

## A.4 MAXIMUM OUTPUT POWER

Test Date	22021/02/20 ~ 26	Temp./Hum.	18 ~ 22°C/56 ~ 67%
Cable Loss	1.3dB	Tested By	Sam Chang
Test Voltage	AC 120V 60Hz (Via AC Adapter)		

### A.4.1 Average Output Power

Mode	U-NII Band	Centre Frequency (MHz)	Average Output Power(dBm)		10log (1/X)	Max Average Output Power		Limit
			Chain 0	Chain 1		(dBm)	(W)	
802.11a	I	5180	18.14	17.94	0.10	18.24	0.067	< 250 mW (24 dBm)
		5200	18.75	18.56		18.85	0.077	
		5240	19.72	19.61		19.82	0.096	
	2A	5260	19.79	19.82		19.92	0.098	
		5300	18.91	18.59		19.01	0.080	
		5320	18.12	17.73		18.22	0.066	
	2C	5500	18.40	18.14		18.50	0.071	
		5580	19.78	19.52		19.88	0.097	
		5700	17.62	18.09		18.19	0.066	
		5720	19.78	19.54		19.88	0.097	
	III	5745	19.73	19.97		20.07	0.102	< 1 W (30 dBm)
		5785	19.70	19.80		19.90	0.098	
		5825	19.58	19.68		19.78	0.095	

Note: 1. The results have been included cable loss.

Mode	U-NII Band	Centre Frequency (MHz)	Average Output Power(dBm)		10log (1/X)	Total Average Output Power		Limit
			Chain 0	Chain 1		(dBm)	(W)	
802.11n-HT20	I	5180	15.43	15.18	0	18.32	0.068	< 250 mW (24 dBm)
		5200	16.17	15.91		19.05	0.080	
		5240	17.32	17.12		20.23	0.105	
	2A	5260	17.42	17.39		20.42	0.110	
		5300	16.20	15.90		19.06	0.081	
		5320	15.36	15.10		18.24	0.067	
	2C	5500	15.58	15.47		18.54	0.071	
		5580	17.40	17.13		20.28	0.107	
		5700	15.05	14.39		17.74	0.059	
		5720	17.35	17.02		20.20	0.105	
	III	5745	17.17	17.11		20.15	0.104	< 1 W (30 dBm)
		5785	17.25	17.14		20.21	0.105	
5825		17.04	17.17	20.12	0.103			
802.11n-HT40	I	5190	14.85	14.70	0	17.79	0.060	< 250 mW (24 dBm)
		5230	17.20	16.93		20.08	0.102	
	2A	5270	16.58	16.48		19.54	0.090	
		5310	14.66	14.40		17.54	0.057	
		5510	14.93	14.53		17.74	0.059	
	2C	5550	15.83	15.54		18.70	0.074	
		5670	17.24	16.82		20.05	0.101	
		5710	17.92	17.41		20.68	0.117	
	III	5755	17.52	17.60		20.57	0.114	< 1 W (30 dBm)
5795		17.66	17.65	20.67	0.117			
802.11ac-VHT80	I	5210	13.22	13.20	0	16.22	0.042	< 250 mW (24 dBm)
	2A	5290	14.21	14.45		17.34	0.054	
	2C	5530	15.44	15.07		18.27	0.067	
		5610	17.45	17.36		20.42	0.110	
		5690	18.00	17.77		20.90	0.123	
	III	5775	16.38	16.30		19.35	0.086	< 1 W (30 dBm)
802.11ac-VHT160	I/2A	5250	11.77	11.80	0	14.80	0.030	< 250 mW (24 dBm)
	2C	5570	11.45	11.34		14.41	0.028	

Note: 1. The results have been included cable loss.

Mode	U-NII Band	Centre Frequency (MHz)	Average Output Power(dBm)		10log (1/X)	Total Average Output Power		Limit
			Chain 0	Chain 1		(dBm)	(W)	
802.11ax-HE20	I	5180	15.37	15.18	0	18.29	0.067	< 250 mW (24 dBm)
		5200	16.03	15.91		18.98	0.079	
		5240	17.22	17.12		20.18	0.104	
	2A	5260	17.29	17.34		20.33	0.108	
		5300	16.14	15.99		19.08	0.081	
		5320	15.23	14.97		18.11	0.065	
	2C	5500	15.69	15.23		18.48	0.070	
		5580	17.38	17.18		20.29	0.107	
		5700	14.85	14.43		17.66	0.058	
		5720	17.33	17.03		20.19	0.104	
	III	5745	17.04	16.98		20.02	0.100	< 1 W (30 dBm)
		5785	17.21	17.18		20.21	0.105	
5825		17.14	17.04	20.10	0.102			
802.11ax-HE40	I	5190	15.15	14.98	0	18.08	0.064	< 250 mW (24 dBm)
		5230	16.97	16.78		19.89	0.097	
	2A	5270	16.39	16.19		19.30	0.085	
		5310	14.38	14.13		17.27	0.053	
		5510	14.75	14.40		17.59	0.057	
	2C	5550	15.53	15.24		18.40	0.069	
		5670	16.95	16.52		19.75	0.094	
		5710	17.54	17.22		20.39	0.109	
	III	5755	17.28	17.17		20.24	0.106	< 1 W (30 dBm)
5795		17.38	17.27	20.34	0.108			
802.11ax-HE80	I	5210	13.37	13.32	0	16.36	0.043	< 250 mW (24 dBm)
	2A	5290	14.26	14.24		17.26	0.053	
		5530	14.73	14.67		17.71	0.059	
	2C	5610	17.61	17.46		20.55	0.114	
		5690	17.79	17.47		20.64	0.116	
	III	5775	16.18	16.22		19.21	0.083	< 1 W (30 dBm)
	802.11ax-HE160	I/2A	5250	11.55		11.49	0	14.53
2C		5570	11.03	11.09	14.07	0.026		

Note: 1. The results have been included cable loss.

