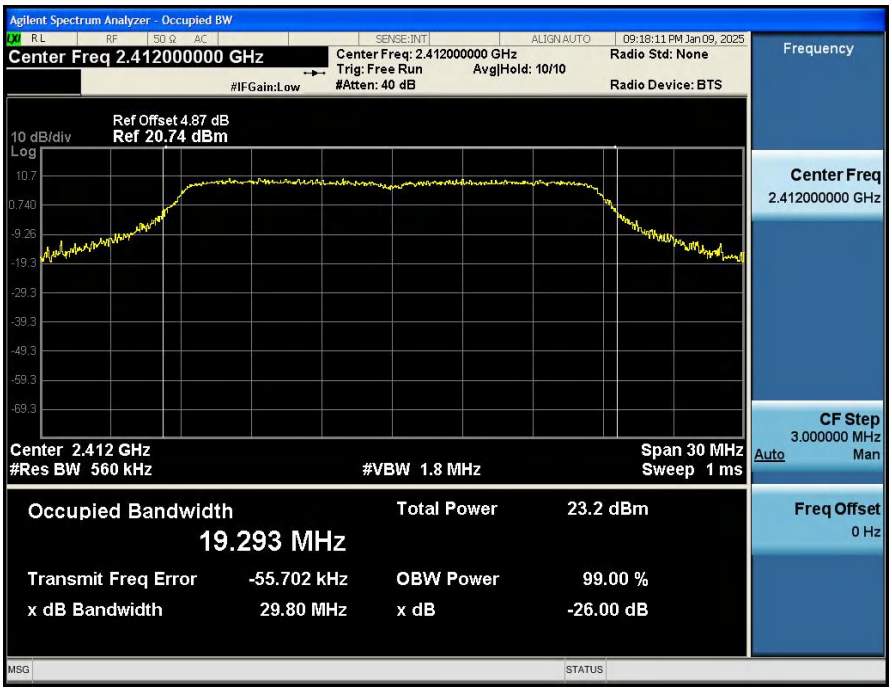
99%_Occupied_Bandwidth_NVNT_ANT1_802_11g_2437



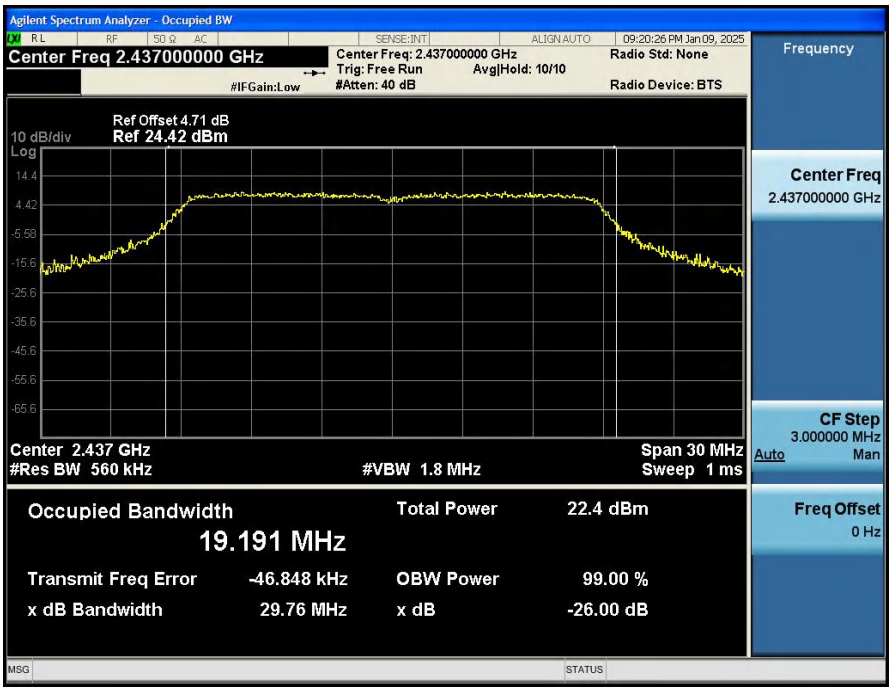
99%_Occupied_Bandwidth_NVNT_ANT1_802_11g_2462



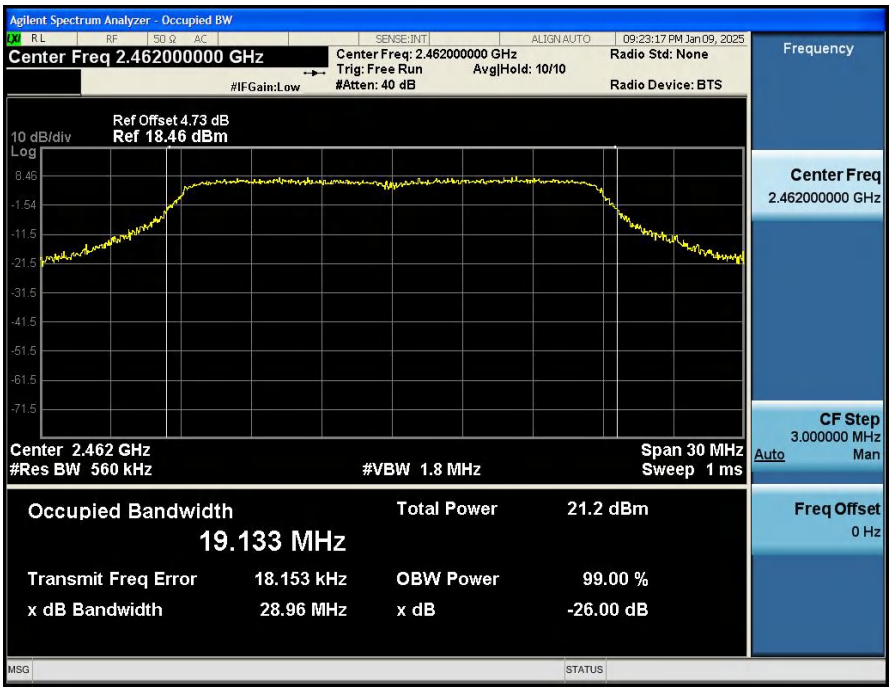
99%_Occupied_Bandwidth_NVNT_ANT1_802_11n(HT20)_2412



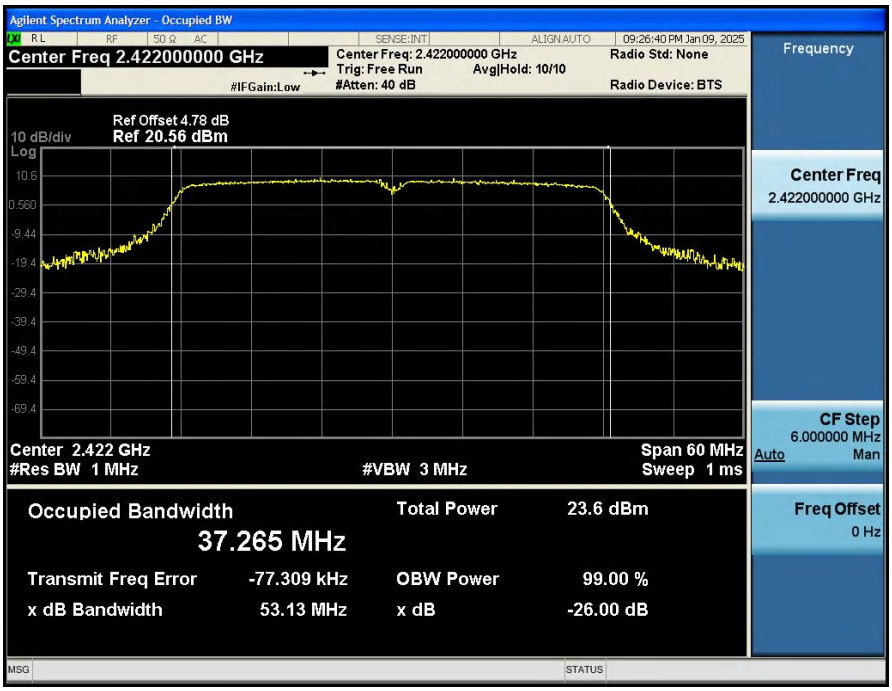
99%_Occupied_Bandwidth_NVNT_ANT1_802_11n(HT20)_2437



