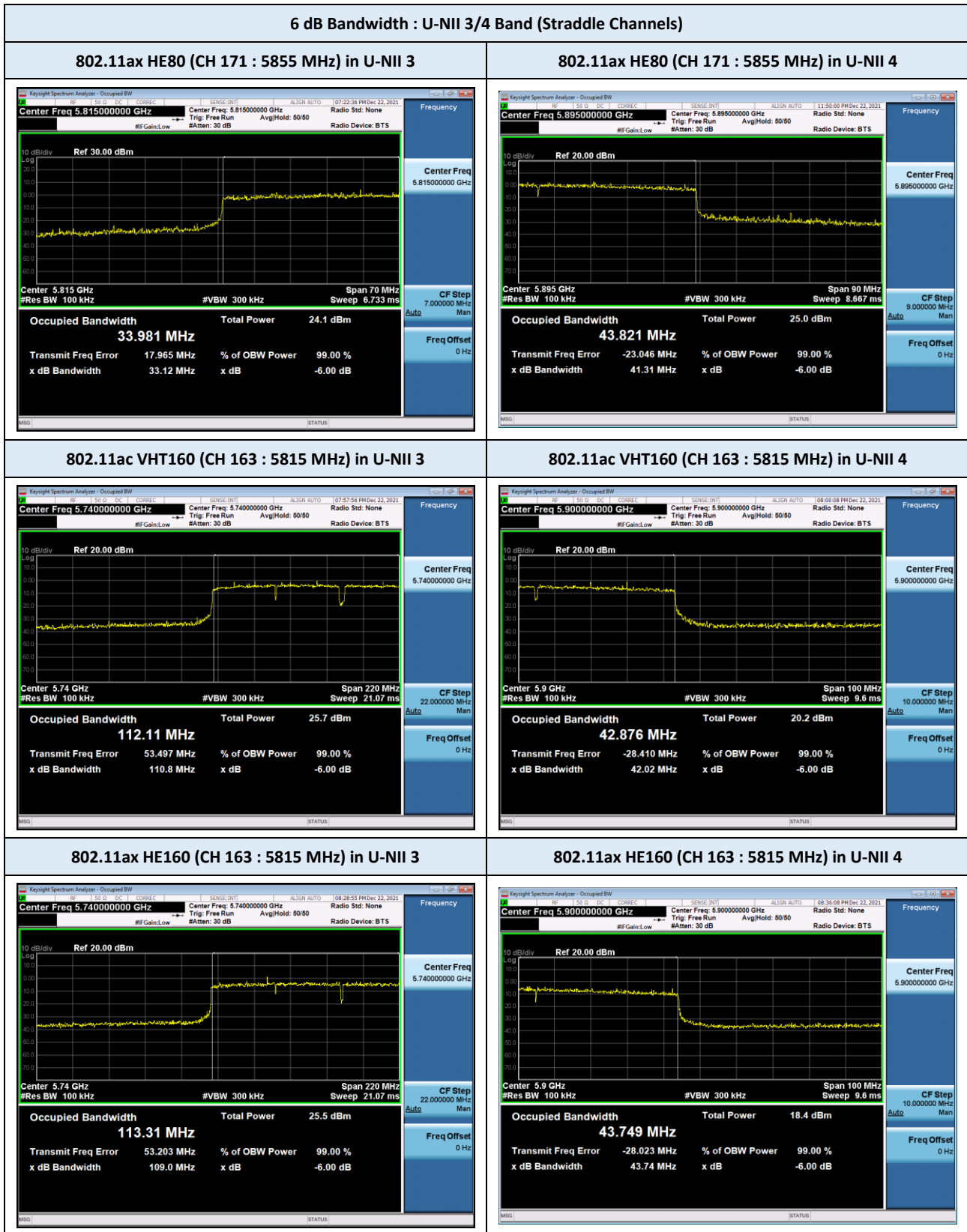


TEST PLOTS



Note :

The worst plots are reported for each bandwidth mode.

9.3 OUTPUT POWER

U-NII 4 Band (20 MHz)				Test Result					e.i.r.p. Limit (dBm)
Mode	Frequency (MHz)	Channel	Data Rate	Measured Power (dBm)		Duty Factor (dB)	G _{ANT} (dBi)	e.i.r.p. (dBm)	
				Chain 0	Chain 1			All Chain	
802.11a	5865	173	6 Mbps	18.98	19.79	0.72	4.36	27.50	36
	5885	177	6 Mbps	19.28	19.17	0.72	4.36	27.32	36
802.11n HT20	5865	173	MCS0	19.77	20.41	0.39	4.36	27.86	36
	5885	177	MCS0	19.46	19.22	0.39	4.36	27.10	36
802.11ax HE20	5865	173	MCS0	19.78	20.52	0.20	4.36	27.73	36
	5885	177	MCS0	19.51	19.39	0.20	4.36	27.02	36

U-NII 4 Band (40 MHz)				Test Result					e.i.r.p. Limit (dBm)
Mode	Frequency (MHz)	Channel	Date Rate	Measured Power (dBm)		Duty Factor (dB)	G _{ANT} (dBi)	e.i.r.p. (dBm)	
				Chain 0	Chain 1			All Chain	
802.11n HT40	5875	175	MCS0	21.28	21.50	0.37	4.36	29.13	36
802.11ax HE40	5875	175	MCS0	20.99	21.10	0.20	4.36	28.61	36

Note(s) :

1. The output power results in the table include the spectrum offset, which is a combination loss of the attenuator and the cable used for testing.

Straddle Channel : U-NII 3 / 4 Band (20 MHz)					Test Result					e.i.r.p. Limit (dBm)
Mode	Frequency (MHz)	Channel	Data Rate	Band	Measured Power (dBm)		Duty Factor (dB)	G _{ANT} (dBi)	e.i.r.p. (dBm)	
					Chain 0	Chain 1			All Chain	
802.11a	5845	169	6 Mbps	U-NII 3	18.44	19.16	0.72	4.36	26.91	36
	5845	169	6 Mbps	U-NII 4	12.02	12.34	0.72	4.36	20.28	36
	5845	169	Combined		19.34	19.98	0.72	4.36	27.76	-
802.11n HT20	5845	169	MCS0	U-NII 3	18.35	19.02	0.39	4.36	26.45	36
	5845	169	MCS0	U-NII 4	12.35	12.66	0.39	4.36	20.26	36
	5845	169	Combined		19.32	19.92	0.39	4.36	27.39	-
802.11ax HE20	5845	169	MCS0	U-NII 3	18.20	19.08	0.20	4.36	26.23	36
	5845	169	MCS0	U-NII 4	12.87	13.19	0.20	4.36	20.60	36
	5845	169	Combined		19.32	20.07	0.20	4.36	27.28	-

Straddle Channel : U-NII 3 / 4 Band (40 MHz)					Test Result					e.i.r.p. Limit (dBm)
Mode	Frequency (MHz)	Channel	Data Rate	Band	Measured Power (dBm)		Duty Factor (dB)	G _{ANT} (dBi)	e.i.r.p. (dBm)	
					Chain 0	Chain 1			All Chain	
802.11n HT40	5835	167	MCS0	U-NII 3	20.00	20.78	0.37	4.36	28.15	36
	5835	167	MCS0	U-NII 4	9.18	9.28	0.37	4.36	16.97	36
	5835	167	Combined		20.35	21.08	0.37	4.36	28.47	-
802.11ax HE40	5835	167	MCS0	U-NII 3	19.77	20.46	0.20	4.36	27.69	36
	5835	167	MCS0	U-NII 4	9.75	9.60	0.20	4.36	17.24	36
	5835	167	Combined		20.18	20.80	0.20	4.36	28.07	-

