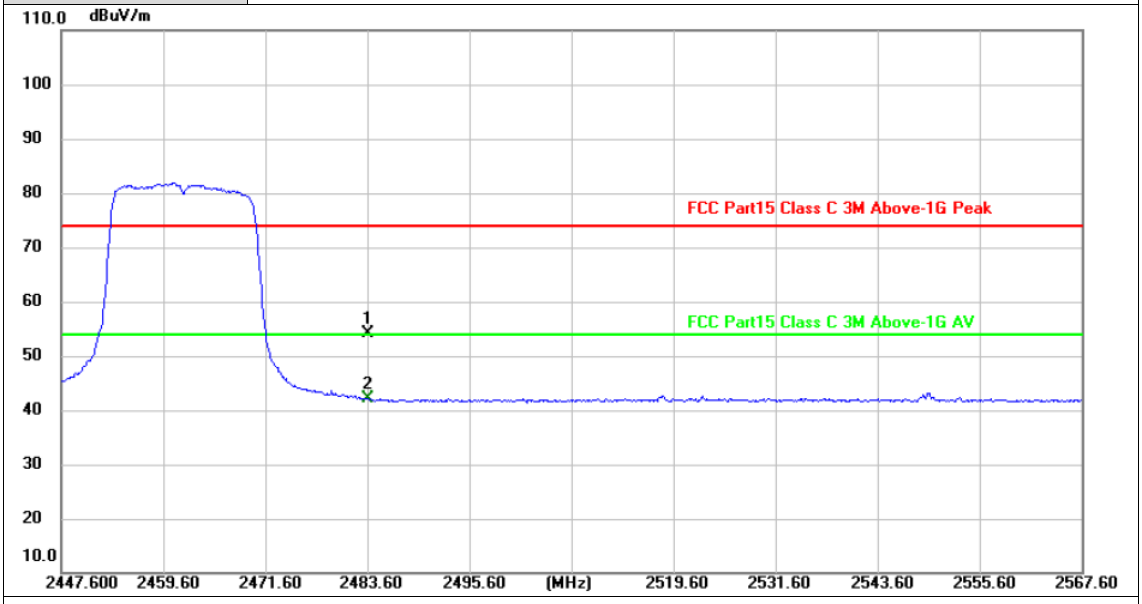
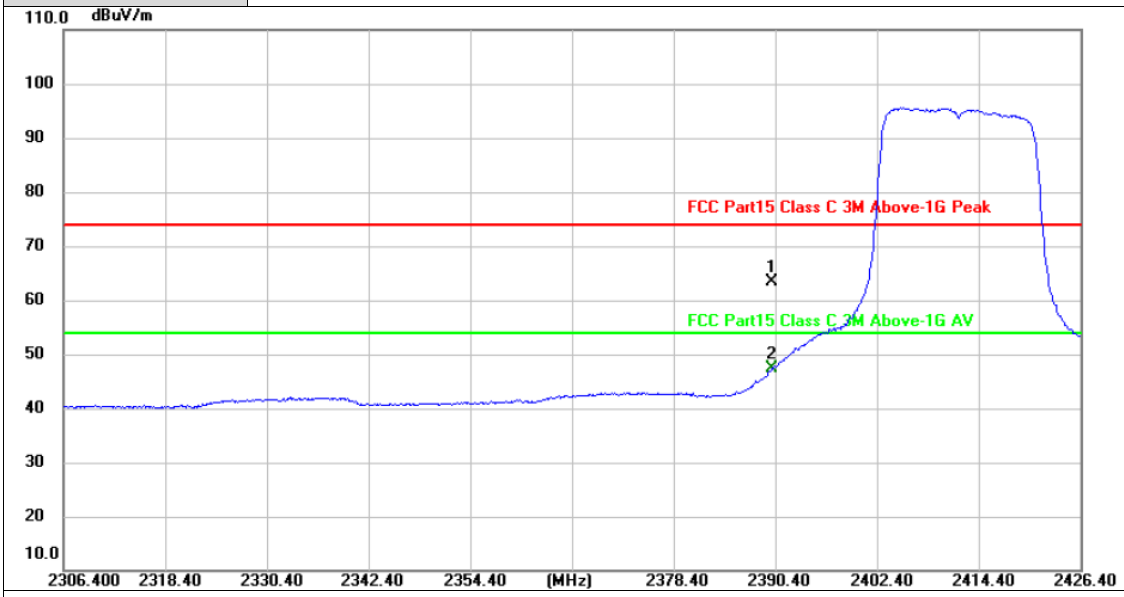
Ant. Pol.	Vertical
Test Mode:	802.11g Mode 2462MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	21.66	32.52	54.18	74.00	-19.82	peak
2 *	2483.500	9.72	32.52	42.24	54.00	-11.76	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

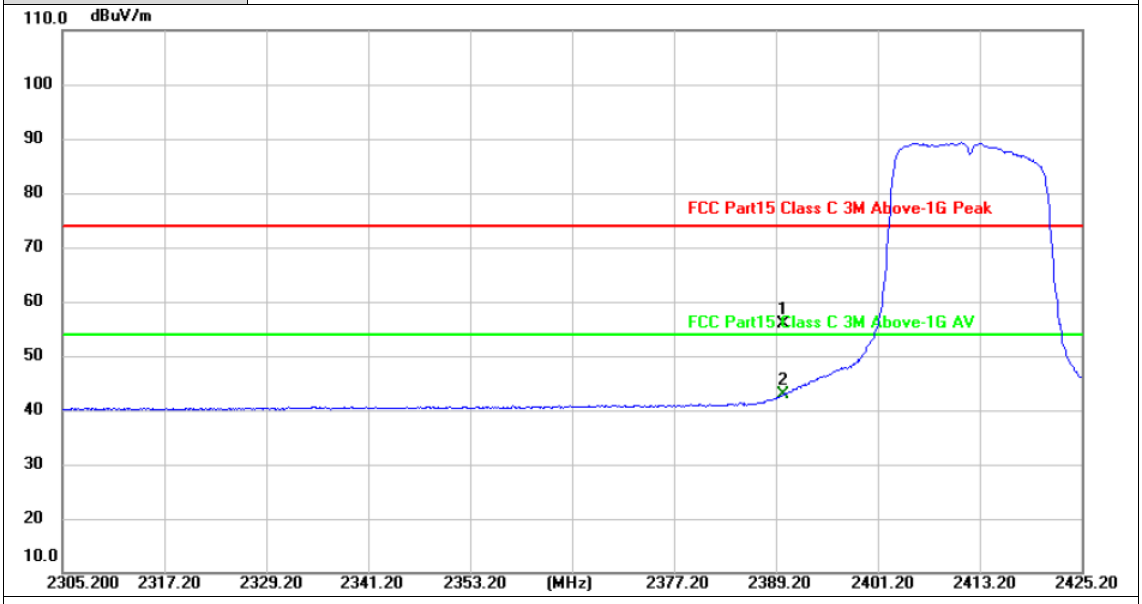
Ant. Pol.	Horizontal
Test Mode:	802.11n(HT20) Mode 2412MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	31.42	32.08	63.50	74.00	-10.50	peak
2 *	2390.000	15.32	32.08	47.40	54.00	-6.60	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

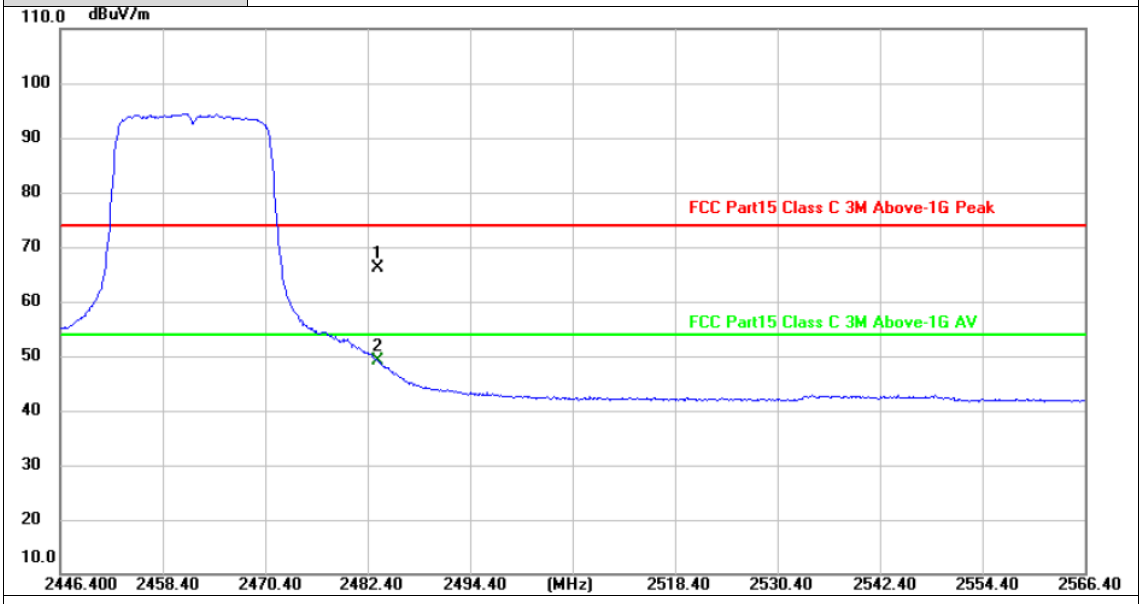
Ant. Pol.	Vertical
Test Mode:	802.11n(HT20) Mode 2412MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	23.87	32.08	55.95	74.00	-18.05	peak
2 *	2390.000	10.70	32.08	42.78	54.00	-11.22	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

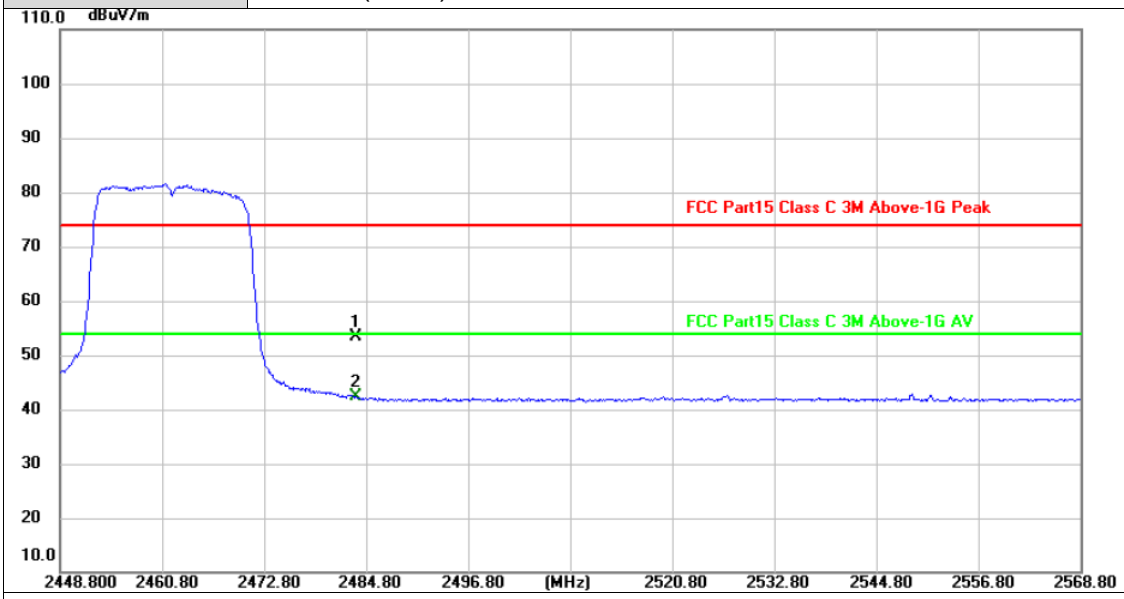
Ant. Pol.	Horizontal
Test Mode:	802.11n(HT20) Mode 2462MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	33.60	32.52	66.12	74.00	-7.88	peak
2 *	2483.500	16.73	32.52	49.25	54.00	-4.75	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

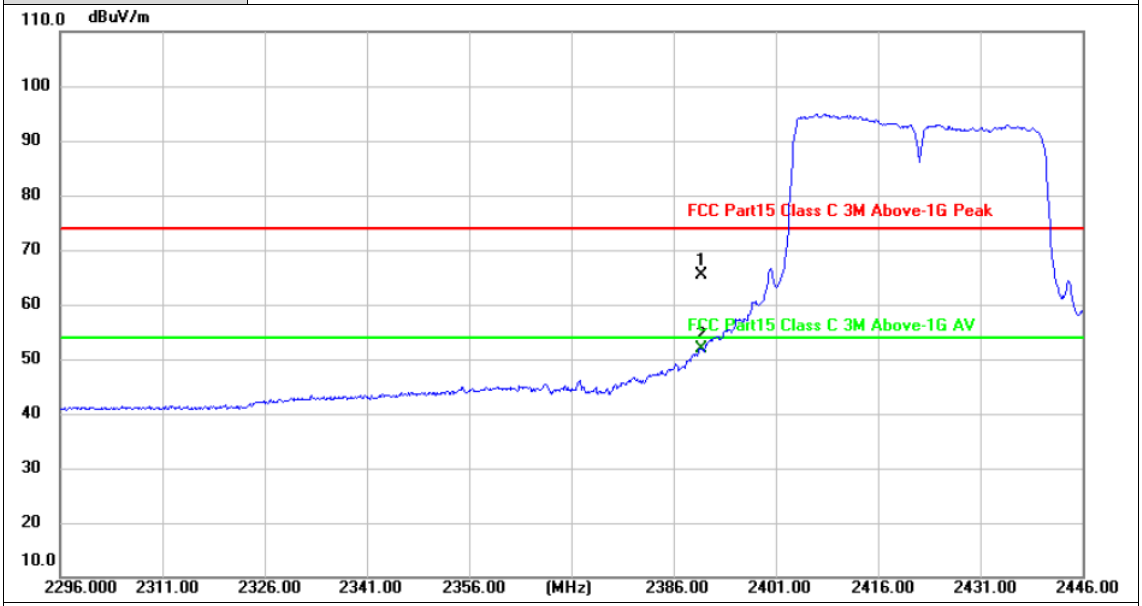
Ant. Pol.	Vertical
Test Mode:	802.11n(HT20) Mode 2462MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	20.83	32.52	53.35	74.00	-20.65	peak
2 *	2483.500	9.74	32.52	42.26	54.00	-11.74	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

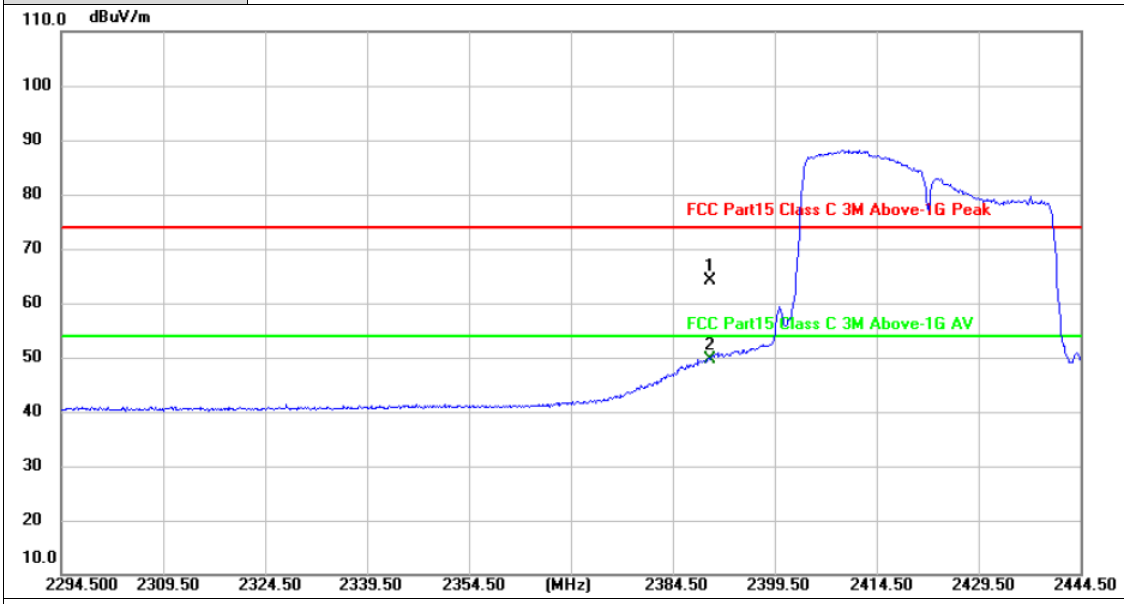
Ant. Pol.	Horizontal
Test Mode:	802.11n(HT40) Mode 2422MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	33.36	32.08	65.44	74.00	-8.56	peak
2 *	2390.000	19.84	32.08	51.92	54.00	-2.08	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

