

Audix Technology Corp.
No. 491, Zhongfu Rd., Linkou Dist.,
New Taipei City244, Taiwan

Tel: +886 2 26099301
Fax: +886 2 26099303

A.3 MAXIMUM POWER SPECTRAL DENSITY

Test Date	2023/01/16 ~ 30	Temp./Hum.	16 ~ 17°C/52 ~ 62%
Cable Loss	1.50dB	Tested By	Sam Chang
Test Voltage	AC 120V 60Hz (Via AC Adapter)		

A.3.1 Power Spectral Density Result

● OFDM Modulation

Modulation Type	U-NII Band	Centre Frequency (MHz)	Power Spectral Density (dBm/MHz)		Duty Cycle Factor (dB) 10log(1/X)	Directional Gain (dBi) ^{Note3}	Total Power Spectral Density (dBm/1MHz) ^{Note 2}	Limit (dBm/MHz)
			AUX	Main				
802.11ax-HE20	5	5955	-9.161	-9.106	N/A	1.60	-4.523	-1
		6175	-9.649	-9.587		1.60	-5.008	
		6415	-9.041	-9.420		-0.08	-6.296	
	6	6435	-9.185	-9.432		-0.08	-6.376	
		6475	-9.451	-9.553		-0.08	-6.571	
		6515	-9.502	-9.819		-0.08	-6.727	
	7	6535	-11.730	-11.190		-0.08	-8.521	
		6695	-13.427	-12.192		-0.08	-9.835	
		6855	-12.467	-12.456		3.47	-5.981	
	8	6875	-12.440	-12.420		3.47	-5.950	
		6995	-11.537	-11.658		3.47	-5.117	
		7115	-15.169	-15.531		3.47	-8.866	
802.11ax-HE40	5	5965	-8.463	-8.971	N/A	1.60	-4.099	-1
		6165	-9.103	-9.362		1.60	-4.620	
		6405	-8.843	-9.217		-0.08	-6.096	
	6	6445	-8.858	-9.116		-0.08	-6.055	
		6485	-8.989	-9.329		-0.08	-6.225	
	7	6525	-9.458	-9.307		-0.08	-6.452	
		6685	-9.987	-10.151		-0.08	-7.138	
		6845	-10.216	-10.593		3.47	-3.920	
	8	6885	-10.203	-10.242		3.47	-3.742	
		7005	-9.621	-9.980		3.47	-3.316	
		7085	-9.877	-9.835		3.47	-3.376	

Note: 1. All results have been included cable loss [Please refer to KDB 662911 E 2) c)]

2. According to KDB 662911 D01 E)2)a), Total Power Spectral Density (dBm/1MHz) = Sum to individual PSD (dBm/1MHz) + Duty Cycle Factor (dB) when duty cycle is less than 98%. + Directional Gain.

3. According to KDB 662911 D01 d) ii), transmit signals are completely uncorrelated, then

Directional gain = $10 \log[(10^{G1/10} + 10^{G2/10} + \dots + 10^{GN/10})/N_{ANT}]$ dBi

Directional gain:

5925MHz: Directional gain = $10 \log[(10^{1.6/10} + 10^{1.6/10})/2] = 1.60$ dBi

6525MHz: Directional gain = $10 \log[(10^{-0.5/10} + 10^{0.3/10})/2] = -0.08$ dBi

7125MHz: Directional gain = $10 \log[(10^{3.9/10} + 10^{3.0/10})/2] = 3.47$ dBi

The MIMO is uncorrelated and supported SDM(Spatial Division Multiplexing) mode only. This radio device doesn't support beamforming and Cyclic Delay Diversity (CDD).

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			AUX	Main				
802.11ax-HE80	5	5985	-8.772	-8.902	N/A	1.60	-4.226	-1
		6145	-8.970	-9.336		1.60	-4.539	
		6385	-8.806	-9.102		-0.08	-6.021	
	6	6465	-9.096	-9.429		-0.08	-6.329	
		6545	-9.473	-9.590		-0.08	-6.601	
		6625	-9.905	-9.872		-0.08	-6.958	
	7	6705	-10.260	-9.955		-0.08	-7.175	
		6785	-10.290	-10.476		-0.08	-7.452	
	8	6865	-10.317	-10.421		3.47	-3.888	
		6945	-9.878	-10.128		3.47	-3.521	
		7025	-9.937	-10.037		3.47	-3.506	
802.11ax-HE160	5	6025	-8.941	-9.081	N/A	1.60	-4.400	-1
		6185	-9.300	-9.138		1.60	-4.608	
		6345	-9.073	-9.458		-0.08	-6.331	
	6	6505	-9.298	-9.242		-0.08	-6.340	
		6665	-9.915	-10.136		-0.08	-7.094	
	7	6825	-10.300	-10.007		3.47	-3.671	
		6985	-9.722	-9.975		3.47	-3.366	
	8							

Note: 1. All results have been included cable loss [Please refer to KDB 662911 E 2) c)]

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● OFDMA Modulation

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					AUX	Main				
26T	18	802.11ax-HE80	8	6945	-13.977	-11.460	0.223	3.47	-5.835	-1
52T	37	802.11ax-HE40	8	7085	-9.782	-10.119	0.146	3.47	-3.321	
106T	60	802.11ax-HE160	8	6985	-12.399	-12.629	N/A	3.47	-6.032	
242T	62	802.11ax-HE80	8	7025	-11.669	-11.556	0.150	3.47	-4.982	
484T	65	802.11ax-HE40	8	6885	-10.409	-10.141	N/A	3.47	-3.793	
996T	67	802.11ax-HE80	8	7025	-10.312	-10.297	0.159	3.47	-3.665	