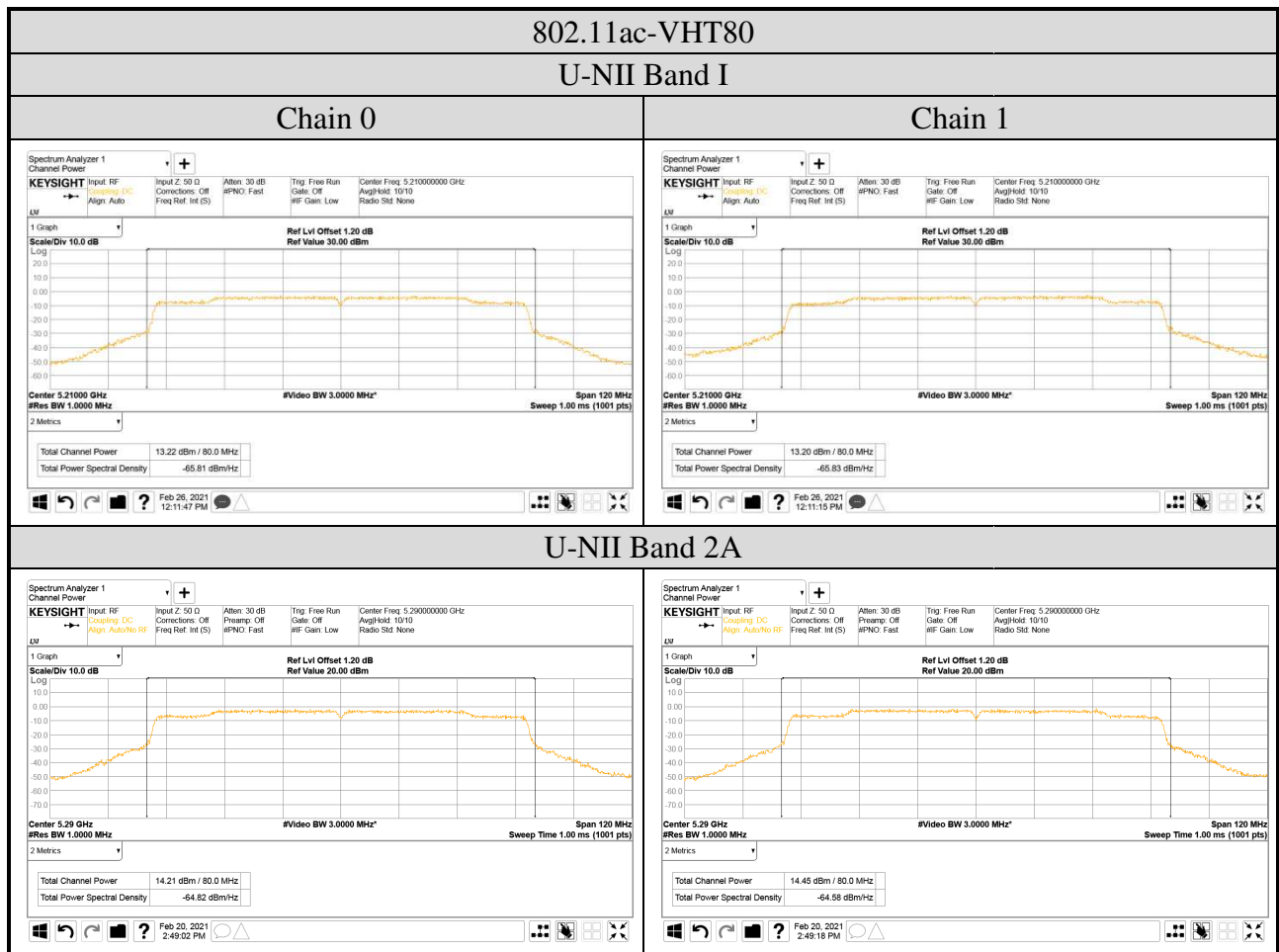
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				Chain 0	Chain 1		(dBm)	(W)	
802.11ax-HE20	I	5180	26/0	11.23	11.04	0	14.15	0.026	< 250 mW (24 dBm)
			52/37	14.28	14.09		17.20	0.052	
			106/53	15.47	15.29		18.39	0.069	
	2A	5320	26/8	11.67	11.55		14.62	0.029	
			52/40	11.90	11.77		14.85	0.031	
			106/54	15.38	15.25		18.33	0.068	
	2C	5500	26/0	11.68	11.40		14.55	0.029	
			52/37	14.70	14.36		17.54	0.057	
			106/53	15.60	15.53		18.58	0.072	
		5700	26/8	11.64	11.22		14.45	0.028	
			52/40	12.92	12.34		15.65	0.037	
			106/54	14.53	13.99		17.28	0.053	
	III	5745	26/0	11.36	11.32		14.35	0.027	
			52/37	14.45	14.40		17.44	0.055	
			106/53	16.97	16.97		19.98	0.100	
		5825	26/8	14.59	14.64		17.63	0.058	
52/40			16.73	16.53	19.64	0.092			
106/54			16.74	16.45	19.61	0.091			
802.11ax-HE40	I	5190	242/61	15.25	15.18	18.23	0.067	< 250 mW (24 dBm)	
	2A	5310	242/62	14.45	14.17	17.32	0.054		
	2C	5510	242/61	14.91	14.67	17.80	0.060		
		5670	242/62	16.81	16.48	19.66	0.092		
	III	5755	242/61	16.92	16.83	19.89	0.097	< 1 W (30 dBm)	
		5795	242/62	16.89	16.87	19.89	0.097		

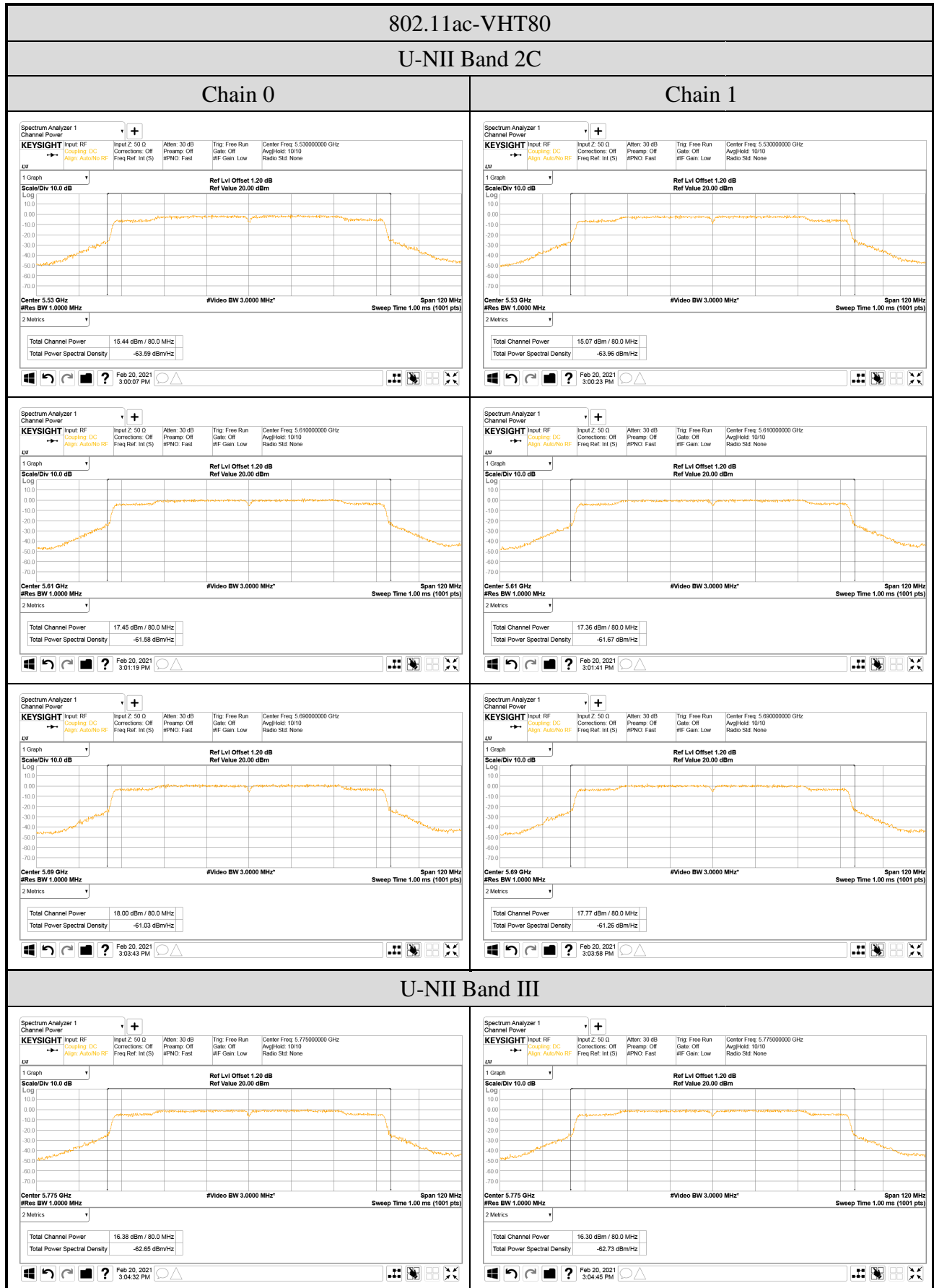
Note: 1. The results have been included cable loss.

