



26dB Bandwidth, ANT C

Modulation Type: 802.11ax HE80 (30.6Mbps)

CH42





26dB Bandwidth, ANT D

Modulation Type: 802.11a (6Mbps)

CH36



Modulation Type: 802.11ac VHT20 (6.5Mbps)

CH36



CH40



CH40



CH48



CH48





26dB Bandwidth, ANT D

Modulation Type: 802.11ac VHT40 (13.5Mbps)

CH38



Modulation Type: 802.11ac VHT80 (29.3Mbps)

CH42



CH46





26dB Bandwidth, ANT D

Modulation Type: 802.11ax HE20 (7.3Mbps)

CH36



Modulation Type: 802.11ax HE40 (14.6Mbps)

CH38



CH40



CH46



CH48





26dB Bandwidth, ANT D

Modulation Type: 802.11ax HE80 (30.6Mbps)

CH42





26dB Bandwidth,
Modulation Type: 802.11ac
CH42 VHT80(ANT A+ANT B) +
CH155 VHT80(ANT C+ANT D) (29.3Mbps)
ANT A



Not required

Modulation Type: 802.11ac
CH42 VHT80(ANT A+ANT B) +
CH155 VHT80(ANT C+ANT D) (29.3Mbps)
ANT B



Not required

Modulation Type: 802.11ac
CH42 VHT80(ANT A+ANT B) +
CH155 VHT80(ANT C+ANT D) (29.3Mbps)
ANT C

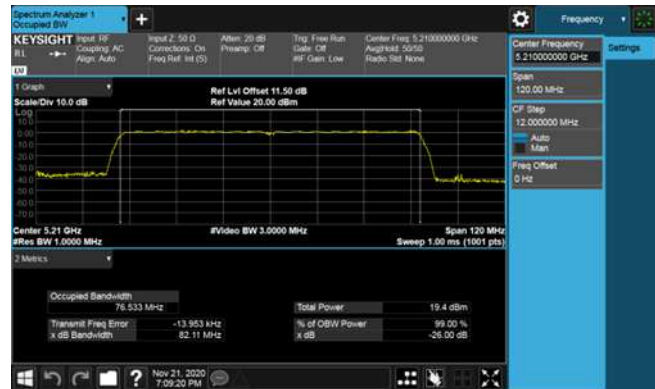
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CH42 VHT80(ANT A+ANT B) +
CH155 VHT80(ANT C+ANT D) (29.3Mbps)
ANT D



26dB Bandwidth,
Modulation Type: 802.11ac
CH42 VHT80(ANT C+ANT D) +
CH155 VHT80(ANT A+ANT B) (29.3Mbps)
ANT A

Modulation Type: 802.11ac
CH42 VHT80(ANT C+ANT D) +
CH155 VHT80(ANT A+ANT B) (29.3Mbps)
ANT C

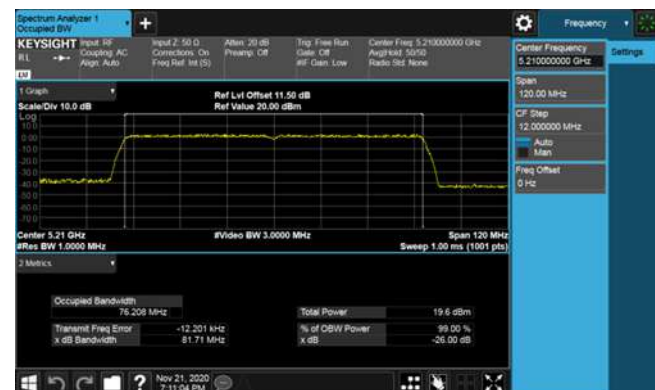
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CH42 VHT80(ANT C+ANT D) +
CH155 VHT80(ANT A+ANT B) (29.3Mbps)
ANT B

Modulation Type: 802.11ac
CH42 VHT80(ANT C+ANT D) +
CH155 VHT80(ANT A+ANT B) (29.3Mbps)
ANT D

Not required





26dB Bandwidth,
Modulation Type: 802.11ax
CH42 HE80(ANT A+ANT B) +
CH155 HE80(ANT C+ANT D) (30.6Mbps)
ANT A

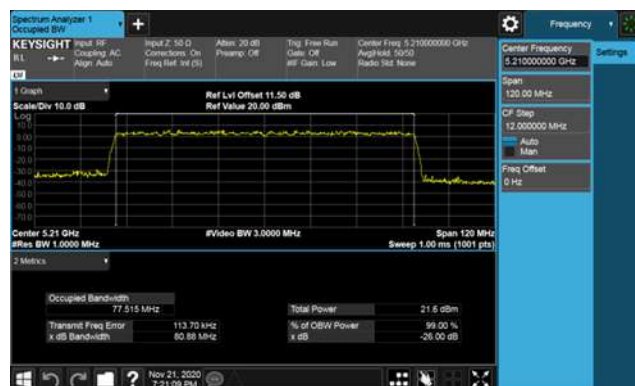
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CH42 HE80(ANT A+ANT B) +
CH155 HE80(ANT C+ANT D) (30.6Mbps)
ANT C



Not required

Modulation Type: 802.11ax
CH42 HE80(ANT A+ANT B) +
CH155 HE80(ANT C+ANT D) (30.6Mbps)
ANT B

Modulation Type: 802.11ax
CH42 HE80(ANT A+ANT B) +
CH155 HE80(ANT C+ANT D) (30.6Mbps)
ANT D



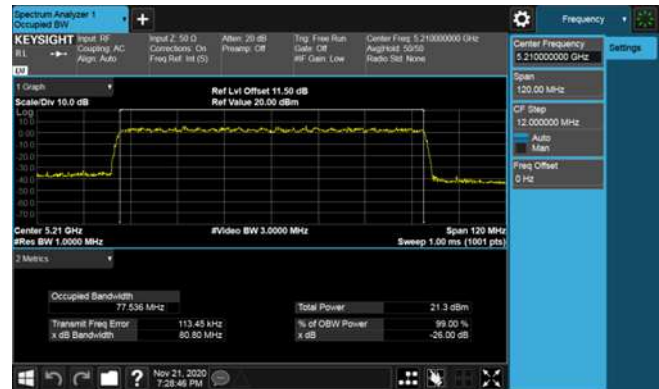
Not required



26dB Bandwidth,
Modulation Type: 802.11ax
CH42 HE80(ANT C+ANT D) +
CH155 HE80(ANT A+ANT B) (30.6Mbps)
ANT A