Straddle Channel : U-NII 3 / 4 Band (80 MHz)					Test Result					e.i.r.p. Limit (dBm)
Mode	Frequency (MHz)	Channel	Data Rate	Band	Measured Power (dBm)		Duty Factor (dB)	G _{ANT} (dBi)	e.i.r.p. (dBm)	
					Chain 0	Chain 1			All Chain	
802.11ac VHT80	5855	171	MCS0	U-NII 3	17.29	18.23	0.40	4.36	25.55	36
	5855	171	MCS0	U-NII 4	18.79	18.53	0.40	4.36	26.43	36
	5855	171	Combined		21.11	21.39	0.40	4.36	29.02	-
802.11ax HE80	5855	171	MCS0	U-NII 3	17.29	18.27	0.25	4.36	25.43	36
	5855	171	MCS0	U-NII 4	18.82	18.42	0.25	4.36	26.25	36
	5855	171	Combined		21.13	21.35	0.25	4.36	28.87	-

Note(s) :

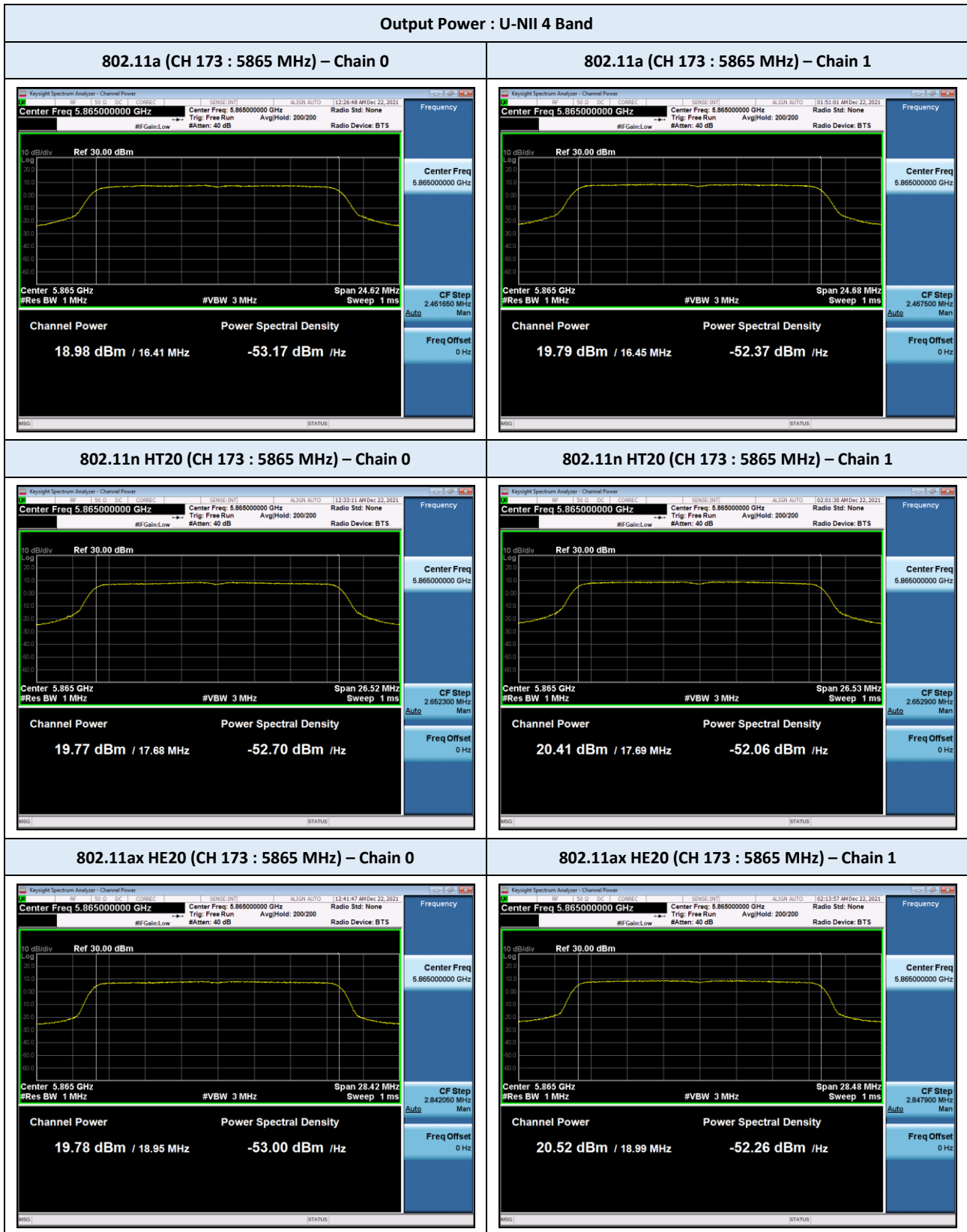
1. The output power results in the table include the spectrum offset, which is a combination loss of the attenuator and the cable used for testing.

Straddle Channel : U-NII 3 / 4 Band (160 MHz)					Test Result					e.i.r.p. Limit (dBm)
Mode	Frequency (MHz)	Channel	Data Rate	Band	Measured Power (dBm)		Duty Factor (dB)	G _{ANT} (dBi)	e.i.r.p. (dBm)	
					Chain 0	Chain 1			All Chain	
802.11ac VHT160	5815	163	MCS0	U-NII 3	18.55	18.54	0.31	4.36	26.23	36
	5815	163	MCS0	U-NII 4	13.32	11.89	0.31	4.36	20.35	36
	5815	163	Combined		19.69	19.39	0.31	4.36	27.22	-
802.11ax HE160	5815	163	MCS0	U-NII 3	18.43	18.40	0.23	4.36	26.02	36
	5815	163	MCS0	U-NII 4	13.35	11.92	0.23	4.36	20.30	36
	5815	163	Combined		19.60	19.28	0.23	4.36	27.05	-

Note(s) :

1. The output power results in the table include the spectrum offset, which is a combination loss of the attenuator and the cable used for testing.