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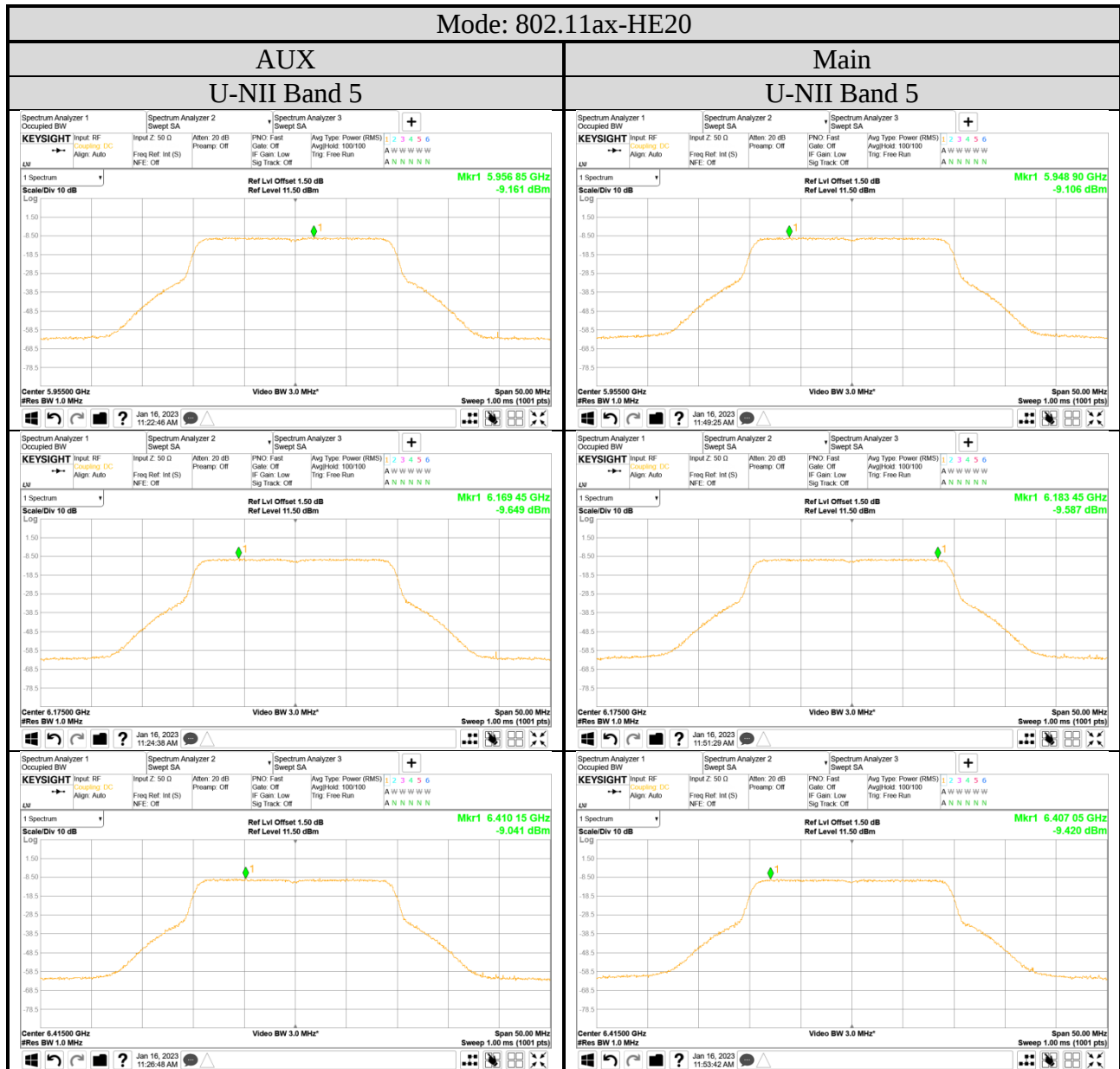
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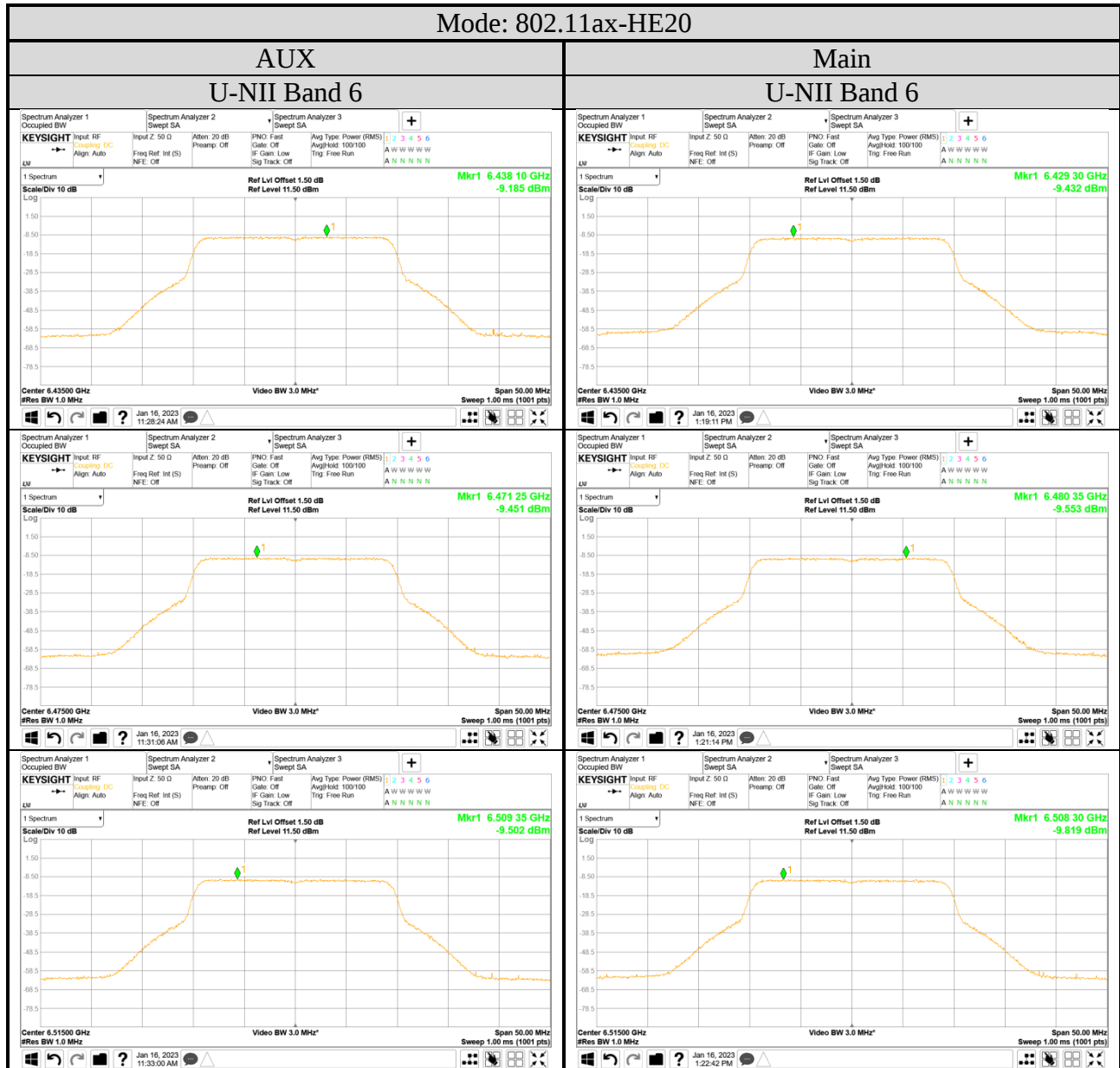
A.3.2 Measurement Plots