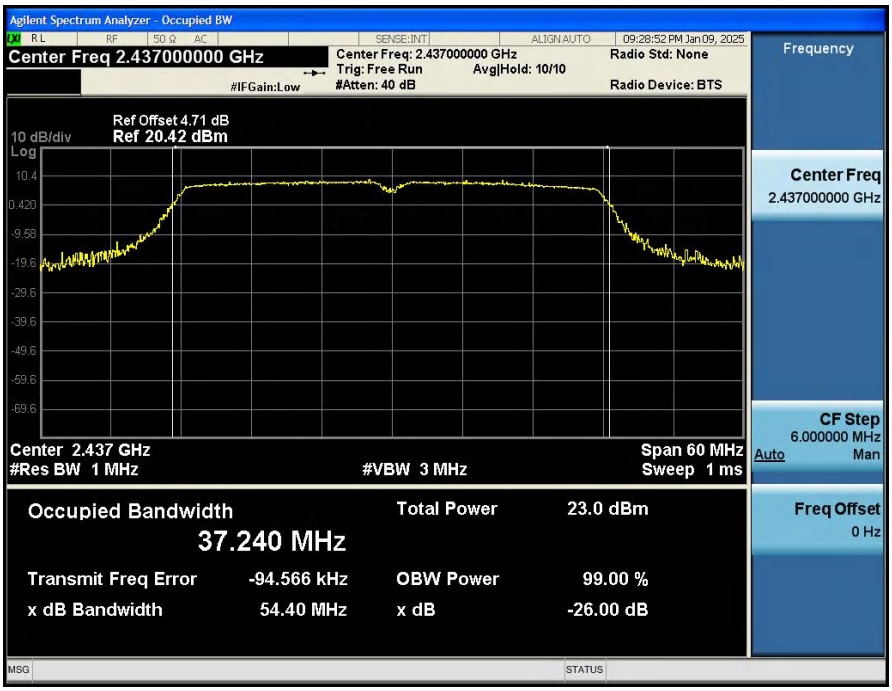
99%_Occupied_Bandwidth_NVNT_ANT1_802_11n(HT20)_2462



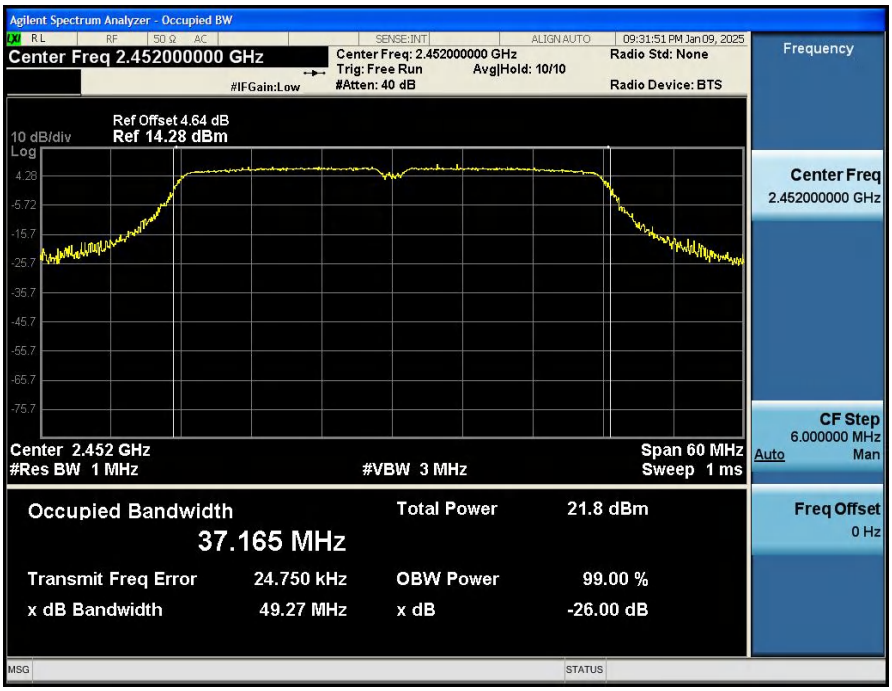
99%_Occupied_Bandwidth_NVNT_ANT1_802_11n(HT40)_2422



99%_Occupied_Bandwidth_NVNT_ANT1_802_11n(HT40)_2437



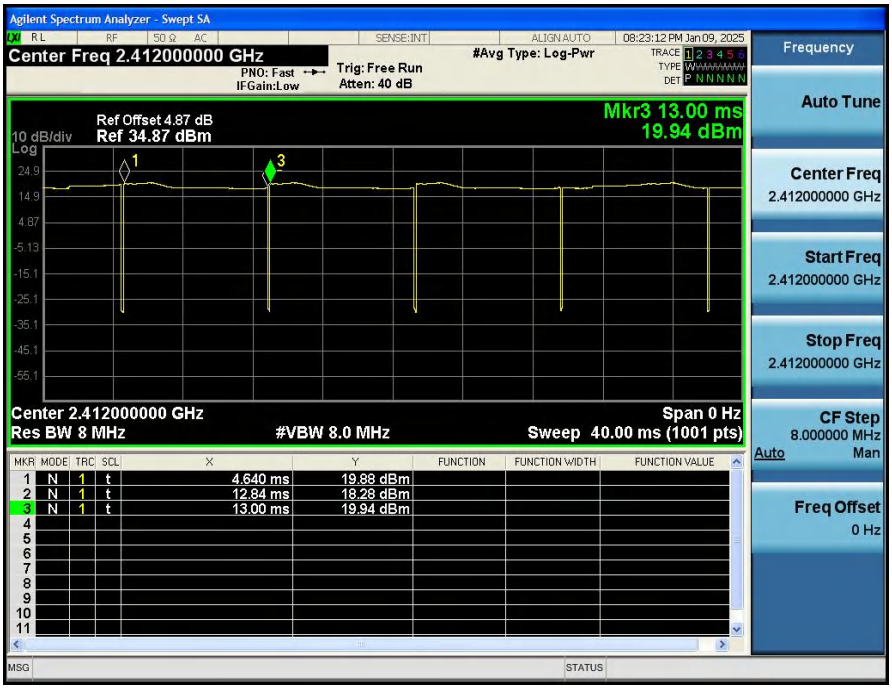
99%_Occupied_Bandwidth_NVNT_ANT1_802_11n(HT40)_2452


Agilent Spectrum Analyzer - Occupied BW
RL
RF
50 Ω
AC
SENSE:INT
ALIGN AUTO
09:31:51 PM Jan 09, 2025
Center Freq 2.452000000 GHz
Center Freq: 2.452000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#IFGain:Low
#Atten: 40 dB
Radio Std: None
Radio Device: BTS
Frequency
Ref Offset 4.64 dB
10 dB/div
Ref 14.28 dBm
Log
4.28
-5.72
-15.7
-25.7
-35.7
-45.7
-55.7
-65.7
-75.7
Center Freq
2.452000000 GHz
CF Step
6.000000 MHz
Auto
Man
Center 2.452 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 60 MHz
Sweep 1 ms
Occupied Bandwidth
37.165 MHz
Total Power
21.8 dBm
Transmit Freq Error
24.750 kHz
OBW Power
99.00 %
x dB Bandwidth
49.27 MHz
x dB
-26.00 dB
Freq Offset
0 Hz
MSG
STATUS