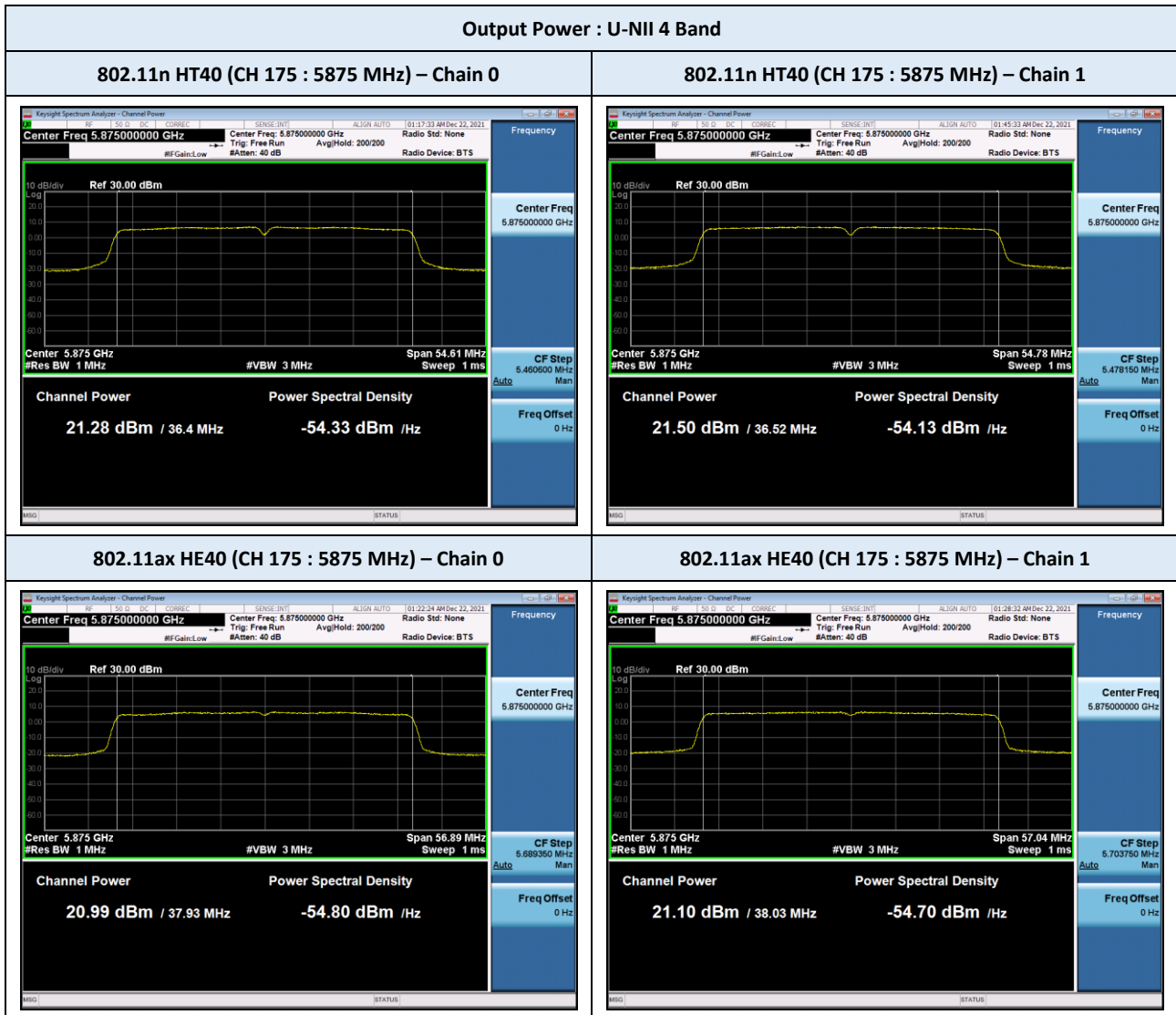
TEST PLOTS



Note :

The worst plots are reported for each bandwidth mode.

TEST PLOTS



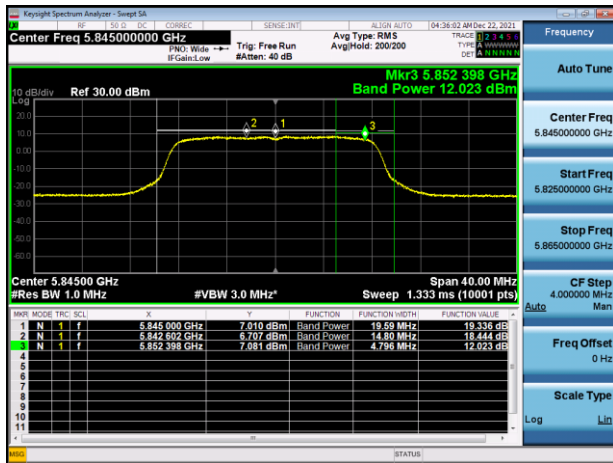
Note :

The worst plots are reported for each bandwidth mode.

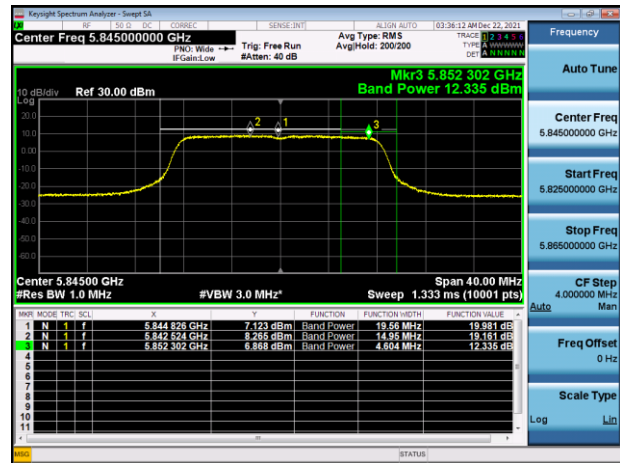
TEST PLOTS

Output Power : U-NII 3/4 Band (Straddle Channels)

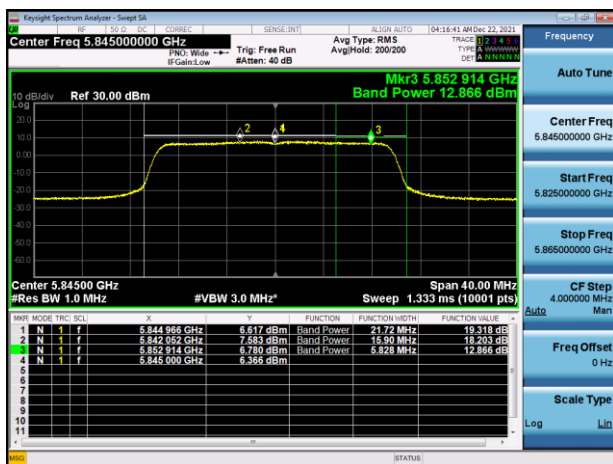
802.11a (CH 169 : 5845 MHz) – Chain 0



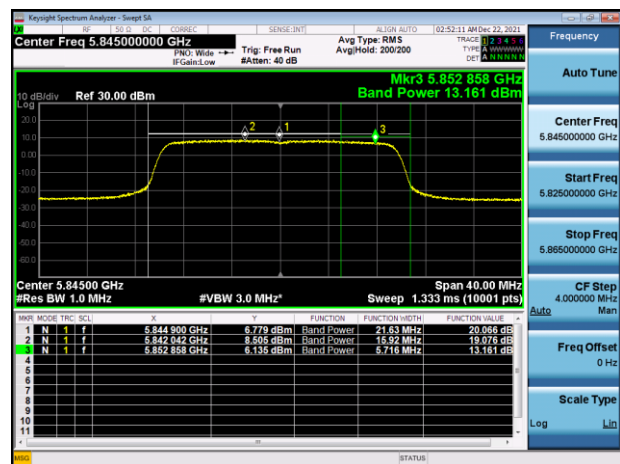
802.11a (CH 169 : 5845 MHz) – Chain 1



802.11ax HE20 (CH 169 : 5845 MHz) – Chain 0



802.11ax HE20 (CH 169 : 5845 MHz) – Chain 1



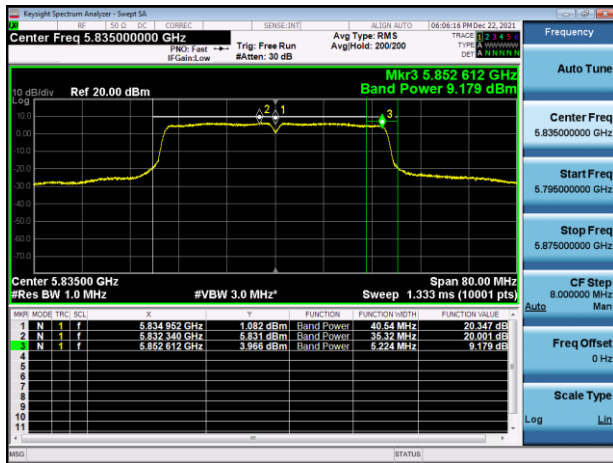
Note :

The worst plots are reported for each bandwidth mode.