Not required

Modulation Type: 802.11ax
CH42 HE80(ANT C+ANT D) +
CH155 HE80(ANT A+ANT B) (30.6Mbps)
ANT C



Modulation Type: 802.11ax
CH42 HE80(ANT C+ANT D) +
CH155 HE80(ANT A+ANT B) (30.6Mbps)
ANT B

Not required

Modulation Type: 802.11ax
CH42 HE80(ANT C+ANT D) +
CH155 HE80(ANT A+ANT B) (30.6Mbps)
ANT D





99% Bandwidth, ANT A

Modulation Type: 802.11a (6Mbps)

CH36



Modulation Type: 802.11ac VHT20 (6.5Mbps)

CH36



CH40



CH40



CH48



CH48





99% Bandwidth, ANT A

Modulation Type: 802.11ac VHT40 (13.5Mbps)

CH38



Modulation Type: 802.11ac VHT80 (29.3Mbps)

CH42



CH46







99% Bandwidth, ANT A

Modulation Type: 802.11ax HE80 (30.6Mbps)

CH42





99% Bandwidth, ANT B

Modulation Type: 802.11a (6Mbps)

CH36



Modulation Type: 802.11ac VHT20 (6.5Mbps)

CH36



CH40



CH40



CH48



CH48





CH38



CH42



CH46





99% Bandwidth, ANT B

Modulation Type: 802.11ax HE20 (7.3Mbps)

CH36



Modulation Type: 802.11ax HE40 (14.6Mbps)

CH38



CH40



CH46



CH48





99% Bandwidth, ANT B

Modulation Type: 802.11ax HE80 (30.6Mbps)

CH42





99% Bandwidth, ANT C

Modulation Type: 802.11a (6Mbps)

CH36



Modulation Type: 802.11ac VHT20 (6.5Mbps)

CH36



CH40



CH40



CH48



CH48





99% Bandwidth, ANT C

Modulation Type: 802.11ac VHT40 (13.5Mbps)

CH38



Modulation Type: 802.11ac VHT80 (29.3Mbps)

CH42



CH46





99% Bandwidth, ANT C

Modulation Type: 802.11ax HE20 (7.3Mbps)

CH36



Modulation Type: 802.11ax HE40 (14.6Mbps)

CH38



CH40



CH46



CH48





99% Bandwidth, ANT C

Modulation Type: 802.11ax HE80 (30.6Mbps)

CH42





99% Bandwidth, ANT D

Modulation Type: 802.11a (6Mbps)

CH36



Modulation Type: 802.11ac VHT20 (6.5Mbps)

CH36



CH40



CH40



CH48



CH48





99% Bandwidth, ANT D

Modulation Type: 802.11ac VHT40 (13.5Mbps)

CH38



Modulation Type: 802.11ac VHT80 (29.3Mbps)

CH42



CH46





99% Bandwidth, ANT D

Modulation Type: 802.11ax HE20 (7.3Mbps)

CH36



Modulation Type: 802.11ax HE40 (14.6Mbps)

CH38



CH40



CH46



CH48

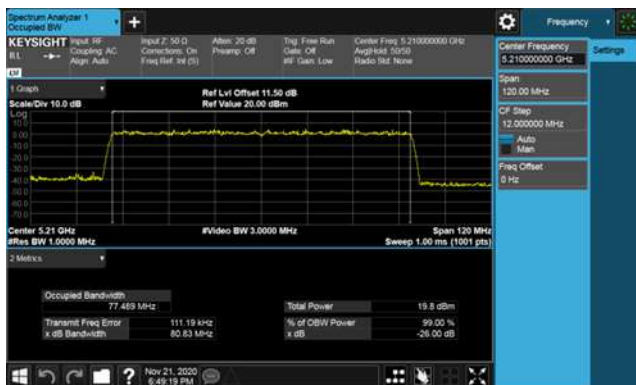




99% Bandwidth, ANT D

Modulation Type: 802.11ax HE80 (30.6Mbps)

CH42





99% Bandwidth,

Modulation Type: 802.11ac
CH42 VHT80(ANT A+ANT B) +
CH155 VHT80(ANT C+ANT D) (29.3Mbps)
ANT A

Modulation Type: 802.11ac
CH42 VHT80(ANT A+ANT B) +
CH155 VHT80(ANT C+ANT D) (29.3Mbps)
ANT C



Not required

Modulation Type: 802.11ac
CH42 VHT80(ANT A+ANT B) +
CH155 VHT80(ANT C+ANT D) (29.3Mbps)
ANT B

Modulation Type: 802.11ac
CH42 VHT80(ANT A+ANT B) +
CH155 VHT80(ANT C+ANT D) (29.3Mbps)
ANT D



Not required



99% Bandwidth,
Modulation Type: 802.11ac
CH42 VHT80(ANT C+ANT D) +
CH155 VHT80(ANT A+ANT B) (29.3Mbps)
ANT A

Not required

Modulation Type: 802.11ac
CH42 VHT80(ANT C+ANT D) +
CH155 VHT80(ANT A+ANT B) (29.3Mbps)
ANT C



Modulation Type: 802.11ac
CH42 VHT80(ANT C+ANT D) +
CH155 VHT80(ANT A+ANT B) (29.3Mbps)
ANT B

Not required

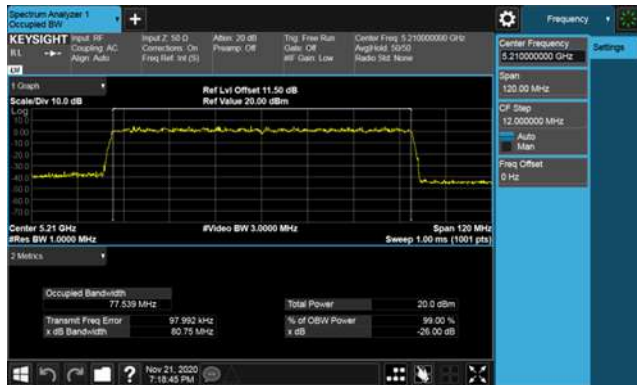
Modulation Type: 802.11ac
CH42 VHT80(ANT C+ANT D) +
CH155 VHT80(ANT A+ANT B) (29.3Mbps)
ANT D





