

11N40MIMO-Ant1-5670



11N40MIMO-Ant2-5670



11N40MIMO-Ant1-5755



11N40MIMO-Ant2-5755



11N40MIMO-Ant1-5795



11N40MIMO-Ant2-5795



11AC20MIMO-Ant1-5180



11AC20MIMO-Ant2-5180



11AC20MIMO-Ant1-5200



11AC20MIMO-Ant2-5200



11AC20MIMO-Ant1-5240



11AC20MIMO-Ant2-5240



11AC20MIMO-Ant1-5260



11AC20MIMO-Ant2-5260



11AC20MIMO-Ant1-5280



11AC20MIMO-Ant2-5280



11AC20MIMO-Ant1-5320



11AC20MIMO-Ant2-5320



11AC20MIMO-Ant1-5500



11AC20MIMO-Ant2-5500



11AC20MIMO-Ant1-5580



11AC20MIMO-Ant2-5580



11AC20MIMO-Ant1-5700



11AC20MIMO-Ant2-5700



11AC20MIMO-Ant1-5745



11AC20MIMO-Ant2-5745



11AC20MIMO-Ant1-5785



11AC20MIMO-Ant2-5785



11AC20MIMO-Ant1-5825



11AC20MIMO-Ant2-5825



11AC40MIMO-Ant1-5190



11AC40MIMO-Ant2-5190



11AC40MIMO-Ant1-5230



11AC40MIMO-Ant2-5230



11AC40MIMO-Ant1-5270



11AC40MIMO-Ant2-5270



11AC40MIMO-Ant1-5310



11AC40MIMO-Ant2-5310



11AC40MIMO-Ant1-5510



11AC40MIMO-Ant2-5510



11AC40MIMO-Ant1-5550



11AC40MIMO-Ant2-5550



11AC40MIMO-Ant1-5670



11AC40MIMO-Ant2-5670



11AC40MIMO-Ant1-5755



11AC40MIMO-Ant2-5755



11AC40MIMO-Ant1-5795



11AC40MIMO-Ant2-5795



11AC80MIMO-Ant1-5530



11AC80MIMO-Ant2-5530



11AC80MIMO-Ant1-5610



11AC80MIMO-Ant2-5610



11AC80MIMO-Ant1-5775



11AC80MIMO-Ant2-5775



11AC80MIMO-Ant1-5290



11AC80MIMO-Ant2-5290



11AC80MIMO-Ant1-5210



11AC80MIMO-Ant2-5210



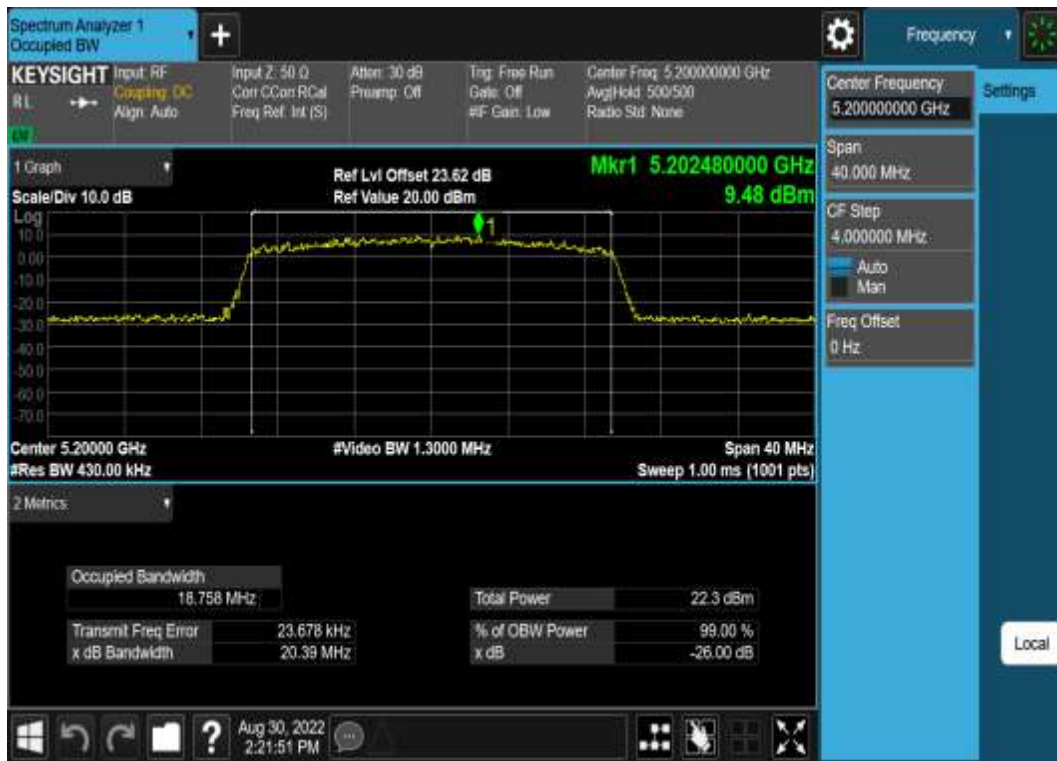
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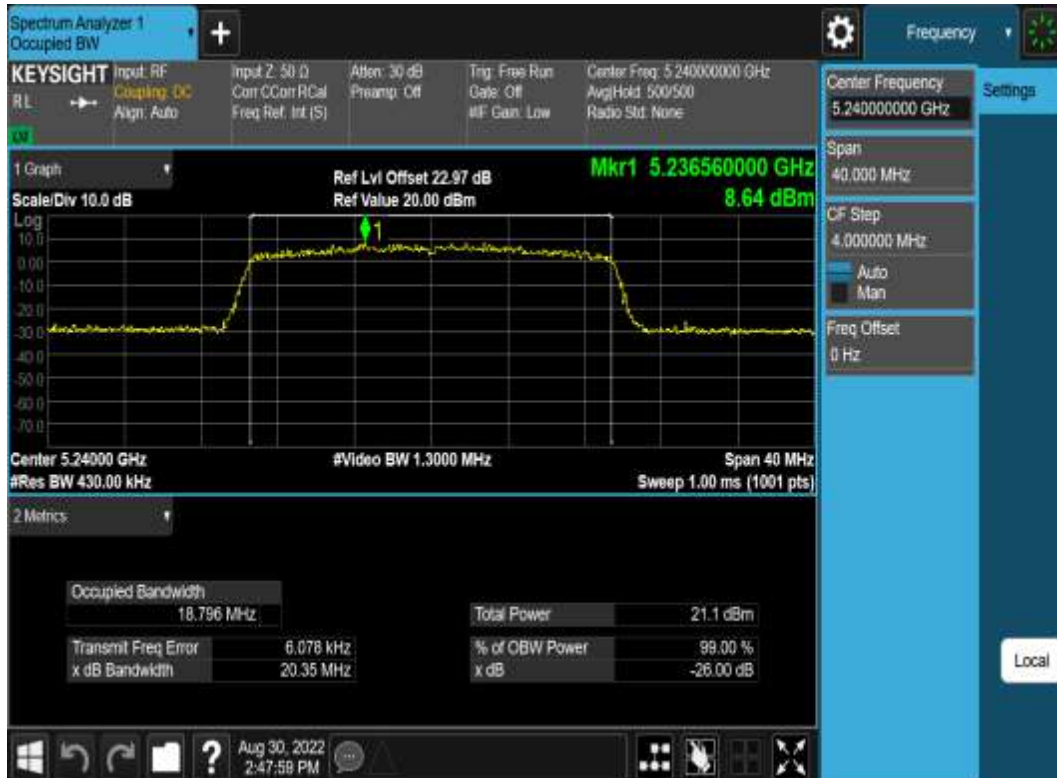
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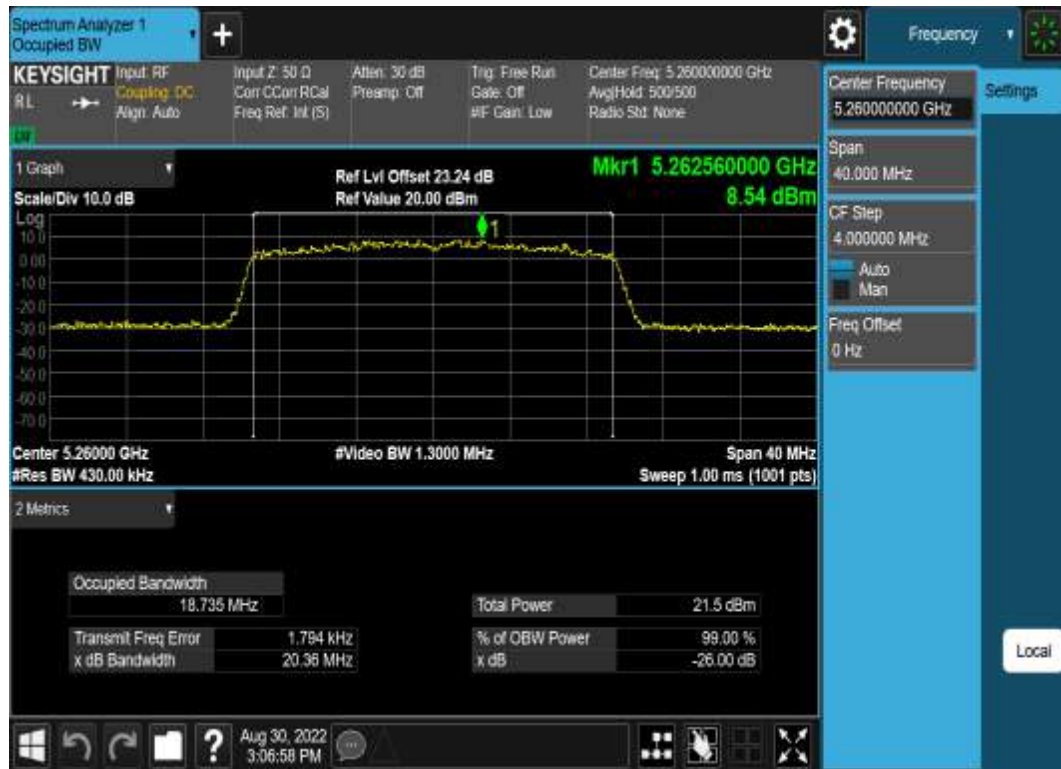
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11AX20MIMO-Ant2-5280



