





















11AX20SISO Ant1 5280



11AX20SISO_Ant1_5320



11AX20SISO Ant1 5500

















11AX80SISO Ant1 5775



6dB Bandwidth:

11A Ant1 5745



11A Ant1 5785















10. Maximum Output Power

10.1. Block Diagram of Test Setup

Same as section 8.1

10.2. Limits

FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
Conducted Output Power	☐ Outdoor Access Point: 1 W (30 dBm)	5150-5250
	☐ Indoor Access Point: 1 W (30 dBm)	
	☐ Fixed Point-To-Point Access Points: 1 W (30 dBm)	
	☒ Client Devices: 250 mW (24 dBm)	
	Shall not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz.	5250-5350 5470-5725
	Shall not exceed 1 Watt (30 dBm).	5725-5850

Note: The above limits are based upon the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

10.3. Test Procedure

- (1) Connect each EUT's antenna output to power meter by RF cable and attenuator
- (2) Add each antenna port's results to get the total output power of EUT.

10.4. Test Result

Test Mode	Ant.	Freq. (MHz)	Channel Power (dBm)	Duty Cycle (%)	DC Factor (dBm)	Result (dBm)	Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Verdict
11A	Ant1	5180	12.44	79.61	0.99	13.43	≤23.98	16.78	≤22.39	PASS
		5200	11.05	79.61	0.99	12.04	≤23.98	15.39	≤22.38	PASS
		5240	11.63	79.61	0.99	12.62	≤23.98	15.97	≤22.40	PASS
		5260	10.95	79.61	0.99	11.94	≤23.98	15.29	≤26.99	PASS
		5280	10.87	79.61	0.99	11.86	≤23.98	15.21	≤26.99	PASS
		5320	10.39	79.61	0.99	11.38	≤23.98	14.73	≤26.99	PASS
		5500	10.51	79.61	0.99	11.50	≤23.98	14.85	≤26.99	PASS
		5580	12.19	79.61	0.99	13.18	≤23.98	16.53	≤26.99	PASS
		5700	11.45	79.61	0.99	12.44	≤23.98	15.79	≤26.99	PASS
		5720_UNI I-2C	10.33	79.61	0.99	11.32	≤23.67	14.67	≤26.99	PASS
		5720_UNI I-3	3.59	79.61	0.99	4.58	≤30.00	7.93	---	PASS
		5745	12.01	79.61	0.99	13.00	≤30.00	16.35	---	PASS
		5785	9.96	80.00	0.97	10.93	≤30.00	14.28	---	PASS
		5825	9.94	80.00	0.97	10.91	≤30.00	14.26	---	PASS
11N20 SISO	Ant1	5180	11.01	78.42	1.06	12.07	≤23.98	15.42	≤22.65	PASS
		5200	10.98	78.42	1.06	12.04	≤23.98	15.39	≤22.62	PASS
		5240	9.55	78.42	1.06	10.61	≤23.98	13.96	≤22.65	PASS
		5260	11.01	78.42	1.06	12.07	≤23.98	15.42	≤26.99	PASS
		5280	10.46	78.42	1.06	11.52	≤23.98	14.87	≤26.99	PASS
		5320	9.48	78.42	1.06	10.54	≤23.98	13.89	≤26.99	PASS
		5500	10.25	78.42	1.06	11.31	≤23.98	14.66	≤26.99	PASS
		5580	12.14	78.42	1.06	13.20	≤23.98	16.55	≤26.99	PASS
		5700	11.22	78.42	1.06	12.28	≤23.98	15.63	≤26.99	PASS
		5720_UNI	10.19	78.42	1.06	11.25	≤23.41	14.60	≤26.99	PASS