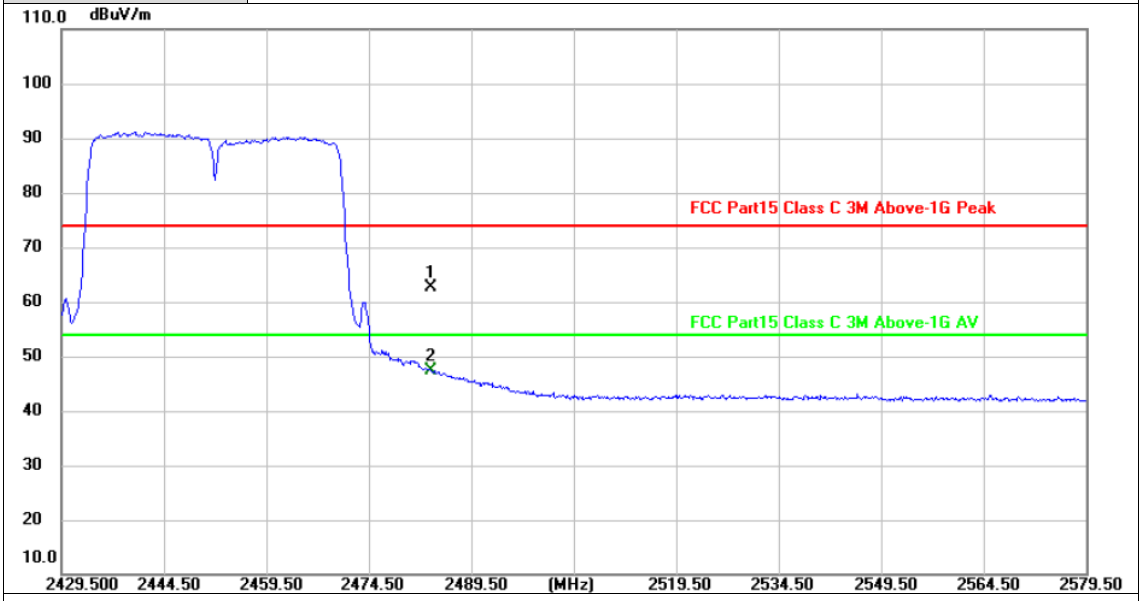
Ant. Pol.	Vertical
Test Mode:	802.11n(HT40) Mode 2422MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.000	32.10	32.08	64.18	74.00	-9.82	peak
2 *	2390.000	17.59	32.08	49.67	54.00	-4.33	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

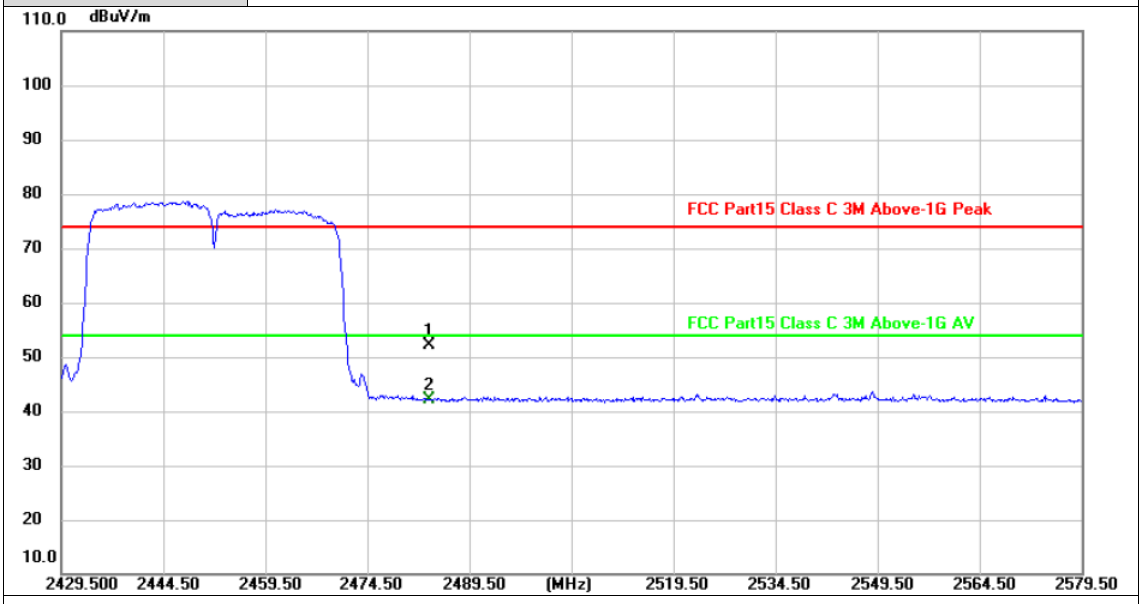
Ant. Pol.	Horizontal
Test Mode:	802.11n(HT40) Mode 2452MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	30.23	32.52	62.75	74.00	-11.25	peak
2 *	2483.500	14.80	32.52	47.32	54.00	-6.68	AVG

Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

Ant. Pol.	Vertical
Test Mode:	802.11n(HT40) Mode 2452MHz



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.500	19.50	32.52	52.02	74.00	-21.98	peak
2 *	2483.500	9.55	32.52	42.07	54.00	-11.93	AVG

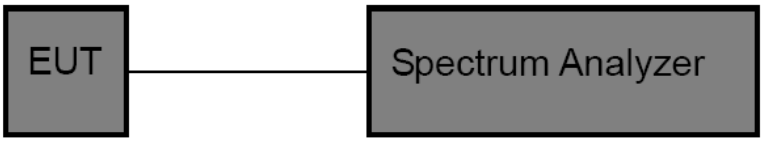
Remarks:
1.Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
2.Margin value = Level -Limit value

3.4. Band edge and Spurious Emissions (Conducted)

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (d):In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

Test Configuration



Test Procedure

1. The transmitter output was connected to the spectrum analyzer through an attenuator, the path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously
3. Use the following spectrum analyzer settings:
   RBW = 100 kHz, VBW ≥ RBW, scan up through 10th harmonic.
   Sweep = auto, Detector function = peak, Trace = max hold
4. Measure and record the results in the test report.

Test Mode

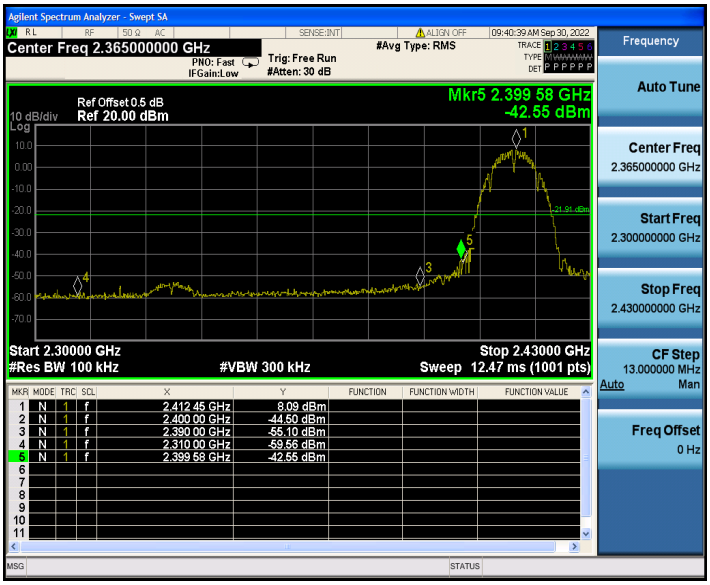
Please refer to the clause 2.4.

Test Results

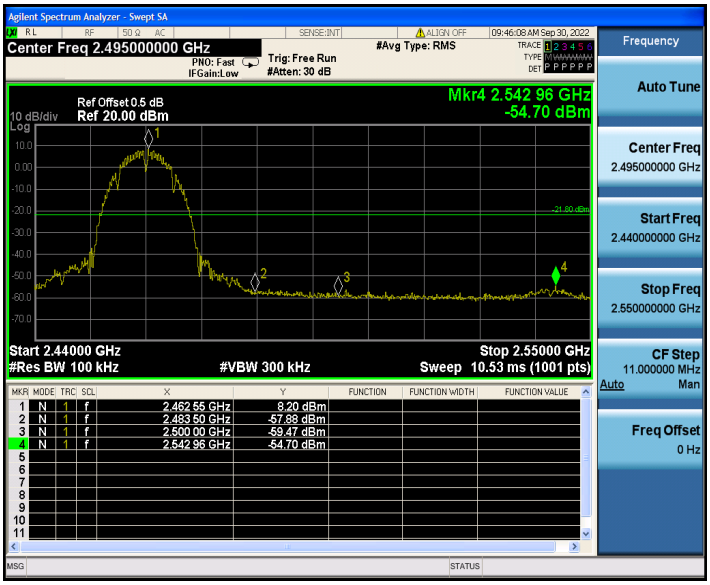
(1) Band edge Conducted Test

Test Mode	Test Frequency	Ref Level[dBm]	Result[dBm]	Limit[dBm]	Verdict
802.11b	2412	8.09	-42.55	≤-21.91	PASS
	2462	8.20	-54.70	≤-21.8	PASS
802.11g	2412	5.15	-27.66	≤-24.86	PASS
	2462	4.21	-41.35	≤-25.79	PASS
802.11n(HT20)	2412	3.96	-32.98	≤-26.05	PASS
	2462	4.13	-38.14	≤-25.87	PASS
802.11n(HT40)	2422	1.15	-32.97	≤-28.85	PASS
	2452	1.24	-38.96	≤-28.76	PASS