11AX20MIMO-Ant1-5320



11AX20MIMO-Ant2-5320



11AX20MIMO-Ant1-5500



11AX20MIMO-Ant2-5500



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11AX20MIMO-Ant2-5700



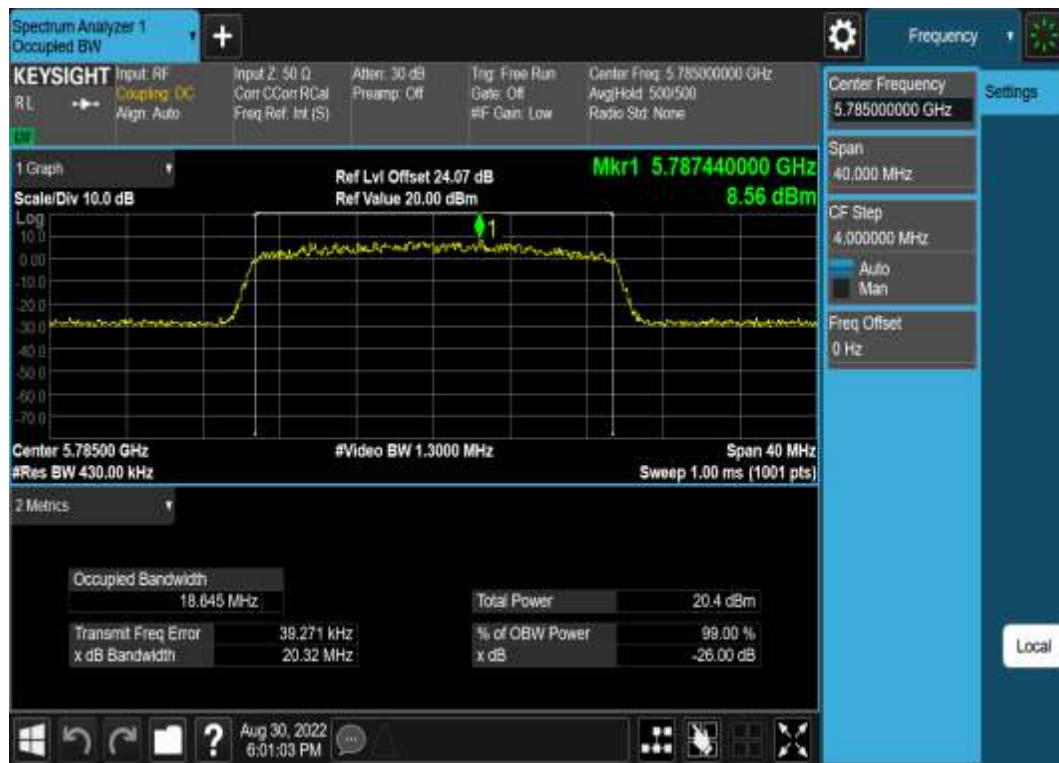
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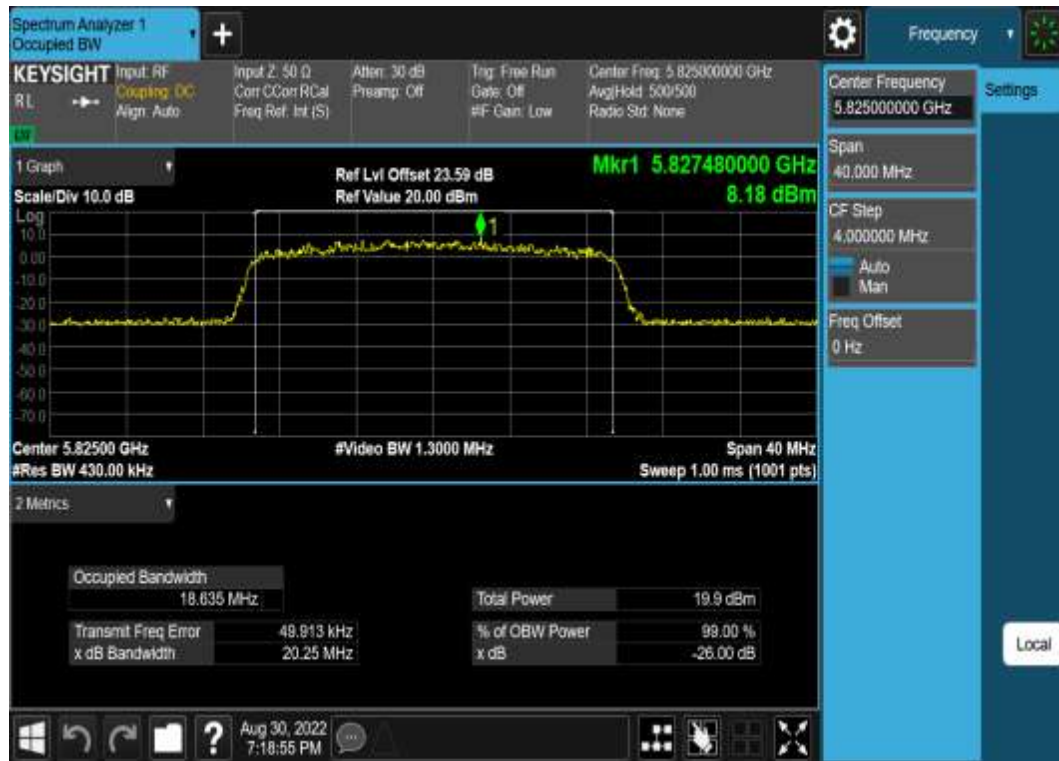
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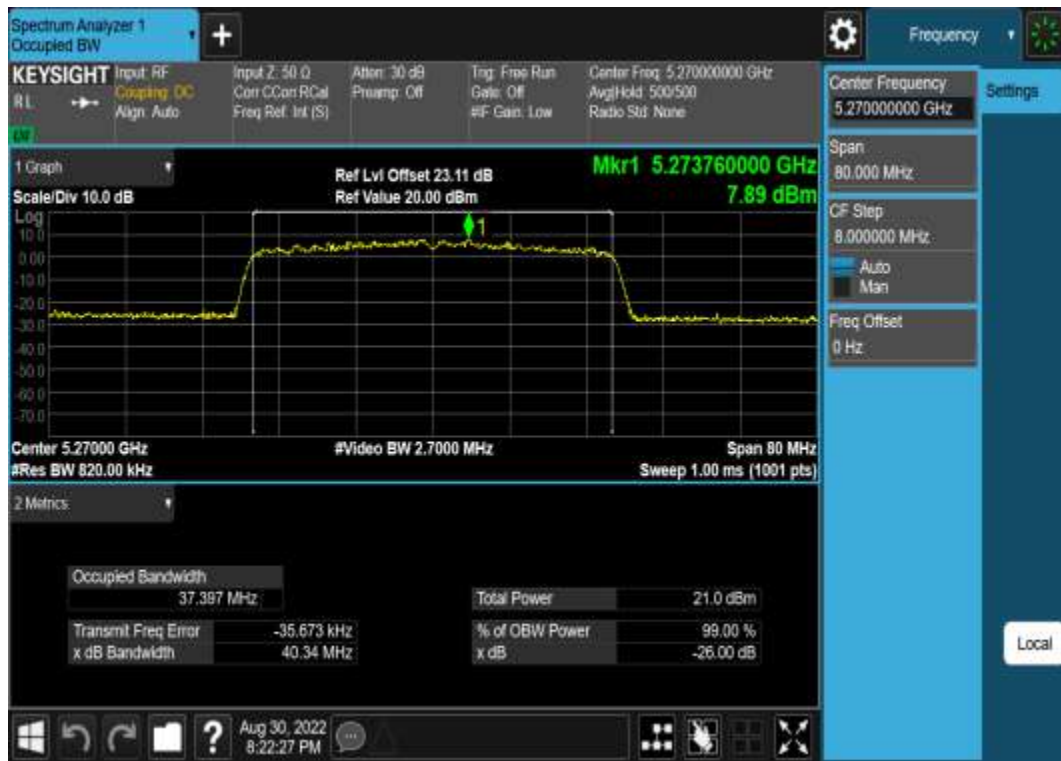
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11AX40MIMO-Ant2-5310



11AX40MIMO-Ant1-5510



11AX40MIMO-Ant2-5510



11AX40MIMO-Ant1-5550



11AX40MIMO-Ant2-5550



11AX40MIMO-Ant1-5670



11AX40MIMO-Ant2-5670



11AX40MIMO-Ant1-5755



11AX40MIMO-Ant2-5755



11AX40MIMO-Ant1-5795



11AX40MIMO-Ant2-5795



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11AX80MIMO-Ant2-5210



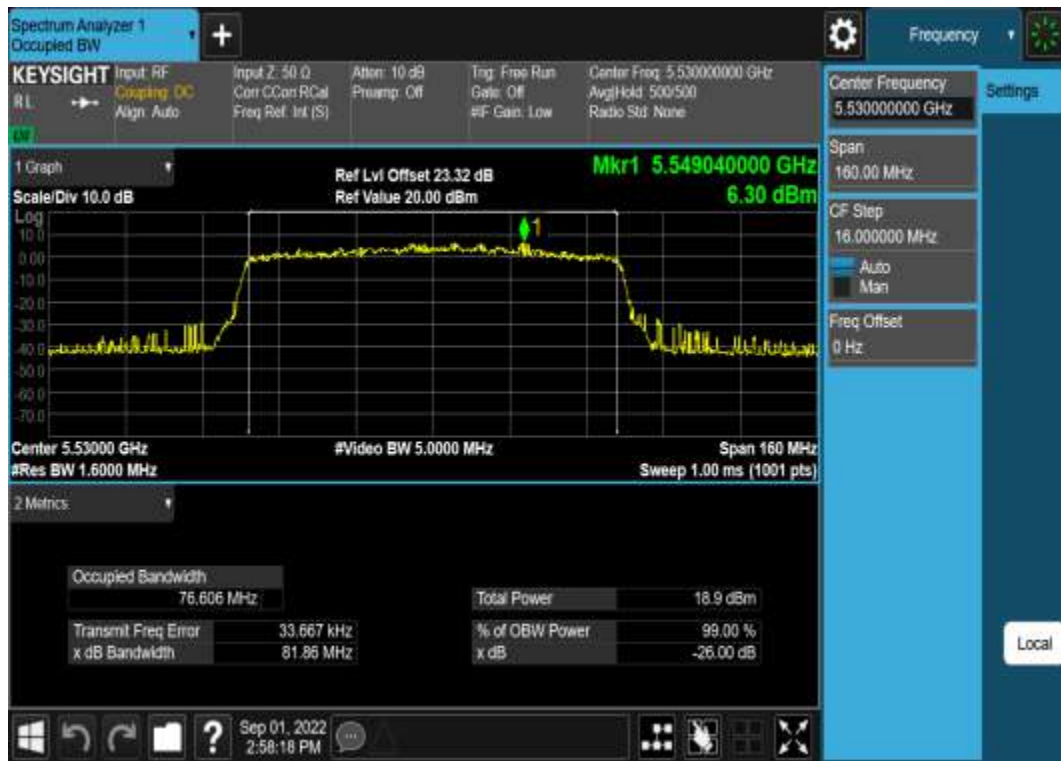
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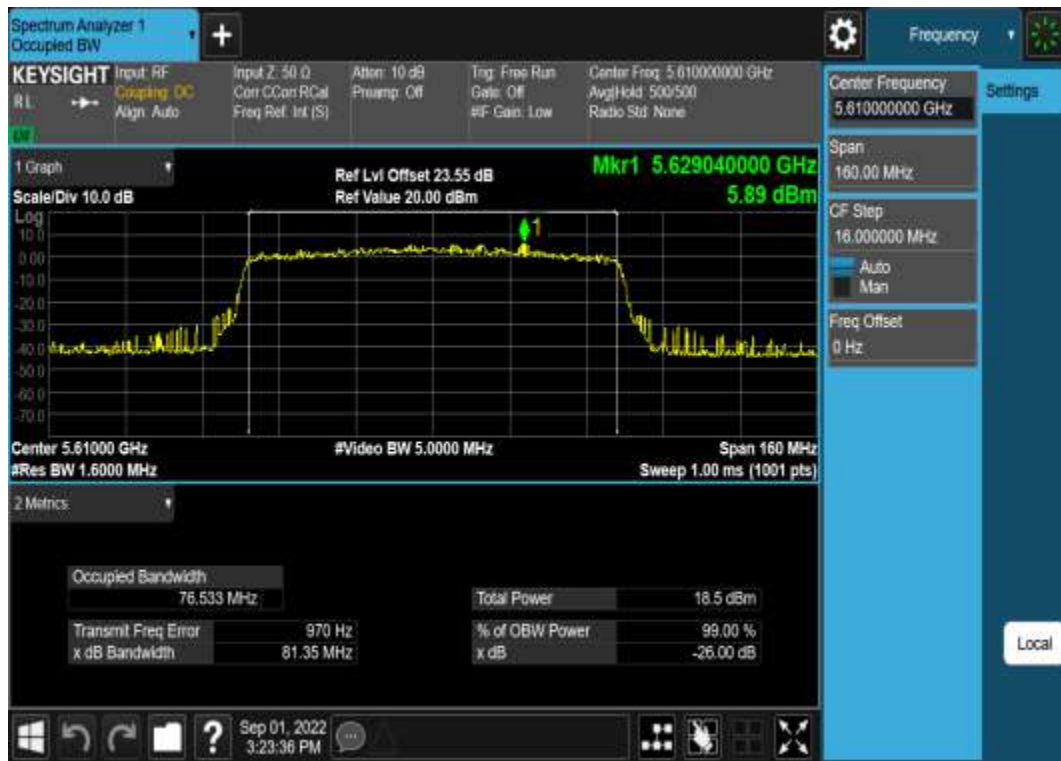
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11AX80MIMO-Ant2-5610