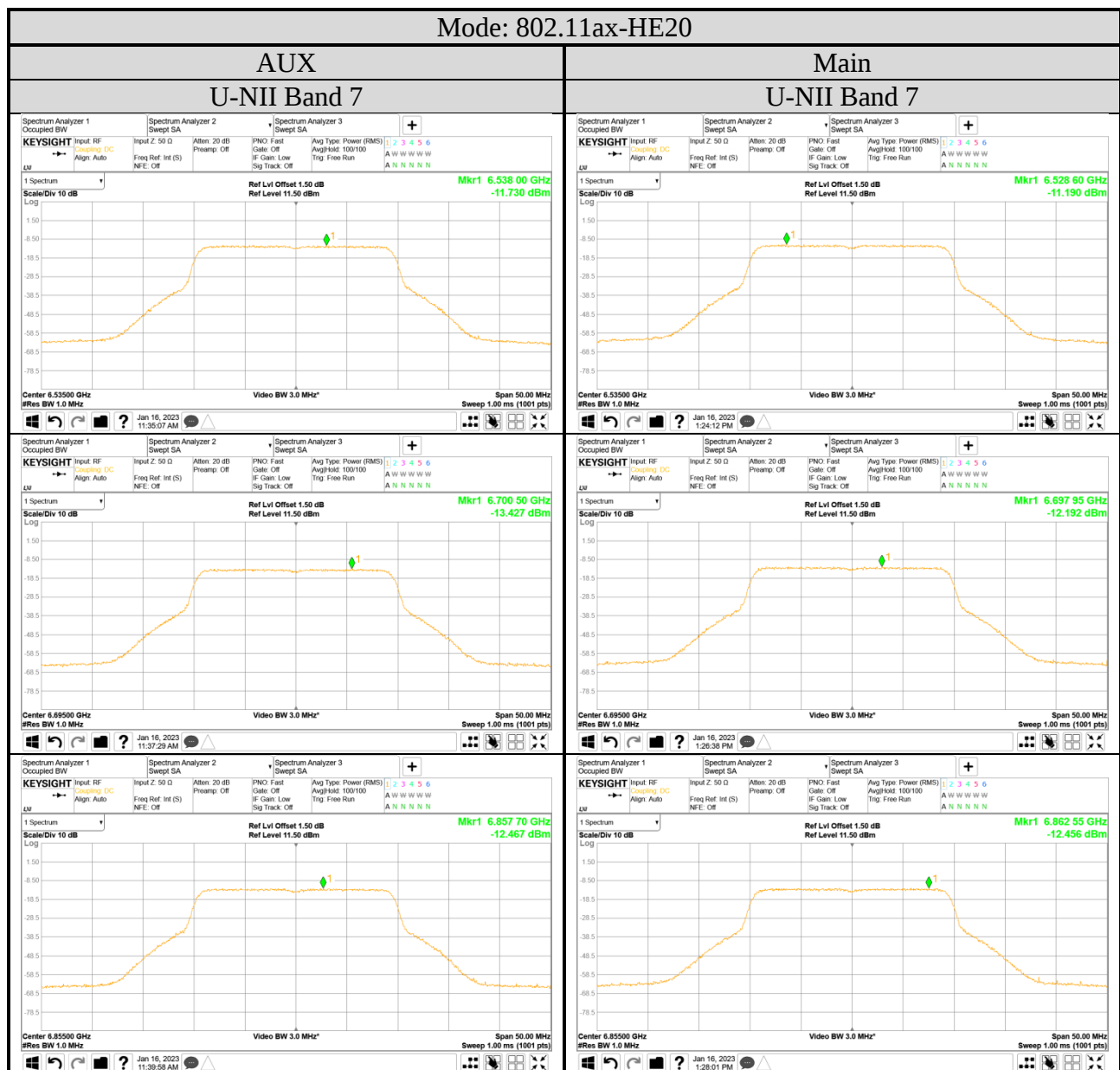
● OFDM Modulation



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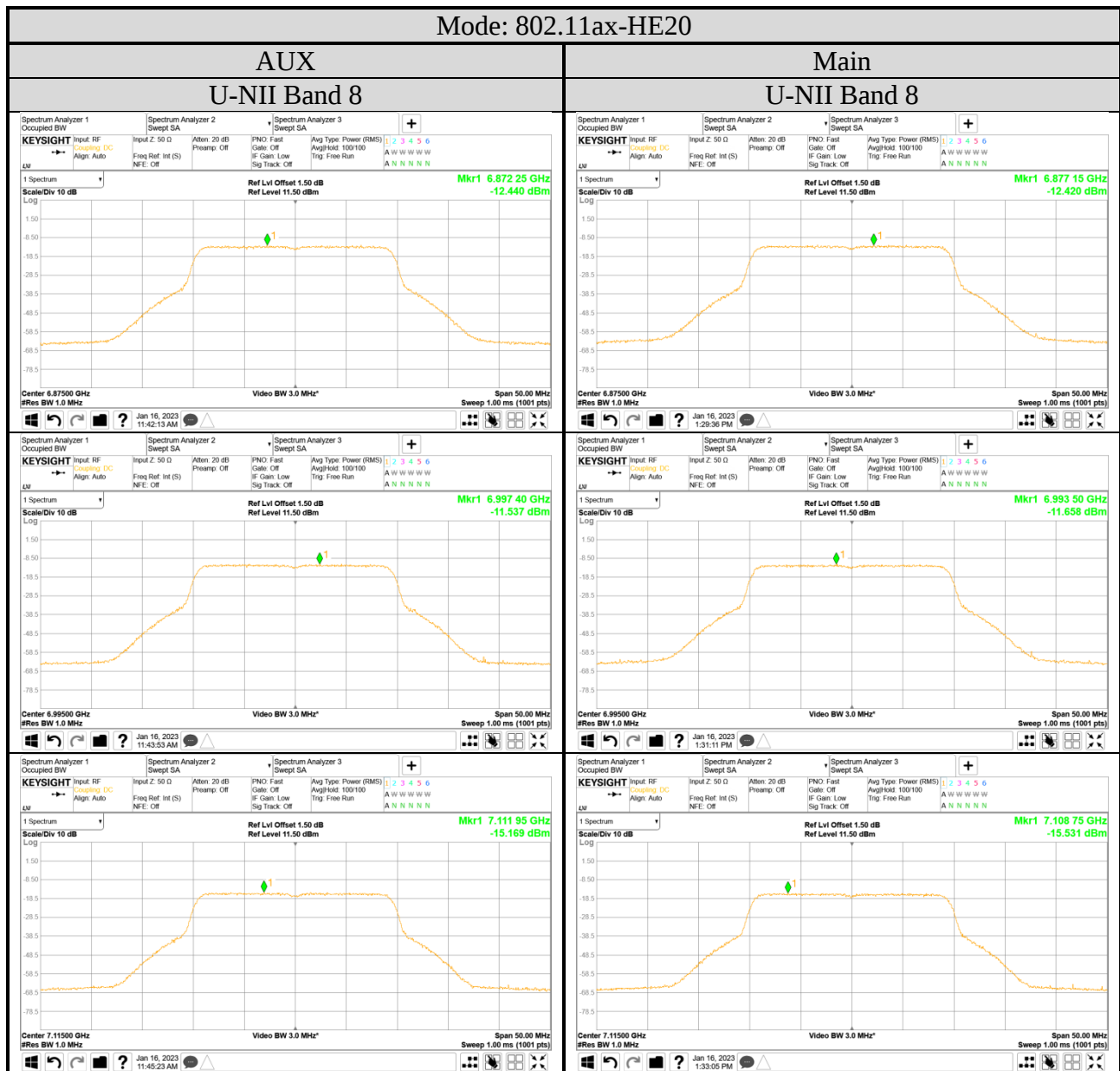