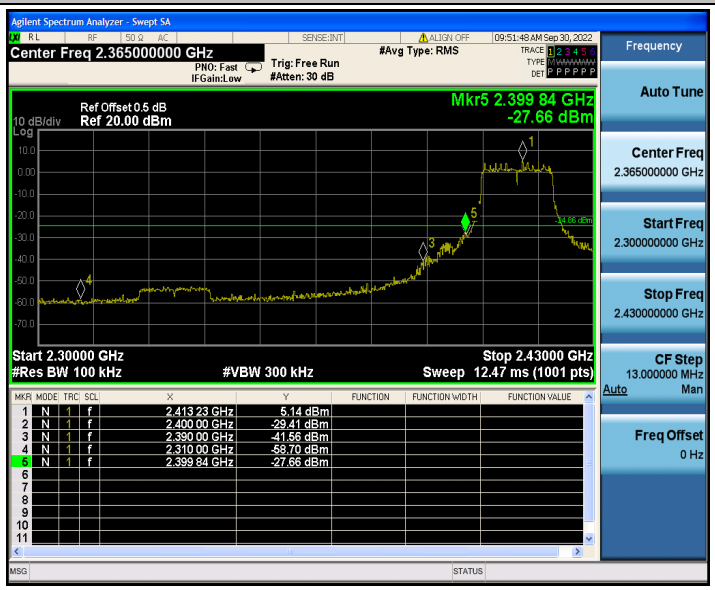
802.11b_Low_2412



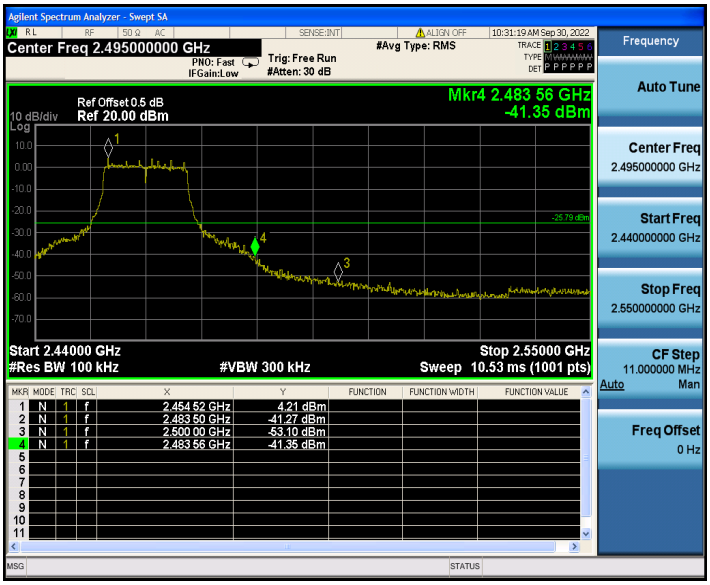
802.11b_High_2462



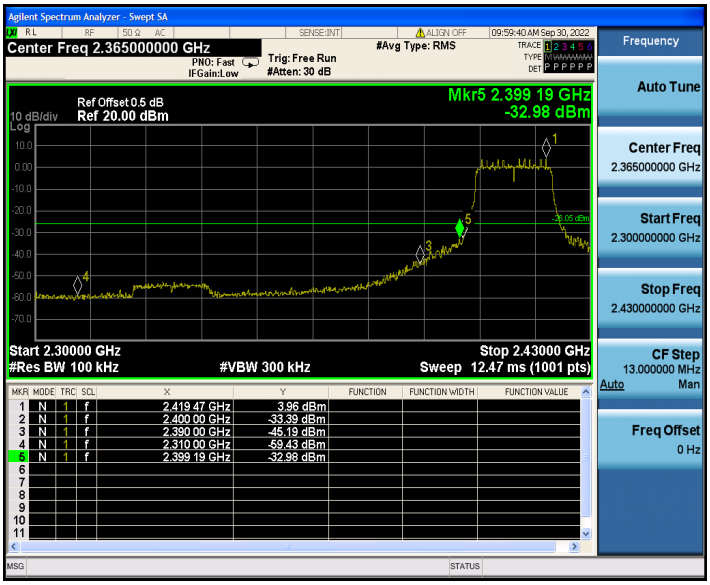
802.11g_Low_2412



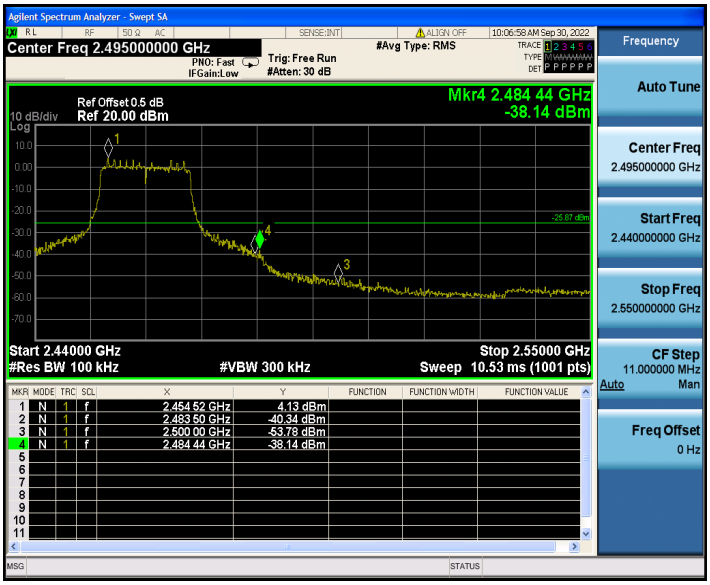
802.11g_High_2462



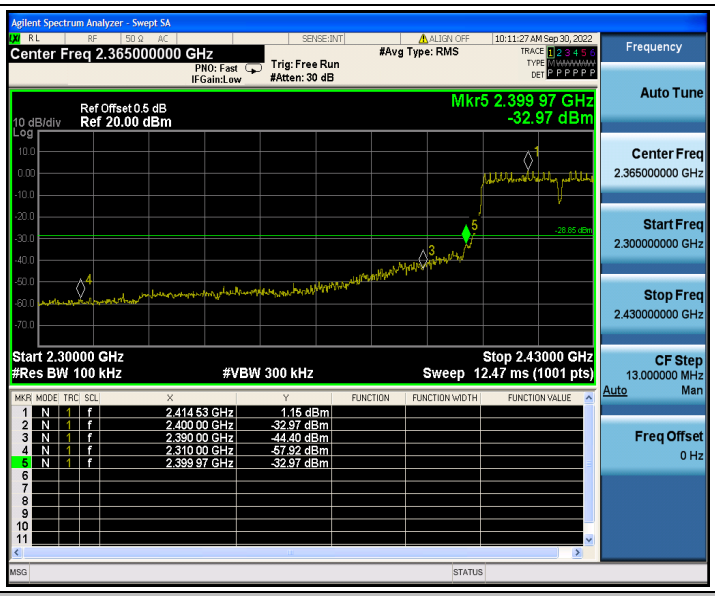
802.11n(HT20)_Low_2412



802.11n(HT20)_High_2462



802.11n(HT40)_Low_2422

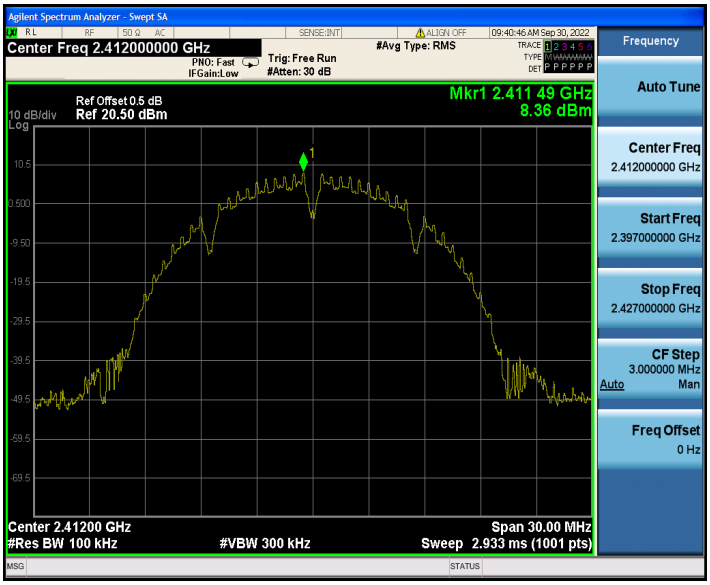


802.11n(HT40)_High_2452

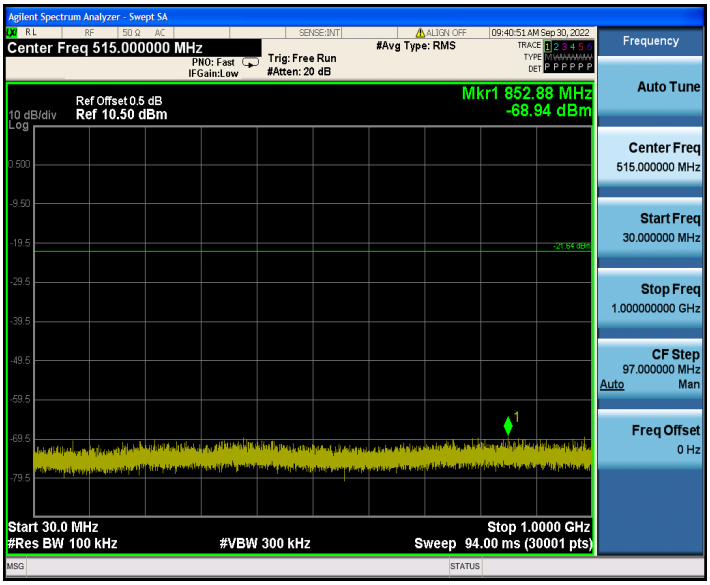
(2) Conducted Spurious Emissions Test

Test Mode	Test Frequency	Freq Range [Mhz]	Ref Level [dBm]	Result [dBm]	Limit [dBm]	Verdict
802.11b	2412	Reference	8.36	8.36	---	PASS
		30~1000	8.36	-68.94	≤-21.64	PASS
		1000~26500	8.36	-40.71	≤-21.64	PASS
	2437	Reference	7.75	7.75	---	PASS
		30~1000	7.75	-68.29	≤-22.25	PASS
		1000~26500	7.75	-42.82	≤-22.25	PASS
	2462	Reference	8.22	8.22	---	PASS
		30~1000	8.22	-68.81	≤-21.78	PASS
		1000~26500	8.22	-42.90	≤-21.78	PASS
802.11g	2412	Reference	4.65	4.65	---	PASS
		30~1000	4.65	-68.34	≤-25.35	PASS
		1000~26500	4.65	-50.10	≤-25.35	PASS
	2437	Reference	4.84	4.84	---	PASS
		30~1000	4.84	-68.16	≤-25.16	PASS
		1000~26500	4.84	-49.92	≤-25.16	PASS
	2462	Reference	2.84	2.84	---	PASS
		30~1000	2.84	-69.30	≤-27.16	PASS
		1000~26500	2.84	-50.18	≤-27.16	PASS
802.11n(HT20)	2412	Reference	3.97	3.97	---	PASS
		30~1000	3.97	-68.90	≤-26.03	PASS
		1000~26500	3.97	-50.15	≤-26.03	PASS
	2437	Reference	4.15	4.15	---	PASS
		30~1000	4.15	-68.71	≤-25.85	PASS
		1000~26500	4.15	-50.33	≤-25.85	PASS
	2462	Reference	4.37	4.37	---	PASS
		30~1000	4.37	-69.14	≤-25.63	PASS
		1000~26500	4.37	-50.16	≤-25.63	PASS
802.11n(HT40)	2422	Reference	1.20	1.20	---	PASS
		30~1000	1.20	-68.53	≤-28.80	PASS
		1000~26500	1.20	-49.36	≤-28.80	PASS
	2437	Reference	1.18	1.18	---	PASS
		30~1000	1.18	-69.23	≤-28.82	PASS
		1000~26500	1.18	-50.01	≤-28.82	PASS
	2452	Reference	1.16	1.16	---	PASS
		30~1000	1.16	-69.14	≤-28.84	PASS
		1000~26500	1.16	-49.31	≤-28.84	PASS

