

## A.4 POWER SPECTRAL DENSITY

Test Date	2022/10/29~11/01	Temp./Hum.	22~23°C /63 ~ 68%
Cable Loss	1.0dB	Tested By	Brian Hsieh
Test Voltage	AC 120V 60Hz (Via AC Adapter)		

### A.4.1 Power Spectral Density Result

Mode	U-NII Band	Centre Frequency (MHz)	Power Spectral Density (dBm/1MHz)		Duty Cycle Factor $10\log(1/X)$	Max. Power Spectral Density (dBm/1MHz) <small>Note 3</small>	Limit
			AUX	Main			
802.11a	1	5180	5.616	6.025	0.101	6.126	11 dBm/MHz
		5200	5.820	5.946		6.047	
		5240	5.698	5.603		5.799	
	2A	5260	5.377	5.438		5.539	
		5300	5.208	5.394		5.495	
		5320	5.284	5.285		5.386	
	2C	5500	5.363	5.236		5.464	
		5580	5.932	5.549		6.033	
		5700	6.165	5.848		6.266	
		5720	6.261	6.188		6.362	

Mode	U-NII Band	Centre Frequency (MHz)	Power Spectral Density (dBm/500kHz)		Duty Cycle Factor $10\log(1/X)$	Max. Power Spectral Density (dBm/500kHz) <small>Note 4</small>	Limit
			AUX	Main			
802.11a	3 <sup>Note2</sup>	5745	4.324	3.946	0.101	4.425	30dBm/500 kHz
		5785	4.123	4.337		4.438	
		5825	3.978	4.081		4.182	

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. Max. Power Spectral Density (dBm/1MHz) = Max of each PSD (dBm/1MHz) + Duty Cycle Factor(dB) when duty cycle is less than 98%.

4. Max. Power Spectral Density (dBm/500kHz) = Max of each PSD (dBm/500kHz) + Duty Cycle Factor(dB) when duty cycle is less than 98%.

5. For U-NII Band 3, Ref Offset of measured plot : Cable Loss (dB) + BWCF (dB) =1dB+7dB=8dB

Mode	U-NII Band	Centre Frequency (MHz)	Power Spectral Density (dBm/1MHz)		Duty Cycle Factor 10log(1/X)	Total Power Spectral Density (dBm/1MHz) <small>Note 3</small>	Limit
			AUX	Main			
802.11n-HT20	1	5180	5.696	5.264	N/A	8.496	11 dBm/MHz
		5200	5.418	5.356		8.397	
		5240	5.347	5.259		8.314	
	2A	5260	5.173	5.219		8.206	
		5300	4.780	5.139		7.974	
		5320	4.785	5.211		8.014	
	2C	5500	5.902	5.169		8.561	
		5580	6.048	5.213		8.661	
		5700	5.962	5.538		8.765	
		5720	5.680	5.575		8.638	

Mode	U-NII Band	Centre Frequency (MHz)	Power Spectral Density (dBm/500kHz)		Duty Cycle Factor 10log(1/X)	Total Power Spectral Density (dBm/500kHz) <small>Note 4</small>	Limit
			AUX	Main			
802.11n-HT20	3 <sup>Note2</sup>	5745	3.568	4.094	N/A	6.849	30dBm/500 kHz
		5785	3.572	3.330		6.463	
		5825	3.677	3.620		6.659	

- 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%.  
 5. For U-NII Band 3, Ref Offset of measured plot : Cable Loss (dB) + BWCF (dB) =1dB+7dB=8dB

Mode	U-NII Band	Centre Frequency (MHz)	Power Spectral Density (dBm/1MHz)		Duty Cycle Factor $10\log(1/X)$	Total Power Spectral Density (dBm/1MHz) <small>Note 3</small>	Limit
			AUX	Main			
802.11n-HT40	1	5190	0.946	1.779	N/A	4.393	11 dBm/MHz
		5230	2.317	2.373		5.355	
	2A	5270	1.857	2.092		4.986	
		5310	-0.527	0.008		2.759	
	2C	5510	2.127	1.895		5.023	
		5550	2.014	2.126		5.081	
		5670	2.533	2.394		5.474	
		5710	2.536	2.424		5.491	

Mode	U-NII Band	Centre Frequency (MHz)	Power Spectral Density (dBm/500kHz)		Duty Cycle Factor $10\log(1/X)$	Total Power Spectral Density (dBm/500kHz) <small>Note 4</small>	Limit
			AUX	Main			
802.11n-HT40	3 <sup>Note2</sup>	5755	0.510	0.865	N/A	3.701	30dBm/500 kHz
		5795	0.732	0.627		3.690	

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

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5. For U-NII Band 3, Ref Offset of measured plot : Cable Loss (dB) + BWCF (dB) =1dB+7dB=8dB