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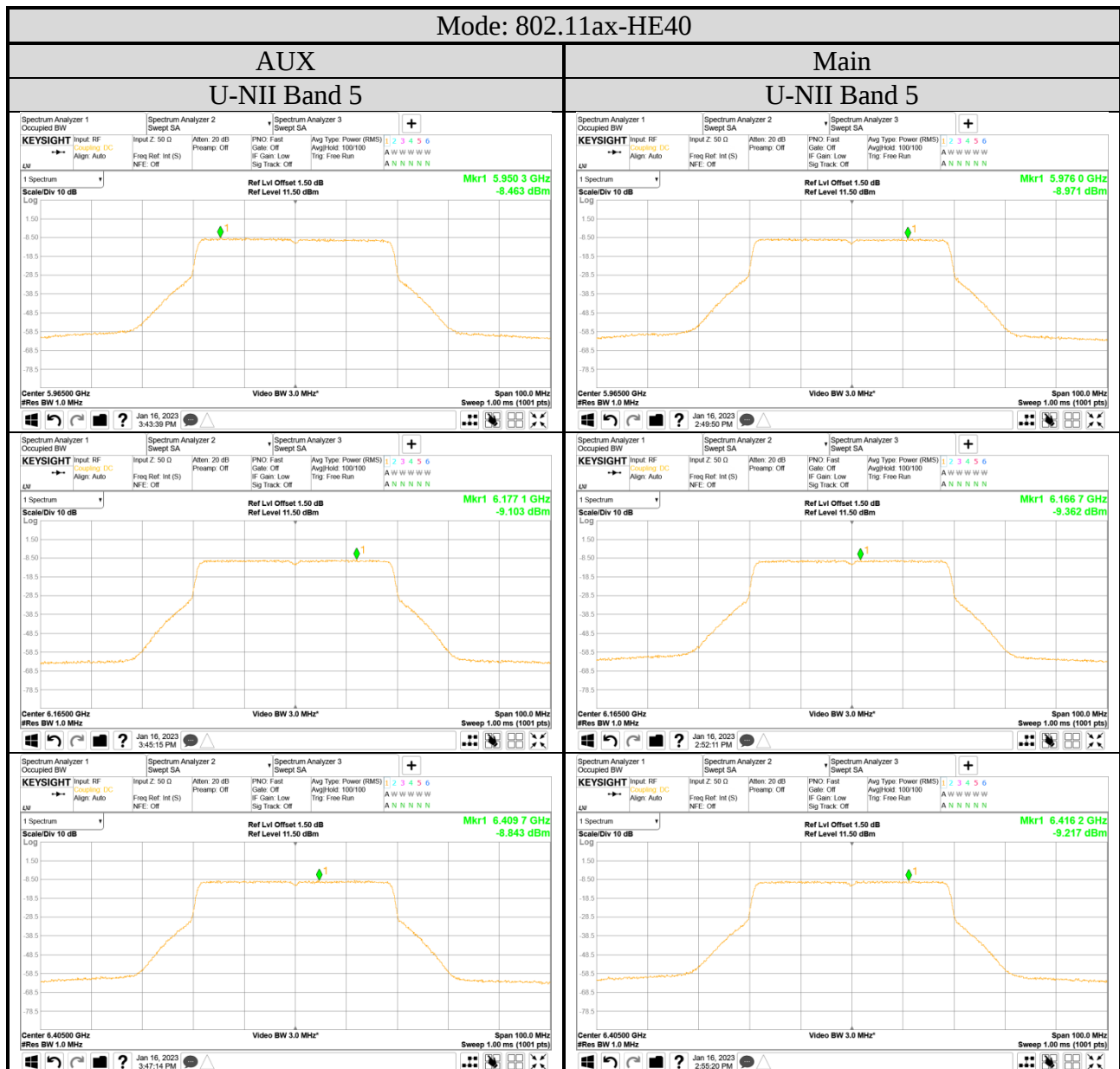
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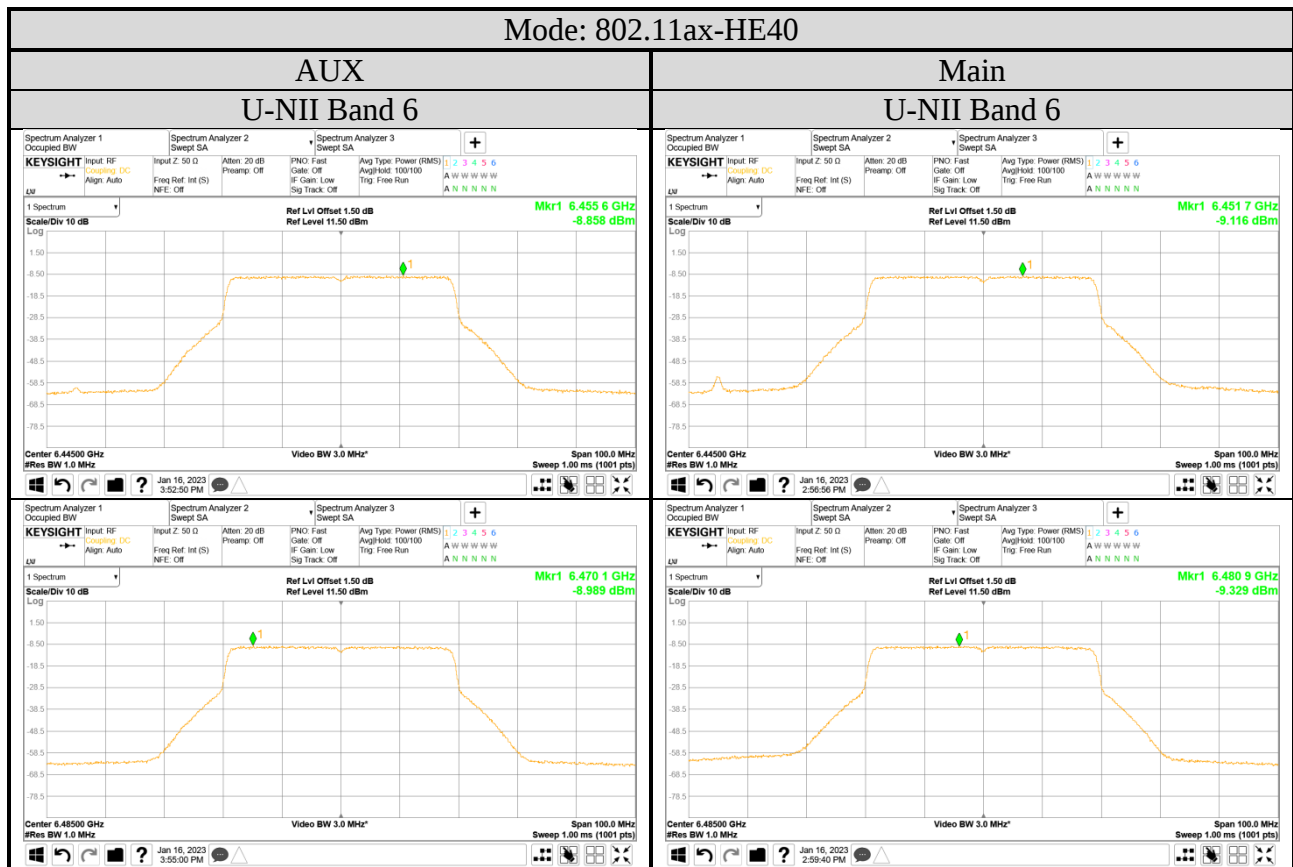
