

A.4 POWER SPECTRAL DENSITY

Test Date	2022/10/27 ~ 30	Temp./Hum.	22 ~ 23°C/58 ~ 63%
Cable Loss	1.0dB	Tested By	Kuper Hsu
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	6.048	6.243	N/A	6.243	11 dBm/MHz
		5200	6.047	6.161		6.161	
		5240	5.660	5.770		5.770	
	2A	5260	5.643	5.724		5.724	
		5300	5.452	5.707		5.707	
		5320	5.564	5.698		5.698	
	2C	5500	6.225	6.349		6.349	
		5580	5.884	5.754		5.884	
		5700	5.313	5.557		5.557	
		5720	5.688	6.040		6.040	

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 ^{Note2}	5745	3.779	4.749	N/A	4.749	30dBm/500 kHz
		5785	4.026	4.052		4.052	
		5825	4.499	4.091		4.499	

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

2. BWCF 7dB (100kHz converted to 500kHz) has been included in the test result.

For UNII Band 3, Ref Offset of measured plot: Cable Loss (dB) + BWCF (dB)= 1dB+7dB=8dB

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%.

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	5.618	5.635	N/A	8.637	11 dBm/MHz
		5200	5.654	5.494		8.585	
		5240	5.347	5.068		8.220	
	2A	5260	5.321	5.043		8.195	
		5300	5.406	5.063		8.248	
		5320	5.184	5.157		8.181	
	2C	5500	6.126	5.878		9.014	
		5580	5.598	5.071		8.353	
		5700	5.373	5.080		8.239	
		5720	5.660	5.068		8.384	

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 ^{Note2}	5745	3.565	3.257	N/A	6.424	30dBm/500 kHz
		5785	3.512	3.721		6.628	
		5825	4.055	3.555		6.822	

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

2. BWCF 7dB (100kHz converted to 500kHz) has been included in the test result.

For UNII Band 3, Ref Offset of measured plot: Cable Loss (dB) + BWCF (dB)= 1dB+7dB=8dB

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	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-HT40	1	5190	1.322	0.659	N/A	4.013	11 dBm/MHz
		5230	2.872	1.737		5.352	
	2A	5270	2.615	1.446		5.080	
		5310	0.363	-0.693		2.877	
	2C	5510	3.172	2.255		5.748	
		5550	3.113	2.083		5.639	
		5670	2.548	1.194		4.934	
		5710	2.797	1.381		5.157	

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-HT40	3 ^{Note2}	5755	0.445	0.017	N/A	3.247	30dBm/500 kHz
		5795	0.964	0.574		3.784	

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For UNII Band 3, Ref Offset of measured plot: Cable Loss (dB) + BWCF (dB)= 1dB+7dB=8dB

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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			
802.11ac-VHT80	1	5210	-3.180	-3.239	N/A	-0.199	11 dBm/MHz
	2A	5290	-2.441	-2.683		0.450	
	2C	5530	-1.874	-0.766		1.726	
		5610	-0.518	-1.910		1.852	
		5690	-0.692	-1.067		2.135	

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>Note 2</small>	5775	-2.854	-3.230	N/A	-0.028	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	-9.115	-9.315	N/A	-6.204	11 dBm/MHz
	2C	5570	-5.726	-5.739		-2.722	

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

2. BWCF 7dB (100kHz converted to 500kHz) has been included in the test result.

For UNII Band 3, Ref Offset of measured plot: Cable Loss (dB) + BWCF (dB)= 1dB+7dB=8dB

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%.

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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			
802.11ax-HE20	1	5180	5.746	5.673	N/A	8.720	11 dBm/MHz
		5200	5.512	5.486		8.509	
		5240	5.597	4.908		8.276	
	2A	5260	5.296	5.059		8.189	
		5300	5.326	4.926		8.141	
		5320	5.310	5.109		8.221	
	2C	5500	5.891	5.504		8.712	
		5580	5.642	5.271		8.471	
		5700	5.365	4.556		7.990	
		5720	5.515	4.686		8.131	

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			
802.11ax-HE20	3 ^{Note2}	5745	2.566	2.326	N/A	5.458	30dBm/500 kHz
		5785	2.838	2.709		5.784	
		5825	2.992	2.795		5.905	