		I-2C								
		5720_UNI I-3	3.99	78.42	1.06	5.05	≤30.00	8.40	---	PASS
		5745	12.04	78.42	1.06	13.10	≤30.00	16.45	---	PASS
		5785	10.01	78.42	1.06	11.07	≤30.00	14.42	---	PASS
		5825	10.03	78.42	1.06	11.09	≤30.00	14.44	---	PASS
11N40 SISO	Ant1	5190	10.39	63.70	1.96	12.35	≤23.98	15.70	≤23.01	PASS
		5230	9.23	64.14	1.93	11.16	≤23.98	14.51	≤23.01	PASS
		5270	10.23	64.14	1.93	12.16	≤23.98	15.51	≤26.99	PASS
		5310	9.03	64.14	1.93	10.96	≤23.98	14.31	≤26.99	PASS
		5510	10.28	64.14	1.93	12.21	≤23.98	15.56	≤26.99	PASS
		5550	11.69	64.83	1.88	13.57	≤23.98	16.92	≤26.99	PASS
		5670	11.41	64.14	1.93	13.34	≤23.98	16.69	≤26.99	PASS
		5710_UNI I-2C	10.10	64.14	1.93	12.03	≤23.98	15.38	≤26.99	PASS
		5710_UNI I-3	-1.41	64.14	1.93	0.52	≤30.00	3.87	---	PASS
		5755	10.73	64.14	1.93	12.66	≤30.00	16.01	---	PASS
		5795	9.34	64.14	1.93	11.27	≤30.00	14.62	---	PASS
11AC2 OSISO	Ant1	5180	11.17	78.51	1.05	12.22	≤23.98	15.57	≤22.65	PASS
		5200	11.23	78.19	1.07	12.30	≤23.98	15.65	≤22.64	PASS
		5240	9.43	78.51	1.05	10.48	≤23.98	13.83	≤22.65	PASS
		5260	8.67	78.51	1.05	9.72	≤23.98	13.07	≤26.99	PASS
		5280	10.52	78.51	1.05	11.57	≤23.98	14.92	≤26.99	PASS
		5320	9.34	78.51	1.05	10.39	≤23.98	13.74	≤26.99	PASS
		5500	10.16	78.51	1.05	11.21	≤23.98	14.56	≤26.99	PASS
		5580	12.39	78.51	1.05	13.44	≤23.98	16.79	≤26.99	PASS
		5700	11.18	78.84	1.03	12.21	≤23.98	15.56	≤26.99	PASS
		5720_UNI I-2C	10.19	78.19	1.07	11.26	≤23.69	14.61	≤26.99	PASS
		5720_UNI I-3	3.86	78.19	1.07	4.93	≤30.00	8.28	---	PASS
		5745	11.91	78.51	1.05	12.96	≤30.00	16.31	---	PASS
		5785	9.85	78.51	1.05	10.90	≤30.00	14.25	---	PASS
		5825	9.86	78.51	1.05	10.91	≤30.00	14.26	---	PASS
11AC4 OSISO	Ant1	5190	10.51	64.38	1.91	12.42	≤23.98	15.77	≤23.01	PASS
		5230	9.31	64.14	1.93	11.24	≤23.98	14.59	≤23.01	PASS
		5270	10.27	64.38	1.91	12.18	≤23.98	15.53	≤26.99	PASS
		5310	8.71	64.14	1.93	10.64	≤23.98	13.99	≤26.99	PASS
		5510	10.18	64.83	1.88	12.06	≤23.98	15.41	≤26.99	PASS
		5550	11.52	64.38	1.91	13.43	≤23.98	16.78	≤26.99	PASS
		5670	11.24	64.38	1.91	13.15	≤23.98	16.50	≤26.99	PASS
		5710_UNI I-2C	10.03	64.14	1.93	11.96	≤23.98	15.31	≤26.99	PASS
		5710_UNI I-3	-1.55	64.14	1.93	0.38	≤30.00	3.73	---	PASS
		5755	10.86	64.38	1.91	12.77	≤30.00	16.12	---	PASS
11AC8 OSISO	Ant1	5210	8.74	46.39	3.34	12.08	≤23.98	15.43	≤23.01	PASS
		5290	5.64	46.94	3.28	8.92	≤23.98	12.27	≤26.99	PASS
		5530	9.63	46.39	3.34	12.97	≤23.98	16.32	≤26.99	PASS
		5610	10.66	46.39	3.34	14.00	≤23.98	17.35	≤26.99	PASS
		5690_UNI I-2C	9.53	47.42	3.24	12.77	≤23.98	16.12	≤26.99	PASS
		5690_UNI I-3	-6.96	47.42	3.24	-3.72	≤30.00	-0.37	---	PASS
		5775	8.74	45.92	3.38	12.12	≤30.00	15.47	---	PASS
11AX2 OSISO	Ant1	5180	9.47	74.11	1.30	10.77	≤23.98	14.12	≤22.84	PASS
		5200	10.68	73.74	1.32	12.00	≤23.98	15.35	≤22.83	PASS
		5240	9.83	73.37	1.34	11.17	≤23.98	14.52	≤22.83	PASS
		5260	8.78	73.74	1.32	10.10	≤23.98	13.45	≤26.99	PASS

