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# Radiated Spurious Emission Measurement Result (below 1GHz) (Band UNII-1 / Band UNII-2A, 802.11n HT40 mode)

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Low	Test By	Barry
Temperature	25	Pol	Ver./Hor
Humidity	65 %		

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	600.36	32.80	1.58	34.38	46.00	-11.62	Peak	VERTICAL
2	670.20	30.56	2.29	32.85	46.00	-13.15	Peak	VERTICAL
3	761.38	30.64	4.40	35.04	46.00	-10.96	Peak	VERTICAL
4	828.31	31.03	5.14	36.17	46.00	-9.83	Peak	VERTICAL
5	870.02	30.42	5.53	35.95	46.00	-10.05	Peak	VERTICAL
6	945.68	30.65	7.12	37.77	46.00	-8.23	Peak	VERTICAL
1	600.36	42.81	1.58	44.39	46.00	-1.61	Peak	HORIZONTAL
2	604.24	34.94	1.67	36.61	46.00	-9.39	Peak	HORIZONTAL
3	767.20	30.56	4.31	34.87	46.00	-11.13	Peak	HORIZONTAL
4	832.19	30.31	5.14	35.45	46.00	-10.55	Peak	HORIZONTAL
5	922.40	29.61	6.79	36.40	46.00	-9.60	Peak	HORIZONTAL
6	939.86	30.55	7.08	37.63	46.00	-8.37	Peak	HORIZONTAL

- 1 The measured emissions between 9kHz to 30MHz are 20dB lower against the limit, so the result is not recorded in the report.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



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#### **Radiated Spurious Emission Measurement Result (below 1GHz)**

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Mid	Test By	Barry
Temperature	25	Pol	Ver./Hor
Humidity	65 %		

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	600.36	34.15	1.58	35.73	46.00	-10.27	Peak	VERTICAL
2	726.46	30.95	3.45	34.40	46.00	-11.60	Peak	VERTICAL
3	786.60	29.90	4.48	34.38	46.00	-11.62	Peak	VERTICAL
4	846.74	30.09	5.24	35.33	46.00	-10.67	Peak	VERTICAL
5	890.39	31.12	5.93	37.05	46.00	-8.95	Peak	VERTICAL
6	932.10	30.02	6.99	37.01	46.00	-8.99	Peak	VERTICAL
1	599.39	41.25	1.55	42.80	46.00	-3.20	Peak	HORIZONTAL
2	604.24	38.47	1.67	40.14	46.00	-5.86	Peak	HORIZONTAL
3	611.03	33.94	1.78	35.72	46.00	-10.28	Peak	HORIZONTAL
4	776.90	31.01	4.33	35.34	46.00	-10.66	Peak	HORIZONTAL
5	820.55	30.11	5.00	35.11	46.00	-10.89	Peak	HORIZONTAL
6	913.67	29.88	6.41	36.29	46.00	-9.71	Peak	HORIZONTAL

- 1 The measured emissions between 9kHz to 30MHz are 20dB lower against the limit, so the result is not recorded in the report.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



# Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH High	Test By	Barry
Temperature	25	Pol	Ver./Hor
Humidity	65 %		

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No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	600.36	31.96	1.58	33.54	46.00	-12.46	Peak	VERTICAL
2	693.48	29.62	2.96	32.58	46.00	-13.42	Peak	VERTICAL
3	825.40	30.13	5.19	35.32	46.00	-10.68	Peak	VERTICAL
4	852.56	30.14	5.39	35.53	46.00	-10.47	Peak	VERTICAL
5	900.09	30.91	6.17	37.08	46.00	-8.92	Peak	VERTICAL
6	939.86	29.17	7.08	36.25	46.00	-9.75	Peak	VERTICAL
1	599.39	41.28	1.55	42.83	46.00	-3.17	Peak	HORIZONTAL
2	688.63	29.70	2.90	32.60	46.00	-13.40	Peak	HORIZONTAL
3	764.29	29.98	4.35	34.33	46.00	-11.67	Peak	HORIZONTAL
4	838.98	30.66	5.17	35.83	46.00	-10.17	Peak	HORIZONTAL
5	913.67	30.62	6.41	37.03	46.00	-8.97	Peak	HORIZONTAL
6	932.10	30.54	6.99	37.53	46.00	-8.47	Peak	HORIZONTAL