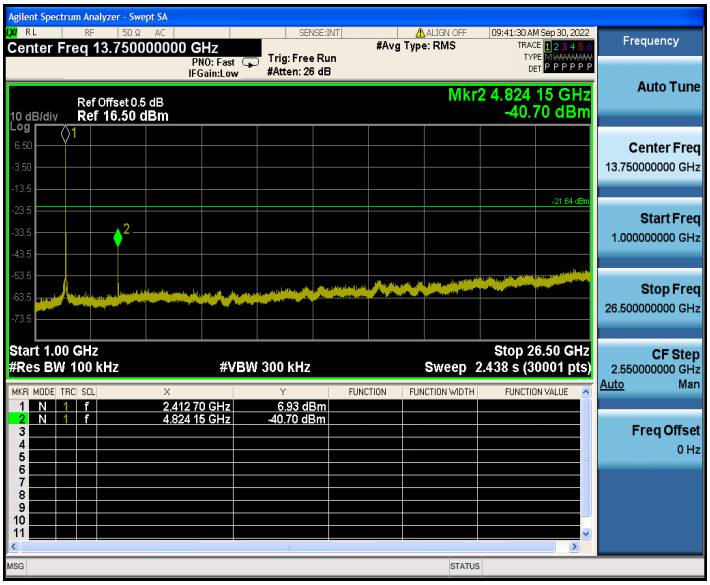
802.11b_2412_0~Reference



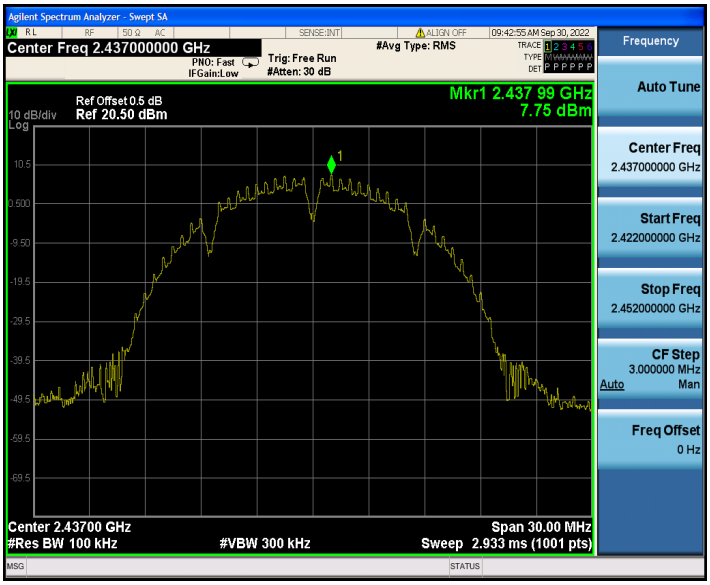
802.11b_2412_30~1000



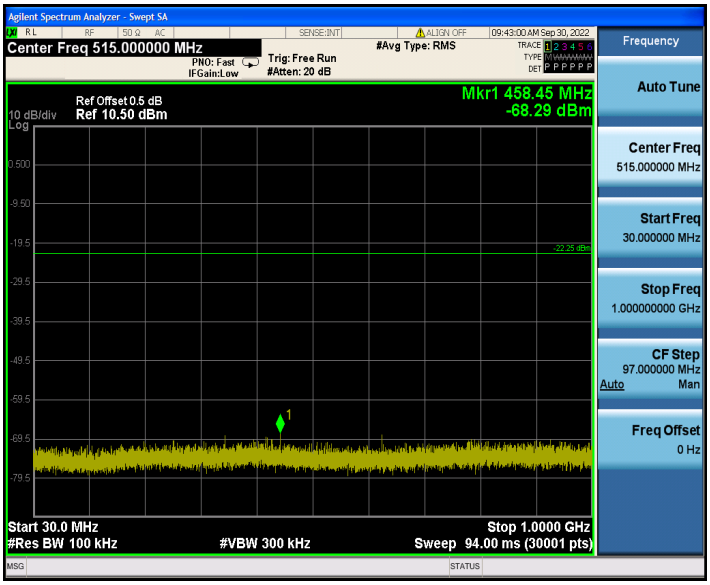
802.11b_2412_1000~26500



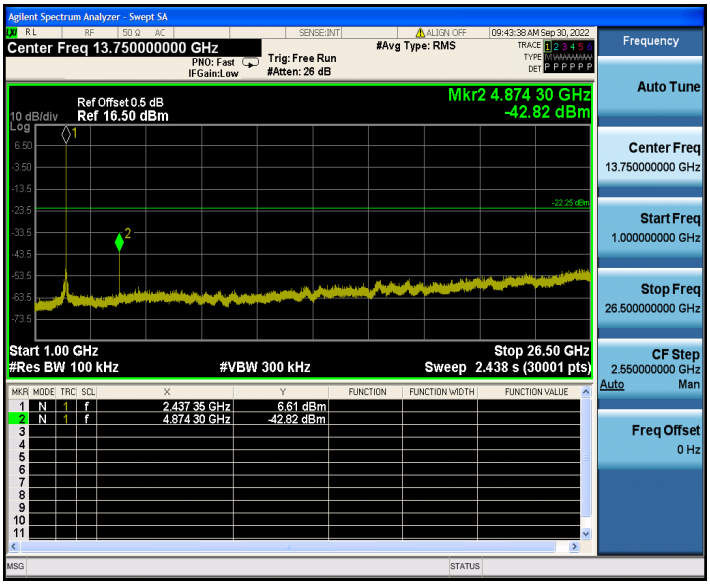
802.11b_2437_0~Reference



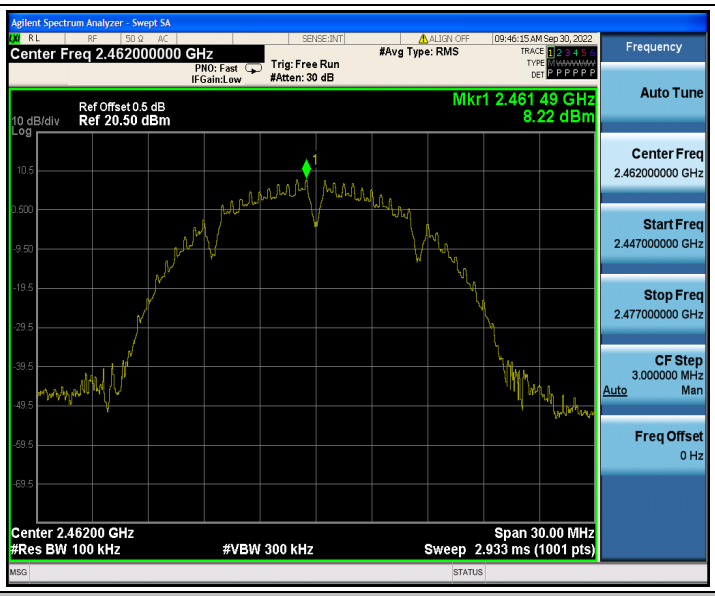
802.11b_2437_30~1000



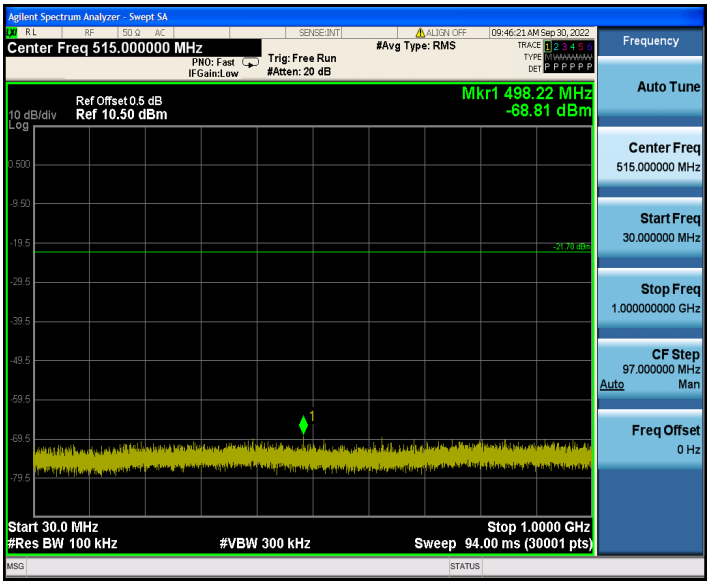
802.11b_2437_1000~26500



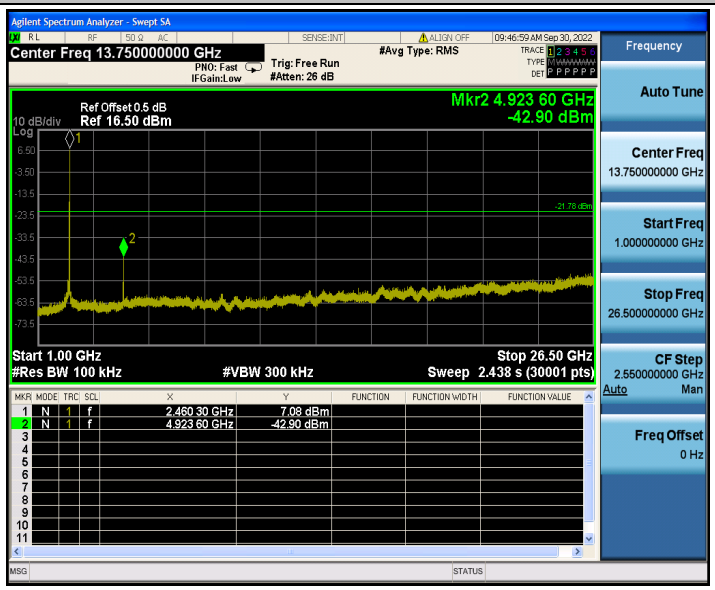
802.11b_2462_0~Reference



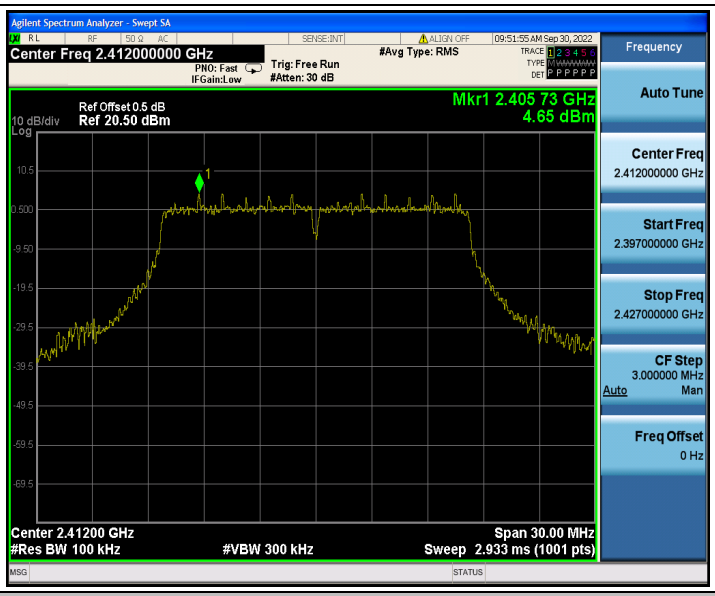
802.11b_2462_30~1000



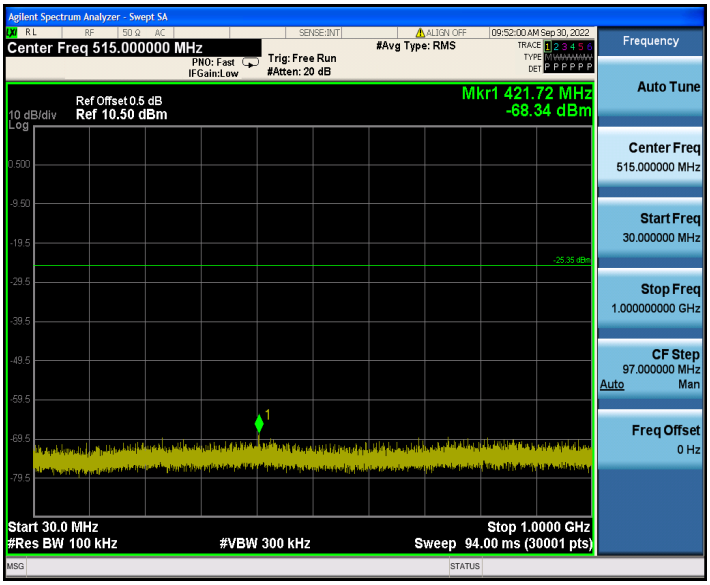
802.11b_2462_1000~26500



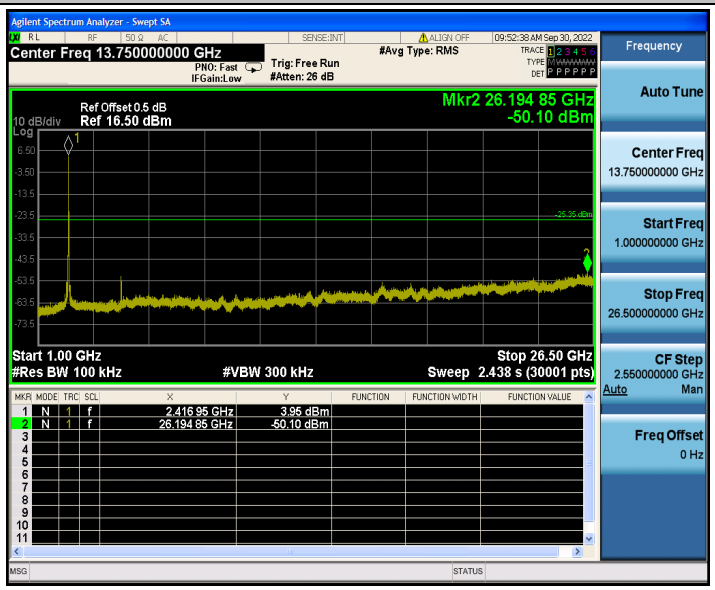
802.11g_2412_0~Reference



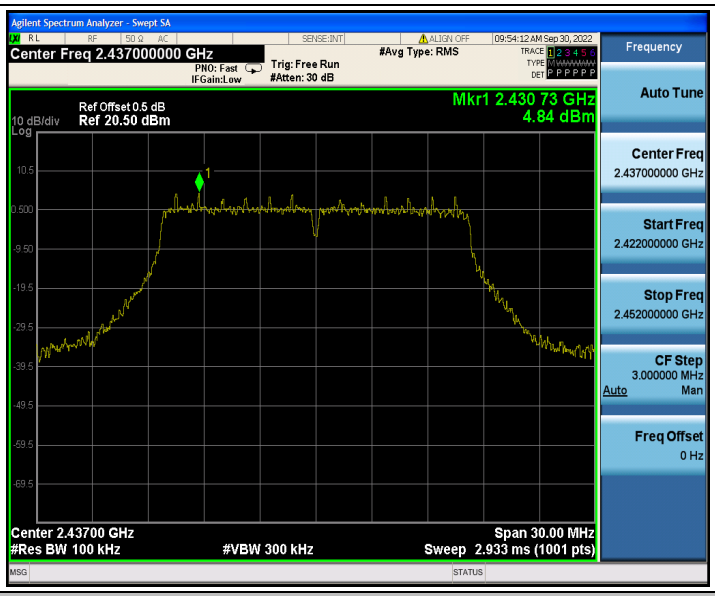
802.11g_2412_30~1000



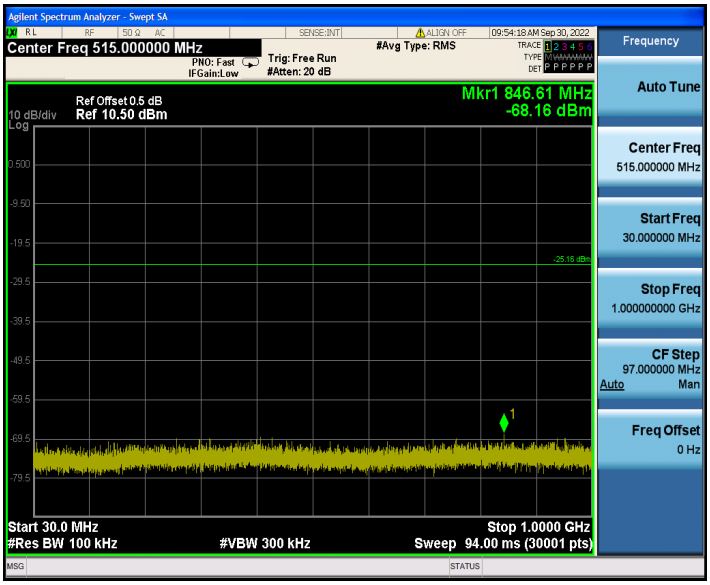
802.11g_2412_1000~26500



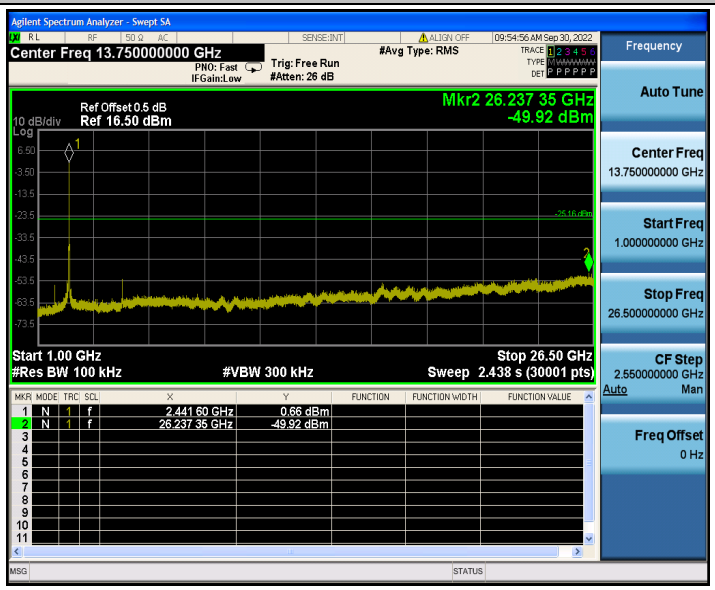
802.11g_2437_0~Reference



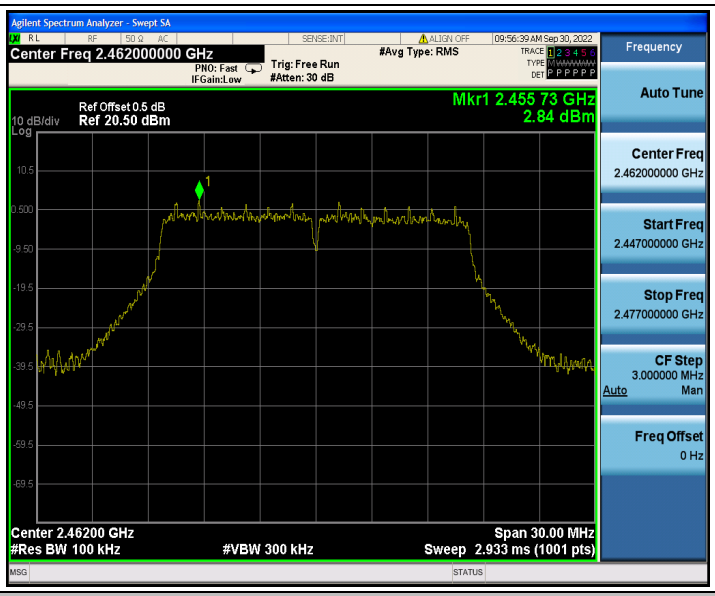
802.11g_2437_30~1000



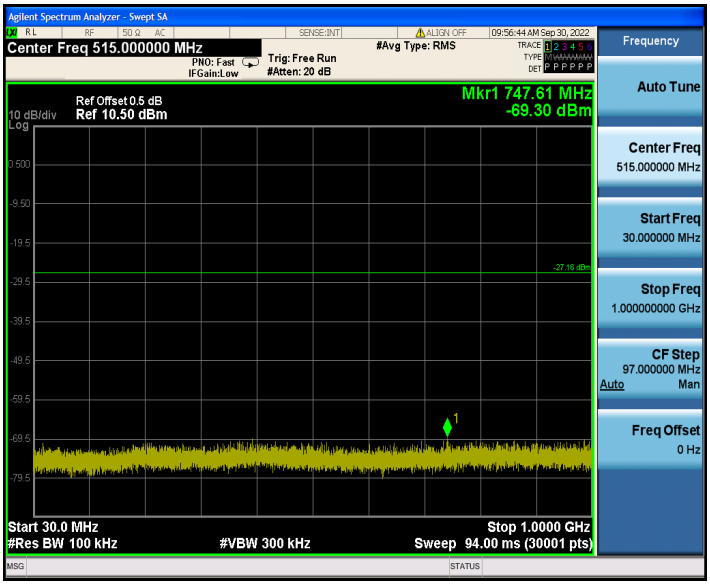
802.11g_2437_1000~26500



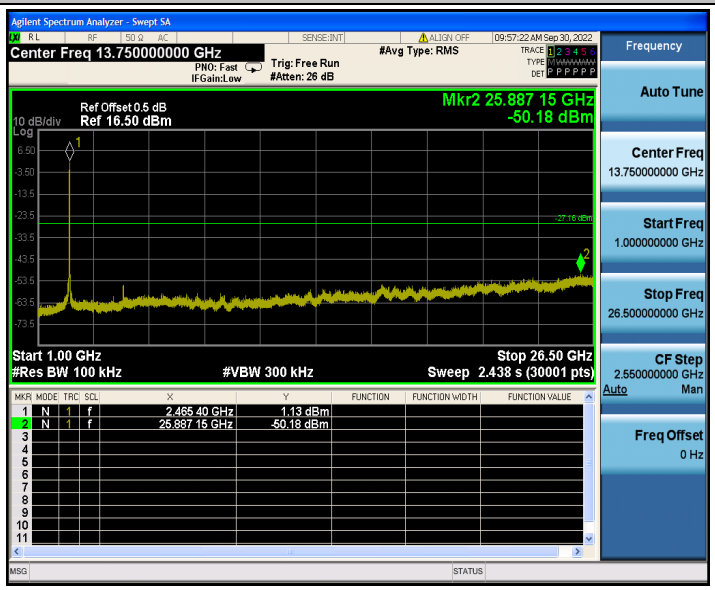
802.11g_2462_0~Reference



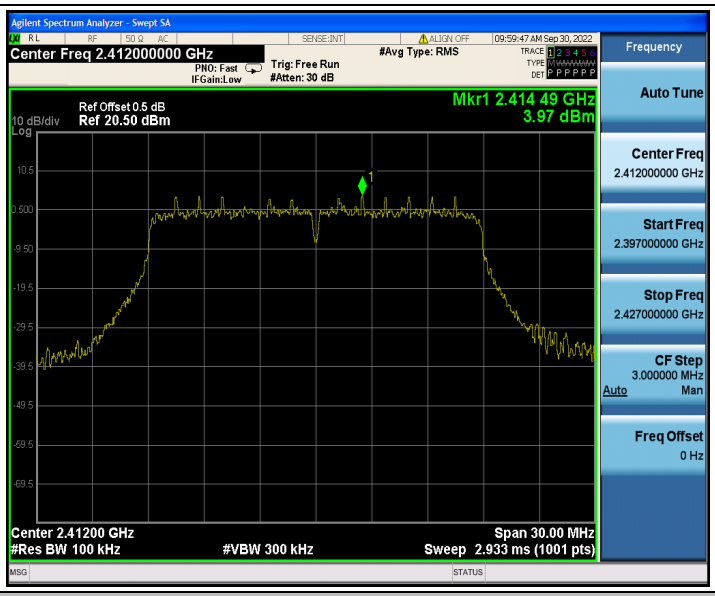
802.11g_2462_30~1000



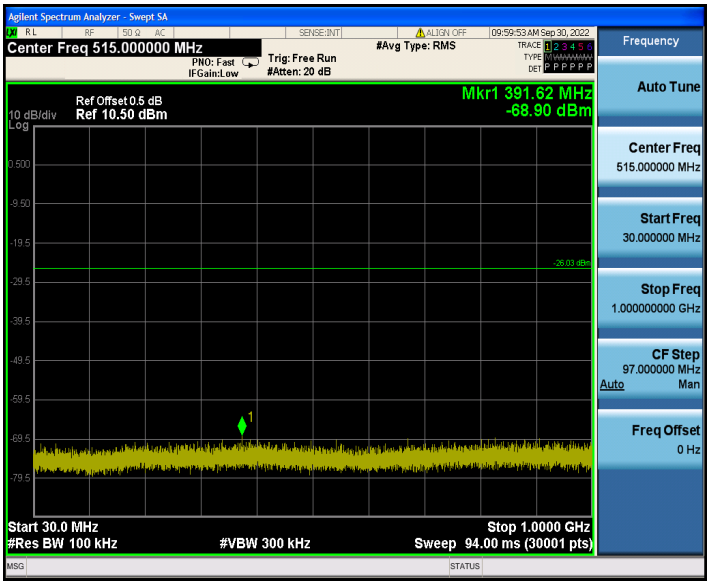
802.11g_2462_1000~26500



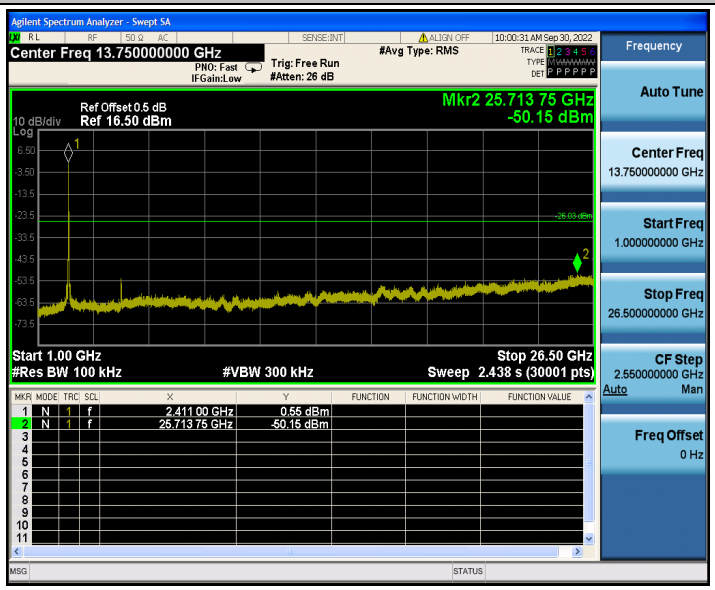
802.11n(HT20)_2412_0~Reference



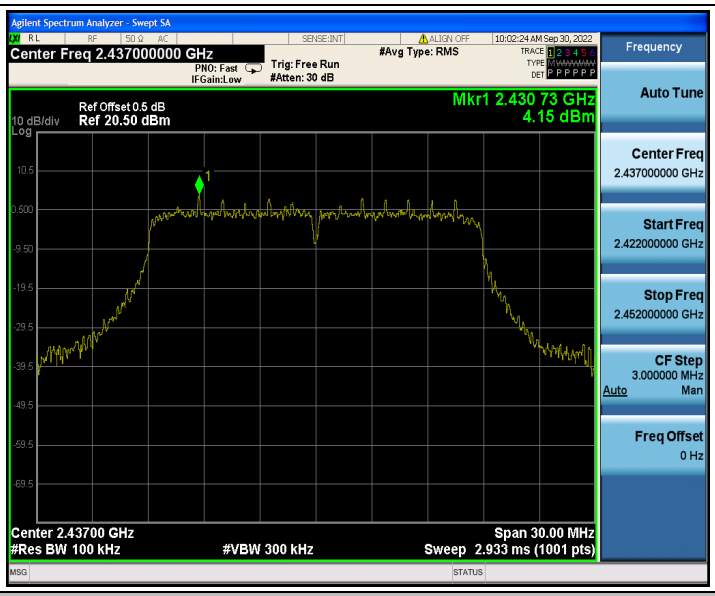
802.11n(HT20)_2412_30~1000



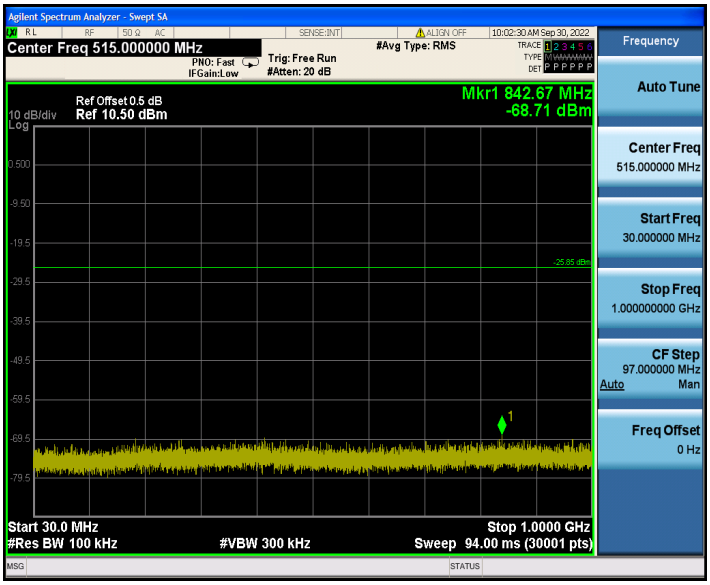
802.11n(HT20)_2412_1000~26500



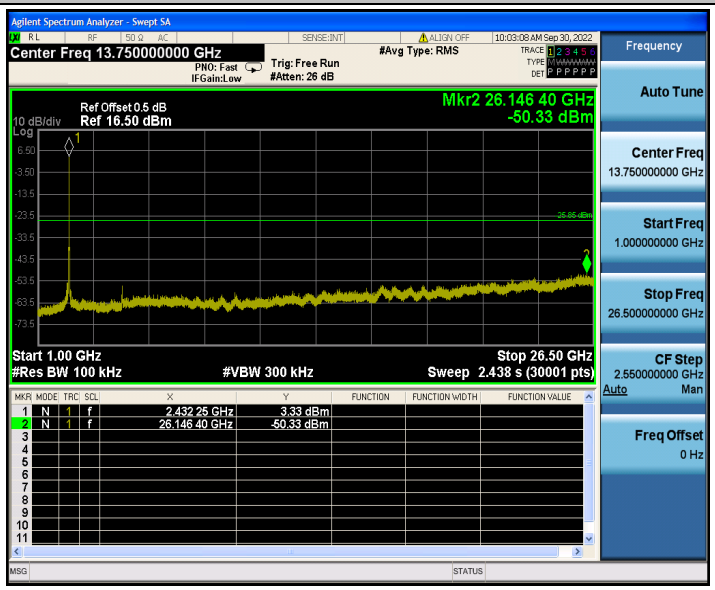