11AX80MIMO-Ant1-5775



11AX80MIMO-Ant2-5775



3.4 Conducted Output Power

3.4.1 Limit

FCC Part15, Subpart E (15.407)			
Section	Test Item	Limit	Frequency Range (MHz)
15.407(a)	Conducted Output Power	Master device: 1 Watt (30 dBm) Client device: 250 mW (23.98 dBm)	5150-5250
		250 mW (23.98 dBm)	5250-5350
		250 mW (23.98 dBm)	5470-5725
		1 Watt (30dBm)	5725-5850

Note:

a. 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. In addition, the maximum power spectral density shall not exceed 17 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.

b. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10log B, where B is the 26dB Bandwidth in megahertz.

3.4.2 Test Peripherals

Support Equipment				
No.	Equipment	Brand Name	Model Name	Remarks
1	Record PC	Lenovo	M4500T	NA
2	Control PC	Lenovo	M4500T	NA

3.4.3 Test Procedure

Test Method	
☒ Conducted Measurement	☐ Radiated Measurement
Test Channels	
☒ Lowest, Middle and Highest Channel	☐ Lowest and Highest Channel
Environmental conditions	
☒ Normal	☐ Normal and Extreme
Note: ● : Test ○ : No Test	

a) The EUT was directly connected to the power meter and antenna output port as show in the block diagram below.

b) Test was performed in accordance with method of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

3.4.4 Test Setup



3.4.5 Table of Parameters of Text Software Setting

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

NO Beamforming

Test Mode	Power Level Setting defined by Manufacturer							
	ALL ANT							
	Band	Value	Band	Value	Band	Value	Band	Value
11A	U-NII-1	16	U-NII-2A	16	U-NII-2C	16	U-NII-3	16
11N20MIMO	U-NII-1	13	U-NII-2A	13	U-NII-2C	13	U-NII-3	13
11N40MIMO	U-NII-1	12	U-NII-2A	12	U-NII-2C	12	U-NII-3	12
11AC20MIMO	U-NII-1	13	U-NII-2A	13	U-NII-2C	13	U-NII-3	13
11AC40MIMO	U-NII-1	12	U-NII-2A	12	U-NII-2C	12	U-NII-3	12
11AC80MIMO	U-NII-1	11	U-NII-2A	11	U-NII-2C	11	U-NII-3	11
11AX20MIMO	U-NII-1	13	U-NII-2A	13	U-NII-2C	13	U-NII-3	13
11AX40MIMO	U-NII-1	12	U-NII-2A	12	U-NII-2C	12	U-NII-3	12
11AX80MIMO	U-NII-1	11	U-NII-2A	11	U-NII-2C	11	U-NII-3	11

Beamforming

Test Mode	Power Level Setting defined by Manufacturer							
	ALL ANT							
	Band	Value	Band	Value	Band	Value	Band	Value
11N20MIMO	U-NII-1	10	U-NII-2A	10	U-NII-2C	10	U-NII-3	10
11N40MIMO	U-NII-1	9	U-NII-2A	9	U-NII-2C	9	U-NII-3	9
11AC20MIMO	U-NII-1	10	U-NII-2A	10	U-NII-2C	10	U-NII-3	10
11AC40MIMO	U-NII-1	9	U-NII-2A	9	U-NII-2C	9	U-NII-3	9
11AC80MIMO	U-NII-1	8	U-NII-2A	8	U-NII-2C	8	U-NII-3	8
11AX20MIMO	U-NII-1	10	U-NII-2A	10	U-NII-2C	10	U-NII-3	10
11AX40MIMO	U-NII-1	9	U-NII-2A	9	U-NII-2C	9	U-NII-3	9
11AX80MIMO	U-NII-1	8	U-NII-2A	8	U-NII-2C	8	U-NII-3	8

3.4.6 The Result

No beamforming

Test Mode	Antenna	Frequency[MHz]	Conducted Average power [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	16.97	≤30	PASS
11A	Ant2	5180	16.90	≤29.34	PASS
11A	Ant1	5200	16.72	≤30	PASS
11A	Ant2	5200	16.79	≤29.34	PASS
11A	Ant1	5240	16.34	≤30	PASS
11A	Ant2	5240	16.49	≤29.34	PASS
11A	Ant1	5260	16.38	≤23.98	PASS
11A	Ant2	5260	16.74	≤23.32	PASS
11A	Ant1	5280	16.33	≤23.98	PASS
11A	Ant2	5280	16.76	≤23.32	PASS
11A	Ant1	5320	17.05	≤23.98	PASS
11A	Ant2	5320	17.09	≤23.32	PASS
11A	Ant1	5500	15.51	≤23.98	PASS
11A	Ant2	5500	14.76	≤23.32	PASS
11A	Ant1	5580	15.68	≤23.98	PASS
11A	Ant2	5580	15.55	≤23.32	PASS
11A	Ant1	5700	15.78	≤23.98	PASS
11A	Ant2	5700	16.62	≤23.32	PASS
11A	Ant1	5745	15.96	≤30	PASS
11A	Ant2	5745	16.49	≤29.34	PASS
11A	Ant1	5785	15.70	≤30	PASS
11A	Ant2	5785	16.30	≤29.34	PASS
11A	Ant1	5825	15.81	≤30	PASS
11A	Ant2	5825	16.80	≤29.34	PASS
11N20MIMO	Ant1	5180	12.52	≤27.17	PASS
11N20MIMO	Ant2	5180	12.52	≤27.17	PASS
11N20MIMO	total	5180	15.53	≤27.17	PASS
11N20MIMO	Ant1	5200	12.69	≤27.17	PASS
11N20MIMO	Ant2	5200	12.69	≤27.17	PASS
11N20MIMO	total	5200	15.70	≤27.17	PASS
11N20MIMO	Ant1	5240	13.04	≤27.17	PASS
11N20MIMO	Ant2	5240	12.00	≤27.17	PASS
11N20MIMO	total	5240	15.56	≤27.17	PASS
11N20MIMO	Ant1	5260	12.71	≤21.15	PASS
11N20MIMO	Ant2	5260	12.42	≤21.15	PASS
11N20MIMO	total	5260	15.58	≤21.15	PASS
11N20MIMO	Ant1	5280	13.18	≤21.15	PASS

11N20MIMO	Ant2	5280	12.46	≤21.15	PASS
11N20MIMO	total	5280	15.85	≤21.15	PASS
11N20MIMO	Ant1	5320	10.71	≤21.15	PASS
11N20MIMO	Ant2	5320	12.81	≤21.15	PASS
11N20MIMO	total	5320	14.90	≤21.15	PASS
11N20MIMO	Ant1	5500	13.02	≤21.15	PASS
11N20MIMO	Ant2	5500	11.62	≤21.15	PASS
11N20MIMO	total	5500	15.39	≤21.15	PASS
11N20MIMO	Ant1	5580	12.07	≤21.15	PASS
11N20MIMO	Ant2	5580	12.29	≤21.15	PASS
11N20MIMO	total	5580	15.19	≤21.15	PASS
11N20MIMO	Ant1	5700	11.61	≤21.15	PASS
11N20MIMO	Ant2	5700	12.48	≤21.15	PASS
11N20MIMO	total	5700	15.08	≤21.15	PASS
11N20MIMO	Ant1	5745	12.40	≤27.17	PASS
11N20MIMO	Ant2	5745	12.22	≤27.17	PASS
11N20MIMO	total	5745	15.32	≤27.17	PASS
11N20MIMO	Ant1	5785	12.27	≤27.17	PASS
11N20MIMO	Ant2	5785	12.65	≤27.17	PASS
11N20MIMO	total	5785	15.47	≤27.17	PASS
11N20MIMO	Ant1	5825	11.55	≤27.17	PASS
11N20MIMO	Ant2	5825	13.08	≤27.17	PASS
11N20MIMO	total	5825	15.39	≤27.17	PASS
11N40MIMO	Ant1	5190	11.41	≤27.17	PASS
11N40MIMO	Ant2	5190	11.75	≤27.17	PASS
11N40MIMO	total	5190	14.59	≤27.17	PASS
11N40MIMO	Ant1	5230	11.42	≤27.17	PASS
11N40MIMO	Ant2	5230	10.92	≤27.17	PASS
11N40MIMO	total	5230	14.19	≤27.17	PASS
11N40MIMO	Ant1	5270	11.27	≤21.15	PASS
11N40MIMO	Ant2	5270	11.06	≤21.15	PASS
11N40MIMO	total	5270	14.18	≤21.15	PASS
11N40MIMO	Ant1	5310	10.58	≤21.15	PASS
11N40MIMO	Ant2	5310	11.64	≤21.15	PASS
11N40MIMO	total	5310	14.15	≤21.15	PASS
11N40MIMO	Ant1	5510	11.17	≤21.15	PASS
11N40MIMO	Ant2	5510	10.82	≤21.15	PASS
11N40MIMO	total	5510	14.01	≤21.15	PASS
11N40MIMO	Ant1	5550	11.44	≤21.15	PASS
11N40MIMO	Ant2	5550	11.45	≤21.15	PASS
11N40MIMO	total	5550	14.46	≤21.15	PASS
11N40MIMO	Ant1	5670	10.93	≤21.15	PASS

