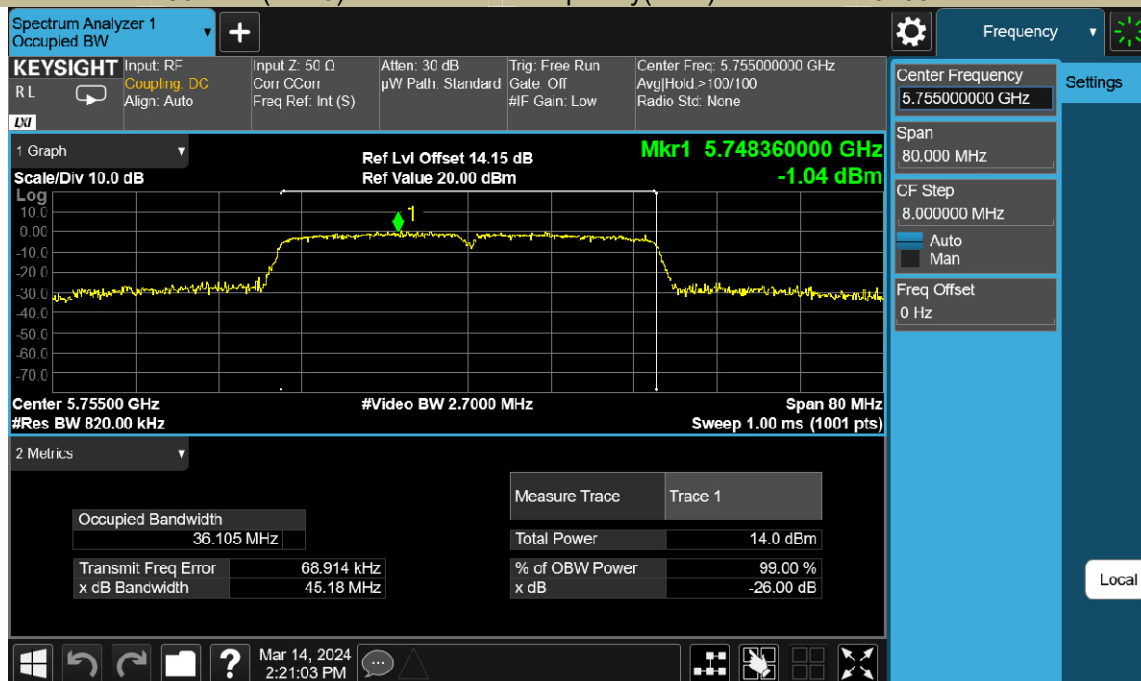


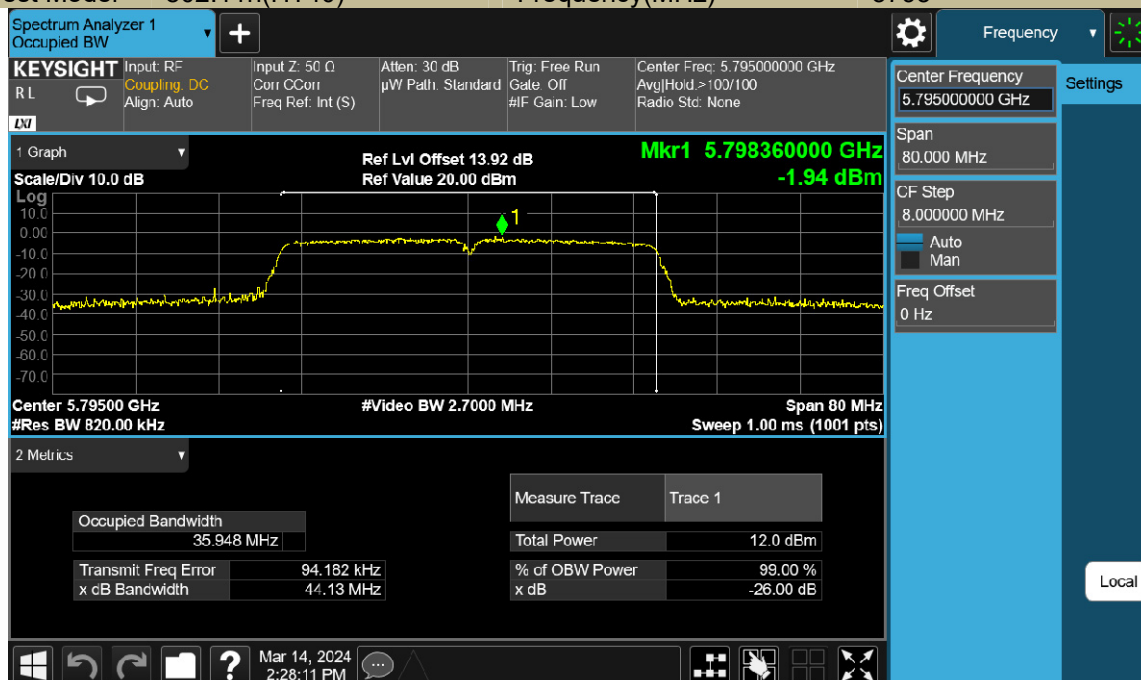
99% Occupied Bandwidth
Test Model 802.11n(HT40)