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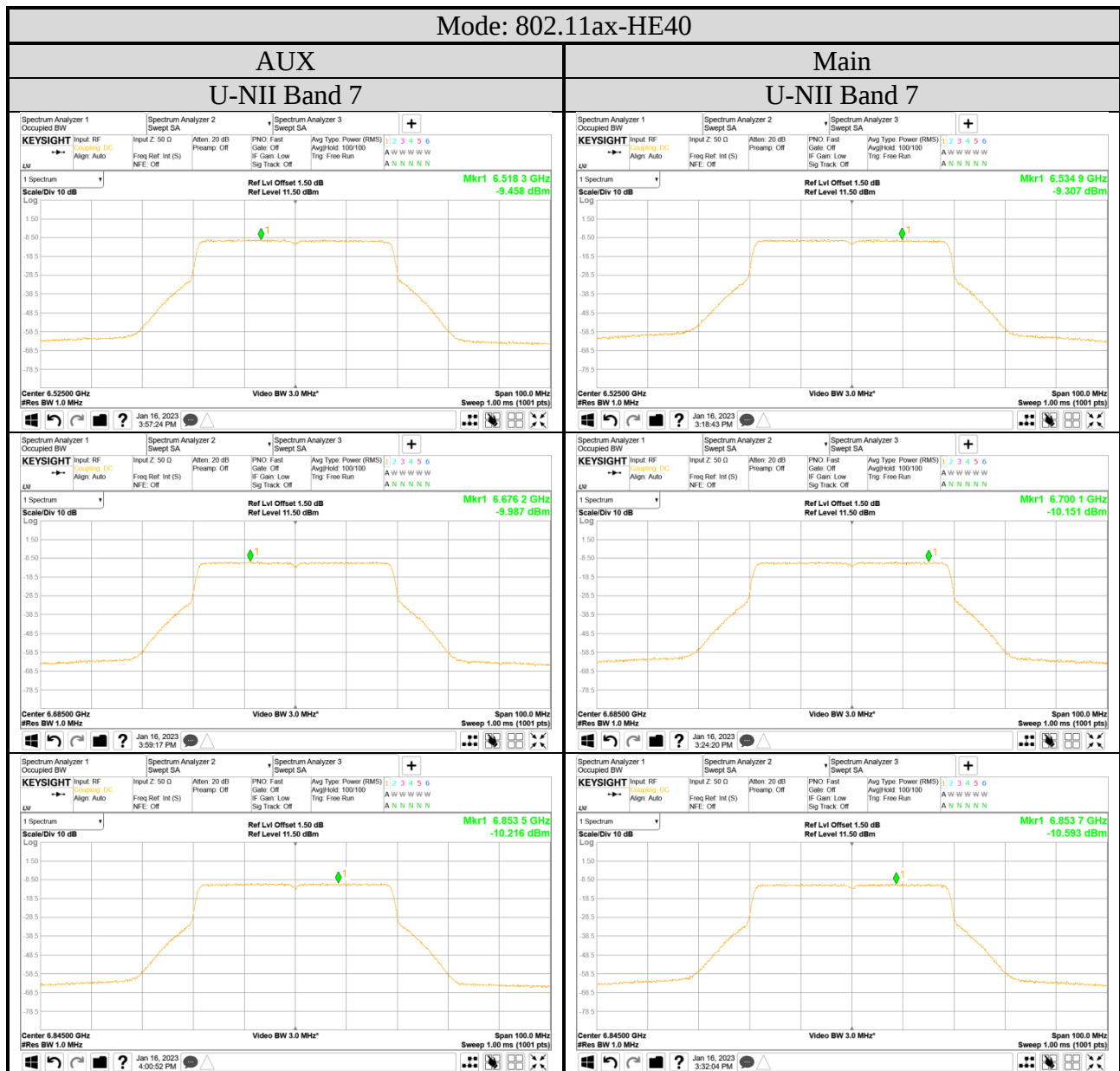
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