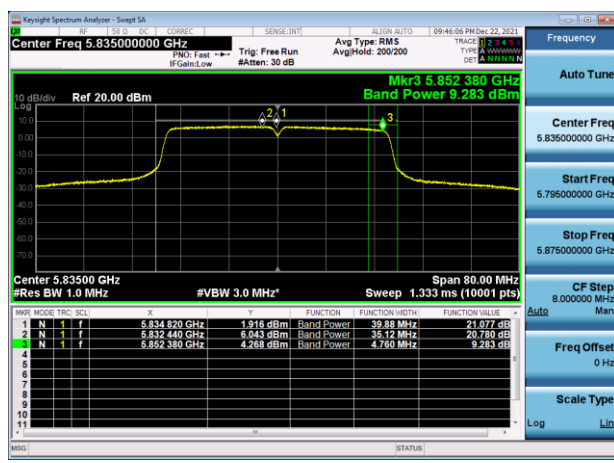
TEST PLOTS

Output Power : U-NII 3/4 Band (Straddle Channels)

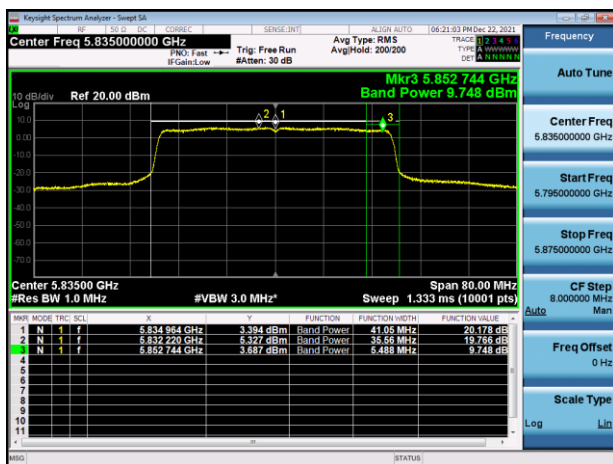
802.11n HT40 (CH 167 : 5835 MHz) – Chain 0



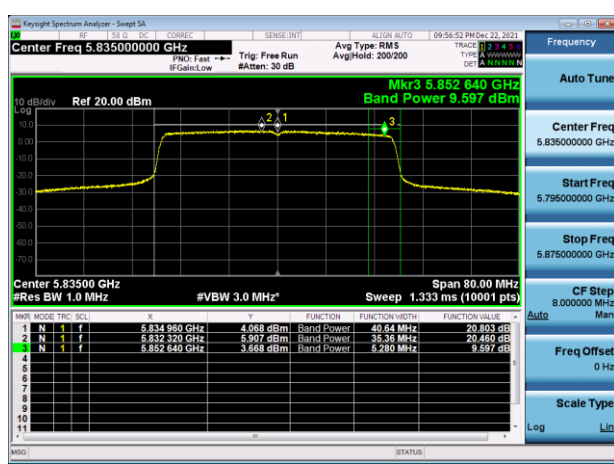
802.11n HT40 (CH 167 : 5835 MHz) – Chain 1



802.11ax HE40 (CH 167 : 5835 MHz) – Chain 0



802.11ax HE40 (CH 167 : 5835 MHz) – Chain 1



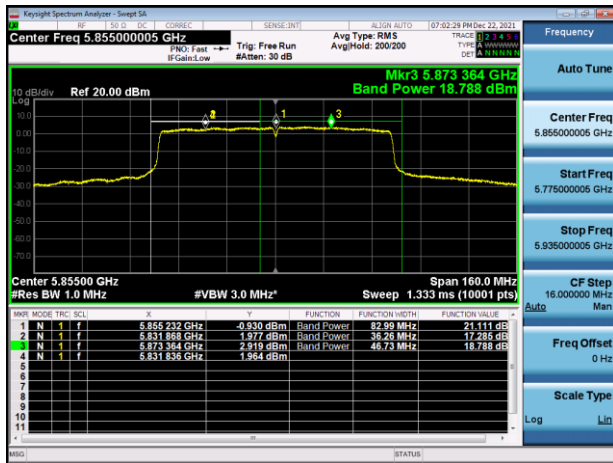
Note :

The worst plots are reported for each bandwidth mode.

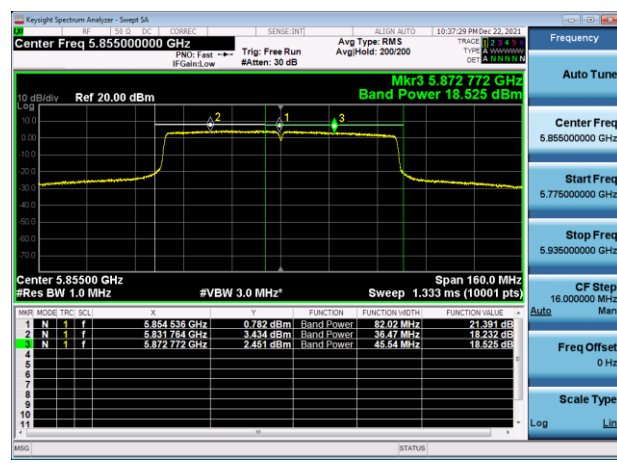
TEST PLOTS

Output Power : U-NII 3/4 Band (Straddle Channels)

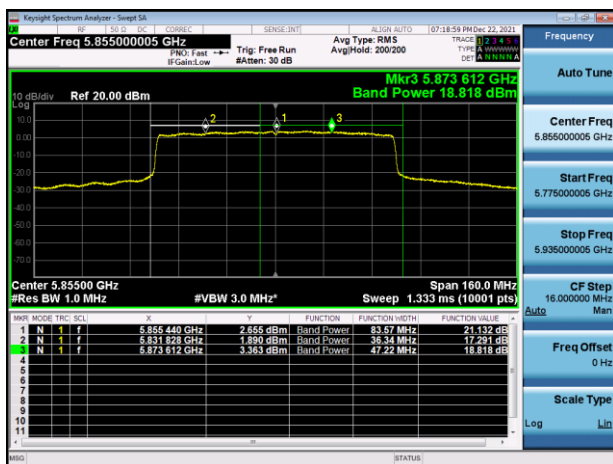
802.11ac VHT80 (CH 171 : 5855 MHz) – Chain 0



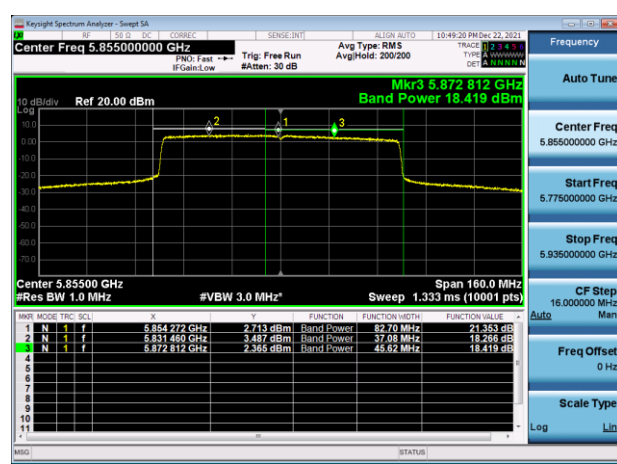
802.11ac VHT80 (CH 171 : 5855 MHz) – Chain 1



802.11ax HE80 (CH 171 : 5855 MHz) – Chain 0



802.11ax HE80 (CH 171 : 5855 MHz) – Chain 1



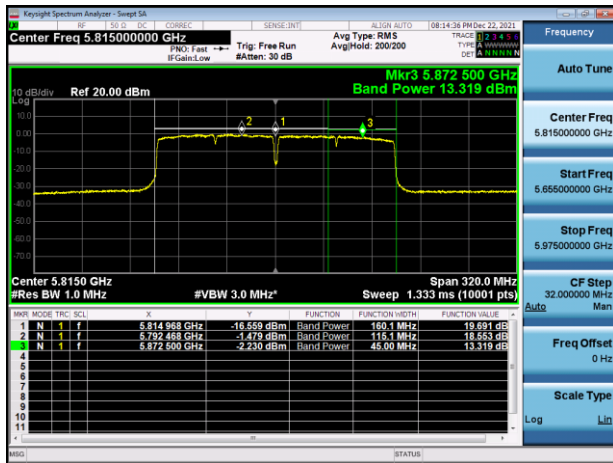
Note :

The worst plots are reported for each bandwidth mode.

