

## A.4 POWER SPECTRAL DENSITY

Test Date	2022/07/07~08	Temp./Hum.	26°C/52~57%
Cable Loss	1.0dB	Tested By	Kuper Hsu
Test Voltage	AC 120V 60Hz (Via AC Adapter)		

### A.4.1 Power Spectral Density Result

Mode 802.11a	Centre Frequency (MHz)	Power Spectral Density (dBm/1MHz)		Duty Cycle Factor (dB) 10log(1/X)	Max. Power Spectral Density (dBm/1MHz) <sup>Note 3</sup>	Limit
		AUX	Main			
U-NII Band 1	5180	4.819	5.477	N/A	5.477	11 dBm/MHz
	5200	4.970	5.577		5.577	
	5240	4.751	5.111		5.111	
U-NII Band 2A	5260	4.714	5.295		5.295	
	5300	4.629	4.992		4.992	
	5320	4.564	5.124		5.124	
U-NII Band 2C	5500	5.072	5.553		5.553	
	5580	5.102	5.325		5.325	
	5700	4.645	4.987		4.987	
	5720	5.152	5.228		5.228	
Mode 802.11a	Centre Frequency (MHz)	Power Spectral Density (dBm/500kHz)		Duty Cycle Factor (dB) 10log(1/X)	Max. Power Spectral Density (dBm/500kHz) <sup>Note 4</sup>	Limit
		AUX	Main			
U-NII Band 3 <small>Note 2</small>	5745	1.425	3.014	N/A	3.014	30dBm/500 kHz
	5785	2.403	3.028		3.028	
	5825	2.180	3.412		3.412	

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

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

3. 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%.

4. According to KDB 662911 D01 E)2)a), Total Power Spectral Density (dBm/500kHz) = Sum to individual PSD (dBm/500kHz) + Duty Cycle Factor (dB) when duty cycle is less than 98%.

Mode 802.11n-HT20	Centre Frequency (MHz)	Power Spectral Density (dBm/1MHz)		Duty Cycle Factor (dB) 10log(1/X)	Total Power Spectral Density (dBm/1MHz) <sup>Note 3</sup>	Limit
		AUX	Main			
U-NII Band 1	5180	4.742	4.690	N/A	7.726	11 dBm/MHz
	5200	4.771	4.687		7.740	
	5240	4.723	4.499		7.623	
U-NII Band 2A	5260	4.411	4.601		7.517	
	5300	4.421	4.384		7.413	
	5320	4.779	4.332		7.572	
U-NII Band 2C	5500	4.739	4.772		7.766	
	5580	4.354	4.247		7.311	
	5700	4.739	4.133		7.457	
	5720	2.300	4.584		6.601	
Mode 802.11n-HT20	Centre Frequency (MHz)	Power Spectral Density (dBm/500kHz)		Duty Cycle Factor (dB) 10log(1/X)	Total Power Spectral Density (dBm/500kHz) <sup>Note 4</sup>	Limit
AUX	Main					
U-NII Band 3 Note 2	5755	2.960	2.626	N/A	5.807	30dBm/500 kHz
	5795	2.695	2.749		5.732	
	5795	4.487	2.419		6.585	

Mode 802.11n-HT40	Centre Frequency (MHz)	Power Spectral Density (dBm/1MHz)		Duty Cycle Factor (dB) 10log(1/X)	Total Power Spectral Density (dBm/1MHz) <sup>Note 3</sup>	Limit		
		AUX	Main					
U-NII Band 1	5190	1.888	2.002	N/A	4.956	11 dBm/MHz		
	5230	1.675	1.722		4.709			
U-NII Band 2A	5270	1.827	1.592		4.721			
	5310	1.613	1.365		4.501			
U-NII Band 2C	5510	1.982	2.000		5.001			
	5550	1.931	1.612		4.785			
	5670	1.490	1.477		4.494			
	5710	1.728	1.394		4.575			
Mode 802.11n-HT40	Centre Frequency (MHz)	Power Spectral Density (dBm/500kHz)			Duty Cycle Factor (dB) 10log(1/X)		Total Power Spectral Density (dBm/500kHz) <sup>Note 4</sup>	Limit
AUX	Main							
U-NII Band 3 Note 2	5755	-0.591	-0.653	N/A	2.388	30dBm/500 kHz		
	5795	-0.513	-0.400		2.554			

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

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

3. 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%.