99% Bandwidth,
Modulation Type: 802.11ax
CH42 HE80(ANT A+ANT B) +
CH155 HE80(ANT C+ANT D) (30.6Mbps)
ANT A

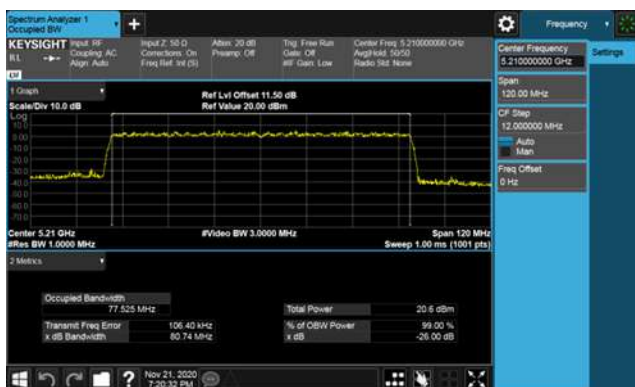
Modulation Type: 802.11ax
CH42 HE80(ANT A+ANT B) +
CH155 HE80(ANT C+ANT D) (30.6Mbps)
ANT C



Not required

Modulation Type: 802.11ax
CH42 HE80(ANT A+ANT B) +
CH155 HE80(ANT C+ANT D) (30.6Mbps)
ANT B

Modulation Type: 802.11ax
CH42 HE80(ANT A+ANT B) +
CH155 HE80(ANT C+ANT D) (30.6Mbps)
ANT D



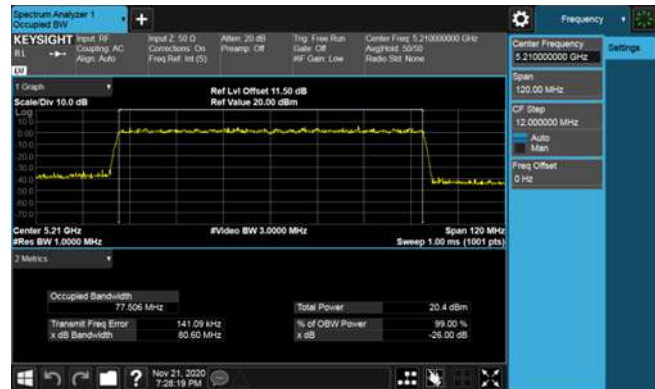
Not required



99% Bandwidth,
Modulation Type: 802.11ax
CH42 HE80(ANT C+ANT D) +
CH155 HE80(ANT A+ANT B) (30.6Mbps)
ANT A

Not required

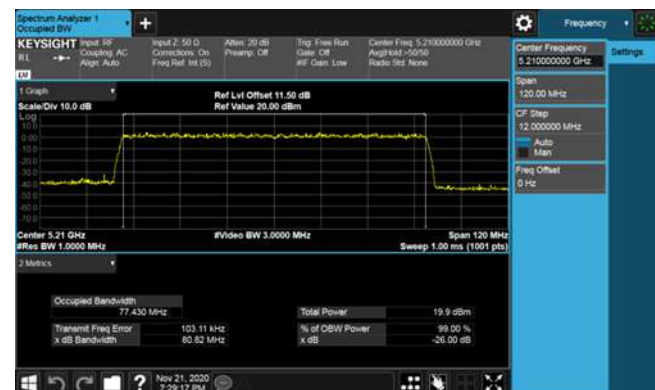
Modulation Type: 802.11ax
CH42 HE80(ANT C+ANT D) +
CH155 HE80(ANT A+ANT B) (30.6Mbps)
ANT C



Modulation Type: 802.11ax
CH42 HE80(ANT C+ANT D) +
CH155 HE80(ANT A+ANT B) (30.6Mbps)
ANT B

Not required

Modulation Type: 802.11ax
CH42 HE80(ANT C+ANT D) +
CH155 HE80(ANT A+ANT B) (30.6Mbps)
ANT D





10. Average Power

10.1. Test Limit

Output Power:

Frequency Band		Limit
☒	5.15~5.25GHz	
	Operating Mode	
☐	Outdoor access point	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm) 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 30degrees as measured from the horizon must not exceed 125 mW (21 dBm).
☒	Indoor access point	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm) 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.
☐	Fixed point-to-point access points	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm). 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.
☐	client devices	The maximum conducted output power over the frequency band of operation shall not exceed 250 mW (24dBm) 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.



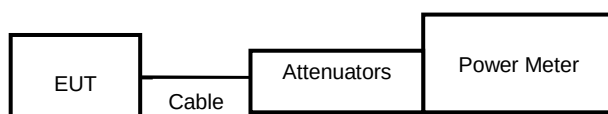
Frequency Band		Limit
☐	5.25-5.35 GHz	The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW (24dBm) or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are used, 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.
☐	5.470-5.725 GHz	
☒	5.725~5.85 GHz	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm). 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. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power.

10.2. Test Procedure

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 11.5 dB (including 10 dB pad and 1.5 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