- 1 The measured emissions between 9kHz to 30MHz are 20dB lower against the limit, so the result is not recorded in the report.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



# Radiated Spurious Emission Measurement Result (below 1GHz) (Band UNII-1 / Band UNII-2A, 802.11ac VHT80 mode)

TX MODE	Test Date	2020/12/30
CH Low	Test By	Barry
25	Pol	Ver./Hor
65 %		
	TX MODE CH Low 25 65 %	TX MODETest DateCH LowTest By25Pol65 %

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	600.36	32.00	1.58	33.58	46.00	-12.42	Peak	VERTICAL
2	700.27	30.60	3.08	33.68	46.00	-12.32	Peak	VERTICAL
3	787.57	30.95	4.53	35.48	46.00	-10.52	Peak	VERTICAL
4	874.87	29.59	5.65	35.24	46.00	-10.76	Peak	VERTICAL
5	907.85	31.43	6.27	37.70	46.00	-8.30	Peak	VERTICAL
6	946.65	29.54	7.15	36.69	46.00	-9.31	Peak	VERTICAL
1	589.69	33.53	1.25	34.78	46.00	-11.22	Peak	HORIZONTAL
2	599.39	41.25	1.55	42.80	46.00	-3.20	Peak	HORIZONTAL
3	611.03	34.02	1.78	35.80	46.00	-10.20	Peak	HORIZONTAL
4	769.14	29.56	4.27	33.83	46.00	-12.17	Peak	HORIZONTAL
5	871.96	30.36	5.57	35.93	46.00	-10.07	Peak	HORIZONTAL
6	907.85	29.80	6.27	36.07	46.00	-9.93	Peak	HORIZONTAL

- 1 The measured emissions between 9kHz to 30MHz are 20dB lower against the limit, so the result is not recorded in the report.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



### **Radiated Spurious Emission Measurement Result (below 1GHz)**

Opera Chanı	Operation ModeTX MODEChannel NumberCH High						Test Date 2020/12/ Test By Barry		
Temp	Temperature 25					Pol	Ver./Hor		
Humidity		65	%						
No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol	

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NO	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	600.36	31.45	1.58	33.03	46.00	-12.97	Peak	VERTICAL
2	688.63	29.42	2.90	32.32	46.00	-13.68	Peak	VERTICAL
3	789.51	30.45	4.61	35.06	46.00	-10.94	Peak	VERTICAL
4	838.01	30.08	5.17	35.25	46.00	-10.75	Peak	VERTICAL
5	866.14	31.13	5.43	36.56	46.00	-9.44	Peak	VERTICAL
6	920.46	32.22	6.78	39.00	46.00	-7.00	Peak	VERTICAL
1	599.39	41.70	1.55	43.25	46.00	-2.75	Peak	HORIZONTAL
2	604.24	34.90	1.67	36.57	46.00	-9.43	Peak	HORIZONTAL
3	612.00	34.16	1.77	35.93	46.00	-10.07	Peak	HORIZONTAL
4	738.10	30.38	3.70	34.08	46.00	-11.92	Peak	HORIZONTAL
5	853.53	31.00	5.42	36.42	46.00	-9.58	Peak	HORIZONTAL
6	883.60	30.65	5.83	36.48	46.00	-9.52	Peak	HORIZONTAL

- 1 The measured emissions between 9kHz to 30MHz are 20dB lower against the limit, so the result is not recorded in the report.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



## Radiated Spurious Emission Measurement Result (below 1GHz) (Band UNII-2C, 802.11a mode)

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Low	Test By	Barry
Temperature	25	Pol	Ver./Hor
Humidity	65 %		

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No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	600.36	33.58	1.58	35.16	46.00	-10.84	Peak	VERTICAL
2	752.65	30.53	4.10	34.63	46.00	-11.37	Peak	VERTICAL
3	803.09	30.93	4.59	35.52	46.00	-10.48	Peak	VERTICAL
4	845.77	30.42	5.23	35.65	46.00	-10.35	Peak	VERTICAL
5	874.87	30.37	5.65	36.02	46.00	-9.98	Peak	VERTICAL
6	919.49	30.59	6.74	37.33	46.00	-8.67	Peak	VERTICAL
1	600.36	40.40	1.58	41.98	46.00	-4.02	Peak	HORIZONTAL
2	783.69	30.03	4.41	34.44	46.00	-11.56	Peak	HORIZONTAL
3	819.58	29.98	4.96	34.94	46.00	-11.06	Peak	HORIZONTAL
4	857.41	30.68	5.47	36.15	46.00	-9.85	Peak	HORIZONTAL
5	901.06	34.89	6.17	41.06	46.00	-4.94	Peak	HORIZONTAL
6	942.77	30.42	7.09	37.51	46.00	-8.49	Peak	HORIZONTAL