802.11n(HT20)_2437_0~Reference



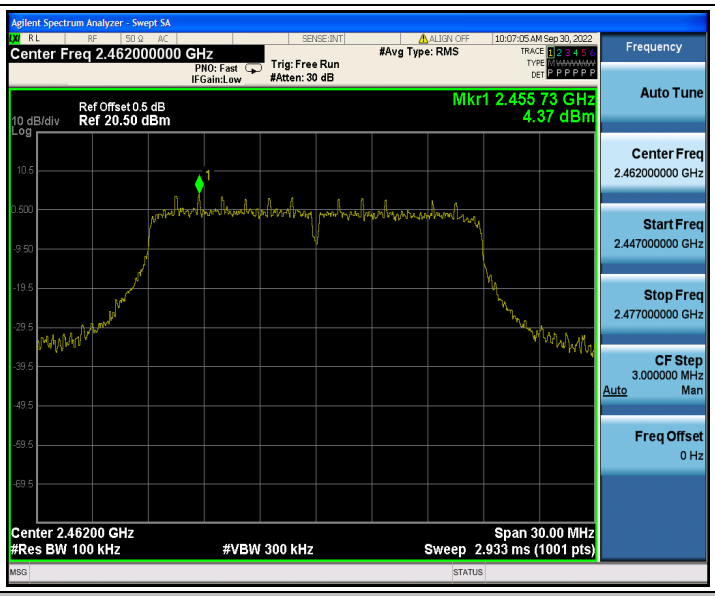
802.11n(HT20)_2437_30~1000



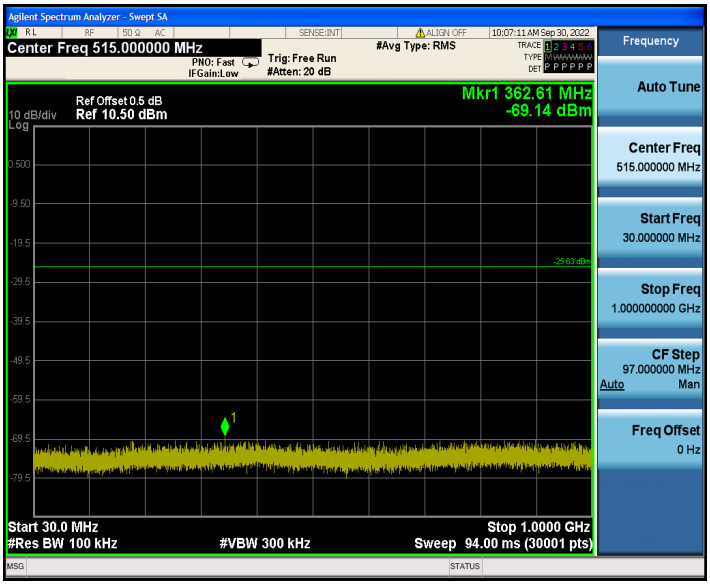
802.11n(HT20)_2437_1000~26500



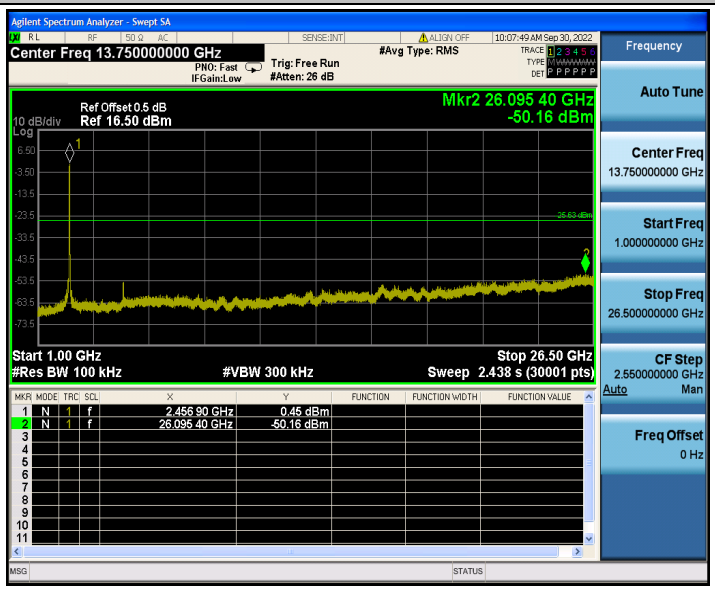
802.11n(HT20)_2462_0~Reference



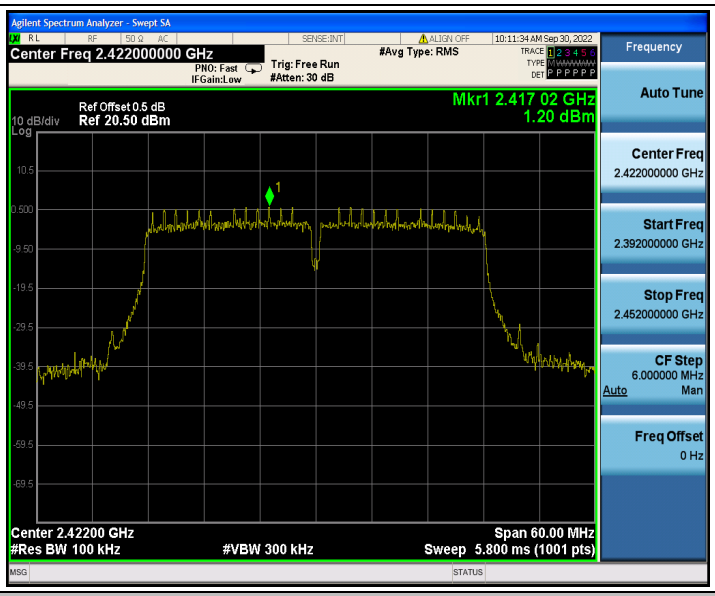
802.11n(HT20)_2462_30~1000



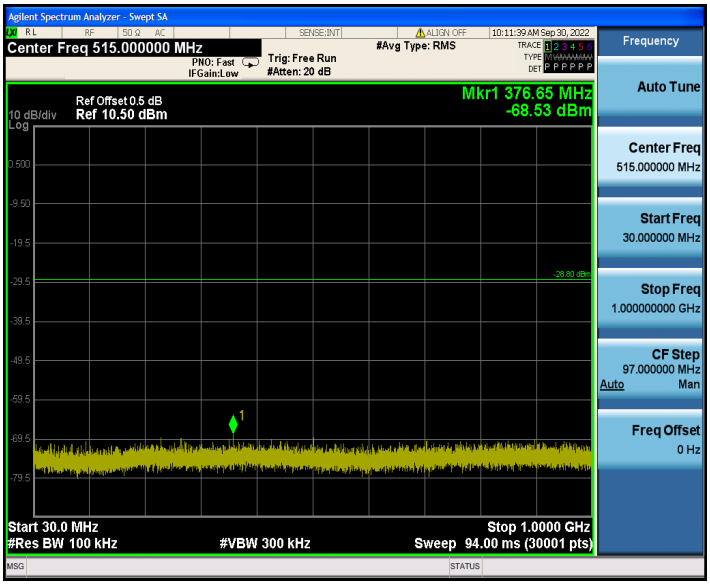
802.11n(HT20)_2462_1000~26500



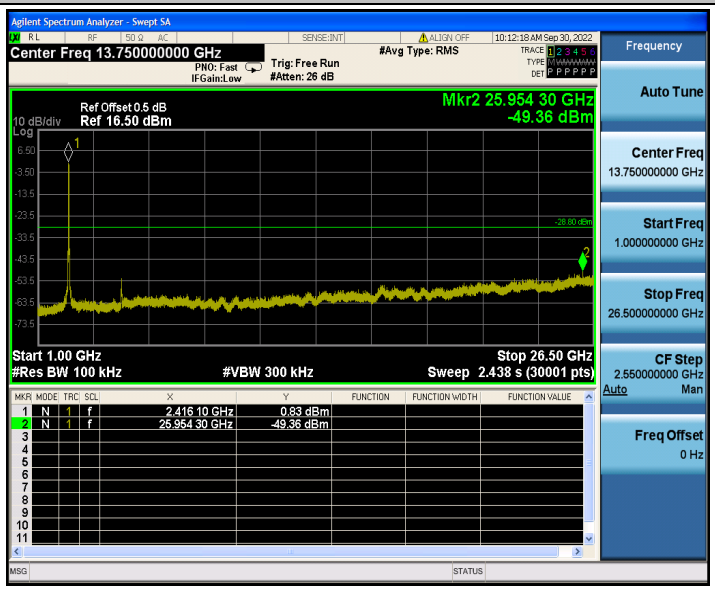
802.11n(HT40)_2422_0~Reference



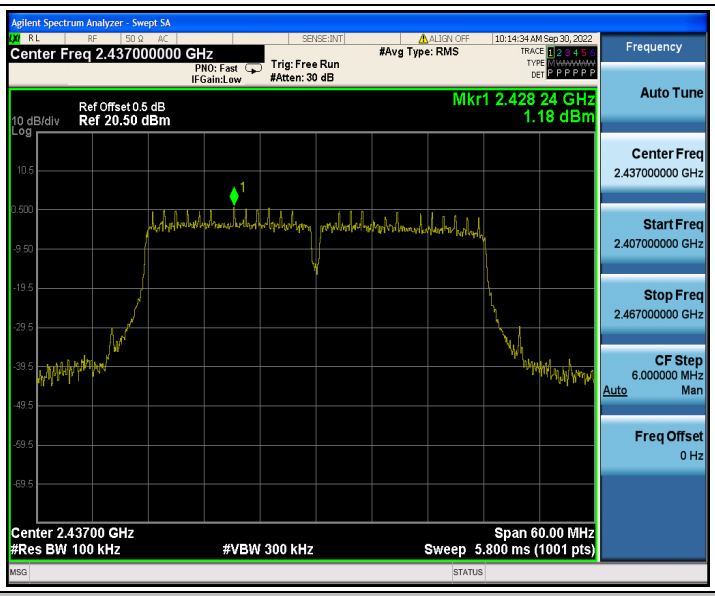
802.11n(HT40)_2422_30~1000



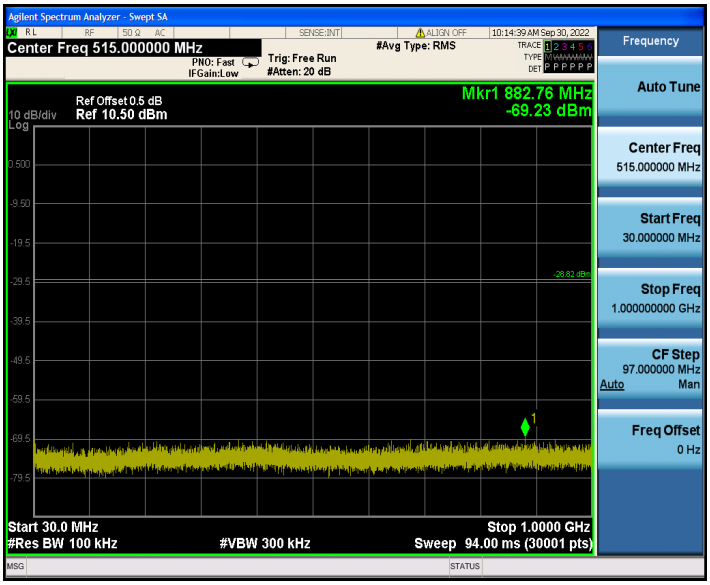
802.11n(HT40)_2422_1000~26500



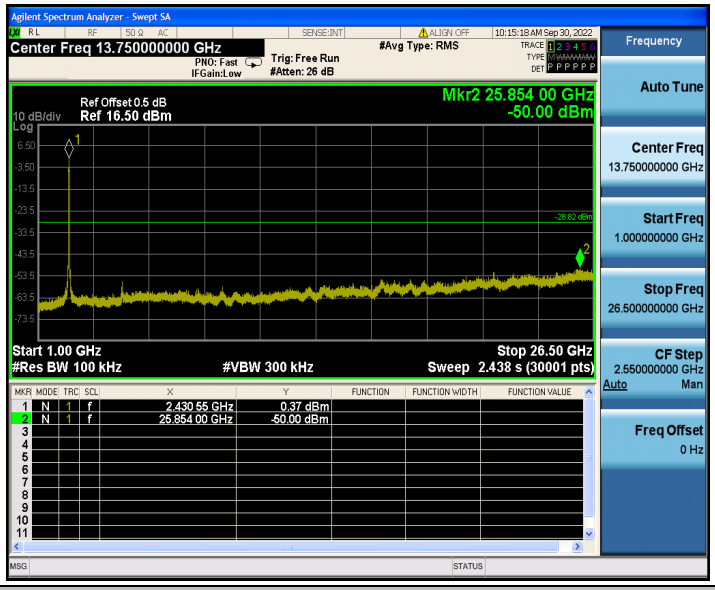
802.11n(HT40)_2437_0~Reference



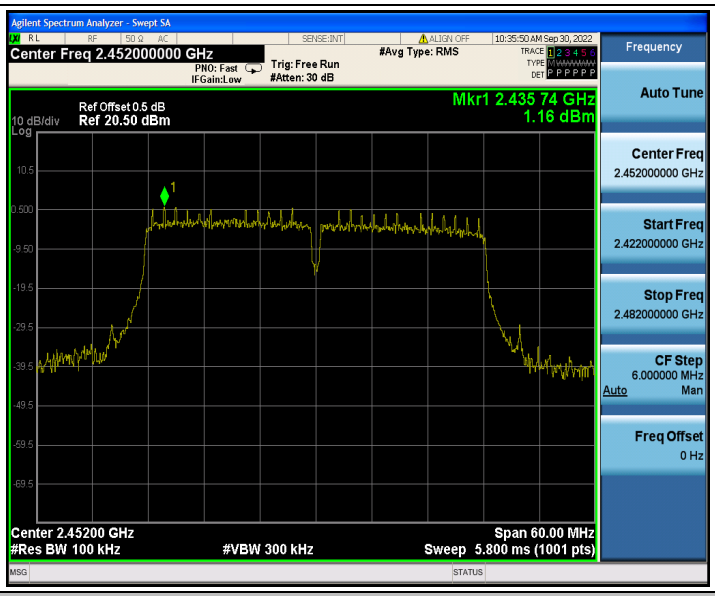
802.11n(HT40)_2437_30~1000



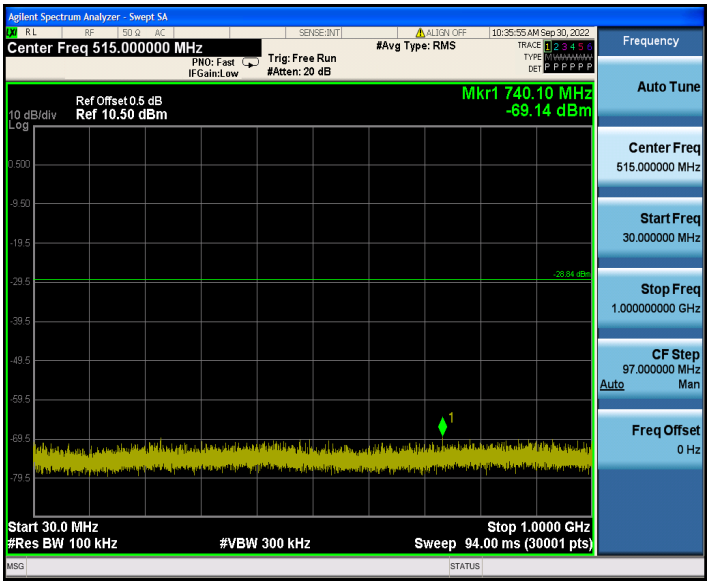
802.11n(HT40)_2437_1000~26500



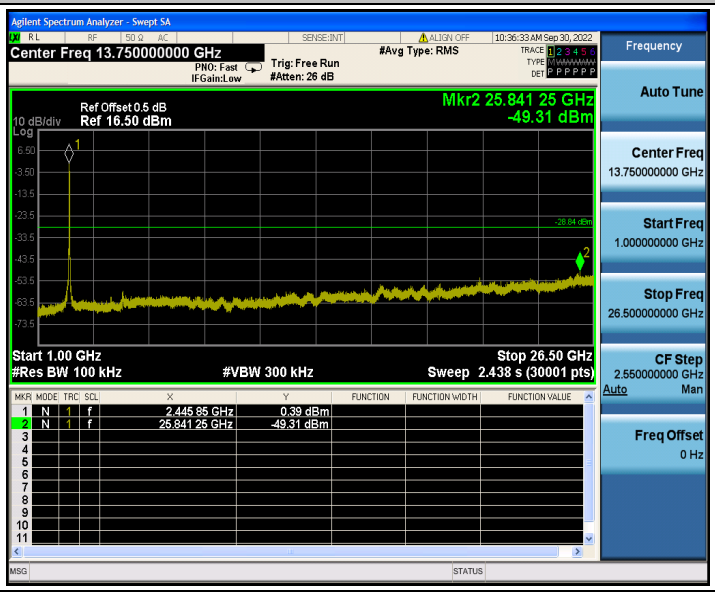
802.11n(HT40)_2452_0~Reference



802.11n(HT40)_2452_30~1000



802.11n(HT40)_2452_1000~26500



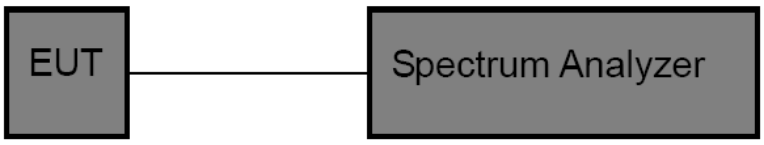
3.5. DTS Bandwidth

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (a)(2)/ RSS-247 5.2 a:

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

Test Configuration



Test Procedure

5. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
6. DTS Spectrum Setting:
   (1) Set RBW = 100 kHz.
   (2) Set the video bandwidth (VBW) ≥ 3 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.

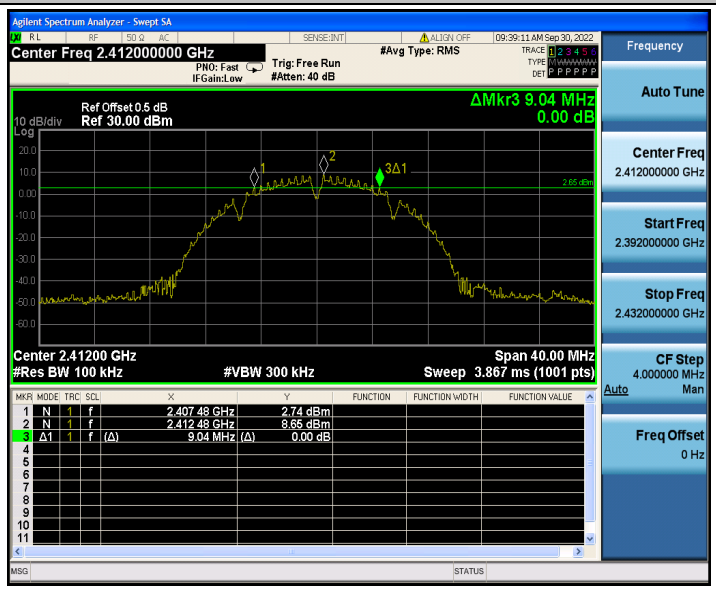
Test Mode

Please refer to the clause 2.4.