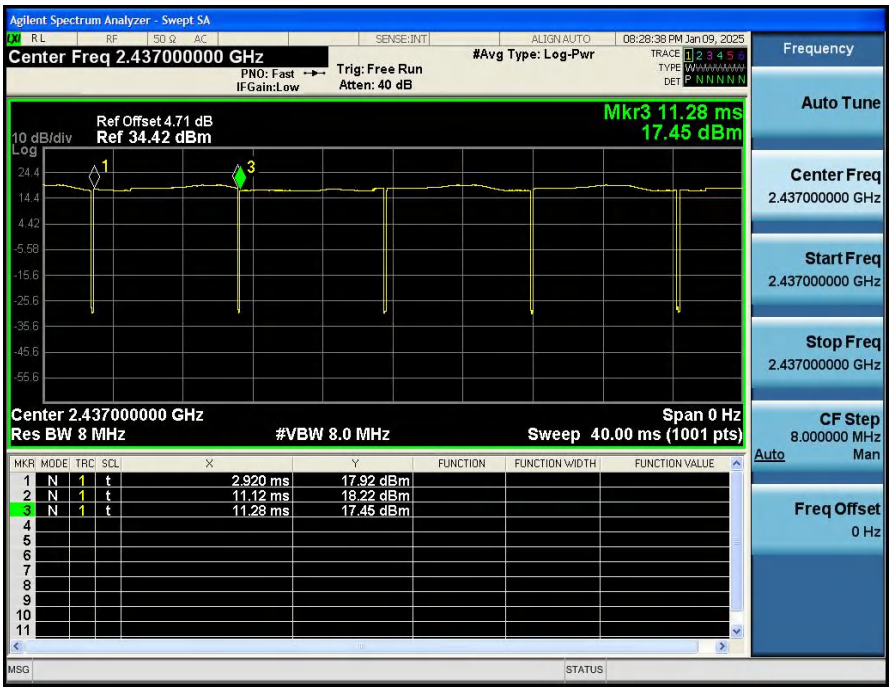
Appendix C: Duty Cycle

Condition	Antenna	Modulation	Frequency (MHz)	Duty cycle(%)	Duty factor(dB)
NVNT	ANT1	802.11b	2412.00	98.56	0.00
NVNT	ANT1	802.11b	2437.00	98.56	0.00
NVNT	ANT1	802.11b	2462.00	98.56	0.00
NVNT	ANT1	802.11g	2412.00	89.61	0.48
NVNT	ANT1	802.11g	2437.00	89.61	0.48
NVNT	ANT1	802.11g	2462.00	89.61	0.48
NVNT	ANT1	802.11n(HT20)	2412.00	96.96	0.13
NVNT	ANT1	802.11n(HT20)	2437.00	96.96	0.13
NVNT	ANT1	802.11n(HT20)	2462.00	97.34	0.12
NVNT	ANT1	802.11n(HT40)	2422.00	94.70	0.24
NVNT	ANT1	802.11n(HT40)	2437.00	93.94	0.27
NVNT	ANT1	802.11n(HT40)	2452.00	94.70	0.24