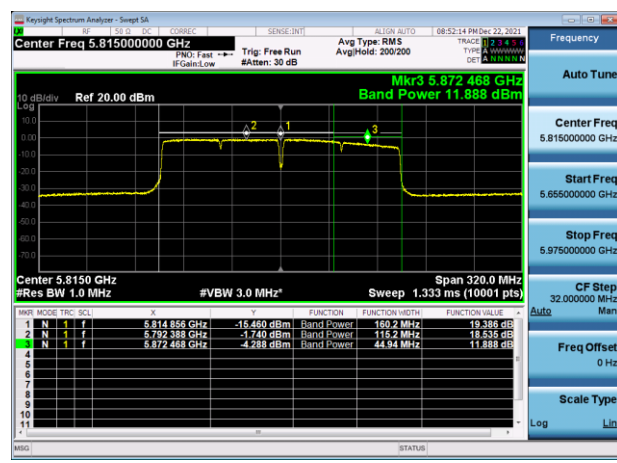
TEST PLOTS

Output Power : U-NII 3/4 Band (Straddle Channels)

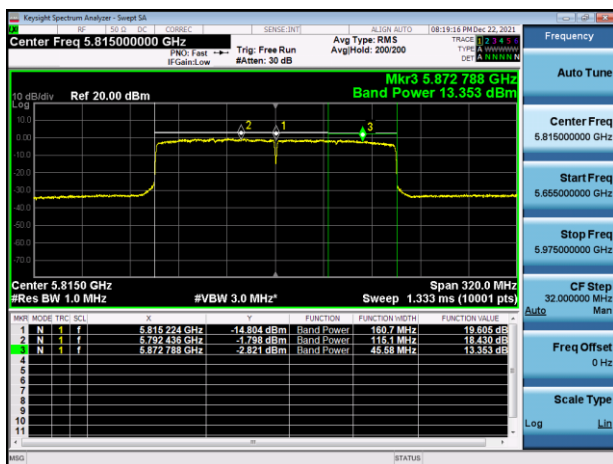
802.11ac VHT160 (CH 163 : 5815 MHz) – Chain 0



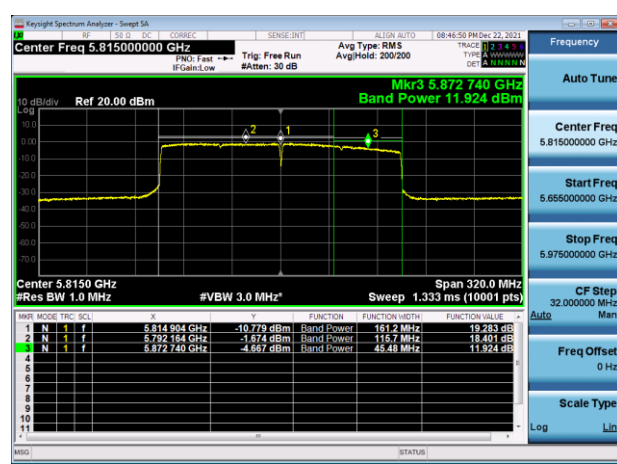
802.11ac VHT160 (CH 163 : 5815 MHz) – Chain 1



802.11ax HE160 (CH 163 : 5815 MHz) – Chain 0



802.11ax HE160 (CH 163 : 5815 MHz) – Chain 1



Note :

The worst plots are reported for each bandwidth mode.

9.4 POWER SPECTRAL DENSITY

U-NII 4 Band (20 MHz)				Test Result					e.i.r.p. PSD Limit (dBm/MHz)
Mode	Frequency (MHz)	Channel	Data Rate	Measured PSD (dBm/MHz)		Duty Factor (dB)	G _{ANT} (dBi)	e.i.r.p. PSD (dBm/MHz)	
				Chain 0	Chain 1			All Chain	
802.11a	5865	173	6 Mbps	7.97	8.52	0.72	7.37	19.36	20
	5885	177	6 Mbps	8.17	8.19	0.72	7.37	19.29	20
802.11n HT20	5865	173	MCS0	8.27	9.03	0.39	7.37	19.43	20
	5885	177	MCS0	8.20	8.02	0.39	7.37	18.88	20
802.11ax HE20	5865	173	MCS0	8.26	8.86	0.20	7.37	19.15	20
	5885	177	MCS0	7.73	7.93	0.20	7.37	18.41	20

U-NII 4 Band (40 MHz)				Test Result					e.i.r.p. PSD Limit (dBm/MHz)
Mode	Frequency (MHz)	Channel	Data Rate	Measured PSD (dBm/MHz)		Duty Factor (dB)	G _{ANT} (dBi)	e.i.r.p. PSD (dBm/MHz)	
				Chain 0	Chain 1			All Chain	
802.11n HT40	5875	175	MCS0	7.07	7.05	0.37	7.37	17.81	20
802.11ax HE40	5875	175	MCS0	6.57	6.79	0.20	7.37	17.26	20

Note :

1. The output power results in the table include the spectrum offset, which is a combination loss of the attenuator and the cable used for testing.

Straddle Channel : U-NII 3 Band (20 MHz)				Test Result				Limit ²⁾ (dBm/500kHz)
Mode	Frequency (MHz)	Channel	Date Rate	Measured PSD (dBm/500kHz)		Duty Factor (dB)	Total PSD (dBm/500kHz)	
				Chain 0	Chain 1		All Chain	
802.11a	5845	169	6 Mbps	5.62	6.13	0.72	9.61	28.63
802.11n HT20	5845	169	MCS0	5.39	5.96	0.39	9.08	28.63
802.11ax HE20	5845	169	MCS0	5.21	5.61	0.20	8.62	28.63

Straddle Channel : U-NII 4 Band (20 MHz)				Test Result					e.i.r.p. PSD Limit (dBm/MHz)
Mode	Frequency (MHz)	Channel	Date Rate	Measured PSD (dBm/MHz)		Duty Factor (dB)	G _{ANT} (dBi)	e.i.r.p. PSD (dBm/MHz)	
				Chain 0	Chain 1			All Chain	
802.11a	5845	169	6 Mbps	8.10	8.44	0.72	7.37	19.38	20
802.11n HT20	5845	169	MCS0	7.34	7.88	0.39	7.37	18.39	20
802.11ax HE20	5845	169	MCS0	7.00	7.88	0.20	7.37	18.04	20

Straddle Channel : U-NII 3 Band (40 MHz)				Test Result				Limit ²⁾ (dBm/500kHz)
Mode	Frequency (MHz)	Channel	Date Rate	Measured PSD (dBm/500kHz)		Duty Factor (dB)	Total PSD (dBm/500kHz)	
				Chain 0	Chain 1		All Chain	
802.11n HT40	5835	167	MCS0	3.52	3.86	0.37	7.07	28.63
802.11ax HE40	5835	167	MCS0	3.23	3.72	0.20	6.69	28.63

Straddle Channel : U-NII 4 Band (40 MHz)				Test Result					e.i.r.p. PSD Limit (dBm/MHz)
Mode	Frequency (MHz)	Channel	Date Rate	Measured PSD (dBm/MHz)		Duty Factor (dB)	G _{ANT} (dBi)	e.i.r.p. PSD (dBm/MHz)	
				Chain 0	Chain 1			All Chain	
802.11n HT40	5835	167	MCS0	5.39	5.27	0.37	7.37	16.08	20
802.11ax HE40	5835	167	MCS0	4.77	4.86	0.20	7.37	15.39	20

Straddle Channel : U-NII 3 Band (80 MHz)				Test Result				Limit ²⁾ (dBm/500kHz)
Mode	Frequency (MHz)	Channel	Date Rate	Measured PSD (dBm/500kHz)		Duty Factor (dB)	Total PSD (dBm/500kHz)	
				Chain 0	Chain 1		All Chain	
802.11ac VHT80	5855	171	MCS0	0.82	1.45	0.40	4.55	28.63
802.11ax HE80	5855	171	MCS0	0.80	1.28	0.25	4.31	28.63