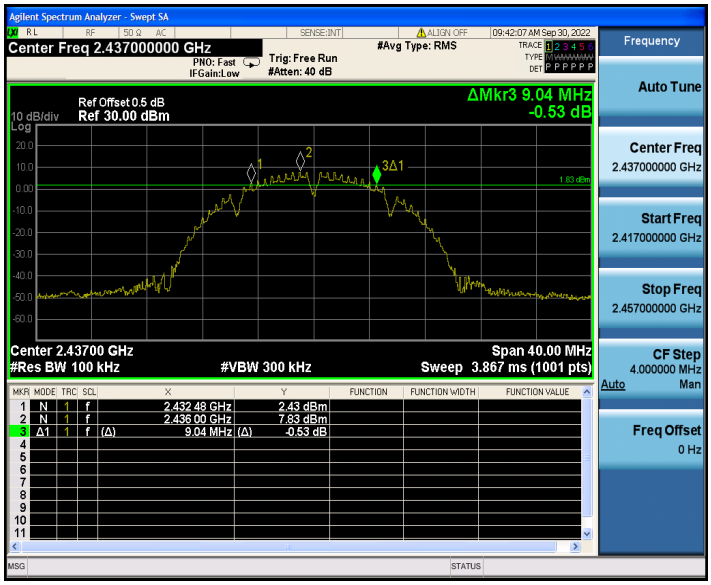
Test Results

Test Mode	Channel	DTS BW [MHz]	Limit [MHz]	Verdict
802.11b	2412	9.040	>=0.5	PASS
	2437	9.040	>=0.5	PASS
	2462	9.080	>=0.5	PASS
802.11g	2412	16.320	>=0.5	PASS
	2437	16.360	>=0.5	PASS
	2462	16.280	>=0.5	PASS
802.11n(HT20)	2412	17.520	>=0.5	PASS
	2437	17.280	>=0.5	PASS
	2462	17.280	>=0.5	PASS
802.11n(HT40)	2422	35.520	>=0.5	PASS
	2437	35.520	>=0.5	PASS
	2452	35.680	>=0.5	PASS

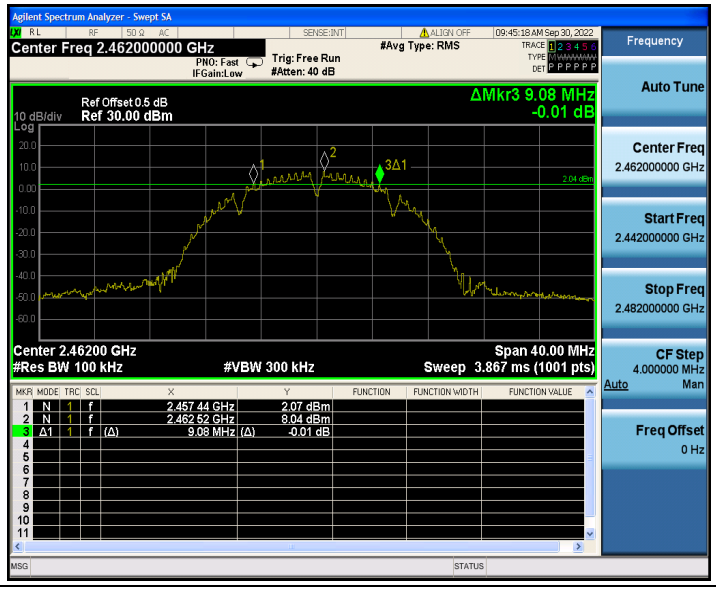
802.11b_2412



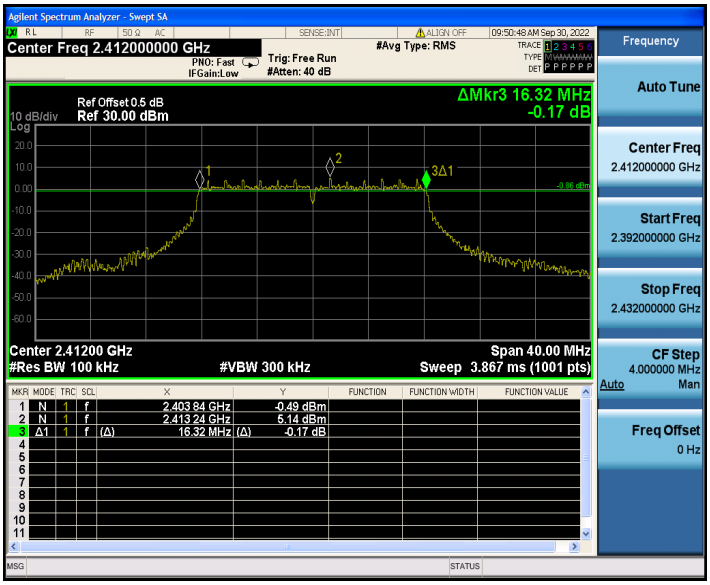
802.11b_2437



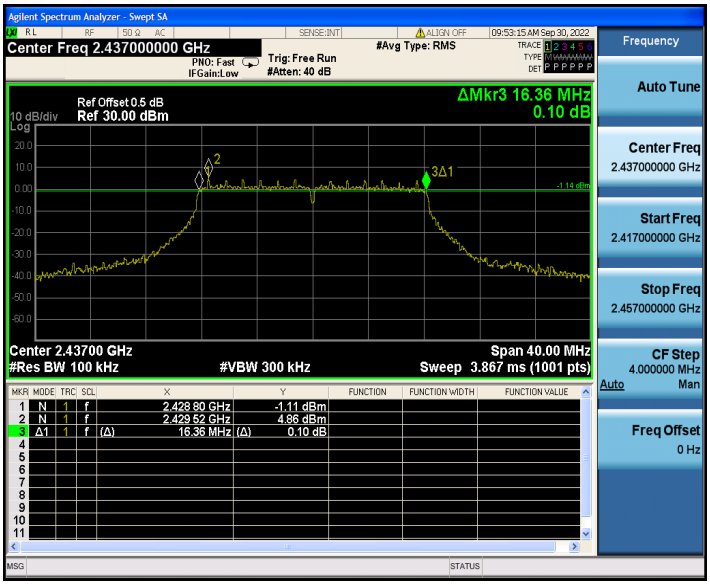
802.11b_2462



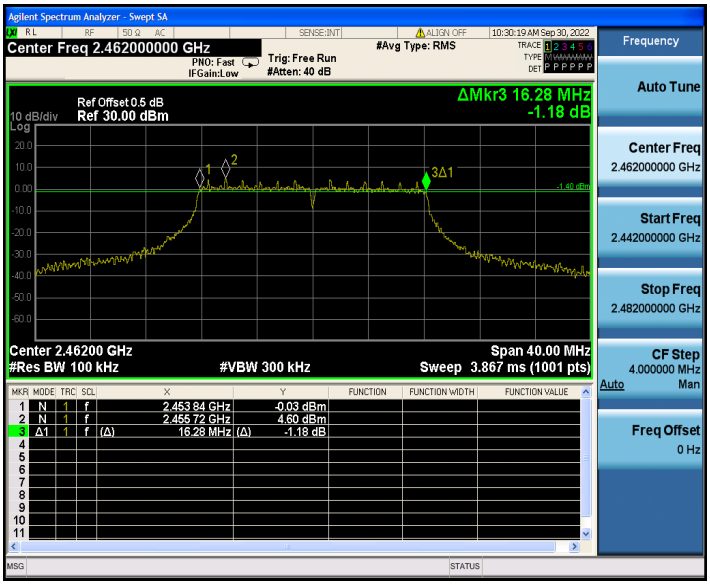
802.11g_2412



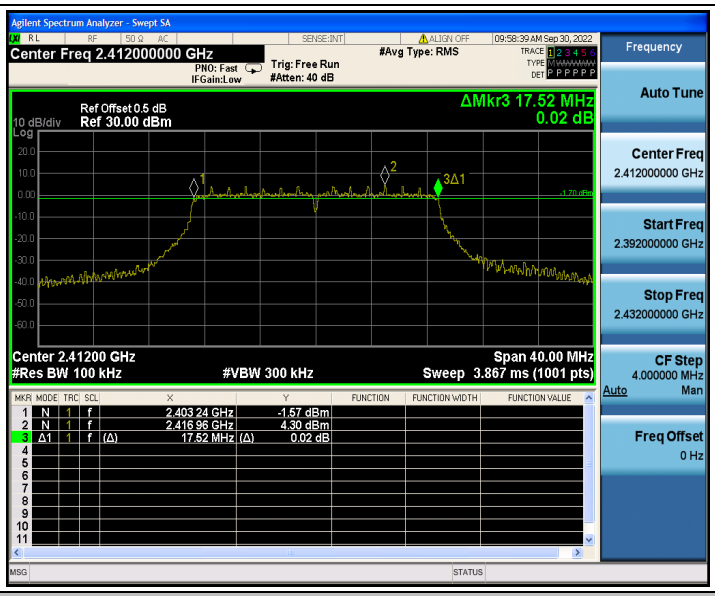
802.11g_2437



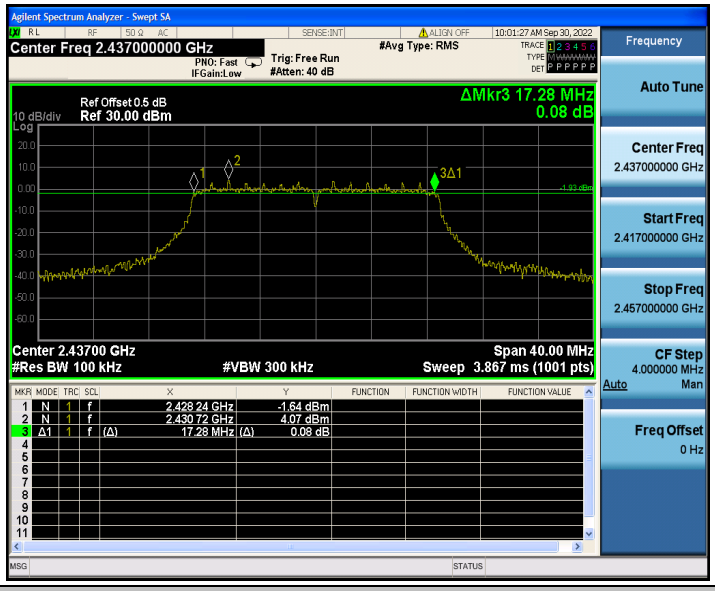
802.11g_2462



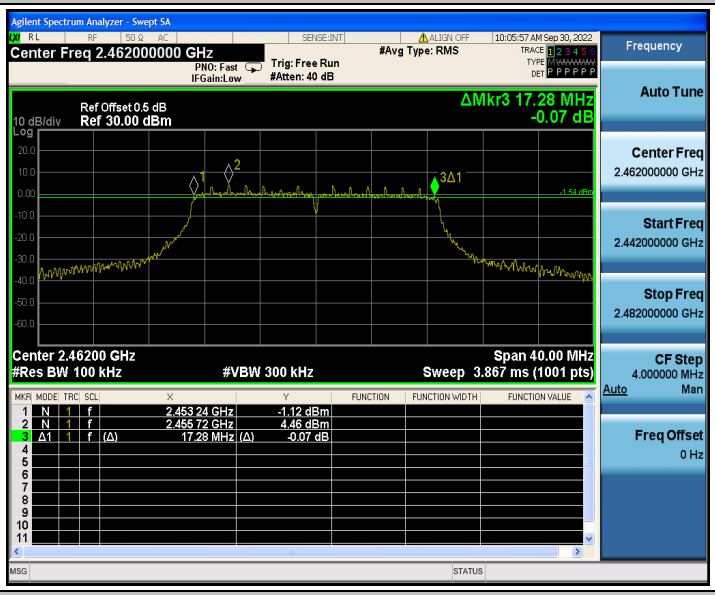
802.11n(HT20)_2412



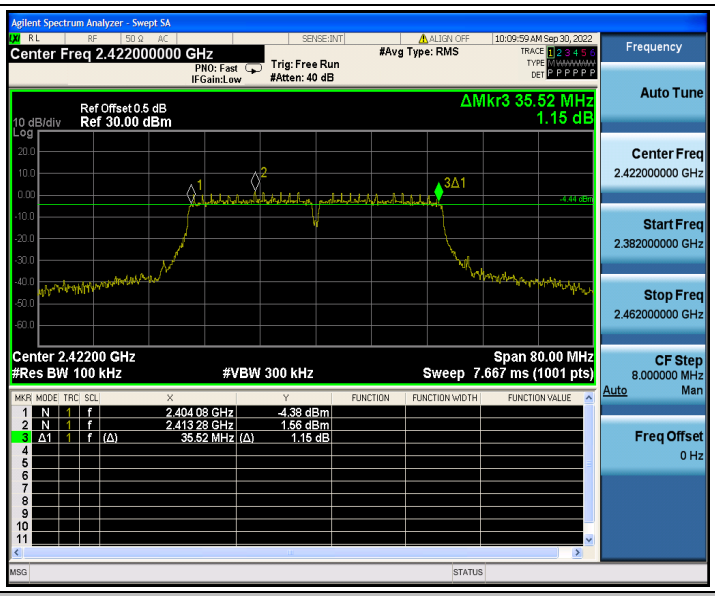
802.11n(HT20)_2437



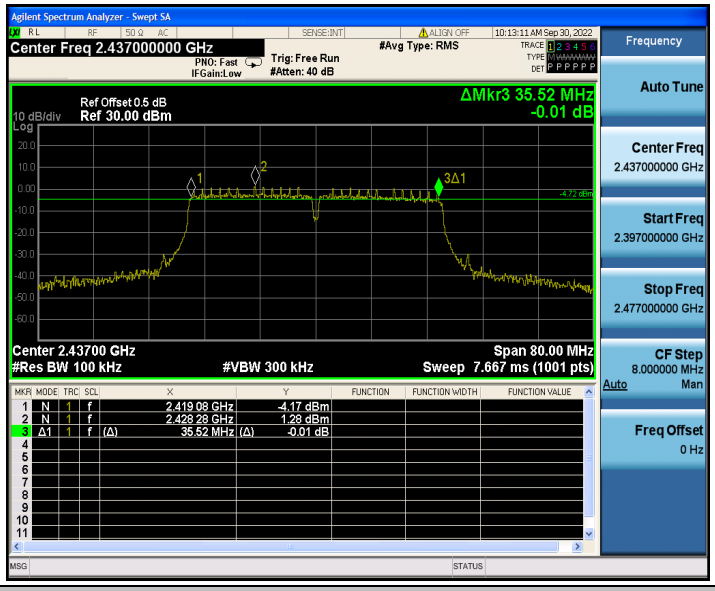
802.11n(HT20)_2462



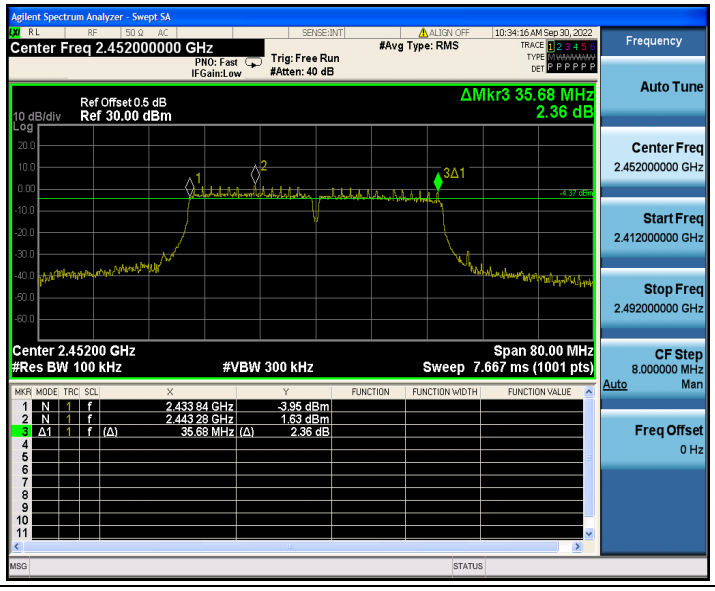
802.11n(HT40)_2422



802.11n(HT40)_2437



802.11n(HT40)_2452



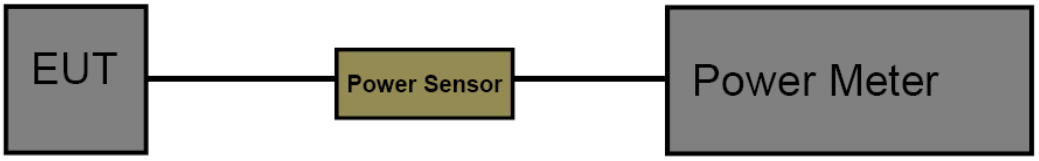
3.6. Maximum Conducted Output Power

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (b)(3)/ RSS-247 5.4:

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 5.4 d	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	Channel	Result AVG [dBm]	Limit [dBm]	Verdict
802.11b	2412	16.83	<=30	PASS
	2437	16.31	<=30	PASS
	2462	16.40	<=30	PASS
802.11g	2412	16.28	<=30	PASS
	2437	15.81	<=30	PASS
	2462	15.35	<=30	PASS
802.11n(HT20)	2412	15.64	<=30	PASS
	2437	15.07	<=30	PASS
	2462	15.27	<=30	PASS
802.11n(HT40)	2422	15.52	<=30	PASS
	2437	15.20	<=30	PASS
	2452	15.32	<=30	PASS

Note: Test results increased RF cable loss by 0.5dB and Duty Cycle Factor.

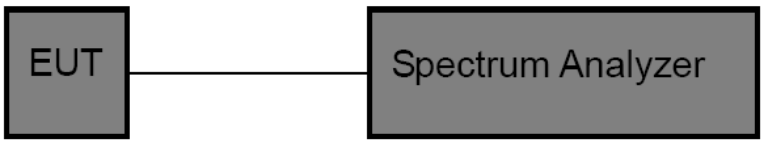
3.7. Power Spectral Density

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (e)/ RSS-247 5.2 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: PK
Sweep time: Auto
Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

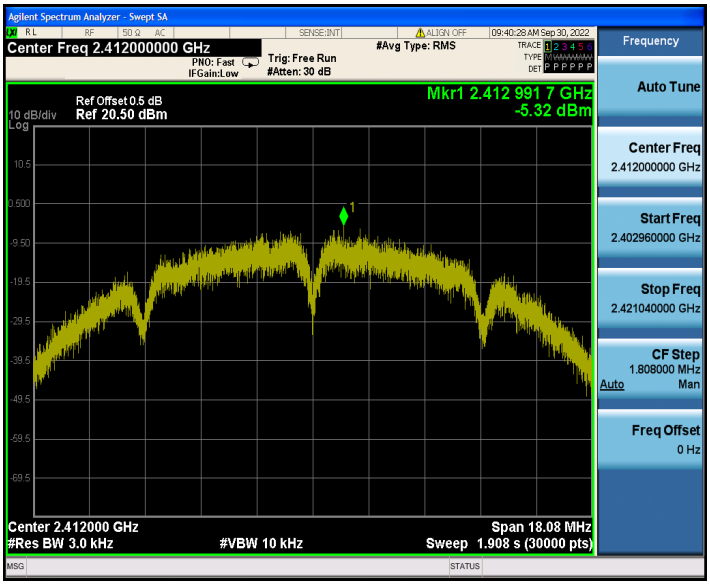
Test Mode

Please refer to the clause 2.4.

