



802.11ax(HE20)_2462



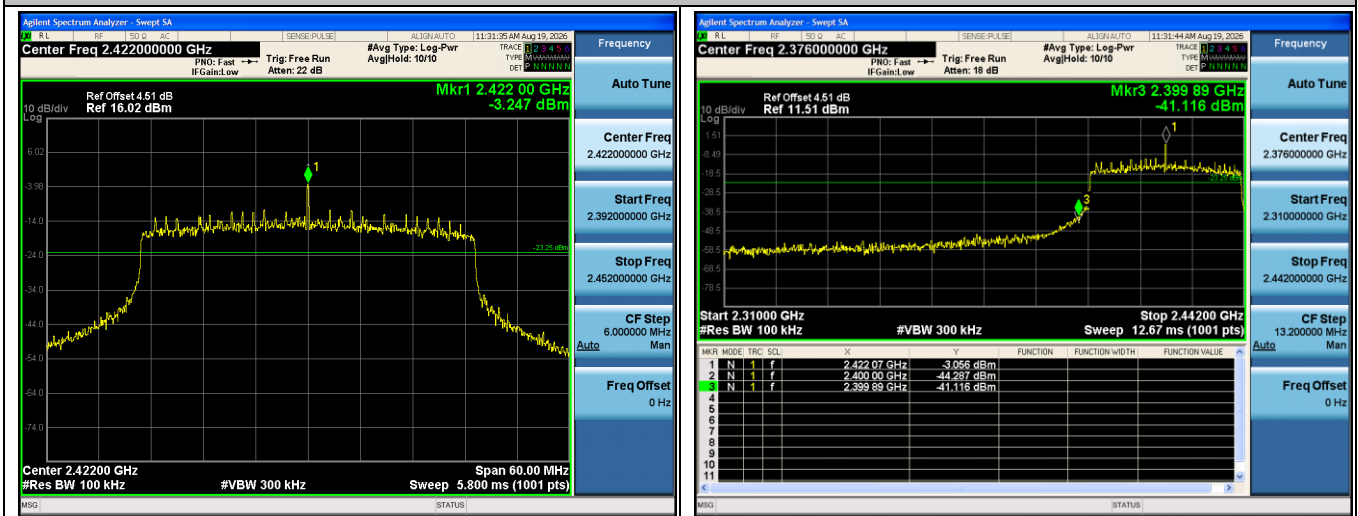
802.11n(HT40)_2422



802.11n(HT40)_2452



802.11ax(HE40) 2422



802.11ax(HE40) 2452



**(2) Conducted Spurious Emissions Test**

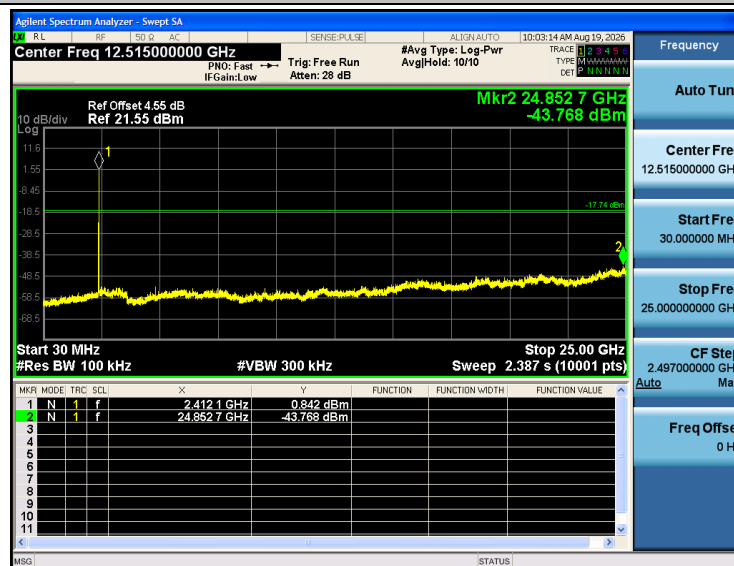
Test Mode	Frequency [MHz]	Ref Level [dBm]	Spurious level[dBm]	Limit[dBm]	Verdict
802.11b	2412	2.258	-43.768	-17.742	PASS
	2437	2.020	-44.526	-17.980	PASS
	2462	1.552	-48.408	-18.448	PASS
802.11g	2412	-4.072	-56.555	-24.072	PASS
	2437	-1.394	-46.846	-21.394	PASS
	2462	-0.823	-53.477	-20.823	PASS
802.11n(HT20)	2412	-4.755	-52.972	-24.755	PASS
	2437	-1.047	-52.900	-21.047	PASS
	2462	-1.495	-50.179	-21.495	PASS
802.11ax(HE20)	2412	-7.190	-59.109	-27.190	PASS
	2437	-0.880	-53.542	-20.880	PASS
	2462	-0.659	-48.469	-20.659	PASS
802.11n(HT40)	2422	-2.675	-54.675	-22.675	PASS
	2437	-3.280	-54.762	-23.280	PASS
	2452	-3.767	-53.787	-23.767	PASS
802.11ax(HE40)	2422	-3.247	-54.409	-23.247	PASS
	2437	-3.264	-59.604	-23.264	PASS
	2452	-3.039	-54.697	-23.039	PASS