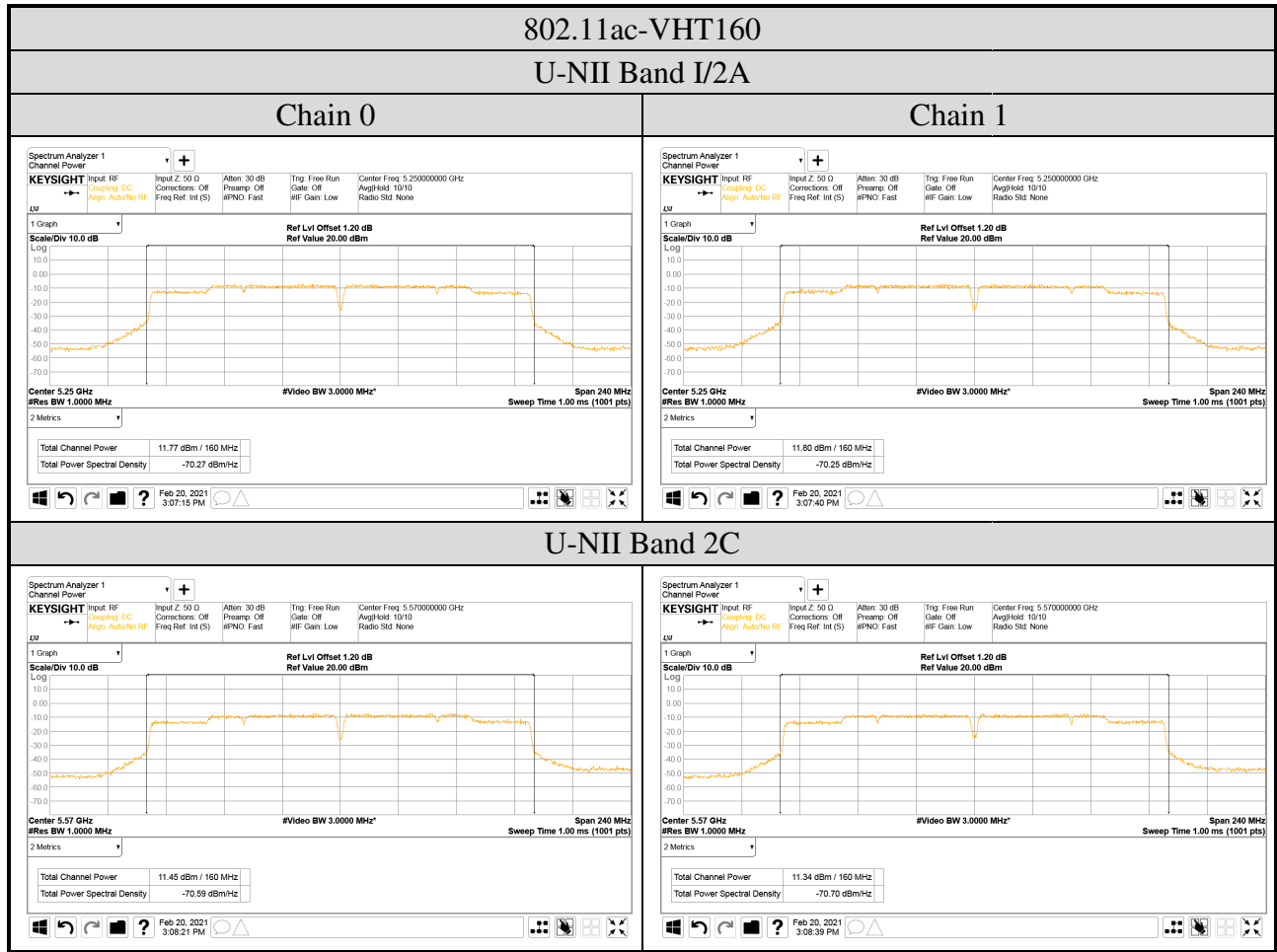
Mode	U-NII Band	Centre Frequency (MHz)	RU Configuration	Average Output Power(dBm)		10log (1/X)	Total Average Output Power		Limit
				Chain 0	Chain 1		(dBm)	(W)	
802.11ax-HE80	I	5210	484/65	14.35	13.73	0	17.06	0.051	< 250 mW (24 dBm)
	2A	5290	484/66	12.12	11.68		14.92	0.031	
	2C	5530	484/65	13.80	13.46		16.64	0.046	
		5610	484/66	15.64	15.45		18.56	0.072	
	III	5775	484/65	15.16	15.95		18.58	0.072	< 1 W (30 dBm)
			484/66	15.53	15.31		18.43	0.070	
802.11ax-HE160	I/2A	5250	996/67	10.49	10.28	0	13.40	0.022	< 250 mW (24 dBm)
			996/S67	10.24	10.37		13.32	0.021	
	2C	5570	996/67	10.18	9.74		12.98	0.020	
			996/S67	9.46	9.16		12.32	0.017	

Note: 1. The results have been included cable loss.