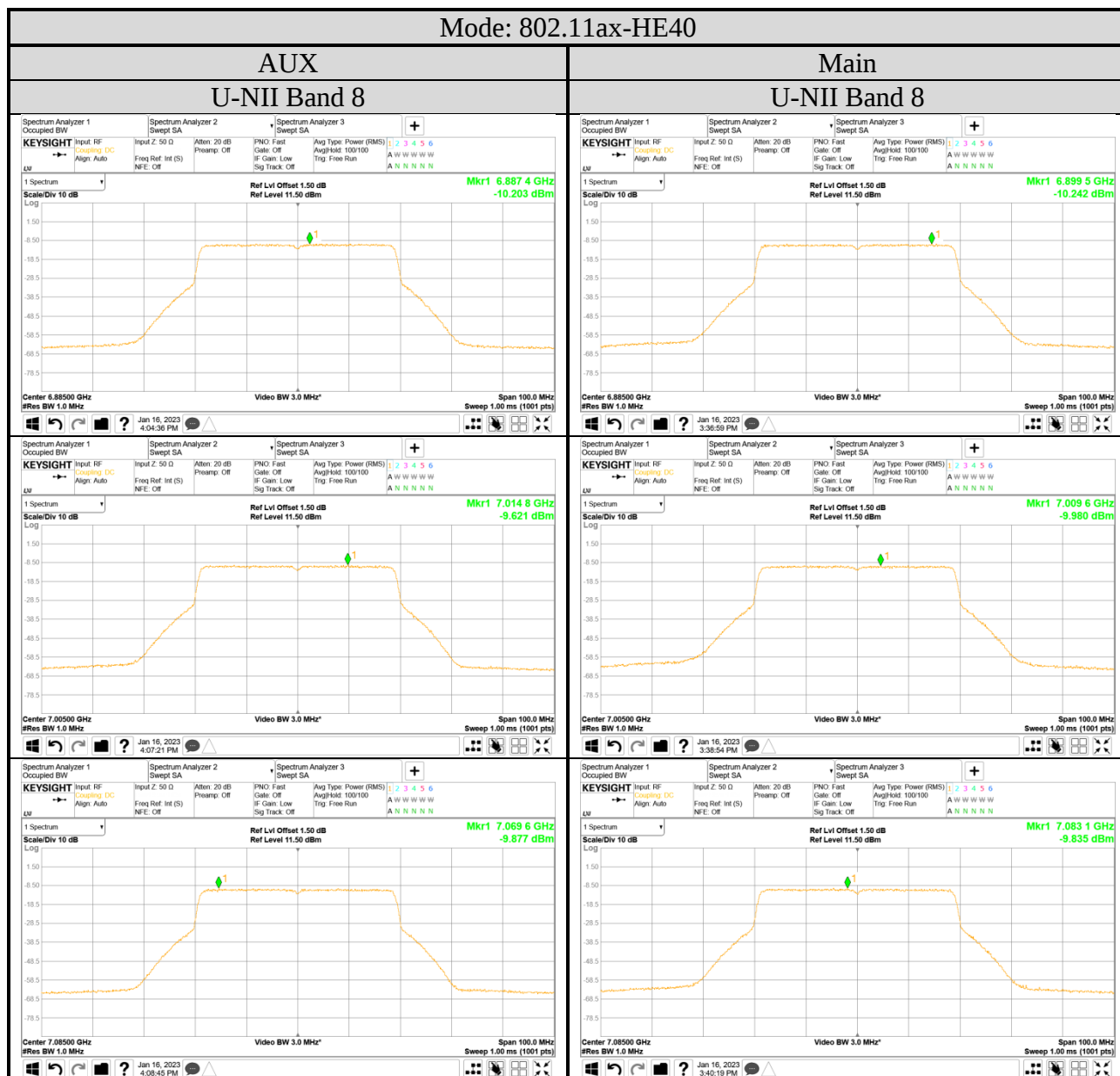
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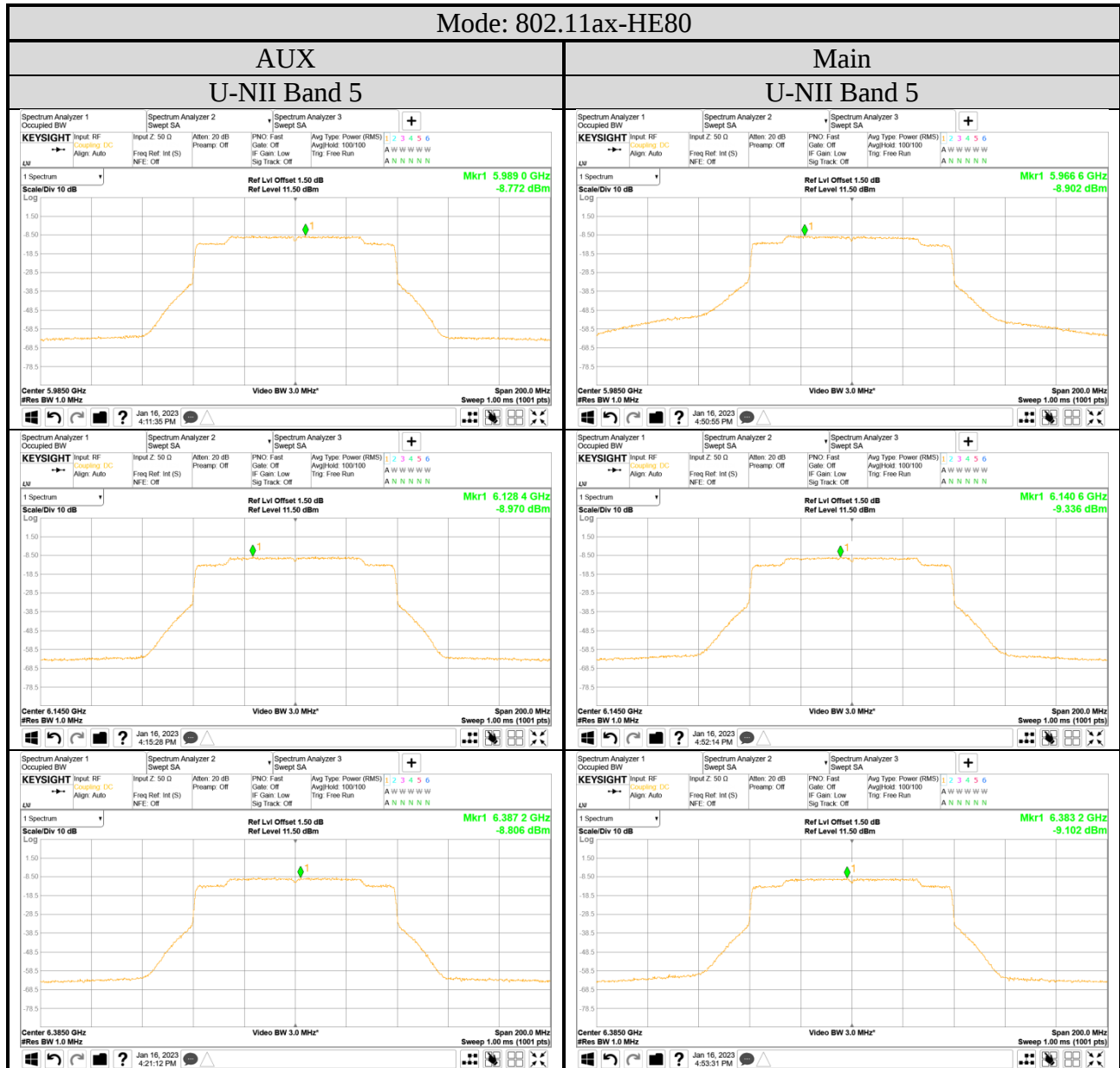