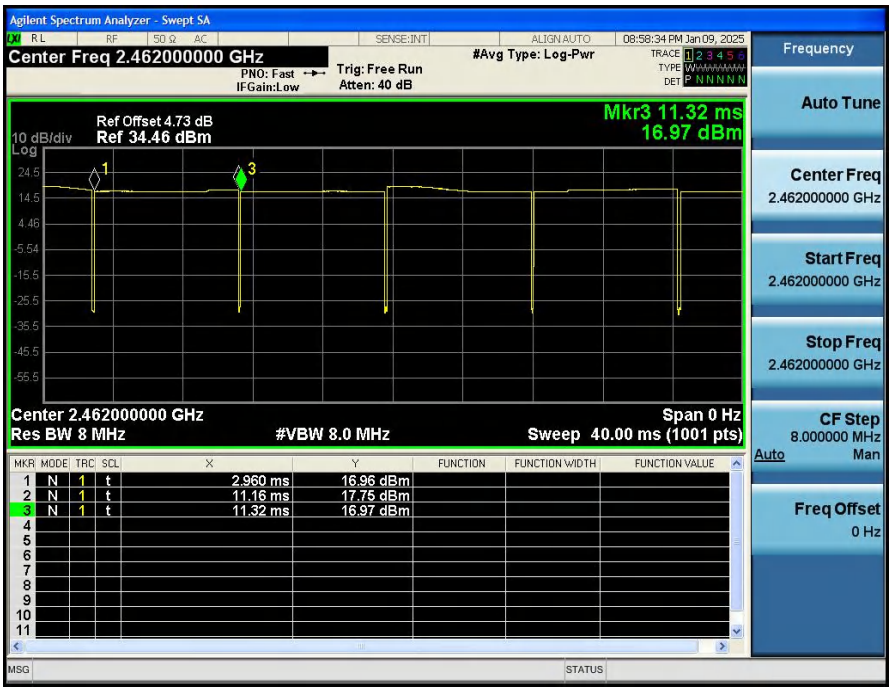
Duty_Cycle_NVNT_ANT1_802_11b_2412



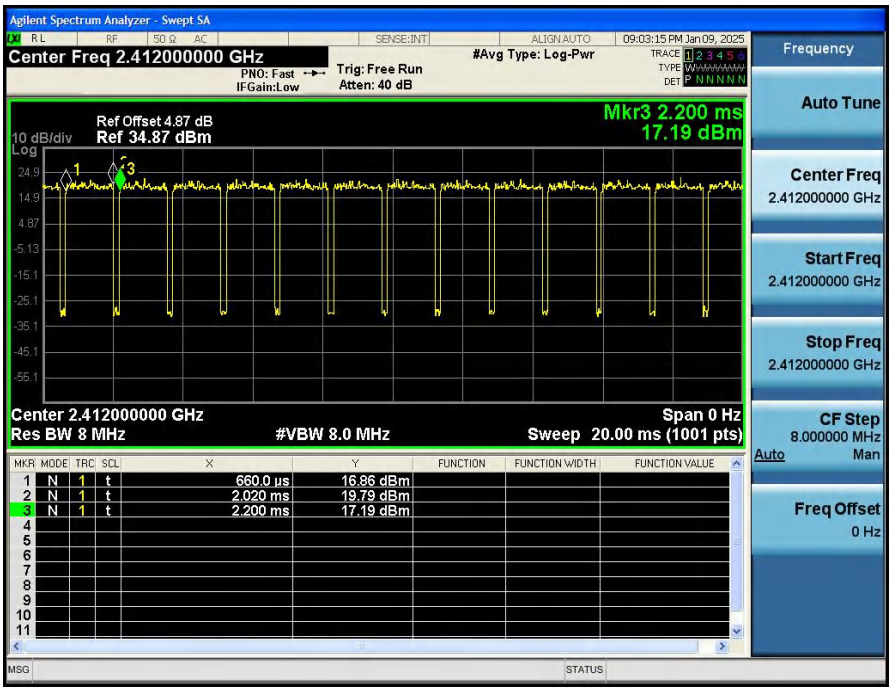
Duty_Cycle_NVNT_ANT1_802_11b_2437



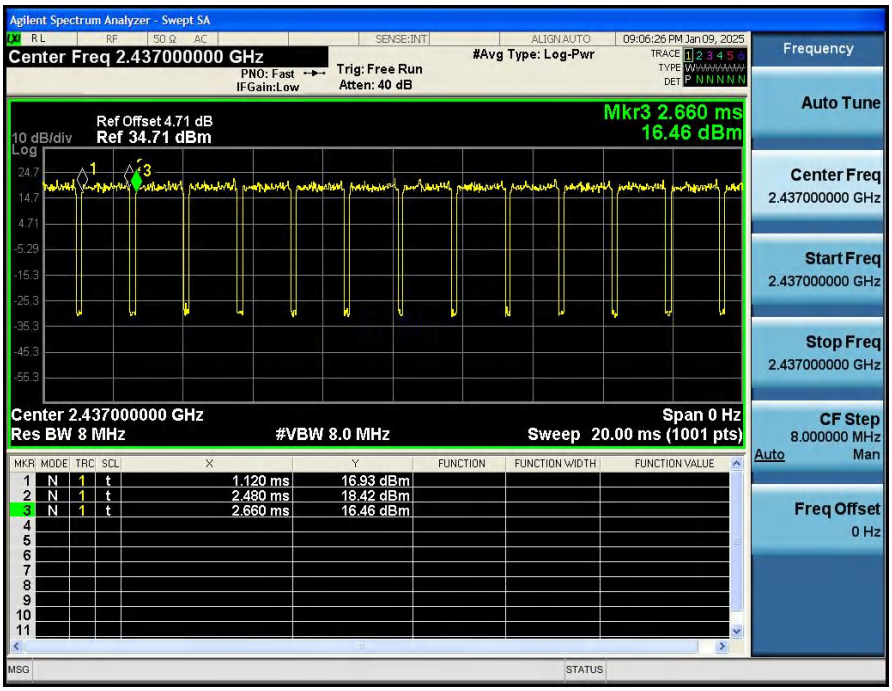
Duty_Cycle_NVNT_ANT1_802_11b_2462



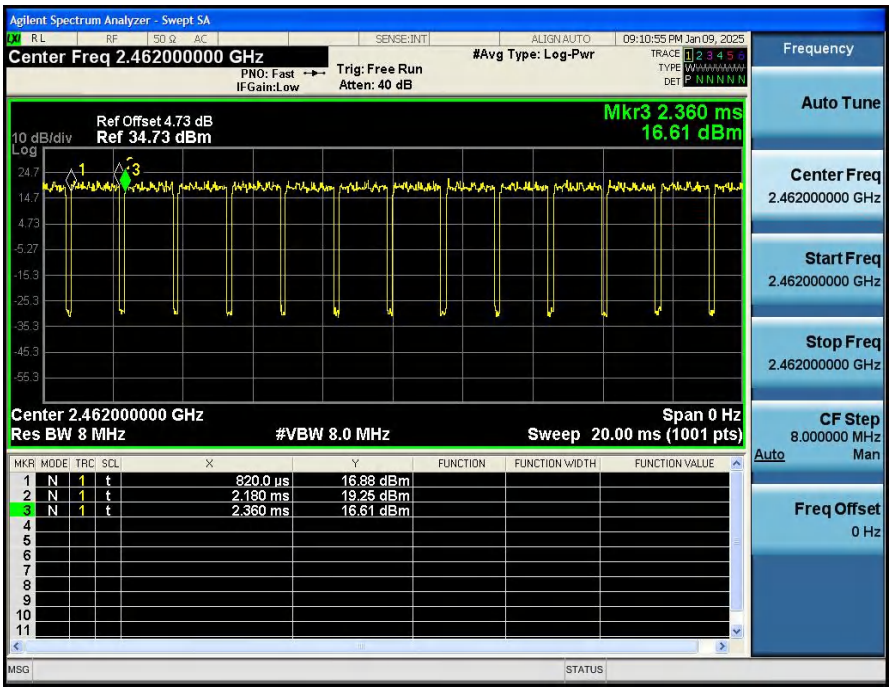
Duty_Cycle_NVNT_ANT1_802_11g_2412



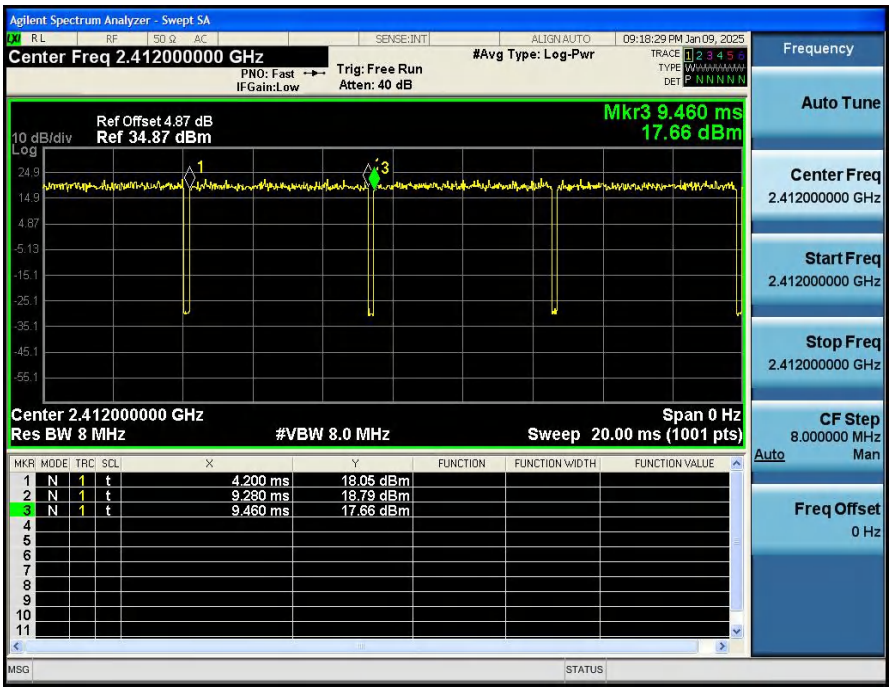
Duty_Cycle_NVNT_ANT1_802_11g_2437



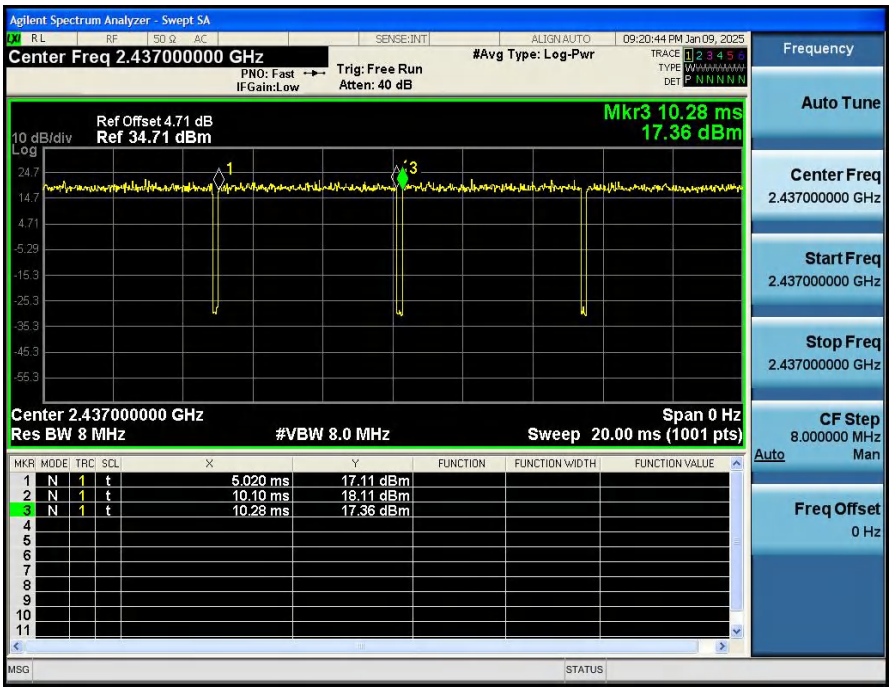
Duty_Cycle_NVNT_ANT1_802_11g_2462



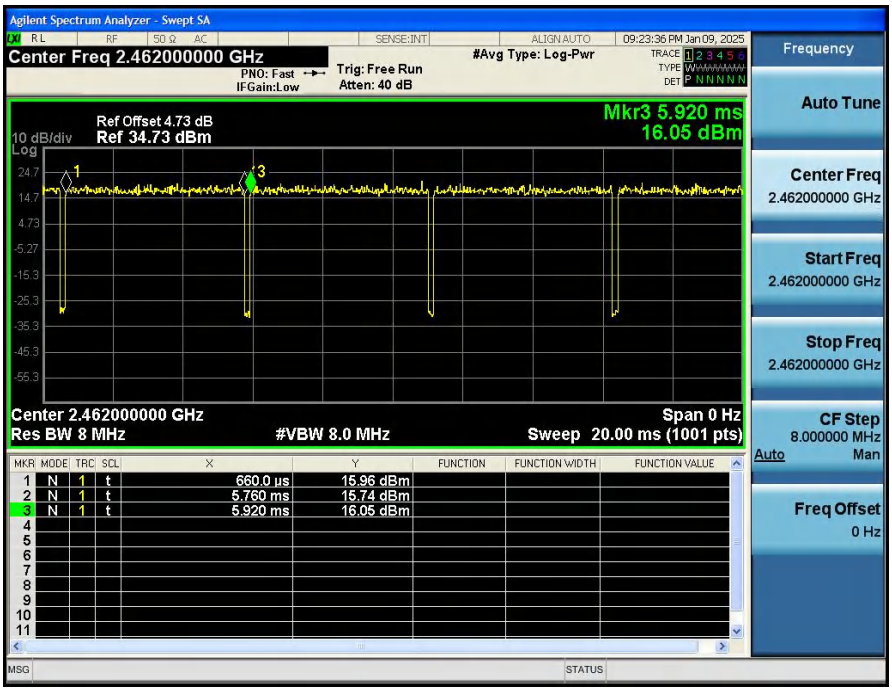
Duty_Cycle_NVNT_ANT1_802_11n(HT20)_2412



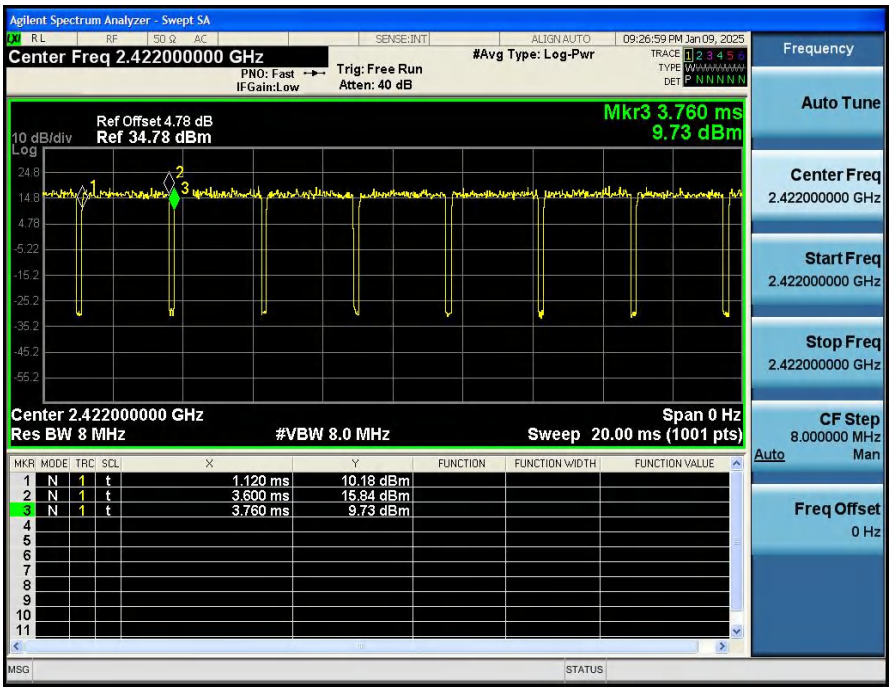
Duty_Cycle_NVNT_ANT1_802_11n(HT20)_2437



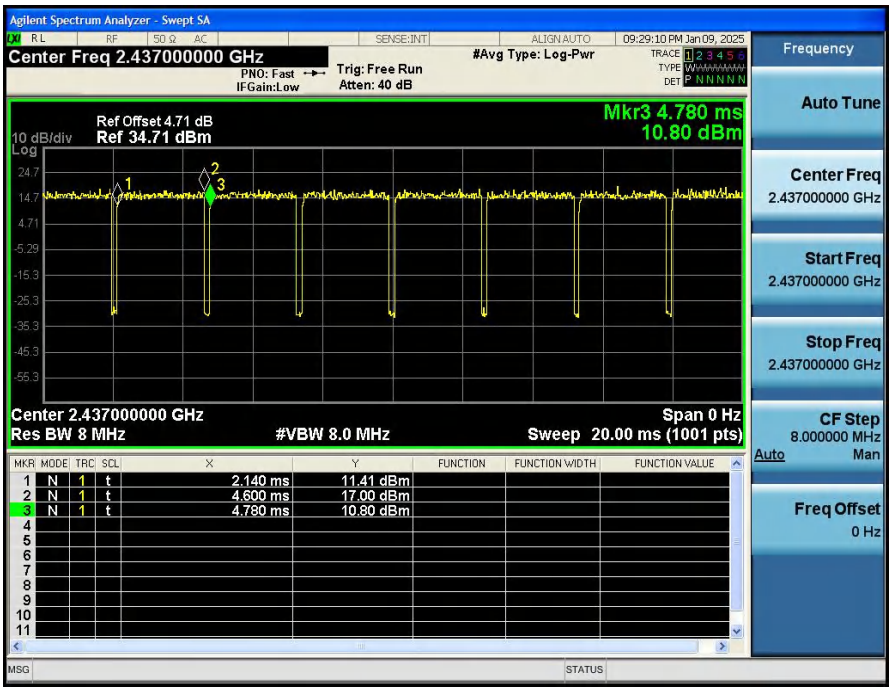
Duty_Cycle_NVNT_ANT1_802_11n(HT20)_2462



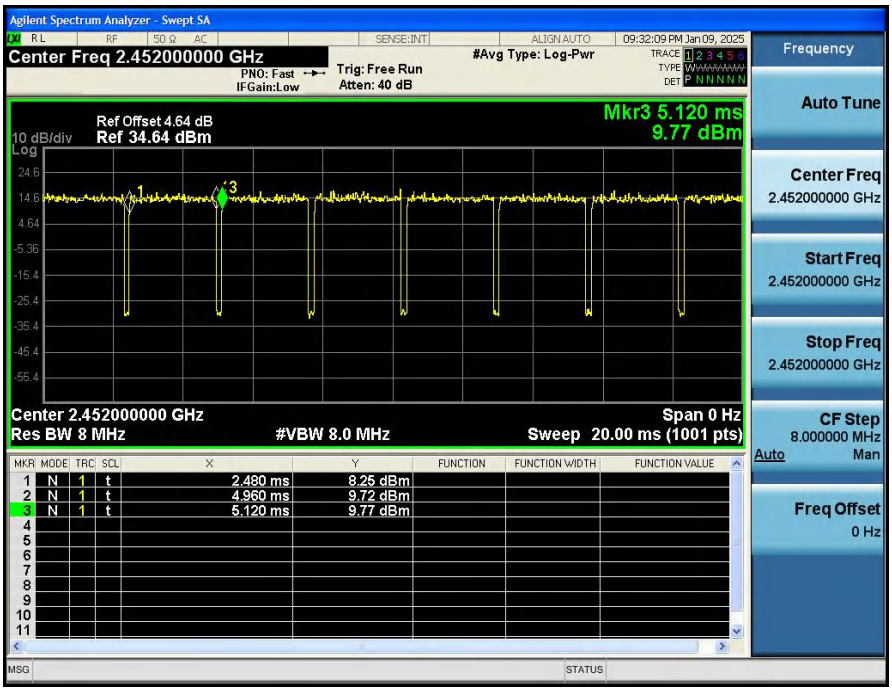
Duty_Cycle_NVNT_ANT1_802_11n(HT40)_2422