11N40MIMO	Ant2	5670	11.33	≤21.15	PASS
11N40MIMO	total	5670	14.14	≤21.15	PASS
11N40MIMO	Ant1	5755	10.85	≤27.17	PASS
11N40MIMO	Ant2	5755	12.14	≤27.17	PASS
11N40MIMO	total	5755	14.55	≤27.17	PASS
11N40MIMO	Ant1	5795	10.17	≤27.17	PASS
11N40MIMO	Ant2	5795	12.48	≤27.17	PASS
11N40MIMO	total	5795	14.49	≤27.17	PASS
11AC20MIMO	Ant1	5180	12.41	≤27.17	PASS
11AC20MIMO	Ant2	5180	12.43	≤27.17	PASS
11AC20MIMO	total	5180	15.43	≤27.17	PASS
11AC20MIMO	Ant1	5200	13.05	≤27.17	PASS
11AC20MIMO	Ant2	5200	12.67	≤27.17	PASS
11AC20MIMO	total	5200	15.87	≤27.17	PASS
11AC20MIMO	Ant1	5240	12.84	≤27.17	PASS
11AC20MIMO	Ant2	5240	11.09	≤27.17	PASS
11AC20MIMO	total	5240	14.06	≤27.17	PASS
11AC20MIMO	Ant1	5260	12.70	≤21.15	PASS
11AC20MIMO	Ant2	5260	12.21	≤21.15	PASS
11AC20MIMO	total	5260	15.47	≤21.15	PASS
11AC20MIMO	Ant1	5280	12.40	≤21.15	PASS
11AC20MIMO	Ant2	5280	12.18	≤21.15	PASS
11AC20MIMO	total	5280	15.30	≤21.15	PASS
11AC20MIMO	Ant1	5320	12.56	≤21.15	PASS
11AC20MIMO	Ant2	5320	12.30	≤21.15	PASS
11AC20MIMO	total	5320	15.44	≤21.15	PASS
11AC20MIMO	Ant1	5500	12.85	≤21.15	PASS
11AC20MIMO	Ant2	5500	11.10	≤21.15	PASS
11AC20MIMO	total	5500	15.07	≤21.15	PASS
11AC20MIMO	Ant1	5580	11.78	≤21.15	PASS
11AC20MIMO	Ant2	5580	12.05	≤21.15	PASS
11AC20MIMO	total	5580	14.93	≤21.15	PASS
11AC20MIMO	Ant1	5700	11.71	≤21.15	PASS
11AC20MIMO	Ant2	5700	12.58	≤21.15	PASS
11AC20MIMO	total	5700	15.18	≤21.15	PASS
11AC20MIMO	Ant1	5745	11.43	≤27.17	PASS
11AC20MIMO	Ant2	5745	12.61	≤27.17	PASS
11AC20MIMO	total	5745	15.07	≤27.17	PASS
11AC20MIMO	Ant1	5785	11.23	≤27.17	PASS
11AC20MIMO	Ant2	5785	13.32	≤27.17	PASS
11AC20MIMO	total	5785	15.41	≤27.17	PASS
11AC20MIMO	Ant1	5825	10.57	≤27.17	PASS

11AC20MIMO	Ant2	5825	12.90	≤27.17	PASS
11AC20MIMO	total	5825	14.90	≤27.17	PASS
11AC40MIMO	Ant1	5190	10.95	≤27.17	PASS
11AC40MIMO	Ant2	5190	11.36	≤27.17	PASS
11AC40MIMO	total	5190	14.17	≤27.17	PASS
11AC40MIMO	Ant1	5230	11.94	≤27.17	PASS
11AC40MIMO	Ant2	5230	11.19	≤27.17	PASS
11AC40MIMO	total	5230	14.59	≤27.17	PASS
11AC40MIMO	Ant1	5270	11.11	≤21.15	PASS
11AC40MIMO	Ant2	5270	11.75	≤21.15	PASS
11AC40MIMO	total	5270	14.45	≤21.15	PASS
11AC40MIMO	Ant1	5310	11.73	≤21.15	PASS
11AC40MIMO	Ant2	5310	11.85	≤21.15	PASS
11AC40MIMO	total	5310	14.80	≤21.15	PASS
11AC40MIMO	Ant1	5510	12.38	≤21.15	PASS
11AC40MIMO	Ant2	5510	11.40	≤21.15	PASS
11AC40MIMO	total	5510	14.93	≤21.15	PASS
11AC40MIMO	Ant1	5550	11.89	≤21.15	PASS
11AC40MIMO	Ant2	5550	11.24	≤21.15	PASS
11AC40MIMO	total	5550	14.59	≤21.15	PASS
11AC40MIMO	Ant1	5670	11.22	≤21.15	PASS
11AC40MIMO	Ant2	5670	11.73	≤21.15	PASS
11AC40MIMO	total	5670	14.49	≤21.15	PASS
11AC40MIMO	Ant1	5755	10.25	≤27.17	PASS
11AC40MIMO	Ant2	5755	12.42	≤27.17	PASS
11AC40MIMO	total	5755	14.48	≤27.17	PASS
11AC40MIMO	Ant1	5795	11.68	≤27.17	PASS
11AC40MIMO	Ant2	5795	11.15	≤27.17	PASS
11AC40MIMO	total	5795	14.43	≤27.17	PASS
11AC80MIMO	Ant1	5210	10.93	≤27.17	PASS
11AC80MIMO	Ant2	5210	10.52	≤27.17	PASS
11AC80MIMO	total	5210	13.74	≤27.17	PASS
11AC80MIMO	Ant1	5290	10.75	≤21.15	PASS
11AC80MIMO	Ant2	5290	10.39	≤21.15	PASS
11AC80MIMO	total	5290	13.58	≤21.15	PASS
11AC80MIMO	Ant1	5530	9.73	≤21.15	PASS
11AC80MIMO	Ant2	5530	11.76	≤21.15	PASS
11AC80MIMO	total	5530	13.87	≤21.15	PASS
11AC80MIMO	Ant1	5610	10.67	≤21.15	PASS
11AC80MIMO	Ant2	5610	10.96	≤21.15	PASS
11AC80MIMO	total	5610	13.83	≤21.15	PASS
11AC80MIMO	Ant1	5775	10.35	≤27.17	PASS

11AC80MIMO	Ant2	5775	11.31	≤27.17	PASS
11AC80MIMO	total	5775	13.87	≤27.17	PASS
11AX20MIMO	Ant1	5180	11.81	≤27.17	PASS
11AX20MIMO	Ant2	5180	11.93	≤27.17	PASS
11AX20MIMO	total	5180	14.88	≤27.17	PASS
11AX20MIMO	Ant1	5200	12.05	≤27.17	PASS
11AX20MIMO	Ant2	5200	11.67	≤27.17	PASS
11AX20MIMO	total	5200	14.87	≤27.17	PASS
11AX20MIMO	Ant1	5240	12.84	≤27.17	PASS
11AX20MIMO	Ant2	5240	12.09	≤27.17	PASS
11AX20MIMO	total	5240	15.49	≤27.17	PASS
11AX20MIMO	Ant1	5260	12.35	≤21.15	PASS
11AX20MIMO	Ant2	5260	11.91	≤21.15	PASS
11AX20MIMO	total	5260	15.15	≤21.15	PASS
11AX20MIMO	Ant1	5280	11.79	≤21.15	PASS
11AX20MIMO	Ant2	5280	12.13	≤21.15	PASS
11AX20MIMO	total	5280	14.97	≤21.15	PASS
11AX20MIMO	Ant1	5320	12.13	≤21.15	PASS
11AX20MIMO	Ant2	5320	12.10	≤21.15	PASS
11AX20MIMO	total	5320	15.13	≤21.15	PASS
11AX20MIMO	Ant1	5500	12.85	≤21.15	PASS
11AX20MIMO	Ant2	5500	11.10	≤21.15	PASS
11AX20MIMO	total	5500	15.07	≤21.15	PASS
11AX20MIMO	Ant1	5580	11.78	≤21.15	PASS
11AX20MIMO	Ant2	5580	12.05	≤21.15	PASS
11AX20MIMO	total	5580	14.93	≤21.15	PASS
11AX20MIMO	Ant1	5700	11.71	≤21.15	PASS
11AX20MIMO	Ant2	5700	12.58	≤21.15	PASS
11AX20MIMO	total	5700	15.18	≤21.15	PASS
11AX20MIMO	Ant1	5745	11.43	≤27.17	PASS
11AX20MIMO	Ant2	5745	12.61	≤27.17	PASS
11AX20MIMO	total	5745	15.07	≤27.17	PASS
11AX20MIMO	Ant1	5785	11.23	≤27.17	PASS
11AX20MIMO	Ant2	5785	13.32	≤27.17	PASS
11AX20MIMO	total	5785	15.41	≤27.17	PASS
11AX20MIMO	Ant1	5825	11.57	≤27.17	PASS
11AX20MIMO	Ant2	5825	12.46	≤27.17	PASS
11AX20MIMO	total	5825	15.05	≤27.17	PASS
11AX40MIMO	Ant1	5190	10.95	≤27.17	PASS
11AX40MIMO	Ant2	5190	11.46	≤27.17	PASS
11AX40MIMO	total	5190	14.22	≤27.17	PASS
11AX40MIMO	Ant1	5230	11.79	≤27.17	PASS

11AX40MIMO	Ant2	5230	11.81	≤ 27.17	PASS
11AX40MIMO	total	5230	14.81	≤ 27.17	PASS
11AX40MIMO	Ant1	5270	11.47	≤ 21.15	PASS
11AX40MIMO	Ant2	5270	11.00	≤ 21.15	PASS
11AX40MIMO	total	5270	14.25	≤ 21.15	PASS
11AX40MIMO	Ant1	5310	11.19	≤ 21.15	PASS
11AX40MIMO	Ant2	5310	12.40	≤ 21.15	PASS
11AX40MIMO	total	5310	14.85	≤ 21.15	PASS
11AX40MIMO	Ant1	5510	11.78	≤ 21.15	PASS
11AX40MIMO	Ant2	5510	11.91	≤ 21.15	PASS
11AX40MIMO	total	5510	14.86	≤ 21.15	PASS
11AX40MIMO	Ant1	5550	11.21	≤ 21.15	PASS
11AX40MIMO	Ant2	5550	11.63	≤ 21.15	PASS
11AX40MIMO	total	5550	14.44	≤ 21.15	PASS
11AX40MIMO	Ant1	5670	10.62	≤ 21.15	PASS
11AX40MIMO	Ant2	5670	11.96	≤ 21.15	PASS
11AX40MIMO	total	5670	14.35	≤ 21.15	PASS
11AX40MIMO	Ant1	5755	11.07	≤ 27.17	PASS
11AX40MIMO	Ant2	5755	12.38	≤ 27.17	PASS
11AX40MIMO	total	5755	14.78	≤ 27.17	PASS
11AX40MIMO	Ant1	5795	10.85	≤ 27.17	PASS
11AX40MIMO	Ant2	5795	12.61	≤ 27.17	PASS
11AX40MIMO	total	5795	14.73	≤ 27.17	PASS
11AX80MIMO	Ant1	5210	11.34	≤ 27.17	PASS
11AX80MIMO	Ant2	5210	11.67	≤ 27.17	PASS
11AX80MIMO	total	5210	14.52	≤ 21.15	PASS
11AX80MIMO	Ant1	5290	11.01	≤ 21.15	PASS
11AX80MIMO	Ant2	5290	11.22	≤ 21.15	PASS
11AX80MIMO	total	5290	14.13	≤ 21.15	PASS
11AX80MIMO	Ant1	5530	10.80	≤ 21.15	PASS
11AX80MIMO	Ant2	5530	10.33	≤ 21.15	PASS
11AX80MIMO	total	5530	13.78	≤ 21.15	PASS
11AX80MIMO	Ant1	5610	10.27	≤ 21.15	PASS
11AX80MIMO	Ant2	5610	11.39	≤ 21.15	PASS
11AX80MIMO	total	5610	13.88	≤ 21.15	PASS
11AX80MIMO	Ant1	5775	10.74	≤ 27.17	PASS
11AX80MIMO	Ant2	5775	10.99	≤ 27.17	PASS
11AX80MIMO	total	5775	13.88	≤ 27.17	PASS

Note: The duty cycle factor has included in power value.