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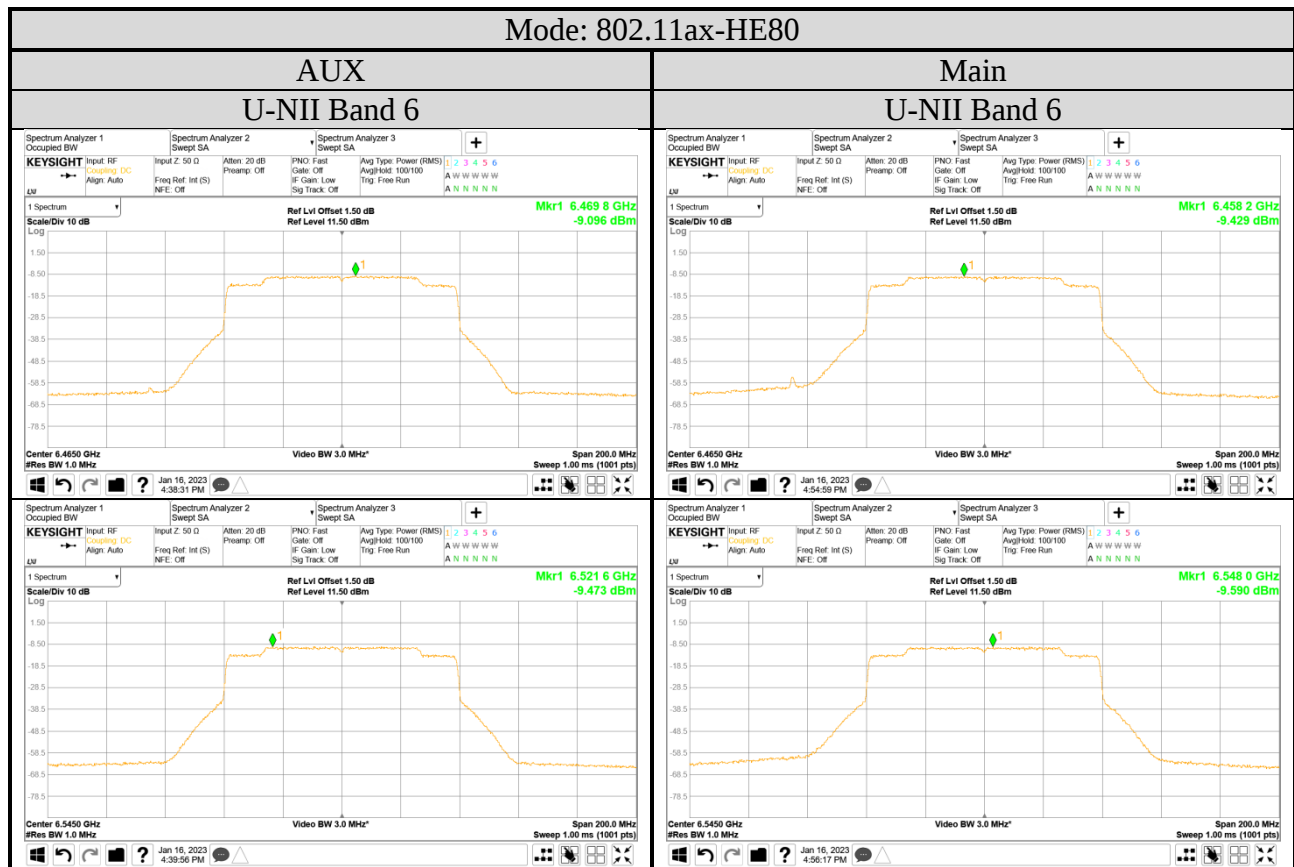
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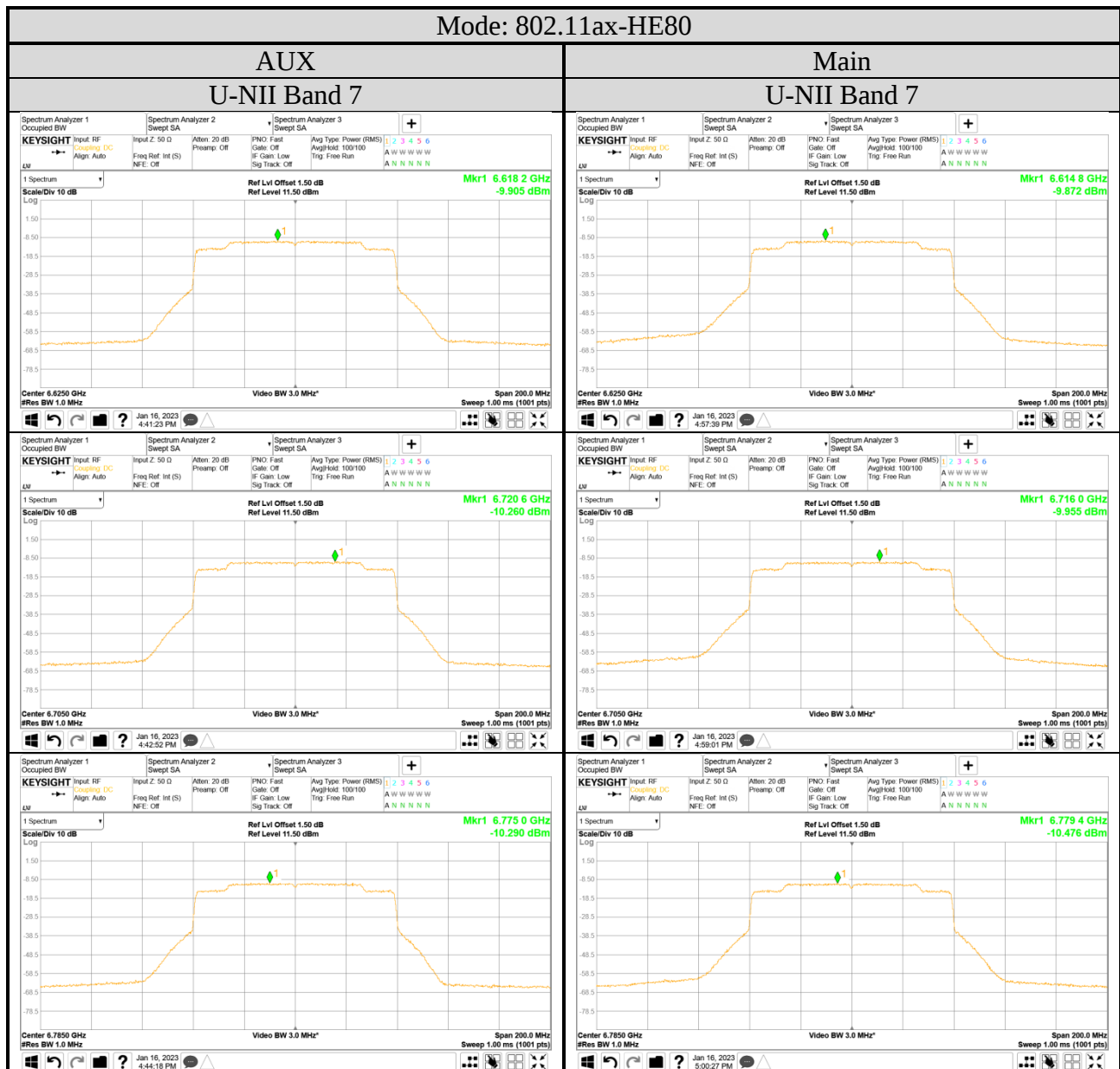