Duty_Cycle_NVNT_ANT1_802_11n(HT40)_2437



Duty_Cycle_NVNT_ANT1_802_11n(HT40)_2452

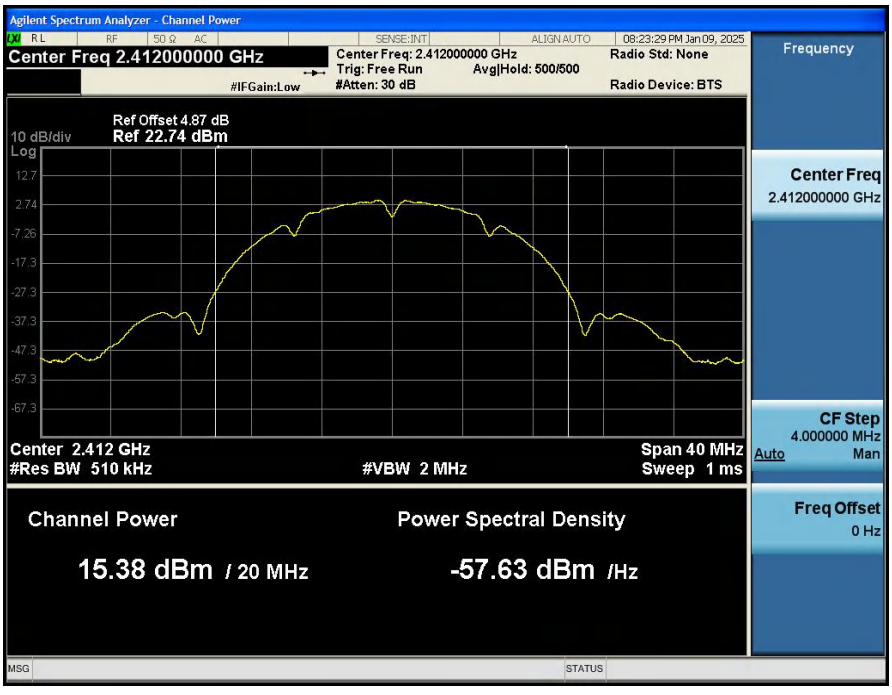

Agilent Spectrum Analyzer - Swept SA
Center Freq 2.452000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 40 dB
#Avg Type: Log-Pwr
09:32:09 PM Jan 09, 2025
Ref Offset 4.64 dB
10 dB/div
Log
Ref 34.64 dBm
Mkr3 5.120 ms
9.77 dBm
24.6
14.6
4.64
-5.36
-15.4
-25.4
-35.4
-45.4
-55.4
Center 2.452000000 GHz
Res BW 8 MHz
#VBW 8.0 MHz
Span 0 Hz
Sweep 20.00 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 t 2.480 ms 8.25 dBm
2 N 1 t 4.960 ms 9.72 dBm
3 N 1 t 5.120 ms 9.77 dBm
Frequency
Auto Tune
Center Freq
2.452000000 GHz
Start Freq
2.452000000 GHz
Stop Freq
2.452000000 GHz
CF Step
8.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