Straddle Channel : U-NII 4 Band (80 MHz)				Test Result					e.i.r.p. PSD Limit (dBm/MHz)
Mode	Frequency (MHz)	Channel	Date Rate	Measured PSD (dBm/MHz)		Duty Factor (dB)	G _{ANT} (dBi)	e.i.r.p. PSD (dBm/MHz)	
				Chain 0	Chain 1			All Chain	
802.11ac VHT80	5855	171	MCS0	3.12	3.51	0.40	7.37	14.09	20
802.11ax HE80	5855	171	MCS0	3.43	3.44	0.25	7.37	14.07	20

Note(s) :

1. The output power results in the table include the spectrum offset, which is a combination loss of the attenuator and the cable used for testing.
2. Conducted PSD limit (U-NII 3) = 30 dBm/500kHz – (7.37 dBi – 6 dBi) = 28.63 dBm/500kHz

Straddle Channel : U-NII 3 Band (160 MHz)				Test Result				Limit ²⁾ (dBm/500kHz)
Mode	Frequency (MHz)	Channel	Date Rate	Measured PSD (dBm/500kHz)		Duty Factor (dB)	Total PSD (dBm/500kHz)	
				Chain 0	Chain 1		All Chain	
802.11ac VHT160	5815	163	MCS0	-3.02	-3.77	0.31	-0.06	28.63
802.11ax HE160	5815	163	MCS0	-3.53	-3.59	0.23	-0.32	28.63

Straddle Channel : U-NII 4 Band (160 MHz)				Test Result					e.i.r.p. PSD Limit (dBm/MHz)
Mode	Frequency (MHz)	Channel	Date Rate	Measured PSD (dBm/MHz)		Duty Factor (dB)	G _{ANT} (dBi)	e.i.r.p. PSD (dBm/MHz)	
				Chain 0	Chain 1			All Chain	
802.11ac VHT160	5815	163	MCS0	-2.06	-2.57	0.31	7.37	8.39	20
802.11ax HE160	5815	163	MCS0	-1.80	-2.63	0.23	7.37	8.42	20

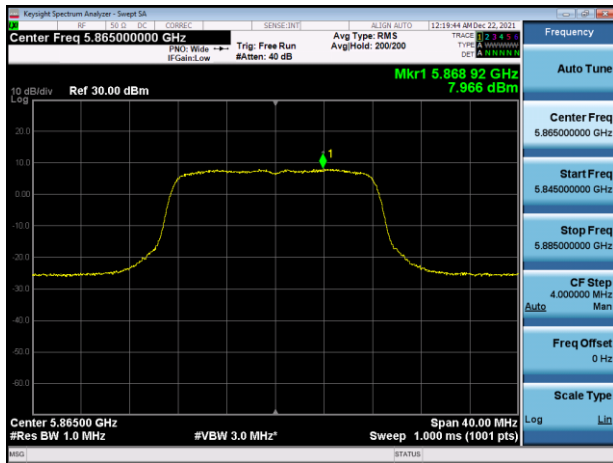
Note(s) :

1. The output power results in the table include the spectrum offset, which is a combination loss of the attenuator and the cable used for testing.
2. Conducted PSD limit (U-NII 3) = 30 dBm/500kHz – (7.37 dBi – 6 dBi) = 28.63 dBm/500kHz

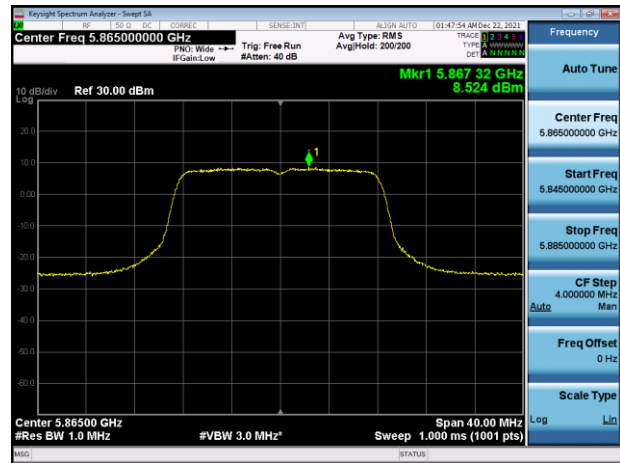
TEST PLOTS

Power Spectral Density : U-NII 4 Band

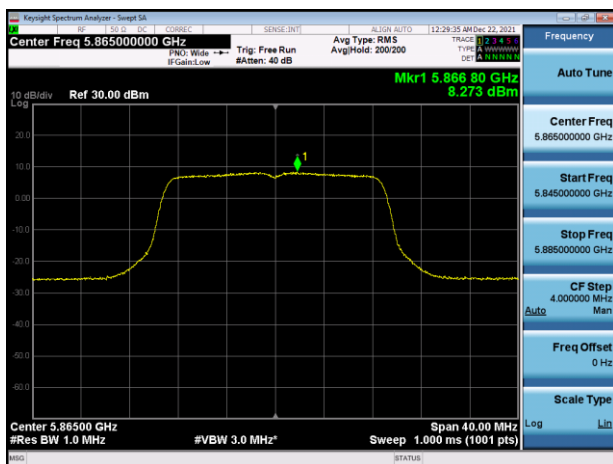
802.11a (CH 173 : 5865 MHz) – Chain 0



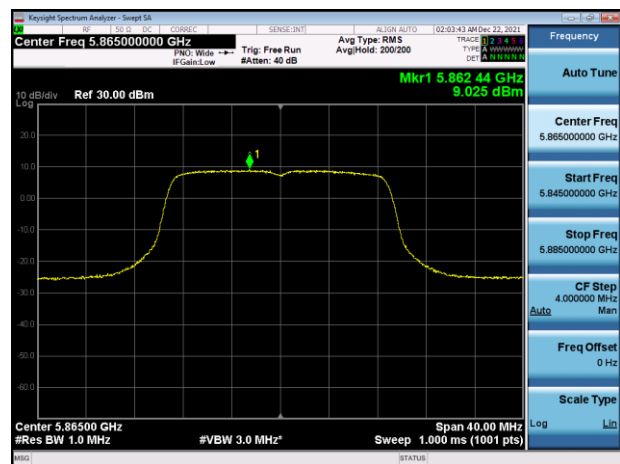
802.11a (CH 173 : 5865 MHz) – Chain 1



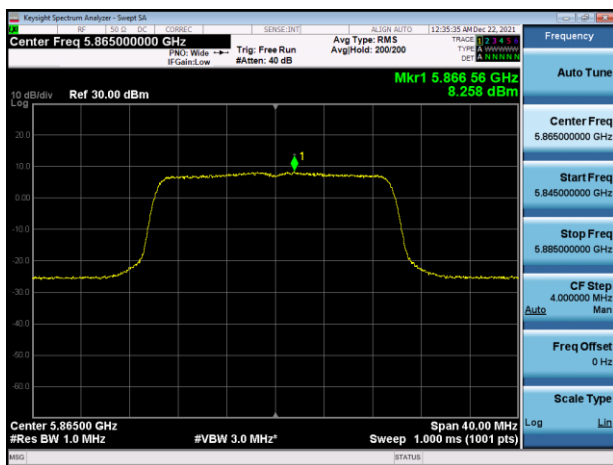
802.11n HT20 (CH 173 : 5865 MHz) – Chain 0



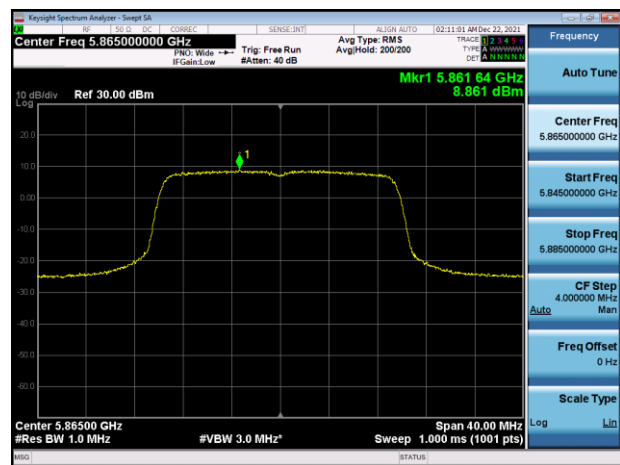
802.11n HT20 (CH 173 : 5865 MHz) – Chain 1