4. According to KDB 662911 D01 E)2)a), Total Power Spectral Density (dBm/500kHz) = Sum to individual PSD (dBm/500kHz) + Duty Cycle Factor (dB) when duty cycle is less than 98%.

Mode 802.11ac-VHT80	Centre Frequency (MHz)	Power Spectral Density (dBm/1MHz)		Duty Cycle Factor (dB) 10log(1/X)	Total Power Spectral Density (dBm/1MHz) <sup>Note 3</sup>	Limit
		AUX	Main			
U-NII Band 1	5210	-2.702	-2.709	N/A	0.305	11 dBm/MHz
U-NII Band 2A	5290	-2.244	-2.217		0.780	
U-NII Band 2C	5530	-1.562	-1.143		1.663	
	5610	-1.098	-1.889		1.535	
	5690	-1.640	-1.845		1.269	
Mode 802.11ac-VHT80	Centre Frequency (MHz)	Power Spectral Density (dBm/500kHz)		Duty Cycle Factor (dB) 10log(1/X)	Total Power Spectral Density (dBm/500kHz) <sup>Note 4</sup>	Limit
AUX	Main					
U-NII Band 3 Note 2	5775	-3.854	-4.537	N/A	-1.172	30dBm/500 kHz

Mode 802.11ac- VHT160	Centre Frequency (MHz)	Power Spectral Density (dBm/1MHz)		Duty Cycle Factor (dB) 10log(1/X)	Total Power Spectral Density (dBm/1MHz) <sup>Note 3</sup>	Limit
		AUX	Main			
U-NII Band 1/2A	5250	-8.736	-8.683	N/A	-5.699	11 dBm/MHz
U-NII Band 2C	5570	-5.741	-5.188		-2.445	

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

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

3. 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%.

4. According to KDB 662911 D01 E)2)a), Total Power Spectral Density (dBm/500kHz) = Sum to individual PSD (dBm/500kHz) + Duty Cycle Factor (dB) when duty cycle is less than 98%.

Mode 802.11ax-HE20	Centre Frequency (MHz)	Power Spectral Density (dBm/1MHz)		Duty Cycle Factor (dB) 10log(1/X)	Total Power Spectral Density (dBm/1MHz) <sup>Note 3</sup>	Limit
		AUX	Main			
U-NII Band 1	5180	4.875	4.937	0.000	7.916	11 dBm/MHz
	5200	4.776	4.837		7.817	
	5240	4.680	4.579		7.640	
U-NII Band 2A	5260	4.368	4.520		7.455	
	5300	4.521	4.399		7.471	
	5320	4.568	4.431		7.510	
U-NII Band 2C	5500	5.063	4.846		7.966	
	5580	4.690	4.610		7.660	
	5700	4.480	4.295		7.399	
	5720	4.636	4.588		7.622	
Mode 802.11ax-HE20	Centre Frequency (MHz)	Power Spectral Density (dBm/500kHz)		Duty Cycle Factor (dB) 10log(1/X)	Total Power Spectral Density (dBm/500kHz) <sup>Note 4</sup>	Limit
		AUX	Main			
U-NII Band 3 Note 2	5755	1.415	1.312	0.000	4.374	30dBm/500 kHz
	5795	1.976	1.882		4.940	
	5795	2.024	1.830		4.938	