Appendix D: MAX. Output Power

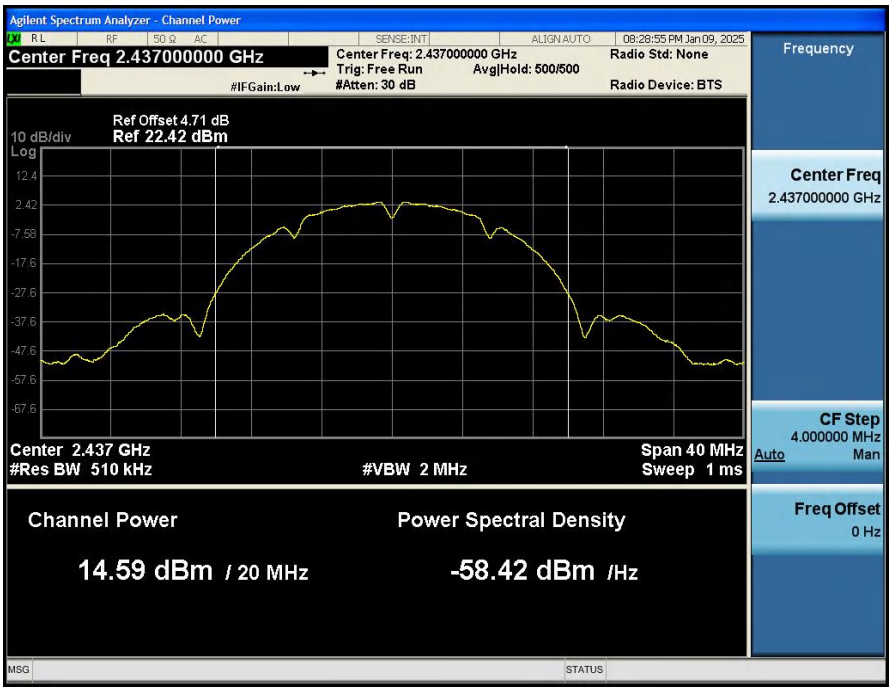
Condition	Antenna	Modulation	Frequency (MHz)	Detector	Conducted Power(dBm)	Duty factor(dB)	Total Power(dBm)	limit(dBm)	Result
NVNT	ANT1	802.11b	2412.00	RMS	15.38	0.00	15.38	30	Pass
NVNT	ANT1	802.11b	2437.00	RMS	14.59	0.00	14.59	30	Pass
NVNT	ANT1	802.11b	2462.00	RMS	14.07	0.00	14.07	30	Pass
NVNT	ANT1	802.11g	2412.00	RMS	15.11	0.48	15.59	30	Pass
NVNT	ANT1	802.11g	2437.00	RMS	14.55	0.48	15.03	30	Pass
NVNT	ANT1	802.11g	2462.00	RMS	14.50	0.48	14.98	30	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	RMS	**15.94**	0.13	16.07	30	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	RMS	15.17	0.13	15.30	30	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	RMS	14.10	0.12	14.22	30	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	RMS	15.13	0.24	15.37	30	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	RMS	14.68	0.27	14.95	30	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	RMS	13.49	0.24	13.73	30	Pass

Note：The cable loss are compensated in the graph.

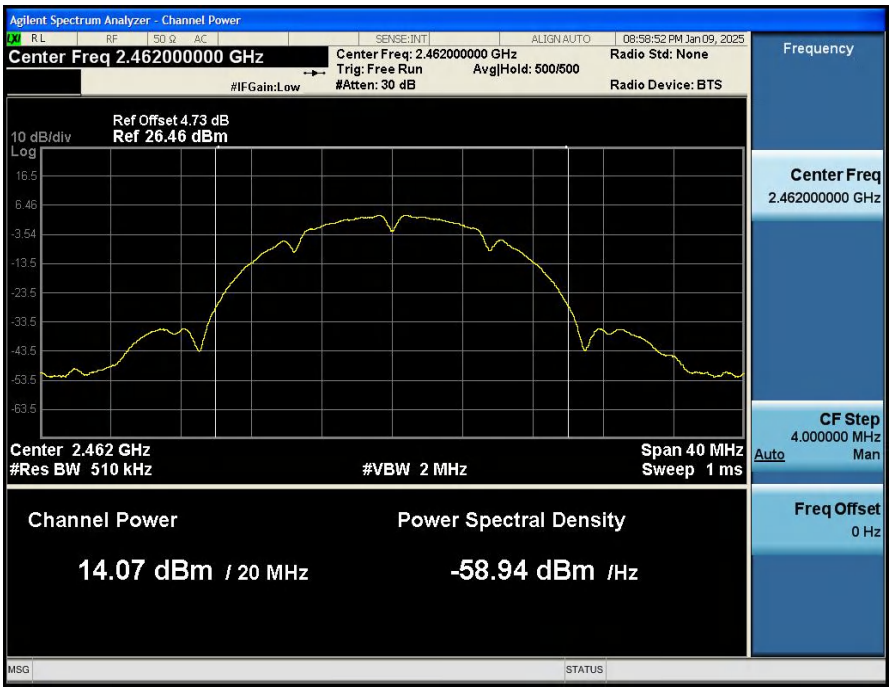
MAX__Output_Power_NVNT_ANT1_802_11b_2412



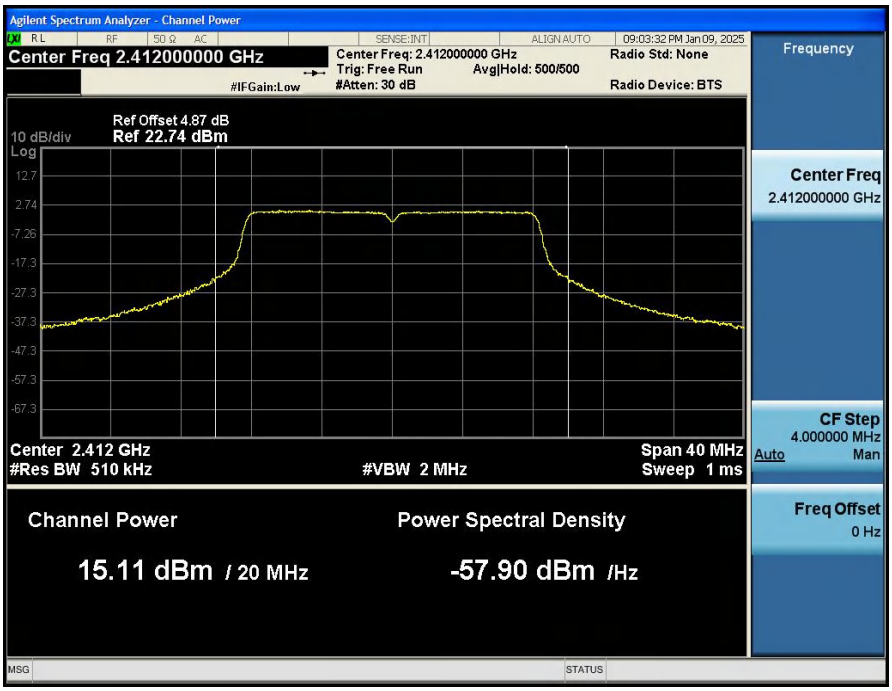
MAX__Output_Power_NVNT_ANT1_802_11b_2437



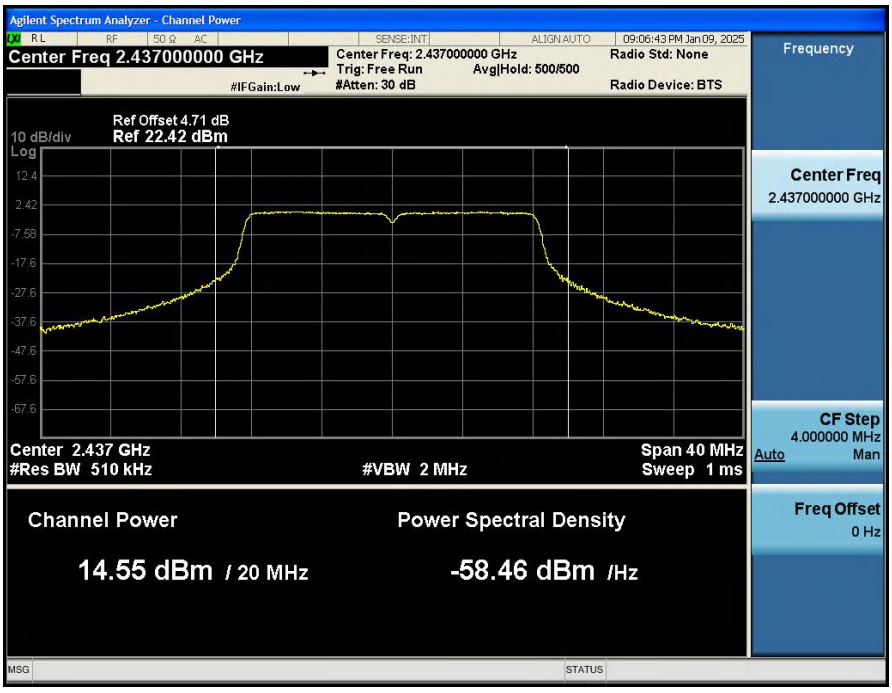
MAX__Output_Power_NVNT_ANT1_802_11b_2462