10.3. Test Setup Layout



**10.4. Test Result and Data**

Non Beamforming

Modulation Type	Data Rate	Setting	Channel	Frequency (MHz)	Measured value of each antenna port (dBm)				Total power (dBm)	Total power (mW)	FCC Limit (dBm)
					ANT A (J5)	ANT B (J6)	ANT C (J7)	ANT D (J8)			
11a	6 Mbps	16	36	5180	15.27	16.14	15.59	15.15	21.58	143.724	30.00
11a	6 Mbps	16.5	40	5200	15.44	16.78	15.72	15.30	21.87	153.847	30.00
11a	6 Mbps	17	48	5240	15.45	16.74	15.53	15.28	21.81	151.738	30.00
11n HT20	MCS 0	16	36	5180	15.38	16.54	15.80	15.18	21.78	150.576	30.00
11n HT20	MCS 0	16	40	5200	15.19	16.42	15.55	15.03	21.60	144.624	30.00
11n HT20	MCS 0	16.5	48	5240	15.25	16.61	15.43	15.04	21.65	146.140	30.00
11n HT40	MCS 0	12.5	38	5190	11.90	12.77	11.91	11.35	18.03	63.581	30.00
11n HT40	MCS 0	16.5	46	5230	15.18	16.51	15.47	15.02	21.61	144.738	30.00
11ac VHT20	NSS1-MCS0	16	36	5180	15.41	16.57	15.82	15.21	21.81	151.532	30.00
11ac VHT20	NSS1-MCS0	16	40	5200	15.21	16.47	15.58	15.05	21.63	145.680	30.00
11ac VHT20	NSS1-MCS0	16.5	48	5240	15.29	16.64	15.47	15.07	21.68	147.312	30.00
11ac VHT40	NSS1-MCS0	12.5	38	5190	11.93	12.79	11.94	11.37	18.06	63.947	30.00
11ac VHT40	NSS1-MCS0	16.5	46	5230	15.21	16.54	15.51	15.04	21.64	145.750	30.00
11ac VHT80	NSS1-MCS0	11	42	5210	10.45	11.24	10.56	10.01	16.61	45.796	30.00
11ax HE20	NSS1-MCS0	16	36	5180	15.74	16.89	16.08	15.43	22.09	161.827	30.00
11ax HE20	NSS1-MCS0	16.5	40	5200	16.06	17.37	15.94	15.01	22.20	165.900	30.00
11ax HE20	NSS1-MCS0	17	48	5240	16.25	17.19	15.93	15.41	22.26	168.457	30.00
11ax HE40	NSS1-MCS0	12	38	5190	11.74	12.72	11.80	11.63	18.02	63.325	30.00
11ax HE40	NSS1-MCS0	16.5	46	5230	15.57	16.88	15.78	15.35	21.96	156.932	30.00
11ax HE80	NSS1-MCS0	11	42	5210	10.82	11.47	10.86	10.32	16.91	49.061	30.00



Non Beamforming

Modulation Type	Data Rate	Setting	Channel	Frequency (MHz)	Measured value of each antenna port (dBm)				Total power (dBm)	Total power (mW)	FCC Limit (dBm)
					ANT A (J5)	ANT B (J6)	ANT C (J7)	ANT D (J8)			
11a	6 Mbps	15.5	149	5745	15.54	16.37	15.29	15.05	21.61	144.956	30.00
11a	6 Mbps	16	157	5785	15.51	16.46	15.35	15.13	21.66	146.682	30.00
11a	6 Mbps	16.5	165	5825	15.56	16.53	15.39	15.27	21.74	149.198	30.00
11n HT20	MCS 0	15.5	149	5745	15.61	16.28	15.29	15.05	21.60	144.649	30.00
11n HT20	MCS 0	16	157	5785	15.58	16.45	15.36	15.03	21.66	146.496	30.00
11n HT20	MCS 0	16.5	165	5825	15.46	16.51	15.33	15.20	21.68	147.160	30.00
11n HT40	MCS 0	16	151	5755	15.98	16.70	15.52	15.11	21.89	154.480	30.00
11n HT40	MCS 0	16.5	159	5795	16.04	16.75	15.59	15.33	21.98	157.838	30.00
11ac VHT20	NSS1-MCS0	15.5	149	5745	15.64	16.32	15.33	15.10	21.64	145.977	30.00
11ac VHT20	NSS1-MCS0	16	157	5785	15.59	16.47	15.39	15.09	21.69	147.464	30.00
11ac VHT20	NSS1-MCS0	16.5	165	5825	15.49	16.54	15.38	15.23	21.71	148.338	30.00
11ac VHT40	NSS1-MCS0	16	151	5755	16.02	16.73	15.54	15.14	21.92	155.561	30.00
11ac VHT40	NSS1-MCS0	16.5	159	5795	16.06	16.79	15.61	15.36	22.01	158.865	30.00
11ac VHT80	NSS1-MCS0	11.5	155	5775	11.48	11.99	11.06	10.85	17.39	54.799	30.00
11ax HE20	NSS1-MCS0	15.5	149	5745	15.79	16.62	15.48	15.14	21.81	151.828	30.00
11ax HE20	NSS1-MCS0	16	157	5785	15.73	16.68	15.51	15.27	21.85	153.184	30.00
11ax HE20	NSS1-MCS0	16.5	165	5825	15.74	16.75	15.54	15.36	21.90	154.978	30.00
11ax HE40	NSS1-MCS0	16	151	5755	16.26	16.88	15.79	15.38	22.13	163.466	30.00
11ax HE40	NSS1-MCS0	16	159	5795	15.76	16.51	15.41	15.18	21.77	150.156	30.00
11ax HE80	NSS1-MCS0	11	155	5775	11.32	11.78	10.91	10.59	17.19	52.404	30.00

Modulation Type	Data Rate	Setting	Channel	Frequency (MHz)	Measured value of each antenna port (dBm)				Total power (dBm)	Total power (mW)	FCC Limit (dBm)
					ANT A (J5)	ANT B (J6)	ANT C (J7)	ANT D (J8)			
11ac VHT80 + VHT80	NSS1-MCS0	12.5	42	5210	10.61	11.52	-	-	14.10	25.699	30.00
			155	5775	-	-	10.96	10.65	13.82	24.088	30.00
11ac VHT80 + VHT80	NSS1-MCS0	12.5	42	5210	-	-	10.71	10.24	13.49	22.344	30.00
			155	5775	11.54	11.89	-	-	14.73	29.709	30.00
11ax HE80 + HE80	NSS1-MCS0	11	42	5210	10.85	11.49	-	-	14.19	26.255	30.00
			155	5775	-	-	10.96	10.57	13.78	23.876	30.00
11ax HE80 + HE80	NSS1-MCS0	11	42	5210	-	-	10.89	10.43	13.68	23.315	30.00
			155	5775	11.42	11.78	-	-	14.61	28.934	30.00