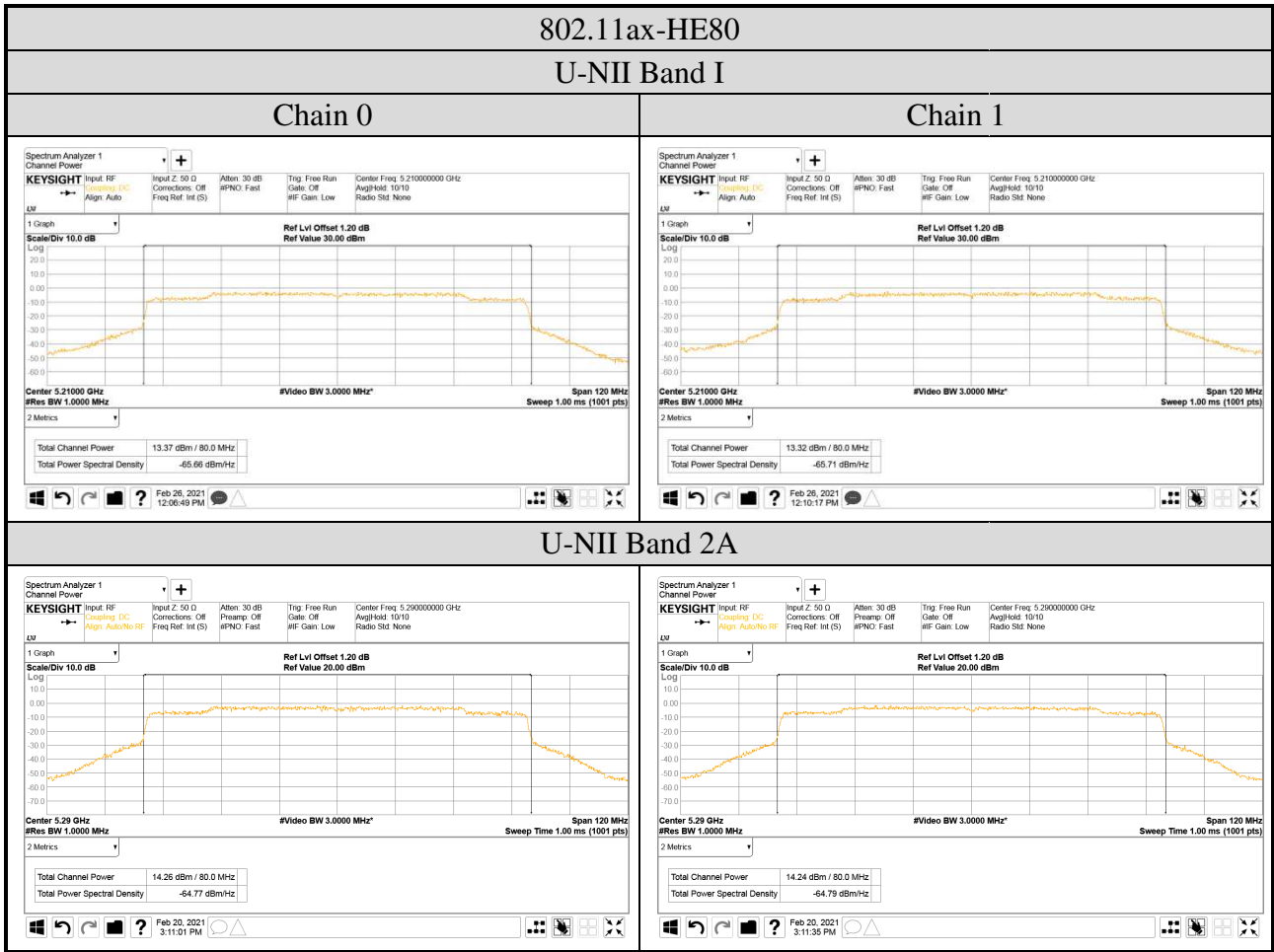
A.4.2 Measurement Plots









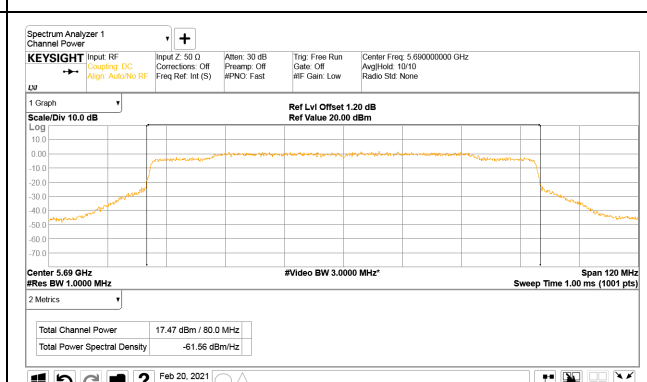
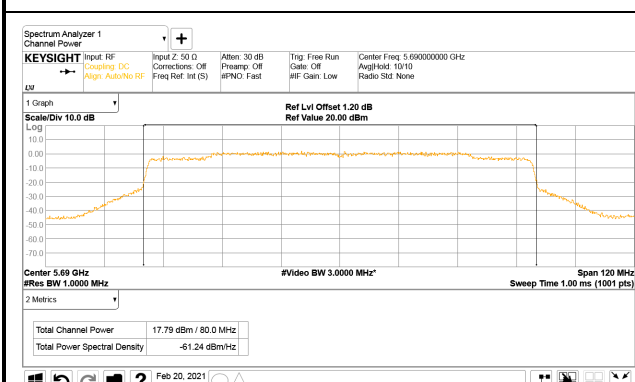
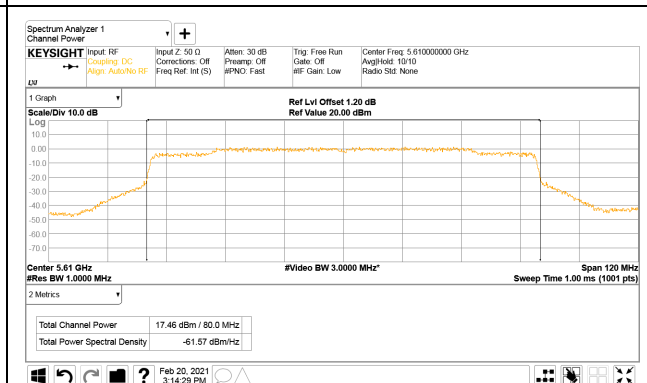
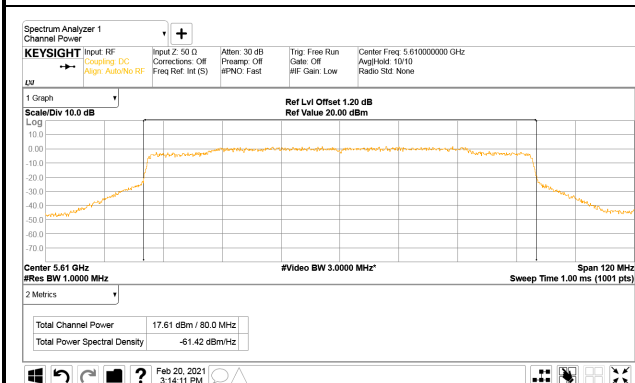
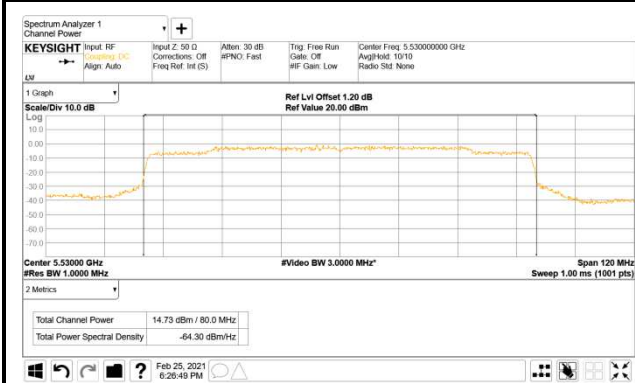