Mode 802.11ax-HE40	Centre Frequency (MHz)	Power Spectral Density (dBm/1MHz)		Duty Cycle Factor (dB) 10log(1/X)	Total Power Spectral Density (dBm/1MHz) <sup>Note 3</sup>	Limit		
		AUX	Main					
U-NII Band 1	5190	1.560	1.463	0.000	4.522	11 dBm/MHz		
	5230	1.302	1.441		4.382			
U-NII Band 2A	5270	1.090	0.954		4.033			
	5310	0.893	0.883		3.898			
U-NII Band 2C	5510	1.578	1.523		4.561			
	5550	1.550	1.308		4.441			
	5670	1.381	1.139		4.272			
	5710	0.968	0.949		3.969			
Mode 802.11ax-HE40	Centre Frequency (MHz)	Power Spectral Density (dBm/500kHz)			Duty Cycle Factor (dB) 10log(1/X)		Total Power Spectral Density (dBm/500kHz) <sup>Note 4</sup>	Limit
		AUX	Main					
U-NII Band 3 Note 2	5755	-2.102	-1.985	0.000	0.967	30dBm/500 kHz		
	5795	-1.128	-1.493		1.704			

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

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

3. 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%.

4. According to KDB 662911 D01 E)2)a), Total Power Spectral Density (dBm/500kHz) = Sum to individual PSD (dBm/500kHz) + Duty Cycle Factor (dB) when duty cycle is less than 98%.

Mode 802.11ax-HE80	Centre Frequency (MHz)	Power Spectral Density (dBm/1MHz)		Duty Cycle Factor (dB) 10log(1/X)	Total Power Spectral Density (dBm/1MHz) <sup>Note 3</sup>	Limit
		AUX	Main			
U-NII Band 1	5210	-2.760	-2.579	0.000	0.342	11 dBm/MHz
U-NII Band 2A	5290	-2.672	-2.242		0.559	
U-NII Band 2C	5530	-1.982	-1.817		1.112	
	5610	-1.402	-1.804		1.412	
	5690	-1.865	-2.247	0.958		
Mode 802.11ax-HE80	Centre Frequency (MHz)	Power Spectral Density (dBm/500kHz)		Duty Cycle Factor (dB) 10log(1/X)	Total Power Spectral Density (dBm/500kHz) <sup>Note 4</sup>	Limit
		AUX	Main			
U-NII Band 3 <small>Note 2</small>	5775	-4.646	-4.697	0.000	-1.661	30dBm/500 kHz

Mode 802.11ax-HE160	Centre Frequency (MHz)	Power Spectral Density (dBm/1MHz)		Duty Cycle Factor (dB) 10log(1/X)	Total Power Spectral Density (dBm/1MHz) <sup>Note 3</sup>	Limit
		AUX	Main			
U-NII Band 1/2A	5250	-8.670	-8.646	0.000	-5.648	11 dBm/MHz
U-NII Band 2C	5570	-5.898	-5.387		-2.625	

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

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

3. 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%.

4. According to KDB 662911 D01 E)2)a), Total Power Spectral Density (dBm/500kHz) = Sum to individual PSD (dBm/500kHz) + Duty Cycle Factor (dB) when duty cycle is less than 98%.

Mode 802.11ax-HE20	Centre Frequency (MHz)	RU Configuration	Power Spectral Density (dBm/1MHz)		Duty Cycle Factor (dB) 10log(1/X)	Total Power Spectral Density (dBm/1MHz) <sup>Note 3</sup>	Limit
			AUX	Main			
U-NII Band 1	5180	26/0	7.152	6.390	0.000	9.798	11 dBm/MHz
		52/37	7.663	7.701		10.692	
		106/53	7.396	7.568		10.493	
U-NII Band 2A	5260	26/8	6.603	5.721		9.195	
		52/40	7.417	7.386		10.412	
		106/54	6.617	6.748		9.693	
U-NII Band 2C	5500	26/0	7.173	6.676		9.942	
		52/37	7.477	7.616		10.557	
		106/53	6.845	6.860		9.863	
	5700	26/8	6.482	5.858		9.191	
		52/40	7.422	7.059	10.255		
		106/54	7.093	7.153	10.133		

  