Mode	U-NII Band	Centre Frequency (MHz)	Power Spectral Density (dBm/1MHz)		Duty Cycle Factor 10log(1/X)	Total Power Spectral Density (dBm/1MHz) <small>Note 3</small>	Limit
			AUX	Main			
802.11ac-VHT80	1	5210	-3.092	-3.079	N/A	-0.075	11 dBm/MHz
	2A	5290	-3.249	-2.955		-0.089	
	2C	5530	-2.737	-2.751		0.266	
		5610	-0.358	-0.490		2.587	
		5690	-0.354	-1.431		2.151	

Mode	U-NII Band	Centre Frequency (MHz)	Power Spectral Density (dBm/500kHz)		Duty Cycle Factor 10log(1/X)	Total Power Spectral Density (dBm/500kHz) <small>Note 4</small>	Limit
			AUX	Main			
802.11ac-VHT80	3 <small>Note2</small>	5775	-3.020	-2.806	N/A	0.099	30dBm/500 kHz

Mode	U-NII Band	Centre Frequency (MHz)	Power Spectral Density (dBm/1MHz)		Duty Cycle Factor 10log(1/X)	Total Power Spectral Density (dBm/1MHz) <small>Note 3</small>	Limit
			AUX	Main			
802.11ac-VHT160	1/2A	5250	-8.891	-8.549	N/A	-5.706	11 dBm/MHz
	2C	5570	-6.085	-5.973		-3.018	

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

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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%.

5. For U-NII Band 3, Ref Offset of measured plot : Cable Loss (dB) + BWCF (dB) =1dB+7dB=8dB

Mode	U-NII Band	Centre Frequency (MHz)	Power Spectral Density (dBm/1MHz)		Duty Cycle Factor 10log(1/X)	Total Power Spectral Density (dBm/1MHz) <small>Note 3</small>	Limit
			AUX	Main			
802.11ax-HE20	1	5180	5.890	5.508	N/A	8.713	11 dBm/MHz
		5200	5.409	5.295		8.363	
		5240	5.160	5.203		8.192	
	2A	5260	5.210	5.377		8.305	
		5300	4.704	4.650		7.687	
		5320	4.505	4.795		7.663	
	2C	5500	4.447	4.883		7.681	
		5580	5.070	5.364		8.230	
		5700	5.310	5.430		8.381	
		5720	5.265	5.672		8.484	

Mode	U-NII Band	Centre Frequency (MHz)	Power Spectral Density (dBm/500kHz)		Duty Cycle Factor 10log(1/X)	Total Power Spectral Density (dBm/500kHz) <small>Note 4</small>	Limit
			AUX	Main			
802.11ax-HE20	3 <sup>Note2</sup>	5745	2.508	2.622	N/A	5.576	30dBm/500 kHz
		5785	2.412	2.573		5.504	
		5825	2.412	2.466		5.449	

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

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

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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%.

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Mode	U-NII Band	Centre Frequency (MHz)	Power Spectral Density (dBm/1MHz)		Duty Cycle Factor 10log(1/X)	Total Power Spectral Density (dBm/1MHz) <small>Note 3</small>	Limit
			AUX	Main			
802.11ax-HE40	1	5190	0.496	0.901	0.101	3.815	11 dBm/MHz
		5230	2.000	1.741		4.984	
	2A	5270	1.596	1.278		4.551	
		5310	-0.893	-0.512		2.413	
	2C	5510	1.487	1.695		4.704	
		5550	2.132	1.981		5.168	
		5670	2.501	2.029		5.383	
		5710	2.552	1.908		5.353	

Mode	U-NII Band	Centre Frequency (MHz)	Power Spectral Density (dBm/500kHz)		Duty Cycle Factor 10log(1/X)	Total Power Spectral Density (dBm/500kHz) <small>Note 4</small>	Limit
			AUX	Main			
802.11ax-HE40	3 <sup>Note2</sup>	5755	-0.253	-0.683	0.101	2.649	30dBm/500 kHz
		5795	-0.747	-0.646		2.415	

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

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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%.

5. For U-NII Band 3, Ref Offset of measured plot : Cable Loss (dB) + BWCF (dB) =1dB+7dB=8dB

Mode	U-NII Band	Centre Frequency (MHz)	Power Spectral Density (dBm/1MHz)		Duty Cycle Factor 10log(1/X)	Total Power Spectral Density (dBm/1MHz) <small>Note 3</small>	Limit
			AUX	Main			
802.11ax-HE80	1	5210	-3.551	-3.433	0.101	-0.380	11 dBm/MHz
	2A	5290	-3.882	-3.110		-0.368	
	2C	5530	-3.114	-3.099		0.005	
		5610	-0.898	-0.783		2.271	
		5690	-0.555	-1.030		2.325	

Mode	U-NII Band	Centre Frequency (MHz)	Power Spectral Density (dBm/500kHz)		Duty Cycle Factor 10log(1/X)	Total Power Spectral Density (dBm/500kHz) <small>Note 4</small>	Limit
			AUX	Main			
802.11ax-HE80	3 <small>Note2</small>	5775	-3.949	-3.819	0.101	-0.772	30dBm/500 kHz

Mode	U-NII Band	Centre Frequency (MHz)	Power Spectral Density (dBm/1MHz)		Duty Cycle Factor 10log(1/X)	Total Power Spectral Density (dBm/1MHz) <small>Note 3</small>	Limit
			AUX	Main			
802.11ax-HE160	1/2A	5250	-9.296	-8.685	N/A	-5.969	11 dBm/MHz
	2C	5570	-6.141	-6.246		-3.183	

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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%.