802.11b_2412_0~Reference



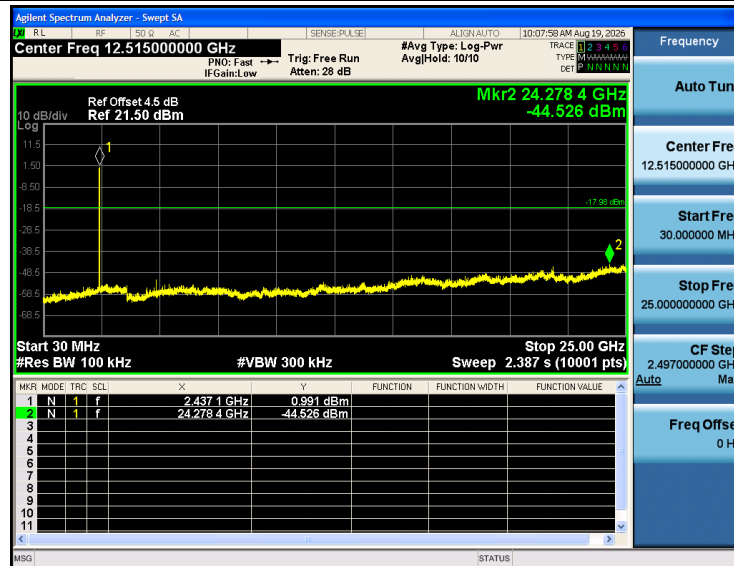
802.11b_2412_30~25000



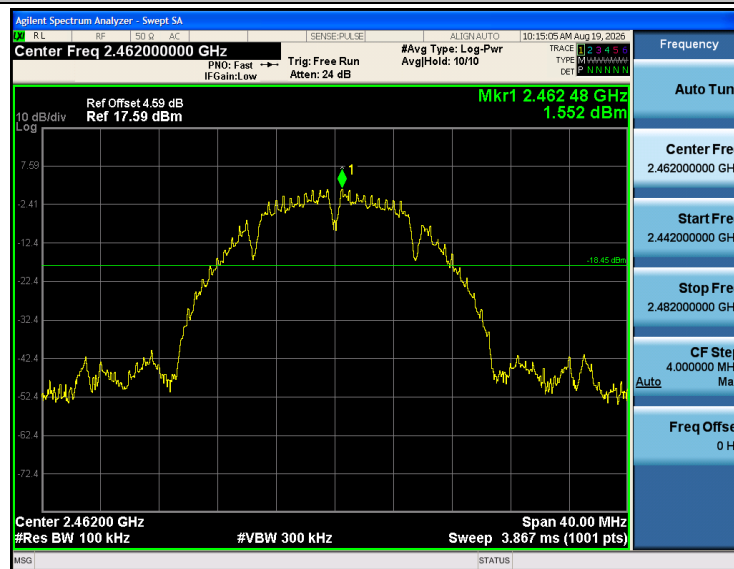
802.11b_2437_0~Reference



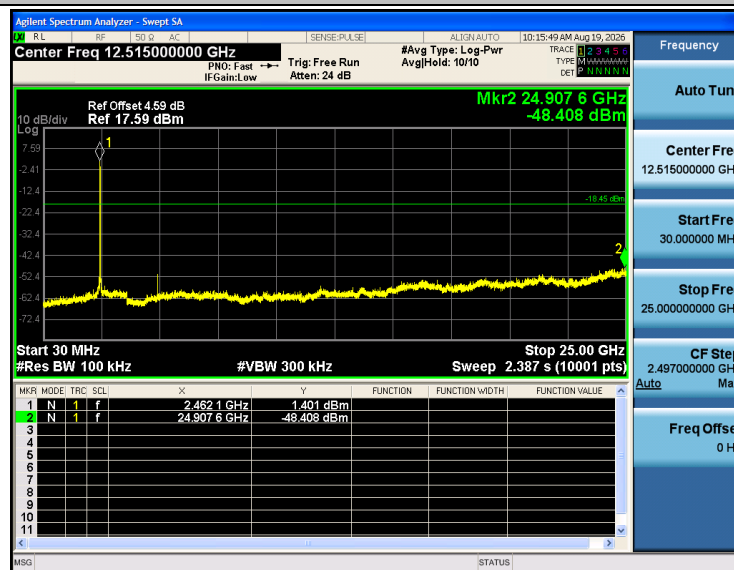
802.11b_2437_30~25000



802.11b_2462_0~Reference



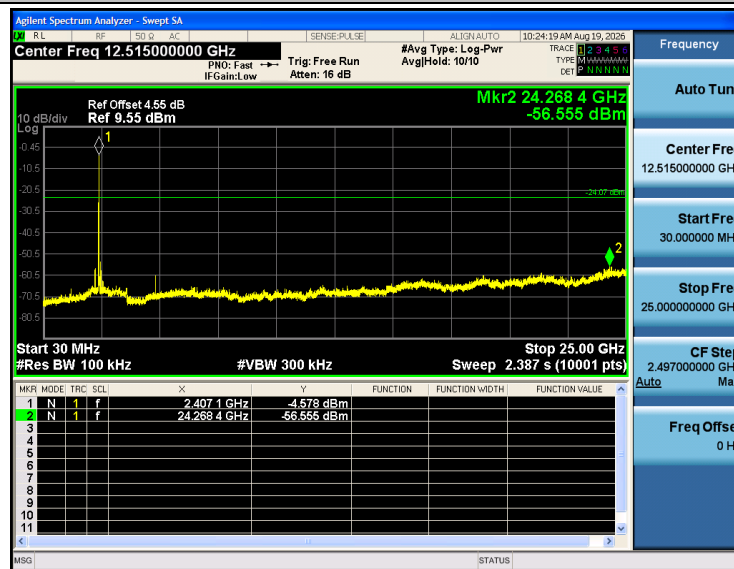
802.11b_2462_30~25000



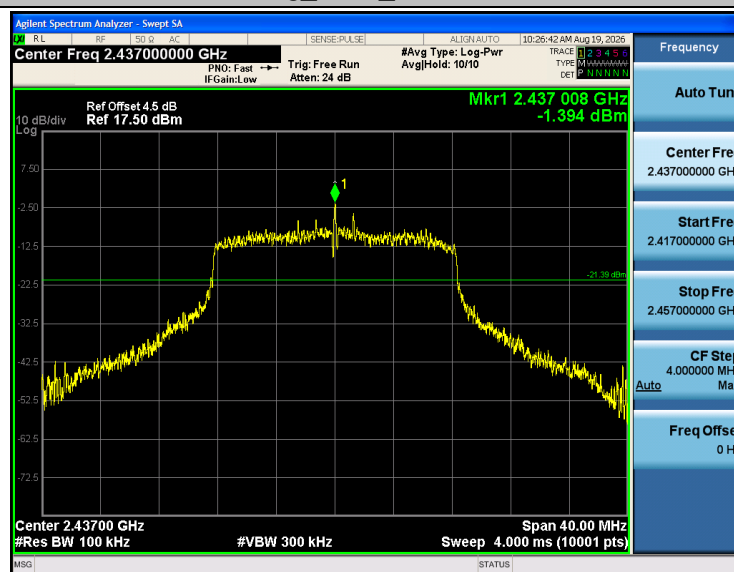
802.11g_2412_0~Reference



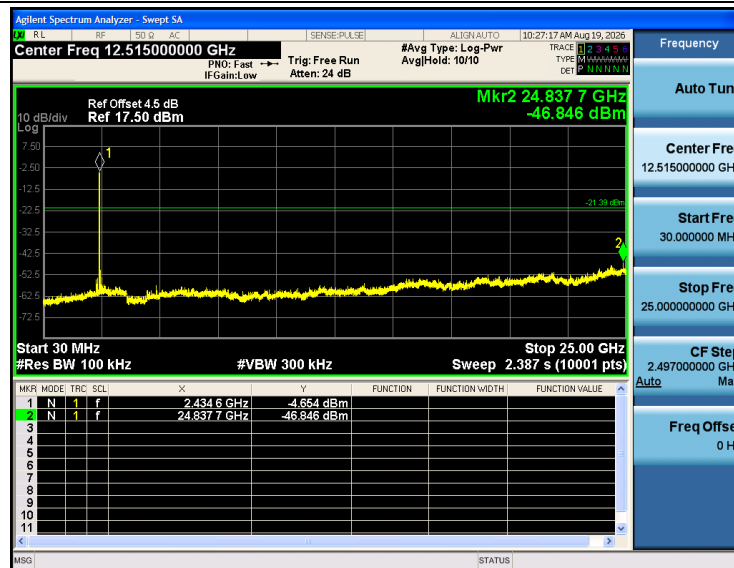
802.11g_2412_30~25000



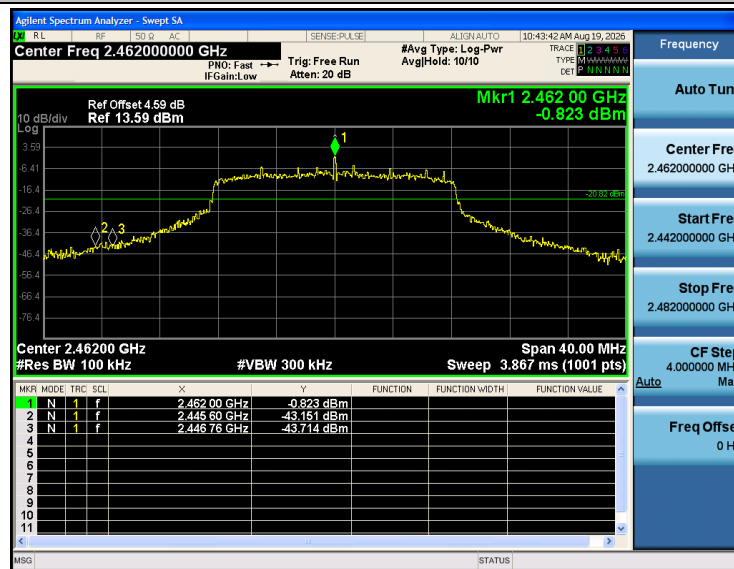
802.11g_2437_0~Reference



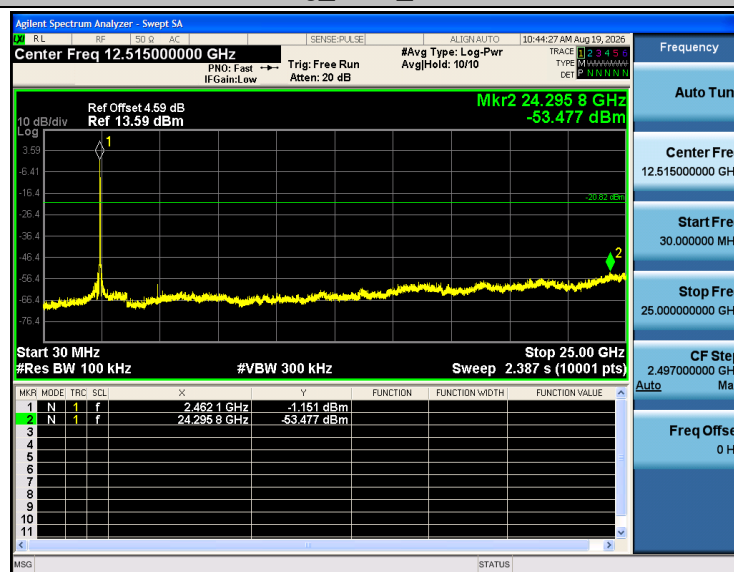
802.11g_2437_30~25000



802.11g_2462_0~Reference



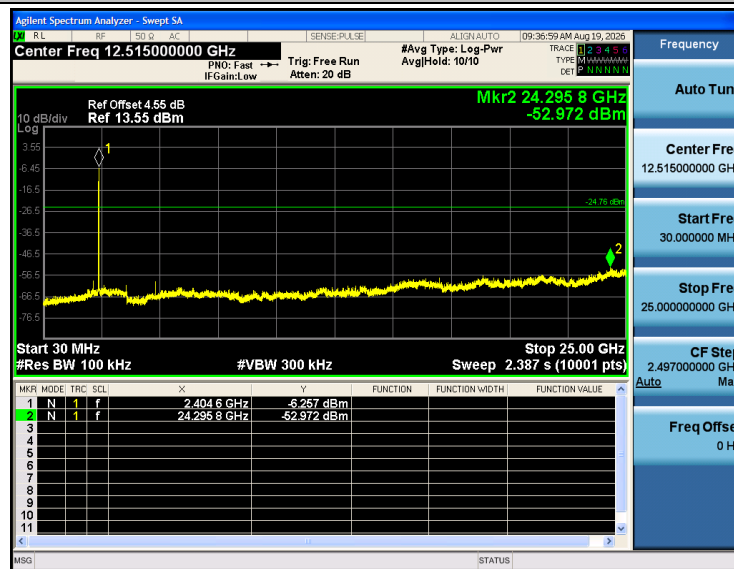
802.11g_2462_30~25000



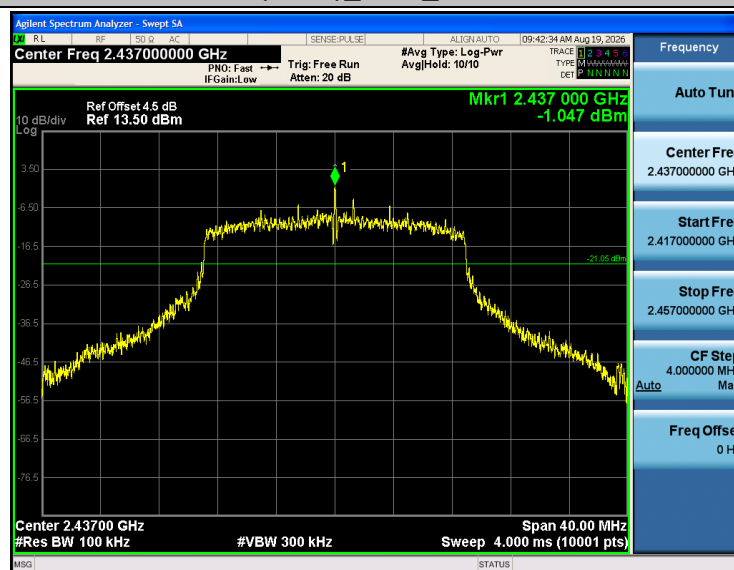
802.11n(HT20)_2412_0~Reference



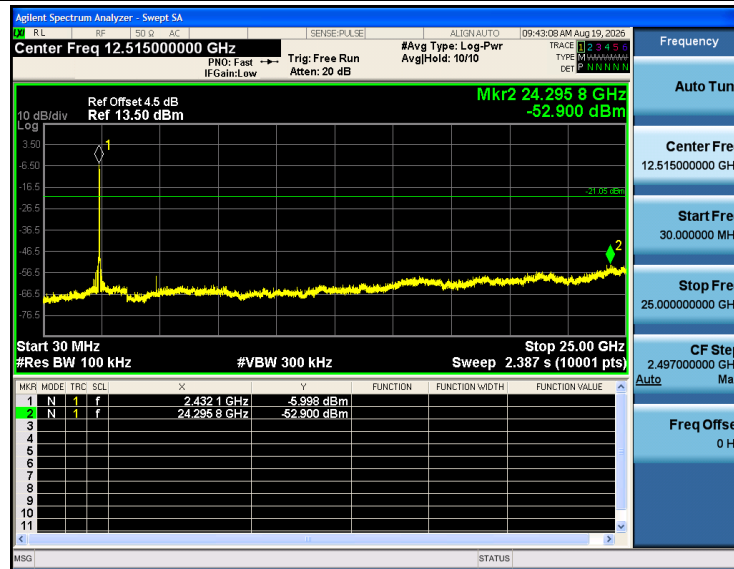
802.11n(HT20)_2412_30~25000



802.11n(HT20)_2437_0~Reference



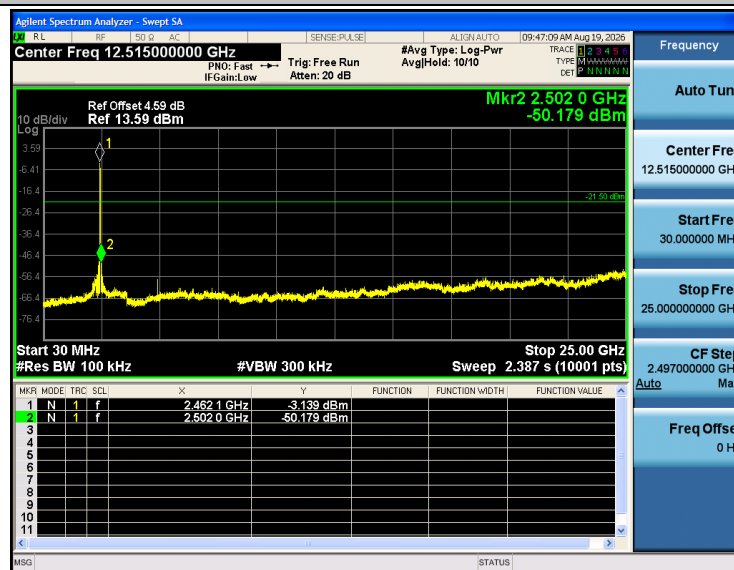
802.11n(HT20)_2437_30~25000



802.11n(HT20)_2462_0~Reference



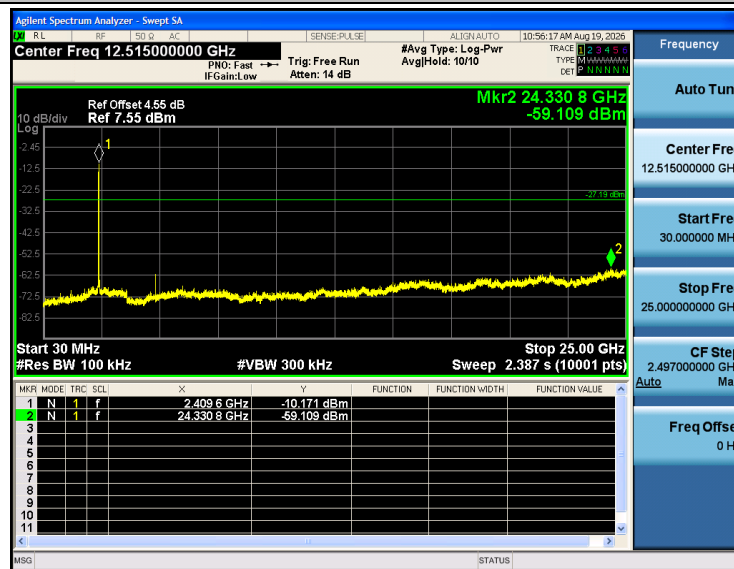
802.11n(HT20)_2462_30~25000



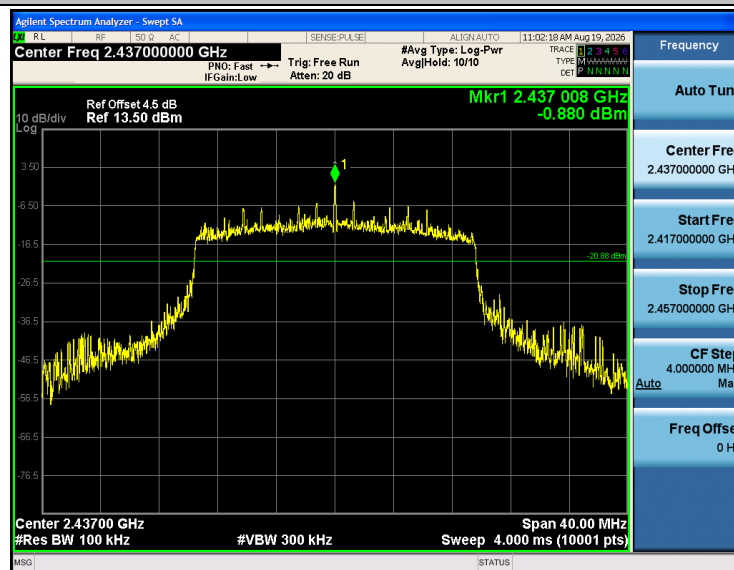
802.11ax(HE20)_2412_0~Reference



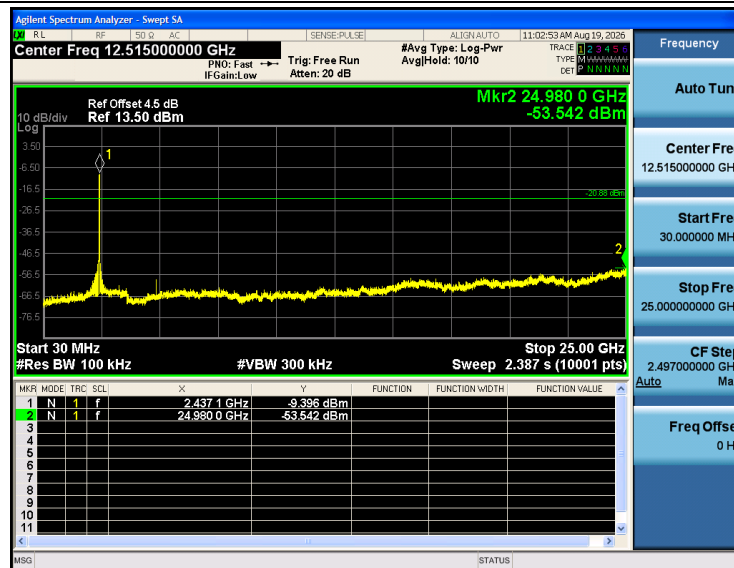
802.11ax(HE20)_2412_30~25000



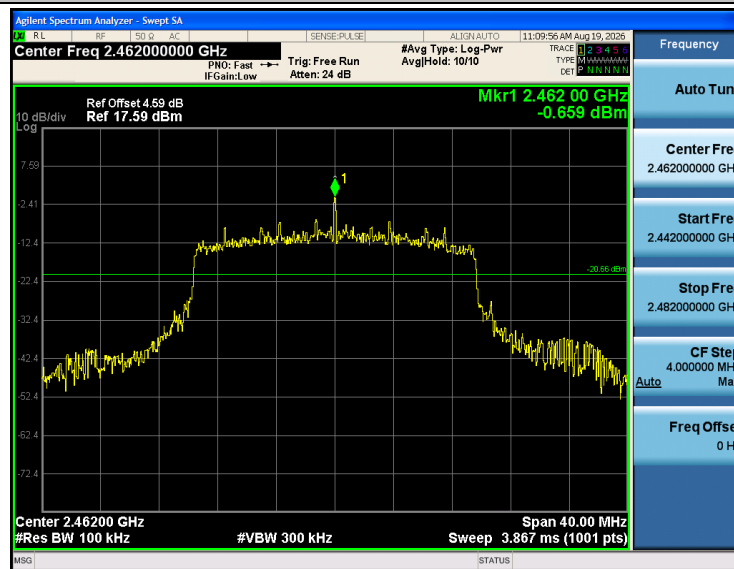
802.11ax(HE20)_2437_0~Reference



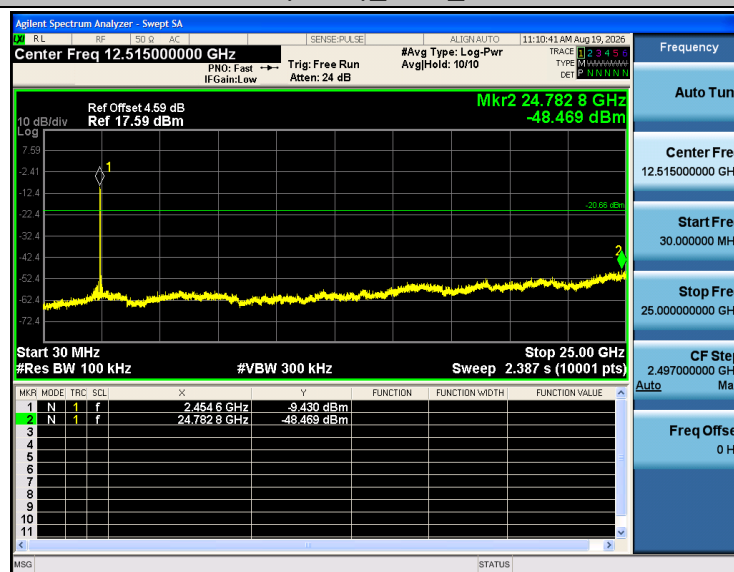