Beamforming

Modulation Type	Data Rate	Channel	Frequency (MHz)	Measured value of each antenna port (dBm)				Total power (dBm)	Total power (mW)	FCC Limit (dBm)
				ANT A (J5)	ANT B (J6)	ANT C (J7)	ANT D (J8)			
11n HT20	MCS 0	36	5180	9.36	10.52	9.78	9.16	15.76	37.649	25.21
11n HT20	MCS 0	40	5200	9.17	10.40	9.53	9.01	15.58	36.161	25.21
11n HT20	MCS 0	48	5240	9.23	10.59	9.41	9.02	15.63	36.540	25.21
11n HT40	MCS 0	38	5190	5.88	6.75	5.89	5.33	12.01	15.898	25.21
11n HT40	MCS 0	46	5230	9.16	10.49	9.45	9.00	15.59	36.190	25.21
11ac VHT20	NSS1-MCS0	36	5180	9.39	10.55	9.80	9.19	15.79	37.888	25.21
11ac VHT20	NSS1-MCS0	40	5200	9.19	10.45	9.56	9.03	15.61	36.425	25.21
11ac VHT20	NSS1-MCS0	48	5240	9.27	10.62	9.45	9.05	15.66	36.833	25.21
11ac VHT40	NSS1-MCS0	38	5190	5.91	6.77	5.92	5.35	12.04	15.989	25.21
11ac VHT40	NSS1-MCS0	46	5230	9.19	10.52	9.49	9.02	15.62	36.442	25.21
11ac VHT80	NSS1-MCS0	42	5210	4.43	5.22	4.54	3.99	10.59	11.450	25.21
11ax HE20	NSS1-MCS0	36	5180	9.72	10.87	10.06	9.41	16.07	40.462	25.21
11ax HE20	NSS1-MCS0	40	5200	10.04	11.35	9.92	8.99	16.18	41.481	25.21
11ax HE20	NSS1-MCS0	48	5240	10.23	11.17	9.91	9.39	16.24	42.120	25.21
11ax HE40	NSS1-MCS0	38	5190	5.72	6.70	5.78	5.61	12.00	15.833	25.21
11ax HE40	NSS1-MCS0	46	5230	9.55	10.86	9.76	9.33	15.94	39.238	25.21
11ax HE80	NSS1-MCS0	42	5210	4.80	5.45	4.84	4.30	10.89	12.267	25.21



Beamforming

Modulation Type	Data Rate	Channel	Frequency (MHz)	Measured value of each antenna port (dBm)				Total power (dBm)	Total power (mW)	FCC Limit (dBm)
				ANT A (J5)	ANT B (J6)	ANT C (J7)	ANT D (J8)			
11n HT20	MCS 0	149	5745	9.59	10.26	9.27	9.03	15.58	36.167	25.12
11n HT20	MCS 0	157	5785	9.56	10.43	9.34	9.01	15.64	36.629	25.12
11n HT20	MCS 0	165	5825	9.44	10.49	9.31	9.18	15.66	36.795	25.12
11n HT40	MCS 0	151	5755	9.96	10.68	9.50	9.09	15.87	38.625	25.12
11n HT40	MCS 0	159	5795	10.02	10.73	9.57	9.31	15.96	39.465	25.12
11ac VHT20	NSS1-MCS0	149	5745	9.62	10.30	9.31	9.08	15.62	36.499	25.12
11ac VHT20	NSS1-MCS0	157	5785	9.57	10.45	9.37	9.07	15.67	36.871	25.12
11ac VHT20	NSS1-MCS0	165	5825	9.47	10.52	9.36	9.21	15.69	37.090	25.12
11ac VHT40	NSS1-MCS0	151	5755	10.00	10.71	9.52	9.12	15.90	38.896	25.12
11ac VHT40	NSS1-MCS0	159	5795	10.04	10.77	9.59	9.34	15.99	39.722	25.12
11ac VHT80	NSS1-MCS0	155	5775	5.46	5.97	5.04	4.83	11.37	13.702	25.12
11ax HE20	NSS1-MCS0	149	5745	9.77	10.60	9.46	9.12	15.79	37.962	25.12
11ax HE20	NSS1-MCS0	157	5785	9.71	10.66	9.49	9.25	15.83	38.301	25.12
11ax HE20	NSS1-MCS0	165	5825	9.72	10.73	9.52	9.34	15.88	38.750	25.12
11ax HE40	NSS1-MCS0	151	5755	10.24	10.86	9.77	9.36	16.11	40.872	25.12
11ax HE40	NSS1-MCS0	159	5795	9.74	10.49	9.39	9.16	15.75	37.544	25.12
11ax HE80	NSS1-MCS0	155	5775	5.30	5.76	4.89	4.57	11.17	13.103	25.12

Modulation Type	Data Rate	Channel	Frequency (MHz)	Measured value of each antenna port (dBm)				Total power (dBm)	Total power (mW)	FCC Limit (dBm)
				ANT A (J5)	ANT B (J6)	ANT C (J7)	ANT D (J8)			
11ac VHT80 + VHT80	NSS1-MCS0	42	5210	4.59	5.50	-	-	8.08	6.426	25.21
		155	5775	-	-	4.94	4.63	7.80	6.023	25.12
11ac VHT80 + VHT80	NSS1-MCS0	42	5210	-	-	4.69	4.22	7.47	5.587	25.21
		155	5775	5.52	5.87	-	-	8.71	7.428	25.12
11ax HE80 + HE80	NSS1-MCS0	42	5210	4.83	5.47	-	-	8.17	6.565	25.21
		155	5775	-	-	4.94	4.55	7.76	5.970	25.12
11ax HE80 + HE80	NSS1-MCS0	42	5210	-	-	4.87	4.41	7.66	5.830	25.21
		155	5775	5.40	5.76	-	-	8.59	7.234	25.12



11. Power Spectral Density

11.1. Test Limit

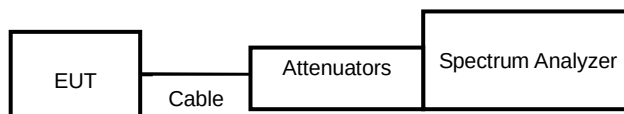
PSD:

Frequency Band		Limit
☒	5.15~5.25GHz	
	Operating Mode	
☐	Outdoor access point	17 dBm/MHz
☒	Indoor access point	17 dBm/MHz
☐	Fixed point-to-point access points	17 dBm/MHz
☐	Mobile and portable client devices	11 dBm/MHz
☐	5.725~5.85 GHz	11 dBm/MHz
☐	5.470-5.725 GHz	11 dBm/MHz
☒	5.725~5.85 GHz	30 dBm/500kHz