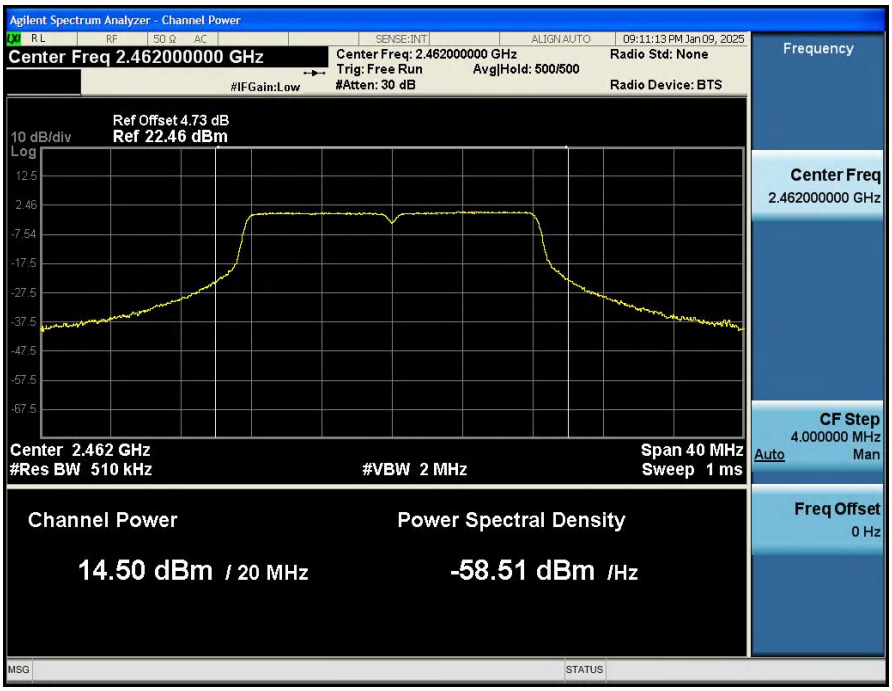
MAX__Output_Power_NVNT_ANT1_802_11g_2412



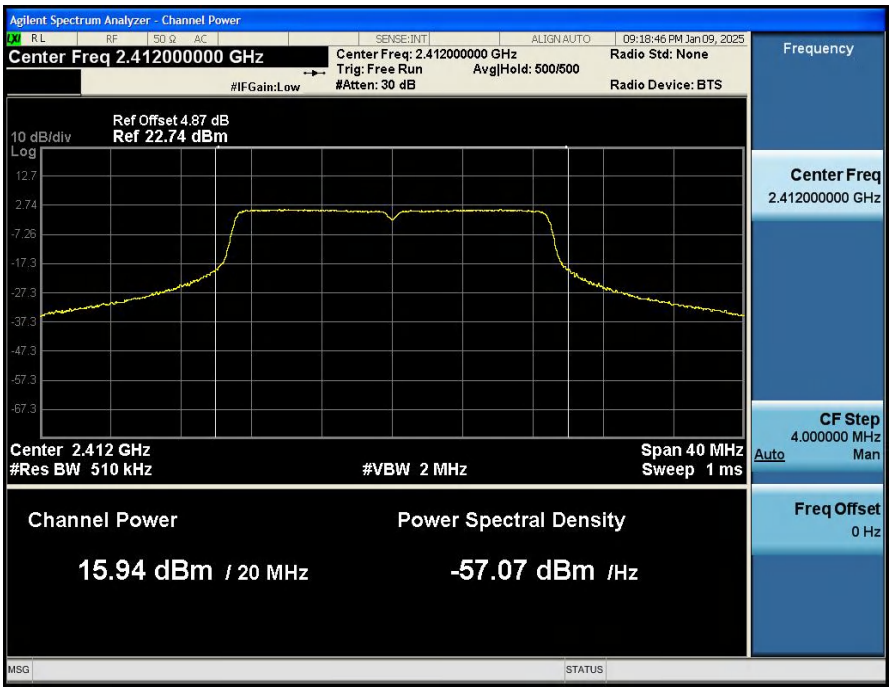
MAX__Output_Power_NVNT_ANT1_802_11g_2437



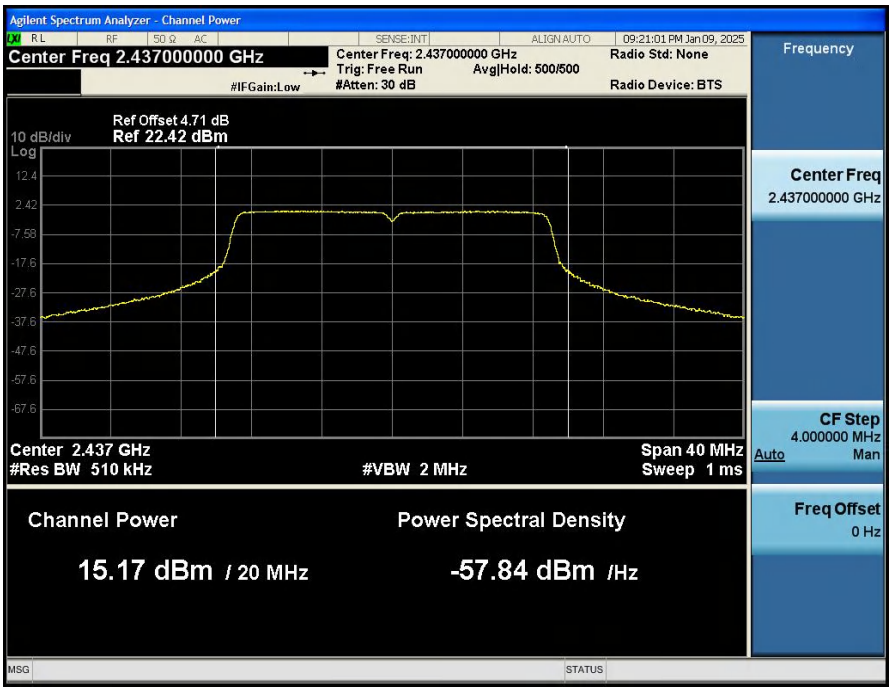
MAX__Output_Power_NVNT_ANT1_802_11g_2462



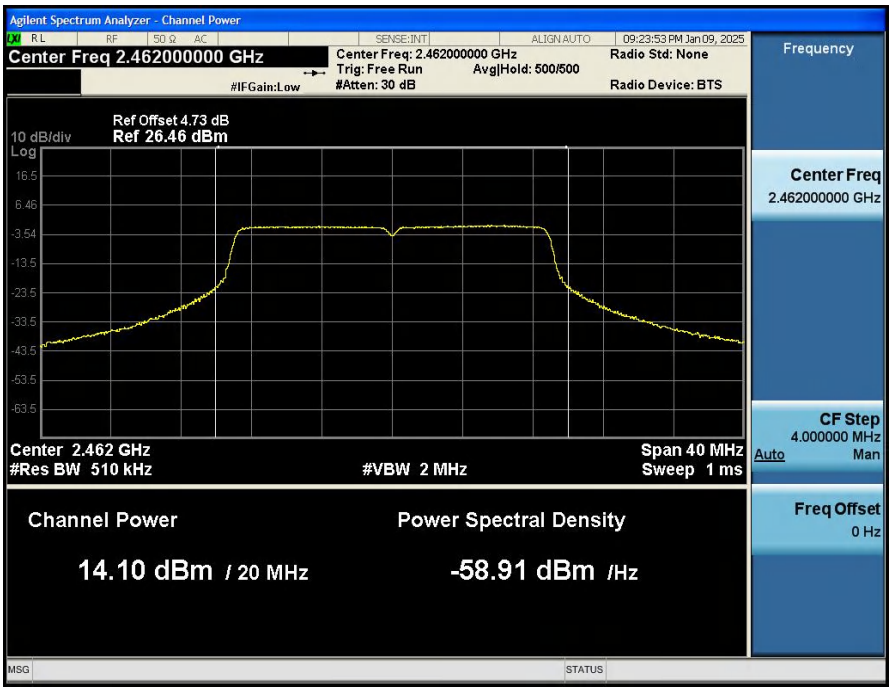
MAX__Output_Power_NVNT_ANT1_802_11n(HT20)_2412