802.11ax(HE20)_2437_30~25000



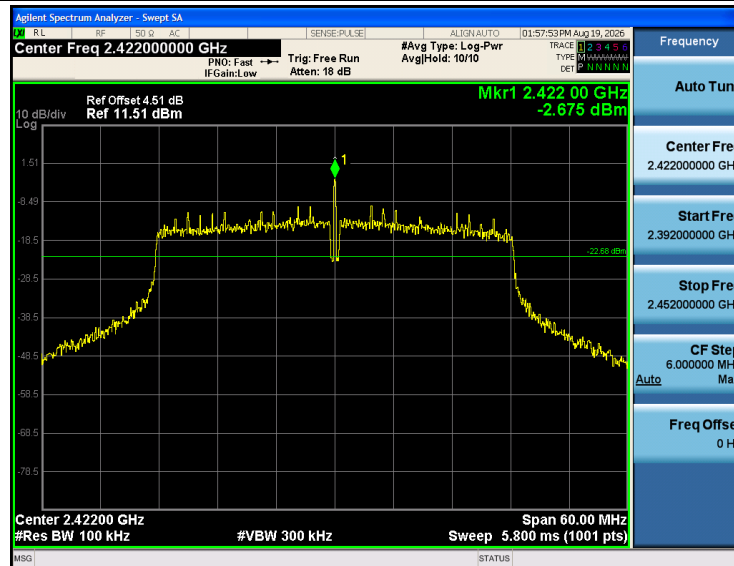
802.11ax(HE20)_2462_0~Reference



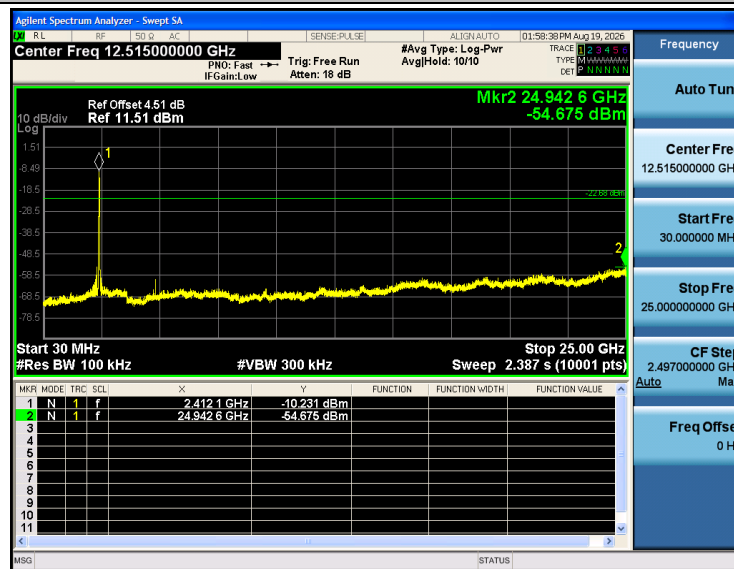
802.11ax(HE20)_2462_30~25000



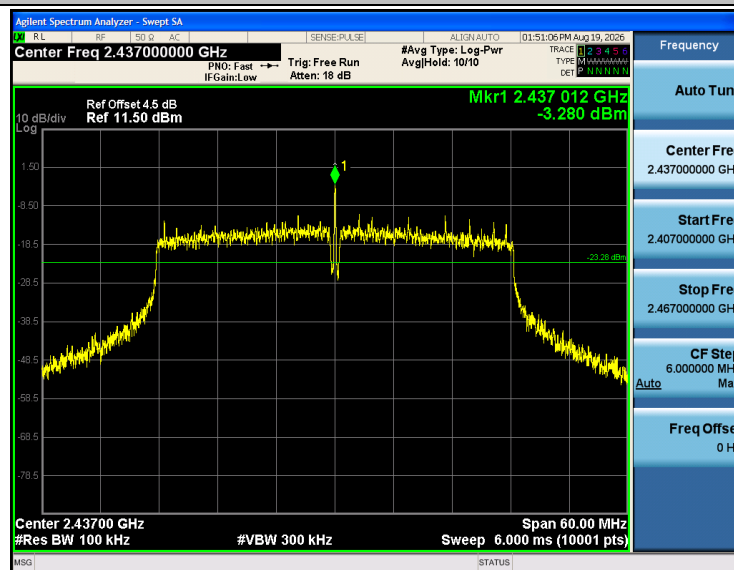
802.11n(HT40)_2422_0~Reference



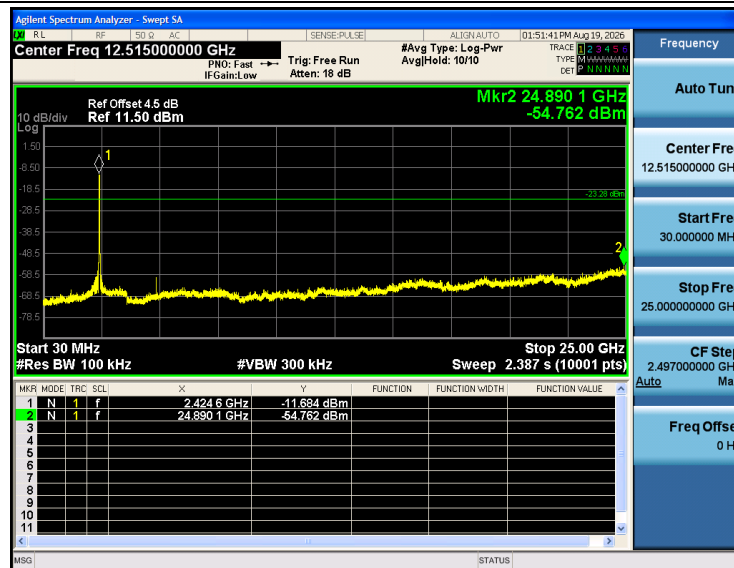
802.11n(HT40)_2422_30~25000



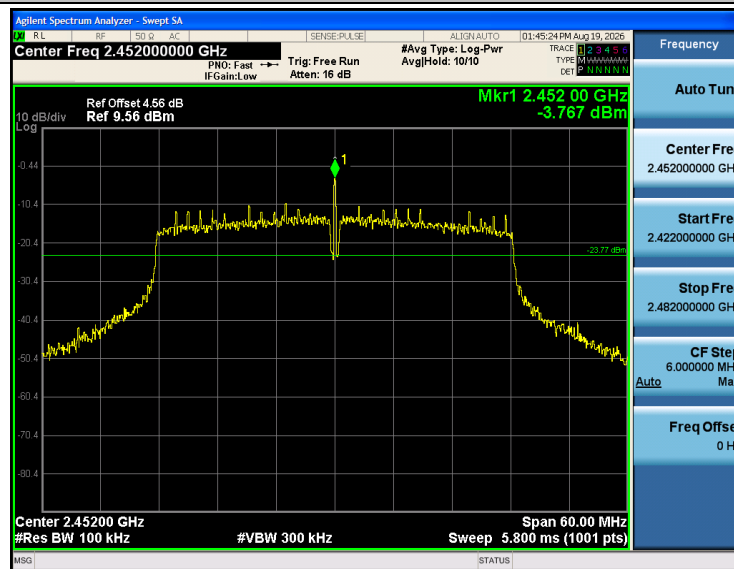
802.11n(HT40)_2437_0~Reference



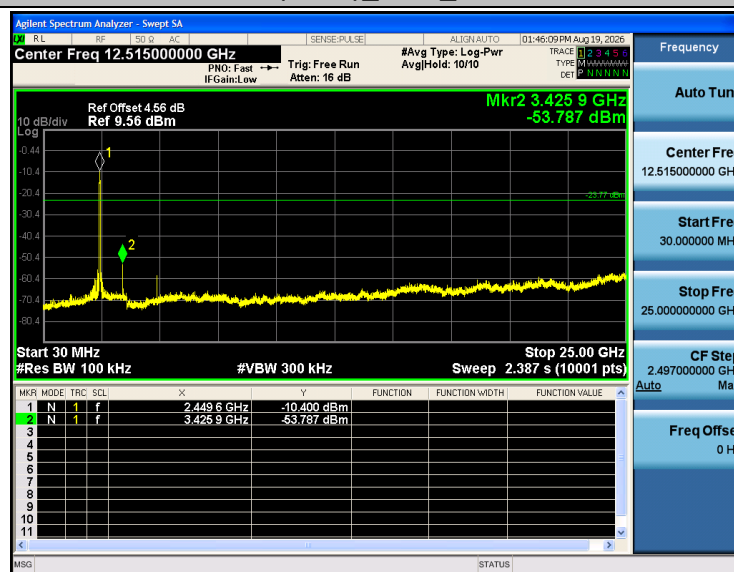
802.11n(HT40)_2437_30~25000



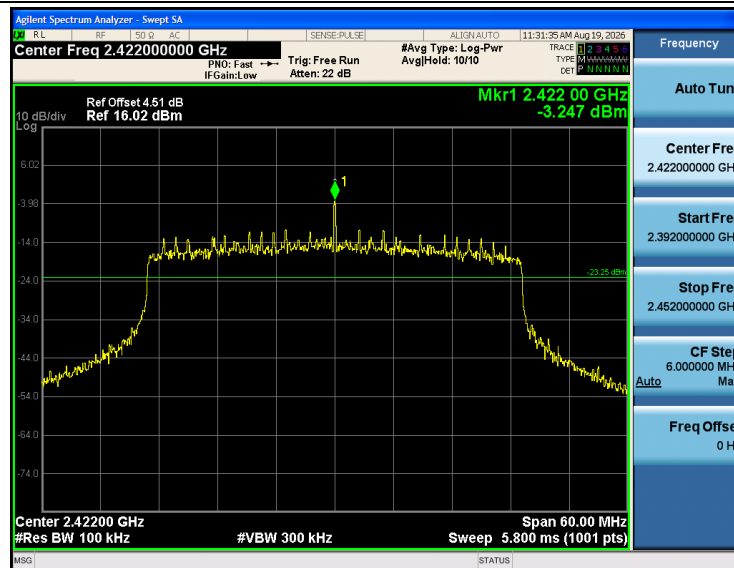
802.11n(HT40)_2452_0~Reference



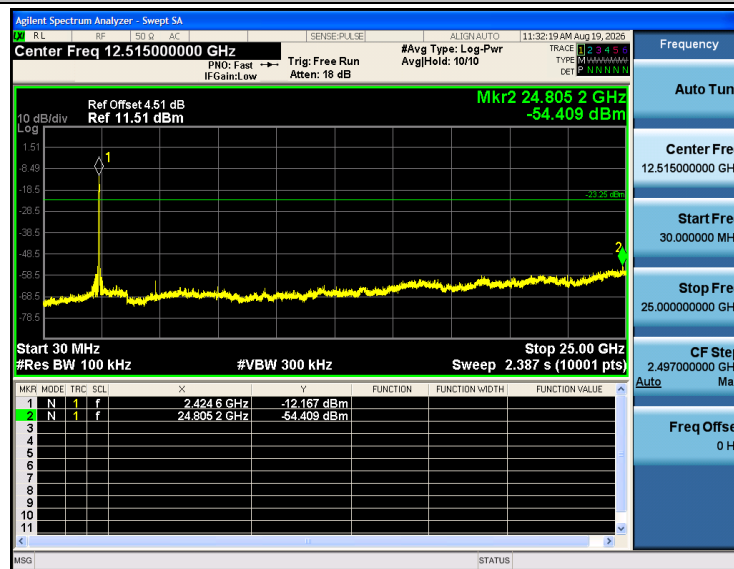
802.11n(HT40)_2452_30~25000



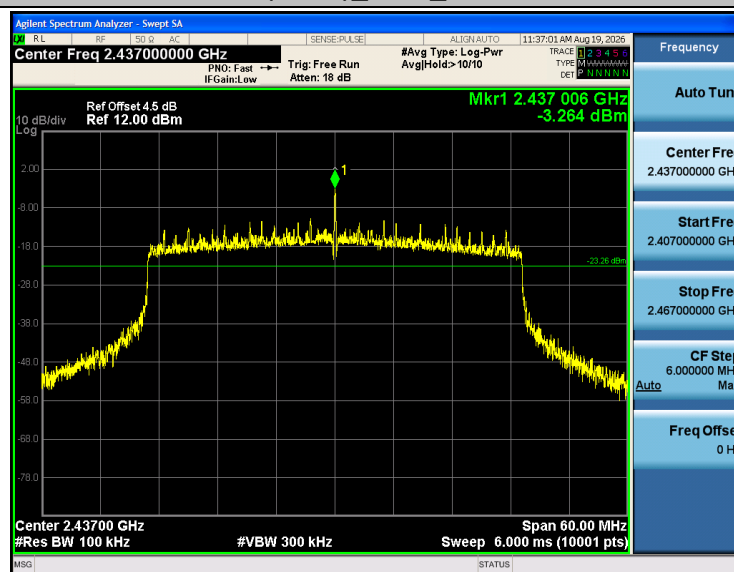
802.11ax(HE40)_2422_0~Reference



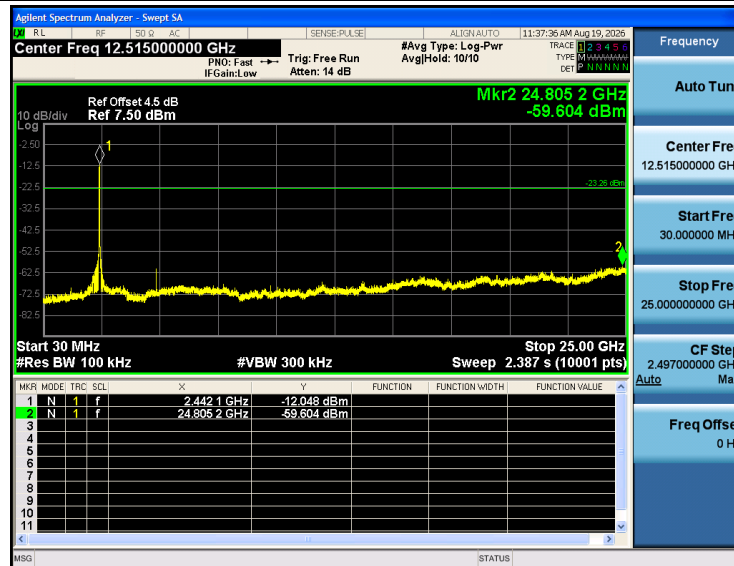
802.11ax(HE40)_2422_30~25000



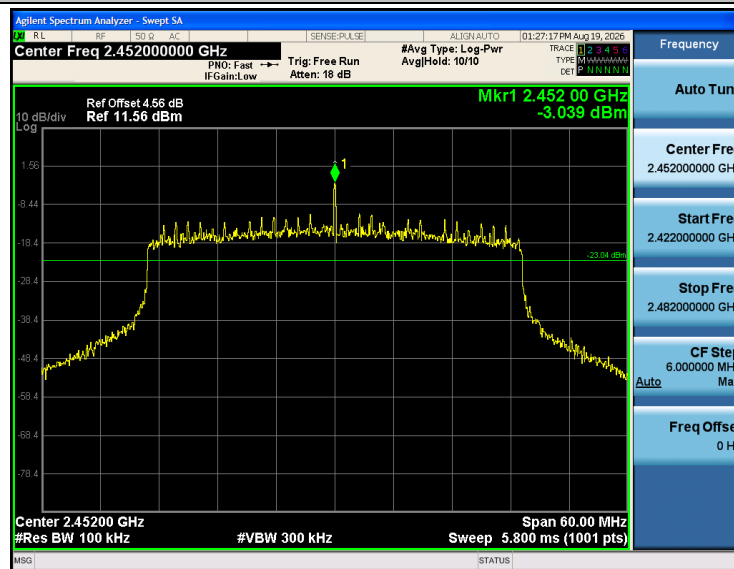
802.11ax(HE40)_2437_0~Reference



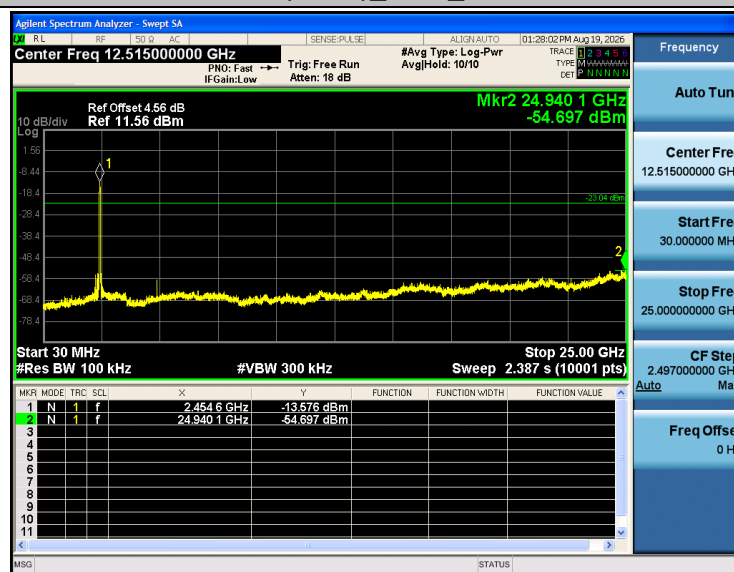
802.11ax(HE40)_2437_30~25000



802.11ax(HE40)_2452_0~Reference



802.11ax(HE40)_2452_30~25000





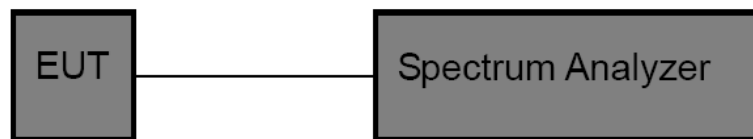
3.5. DTS Bandwidth

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (a)(2)/ RSS-247 6.3.1 (a):

Test Item	Limit	Frequency Range(MHz)
DTS Bandwidth	≥ 500 KHz (6dB bandwidth)	2400~2483.5

Test Configuration



Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. DTS Spectrum Setting:
 - (1) Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz.
 - (2) Set the VBW $\geq [3 \times \text{RBW}]$.
 - (3) Detector = Peak.
 - (4) Trace mode = Max hold.
 - (5) Sweep = Auto couple.OCB Spectrum Setting:
 - (1) Set RBW = 1% ~ 5% occupied bandwidth.
 - (2) Set the video bandwidth (VBW) ≥ 3 RBW.
 - (3) Detector = Peak.
 - (4) Trace mode = Max hold.
 - (5) Sweep = Auto couple.

NOTE: The EUT was set to continuously transmitting in each mode and low, Middle and high channel for the test.

Test Mode

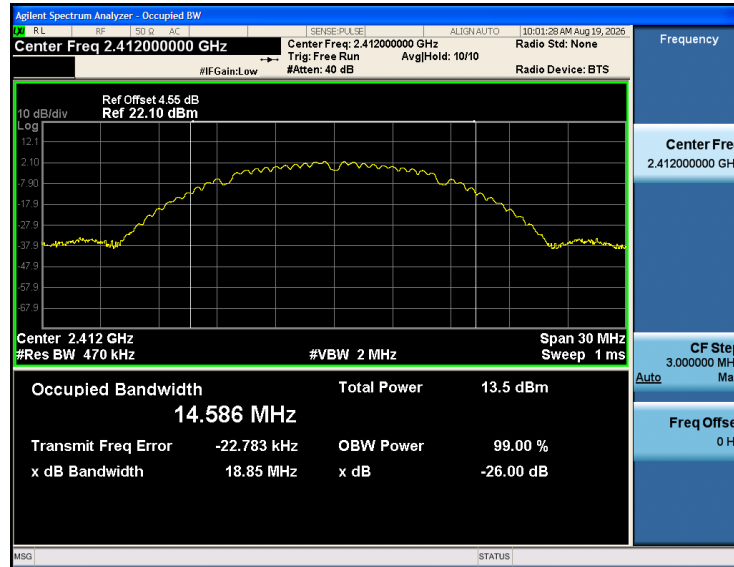
Please refer to the clause 2.4.

**Test Results**

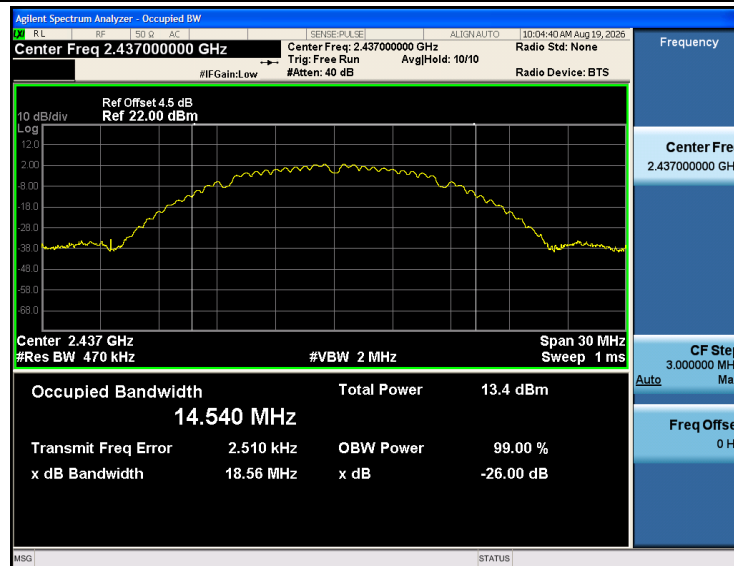
Test Mode	Frequency [MHz]	OBW [MHz]	DTS BW [MHz]	Limit [MHz]	Verdict
802.11b	2412	14.586	10.19	≥ 0.5	PASS
	2437	14.540	10.19	≥ 0.5	PASS
	2462	14.520	10.19	≥ 0.5	PASS
802.11g	2412	17.763	16.23	≥ 0.5	PASS
	2437	17.551	16.13	≥ 0.5	PASS
	2462	17.643	16.02	≥ 0.5	PASS
802.11n(HT20)	2412	18.901	17.35	≥ 0.5	PASS
	2437	18.836	17.41	≥ 0.5	PASS
	2462	18.841	17.42	≥ 0.5	PASS
802.11ax(HE20)	2412	19.557	18.83	≥ 0.5	PASS
	2437	19.415	18.73	≥ 0.5	PASS
	2462	19.459	18.63	≥ 0.5	PASS
802.11n(HT40)	2422	37.823	36.34	≥ 0.5	PASS
	2437	37.671	35.70	≥ 0.5	PASS
	2452	37.796	35.93	≥ 0.5	PASS
802.11ax(HE40)	2422	38.519	36.97	≥ 0.5	PASS
	2437	38.521	37.39	≥ 0.5	PASS
	2452	38.569	37.40	≥ 0.5	PASS