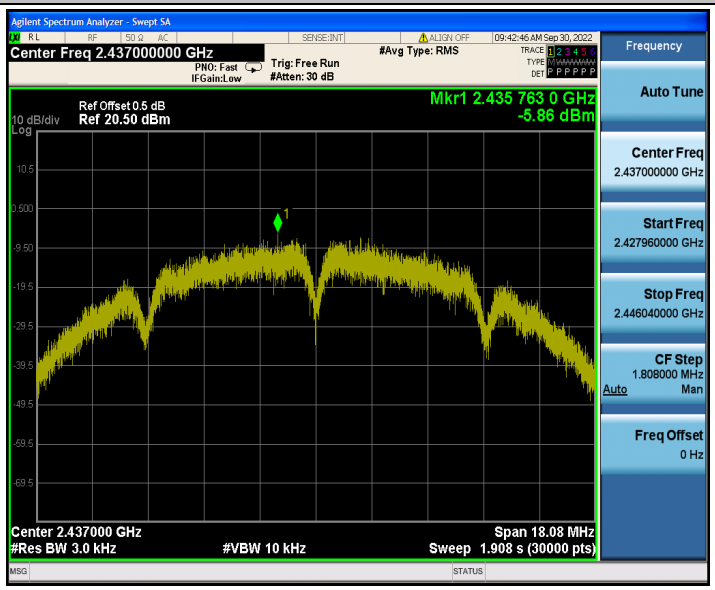
Test Result

Test Mode	Channel	Result [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
802.11b	2412	-5.32	<=8	PASS
	2437	-5.87	<=8	PASS
	2462	-5.96	<=8	PASS
802.11g	2412	-9.28	<=8	PASS
	2437	-9.62	<=8	PASS
	2462	-10.08	<=8	PASS
802.11n(HT20)	2412	-9.78	<=8	PASS
	2437	-10.66	<=8	PASS
	2462	-9.75	<=8	PASS
802.11n(HT40)	2422	-13.36	<=8	PASS
	2437	-12.11	<=8	PASS
	2452	-10.88	<=8	PASS

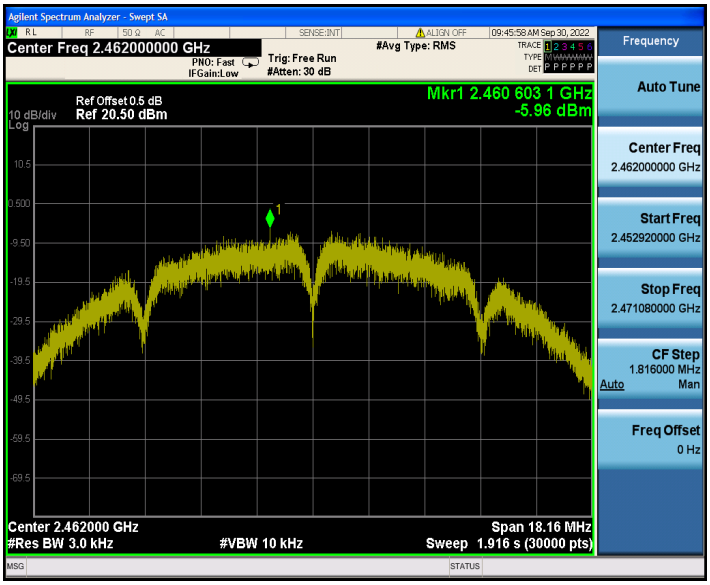
802.11b_2412



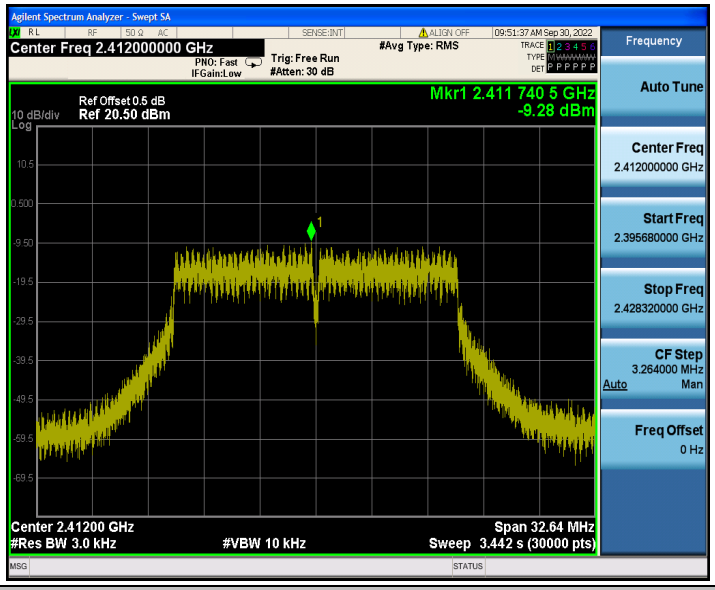
802.11b_2437



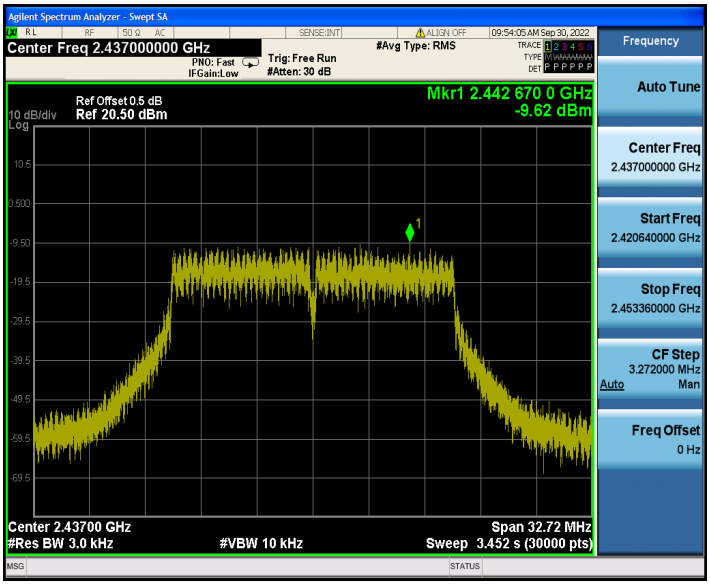
802.11b_2462



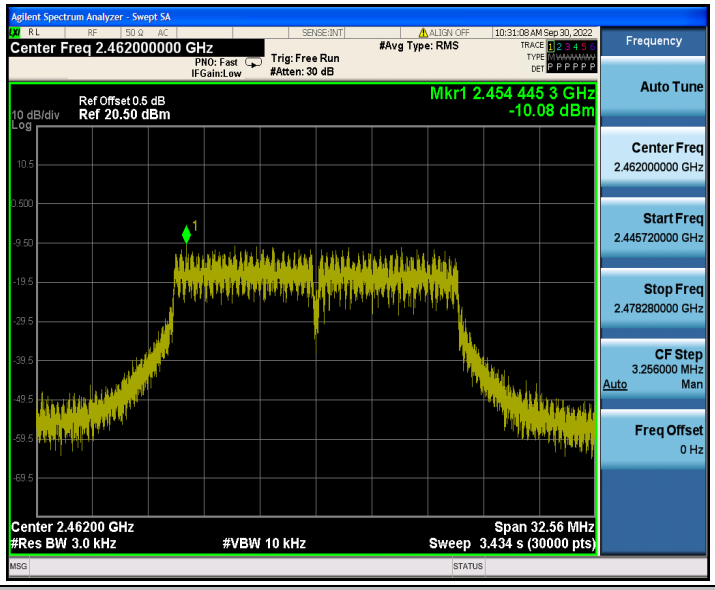
802.11g_2412



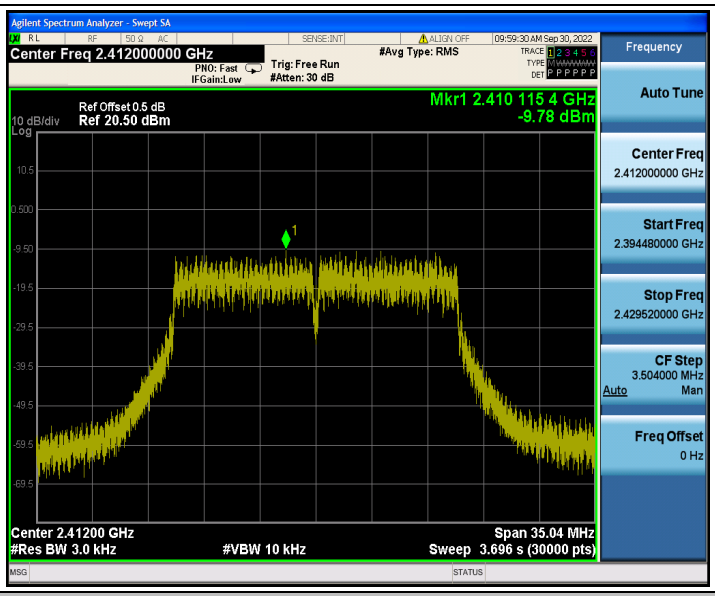
802.11g_2437



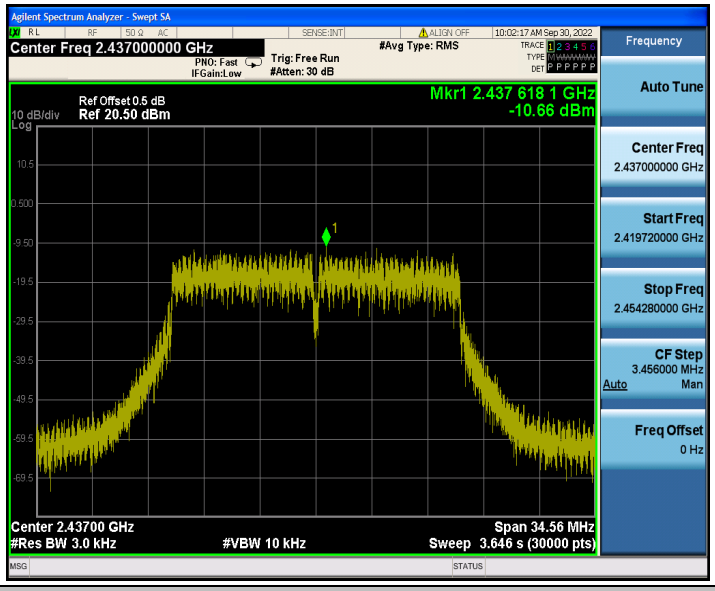
802.11g_2462



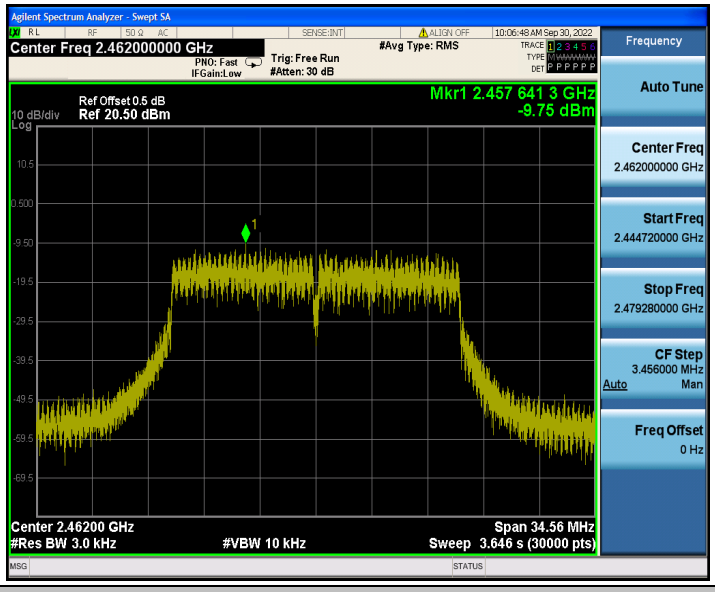
802.11n(HT20)_2412



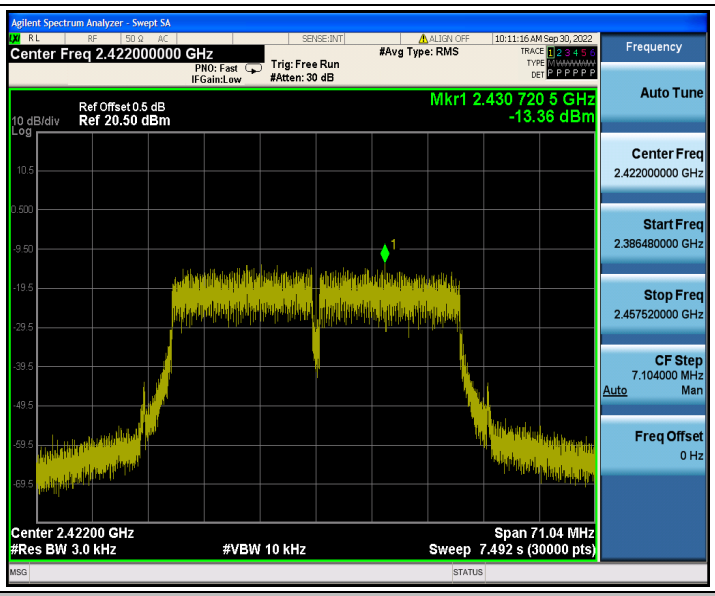
802.11n(HT20)_2437



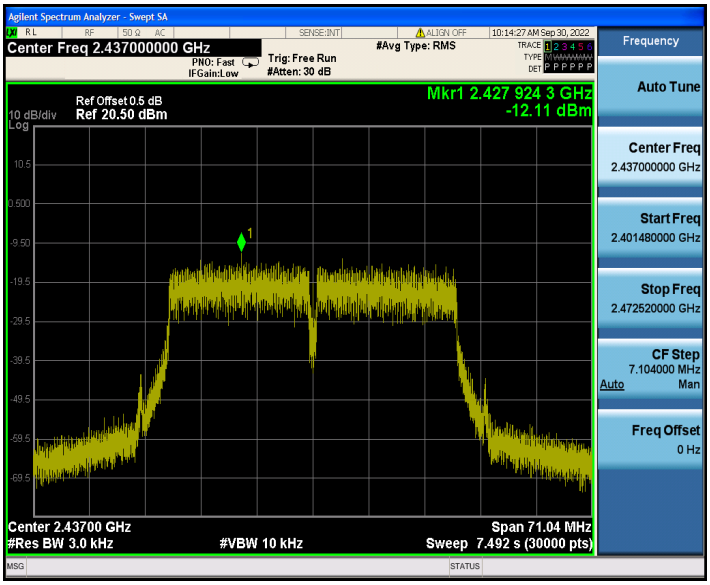
802.11n(HT20)_2462



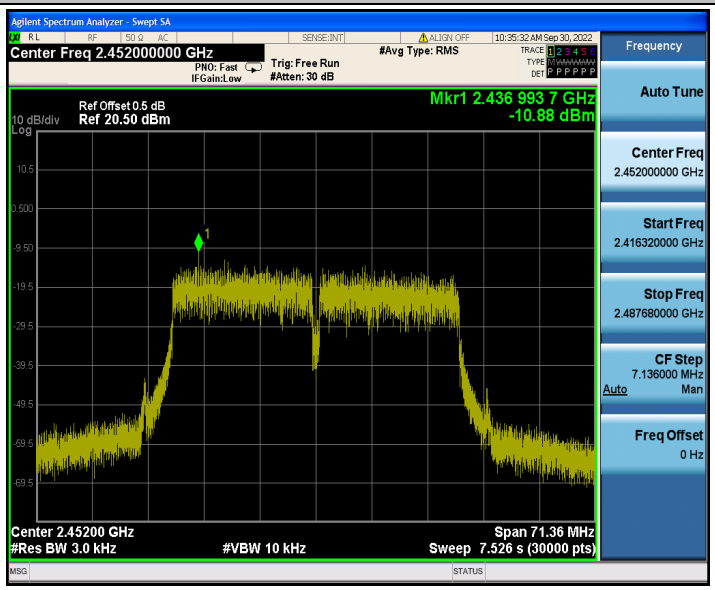
802.11n(HT40)_2422



802.11n(HT40)_2437



802.11n(HT40)_2452

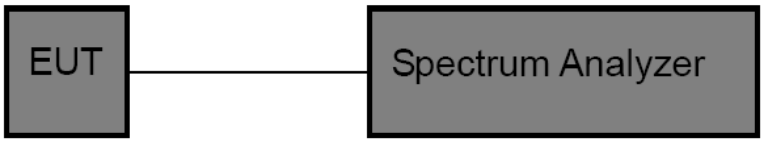


3.8. Duty Cycle

Limit

None, for report purposes only.