11.2. Test Procedure

Reference to KDB789033 D02 General UNII Test Procedures New Rules v02r01

11.3. Test Setup Layout





11.4. Test Result and Data

In the 5.2G Band

Modulation Type	Channel	Frequency (MHz)	Meas PSD (dBm/MHz)				Sum chain (dBm)	Duty Cycle CF(dB)	Total Corr'd PSD (dBm/MHz)	PSD Limit (dBm/MHz)
			ANT A	ANT B	ANT C	ANT D				
11a	36	5180	5.60	6.81	6.09	5.48	12.05	0.00	12.05	17.00
11a	40	5200	5.87	7.06	6.05	5.50	12.18	0.00	12.18	17.00
11a	48	5240	5.75	6.93	5.80	5.66	12.09	0.00	12.09	17.00
11ac VHT20	36	5180	5.29	6.40	5.80	5.11	11.70	0.00	11.70	17.00
11ac VHT20	40	5200	5.11	6.29	5.28	4.84	11.44	0.00	11.44	17.00
11ac VHT20	48	5240	5.04	6.20	5.00	4.76	11.31	0.00	11.31	17.00
11ac VHT40	38	5190	-1.50	-0.42	-1.09	-1.60	4.89	0.00	4.89	17.00
11ac VHT40	46	5230	1.90	3.28	2.14	2.00	8.39	0.00	8.39	17.00
11ac VHT80	42	5210	-6.74	-6.11	-6.60	-7.03	-0.59	0.00	-0.59	17.00
11ax HE20	36	5180	5.83	6.81	5.79	5.28	11.98	0.00	11.98	17.00
11ax HE20	40	5200	5.95	7.13	6.00	5.39	12.19	0.00	12.19	17.00
11ax HE20	48	5240	5.49	6.97	5.23	5.22	11.81	0.00	11.81	17.00
11ax HE40	38	5190	-2.04	-0.98	-1.37	-1.64	4.53	0.00	4.53	17.00
11ax HE40	46	5230	1.95	3.31	2.58	1.94	8.50	0.00	8.50	17.00
11ax HE80	42	5210	-5.95	-5.18	-5.73	-6.31	0.25	0.00	0.25	17.00



In the 5.8G Band

Modulation Type	Channel (MHz)	Frequency (MHz)	Meas PSD (dBm/MHz)				Sum chain (dBm)	Duty Cycle CF(dB)	10log(500KHz/R BW) CF (dB)	Total Corr'd PSD (dBm/500kHz)	PSD Limit (dBm/500kHz)
			ANT A	ANT B	ANT C	ANT D					
11a	149	5745	5.79	6.23	5.40	5.66	11.80	0.00	-3.01	8.79	30.00
11a	157	5785	5.76	6.24	5.61	5.51	11.81	0.00	-3.01	8.80	30.00
11a	165	5825	5.63	6.33	5.49	5.77	11.84	0.00	-3.01	8.83	30.00
11ac VHT20	149	5745	5.61	5.88	5.18	5.30	11.52	0.00	-3.01	8.51	30.00
11ac VHT20	157	5785	5.77	6.29	5.14	5.18	11.64	0.00	-3.01	8.63	30.00
11ac VHT20	165	5825	5.75	6.24	5.31	5.51	11.74	0.00	-3.01	8.73	30.00
11ac VHT40	151	5755	3.00	3.22	2.51	2.20	8.77	0.00	-3.01	5.76	30.00
11ac VHT40	159	5795	2.88	3.16	2.29	2.11	8.65	0.00	-3.01	5.64	30.00
11ac VHT80	155	5775	-5.21	-5.32	-6.03	-5.82	0.44	0.00	-3.01	-2.57	30.00
11ax HE20	149	5745	4.58	6.38	5.16	5.53	11.48	0.00	-3.01	8.47	30.00
11ax HE20	157	5785	4.71	6.27	5.15	5.44	11.45	0.00	-3.01	8.44	30.00
11ax HE20	165	5825	6.18	6.30	5.68	5.90	12.04	0.00	-3.01	9.03	30.00
11ax HE40	151	5755	3.04	3.18	2.54	2.27	8.80	0.00	-3.01	5.79	30.00
11ax HE40	159	5795	2.68	2.79	2.08	1.88	8.39	0.00	-3.01	5.38	30.00
11ax HE80	155	5775	-5.14	-4.96	-5.52	-5.50	0.75	0.00	-3.01	-2.26	30.00

11ac VTH80 + VHT80

Modulation Type	Channel (MHz)	Frequency (MHz)	Meas PSD (dBm/MHz)				Sum chain (dBm)	Duty Cycle CF(dB)	10log(500KHz/R BW) CF (dB)	Total Corr'd PSD (dBm/MHz)	PSD Limit (dBm/MHz)
			ANT A	ANT B	ANT C	ANT D					
11ac VHT80 + VHT 80	42	5210	-6.59	-5.86	-	-	-3.20	0.00	0.00	-3.20	17.00
	155	5775	-	-	-6.41	-6.35	-3.37	0.00	-3.01	-6.38	30.00
11ac VHT80 + VHT 80	42	5210	-	-	-6.34	-6.97	-3.63	0.00	0.00	-3.63	30.00
	155	5775	-5.72	-5.45	-	-	-2.57	0.00	-3.01	-5.58	17.00

11ax VTH80 + VHT80

Modulation Type	Channel (MHz)	Frequency (MHz)	Meas PSD (dBm/MHz)				Sum chain (dBm)	Duty Cycle CF(dB)	10log(500KHz/R BW) CF (dB)	Total Corr'd PSD (dBm/MHz)	PSD Limit (dBm/MHz)
			ANT A	ANT B	ANT C	ANT D					
11ax HE80 + HE 80	42	5210	-6.14	-5.56	-	-	-2.83	0.00	0.00	-2.83	17.00
	155	5775	-	-	-5.88	-6.15	-3.00	0.00	-3.01	-6.01	30.00
11ax HE80 + HE 80	42	5210	-	-	-5.77	-6.19	-2.96	0.00	0.00	-2.96	17.00
	155	5775	-5.25	-5.15	-	-	-2.19	0.00	-3.01	-5.20	30.00



ANT A:

Modulation Type: 802.11a (6Mbps)