U-NII - 3
Frequency(MHz) 5755



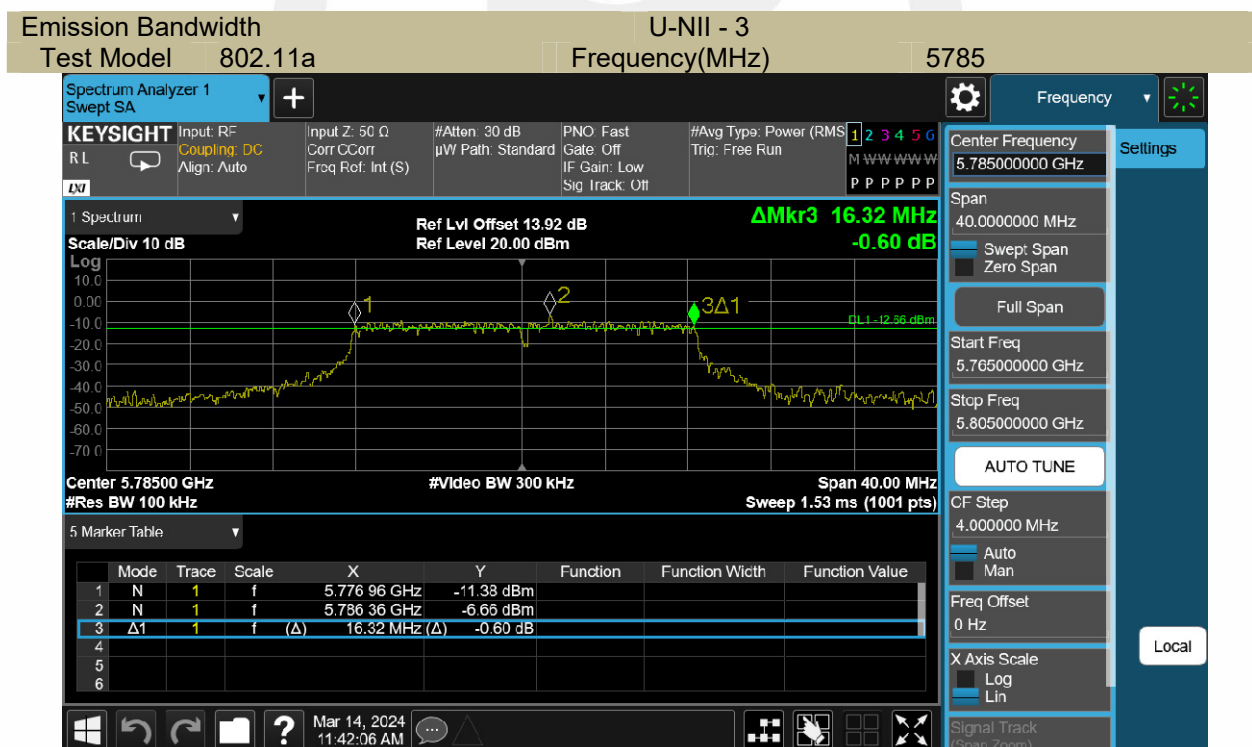