802.11ax-HE80

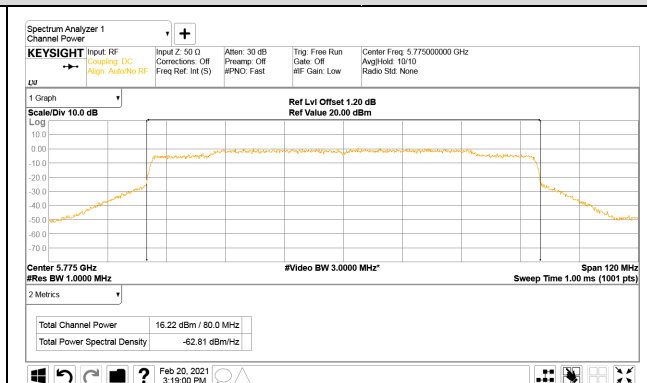
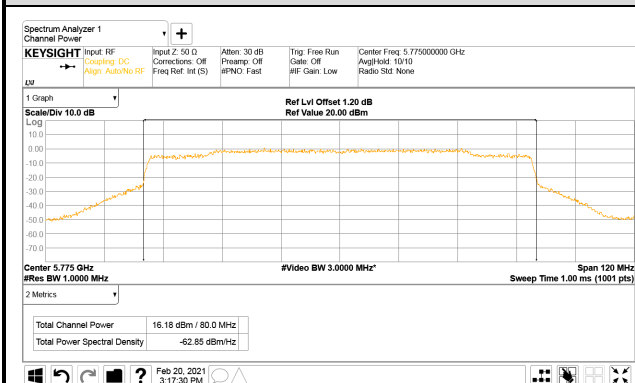
U-NII Band 2C