802.11ax HE20 (CH 173 : 5865 MHz) – Chain 0



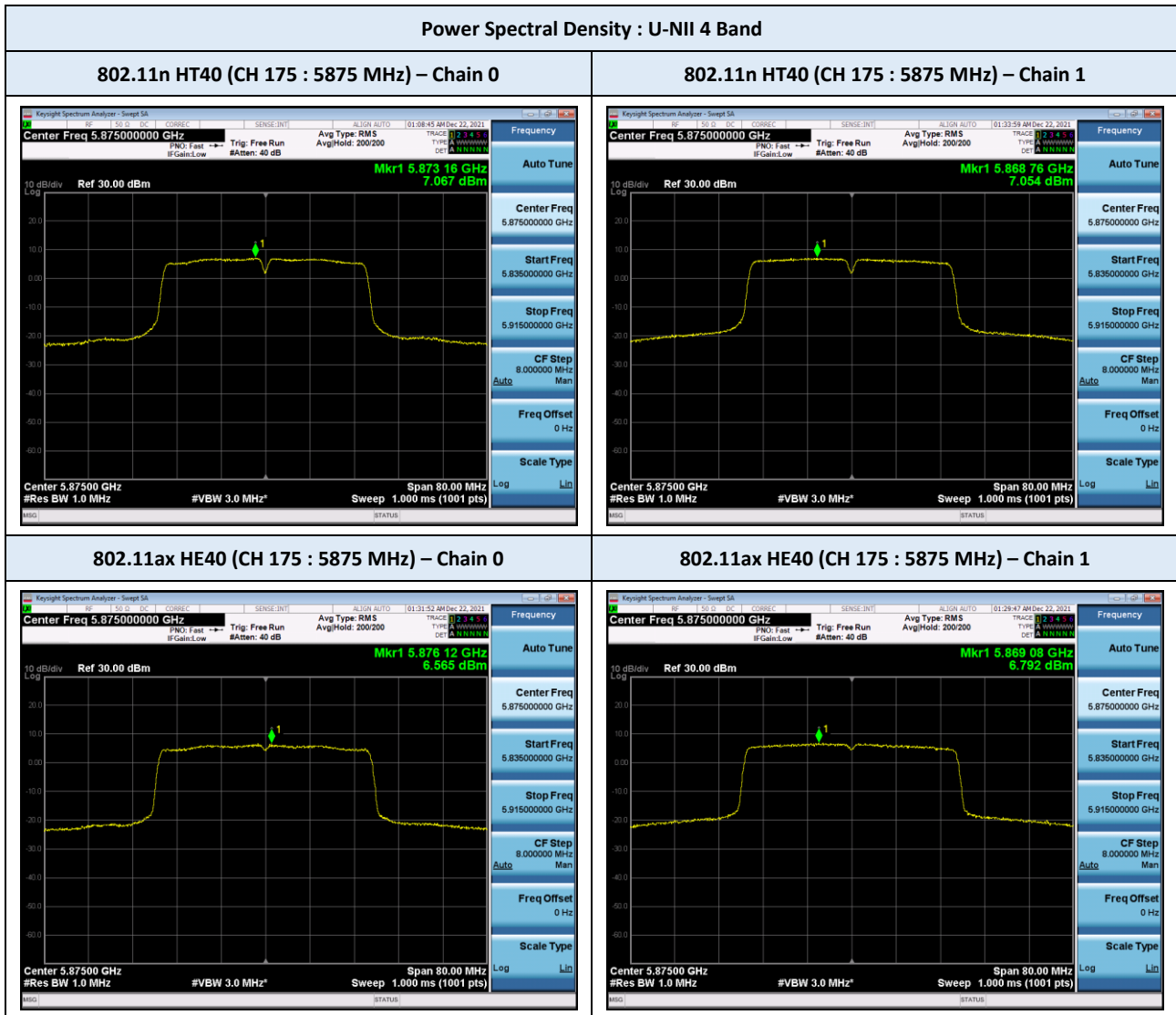
802.11ax HE20 (CH 173 : 5865 MHz) – Chain 1



Note :

The worst plots are reported for each bandwidth mode.

TEST PLOTS



Note :

The worst plots are reported for each bandwidth mode.

TEST PLOTS

Power Spectral Density : U-NII 3/4 Band (Straddle Channels)

802.11a (CH 175 : 5845 MHz) in U-NII 3 – Chain 0



802.11a (CH 175 : 5845 MHz) in U-NII 4 – Chain 0



802.11a (CH 175 : 5845 MHz) in U-NII 3 – Chain 1



802.11a (CH 175 : 5845 MHz) in U-NII 4 – Chain 1



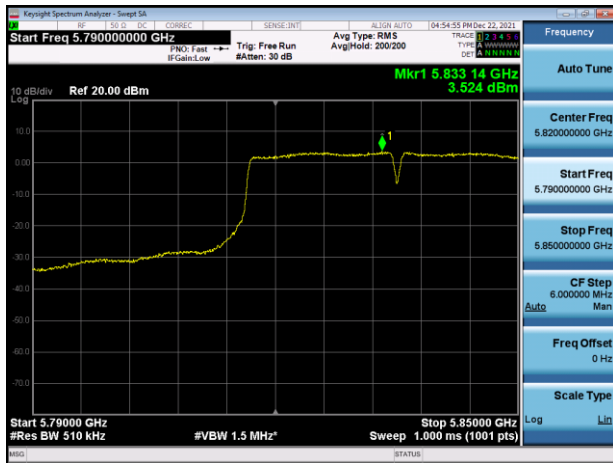
Note :

The worst plots are reported for each bandwidth mode.

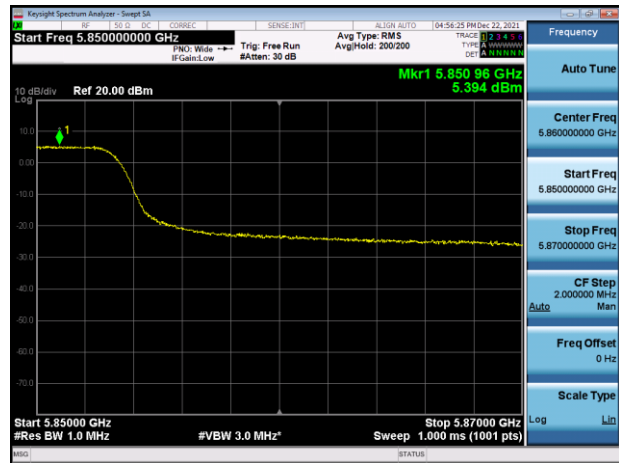
TEST PLOTS

Power Spectral Density : U-NII 3/4 Band (Straddle Channels)

802.11n HT40 (CH 167 : 5835 MHz) in U-NII 3 – Chain 0



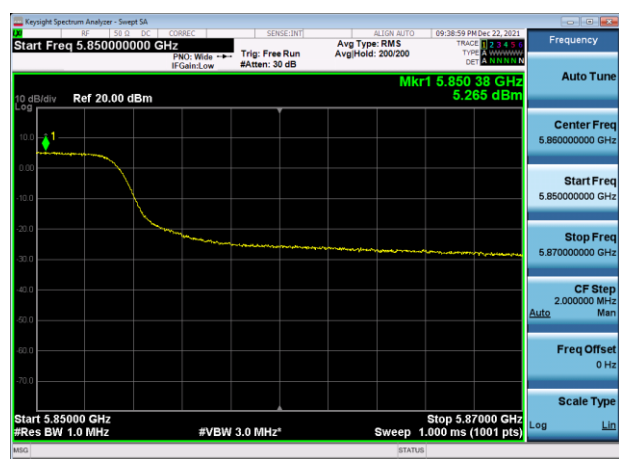
802.11n HT40 (CH 167 : 5835 MHz) in U-NII 4 – Chain 0



802.11n HT40 (CH 167 : 5835 MHz) in U-NII 3 – Chain 1



802.11n HT40 (CH 167 : 5835 MHz) in U-NII 4 – Chain 1



Note :

The worst plots are reported for each bandwidth mode.

