







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 1.

8.2.4 Test Procedure

The maximum average conducted output power can be measured using Method PM-G (Measurement using a gated RF average power meter):

Measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

- a. The Transmitter output (antenna port) was connected to the power meter.
- b. Turn on the EUT and power meter and then record the power value.
- c. Repeat above procedures on all channels needed to be tested.

8.2.5 Test Results

Temperature :	25°C	ATM Pressure::	1011 mbar
Humidity :	60 %	Test Engineer:	XXH

Test Mode	Antenna	Frequency [MHz]	TPC	Channel Power [dBm]	Duty Cycle [%]	Set Power	Result [dBm]	Limit [dBm]	Gain [dBi]	EIRP [dBm]	EIRP Limit [dBm]	Verdict
11A	Ant1	5180	NA	18.43	95.86	18	18.61	≤ 30.00	4.67	23.28	---	PASS
	Ant2	5180	NA	19.23	96.55	18	19.38	≤ 30.00	4.67	24.05	---	PASS
	Ant1	5200	NA	18.53	95.86	18	18.71	≤ 30.00	4.67	23.38	---	PASS
	Ant2	5200	NA	19.03	96.55	18	19.18	≤ 30.00	4.67	23.85	---	PASS
	Ant1	5240	NA	19.53	95.89	18	19.71	≤ 30.00	4.67	24.38	---	PASS
	Ant2	5240	NA	18.83	95.86	18	19.01	≤ 30.00	4.67	23.68	---	PASS
	Ant1	5260	TPC_L	11.87	95.86	0E	12.05	≤ 23.98	4.67	16.72	---	PASS
			TPC_H	15.07	95.86	0E	15.25	≤ 23.98	4.67	19.92	---	PASS
	Ant2	5260	TPC_L	9.13	95.86	0E	9.31	≤ 23.92	4.67	13.98	---	PASS
			TPC_H	12.64	95.86	0E	12.82	≤ 23.92	4.67	17.49	---	PASS
	Ant1	5280	TPC_L	12.02	95.89	0E	12.20	≤ 23.98	4.67	16.87	---	PASS
			TPC_H	15.15	95.89	0E	15.33	≤ 23.98	4.67	20.00	---	PASS
	Ant2	5280	TPC_L	9.09	95.86	0E	9.27	≤ 23.92	4.67	13.94	---	PASS
			TPC_H	12.66	95.86	0E	12.84	≤ 23.92	4.67	17.51	---	PASS
	Ant1	5320	TPC_L	12.42	95.86	0E	12.60	≤ 23.97	4.67	17.27	---	PASS
			TPC_H	15.55	95.86	0E	15.73	≤ 23.97	4.67	20.40	---	PASS
	Ant2	5320	TPC_L	11.69	96.55	0E	11.84	≤ 23.92	4.67	16.51	---	PASS
			TPC_H	15.16	96.55	0E	15.31	≤ 23.92	4.67	19.98	---	PASS
	Ant1	5500	TPC_L	10.13	96.55	0E	10.28	≤ 23.98	4.67	14.95	---	PASS
			TPC_H	13.57	96.55	0E	13.72	≤ 23.98	4.67	18.39	---	PASS
	Ant2	5500	TPC_L	11.63	95.86	0E	11.81	≤ 23.90	4.67	16.48	---	PASS
			TPC_H	14.70	95.86	0E	14.88	≤ 23.90	4.67	19.55	---	PASS
	Ant1	5580	TPC_L	10.74	95.86	0E	10.92	≤ 23.98	4.67	15.59	---	PASS
			TPC_H	13.92	95.86	0E	14.10	≤ 23.98	4.67	18.77	---	PASS
	Ant2	5580	TPC_L	10.89	96.55	0E	11.04	≤ 23.94	4.67	15.71	---	PASS
			TPC_H	13.96	96.55	0E	14.11	≤ 23.94	4.67	18.78	---	PASS
	Ant1	5700	TPC_L	11.14	95.86	0E	11.32	≤ 23.98	4.67	15.99	---	PASS
			TPC_H	14.83	95.86	0E	15.01	≤ 23.98	4.67	19.68	---	PASS
	Ant2	5700	TPC_L	10.98	95.86	0E	11.16	≤ 23.94	4.67	15.83	---	PASS
			TPC_H	14.04	95.86	0E	14.22	≤ 23.94	4.67	18.89	---	PASS
	Ant1	5745	NA	15.19	95.89	0E	15.37	≤ 30.00	4.67	20.04	---	PASS
	Ant2	5745	NA	15.07	96.55	0E	15.22	≤ 30.00	4.67	19.89	---	PASS
	Ant1	5785	NA	15.63	96.55	0E	15.78	≤ 30.00	4.67	20.45	---	PASS
	Ant2	5785	NA	15.71	96.55	0E	15.86	≤ 30.00	4.67	20.53	---	PASS
	Ant1	5825	NA	14.61	95.89	0E	14.79	≤ 30.00	4.67	19.46	---	PASS
	Ant2	5825	NA	15.90	96.55	0E	16.05	≤ 30.00	4.67	20.72	---	PASS
11N20MI MO	Ant1	5180	NA	17.00	95.62	12	17.19	≤ 28.32	4.67	21.86	---	PASS
	Ant2	5180	NA	16.98	95.59	12	17.18	≤ 28.32	4.67	21.85	---	PASS
	total	5180	NA	---	---	12	20.20	≤ 28.32	---	24.87	---	PASS