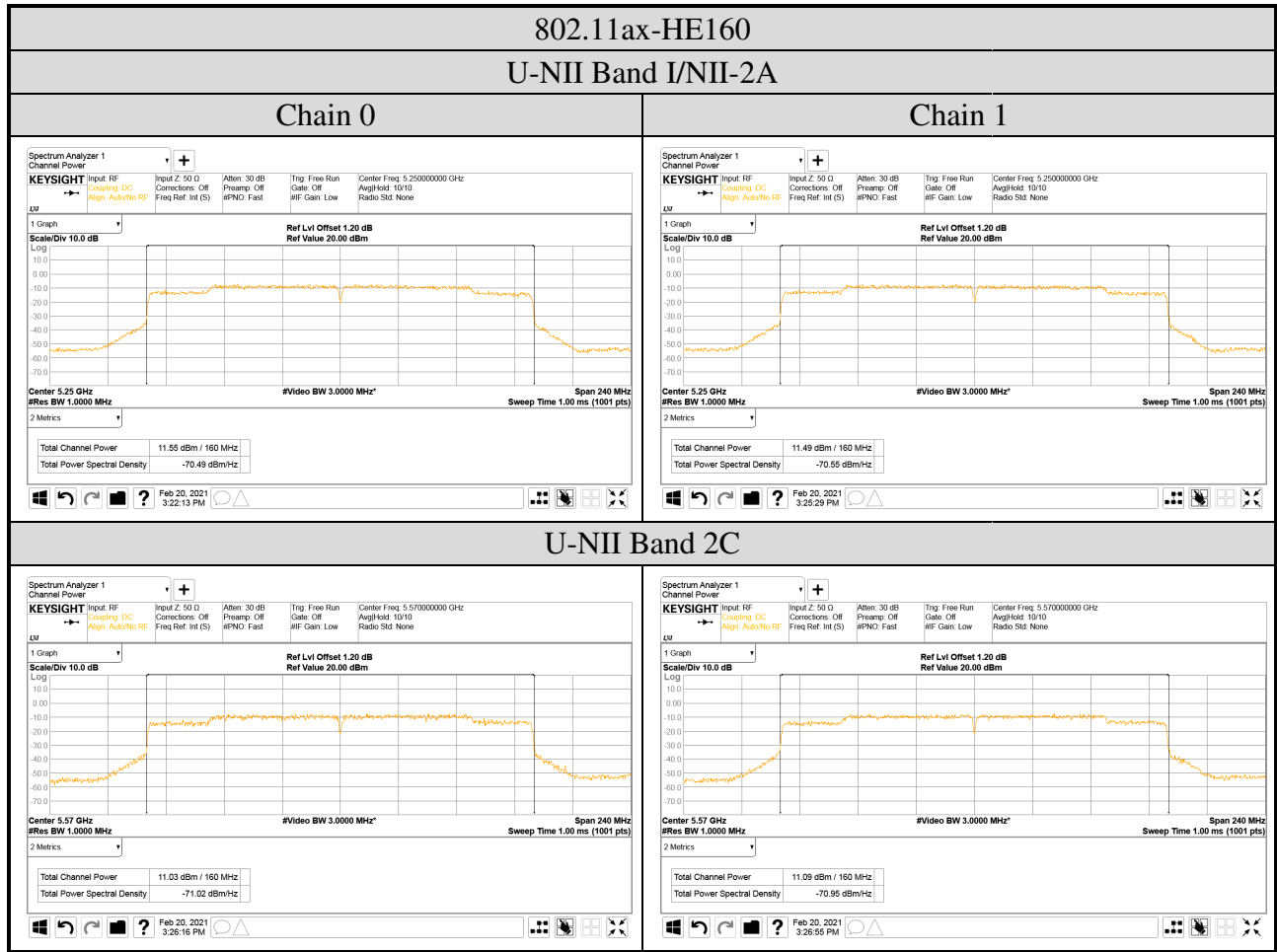
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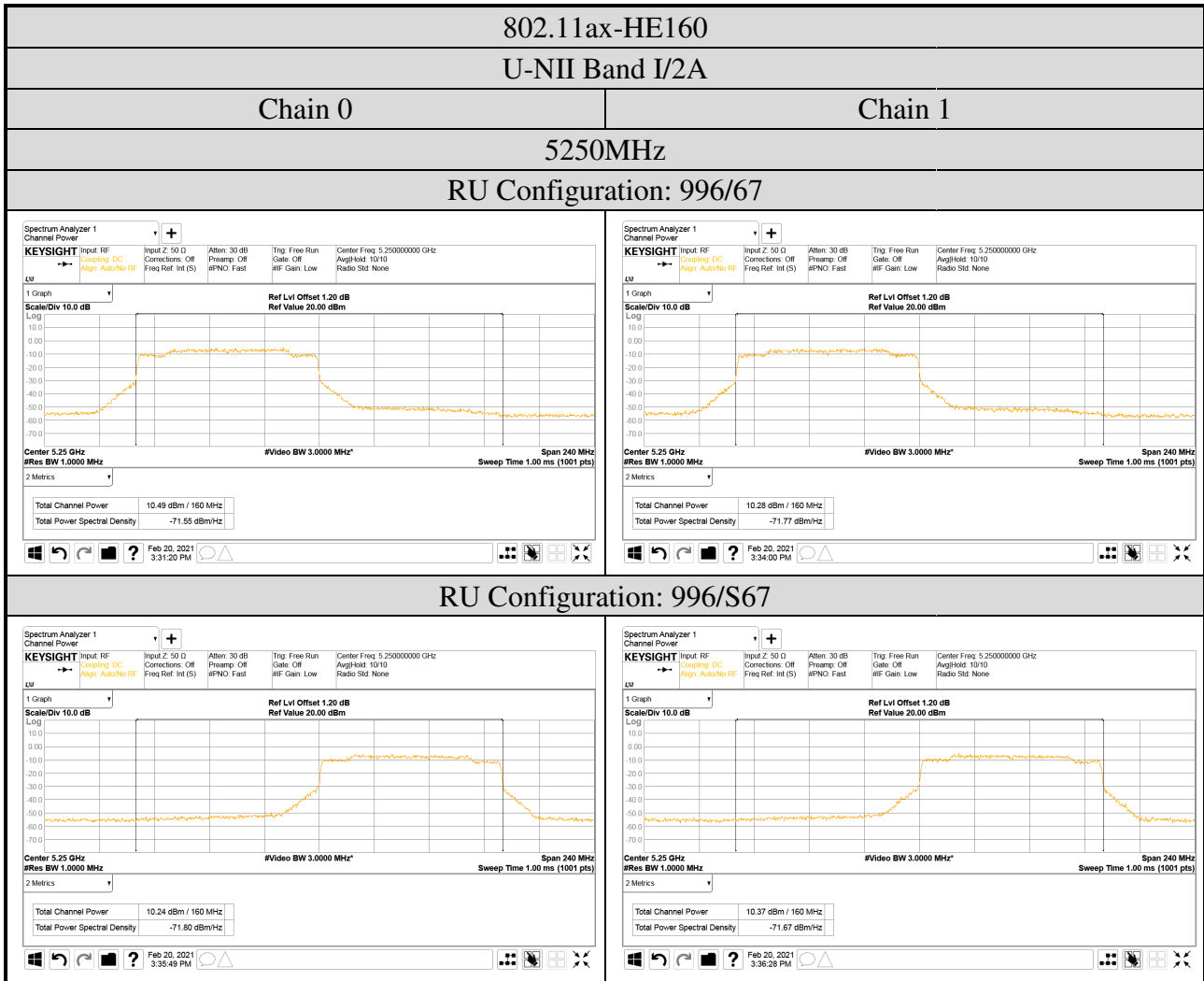
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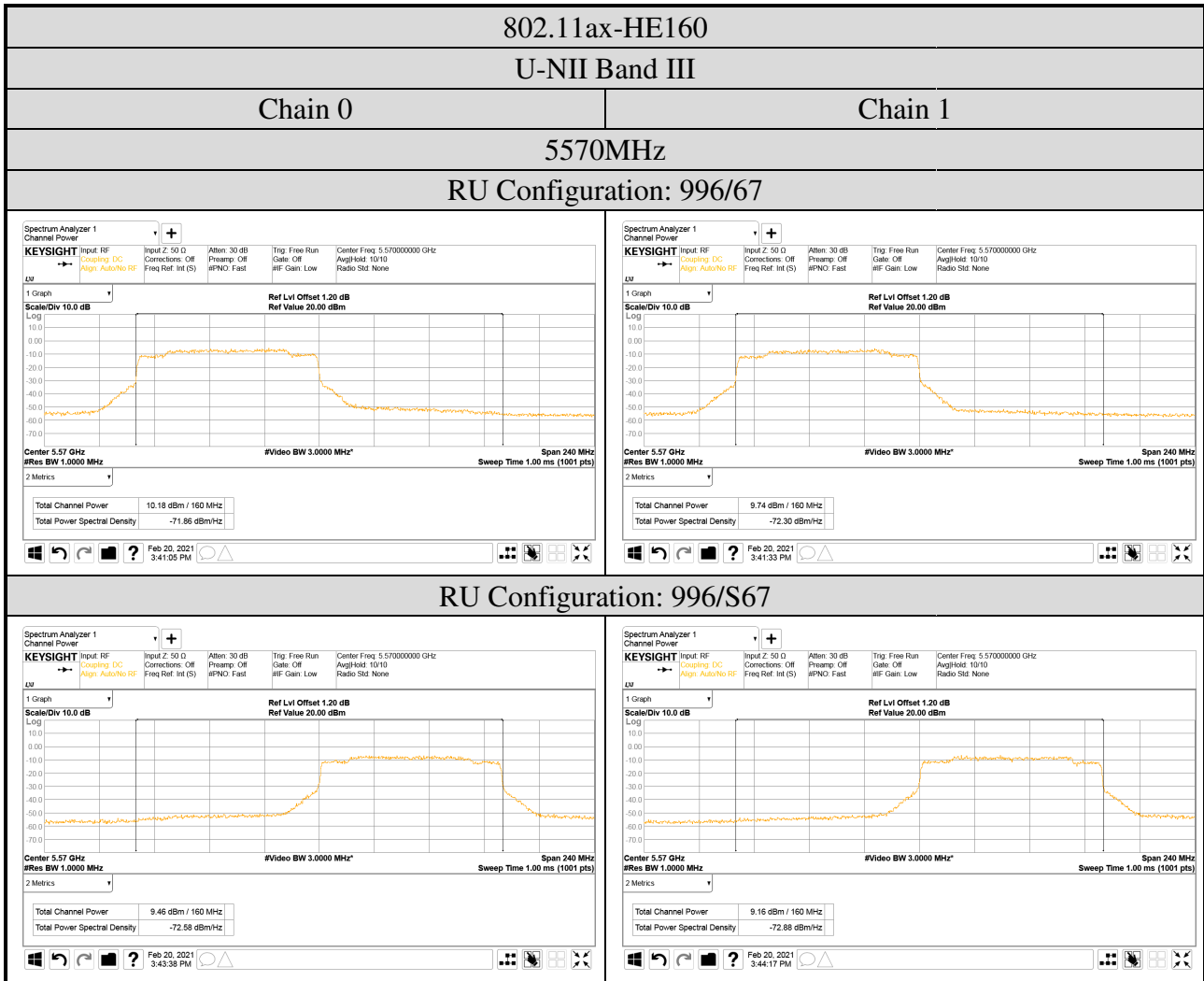