For EUT1/EUT4/EUT5

Frequency Band	ANT 1 Antenna Gain (dBi)	ANT 2 Antenna Gain (dBi)	Correlated chains directional gain (dBi)	Power Limit (dBm)
U-NII-1	5.20	5.26	8.24	27.76
U-NII-2A	5.20	5.26	8.24	21.74
U-NII-2C	5.20	5.26	8.24	21.74
U-NII-3	5.20	5.26	8.24	27.76

Unequal antenna gains, with equal transmit powers. For antenna gains given by $G_1, G_2, \dots, G_N$ dBi
If transmit signals are correlated, then Directional gain = $10 \log[(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20})^2 / N_{ANT}]$ dBi
[Note the "20"s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]
Directional gain = $10 \log[(10^{5.20/20} + 10^{5.26/20})^2 / N_{ANT}]$ dBi=8.24

For EUT2/EUT3

Frequency Band	ANT 1 Antenna Gain (dBi)	ANT 2 Antenna Gain (dBi)	Correlated chains directional gain (dBi)	Power Limit (dBm)
U-NII-1	4.88	6.66	8.83	27.17
U-NII-2A	4.88	6.66	8.83	21.15
U-NII-2C	4.88	6.66	8.83	21.15
U-NII-3	4.88	6.66	8.83	27.17

Unequal antenna gains, with equal transmit powers. For antenna gains given by $G_1, G_2, \dots, G_N$ dBi
If transmit signals are correlated, then Directional gain = $10 \log[(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20})^2 / N_{ANT}]$ dBi
[Note the "20"s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]
Directional gain = $10 \log[(10^{4.88/20} + 10^{6.66/20})^2 / N_{ANT}]$ dBi=8.83

Beamforming

11N20MIMO	Ant1	5180	9.47	≤ 24.17	PASS
11N20MIMO	Ant2	5180	8.88	≤ 24.17	PASS
11N20MIMO	total	5180	12.19	≤ 24.17	PASS
11N20MIMO	Ant1	5200	9.59	≤ 24.17	PASS
11N20MIMO	Ant2	5200	9.06	≤ 24.17	PASS
11N20MIMO	total	5200	12.35	≤ 24.17	PASS
11N20MIMO	Ant1	5240	9.59	≤ 24.17	PASS
11N20MIMO	Ant2	5240	9.17	≤ 24.17	PASS
11N20MIMO	total	5240	12.40	≤ 24.17	PASS
11N20MIMO	Ant1	5260	9.62	≤ 18.15	PASS
11N20MIMO	Ant2	5260	9.08	≤ 18.15	PASS

11N20MIMO	total	5260	12.37	≤18.15	PASS
11N20MIMO	Ant1	5280	9.69	≤18.15	PASS
11N20MIMO	Ant2	5280	9.00	≤18.15	PASS
11N20MIMO	total	5280	12.37	≤18.15	PASS
11N20MIMO	Ant1	5320	9.61	≤18.15	PASS
11N20MIMO	Ant2	5320	9.09	≤18.15	PASS
11N20MIMO	total	5320	12.37	≤18.15	PASS
11N20MIMO	Ant1	5500	9.63	≤18.15	PASS
11N20MIMO	Ant2	5500	9.05	≤18.15	PASS
11N20MIMO	total	5500	12.36	≤18.15	PASS
11N20MIMO	Ant1	5580	9.48	≤18.15	PASS
11N20MIMO	Ant2	5580	8.97	≤18.15	PASS
11N20MIMO	total	5580	12.24	≤18.15	PASS
11N20MIMO	Ant1	5700	9.46	≤18.15	PASS
11N20MIMO	Ant2	5700	9.15	≤18.15	PASS
11N20MIMO	total	5700	12.32	≤18.15	PASS
11N20MIMO	Ant1	5745	9.32	≤24.17	PASS
11N20MIMO	Ant2	5745	8.84	≤24.17	PASS
11N20MIMO	total	5745	12.10	≤24.17	PASS
11N20MIMO	Ant1	5785	9.46	≤24.17	PASS
11N20MIMO	Ant2	5785	9.07	≤24.17	PASS
11N20MIMO	total	5785	12.28	≤24.17	PASS
11N20MIMO	Ant1	5825	9.46	≤24.17	PASS
11N20MIMO	Ant2	5825	9.08	≤24.17	PASS
11N20MIMO	total	5825	12.28	≤24.17	PASS
11N40MIMO	Ant1	5190	8.86	≤24.17	PASS
11N40MIMO	Ant2	5190	8.22	≤24.17	PASS
11N40MIMO	total	5190	11.56	≤24.17	PASS
11N40MIMO	Ant1	5230	9.03	≤24.17	PASS
11N40MIMO	Ant2	5230	8.47	≤24.17	PASS
11N40MIMO	total	5230	11.77	≤24.17	PASS
11N40MIMO	Ant1	5270	8.91	≤18.15	PASS
11N40MIMO	Ant2	5270	8.34	≤18.15	PASS
11N40MIMO	total	5270	11.64	≤18.15	PASS
11N40MIMO	Ant1	5310	9.02	≤18.15	PASS
11N40MIMO	Ant2	5310	8.48	≤18.15	PASS
11N40MIMO	total	5310	11.77	≤18.15	PASS
11N40MIMO	Ant1	5510	8.83	≤18.15	PASS
11N40MIMO	Ant2	5510	8.46	≤18.15	PASS
11N40MIMO	total	5510	11.66	≤18.15	PASS
11N40MIMO	Ant1	5550	8.84	≤18.15	PASS
11N40MIMO	Ant2	5550	8.31	≤18.15	PASS

11N40MIMO	total	5550	11.60	≤18.15	PASS
11N40MIMO	Ant1	5670	8.97	≤18.15	PASS
11N40MIMO	Ant2	5670	8.49	≤18.15	PASS
11N40MIMO	total	5670	11.75	≤18.15	PASS
11N40MIMO	Ant1	5755	9.07	≤24.17	PASS
11N40MIMO	Ant2	5755	8.36	≤24.17	PASS
11N40MIMO	total	5755	11.74	≤24.17	PASS
11N40MIMO	Ant1	5795	8.77	≤24.17	PASS
11N40MIMO	Ant2	5795	8.35	≤24.17	PASS
11N40MIMO	total	5795	11.58	≤24.17	PASS
11AC20MIMO	Ant1	5180	9.47	≤24.17	PASS
11AC20MIMO	Ant2	5180	9.22	≤24.17	PASS
11AC20MIMO	total	5180	12.36	≤24.17	PASS
11AC20MIMO	Ant1	5200	9.55	≤24.17	PASS
11AC20MIMO	Ant2	5200	9.07	≤24.17	PASS
11AC20MIMO	total	5200	12.33	≤24.17	PASS
11AC20MIMO	Ant1	5240	9.61	≤24.17	PASS
11AC20MIMO	Ant2	5240	9.03	≤24.17	PASS
11AC20MIMO	total	5240	12.34	≤24.17	PASS
11AC20MIMO	Ant1	5260	9.53	≤18.15	PASS
11AC20MIMO	Ant2	5260	8.91	≤18.15	PASS
11AC20MIMO	total	5260	12.24	≤18.15	PASS
11AC20MIMO	Ant1	5280	9.42	≤18.15	PASS
11AC20MIMO	Ant2	5280	8.97	≤18.15	PASS
11AC20MIMO	total	5280	12.21	≤18.15	PASS
11AC20MIMO	Ant1	5320	9.39	≤18.15	PASS
11AC20MIMO	Ant2	5320	9.03	≤18.15	PASS
11AC20MIMO	total	5320	12.22	≤18.15	PASS
11AC20MIMO	Ant1	5500	9.69	≤18.15	PASS
11AC20MIMO	Ant2	5500	9.21	≤18.15	PASS
11AC20MIMO	total	5500	12.47	≤18.15	PASS
11AC20MIMO	Ant1	5580	9.68	≤18.15	PASS
11AC20MIMO	Ant2	5580	9.00	≤18.15	PASS
11AC20MIMO	total	5580	12.36	≤18.15	PASS
11AC20MIMO	Ant1	5700	9.47	≤18.15	PASS
11AC20MIMO	Ant2	5700	8.94	≤18.15	PASS
11AC20MIMO	total	5700	12.23	≤18.15	PASS
11AC20MIMO	Ant1	5745	9.60	≤24.17	PASS
11AC20MIMO	Ant2	5745	9.09	≤24.17	PASS
11AC20MIMO	total	5745	12.36	≤24.17	PASS
11AC20MIMO	Ant1	5785	9.36	≤24.17	PASS
11AC20MIMO	Ant2	5785	8.98	≤24.17	PASS

11AC20MIMO	total	5785	12.18	≤24.17	PASS
11AC20MIMO	Ant1	5825	9.41	≤24.17	PASS
11AC20MIMO	Ant2	5825	9.11	≤24.17	PASS
11AC20MIMO	total	5825	12.27	≤24.17	PASS
11AC40MIMO	Ant1	5190	8.54	≤24.17	PASS
11AC40MIMO	Ant2	5190	8.26	≤24.17	PASS
11AC40MIMO	total	5190	11.41	≤24.17	PASS
11AC40MIMO	Ant1	5230	8.65	≤24.17	PASS
11AC40MIMO	Ant2	5230	8.28	≤24.17	PASS
11AC40MIMO	total	5230	11.48	≤24.17	PASS
11AC40MIMO	Ant1	5270	8.77	≤18.15	PASS
11AC40MIMO	Ant2	5270	8.29	≤18.15	PASS
11AC40MIMO	total	5270	11.55	≤18.15	PASS
11AC40MIMO	Ant1	5310	8.81	≤18.15	PASS
11AC40MIMO	Ant2	5310	8.15	≤18.15	PASS
11AC40MIMO	total	5310	11.50	≤18.15	PASS
11AC40MIMO	Ant1	5510	8.56	≤18.15	PASS
11AC40MIMO	Ant2	5510	8.24	≤18.15	PASS
11AC40MIMO	total	5510	11.41	≤18.15	PASS
11AC40MIMO	Ant1	5550	8.72	≤18.15	PASS
11AC40MIMO	Ant2	5550	8.09	≤18.15	PASS
11AC40MIMO	total	5550	11.43	≤18.15	PASS
11AC40MIMO	Ant1	5670	8.56	≤18.15	PASS
11AC40MIMO	Ant2	5670	8.25	≤18.15	PASS
11AC40MIMO	total	5670	11.42	≤18.15	PASS
11AC40MIMO	Ant1	5755	8.78	≤24.17	PASS
11AC40MIMO	Ant2	5755	8.27	≤24.17	PASS
11AC40MIMO	total	5755	11.54	≤24.17	PASS
11AC40MIMO	Ant1	5795	8.81	≤24.17	PASS
11AC40MIMO	Ant2	5795	8.32	≤24.17	PASS
11AC40MIMO	total	5795	11.58	≤24.17	PASS
11AC80MIMO	Ant1	5210	7.37	≤24.17	PASS
11AC80MIMO	Ant2	5210	6.94	≤24.17	PASS
11AC80MIMO	total	5210	10.17	≤24.17	PASS
11AC80MIMO	Ant1	5290	7.30	≤18.15	PASS
11AC80MIMO	Ant2	5290	6.97	≤18.15	PASS
11AC80MIMO	total	5290	10.15	≤18.15	PASS
11AC80MIMO	Ant1	5530	7.30	≤18.15	PASS
11AC80MIMO	Ant2	5530	7.00	≤18.15	PASS
11AC80MIMO	total	5530	10.16	≤18.15	PASS
11AC80MIMO	Ant1	5610	7.20	≤18.15	PASS
11AC80MIMO	Ant2	5610	6.89	≤18.15	PASS