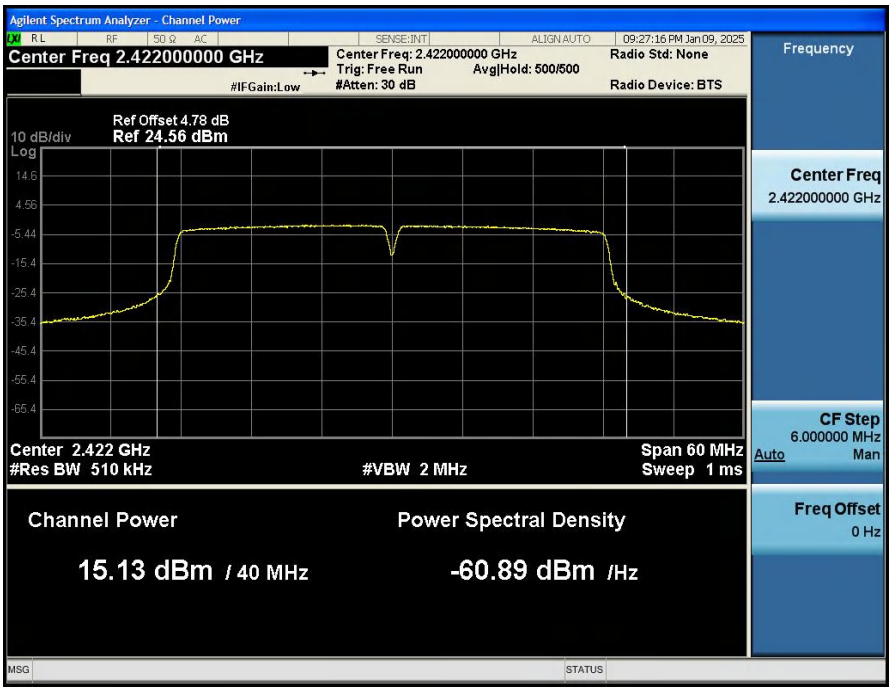
MAX__Output_Power_NVNT_ANT1_802_11n(HT20)_2437



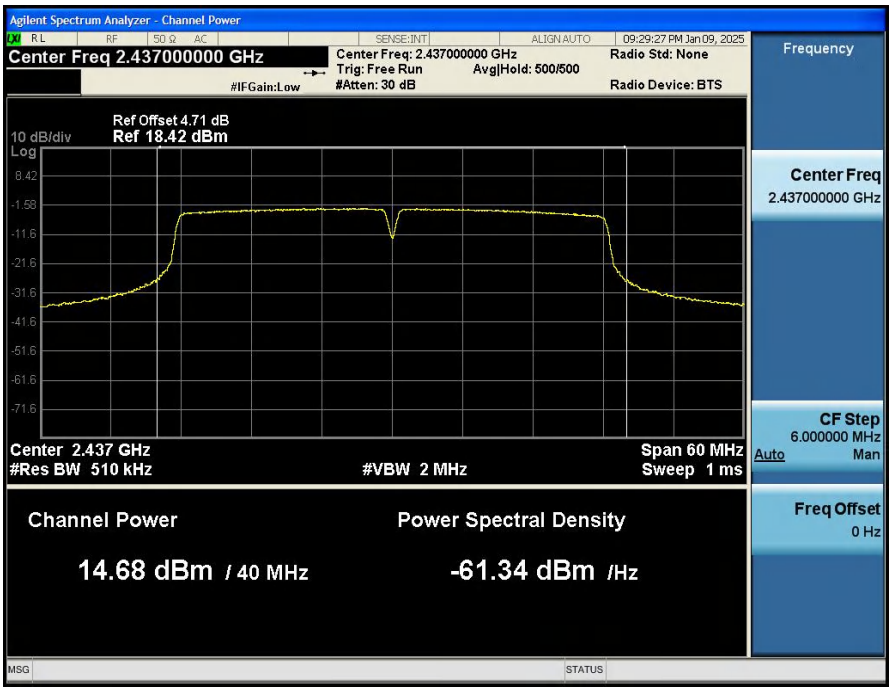
MAX__Output_Power_NVNT_ANT1_802_11n(HT20)_2462



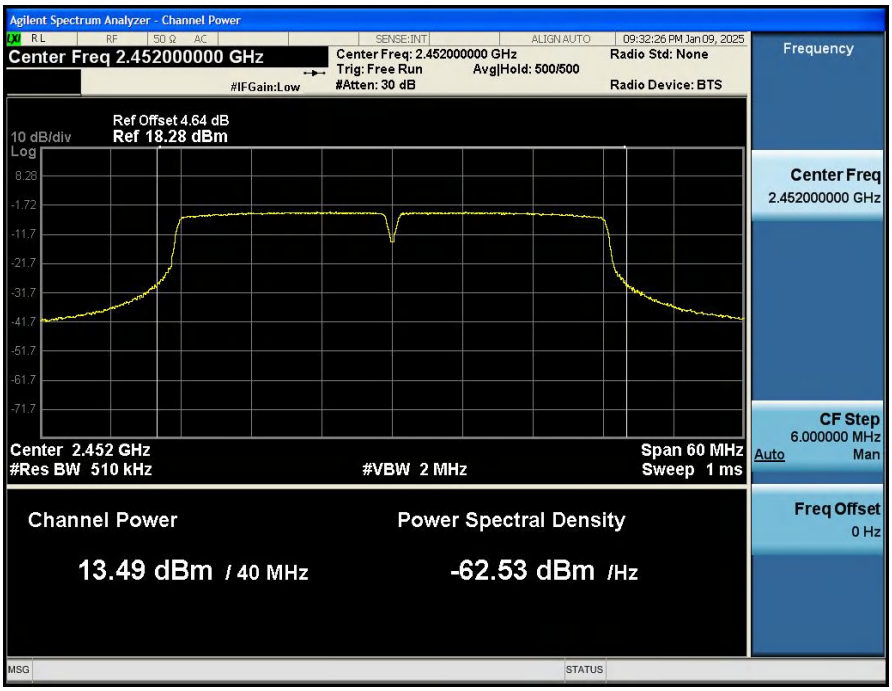
MAX__Output_Power_NVNT_ANT1_802_11n(HT40)_2422



MAX__Output_Power_NVNT_ANT1_802_11n(HT40)_2437



MAX__Output_Power_NVNT_ANT1_802_11n(HT40)_2452


Agilent Spectrum Analyzer - Channel Power
RL
RF
50 Ω AC
SENSE:INT
ALIGN AUTO
09:32:26 PM Jan 09, 2025
Center Freq 2.452000000 GHz
Center Freq: 2.452000000 GHz
Trig: Free Run
Avg|Hold: 500/500
#IFGain:Low
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Ref Offset 4.64 dB
10 dB/div
Ref 18.28 dBm
Log
8.28
-1.72
-11.7
-21.7
-31.7
-41.7
-51.7
-61.7
-71.7
Center 2.452 GHz
#Res BW 510 kHz
#VBW 2 MHz
Span 60 MHz
Sweep 1 ms
Channel Power
13.49 dBm / 40 MHz
Power Spectral Density
-62.53 dBm /Hz
MSG
STATUS
Frequency
Center Freq
2.452000000 GHz
CF Step
6.000000 MHz
Auto
Man
Freq Offset
0 Hz

Appendix E: Power Spectral Density

Condition	Antenna	Modulation	Frequency (MHz)	SA_PSD(dBm/30kHz)	Duty factor(dB)	RB factor(dB)	PSD(dBm/3kHz)	limit(dBm/3kHz)	Result
NVNT	ANT1	802.11b	2412.00	1.85	0.00	-10.00	-8.15	8	Pass
NVNT	ANT1	802.11b	2437.00	0.61	0.00	-10.00	-9.39	8	Pass
NVNT	ANT1	802.11b	2462.00	1.03	0.00	-10.00	-8.97	8	Pass
NVNT	ANT1	802.11g	2412.00	-0.10	0.48	-10.00	-9.62	8	Pass
NVNT	ANT1	802.11g	2437.00	-2.03	0.48	-10.00	-11.55	8	Pass
NVNT	ANT1	802.11g	2462.00	-1.68	0.48	-10.00	-11.20	8	Pass
NVNT	ANT1	802.11n(HT20)	2412.00	-0.70	0.13	-10.00	-10.57	8	Pass
NVNT	ANT1	802.11n(HT20)	2437.00	-1.22	0.13	-10.00	-11.09	8	Pass
NVNT	ANT1	802.11n(HT20)	2462.00	-1.97	0.12	-10.00	-11.85	8	Pass
NVNT	ANT1	802.11n(HT40)	2422.00	-4.04	0.24	-10.00	-13.80	8	Pass
NVNT	ANT1	802.11n(HT40)	2437.00	-4.67	0.27	-10.00	-14.40	8	Pass
NVNT	ANT1	802.11n(HT40)	2452.00	-5.73	0.24	-10.00	-15.49	8	Pass

Note：The cable loss are compensated in the graph.

Power_Spectral_Density_NVNT_ANT1_802_11b_2412

Power_Spectral_Density_NVNT_ANT1_802_11b_2437

Power_Spectral_Density_NVNT_ANT1_802_11b_2462

Power_Spectral_Density_NVNT_ANT1_802_11g_2412