		5280	10.64	73.74	1.32	11.96	≤23.98	15.31	≤26.99	PASS
		5320	9.29	73.74	1.32	10.61	≤23.98	13.96	≤26.99	PASS
		5500	9.58	73.74	1.32	10.90	≤23.98	14.25	≤26.99	PASS
		5580	11.66	73.74	1.32	12.98	≤23.98	16.33	≤26.99	PASS
		5700	11.38	73.74	1.32	12.70	≤23.98	16.05	≤26.99	PASS
		5720_UNI I-2C	10.55	74.24	1.29	11.84	≤23.65	15.19	≤26.99	PASS
		5720_UNI I-3	4.38	74.24	1.29	5.67	≤30.00	9.02	---	PASS
		5745	12.52	74.11	1.30	13.82	≤30.00	17.17	---	PASS
		5785	11.79	73.74	1.32	13.11	≤30.00	16.46	---	PASS
		5825	11.81	74.24	1.29	13.10	≤30.00	16.45	---	PASS
11AX4 0SISO	Ant1	5190	8.52	58.91	2.30	10.82	≤23.98	14.17	≤23.01	PASS
		5230	10.31	59.38	2.26	12.57	≤23.98	15.92	≤23.01	PASS
		5270	9.67	59.38	2.26	11.93	≤23.98	15.28	≤26.99	PASS
		5310	8.12	59.38	2.26	10.38	≤23.98	13.73	≤26.99	PASS
		5510	7.50	59.38	2.26	9.76	≤23.98	13.11	≤26.99	PASS
		5550	9.22	59.38	2.26	11.48	≤23.98	14.83	≤26.99	PASS
		5670	10.69	59.38	2.26	12.95	≤23.98	16.30	≤26.99	PASS
		5710_UNI I-2C	9.35	58.91	2.30	11.65	≤23.98	15.00	≤26.99	PASS
		5710_UNI I-3	-2.01	58.91	2.30	0.29	≤30.00	3.64	---	PASS
		5755	11.42	59.38	2.26	13.68	≤30.00	17.03	---	PASS
11AX8 0SISO	Ant1	5795	10.90	59.38	2.26	13.16	≤30.00	16.51	---	PASS
		5210	8.89	43.48	3.62	12.51	≤23.98	15.86	≤23.01	PASS
		5290	7.55	42.39	3.73	11.28	≤23.98	14.63	≤26.99	PASS
		5530	7.52	43.48	3.62	11.14	≤23.98	14.49	≤26.99	PASS
		5610	8.66	43.48	3.62	12.28	≤23.98	15.63	≤26.99	PASS
		5690_UNI I-2C	9.17	42.86	3.68	12.85	≤23.98	16.20	≤26.99	PASS
		5690_UNI I-3	-7.10	42.86	3.68	-3.42	≤30.00	-0.07	---	PASS
		5775	9.90	42.86	3.68	13.58	≤30.00	16.93	---	PASS

11. Power Spectral Density

11.1. Block Diagram of Test Setup

Same as section 8.1

11.2. Limits

CFR 47 FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
Power Spectral Density	☐ Outdoor Access Point: 17 dBm/MHz ☐ Indoor Access Point: 17 dBm/MHz ☐ Fixed Point-To-Point Access Points: 17 dBm/MHz ☒ Client Devices: 11 dBm/MHz	5150-5250
	11 dBm/MHz	5250-5350 5470-5725
	30 dBm/500 kHz	5725-5850

Note: The above limits are based upon the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

11.3. Test Procedure

The transmitter output was connected to a spectrum analyzer. Power density was measured by spectrum analyzer with 1MHz RBW and 3MHz VBW.