U-NII Band III









## A.5 POWER SPECTRAL DENSITY

Test Date	2021/03/02 ~ 03	Temp./Hum.	18 ~ 20°C/64 ~ 66%
Cable Loss	1.3dB/1.2dB	Tested By	Martin Chen
Test Voltage	AC 120V 60Hz (Via AC Adapter)		
Simultaneous Factor 10 log(n) (Note: “n” is antenna number)	802.11a: 0dB 802.11n-HT20/40: 3dB 802.11ac-VHT80/160: 3dB 802.11ax-HE20/40/80/160: 3dB		

### A.5.1 Power Spectral Density Result

Mode	U-NII Band	Centre Frequency (MHz)	Power Spectral Density (dBm)	Limit
802.11a	I	5180	6.957	11 dBm/MHz
		5200	7.514	
		5240	8.625	
	2A	5260	8.712	
		5300	7.631	
		5320	6.703	
	2C	5500	7.945	
		5580	8.947	
		5700	6.624	
		5720	8.699	
	III <sup>Note2</sup>	5745	7.275	30dBm/500 kHz
		5785	7.628	
5825		6.871		

Note 1: All results have been included cable loss and Simultaneous Factor and correct duty factor.

Note 2: BWCF 6.99dB (100kHz converted to 500kHz) has been included in the test result.

Mode	U-NII Band	Centre Frequency (MHz)	Power Spectral Density (dBm)	Limit	
802.11n- HT20	I	5180	7.699	11 dBm/MHz	
		5200	8.257		
		5240	9.099		
	2A	5260	8.961		
		5300	7.583		
		5320	6.791		
	2C	5500	7.586		
		5580	9.427		
		5700	6.283		
		5720	8.928		
III <sup>Note2</sup>	5745	7.117	30dBm/500 kHz		
	5785	7.292			
	5825	6.996			
802.11n- HT40	I	5190	3.437	11 dBm/MHz	
		5230	5.951		
	2A	5270	5.287		
		5310	3.332		
	2C	5510	4.324		
		5550	5.107		
		5670	5.423		
		5710	6.306		
	III <sup>Note2</sup>	5755	4.385		30dBm/500 kHz
		5795	4.516		
802.11ac- VHT80	I	5210	-1.175	11 dBm/MHz	
	2A	5290	-0.118		
	2C	5530	1.452		
		5610	3.319		
		5690	3.628		
	III <sup>Note2</sup>	5775	-0.032		30dBm/500 kHz
802.11ac- VHT160	I/2A	5250	-5.024	11 dBm/MHz	
	2C	5570	-5.048		

Note 1: All results have been included cable loss and Simultaneous Factor.

Note 2: BWCF 6.99dB (100kHz converted to 500kHz) has been included in the test result.

Mode	U-NII Band	Centre Frequency (MHz)	Power Spectral Density (dBm)	Limit	
802.11ax-HE20	I	5180	7.498	11 dBm/MHz	
		5200	7.954		
		5240	8.560		
	2A	5260	8.693		
		5300	7.282		
		5320	6.260		
	2C	5500	7.658		
		5580	9.163		
		5700	6.079		
		5720	8.381		
III <sup>Note2</sup>	5745	5.847	30dBm/500 kHz		
	5785	5.960			
	5825	5.922			
802.11ax-HE40	I	5190	3.621	11 dBm/MHz	
		5230	4.744		
	2A	5270	5.493		
		5310	2.676		
	2C	5510	3.901		
		5550	4.187		
		5670	5.179		
		5710	5.601		
	III <sup>Note2</sup>	5755	2.755		30dBm/500 kHz
		5795	3.209		
802.11ax-HE80	I	5210	-0.651	11 dBm/MHz	
	2A	5290	-0.439		
	2C	5530	1.252		
		5610	3.253		
		5690	2.928		
	III <sup>Note2</sup>	5775	-1.300		30dBm/500 kHz
802.11ax-HE160	I/2A	5250	-5.470	11 dBm/MHz	
	2C	5570	-5.761		

Note 1: All results have been included cable loss and Simultaneous Factor.

Note 2: BWCF 6.99dB (100kHz converted to 500kHz) has been included in the test result.