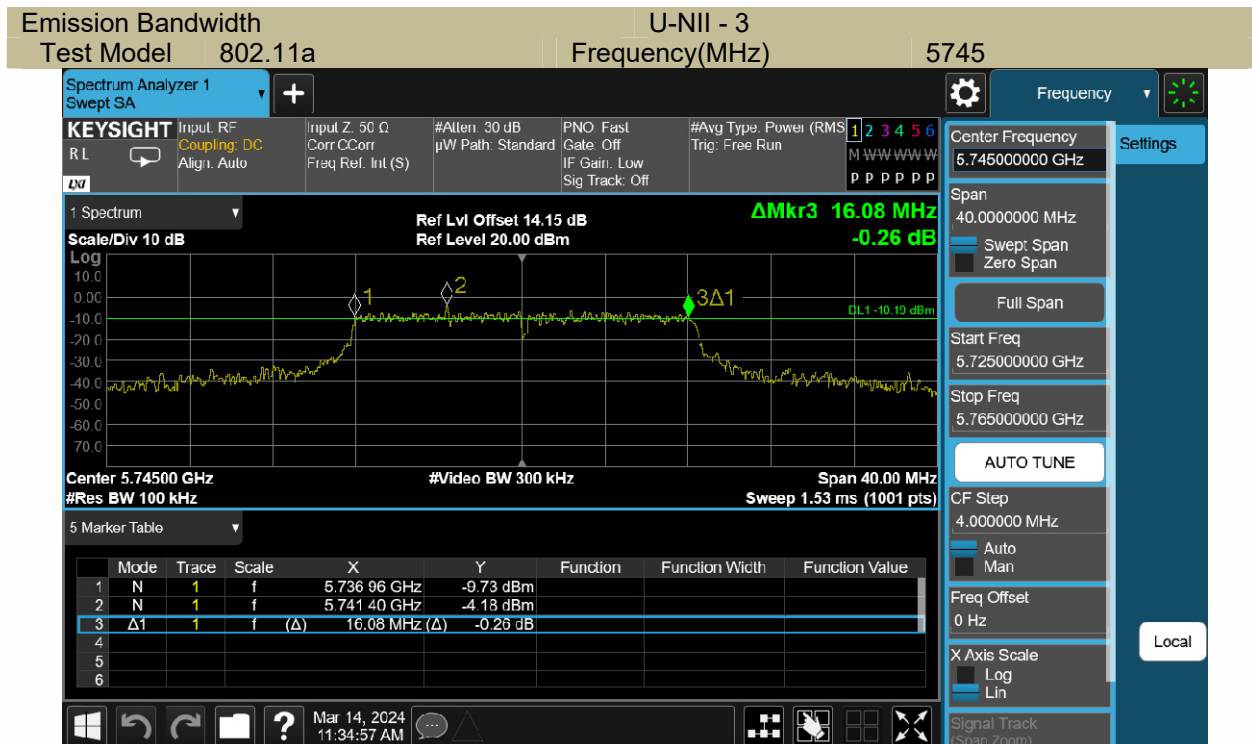
99% Occupied Bandwidth
Test Model 802.11n(HT40)