CH36



Modulation Type: 802.11ac VHT20 (6.5Mbps)

CH36



CH40



CH40



CH48



CH48





ANT A:

Modulation Type: 802.11ac VHT40 (13.5Mbps)

CH38



Modulation Type: 802.11ac VHT80 (29.3Mbps)

CH42



CH46





ANT A:

Modulation Type: 802.11ax HE20 (7.3Mbps)

CH36



Modulation Type: 802.11ax HE40 (14.6Mbps)

CH38



CH40



CH46



CH48





ANT A:

Modulation Type: 802.11ax HE80 (30.6Mbps)

CH42





ANT B:

Modulation Type: 802.11a (6Mbps)

CH36



Modulation Type: 802.11ac VHT20 (6.5Mbps)

CH36



CH40



CH40



CH48



CH48





ANT B:

Modulation Type: 802.11ac VHT40 (13.5Mbps)

CH38



Modulation Type: 802.11ac VHT80 (29.3Mbps)

CH42



CH46





ANT B:

Modulation Type: 802.11ax HE20 (7.3Mbps)

CH36



Modulation Type: 802.11ax HE40 (14.6Mbps)

CH38



CH40



CH46



CH48





ANT B:

Modulation Type: 802.11ax HE80 (30.6Mbps)

CH42





ANT C:

Modulation Type: 802.11a (6Mbps)

CH36



Modulation Type: 802.11ac VHT20 (6.5Mbps)

CH36



CH40



CH40



CH48



CH48





ANT C:

Modulation Type: 802.11ac VHT40 (13.5Mbps)

CH38



Modulation Type: 802.11ac VHT80 (29.3Mbps)

CH42



CH46





ANT C:

Modulation Type: 802.11ax HE20 (7.3Mbps)

CH36



Modulation Type: 802.11ax HE40 (14.6Mbps)

CH38



CH40



CH46



CH48





ANT C:

Modulation Type: 802.11ax HE80 (30.6Mbps)

CH42





ANT D:

Modulation Type: 802.11a (6Mbps)

CH36



Modulation Type: 802.11ac VHT20 (6.5Mbps)

CH36



CH40



CH40



CH48



CH48







ANT D:

Modulation Type: 802.11ax HE20 (7.3Mbps)

CH36



Modulation Type: 802.11ax HE40 (14.6Mbps)

CH38



CH40



CH46



CH48





ANT D:

Modulation Type: 802.11ax HE80 (30.6Mbps)

CH42





ANT A:

Modulation Type: 802.11a (6Mbps)

CH149



Modulation Type: 802.11ac VHT20 (6.5Mbps)

CH149



CH157



CH157



CH165



CH165





ANT A:

Modulation Type: 802.11ac VHT40 (13.5Mbps)

CH151



Modulation Type: 802.11ac VHT80 (29.3Mbps)

CH155



CH159





ANT A:

Modulation Type: 802.11ax HE20 (7.3Mbps)

CH149



Modulation Type: 802.11ax HE40 (14.6Mbps)

CH151



CH157



CH159



CH165





ANT A:

Modulation Type: 802.11ax H80 (30.6Mbps)

CH155





ANT B:

Modulation Type: 802.11a (6Mbps)

CH149



Modulation Type: 802.11ac VHT20 (6.5Mbps)

CH149



CH157



CH157



CH165



CH165





ANT B:

Modulation Type: 802.11ac VHT40 (13.5Mbps)

CH151



Modulation Type: 802.11ac VHT80 (29.3Mbps)

CH155



CH159





ANT B:

Modulation Type: 802.11ax HE20 (7.3Mbps)

CH149



Modulation Type: 802.11ax HE40 (14.6Mbps)

CH151



CH157



CH159



CH165





ANT B:

Modulation Type: 802.11ax H80 (30.6Mbps)

CH155





ANT C:

Modulation Type: 802.11a (6Mbps)

CH149



Modulation Type: 802.11ac VHT20 (6.5Mbps)

CH149



CH157



CH157



CH165



CH165





ANT C:

Modulation Type: 802.11ac VHT40 (13.5Mbps)

CH151



Modulation Type: 802.11ac VHT80 (29.3Mbps)

CH155



CH159





ANT C:

Modulation Type: 802.11ax HE20 (7.3Mbps)

CH149



Modulation Type: 802.11ax HE40 (14.6Mbps)

CH151



CH157



CH159



CH165





ANT C:

Modulation Type: 802.11ax H80 (30.6Mbps)

CH155





ANT D:

Modulation Type: 802.11a (6Mbps)

CH149



Modulation Type: 802.11ac VHT20 (6.5Mbps)

CH149



CH157



CH157



CH165



CH165





ANT D:

Modulation Type: 802.11ac VHT40 (13.5Mbps)
CH151



Modulation Type: 802.11ac VHT80 (29.3Mbps)
CH155



CH159





ANT D:

Modulation Type: 802.11ax HE20 (7.3Mbps)

CH149



Modulation Type: 802.11ax HE40 (14.6Mbps)

CH151



CH157



CH159



CH165





ANT D:

Modulation Type: 802.11ax H80 (30.6Mbps)

CH155





Modulation Type: 802.11ac
CH42 VHT80(ANT A+ANT B) +
CH155 VHT80(ANT C+ANT D) (29.3Mbps)
ANT A



Modulation Type: 802.11ac
CH42 VHT80(ANT A+ANT B) +
CH155 VHT80(ANT C+ANT D) (29.3Mbps)
ANT C



Modulation Type: 802.11ac
CH42 VHT80(ANT A+ANT B) +
CH155 VHT80(ANT C+ANT D) (29.3Mbps)
ANT B



Modulation Type: 802.11ac
CH42 VHT80(ANT A+ANT B) +
CH155 VHT80(ANT C+ANT D) (29.3Mbps)
ANT D





Modulation Type: 802.11ac
CH42 VHT80(ANT C+ANT D) +
CH155 VHT80(ANT A+ANT B) (29.3Mbps)
ANT A



Modulation Type: 802.11ac
CH42 VHT80(ANT C+ANT D) +
CH155 VHT80(ANT A+ANT B) (29.3Mbps)
ANT C



Modulation Type: 802.11ac
CH42 VHT80(ANT C+ANT D) +
CH155 VHT80(ANT A+ANT B) (29.3Mbps)
ANT B