11AC80M IMO	Ant1	5755	NA	17.39	87.50	12	17.97	≤ 28.32	4.67	22.64	---	PASS
	Ant2	5755	NA	17.16	87.50	12	17.74	≤ 28.32	4.67	22.41	---	PASS
	total	5755	NA	---	---	12	20.87	≤ 28.32	---	25.54	---	PASS
	Ant1	5795	NA	17.83	87.50	12	18.41	≤ 28.32	4.67	23.08	---	PASS
	Ant2	5795	NA	18.07	85.37	12	18.76	≤ 28.32	4.67	23.43	---	PASS
	total	5795	NA	---	---	12	21.60	≤ 28.32	---	26.27	---	PASS
	Ant1	5210	NA	16.55	76.00	12	17.74	≤ 28.32	4.67	22.41	---	PASS
	Ant2	5210	NA	16.15	79.17	12	17.16	≤ 28.32	4.67	21.83	---	PASS
	total	5210	NA	---	---	12	20.47	≤ 28.32	---	25.14	---	PASS
	Ant1	5290	TPC_L	12.91	76.00	12	14.10	≤ 22.30	4.67	18.77	---	PASS
		TPC_H		16.93	76.00	11	18.12	≤ 22.30	4.67	22.79	---	PASS
	Ant2	5290	TPC_L	12.18	79.17	11	13.19	≤ 22.30	4.67	17.86	---	PASS
		TPC_H		16.19	79.17	11	17.20	≤ 22.30	4.67	21.87	---	PASS
	total	5290	TPC_L	---	---	11	16.68	≤ 22.30	---	21.35	---	PASS
		TPC_H		---	---	11	20.69	≤ 22.30	---	25.36	---	PASS
	Ant1	5530	TPC_L	11.12	75.00	12	12.37	≤ 22.30	4.67	17.04	---	PASS
		TPC_H		15.50	75.00	12	16.75	≤ 22.30	4.67	21.42	---	PASS
	Ant2	5530	TPC_L	12.61	79.17	12	13.62	≤ 22.30	4.67	18.29	---	PASS
		TPC_H		17.08	79.17	12	18.09	≤ 22.30	4.67	22.76	---	PASS
	total	5530	TPC_L	---	---	12	16.05	≤ 22.30	---	20.72	---	PASS
		TPC_H		---	---	12	20.48	≤ 22.30	---	25.15	---	PASS
	Ant1	5610	TPC_L	11.30	76.00	12	12.49	≤ 22.30	4.67	17.16	---	PASS
		TPC_H		15.83	76.00	12	17.02	≤ 22.30	4.67	21.69	---	PASS
	Ant2	5610	TPC_L	11.60	76.00	12	12.79	≤ 22.30	4.67	17.46	---	PASS
		TPC_H		16.15	76.00	12	17.34	≤ 22.30	4.67	22.01	---	PASS
	total	5610	TPC_L	---	---	12	15.65	≤ 22.30	---	20.32	---	PASS
		TPC_H		---	---	12	20.19	≤ 22.30	---	24.86	---	PASS
	Ant1	5775	NA	17.50	76.00	12	18.69	≤ 28.32	4.67	23.36	---	PASS
	Ant2	5775	NA	17.49	79.17	12	18.50	≤ 28.32	4.67	23.17	---	PASS
	total	5775	NA	---	---	12	21.61	≤ 28.32	---	26.28	---	PASS























































