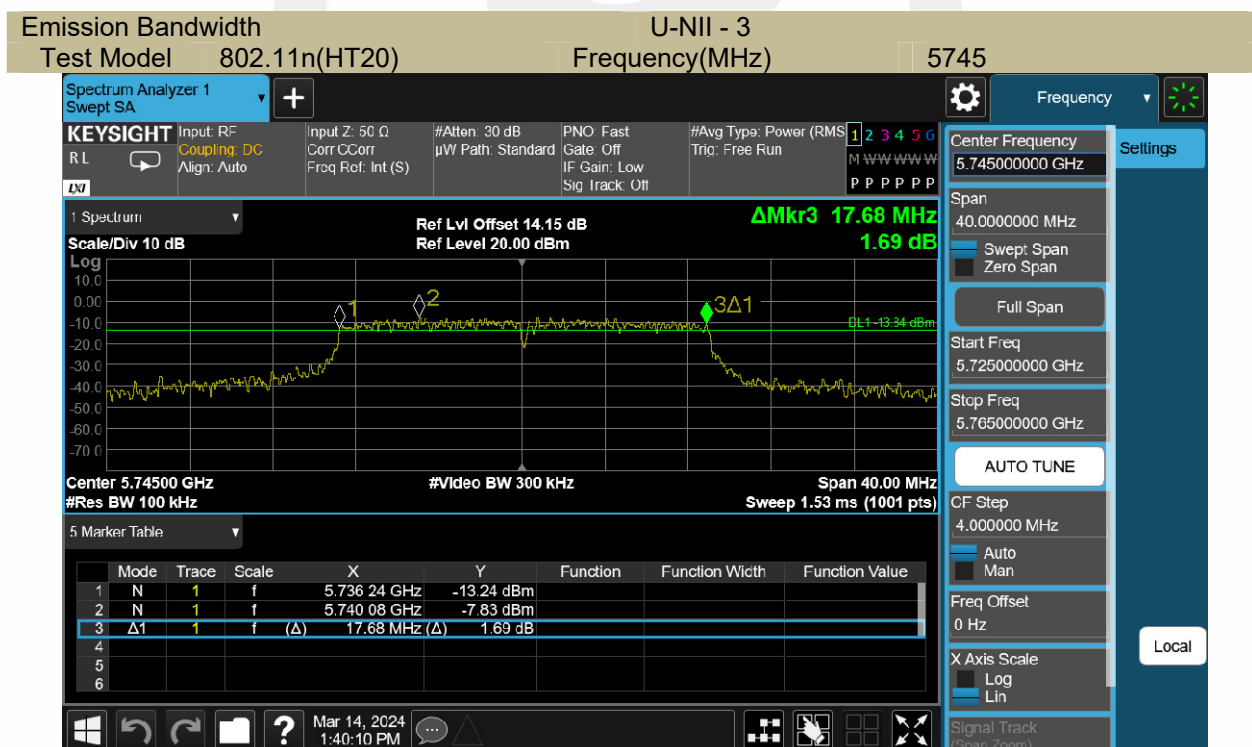
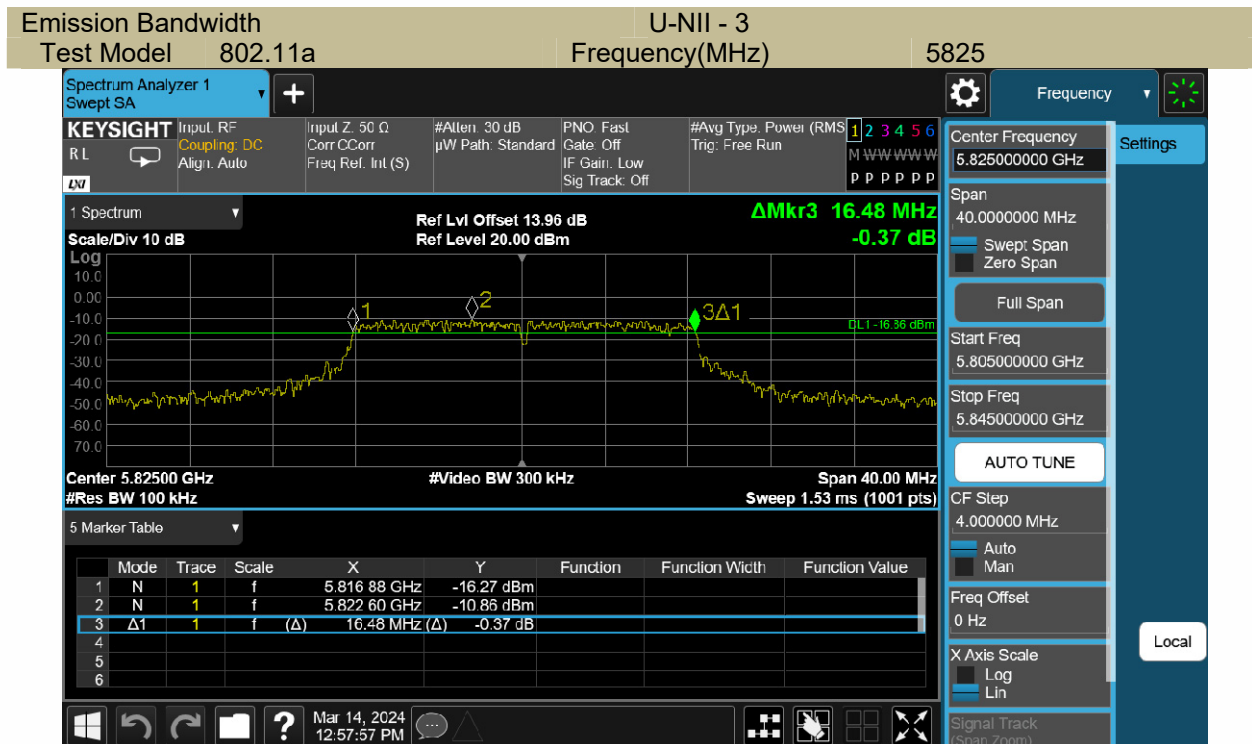
U-NII - 3
Frequency(MHz) 5795