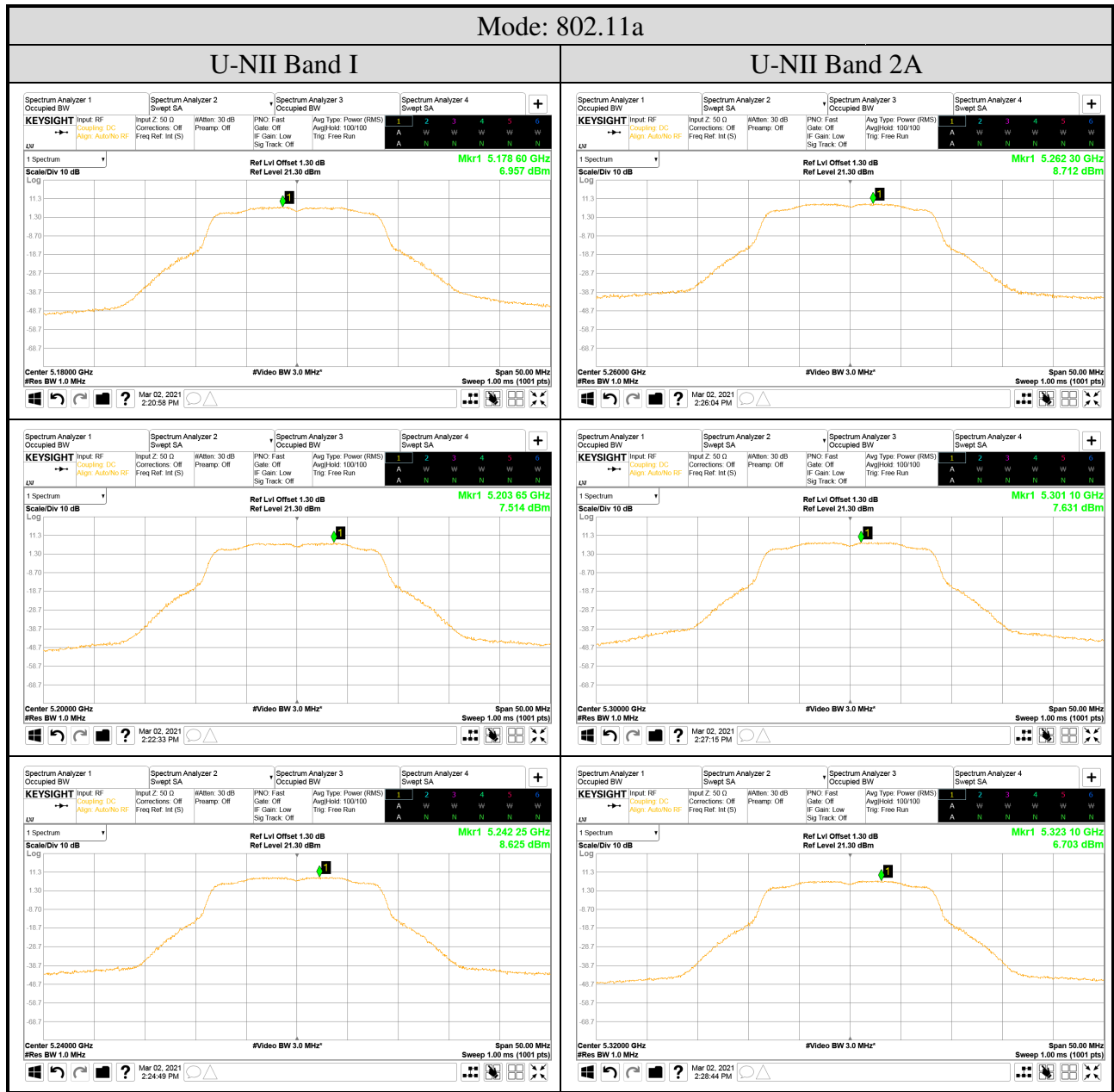


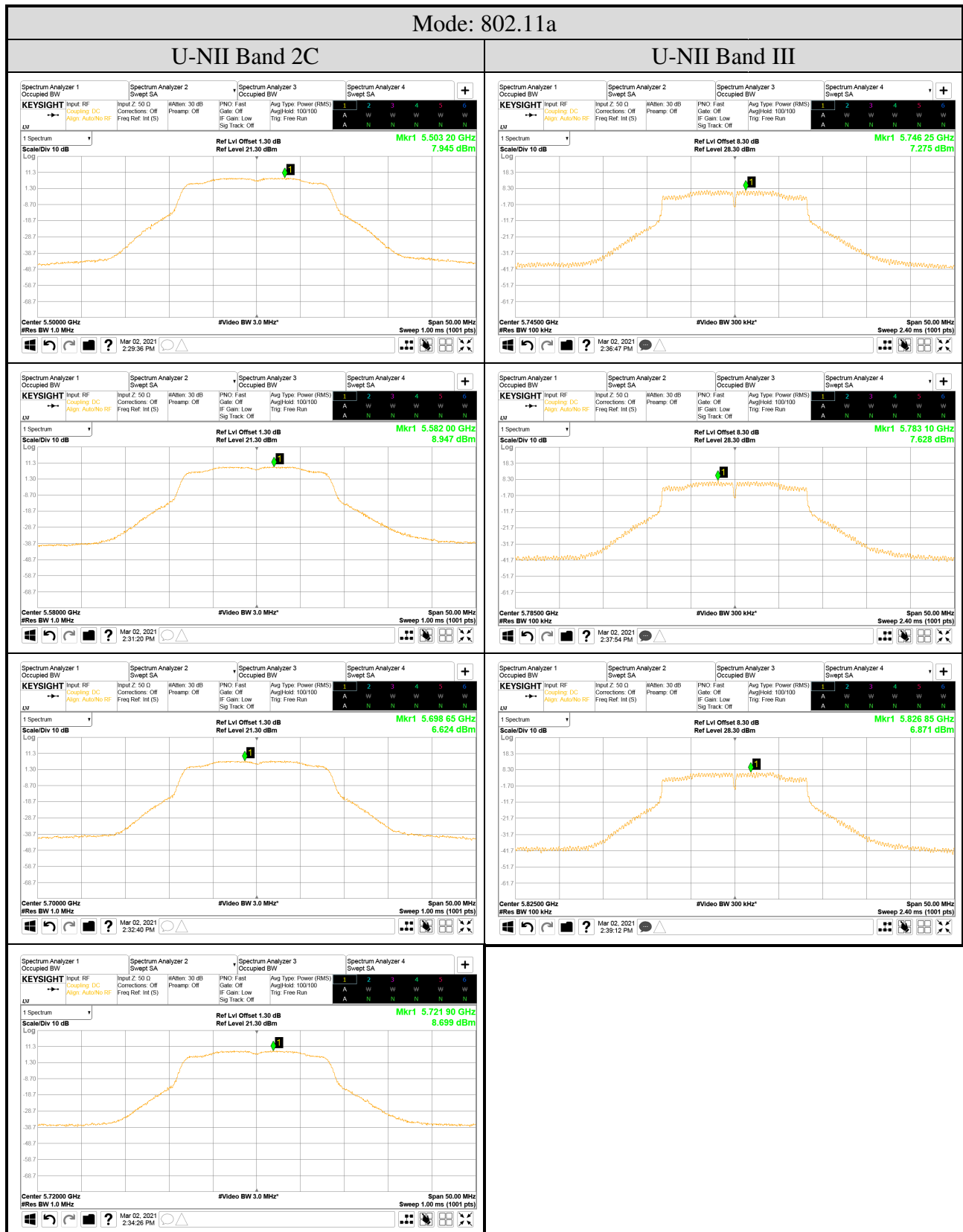
Mode	U-NII Band	Centre Frequency (MHz)	RU Configuration	Power Spectral Density (dBm)	Limit
802.11ax-HE20	I	5180	26/0	10.397	11 dBm/MHz
			52/37	10.616	
			106/53	10.150	
	2A	5320	26/8	10.706	
			52/40	8.437	
			106/54	9.425	
	2C	5500	26/0	10.588	
			52/37	10.679	
			106/53	9.958	
		5700	26/8	10.677	
			52/40	9.427	
			106/54	8.397	
III <sup>Note2</sup>	5745	26/0	8.641	30dBm/500 kHz	
		52/37	8.763		
		106/53	7.830		
	5825	26/8	11.482		
		52/40	10.658		
		106/54	7.675		
802.11ax-HE40	I	5190	242/61	6.924	11 dBm/MHz
	2A	5310	242/62	5.886	
	2C	5510	242/61	6.804	
		5670	242/62	7.419	
	III <sup>Note2</sup>	5755	242/61	5.431	30dBm/500 kHz
		5795	242/62	5.825	
802.11ax-HE80	I	5210	484/65	2.632	11 dBm/MHz
	2A	5290	484/66	0.537	
	2C	5530	484/65	2.752	
		5610	484/66	3.898	
	III <sup>Note2</sup>	5775	484/65	1.251	30dBm/500 kHz
			484/66	1.101	
802.11ax-HE160	I/2A	5250	996/67	-3.244	11 dBm/MHz
			996/S67	-3.669	
	2C	5570	996/67	-3.608	
			996/S67	-5.206	

Note 1: All results have been included cable loss and Simultaneous Factor.

Note 2: BWCF 6.99dB (100kHz converted to 500kHz) has been included in the test result.

A.5.2 Measurement Plots





Mode: 802.11n-HT20