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 0Hz
Set the RBW to 8MHz
Set the VBW to 8MHz
Detector: peak
Sweep time: auto
Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

Test Mode

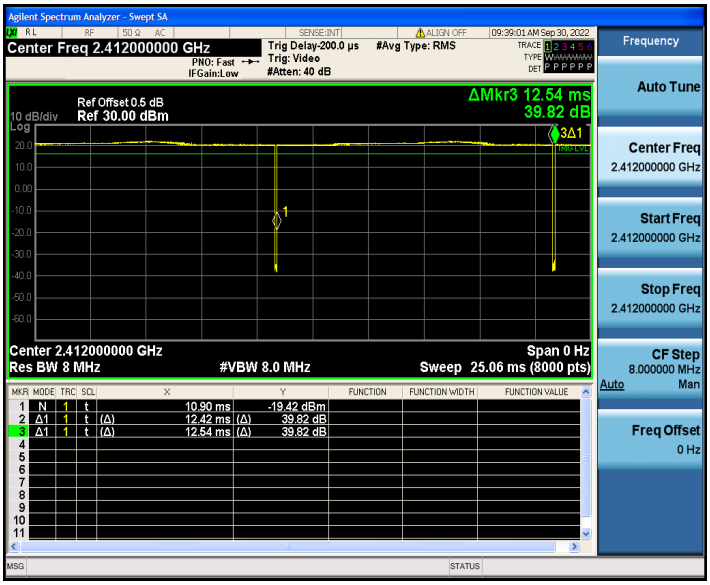
Please refer to the clause 2.4.

Test Result

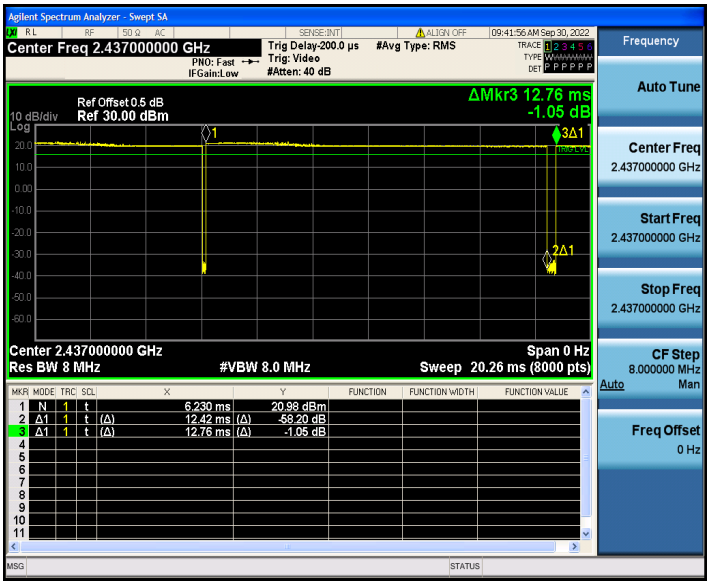
Test Mode	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Duty Cycle Factor	1/T Minimum VBW (kHz)	Final setting For VBW (kHz)
802.11b	2412	12.42	12.54	99.04	0.04	0.081	1
	2437	12.42	12.76	97.34	0.12	0.081	1
	2462	12.42	12.47	99.60	0.02	0.081	1
802.11g	2412	2.06	2.21	93.21	0.31	0.485	1
	2437	2.06	2.22	92.79	0.32	0.485	1
	2462	2.07	2.18	94.95	0.23	0.483	1
802.11n(HT20)	2412	1.92	2.07	92.75	0.33	0.521	1
	2437	1.92	2.08	92.31	0.35	0.521	1
	2462	1.92	2.08	92.31	0.35	0.521	1
802.11n(HT40)	2422	0.94	1.11	84.68	0.72	1.064	3
	2437	0.94	1.11	84.68	0.72	1.064	3
	2452	0.94	1.09	86.24	0.64	1.064	3

Note: Duty Cycle Factor = 10*Log10(1/ Duty Cycle)

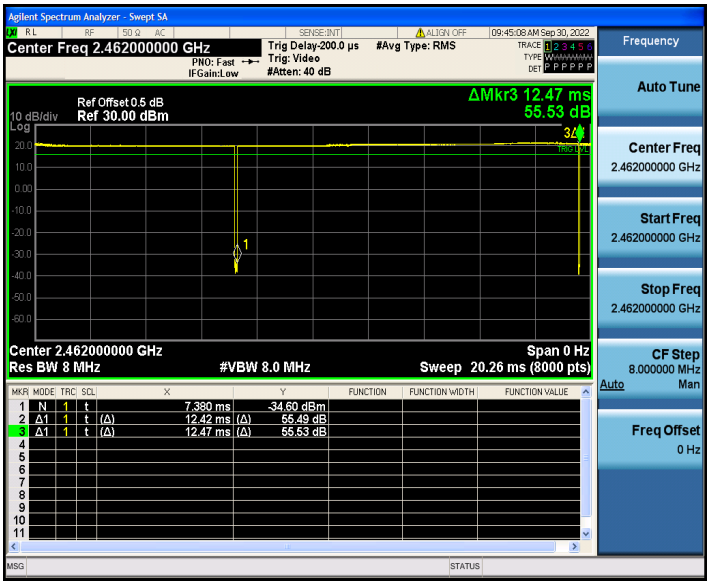
802.11b_2412



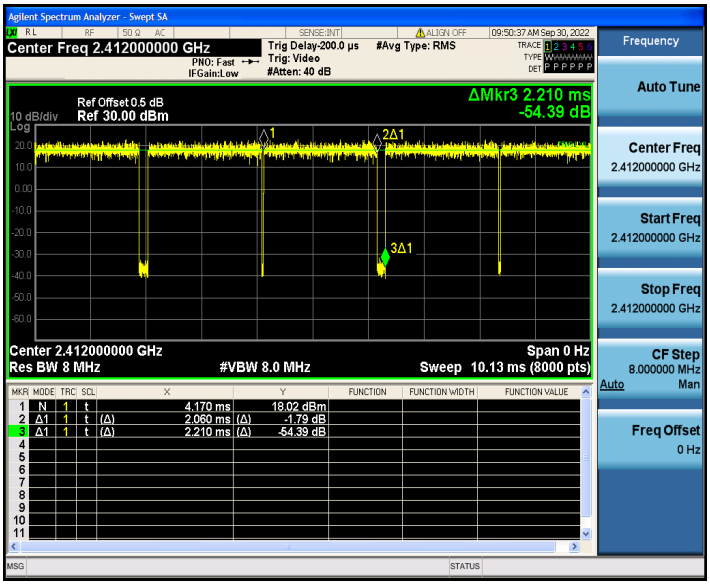
802.11b_2437



802.11b_2462



802.11g_2412



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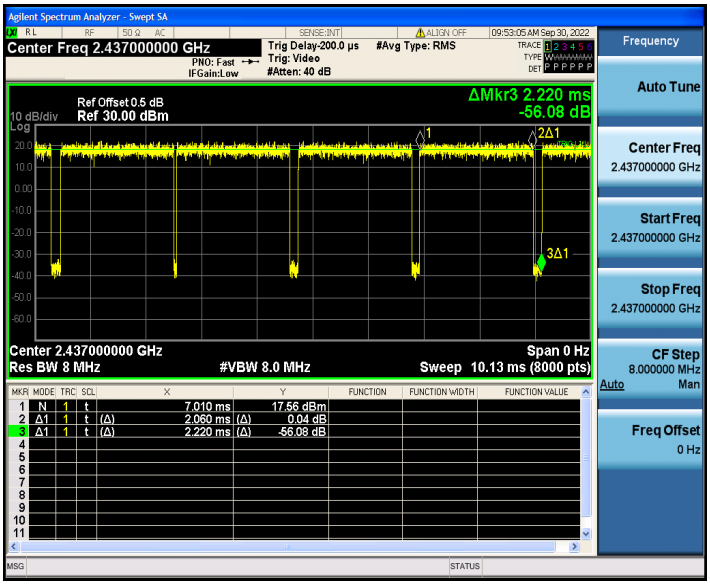

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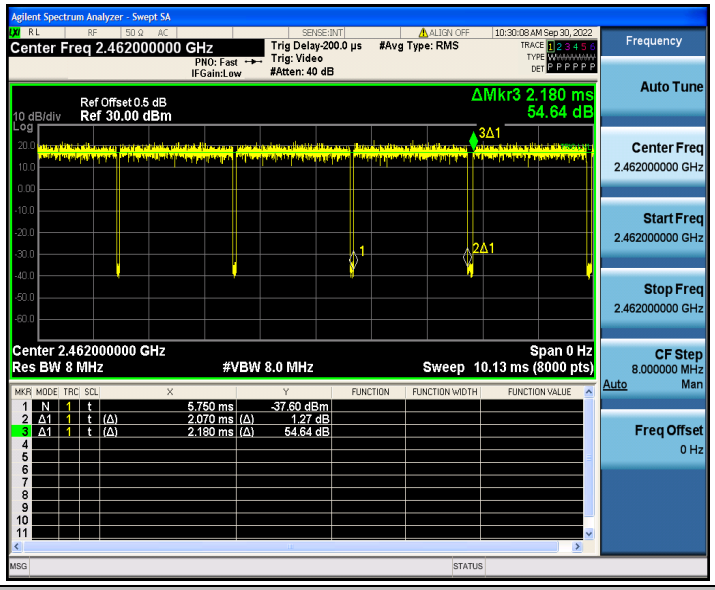
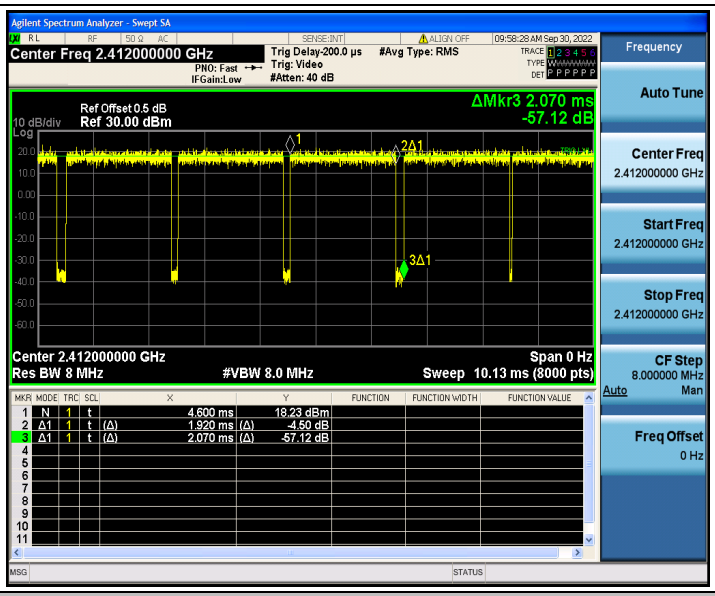
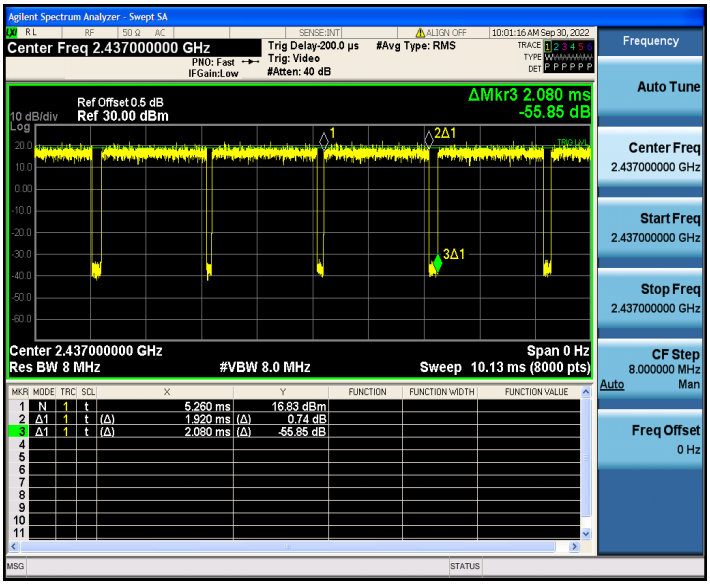


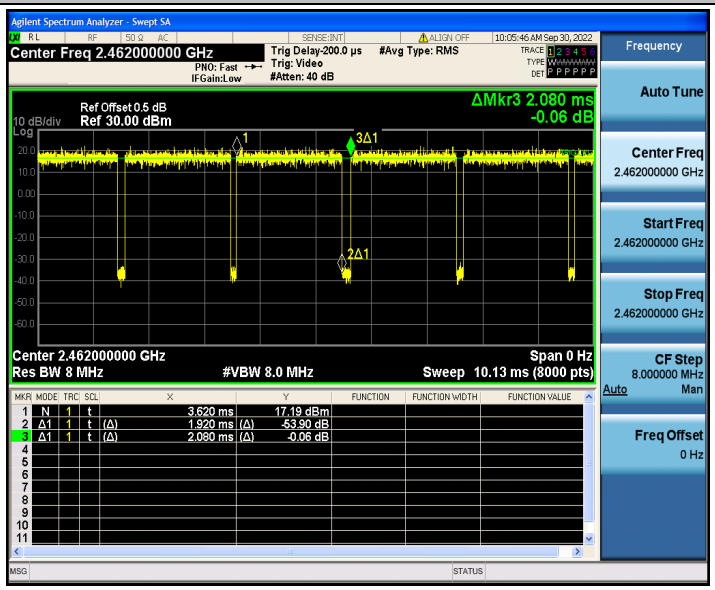
802.11n(HT20)_2412



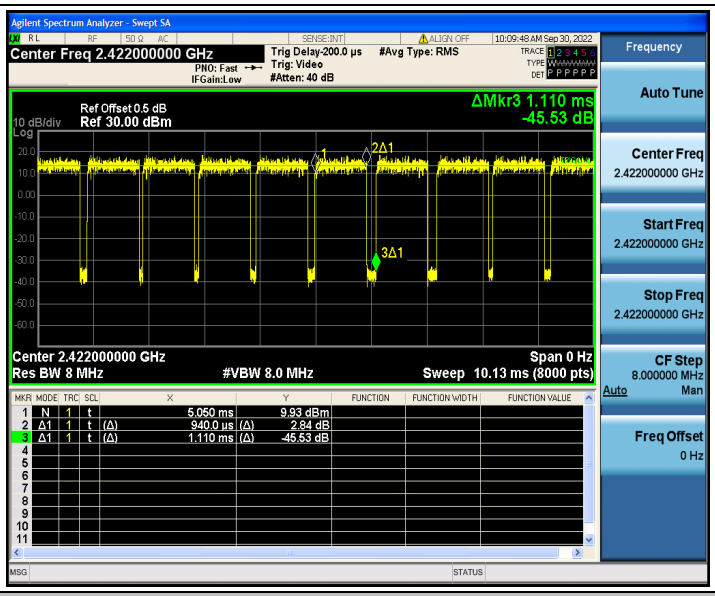
802.11n(HT20)_2437



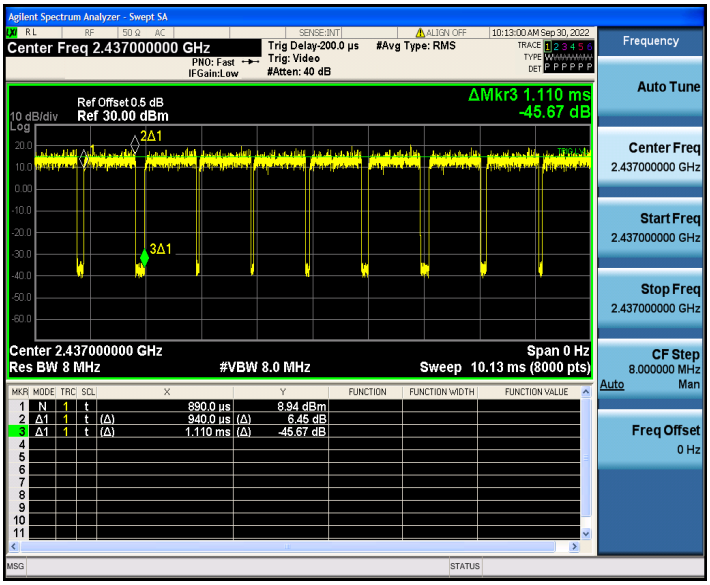
802.11n(HT20)_2462



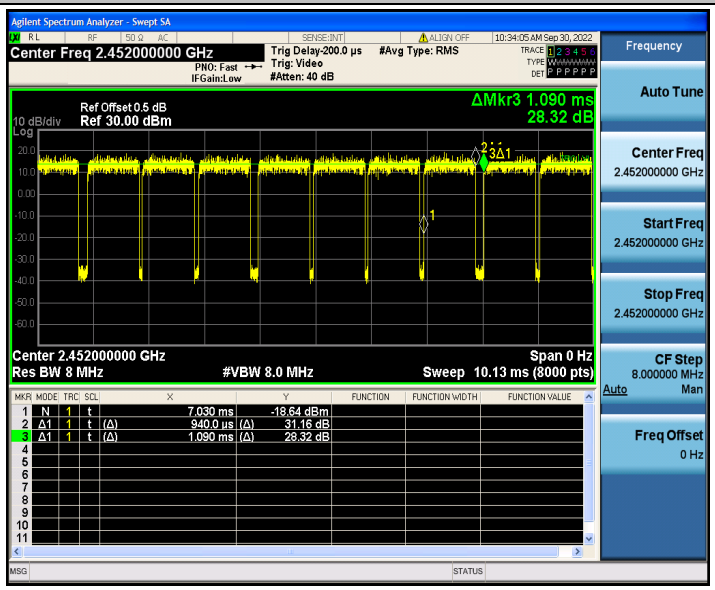
802.11n(HT40)_2422



802.11n(HT40)_2437



802.11n(HT40)_2452



3.9. Antenna requirement

Requirement

FCC CFR Title 47 Part 15 Subpart C Section 15.203:
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.
FCC CFR Title 47 Part 15 Subpart C Section 15.247(c) (1)(i):
(i) Systems operating in the 2400~2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

Test Result

The directional gain of the antenna less than 6dBi, please refer to the EUT internal photographs antenna photo.

**************************THE END*************************