Connect the UUT to the spectrum analyzer and use the following settings:

5150 MHz~5250 MHz, 5250 MHz~5350 MHz, 5470 MHz~5725 MHz

Center Frequency	The centre frequency of the channel under test
Detector	RMS
RBW	1MHz
VBW	$\geq 3 \times \text{RBW}$
Span	Encompass the entire emissions bandwidth (EBW) of the signal
Trace	Max hold
Sweep time	Auto

5725 MHz-5850 MHz

Center Frequency	The centre frequency of the channel under test
Detector	RMS
RBW	500 kHz
VBW	$\geq 3 \times \text{RBW}$
Span	Encompass the entire emissions bandwidth (EBW) of the signal
Trace	Max hold
Sweep time	Auto

Note:

1. For UNII-3, according to KdB publication 789033 D02 General U-NII Test Procedures New Rules v02r01, section II.F.5., it is acceptable to set RBW at 1 MHz and VBW at 3 MHz if the spectrum analyzer does not have 500 kHz RBW.

2. The value measured with RBW=300kHz is to be added with $10\log(500\text{kHz}/300\text{kHz})$ which is 2.2dB. For example, if the measured value is +30 dBm using RBW=300kHz (that is +30 dBm/300kHz), then the converted value will be +32.2 dBm/1MHz.

3. Allow trace to fully stabilize and use the peak marker function to determine the maximum amplitude level within the RBW.

11.4. Test Result

Test Mode	Ant.	Freq. (MHz)	Result (dBm/MHz)	Limit (dBm/MHz)	Verdict
11A	Ant1	5180	-3.81	≤11.00	PASS
		5200	-3.80	≤11.00	PASS
		5240	-5.87	≤11.00	PASS
		5260	-7.21	≤11.00	PASS
		5280	-7.68	≤11.00	PASS
		5320	-7.00	≤11.00	PASS
		5500	-6.76	≤11.00	PASS
		5580	-4.38	≤11.00	PASS
		5700	-4.83	≤11.00	PASS
		5720 UNII-2C	-5.09	≤11.00	PASS
11N20SISO	Ant1	5180	-4.25	≤11.00	PASS
		5200	-4.31	≤11.00	PASS
		5240	-6.22	≤11.00	PASS
		5260	-4.86	≤11.00	PASS
		5280	-5.68	≤11.00	PASS
		5320	-6.95	≤11.00	PASS
		5500	-6.64	≤11.00	PASS
		5580	-4.59	≤11.00	PASS
		5700	-5.57	≤11.00	PASS
		5720 UNII-2C	-5.43	≤11.00	PASS
11N40SISO	Ant1	5190	-6.66	≤11.00	PASS
		5230	-7.57	≤11.00	PASS
		5270	-6.91	≤11.00	PASS
		5310	-8.86	≤11.00	PASS
		5510	-8.75	≤11.00	PASS
		5550	-7.14	≤11.00	PASS
		5670	-7.07	≤11.00	PASS
		5710 UNII-2C	-8.40	≤11.00	PASS
11AC20SISO	Ant1	5180	-3.91	≤11.00	PASS
		5200	-3.97	≤11.00	PASS
		5240	-5.88	≤11.00	PASS
		5260	-7.19	≤11.00	PASS
		5280	-5.68	≤11.00	PASS
		5320	-6.58	≤11.00	PASS
		5500	-6.86	≤11.00	PASS
		5580	-4.67	≤11.00	PASS
		5700	-5.19	≤11.00	PASS
		5720 UNII-2C	-5.67	≤11.00	PASS
11AC40SISO	Ant1	5190	-6.35	≤11.00	PASS
		5230	-8.79	≤11.00	PASS
		5270	-10.75	≤11.00	PASS
		5310	-9.86	≤11.00	PASS
		5510	-9.05	≤11.00	PASS
		5550	-7.73	≤11.00	PASS
		5670	-7.40	≤11.00	PASS
		5710 UNII-2C	-8.10	≤11.00	PASS
11AC80SISO	Ant1	5210	-10.02	≤11.00	PASS
		5290	-14.29	≤11.00	PASS
		5530	-10.20	≤11.00	PASS
		5610	-8.15	≤11.00	PASS
		5690 UNII-2C	-10.10	≤11.00	PASS
11AX20SISO	Ant1	5180	-3.57	≤11.00	PASS
		5200	-3.44	≤11.00	PASS
		5240	-6.37	≤11.00	PASS
		5260	-8.16	≤11.00	PASS
		5280	-5.34	≤11.00	PASS