TEST PLOTS

Power Spectral Density : U-NII 3/4 Band (Straddle Channels)

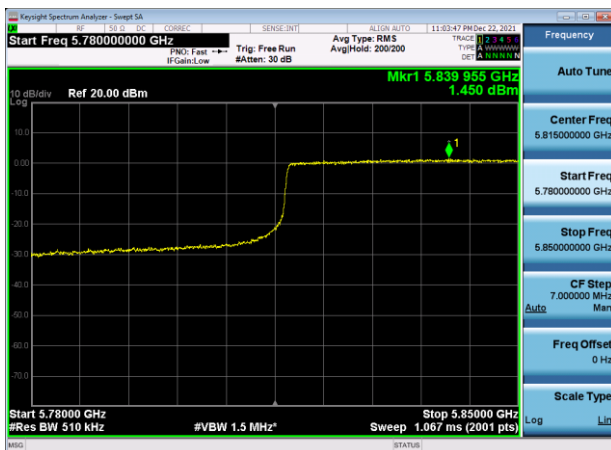
802.11ac VHT80 (CH 171 : 5855 MHz) in U-NII 3 – Chain 0



802.11ac VHT80 (CH 171 : 5855 MHz) in U-NII 4 – Chain 0



802.11ac VHT80 (CH 171 : 5855 MHz) in U-NII 3 – Chain 1



802.11ac VHT80 (CH 171 : 5855 MHz) in U-NII 4 – Chain 1



Note :

The worst plots are reported for each bandwidth mode.

TEST PLOTS

Power Spectral Density : U-NII 3/4 Band (Straddle Channels)

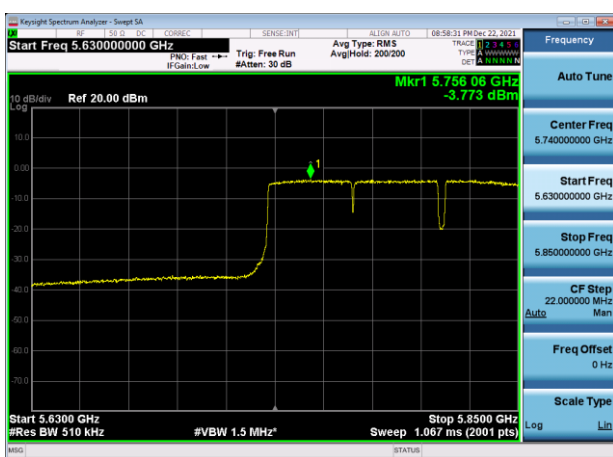
802.11ac VHT160 (CH 163 : 5815 MHz) in U-NII 3 – Chain 0



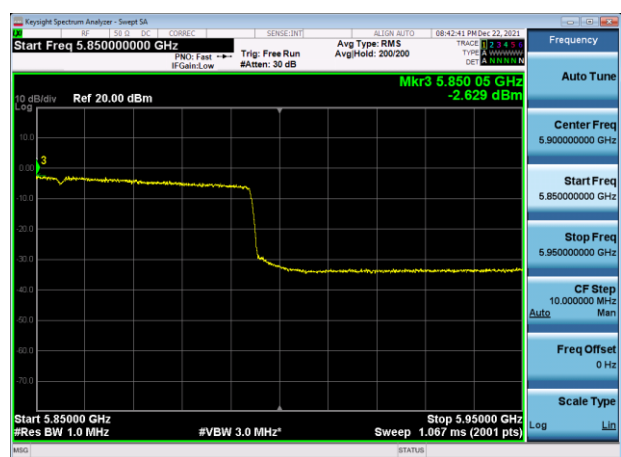
802.11ac HE160 (CH 163 : 5815 MHz) in U-NII 4 – Chain 0



802.11ac VHT160 (CH 163 : 5815 MHz) in U-NII 3 – Chain 1



802.11ax HE160 (CH 163 : 5815 MHz) in U-NII 4 – Chain 1



Note :

The worst plots are reported for each bandwidth mode.

9.5 FREQUENCY STABILITY

Operating Band :	U-NII Band 4
Operating Frequency :	5,865,000,000 Hz (CH 173)
Reference Voltage :	5 V d.c.

Voltage (%)	Power (V d.c.)	Temp (°C)	Frequency error (ppm)			
			0 minutes	2 minutes	5 minutes	10 minutes
100%	5.0	+20 (Ref)	5.32	6.46	7.24	7.60
100%		-30	13.93	13.71	13.59	13.57
100%		-20	15.87	16.19	16.37	16.44
100%		-10	16.96	16.88	16.84	16.77
100%		0	15.71	15.35	15.07	14.93
100%		+10	13.12	12.45	12.01	11.70
100%		+30	6.65	4.97	4.44	4.06
100%		+40	1.94	1.23	0.90	0.65
100%		+50	-0.62	-1.38	-1.64	-1.81
115%	5.8	+20	7.62	7.68	7.72	7.75
85%	4.3	+20	7.75	7.77	7.79	7.79

Note:

According to the results of the frequency stability test above, the frequency deviation measured are very small. The channels at the band edge should remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore, the Radio frequency should remain in-band during operation over the temperature and voltage range as tested.

9.6 RADIATED SPURIOUS EMISSIONS

Frequency Range : Below 1 GHz

Test Mode 802.11a : TX mode
Operating Frequency 5845 MHz (CH 169)

Frequency (MHz)	Polarization	Reading (dBuV)	Corr. ¹⁾ (dB)	Total (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement Type
42.314	V	39.6	-8.8	30.8	40	9.2	QP
55.144	V	49.8	-13.5	36.3	40	3.7	QP
108.401	V	42.3	-7.5	34.8	43.5	8.7	QP
160.378	V	35.7	-7.1	28.6	43.5	14.9	QP
249.987	H	34.2	-7.9	26.3	46	19.7	QP
250.008	V	39.1	-7.9	31.2	46	14.8	QP
500.006	H	28.6	-2.2	26.4	46	19.6	QP

Test Mode 802.11a : TX mode
Operating Frequency 5865 MHz (CH 173)

Frequency (MHz)	Polarization	Reading (dBuV)	Corr. ¹⁾ (dB)	Total (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement Type
40.141	V	38.5	-7.1	31.4	40	8.6	QP
55.053	V	49.3	-13.5	35.8	40	4.2	QP
107.962	V	43.0	-7.5	35.5	43.5	8.0	QP
161.691	V	32.1	-7.1	25.0	43.5	18.5	QP
249.999	H	36.0	-7.9	28.1	46	17.9	QP
249.999	V	36.8	-7.9	28.9	46	17.1	QP

Test Mode 802.11a : TX mode
Operating Frequency 5885 MHz (CH 177)

Frequency (MHz)	Polarization	Reading (dBuV)	Corr. ¹⁾ (dB)	Total (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement Type
40.014	V	39.0	-7.0	32.0	40	8.0	QP
55.513	V	49.3	-13.4	35.9	40	4.1	QP
87.204	V	42.6	-12.7	29.9	40	10.1	QP
108.252	V	42.8	-7.5	35.3	43.5	8.2	QP
249.990	H	35.4	-7.9	27.5	46	18.5	QP
250.011	V	39.0	-7.9	31.1	46	14.9	QP
836.721	V	24.1	3.3	27.4	46	18.6	QP

Note(s) :

1. Correction Factor: Antenna Factor + Cable loss + Preamplifier Gain