11AC80MIMO	total	5610	10.06	≤18.15	PASS
11AC80MIMO	Ant1	5775	7.14	≤24.17	PASS
11AC80MIMO	Ant2	5775	6.85	≤24.17	PASS
11AC80MIMO	total	5775	10.01	≤24.17	PASS
11AX20MIMO	Ant1	5180	8.69	≤24.17	PASS
11AX20MIMO	Ant2	5180	8.23	≤24.17	PASS
11AX20MIMO	total	5180	11.48	≤24.17	PASS
11AX20MIMO	Ant1	5200	8.71	≤24.17	PASS
11AX20MIMO	Ant2	5200	8.14	≤24.17	PASS
11AX20MIMO	total	5200	11.45	≤24.17	PASS
11AX20MIMO	Ant1	5240	8.69	≤24.17	PASS
11AX20MIMO	Ant2	5240	8.31	≤24.17	PASS
11AX20MIMO	total	5240	11.51	≤24.17	PASS
11AX20MIMO	Ant1	5260	8.60	≤18.15	PASS
11AX20MIMO	Ant2	5260	8.06	≤18.15	PASS
11AX20MIMO	total	5260	11.35	≤18.15	PASS
11AX20MIMO	Ant1	5280	8.57	≤18.15	PASS
11AX20MIMO	Ant2	5280	8.25	≤18.15	PASS
11AX20MIMO	total	5280	11.43	≤18.15	PASS
11AX20MIMO	Ant1	5320	8.72	≤18.15	PASS
11AX20MIMO	Ant2	5320	8.25	≤18.15	PASS
11AX20MIMO	total	5320	11.51	≤18.15	PASS
11AX20MIMO	Ant1	5500	8.62	≤18.15	PASS
11AX20MIMO	Ant2	5500	8.20	≤18.15	PASS
11AX20MIMO	total	5500	11.42	≤18.15	PASS
11AX20MIMO	Ant1	5580	8.41	≤18.15	PASS
11AX20MIMO	Ant2	5580	8.03	≤18.15	PASS
11AX20MIMO	total	5580	11.23	≤18.15	PASS
11AX20MIMO	Ant1	5700	8.62	≤18.15	PASS
11AX20MIMO	Ant2	5700	8.32	≤18.15	PASS
11AX20MIMO	total	5700	11.48	≤18.15	PASS
11AX20MIMO	Ant1	5745	8.52	≤24.17	PASS
11AX20MIMO	Ant2	5745	8.21	≤24.17	PASS
11AX20MIMO	total	5745	11.38	≤24.17	PASS
11AX20MIMO	Ant1	5785	8.64	≤24.17	PASS
11AX20MIMO	Ant2	5785	8.25	≤24.17	PASS
11AX20MIMO	total	5785	11.46	≤24.17	PASS
11AX20MIMO	Ant1	5825	8.48	≤24.17	PASS
11AX20MIMO	Ant2	5825	8.18	≤24.17	PASS
11AX20MIMO	total	5825	11.34	≤24.17	PASS
11AX40MIMO	Ant1	5190	8.25	≤24.17	PASS
11AX40MIMO	Ant2	5190	7.90	≤24.17	PASS

11AX40MIMO	total	5190	11.09	≤24.17	PASS
11AX40MIMO	Ant1	5230	8.13	≤24.17	PASS
11AX40MIMO	Ant2	5230	7.76	≤24.17	PASS
11AX40MIMO	total	5230	10.96	≤24.17	PASS
11AX40MIMO	Ant1	5270	8.17	≤18.15	PASS
11AX40MIMO	Ant2	5270	7.63	≤18.15	PASS
11AX40MIMO	total	5270	10.92	≤18.15	PASS
11AX40MIMO	Ant1	5310	8.32	≤18.15	PASS
11AX40MIMO	Ant2	5310	7.90	≤18.15	PASS
11AX40MIMO	total	5310	11.13	≤18.15	PASS
11AX40MIMO	Ant1	5510	8.33	≤18.15	PASS
11AX40MIMO	Ant2	5510	7.80	≤18.15	PASS
11AX40MIMO	total	5510	11.09	≤18.15	PASS
11AX40MIMO	Ant1	5550	8.30	≤18.15	PASS
11AX40MIMO	Ant2	5550	7.78	≤18.15	PASS
11AX40MIMO	total	5550	11.06	≤18.15	PASS
11AX40MIMO	Ant1	5670	8.20	≤18.15	PASS
11AX40MIMO	Ant2	5670	7.91	≤18.15	PASS
11AX40MIMO	total	5670	11.07	≤18.15	PASS
11AX40MIMO	Ant1	5755	8.29	≤24.17	PASS
11AX40MIMO	Ant2	5755	7.86	≤24.17	PASS
11AX40MIMO	total	5755	11.09	≤24.17	PASS
11AX40MIMO	Ant1	5795	8.35	≤24.17	PASS
11AX40MIMO	Ant2	5795	7.79	≤24.17	PASS
11AX40MIMO	total	5795	11.09	≤24.17	PASS
11AX80MIMO	Ant1	5210	8.34	≤24.17	PASS
11AX80MIMO	Ant2	5210	7.78	≤24.17	PASS
11AX80MIMO	total	5210	11.08	≤18.15	PASS
11AX80MIMO	Ant1	5290	8.37	≤18.15	PASS
11AX80MIMO	Ant2	5290	7.89	≤18.15	PASS
11AX80MIMO	total	5290	11.14	≤18.15	PASS
11AX80MIMO	Ant1	5530	8.19	≤18.15	PASS
11AX80MIMO	Ant2	5530	7.83	≤18.15	PASS
11AX80MIMO	total	5530	11.02	≤18.15	PASS
11AX80MIMO	Ant1	5610	8.23	≤18.15	PASS
11AX80MIMO	Ant2	5610	7.82	≤18.15	PASS
11AX80MIMO	total	5610	11.04	≤18.15	PASS
11AX80MIMO	Ant1	5775	8.29	≤24.17	PASS
11AX80MIMO	Ant2	5775	7.73	≤24.17	PASS
11AX80MIMO	total	5775	11.03	≤24.17	PASS

For EUT1/EUT4/EUT5

Frequency Band	ANT 1 Antenna Gain (dBi)	ANT 2 Antenna Gain (dBi)	Beamforming gain(dB)	Correlated chains directional gain (dBi)	Power Limit (dBm)
U-NII-1	5.20	5.26	3	11.24	24.76
U-NII-2A	5.20	5.26	3	11.24	18.74
U-NII-2C	5.20	5.26	3	11.24	18.74
U-NII-3	5.20	5.26	3	11.24	24.76
Unequal antenna gains, with equal transmit powers. For antenna gains given by $G_1, G_2, \dots, G_N$ dBi If transmit signals are correlated, then Directional gain = $10 \log[(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20})^2 / N_{ANT}]$ dBi [Note the "20"s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.] Directional gain = $10 \log[(10^{5.20/20} + 10^{5.26/20})^2 / N_{ANT}]$ dBi=8.24 Correlated chains directional gain= Directional gain+ Beamforming gain=8.24+3=11.24 dBi					

For EUT2/EUT3

Frequency Band	ANT 1 Antenna Gain (dBi)	ANT 2 Antenna Gain (dBi)	Beamforming gain(dB)	Correlated chains directional gain (dBi)	Power Limit (dBm)
U-NII-1	4.88	6.66	3	11.83	24.17
U-NII-2A	4.88	6.66	3	11.83	18.15
U-NII-2C	4.88	6.66	3	11.83	18.15
U-NII-3	4.88	6.66	3	11.83	24.17
Unequal antenna gains, with equal transmit powers. For antenna gains given by $G_1, G_2, \dots, G_N$ dBi If transmit signals are correlated, then Directional gain = $10 \log[(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20})^2 / N_{ANT}]$ dBi [Note the "20"s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.] Directional gain = $10 \log[(10^{4.88/20} + 10^{6.66/20})^2 / N_{ANT}]$ dBi=8.83 Correlated chains directional gain= Directional gain+ Beamforming gain=8.83+3=11.83 dBi					

3.5 Power Spectral Density

3.5.1 Limit

FCC Part15, Subpart E (15.407)			
Section	Test Item	Limit	Frequency Range (MHz)
15.407(a)	Power Spectral Density	Master device: 17 dBm/MHz Client device: 11 dBm/MHz	5150-5250
		11 dBm/MHz	5250-5350
		11 dBm/MHz	5470-5725
		30 dBm/500 kHz	5725-5850

3.5.2 Test Peripherals

Support Equipment				
No.	Equipment	Brand Name	Model Name	Remarks
1	Record PC	Lenovo	M4500T	NA
2	Control PC	Lenovo	M4500T	NA

3.5.3 Test Procedure

Test Method	
☒ Conducted Measurement	☐ Radiated Measurement
Test Channels	
☒ Lowest, Middle and Highest Channel	☐ Lowest and Highest Channel
Environmental conditions	
☒ Normal	☐ Normal and Extreme
Note: ● : Test ○ : No Test	

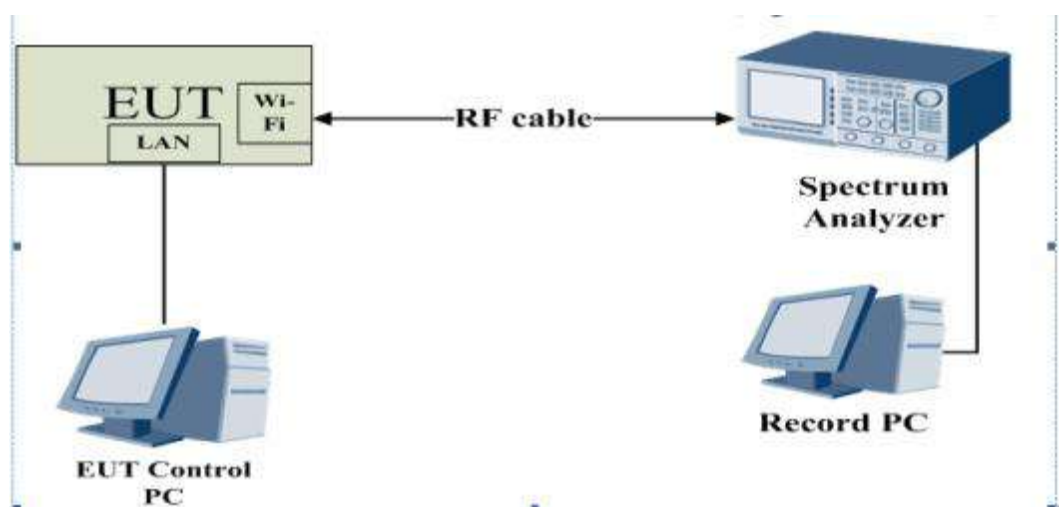
a) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below. Spectrum analyser settings as following:

Centre Frequency	The centre frequency of the channel under test
RBW	= 1 MHz (Band1/2/3) = 500kHz (Band4)
VBW	≥ 3 x RBW
Frequency span	2 x Nominal Channel Bandwidth
Detector Mode	RMS
Trace Mode	Max Hold
Sweep Time	Auto Couple

b) Wait for the trace to stabilize. Use the peak marker function to determine the maximum amplitude level within the RBW.

c) The value defined in step b shall be compared to the limits and be recorded .