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

2. BWCF 7dB (100kHz converted to 500kHz) has been included in the test result.

For UNII Band 3, Ref Offset of measured plot: Cable Loss (dB) + BWCF (dB)= 1dB+7dB=8dB

3. According to KDB 662911 D01 E)2a), Total Power Spectral Density (dBm/1MHz) = Sum to individual PSD (dBm/1MHz) + 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	0.970	-0.254	N/A	3.411	11 dBm/MHz
		5230	2.304	1.095		4.752	
	2A	5270	2.127	0.860		4.550	
		5310	0.283	-1.173		2.626	
	2C	5510	2.945	2.384		5.684	
		5550	2.468	2.457		5.473	
		5670	1.935	1.350		4.663	
		5710	2.141	1.606		4.892	

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 ^{Note2}	5755	-0.603	-1.114	N/A	2.159	30dBm/500 kHz
		5795	-0.477	-0.524		2.510	

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2. BWCF 7dB (100kHz converted to 500kHz) has been included in the test result.

For UNII Band 3, Ref Offset of measured plot: Cable Loss (dB) + BWCF (dB)= 1dB+7dB=8dB

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%.

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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-HE80	1	5210	-3.399	-3.450	N/A	-0.414	11 dBm/MHz
	2A	5290	-2.795	-3.111		0.060	
	2C	5530	-2.253	-2.205		0.781	
		5610	-0.753	-1.229		2.026	
		5690	-0.982	-1.088		1.976	

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	-3.620	-4.122	N/A	-0.853	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	-9.424	-9.923	N/A	-6.656	11 dBm/MHz
	2C	5570	-5.658	-6.305		-2.959	

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For UNII Band 3, Ref Offset of measured plot: Cable Loss (dB) + BWCF (dB)= 1dB+7dB=8dB

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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-HE20	1	5180	26/0	6.711	6.344	0.173	9.715	11 dBm/MHz
			52/37	7.092	7.265	0.119	10.309	
			106/53	7.125	7.177	N/A	10.161	
	2A	5320	26/8	5.951	6.280	0.173	9.302	
			52/40	7.083	6.586	0.119	9.971	
			106/54	6.706	6.141	N/A	9.443	
	2C	5500	26/0	6.651	6.210	0.173	9.619	
			52/37	7.718	7.100	0.119	10.549	
			106/53	6.457	6.450	N/A	9.464	
		5700	26/8	5.964	5.846	0.173	9.089	
			52/40	6.836	6.192	0.119	9.655	
			106/54	6.524	6.293	N/A	9.420	

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-HE20	3 ^{Note2}	5745	26/0	9.285	8.799	0.173	12.232	30dBm/500 kHz
			52/37	4.084	3.284	0.119	6.832	
			106/53	5.592	4.989	N/A	8.311	
		5825	26/8	9.334	9.287	0.173	12.494	
			52/40	4.248	3.730	0.119	7.126	
			106/54	5.510	5.075	N/A	8.308	

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%.

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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	5.550	5.115	0.150	8.498	11 dBm/MHz
	2A	5310	242/62	4.264	3.867		7.230	
	2C	5510	242/61	6.064	5.443		8.263	
		5670	242/62	5.461	4.967		8.381	

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 ^{Note2}	5755	242/61	2.378	1.935	0.150	5.322	30dBm/500 kHz
		5795	242/62	3.371	3.203		6.448	

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				AUX	Main			
802.11ax-HE80	1	5210	484/65	-0.064	-0.401	N/A	2.781	11 dBm/MHz
	2A	5290	484/66	-2.766	-3.034		0.112	
	2C	5530	484/65	1.010	0.448		3.748	
		5610	484/66	2.551	3.390		6.001	

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 ^{Note2}	5775	484/65	-0.618	-0.987	N/A	2.212	30dBm/500 kHz
		5775	484/66	-0.589	-1.154		2.148	

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	-3.704	-3.942	0.159	-0.652	11 dBm/MHz
			996/S67	-5.093	-5.706		-2.219	
	2C	5570	996/67	-3.425	-3.427		-0.257	
			996/S67	0.003	-0.701		2.835	

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

2. BWCF 7dB (100kHz converted to 500kHz) has been included in the test result.

For UNII Band 3, Ref Offset of measured plot: Cable Loss (dB) + BWCF (dB)= 1dB+7dB=8dB

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