TestMode	Antenna	Frequency[MHz]	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	16.080	5736.960	5753.040	0.5	PASS
		5785	16.320	5776.960	5793.280	0.5	PASS
		5825	16.480	5816.880	5833.360	0.5	PASS
11N20SISO	Ant1	5745	17.680	5736.240	5753.920	0.5	PASS
		5785	17.560	5776.360	5793.920	0.5	PASS
		5825	17.120	5816.400	5833.520	0.5	PASS
11N40SISO	Ant1	5755	33.600	5737.640	5771.240	0.5	PASS
		5795	35.920	5777.000	5812.920	0.5	PASS



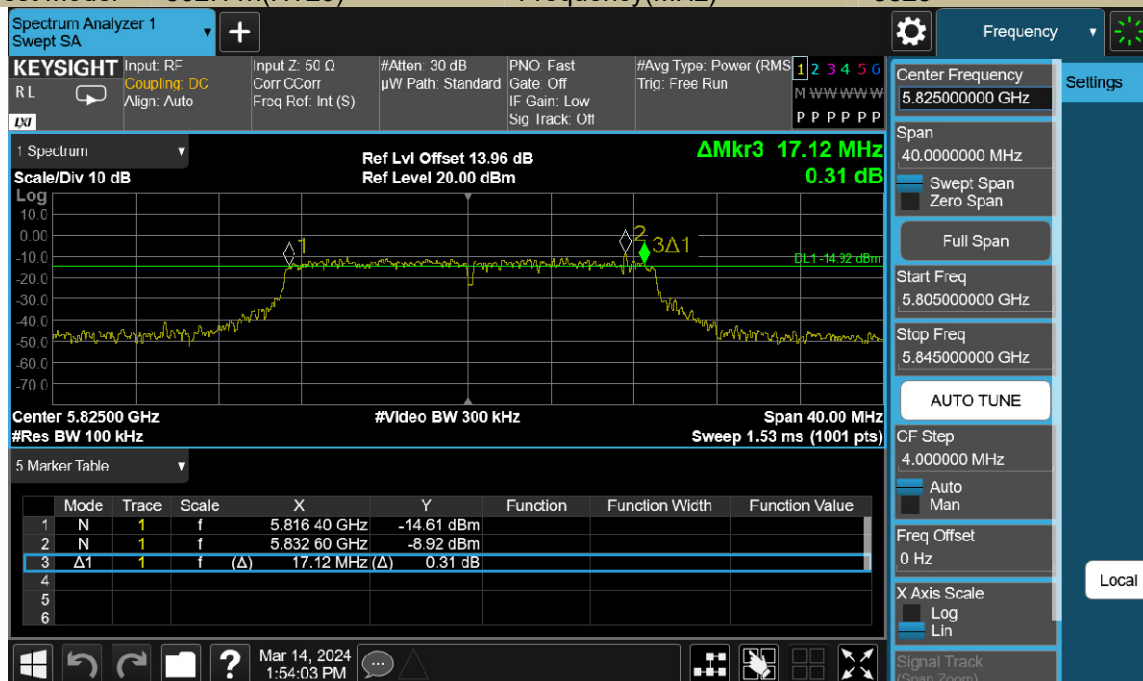


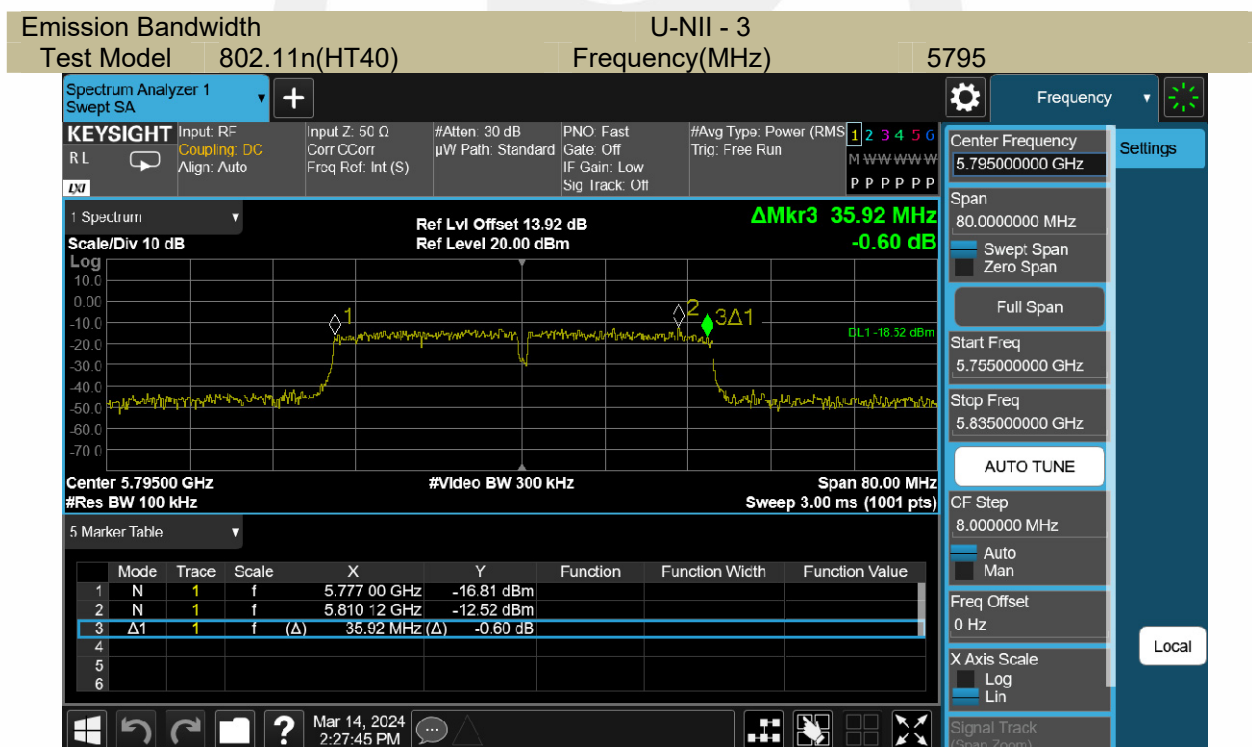
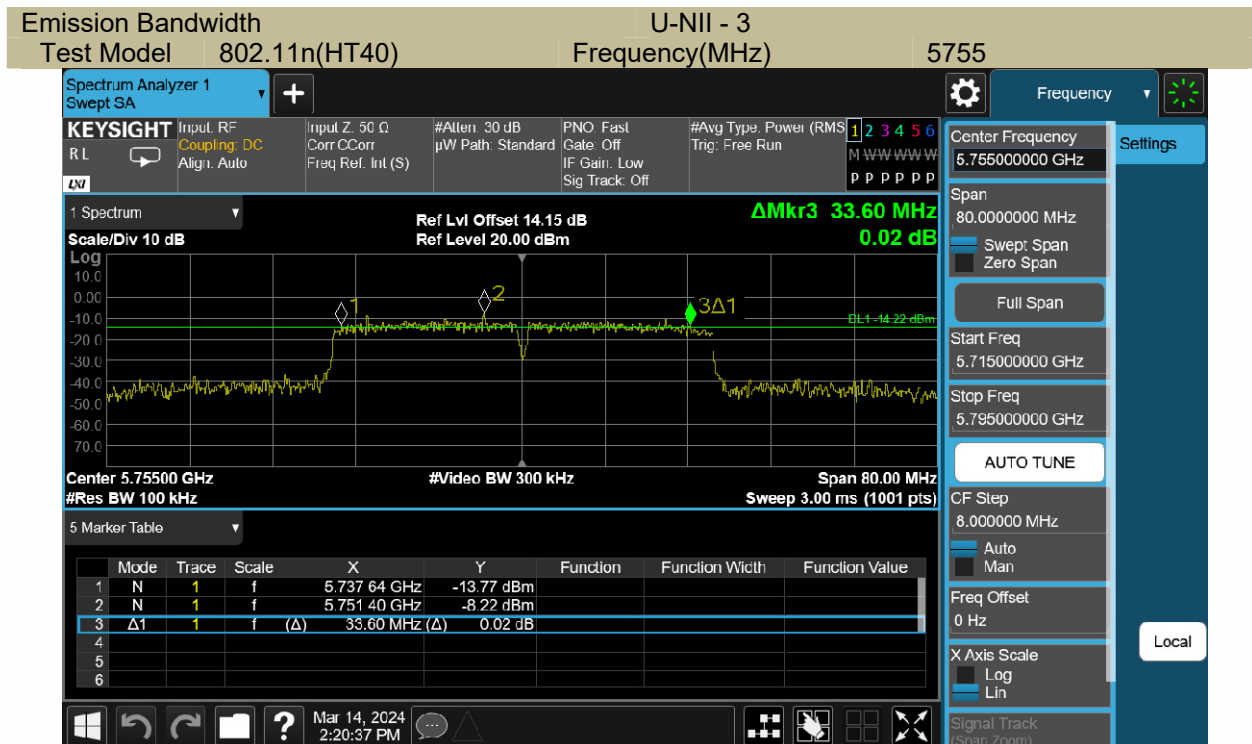


Emission Bandwidth U-NII - 3
Test Model 802.11n(HT20) Frequency(MHz) 5785



Emission Bandwidth U-NII - 3
Test Model 802.11n(HT20) Frequency(MHz) 5825





8.2 MAXIMUM CONDUCTED OUTPUT POWER

8.2.1 Applicable Standard

According to FCC Part 15.407(a)(1) for UNII Band I

According to FCC Part 15.407(a)(2) for UNII Band II-A and UNII Band II-C

According to FCC Part 15.407(a)(3) for UNII Band III

According to 789033 D02 Section II(E)

8.2.2 Conformance Limit

■ For the band 5.15-5.25 GHz,

(a) (1) (i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(a) (1) (ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(a) (1) (iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(a) (1) (iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

■ For the 5.25-5.35 GHz and 5.47-5.725 GHz bands

(a) (2) the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

■ For the band 5.725-5.85 GHz

(a) (3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

8.2.3 Test Configuration

Test according to clause 6.1 radio frequency test setup

8.2.4 Test Procedure

The following procedure shall be used for Maximum Conducted Output Power:

Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.