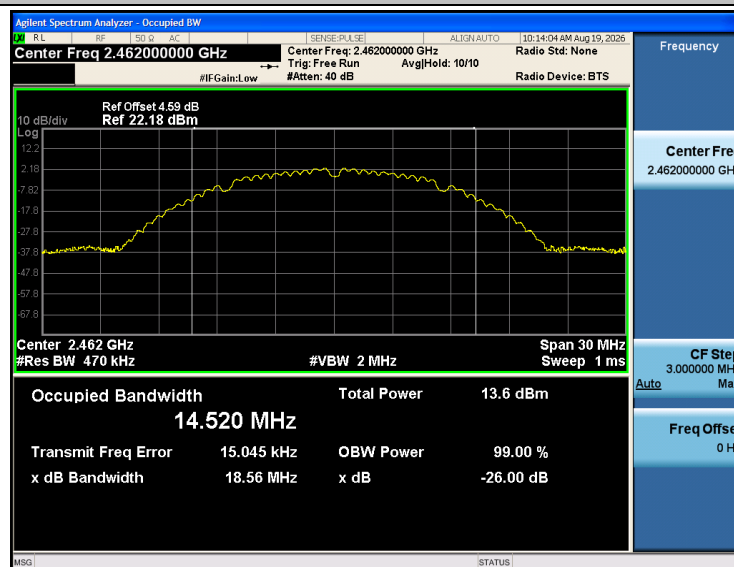
802.11b_OBW_2412



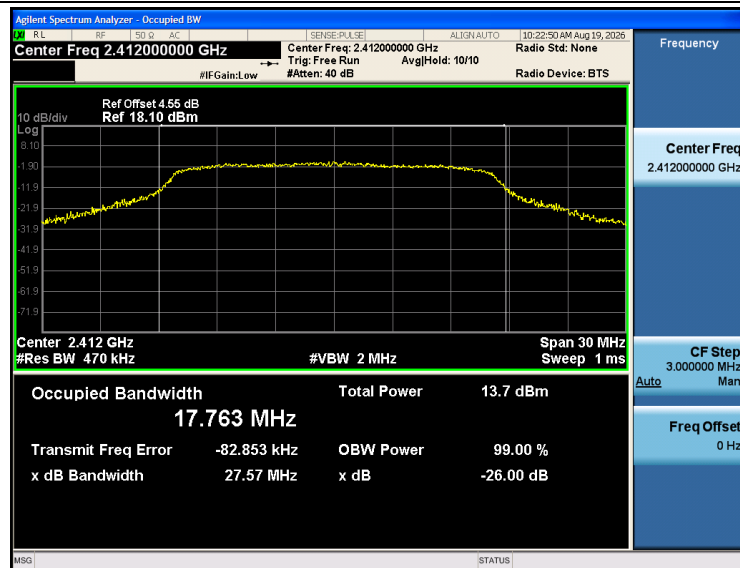
802.11b_OBW_2437



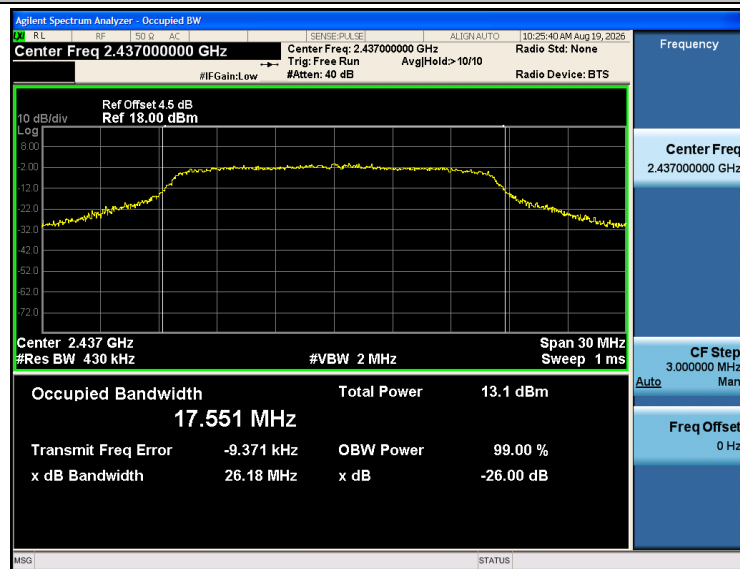
802.11b_OBW_2462



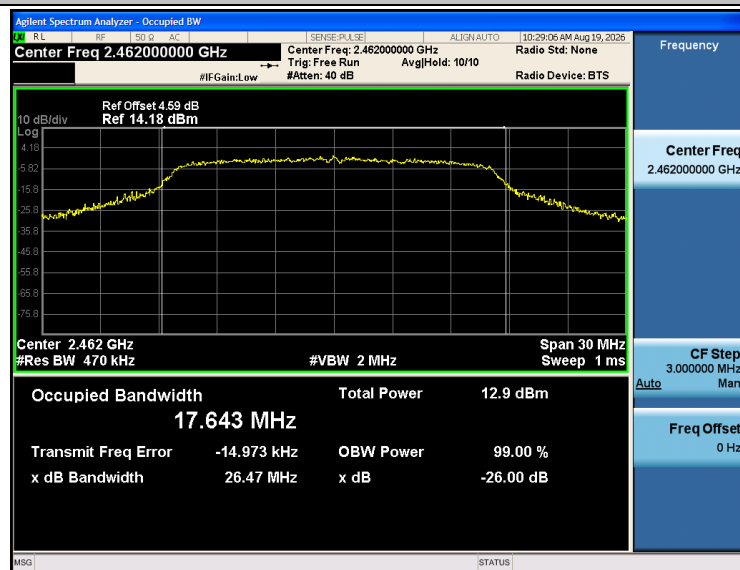
802.11g_OBW_2412



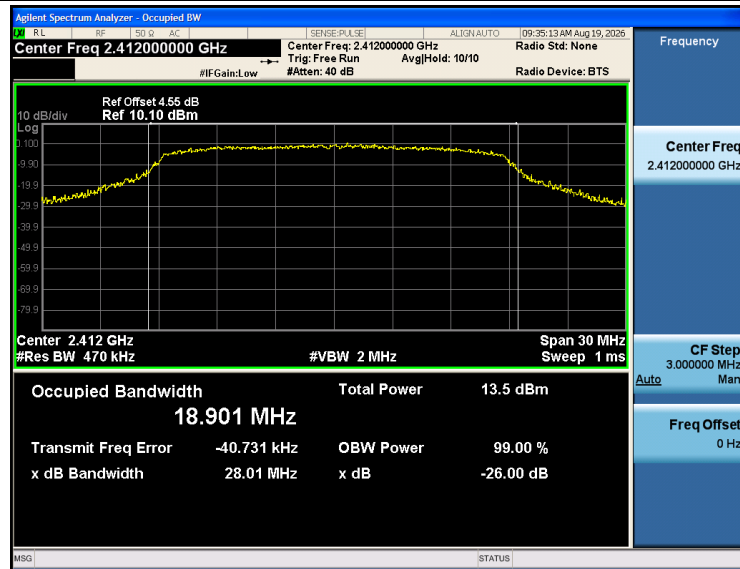
802.11g_OBW_2437



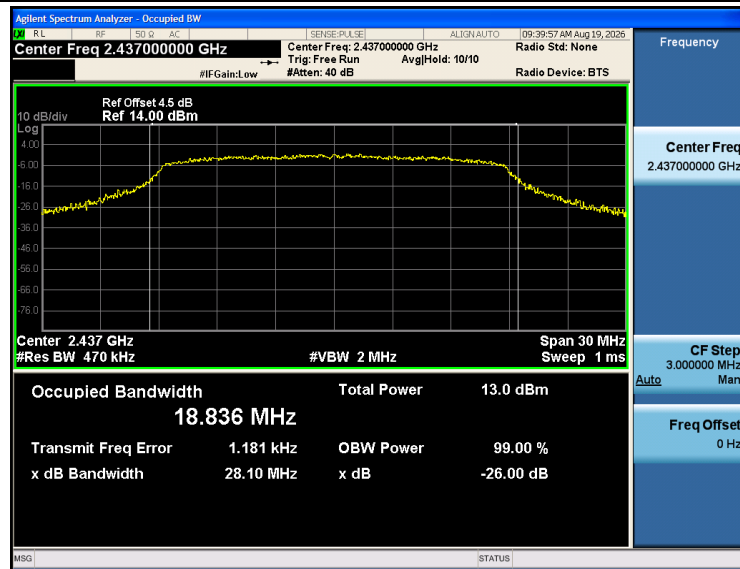
802.11g_OBW_2462



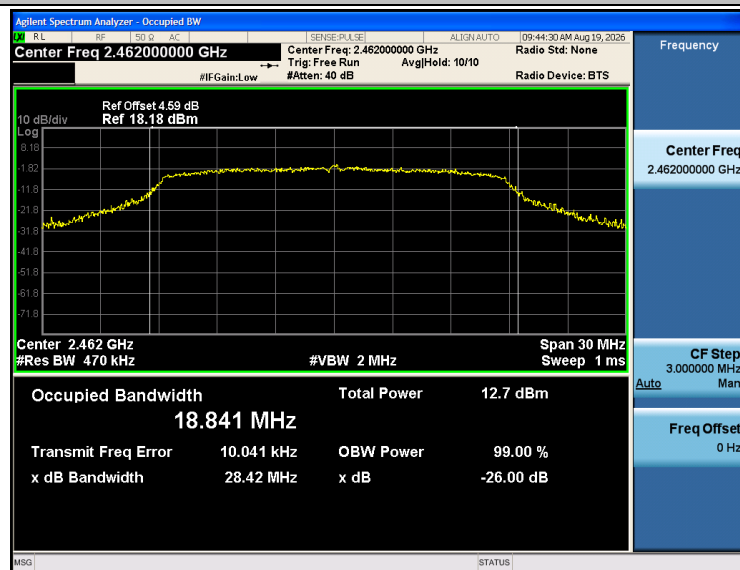
802.11n(HT20)_OBW_2412



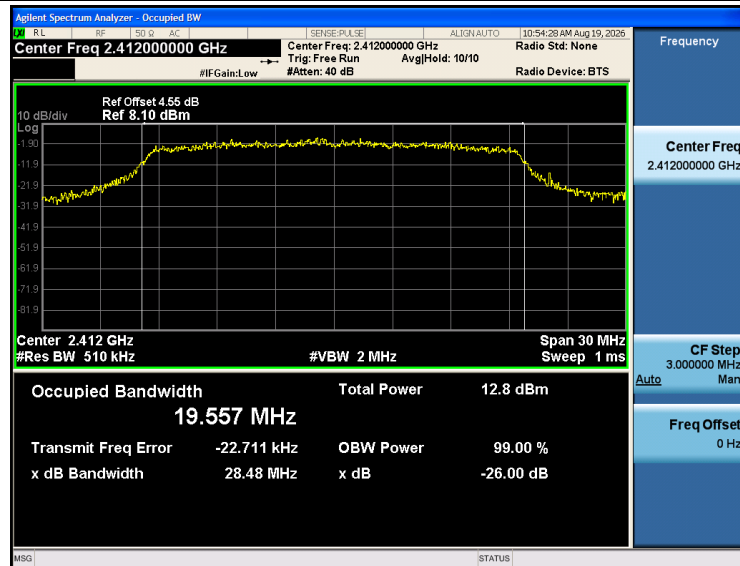
802.11n(HT20)_OBW_2437



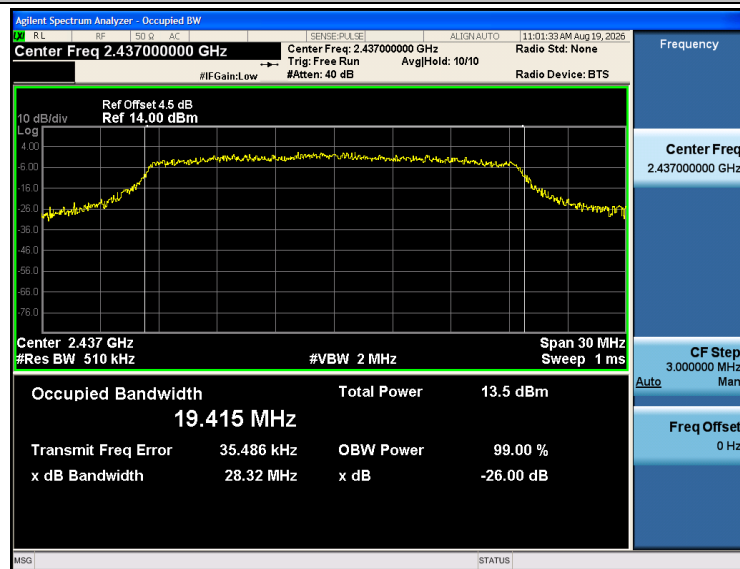
802.11n(HT20)_OBW_2462



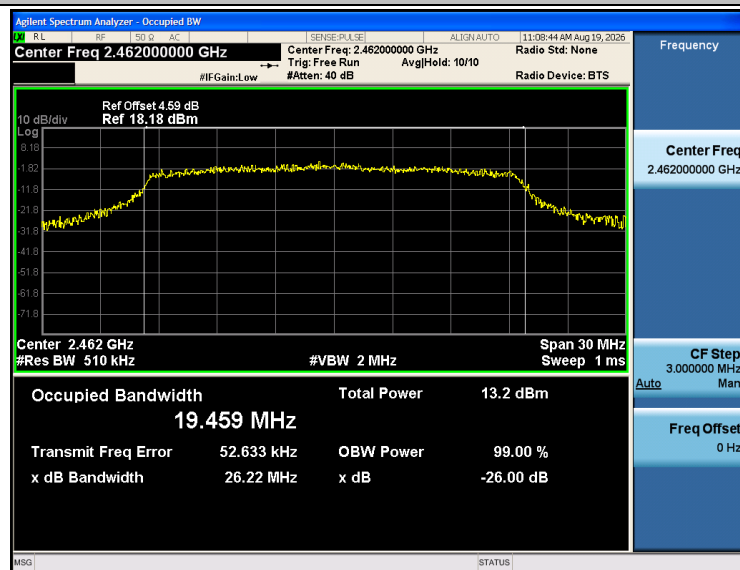
802.11ax(HE20)_OBW_2412



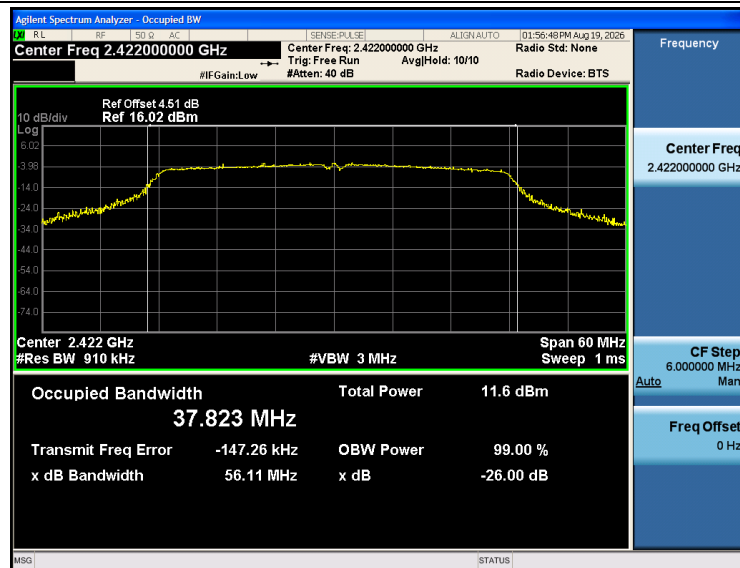
802.11ax(HE20)_OBW_2437



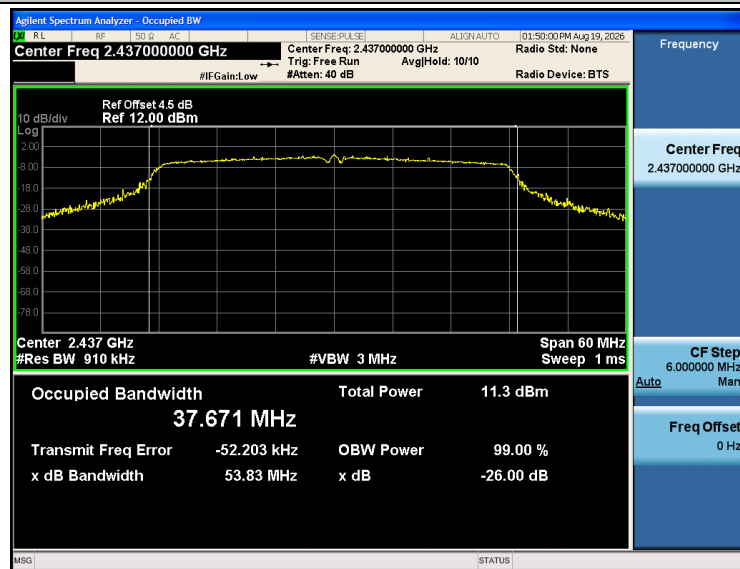
802.11ax(HE20)_OBW_2462



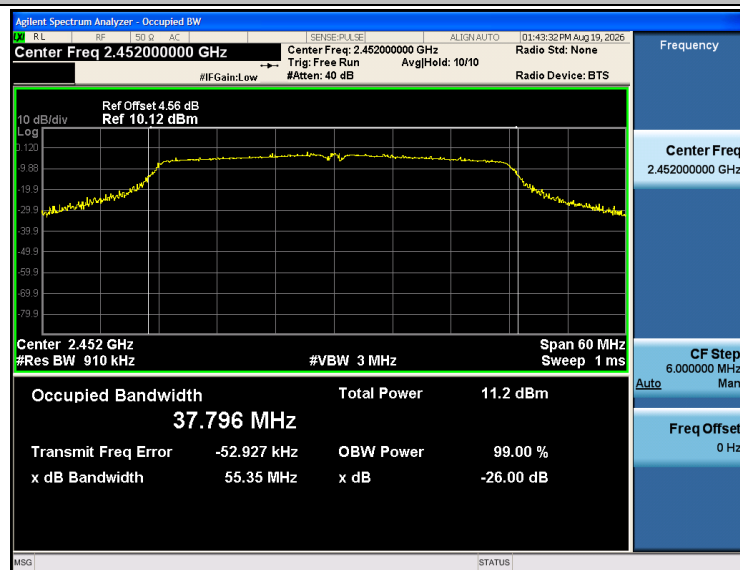
802.11n(HT40)_OBW_2422



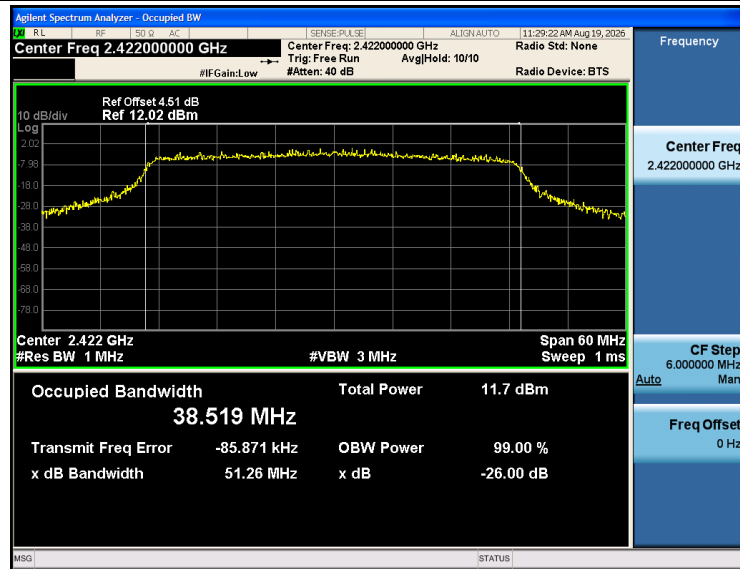
802.11n(HT40)_OBW_2437



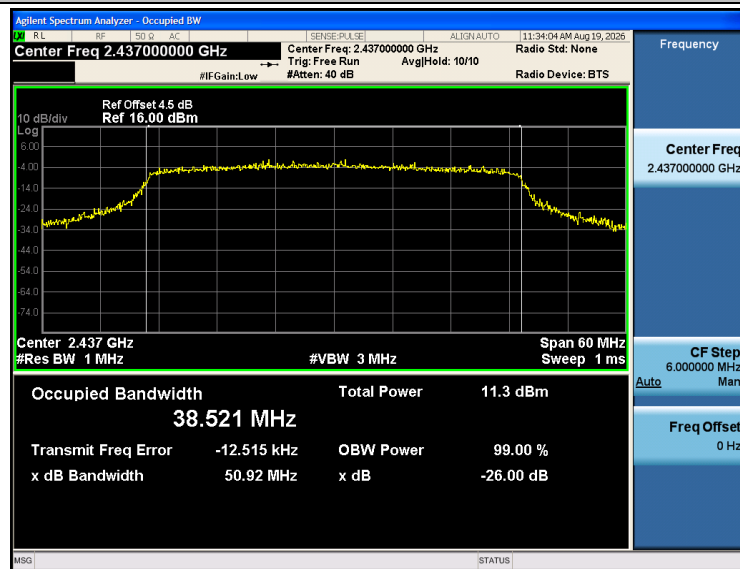
802.11n(HT40)_OBW_2452



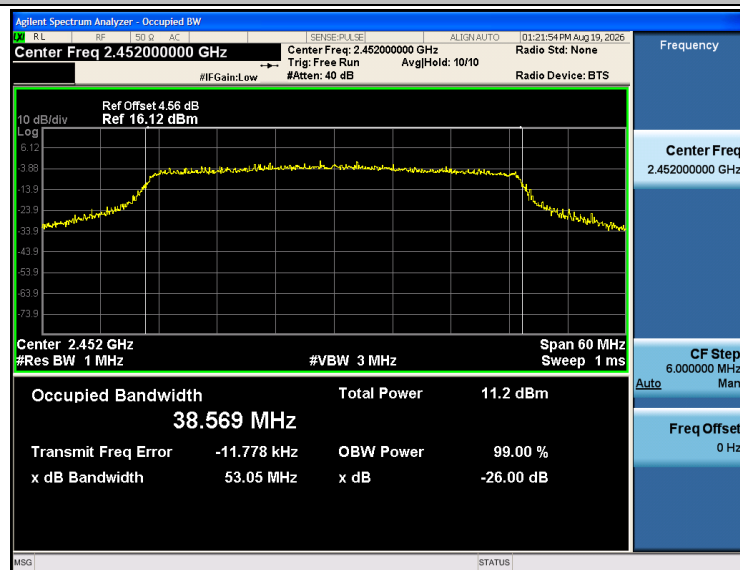
802.11ax(HE40)_OBW_2422



802.11ax(HE40)_OBW_2437

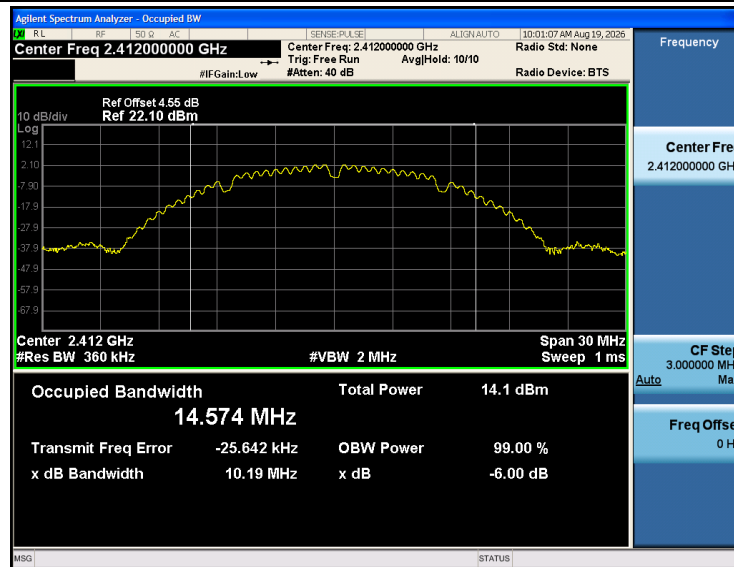


802.11ax(HE40)_OBW_2452

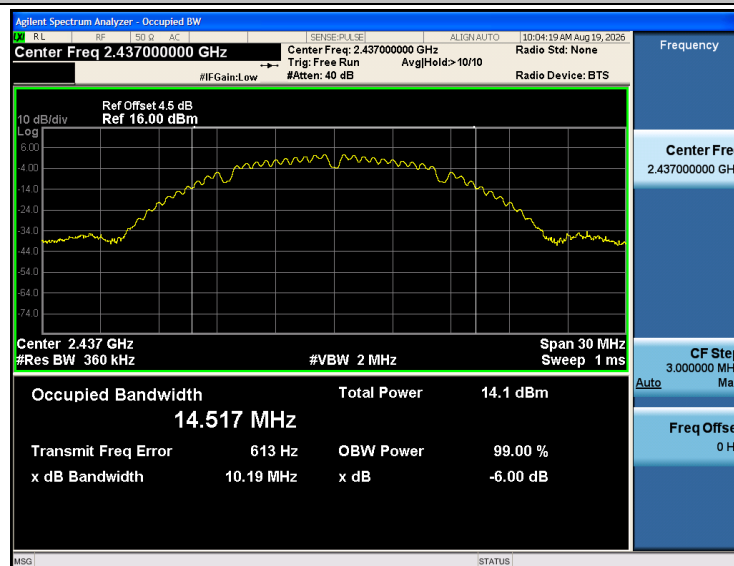




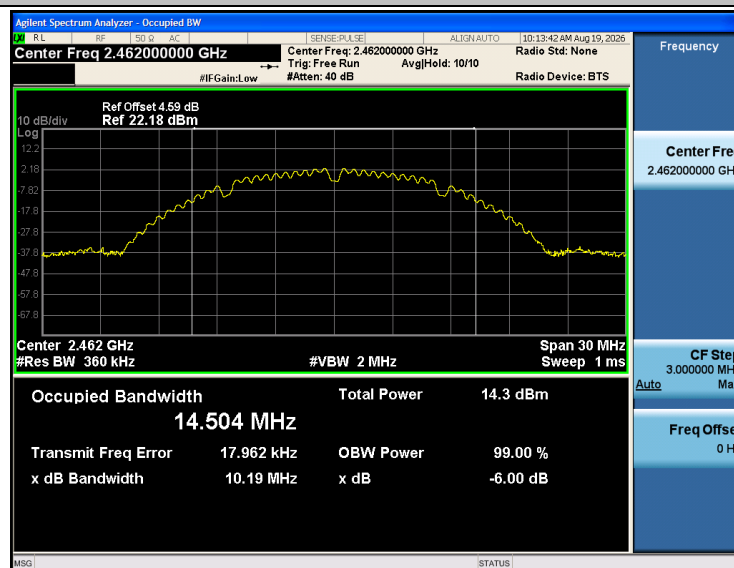
802.11b_DTS_2412



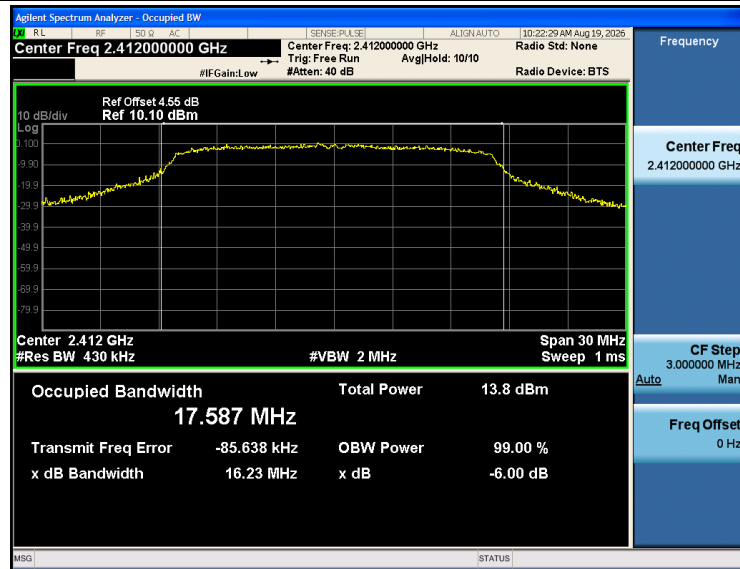
802.11b_DTS_2437



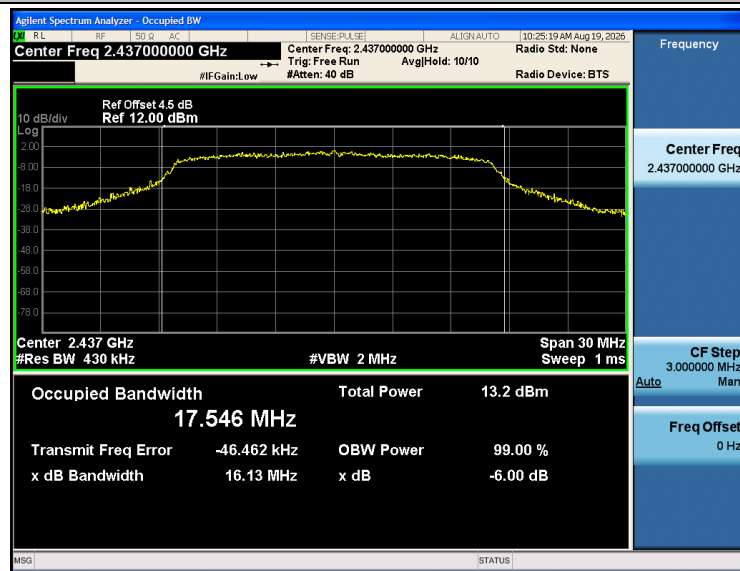
802.11b_DTS_2462



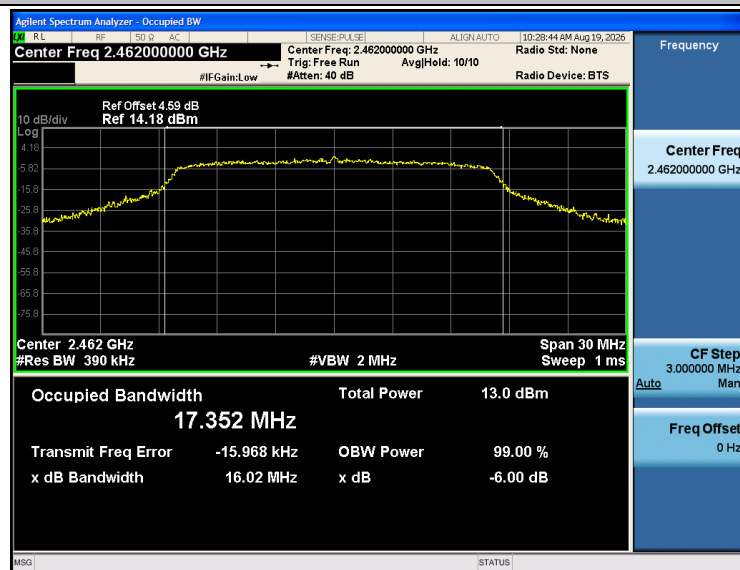
802.11g_DTS_2412



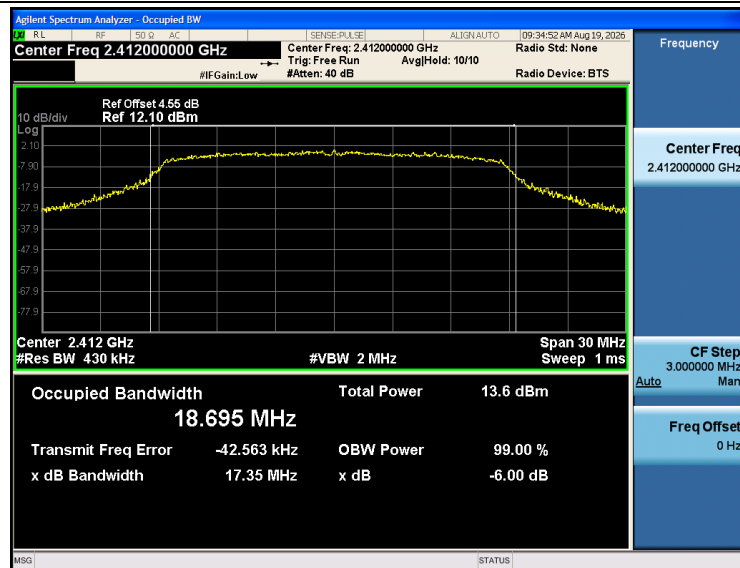
802.11g_DTS_2437