3.5.4 Test Setup



3.5.5 The Result

Test Mode	Antenna	Frequency[MHz]	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	7.68	≤14.17	PASS
11A	Ant2	5180	7.68	≤14.17	PASS
11A	Ant1	5200	5.91	≤14.17	PASS
11A	Ant2	5200	7.69	≤14.17	PASS
11A	Ant1	5240	7.87	≤14.17	PASS
11A	Ant2	5240	7.42	≤14.17	PASS
11A	Ant1	5260	7.65	≤8.17	PASS
11A	Ant2	5260	7.21	≤8.17	PASS
11A	Ant1	5280	7.8	≤8.17	PASS
11A	Ant2	5280	7.47	≤8.17	PASS
11A	Ant1	5320	7.92	≤8.17	PASS
11A	Ant2	5320	8.01	≤8.17	PASS
11A	Ant1	5500	5.6	≤8.17	PASS
11A	Ant2	5500	4.25	≤8.17	PASS
11A	Ant1	5580	6.24	≤8.17	PASS
11A	Ant2	5580	5.8	≤8.17	PASS
11A	Ant1	5700	6.07	≤8.17	PASS
11A	Ant2	5700	6.76	≤8.17	PASS
11A	Ant1	5745	2.77	≤27.17	PASS
11A	Ant2	5745	4.18	≤27.17	PASS
11A	Ant1	5785	2.51	≤27.17	PASS
11A	Ant2	5785	5.01	≤27.17	PASS
11A	Ant1	5825	2.59	≤27.17	PASS
11A	Ant2	5825	3.83	≤27.17	PASS
11N20MIMO	Ant1	5180	4.35	≤14.17	PASS
11N20MIMO	Ant2	5180	4.24	≤14.17	PASS
11N20MIMO	total	5180	7.31	≤14.17	PASS
11N20MIMO	Ant1	5200	4.33	≤14.17	PASS
11N20MIMO	Ant2	5200	5.38	≤14.17	PASS
11N20MIMO	total	5200	7.90	≤14.17	PASS
11N20MIMO	Ant1	5240	4.87	≤14.17	PASS
11N20MIMO	Ant2	5240	4.63	≤14.17	PASS
11N20MIMO	total	5240	7.76	≤14.17	PASS
11N20MIMO	Ant1	5260	3.94	≤8.17	PASS
11N20MIMO	Ant2	5260	4.94	≤8.17	PASS
11N20MIMO	total	5260	7.48	≤8.17	PASS
11N20MIMO	Ant1	5280	5.14	≤8.17	PASS
11N20MIMO	Ant2	5280	5.00	≤8.17	PASS
11N20MIMO	total	5280	8.08	≤8.17	PASS

11N20MIMO	Ant1	5320	4.72	≤8.17	PASS
11N20MIMO	Ant2	5320	5.43	≤8.17	PASS
11N20MIMO	total	5320	8.10	≤8.17	PASS
11N20MIMO	Ant1	5500	3.06	≤8.17	PASS
11N20MIMO	Ant2	5500	1.26	≤8.17	PASS
11N20MIMO	total	5500	5.26	≤8.17	PASS
11N20MIMO	Ant1	5580	2.97	≤8.17	PASS
11N20MIMO	Ant2	5580	2.98	≤8.17	PASS
11N20MIMO	total	5580	5.99	≤8.17	PASS
11N20MIMO	Ant1	5700	2.70	≤8.17	PASS
11N20MIMO	Ant2	5700	1.05	≤8.17	PASS
11N20MIMO	total	5700	4.96	≤8.17	PASS
11N20MIMO	Ant1	5745	0.01	≤27.17	PASS
11N20MIMO	Ant2	5745	1.56	≤27.17	PASS
11N20MIMO	total	5745	3.86	≤27.17	PASS
11N20MIMO	Ant1	5785	0.19	≤27.17	PASS
11N20MIMO	Ant2	5785	1.26	≤27.17	PASS
11N20MIMO	total	5785	3.77	≤27.17	PASS
11N20MIMO	Ant1	5825	-0.11	≤27.17	PASS
11N20MIMO	Ant2	5825	1.92	≤27.17	PASS
11N20MIMO	total	5825	4.03	≤27.17	PASS
11N40MIMO	Ant1	5190	0.31	≤14.17	PASS
11N40MIMO	Ant2	5190	1.66	≤14.17	PASS
11N40MIMO	total	5190	4.05	≤14.17	PASS
11N40MIMO	Ant1	5230	1.65	≤14.17	PASS
11N40MIMO	Ant2	5230	3.52	≤14.17	PASS
11N40MIMO	total	5230	5.70	≤14.17	PASS
11N40MIMO	Ant1	5270	1.51	≤8.17	PASS
11N40MIMO	Ant2	5270	1.71	≤8.17	PASS
11N40MIMO	total	5270	4.62	≤8.17	PASS
11N40MIMO	Ant1	5310	0.94	≤8.17	PASS
11N40MIMO	Ant2	5310	1.93	≤8.17	PASS
11N40MIMO	total	5310	4.47	≤8.17	PASS
11N40MIMO	Ant1	5510	-0.4	≤8.17	PASS
11N40MIMO	Ant2	5510	-0.72	≤8.17	PASS
11N40MIMO	total	5510	2.45	≤8.17	PASS
11N40MIMO	Ant1	5550	-0.55	≤8.17	PASS
11N40MIMO	Ant2	5550	-0.3	≤8.17	PASS
11N40MIMO	total	5550	2.59	≤8.17	PASS
11N40MIMO	Ant1	5670	-0.04	≤8.17	PASS
11N40MIMO	Ant2	5670	-0.21	≤8.17	PASS
11N40MIMO	total	5670	2.89	≤8.17	PASS

11N40MIMO	Ant1	5755	-4.58	≤ 27.17	PASS
11N40MIMO	Ant2	5755	-3.5	≤ 27.17	PASS
11N40MIMO	total	5755	-1.00	≤ 27.17	PASS
11N40MIMO	Ant1	5795	-3.45	≤ 27.17	PASS
11N40MIMO	Ant2	5795	-2.5	≤ 27.17	PASS
11N40MIMO	total	5795	0.06	≤ 27.17	PASS
11AC20MIMO	Ant1	5180	4.79	≤ 14.17	PASS
11AC20MIMO	Ant2	5180	4.36	≤ 14.17	PASS
11AC20MIMO	total	5180	7.59	≤ 14.17	PASS
11AC20MIMO	Ant1	5200	4.7	≤ 14.17	PASS
11AC20MIMO	Ant2	5200	4.6	≤ 14.17	PASS
11AC20MIMO	total	5200	7.66	≤ 14.17	PASS
11AC20MIMO	Ant1	5240	5.2	≤ 14.17	PASS
11AC20MIMO	Ant2	5240	4.56	≤ 14.17	PASS
11AC20MIMO	total	5240	7.90	≤ 14.17	PASS
11AC20MIMO	Ant1	5260	5.52	≤ 8.17	PASS
11AC20MIMO	Ant2	5260	4.6	≤ 8.17	PASS
11AC20MIMO	total	5260	8.09	≤ 8.17	PASS
11AC20MIMO	Ant1	5280	5.02	≤ 8.17	PASS
11AC20MIMO	Ant2	5280	5.04	≤ 8.17	PASS
11AC20MIMO	total	5280	8.04	≤ 8.17	PASS
11AC20MIMO	Ant1	5320	4.85	≤ 8.17	PASS
11AC20MIMO	Ant2	5320	4.59	≤ 8.17	PASS
11AC20MIMO	total	5320	7.73	≤ 8.17	PASS
11AC20MIMO	Ant1	5500	3.43	≤ 8.17	PASS
11AC20MIMO	Ant2	5500	1.84	≤ 8.17	PASS
11AC20MIMO	total	5500	5.72	≤ 8.17	PASS
11AC20MIMO	Ant1	5580	2.75	≤ 8.17	PASS
11AC20MIMO	Ant2	5580	2.41	≤ 8.17	PASS
11AC20MIMO	total	5580	5.59	≤ 8.17	PASS
11AC20MIMO	Ant1	5700	4.33	≤ 8.17	PASS
11AC20MIMO	Ant2	5700	3.96	≤ 8.17	PASS
11AC20MIMO	total	5700	7.16	≤ 8.17	PASS
11AC20MIMO	Ant1	5745	-0.2	≤ 27.17	PASS
11AC20MIMO	Ant2	5745	1.3	≤ 27.17	PASS
11AC20MIMO	total	5745	3.62	≤ 27.17	PASS
11AC20MIMO	Ant1	5785	-0.37	≤ 27.17	PASS
11AC20MIMO	Ant2	5785	0.73	≤ 27.17	PASS
11AC20MIMO	total	5785	3.23	≤ 27.17	PASS
11AC20MIMO	Ant1	5825	-0.66	≤ 27.17	PASS
11AC20MIMO	Ant2	5825	1.44	≤ 27.17	PASS
11AC20MIMO	total	5825	3.53	≤ 27.17	PASS

11AC40MIMO	Ant1	5190	2.26	≤ 14.17	PASS
11AC40MIMO	Ant2	5190	2.01	≤ 14.17	PASS
11AC40MIMO	total	5190	5.15	≤ 14.17	PASS
11AC40MIMO	Ant1	5230	1.9	≤ 14.17	PASS
11AC40MIMO	Ant2	5230	0.4	≤ 14.17	PASS
11AC40MIMO	total	5230	4.22	≤ 14.17	PASS
11AC40MIMO	Ant1	5270	1.67	≤ 8.17	PASS
11AC40MIMO	Ant2	5270	1.58	≤ 8.17	PASS
11AC40MIMO	total	5270	4.64	≤ 8.17	PASS
11AC40MIMO	Ant1	5310	0.83	≤ 8.17	PASS
11AC40MIMO	Ant2	5310	1.21	≤ 8.17	PASS
11AC40MIMO	total	5310	4.03	≤ 8.17	PASS
11AC40MIMO	Ant1	5510	-1.43	≤ 8.17	PASS
11AC40MIMO	Ant2	5510	-1.31	≤ 8.17	PASS
11AC40MIMO	total	5510	1.64	≤ 8.17	PASS
11AC40MIMO	Ant1	5550	0.06	≤ 8.17	PASS
11AC40MIMO	Ant2	5550	0.48	≤ 8.17	PASS
11AC40MIMO	total	5550	3.29	≤ 8.17	PASS
11AC40MIMO	Ant1	5670	-0.38	≤ 8.17	PASS
11AC40MIMO	Ant2	5670	0.11	≤ 8.17	PASS
11AC40MIMO	total	5670	2.88	≤ 8.17	PASS
11AC40MIMO	Ant1	5755	-2.84	≤ 27.17	PASS
11AC40MIMO	Ant2	5755	-1.06	≤ 27.17	PASS
11AC40MIMO	total	5755	1.15	≤ 27.17	PASS
11AC40MIMO	Ant1	5795	-2.28	≤ 27.17	PASS
11AC40MIMO	Ant2	5795	0.16	≤ 27.17	PASS
11AC40MIMO	total	5795	2.12	≤ 27.17	PASS
11AC80MIMO	Ant1	5210	-2.2	≤ 14.17	PASS
11AC80MIMO	Ant2	5210	-1.95	≤ 14.17	PASS
11AC80MIMO	total	5210	0.94	≤ 14.17	PASS
11AC80MIMO	Ant1	5290	-2.68	≤ 8.17	PASS
11AC80MIMO	Ant2	5290	-1.43	≤ 8.17	PASS
11AC80MIMO	total	5290	1.00	≤ 8.17	PASS
11AC80MIMO	Ant1	5530	-6.16	≤ 8.17	PASS
11AC80MIMO	Ant2	5530	-3.45	≤ 8.17	PASS
11AC80MIMO	total	5530	-1.59	≤ 8.17	PASS
11AC80MIMO	Ant1	5610	-4.33	≤ 8.17	PASS
11AC80MIMO	Ant2	5610	-3.53	≤ 8.17	PASS
11AC80MIMO	total	5610	-0.90	≤ 8.17	PASS
11AC80MIMO	Ant1	5775	-6.89	≤ 27.17	PASS
11AC80MIMO	Ant2	5775	-7.86	≤ 27.17	PASS
11AC80MIMO	total	5775	-4.34	≤ 27.17	PASS