1. Set RBW = 1 MHz

2. Set VBW > 3 MHz

3. Number of points in sweep > 2 x span / RBW. (This ensures that bin-to-bin spacing is < RBW/2, so that narrowband signals are not lost between frequency bins.)

4. Sweep time = auto.

5. Detector = power averaging (rms), if available. Otherwise, use sample detector mode

6. If transmit duty cycle < 98%, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e, with no off intervals) or at duty cycle > 98%, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to "free run".

7. Trace average at least 100 traces in power averaging (rms) mode.

8. Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the spectrum.

9. Adjust the measurement in dBm by adding $[10 \log (1 / D)]$, where D is the duty cycle (e.g. $[10 \log (1 / 0.25)]$, if the duty cycle is 25%.

8.2.5 Test Results

☒ 802.11a mode								
Band	Channel Number	Channel Freq. (MHz)	Channel Power (dBm)	Duty Cycle (%)	DC Factor (dBm)	Conducted Output Power (dBm)	Limit (dBm)	Verdict
U-NII - 1	CH36	5180	12.22	94.09	0.26	12.48	23.98	Pass
	CH40	5200	12.81	94.09	0.26	13.07	23.98	Pass
	CH48	5240	12.78	94.06	0.27	13.05	23.98	Pass

☒ 802.11n-HT20								
Band	Channel Number	Channel Freq. (MHz)	Channel Power (dBm)	Duty Cycle (%)	DC Factor (dBm)	Conducted Output Power (dBm)	Limit (dBm)	Verdict
U-NII - 1	CH36	5180	10.39	93.66	0.28	10.67	23.98	Pass
	CH40	5200	10.74	93.66	0.28	11.02	23.98	Pass
	CH48	5240	11.02	93.66	0.28	11.30	23.98	Pass

☒ 802.11n-HT40								
Band	Channel Number	Channel Freq. (MHz)	Channel Power (dBm)	Duty Cycle (%)	DC Factor (dBm)	Conducted Output Power (dBm)	Limit (dBm)	Verdict
U-NII - 1	CH38	5190	10.43	87.85	0.56	10.99	23.98	Pass
	CH46	5230	10.70	87.96	0.56	11.26	23.98	Pass

☒ 802.11a mode								
Band	Channel Number	Channel Freq. (MHz)	Channel Power (dBm)	Duty Cycle (%)	DC Factor (dBm)	Conducted Output Power(dBm)	Limit (dBm)	Verdict
U-NII - 3	CH149	5745	13.72	94.09	0.26	13.98	30	Pass
	CH157	5785	12.29	94.09	0.26	12.55	30	Pass
	CH165	5825	15.02	94.09	0.26	15.28	30	Pass

☒ 802.11n-HT20								
Band	Channel Number	Channel Freq. (MHz)	Channel Power (dBm)	Duty Cycle (%)	DC Factor (dBm)	Conducted Output Power(dBm)	Limit (dBm)	Verdict
U-NII - 3	CH149	5745	12.29	93.66	0.28	12.57	30	Pass
	CH157	5785	10.55	93.66	0.28	10.83	30	Pass
	CH165	5825	13.09	93.66	0.28	13.37	30	Pass

☒ 802.11n-HT40								
Band	Channel Number	Channel Freq. (MHz)	Channel Power (dBm)	Duty Cycle (%)	DC Factor (dBm)	Conducted Output Power(dBm)	Limit (dBm)	Verdict
U-NII - 3	CH151	5755	12.62	87.96	0.56	13.18	30	Pass
	CH159	5795	10.44	87.96	0.56	11.00	30	Pass