Mode 802.11ax-HE20	Centre Frequency (MHz)	RU Configuration	Power Spectral Density (dBm/500kHz)		Duty Cycle Factor (dB) 10log(1/X)	Total Power Spectral Density (dBm/500kHz) <sup>Note 4</sup>	Limit
			AUX	Main			
U-NII Band 3 Note 2	5745	26/0	9.273	9.234	0.000	12.264	30dBm/500 kHz
		52/37	4.232	3.676		6.973	
		106/53	5.316	5.173		8.255	
	5825	26/8	9.615	9.587		12.611	30dBm/500 kHz
		52/40	4.397	4.437		7.427	
		106/54	5.580	4.712		8.178	

Mode 802.11ax-HE40	Centre Frequency (MHz)	RU Configuration	Power Spectral Density (dBm/1MHz)		Duty Cycle Factor (dB) 10log(1/X)	Total Power Spectral Density (dBm/1MHz) <sup>Note 3</sup>	Limit
			AUX	Main			
U-NII Band 1	5190	242/61	4.726	5.051	0.000	7.902	11 dBm/MHz
U-NII Band 2A	5310	242/62	4.170	4.472		7.334	
U-NII Band 2C	5510	242/61	5.410	5.687		8.561	
	5670	242/62	4.909	4.783		7.857	

  

Mode 802.11ax-HE40	Centre Frequency (MHz)	RU Configuration	Power Spectral Density (dBm/500kHz)		Duty Cycle Factor (dB) 10log(1/X)	Total Power Spectral Density (dBm/500kHz) <sup>Note 4</sup>	Limit
			AUX	Main			
U-NII Band 3 Note 2	5755	242/61	1.274	1.221	0.000	4.258	30dBm/500 kHz
	5795	242/62	2.182	2.425		5.315	

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

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

3. 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%.

4. According to KDB 662911 D01 E)2)a), Total Power Spectral Density (dBm/500kHz) = Sum to individual PSD (dBm/500kHz) + Duty Cycle Factor (dB) when duty cycle is less than 98%.

Mode 802.11ax-HE80	Centre Frequency (MHz)	RU Configuration	Power Spectral Density (dBm/1MHz)		Duty Cycle Factor (dB) 10log(1/X)	Total Power Spectral Density (dBm/1MHz) <sup>Note 3</sup>	Limit
			AUX	Main			
U-NII Band 1	5210	484/65	1.198	1.231	0.000	4.225	11 dBm/MHz
U-NII Band 2A	5290	484/66	-2.174	-2.834		0.519	
U-NII Band 2C	5530	484/65	0.919	0.841		3.890	
	5610	484/66	0.987	1.020		4.014	
Mode 802.11ax-HE80	Centre Frequency (MHz)	RU Configuration	Power Spectral Density (dBm/500kHz)		Duty Cycle Factor (dB) 10log(1/X)	Total Power Spectral Density (dBm/500kHz) <sup>Note 4</sup>	Limit
			AUX	Main			
U-NII Band 3 <small>Note 2</small>	5775	484/65	-1.594	-1.901	0.000	1.266	30dBm/500 kHz
	5775	484/66	-1.642	-1.71		1.334	

Mode 802.11ax-HE160	Centre Frequency (MHz)	RU Configuration	Power Spectral Density (dBm/1MHz)		Duty Cycle Factor (dB) 10log(1/X)	Total Power Spectral Density (dBm/1MHz) <sup>Note 3</sup>	Limit
			AUX	Main			
U-NII Band 1/2A	5250	996/67	-3.048	-2.906	0.000	0.034	11 dBm/MHz
		996/S67	-5.103	-4.683		-1.878	
U-NII Band 2C	5570	996/67	-3.201	-2.727		0.053	
		996/S67	-1.466	-1.471		1.542	

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

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

3. 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%.

4. According to KDB 662911 D01 E)2)a), Total Power Spectral Density (dBm/500kHz) = Sum to individual PSD (dBm/500kHz) + Duty Cycle Factor (dB) when duty cycle is less than 98%.

## A.4.2 Measurement Plots

