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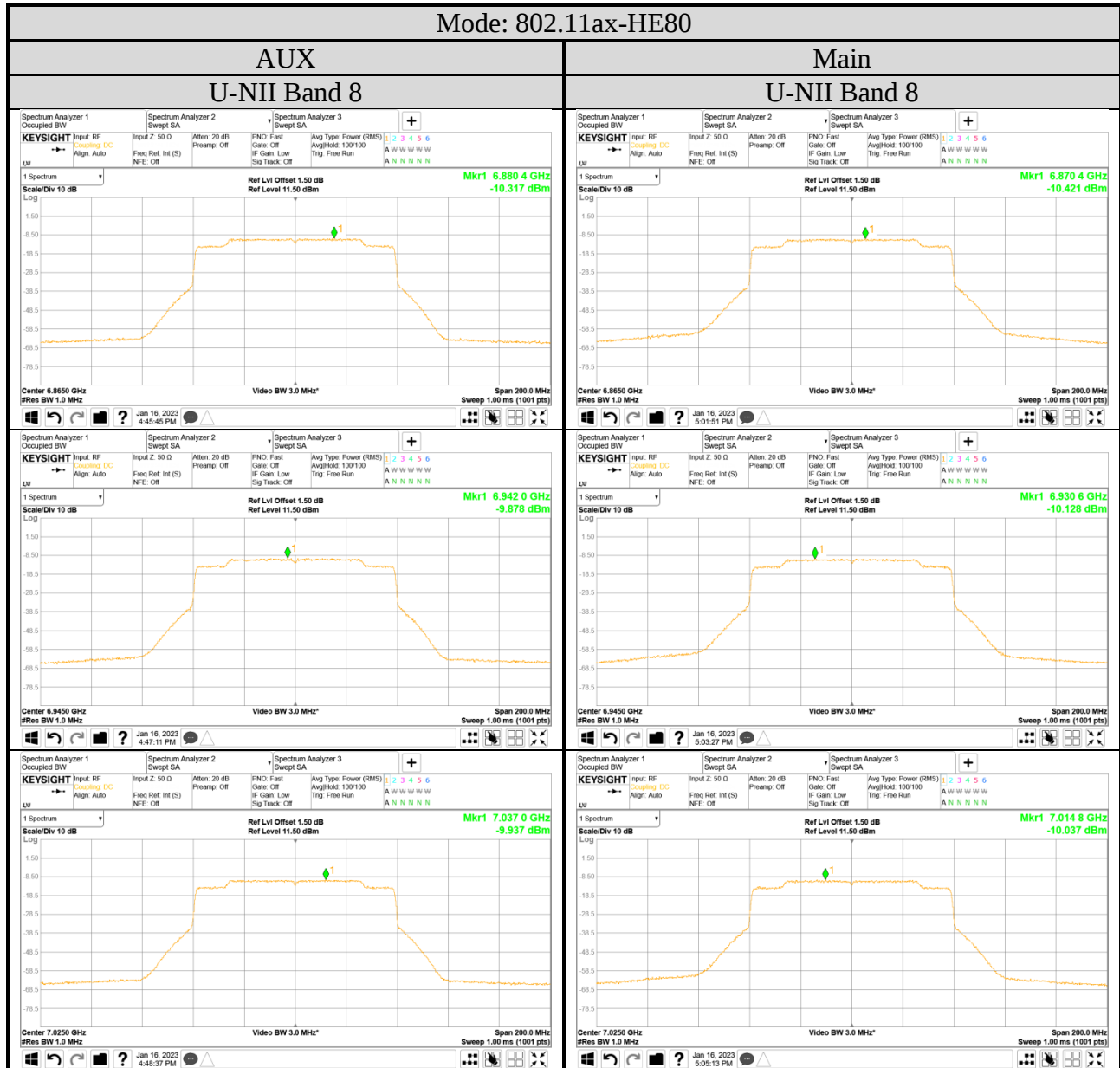
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