Modulation Type: 802.11ac
CH42 VHT80(ANT C+ANT D) +
CH155 VHT80(ANT A+ANT B) (29.3Mbps)
ANT D





Modulation Type: 802.11ax
CH42 HE80(ANT A+ANT B) +
CH155 HE80(ANT C+ANT D) (30.6Mbps)
ANT A



Modulation Type: 802.11ax
CH42 HE80(ANT A+ANT B) +
CH155 HE80(ANT C+ANT D) (30.6Mbps)
ANT C



Modulation Type: 802.11ax
CH42 HE80(ANT A+ANT B) +
CH155 HE80(ANT C+ANT D) (30.6Mbps)
ANT B



Modulation Type: 802.11ax
CH42 HE80(ANT A+ANT B) +
CH155 HE80(ANT C+ANT D) (30.6Mbps)
ANT D



Modulation Type: 802.11ax
CH42 HE80(ANT C+ANT D) +
CH155 HE80(ANT A+ANT B) (30.6Mbps)
ANT A

Modulation Type: 802.11ax
CH42 HE80(ANT C+ANT D) +
CH155 HE80(ANT A+ANT B) (30.6Mbps)
ANT C



Modulation Type: 802.11ax
CH42 HE80(ANT C+ANT D) +
CH155 HE80(ANT A+ANT B) (30.6Mbps)
ANT B

Modulation Type: 802.11ax
CH42 HE80(ANT C+ANT D) +
CH155 HE80(ANT A+ANT B) (30.6Mbps)
ANT D



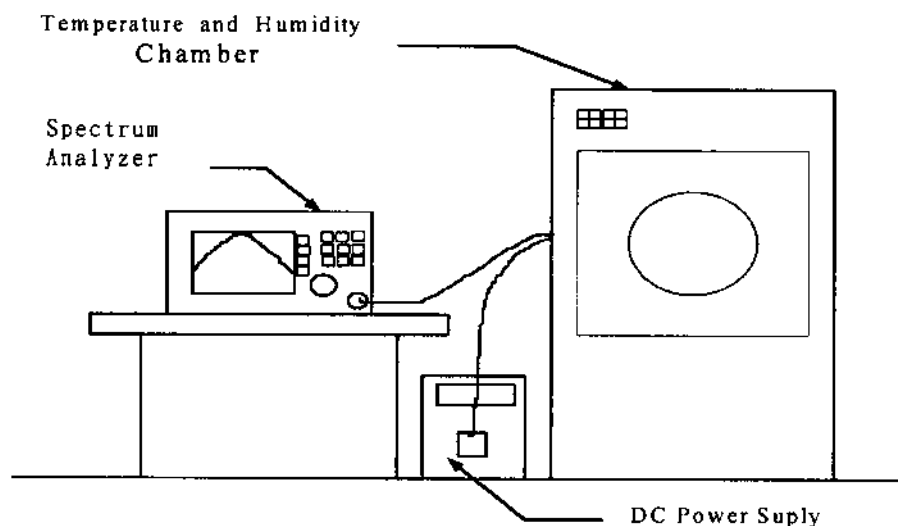


12. Frequency Stability

12.1. Test Procedure

1. The EUT was placed inside the Temperature and Humidity chamber.
2. The transmitter output was connected to spectrum analyzer.
3. Turn the EUT on and couple its output to a spectrum analyzer.
4. Turn the EUT off and set the chamber to the highest temperature specified.
5. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
6. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
7. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

12.2. Test Setup Layout





12.3. Test Result and Data

Operating frequency: 5180 MHz							
Temp	Power supply	2 minute		5 minute		10 minute	
(°C)	(V)	(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	102	5179.9700	-0.000579	5179.9710	-0.000560	5179.9712	-0.000556
	120	5179.9701	-0.000577	5179.9711	-0.000558	5179.9714	-0.000552
	138	5179.9703	-0.000573	5179.9713	-0.000554	5179.9716	-0.000548
40	102	5179.9719	-0.000542	5179.9722	-0.000537	5179.9728	-0.000525
	120	5179.9721	-0.000539	5179.9724	-0.000533	5179.9730	-0.000521
	138	5179.9723	-0.000535	5179.9725	-0.000531	5179.9733	-0.000515
30	102	5179.9769	-0.000446	5179.9754	-0.000475	5179.9736	-0.000510
	120	5179.9771	-0.000442	5179.9756	-0.000471	5179.9738	-0.000506
	138	5179.9772	-0.000440	5179.9757	-0.000469	5179.9739	-0.000504
20	102	5179.9871	-0.000249	5179.9874	-0.000243	5179.9879	-0.000234
	120	5179.9873	-0.000245	5179.9876	-0.000239	5179.9881	-0.000230
	138	5179.9874	-0.000243	5179.9878	-0.000236	5179.9883	-0.000226
10	102	5180.0089	0.000172	5180.0108	0.000208	5180.0131	0.000253
	120	5180.0092	0.000178	5180.0110	0.000212	5180.0132	0.000255
	138	5180.0093	0.000180	5180.0112	0.000216	5180.0134	0.000259
0	102	5180.0152	0.000293	5180.0173	0.000334	5180.0195	0.000376
	120	5180.0154	0.000297	5180.0174	0.000336	5180.0196	0.000378
	138	5180.0155	0.000299	5180.0175	0.000338	5180.0198	0.000382
-10	102	5180.0171	0.000330	5180.0182	0.000351	5180.0185	0.000357
	120	5180.0172	0.000332	5180.0184	0.000355	5180.0187	0.000361
	138	5180.0174	0.000336	5180.0187	0.000361	5180.0190	0.000367
-20	102	5180.0229	0.000442	5180.0238	0.000459	5180.0248	0.000479
	120	5180.0231	0.000446	5180.0241	0.000465	5180.0250	0.000483
	138	5180.0233	0.000450	5180.0243	0.000469	5180.0253	0.000488
-30	102	5180.0179	0.000346	5180.0182	0.000351	5180.0189	0.000365
	120	5180.0181	0.000349	5180.0184	0.000355	5180.0191	0.000369
	138	5180.0183	0.000353	5180.0186	0.000359	5180.0193	0.000373

Limit:

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.