5. For U-NII Band 3, Ref Offset of measured plot : Cable Loss (dB) + BWCF (dB) =1dB+7dB=8dB

Mode	U-NII Band	Centre Frequency (MHz)	RU Configuration	Power Spectral Density (dBm/1MHz)		Duty Cycle Factor 10log(1/X)	Total Power Spectral Density (dBm) <small>Note 3</small>	Limit
				AUX	Main			
802.11ax-HE20	1	5180	26/0	6.223	6.715	0.214	9.700	11 dBm/MHz
			52/37	7.387	7.666	0.146	10.685	
			106/53	6.860	7.150	N/A	10.018	
	2A	5320	26/8	5.716	5.596	0.214	8.881	
			52/40	6.408	6.768	0.146	9.748	
			106/54	5.732	6.385	N/A	9.081	
	2C	5500	26/0	5.271	5.641	0.214	8.684	
			52/37	6.394	6.201	0.146	9.455	
			106/53	5.409	5.523	N/A	8.477	
		5700	26/8	6.249	6.226	0.214	9.462	
			52/40	7.000	6.971	0.146	10.142	
			106/54	7.038	6.962	N/A	10.010	

Mode	U-NII Band	Centre Frequency (MHz)	RU Configuration	Power Spectral Density (dBm/500kHz)		Duty Cycle Factor 10log(1/X)	Total Power Spectral Density (dBm) <small>Note 4</small>	Limit
				AUX	Main			
802.11ax-HE20	3 <sup>Note2</sup>	5745	26/0	9.454	9.398	0.214	12.650	30dBm/500 kHz
			52/37	3.966	4.639	0.146	7.472	
			106/53	6.000	5.901	N/A	8.961	
		5825	26/8	9.402	9.622	0.214	12.738	
			52/40	4.224	4.239	0.146	7.388	
			106/54	5.232	5.165	N/A	8.209	

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

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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%.

5. For U-NII Band 3, Ref Offset of measured plot : Cable Loss (dB) + BWCF (dB) =1dB+7dB=8dB



Mode	U-NII Band	Centre Frequency (MHz)	RU Configuration	Power Spectral Density (dBm/1MHz)		Duty Cycle Factor 10log(1/X)	Total Power Spectral Density (dBm) Note 3	Limit
				AUX	Main			
802.11ax-HE40	1	5190	242/61	5.130	5.085	0.146	8.264	11 dBm/MHz
	2A	5310	242/62	3.612	4.303		7.128	
	2C	5510	242/61	4.379	4.594		7.497	
		5670	242/62	5.944	5.944		9.100	

Mode	U-NII Band	Centre Frequency (MHz)	RU Configuration	Power Spectral Density (dBm/500kHz)		Duty Cycle Factor 10log(1/X)	Total Power Spectral Density (dBm) Note 4	Limit
				AUX	Main			
802.11ax-HE40	3 <sup>Note2</sup>	5755	242/61	3.027	2.807	0.146	6.075	30dBm/500 kHz
		5795	242/62	3.233	3.106		6.326	

Mode	U-NII Band	Centre Frequency (MHz)	RU Configuration	Power Spectral Density (dBm/1MHz)		Duty Cycle Factor 10log(1/X)	Total Power Spectral Density (dBm) Note 3	Limit
				AUX	Main			
802.11ax-HE80	1	5210	484/65	-0.319	0.020	N/A	2.864	11 dBm/MHz
	2A	5290	484/66	-3.091	-2.994		-0.032	
	2C	5530	484/65	-0.146	1.919		4.018	
		5610	484/66	2.676	2.159		5.435	

Mode	U-NII Band	Centre Frequency (MHz)	RU Configuration	Power Spectral Density (dBm/500kHz)		Duty Cycle Factor 10log(1/X)	Total Power Spectral Density (dBm) Note 4	Limit
				AUX	Main			
802.11ax-HE80	3 <sup>Note2</sup>	5775	484/65	-0.587	-0.484	N/A	2.475	30dBm/500 kHz
		5775	484/66	-0.578	-0.861		2.293	

Mode	U-NII Band	Centre Frequency (MHz)	RU Configuration	Power Spectral Density (dBm/1MHz)		Duty Cycle Factor 10log(1/X)	Total Power Spectral Density (dBm) Note 3	Limit
				AUX	Main			
802.11ax-HE160	1/2A	5250	996/67	-3.576	-3.424	0.168	-0.321	11 dBm/MHz
			996/S67	-5.492	-4.864		-1.988	
	2C	5570	996/67	-3.676	-3.738		-0.529	
			996/S67	-0.932	-1.085		2.170	

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

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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%.

5. For U-NII Band 3, Ref Offset of measured plot : Cable Loss (dB) + BWCF (dB) =1dB+7dB=8dB

A.4.2 Measurement Plots



