11AX20MIMO	Ant1	5180	4.63	≤ 14.17	PASS
11AX20MIMO	Ant2	5180	5.22	≤ 14.17	PASS
11AX20MIMO	total	5180	7.95	≤ 14.17	PASS
11AX20MIMO	Ant1	5200	4.91	≤ 14.17	PASS
11AX20MIMO	Ant2	5200	5.55	≤ 14.17	PASS
11AX20MIMO	total	5200	8.25	≤ 14.17	PASS
11AX20MIMO	Ant1	5240	3.13	≤ 14.17	PASS
11AX20MIMO	Ant2	5240	4.94	≤ 14.17	PASS
11AX20MIMO	total	5240	7.14	≤ 14.17	PASS
11AX20MIMO	Ant1	5260	3.91	≤ 8.17	PASS
11AX20MIMO	Ant2	5260	5.12	≤ 8.17	PASS
11AX20MIMO	total	5260	7.57	≤ 8.17	PASS
11AX20MIMO	Ant1	5280	4.62	≤ 8.17	PASS
11AX20MIMO	Ant2	5280	4.87	≤ 8.17	PASS
11AX20MIMO	total	5280	7.76	≤ 8.17	PASS
11AX20MIMO	Ant1	5320	4.31	≤ 8.17	PASS
11AX20MIMO	Ant2	5320	5.54	≤ 8.17	PASS
11AX20MIMO	total	5320	7.98	≤ 8.17	PASS
11AX20MIMO	Ant1	5500	2.94	≤ 8.17	PASS
11AX20MIMO	Ant2	5500	1.99	≤ 8.17	PASS
11AX20MIMO	total	5500	5.50	≤ 8.17	PASS
11AX20MIMO	Ant1	5580	2.37	≤ 8.17	PASS
11AX20MIMO	Ant2	5580	3.56	≤ 8.17	PASS
11AX20MIMO	total	5580	6.02	≤ 8.17	PASS
11AX20MIMO	Ant1	5700	1.86	≤ 8.17	PASS
11AX20MIMO	Ant2	5700	4.05	≤ 8.17	PASS
11AX20MIMO	total	5700	6.10	≤ 8.17	PASS
11AX20MIMO	Ant1	5745	0.39	≤ 27.17	PASS
11AX20MIMO	Ant2	5745	2.71	≤ 27.17	PASS
11AX20MIMO	total	5745	4.71	≤ 27.17	PASS
11AX20MIMO	Ant1	5785	0.06	≤ 27.17	PASS
11AX20MIMO	Ant2	5785	1.34	≤ 27.17	PASS
11AX20MIMO	total	5785	3.76	≤ 27.17	PASS
11AX20MIMO	Ant1	5825	-0.38	≤ 27.17	PASS
11AX20MIMO	Ant2	5825	1.78	≤ 27.17	PASS
11AX20MIMO	total	5825	3.84	≤ 27.17	PASS
11AX40MIMO	Ant1	5190	1.88	≤ 14.17	PASS
11AX40MIMO	Ant2	5190	1.15	≤ 14.17	PASS
11AX40MIMO	total	5190	4.54	≤ 14.17	PASS
11AX40MIMO	Ant1	5230	1.24	≤ 14.17	PASS
11AX40MIMO	Ant2	5230	1.86	≤ 14.17	PASS
11AX40MIMO	total	5230	4.57	≤ 14.17	PASS

11AX40MIMO	Ant1	5270	-0.29	≤ 8.17	PASS
11AX40MIMO	Ant2	5270	1.43	≤ 8.17	PASS
11AX40MIMO	total	5270	3.66	≤ 8.17	PASS
11AX40MIMO	Ant1	5310	0.4	≤ 8.17	PASS
11AX40MIMO	Ant2	5310	2.59	≤ 8.17	PASS
11AX40MIMO	total	5310	4.64	≤ 8.17	PASS
11AX40MIMO	Ant1	5510	-0.32	≤ 8.17	PASS
11AX40MIMO	Ant2	5510	-0.25	≤ 8.17	PASS
11AX40MIMO	total	5510	2.73	≤ 8.17	PASS
11AX40MIMO	Ant1	5550	0.2	≤ 8.17	PASS
11AX40MIMO	Ant2	5550	-1.61	≤ 8.17	PASS
11AX40MIMO	total	5550	2.40	≤ 8.17	PASS
11AX40MIMO	Ant1	5670	0.42	≤ 8.17	PASS
11AX40MIMO	Ant2	5670	1.09	≤ 8.17	PASS
11AX40MIMO	total	5670	3.78	≤ 8.17	PASS
11AX40MIMO	Ant1	5755	-2.06	≤ 27.17	PASS
11AX40MIMO	Ant2	5755	-1.19	≤ 27.17	PASS
11AX40MIMO	total	5755	1.41	≤ 27.17	PASS
11AX40MIMO	Ant1	5795	-3.7	≤ 27.17	PASS
11AX40MIMO	Ant2	5795	-0.99	≤ 27.17	PASS
11AX40MIMO	total	5795	0.87	≤ 27.17	PASS
11AX80MIMO	Ant1	5210	-0.86	≤ 14.17	PASS
11AX80MIMO	Ant2	5210	-3.03	≤ 14.17	PASS
11AX80MIMO	total	5210	1.20	≤ 14.17	PASS
11AX80MIMO	Ant1	5290	-4.41	≤ 8.17	PASS
11AX80MIMO	Ant2	5290	-1.29	≤ 8.17	PASS
11AX80MIMO	total	5290	0.43	≤ 8.17	PASS
11AX80MIMO	Ant1	5530	-2.83	≤ 8.17	PASS
11AX80MIMO	Ant2	5530	-2.01	≤ 8.17	PASS
11AX80MIMO	total	5530	0.61	≤ 8.17	PASS
11AX80MIMO	Ant1	5610	-5.58	≤ 8.17	PASS
11AX80MIMO	Ant2	5610	-1.34	≤ 8.17	PASS
11AX80MIMO	total	5610	0.05	≤ 8.17	PASS
11AX80MIMO	Ant1	5775	-6.35	≤ 27.17	PASS
11AX80MIMO	Ant2	5775	-4.18	≤ 27.17	PASS
11AX80MIMO	total	5775	-2.12	≤ 27.17	PASS

Note:

1. The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.
2. For UNII-3, according to KDB publication 789033 D02 General UNII Test Procedures New Rules v02r01, section II.F.5., it is acceptable to set RBW at 300kHz and VBW at 1500kHz if the spectrum analyzer does not have 500 kHz RBW. Then, add 10 log (500 kHz/300 kHz) to the measured result, i.e. 2.22 dB.
3. During the test of U-NII 3 PSD, the measurement result with RBW=300kHz has been added 2.22 dB by compensating offset, offset=cable loss+duty factor+10log(500kHz/300kHz).
4. Beamforming conducted power less than no beamforming conducted power, so only no beamforming conducted power spectral density was recored.

For EUT1/EUT4/EUT5

Frequency Band	ANT 1 Antenna Gain (dBi)	ANT 2 Antenna Gain (dBi)	Correlated chains directional gain (dBi)	Power Spectral Density Limit (dBm)
U-NII-1	5.20	5.26	8.24	14.76
U-NII-2A	5.20	5.26	8.24	8.76
U-NII-2C	5.20	5.26	8.24	8.76
U-NII-3	5.20	5.26	8.24	27.76

Unequal antenna gains, with equal transmit powers. For antenna gains given by $G_1, G_2, \dots, G_N$ dBi
If transmit signals are correlated, then Directional gain = $10 \log[(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20})^2 / N_{ANT}]$ dBi
[Note the “20”s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]
Directional gain = $10 \log[(10^{5.20/20} + 10^{5.26/20})^2 / N_{ANT}]$ dBi=8.24

For EUT2/EUT3

Frequency Band	ANT 1 Antenna Gain (dBi)	ANT 2 Antenna Gain (dBi)	Correlated chains directional gain (dBi)	Power Spectral Density Limit (dBm)
U-NII-1	4.88	6.66	8.83	14.17
U-NII-2A	4.88	6.66	8.83	8.17
U-NII-2C	4.88	6.66	8.83	8.17
U-NII-3	4.88	6.66	8.83	27.17

Unequal antenna gains, with equal transmit powers. For antenna gains given by $G_1, G_2, \dots, G_N$ dBi
If transmit signals are correlated, then Directional gain = $10 \log[(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20})^2 / N_{ANT}]$ dBi
[Note the “20”s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]
Directional gain = $10 \log[(10^{4.88/20} + 10^{6.66/20})^2 / N_{ANT}]$ dBi=8.83

11A-Ant1-5180



11A-Ant2-5180



11A-Ant1-5200



11A-Ant2-5200



11A-Ant1-5240



11A-Ant2-5240



11A-Ant1-5260



11A-Ant2-5260



11A-Ant1-5280



11A-Ant2-5280



11A-Ant1-5320



11A-Ant2-5320



11A-Ant1-5500



11A-Ant2-5500



11A-Ant1-5580



11A-Ant2-5580



11A-Ant1-5700



11A-Ant2-5700



11A-Ant1-5745



11A-Ant2-5745



11A-Ant1-5785



11A-Ant2-5785



11A-Ant1-5825



11A-Ant2-5825



11N20MIMO-Ant1-5180



11N20MIMO-Ant2-5180



11N20MIMO-Ant1-5200



11N20MIMO-Ant2-5200



11N20MIMO-Ant1-5240



11N20MIMO-Ant2-5240



11N20MIMO-Ant1-5260



11N20MIMO-Ant2-5260



11N20MIMO-Ant1-5280



11N20MIMO-Ant2-5280



11N20MIMO-Ant1-5320



11N20MIMO-Ant2-5320



11N20MIMO-Ant1-5500



11N20MIMO-Ant2-5500



11N20MIMO-Ant1-5580



11N20MIMO-Ant2-5580



11N20MIMO-Ant1-5700



11N20MIMO-Ant2-5700



11N20MIMO-Ant1-5745



11N20MIMO-Ant2-5745



11N20MIMO-Ant1-5785



11N20MIMO-Ant2-5785



11N20MIMO-Ant1-5825



11N20MIMO-Ant2-5825



11N40MIMO-Ant1-5190



11N40MIMO-Ant2-5190



11N40MIMO-Ant1-5230



11N40MIMO-Ant2-5230



11N40MIMO-Ant1-5270



11N40MIMO-Ant2-5270



11N40MIMO-Ant1-5310



11N40MIMO-Ant2-5310



11N40MIMO-Ant1-5510



11N40MIMO-Ant2-5510



11N40MIMO-Ant1-5550



11N40MIMO-Ant2-5550



11N40MIMO-Ant1-5670



11N40MIMO-Ant2-5670