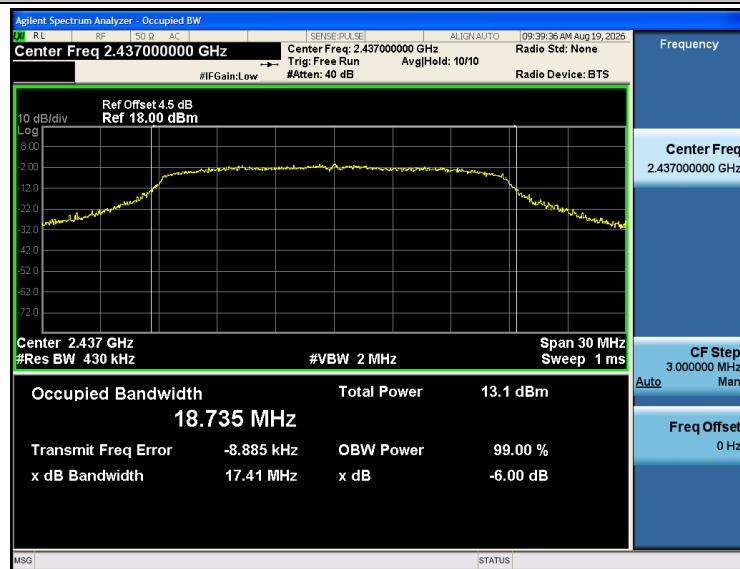
802.11g_DTS_2462



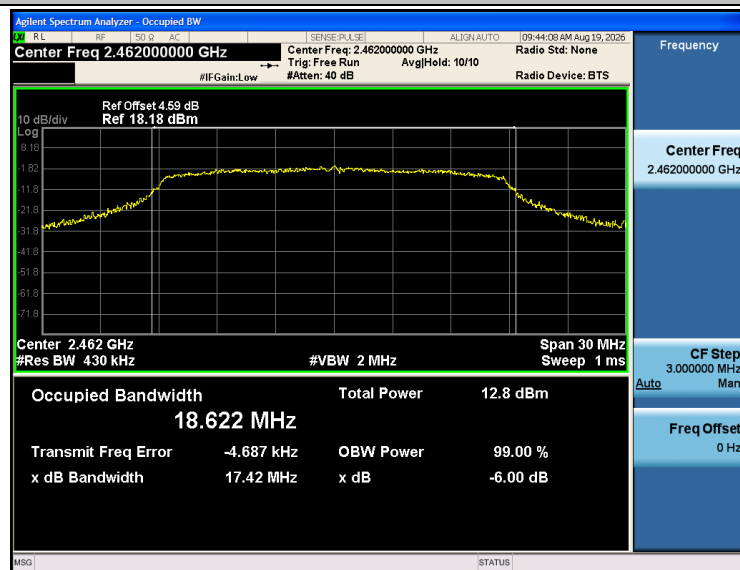
802.11n(HT20)_DTS_2412



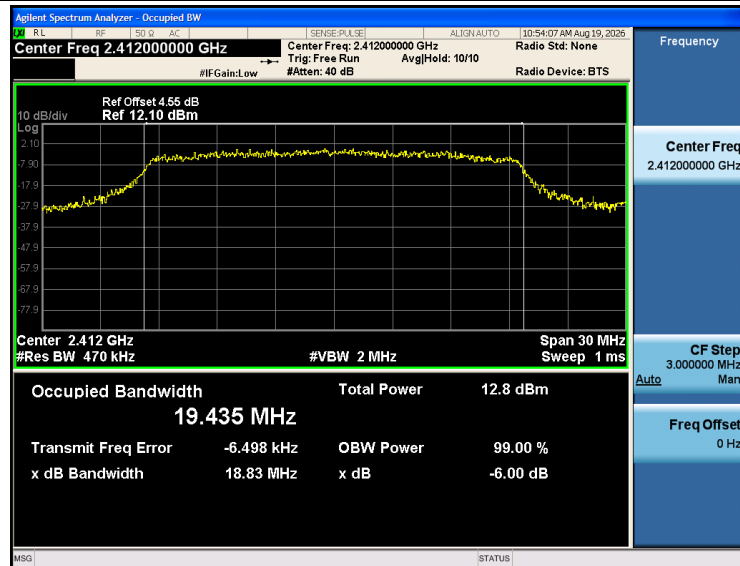
802.11n(HT20)_DTS_2437



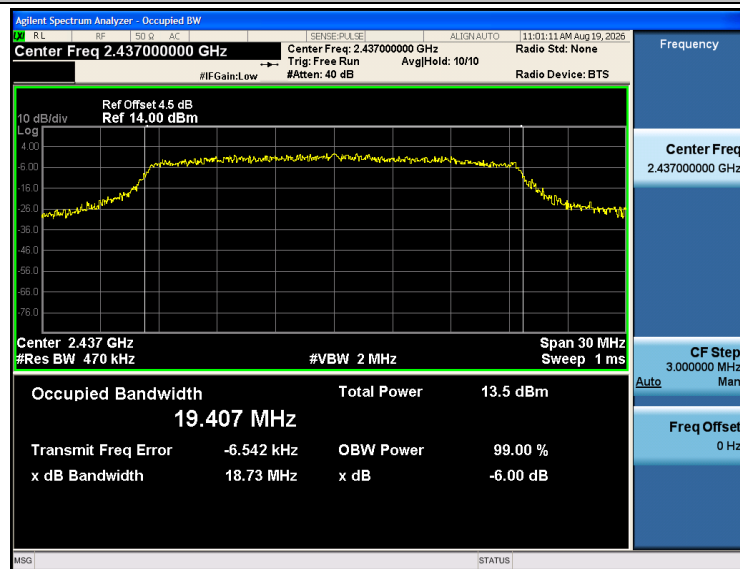
802.11n(HT20)_DTS_2462



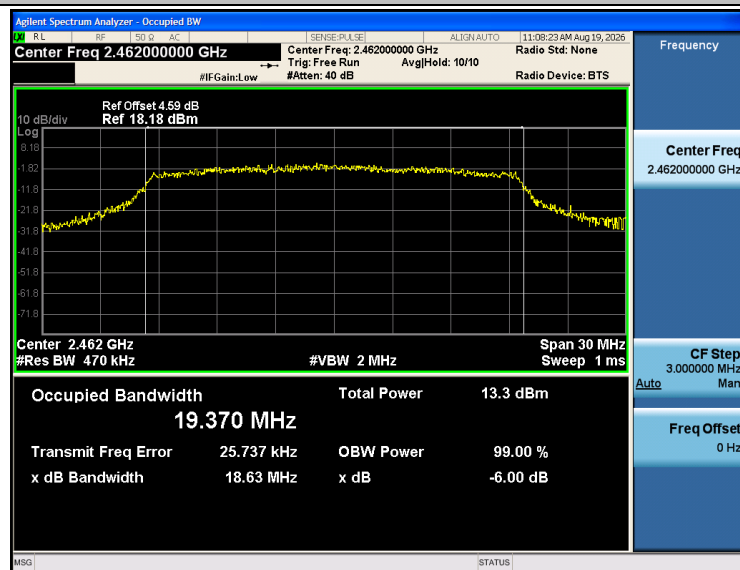
802.11ax(HE20)_DTS_2412



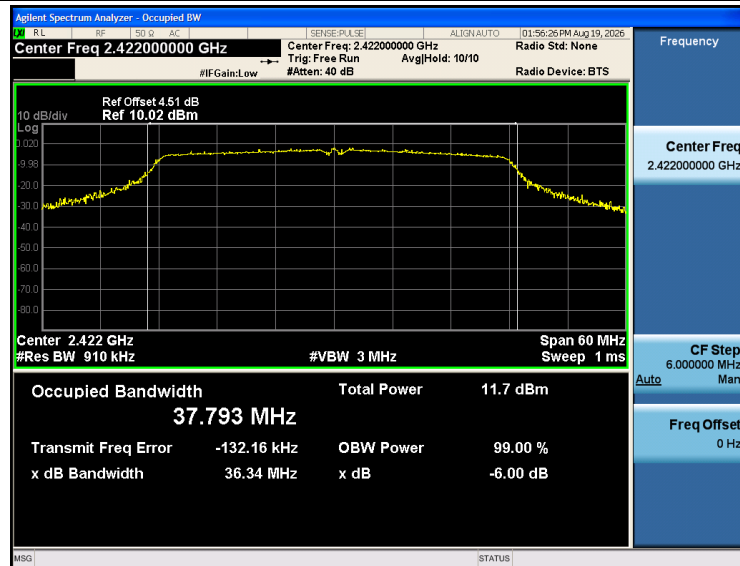
802.11ax(HE20)_DTS_2437



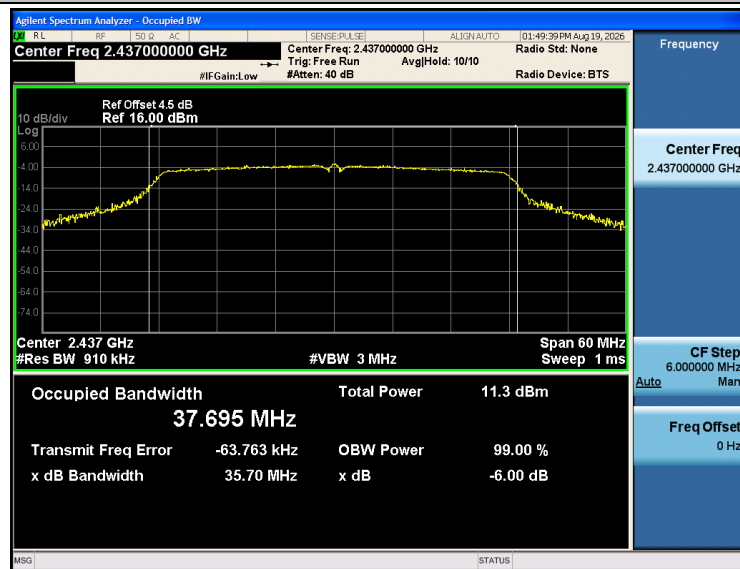
802.11ax(HE20)_DTS_2462



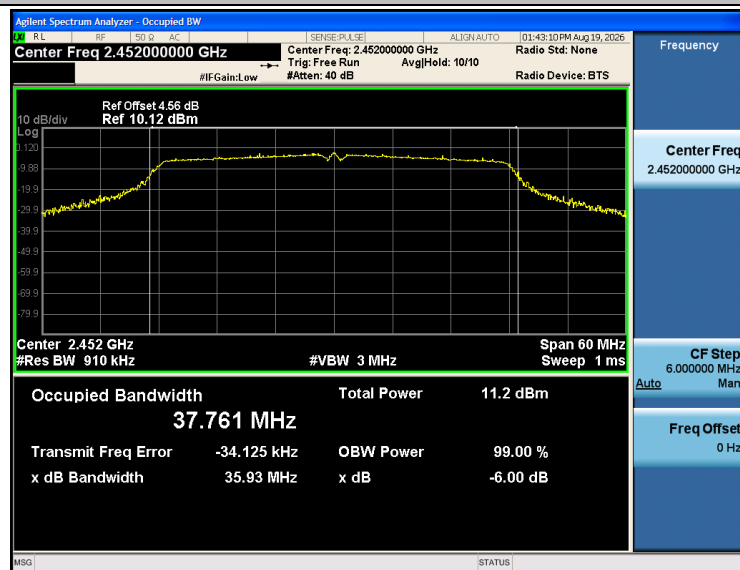
802.11n(HT40)_DTS_2422



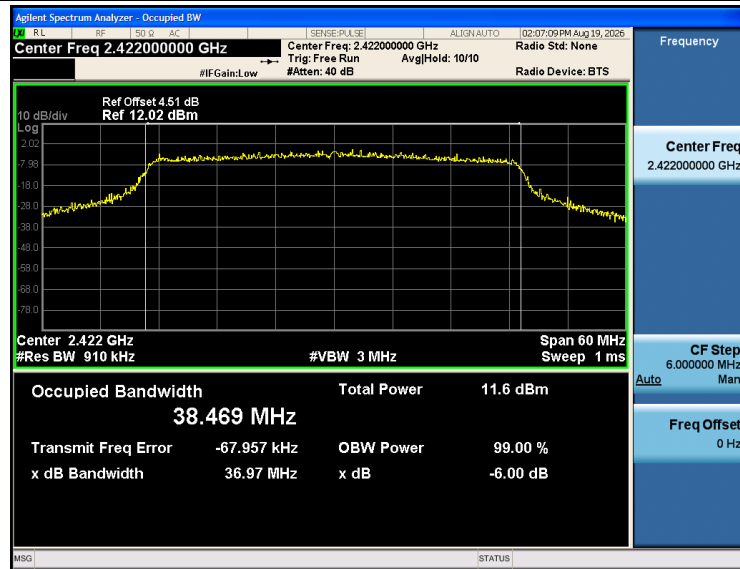
802.11n(HT40)_DTS_2437



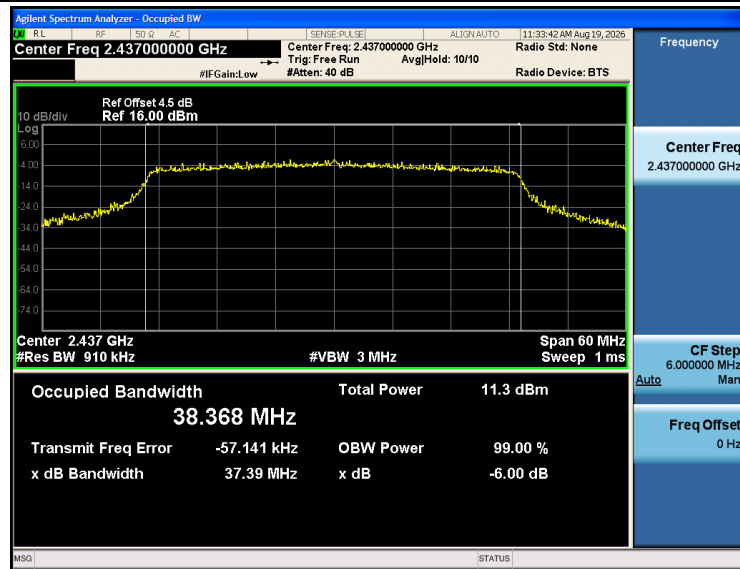
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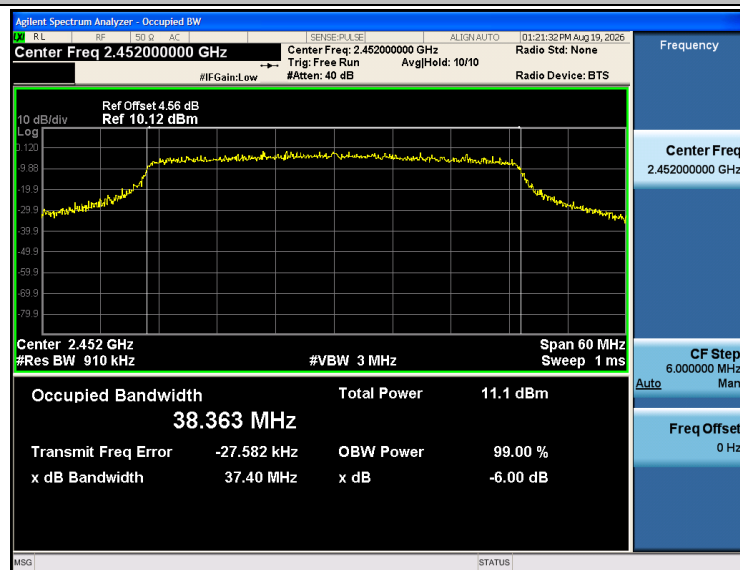
802.11ax(HE40)_DTS_2422



802.11ax(HE40)_DTS_2437



802.11ax(HE40)_DTS_2452





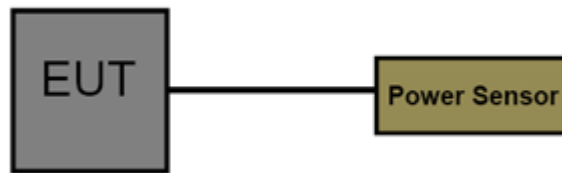
3.6. Maximum Conducted Output Power

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (b)(3)/ RSS-247 6.3.2:

Section	Test Item	Limit	Frequency Range(MHz)
CFR 47 FCC 15.247(b)(3)	Maximum conducted output power	1 Watt or 30dBm	2400~2483.5
ISED RSS-247 6.3.2	Maximum conducted output power	1 Watt or 30dBm	2400~2483.5
ISED RSS-247 6.3.2	EIRP	4 Watt or 36dBm	2400~2483.5

Test Configuration



Test Procedure

1. The maximum conducted output power may be measured using a broadband RF power meter.
2. Power measurements were performed only when the EUT was transmitting at its AVG power control level using a broadband power meter with a pulse sensor.
3. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.
4. Record the measurement data.

Test Mode

Please refer to the clause 2.4.

Test Result



Test Mode	Frequency [MHz]	Conducted Peak power [dBm]	Ant. gain [dBi]	E.I.R.P Result [dBm]	Conducted output power Limit[dBm]	E.I.R.P Limit[dBm]	Verdict
802.11b	2412	12.85	4.05	16.90	<=30	<=36	PASS
	2437	12.80	4.05	16.85	<=30	<=36	PASS
	2462	13.01	4.05	17.06	<=30	<=36	PASS
802.11g	2412	12.85	4.05	16.90	<=30	<=36	PASS
	2437	12.29	4.05	16.34	<=30	<=36	PASS
	2462	12.08	4.05	16.13	<=30	<=36	PASS
802.11n(HT20)	2412	12.67	4.05	16.72	<=30	<=36	PASS
	2437	12.14	4.05	16.19	<=30	<=36	PASS
	2462	11.90	4.05	15.95	<=30	<=36	PASS
802.11ax(HE20)	2412	11.71	4.05	15.76	<=30	<=36	PASS
	2437	12.37	4.05	16.42	<=30	<=36	PASS
	2462	12.24	4.05	16.29	<=30	<=36	PASS
802.11n(HT40)	2422	10.23	4.05	14.28	<=30	<=36	PASS
	2437	9.88	4.05	13.93	<=30	<=36	PASS
	2452	9.78	4.05	13.83	<=30	<=36	PASS
802.11ax(HE40)	2422	10.34	4.05	14.39	<=30	<=36	PASS
	2437	10.05	4.05	14.10	<=30	<=36	PASS
	2452	9.88	4.05	13.93	<=30	<=36	PASS

Note 1: Test results increased RF cable loss by 0.7dB and Duty Cycle Factor.

Note 2: E.I.R.P output power = Conducted output power + Antenna gain



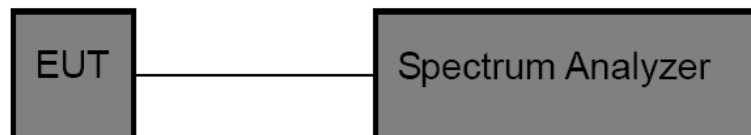
3.7. Power Spectral Density

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (e)/ RSS-247 6.3.1 (b):

Test Item	Limit	Frequency Range(MHz)
Power Spectral Density	8dBm(in any 3 kHz)	2400~2483.5

Test Configuration



Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement according to section 10.2 of KDB 558074 D01 DTS Meas Guidance v05r02.
3. Spectrum Setting:
Set analyzer center frequency to DTS channel center frequency.
Set the span to 1.5 times the DTS bandwidth.
Set the RBW to: 3 kHz
Set the VBW to: 10 kHz
Detector: RMS
Sweep time: Auto
Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

Test Mode

Please refer to the clause 2.4.

**Test Result**

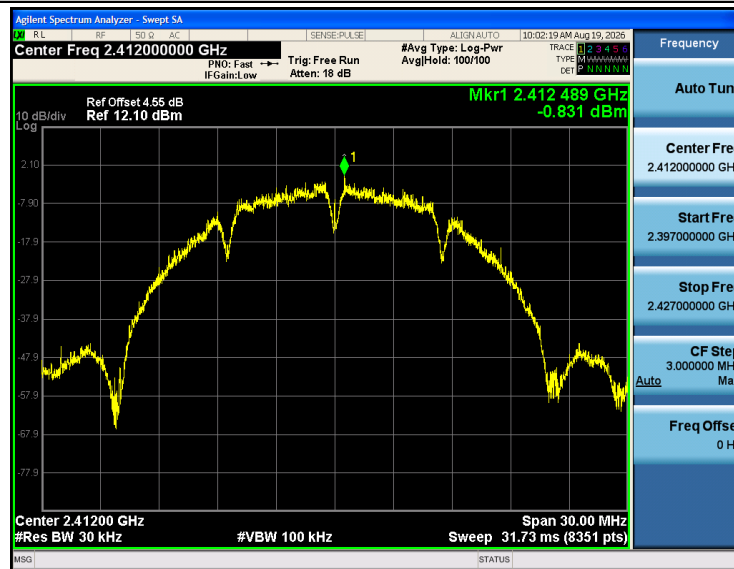
Test Mode	Frequency [MHz]	SA_PSD [dBm/30kHz]	Duty Cycle Factor	Result [dBm/30kHz]	Limit [dBm/30kHz]	Verdict
802.11b	2412	-0.83	0.29	-0.54	<=8	PASS
	2437	-1.80	0.29	-1.51	<=8	PASS
	2462	-1.90	0.29	-1.61	<=8	PASS
802.11g	2412	-1.77	1.59	-0.18	<=8	PASS
	2437	-0.34	1.59	1.25	<=8	PASS
	2462	-1.30	1.59	0.29	<=8	PASS
802.11n(HT20)	2412	-1.56	1.67	0.11	<=8	PASS
	2437	-1.33	1.67	0.34	<=8	PASS
	2462	-1.80	1.67	-0.13	<=8	PASS
802.11ax(HE20)	2412	-5.26	2.04	-3.22	<=8	PASS
	2437	-1.07	2.07	1	<=8	PASS
	2462	-0.99	2.07	1.08	<=8	PASS
802.11n(HT40)	2422	-2.43	2.80	0.37	<=8	PASS
	2437	-4.21	2.80	-1.41	<=8	PASS
	2452	-3.44	2.80	-0.64	<=8	PASS
802.11ax(HE40)	2422	-3.50	3.17	-0.33	<=8	PASS
	2437	-2.90	3.25	0.35	<=8	PASS
	2452	-3.41	3.17	-0.24	<=8	PASS

Note: Result = SA_PSD + Duty Cycle Factor

Detector = Power averaging (rms)



802.11b_2412



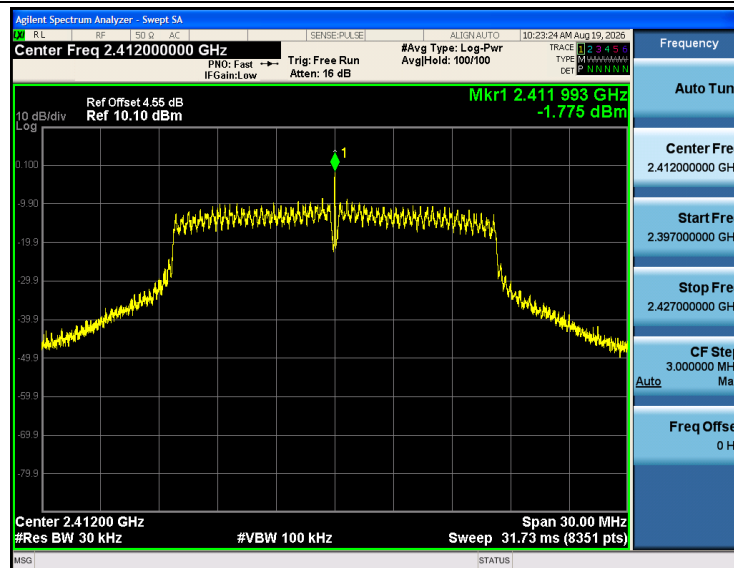
802.11b_2437



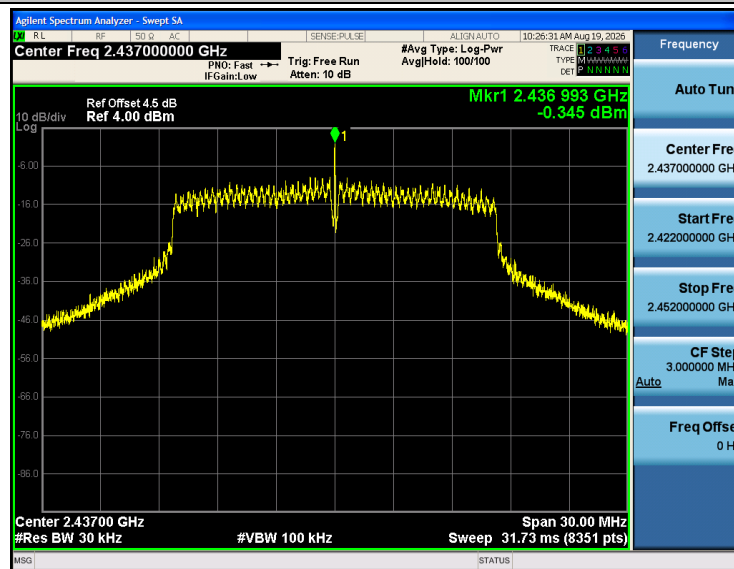
802.11b_2462



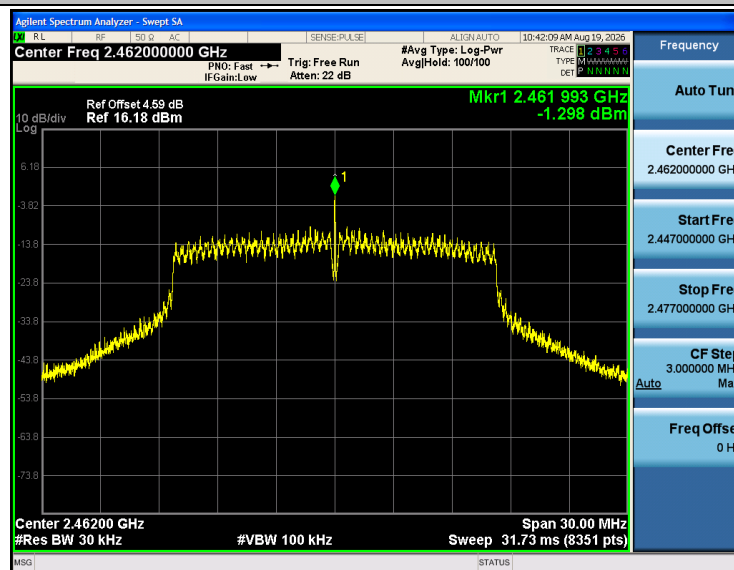
802.11g_2412



802.11g_2437



802.11g_2462



802.11n(HT20)_2412