		5320	-6.85	≤11.00	PASS
		5500	-7.56	≤11.00	PASS
		5580	-5.63	≤11.00	PASS
		5700	-6.52	≤11.00	PASS
		5720_UNII-2C	-6.85	≤11.00	PASS
11AX40SISO	Ant1	5190	-7.53	≤11.00	PASS
		5230	-9.61	≤11.00	PASS
		5270	-11.80	≤11.00	PASS
		5310	-13.35	≤11.00	PASS
		5510	-8.76	≤11.00	PASS
		5550	-7.80	≤11.00	PASS
		5670	-6.97	≤11.00	PASS
11AX80SISO	Ant1	5710_UNII-2C	-8.52	≤11.00	PASS
		5210	-10.13	≤11.00	PASS
		5290	-14.43	≤11.00	PASS
		5530	-10.43	≤11.00	PASS
		5610	-9.79	≤11.00	PASS
		5690_UNII-2C	-10.35	≤11.00	PASS

Test Mode	Ant.	Freq. (MHz)	Result (dBm/300kHz)	Result (dBm/500kHz)	Limit (dBm/500kHz)	Verdict
11A	Ant1	5720_UNII-3	-7.71	-5.51	≤30.00	PASS
		5745	-6.67	-4.47	≤30.00	PASS
		5785	-9.26	-7.06	≤30.00	PASS
		5825	-9.54	-7.34	≤30.00	PASS
11N20SISO	Ant1	5720_UNII-3	-8.59	-6.39	≤30.00	PASS
		5745	-7.28	-5.08	≤30.00	PASS
		5785	-10.04	-7.84	≤30.00	PASS
		5825	-10.26	-8.06	≤30.00	PASS
11N40SISO	Ant1	5710_UNII-3	-10.84	-8.64	≤30.00	PASS
		5755	-10.16	-7.96	≤30.00	PASS
		5795	-12.31	-10.11	≤30.00	PASS
11AC20SISO	Ant1	5720_UNII-3	-8.41	-6.21	≤30.00	PASS
		5745	-7.24	-5.04	≤30.00	PASS
		5785	-9.78	-7.58	≤30.00	PASS
		5825	-10.12	-7.92	≤30.00	PASS
11AC40SISO	Ant1	5710_UNII-3	-11.56	-9.36	≤30.00	PASS
		5755	-10.72	-8.52	≤30.00	PASS
		5795	-12.61	-10.41	≤30.00	PASS
11AC80SISO	Ant1	5690_UNII-3	-14.52	-12.32	≤30.00	PASS
		5775	-14.24	-12.04	≤30.00	PASS
11AX20SISO	Ant1	5720_UNII-3	-9.80	-7.6	≤30.00	PASS
		5745	-8.50	-6.3	≤30.00	PASS
		5785	-11.29	-9.09	≤30.00	PASS
		5825	-11.50	-9.3	≤30.00	PASS
11AX40SISO	Ant1	5710_UNII-3	-11.65	-9.45	≤30.00	PASS
		5755	-10.81	-8.61	≤30.00	PASS
		5795	-12.16	-9.96	≤30.00	PASS
11AX80SISO	Ant1	5690_UNII-3	-14.50	-12.3	≤30.00	PASS
		5775	-14.29	-12.09	≤30.00	PASS

Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

2.The Duty Cycle Factor and RBW Factor is compensated in the graph.

11.5. Original Test Data





