- 1 The measured emissions between 9kHz to 30MHz are 20dB lower against the limit, so the result is not recorded in the report.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



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#### **Radiated Spurious Emission Measurement Result (below 1GHz)**

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Mid	Test By	Barry
Temperature	25	Pol	Ver./Hor
Humidity	65 %		

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	600.36	35.62	1.58	37.20	46.00	-8.80	Peak	VERTICAL
2	759.44	30.35	4.40	34.75	46.00	-11.25	Peak	VERTICAL
3	837.04	30.41	5.16	35.57	46.00	-10.43	Peak	VERTICAL
4	875.84	30.14	5.66	35.80	46.00	-10.20	Peak	VERTICAL
5	914.64	31.08	6.44	37.52	46.00	-8.48	Peak	VERTICAL
6	954.41	29.97	7.25	37.22	46.00	-8.78	Peak	VERTICAL
1	587.75	31.77	1.17	32.94	46.00	-13.06	Peak	HORIZONTAL
2	600.36	41.92	1.58	43.50	46.00	-2.50	Peak	HORIZONTAL
3	607.15	34.59	1.74	36.33	46.00	-9.67	Peak	HORIZONTAL
4	614.91	31.81	1.72	33.53	46.00	-12.47	Peak	HORIZONTAL
5	649.83	30.50	2.13	32.63	46.00	-13.37	Peak	HORIZONTAL
6	900.09	34.34	6.17	40.51	46.00	-5.49	Peak	HORIZONTAL

- 1 The measured emissions between 9kHz to 30MHz are 20dB lower against the limit, so the result is not recorded in the report.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



Radiated Spurious Emission Measurement Result (below 1GHz)							
Operation Mode	TX MODE	Test Date	2020/12/30				
Channel Number	CH High	Test By	Barry				
Temperature	25	Pol	Ver./Hor				
Humidity	65 %						

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No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	600.36	34.02	1.58	35.60	46.00	-10.40	Peak	VERTICAL
2	651.77	30.49	2.18	32.67	46.00	-13.33	Peak	VERTICAL
3	730.34	29.72	3.60	33.32	46.00	-12.68	Peak	VERTICAL
4	764.29	31.68	4.35	36.03	46.00	-9.97	Peak	VERTICAL
5	861.29	30.47	5.45	35.92	46.00	-10.08	Peak	VERTICAL
6	950.53	29.56	7.24	36.80	46.00	-9.20	Peak	VERTICAL
1	600.36	40.04	1.58	41.62	46.00	-4.38	Peak	HORIZONTAL
2	608.12	34.17	1.76	35.93	46.00	-10.07	Peak	HORIZONTAL
3	614.91	32.72	1.72	34.44	46.00	-11.56	Peak	HORIZONTAL
4	623.64	32.37	1.75	34.12	46.00	-11.88	Peak	HORIZONTAL
5	825.40	30.36	5.19	35.55	46.00	-10.45	Peak	HORIZONTAL
6	900.09	33.87	6.17	40.04	46.00	-5.96	Peak	HORIZONTAL

- 1 The measured emissions between 9kHz to 30MHz are 20dB lower against the limit, so the result is not recorded in the report.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



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# Radiated Spurious Emission Measurement Result (below 1GHz) (Band UNII-2C, 802.11n HT20 mode)

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Low	Test By	Barry
Temperature	25	Pol	Ver./Hor
Humidity	65 %		

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	600.36	32.30	1.58	33.88	46.00	-12.12	Peak	VERTICAL
2	673.11	29.87	2.36	32.23	46.00	-13.77	Peak	VERTICAL
3	749.74	30.02	3.97	33.99	46.00	-12.01	Peak	VERTICAL
4	828.31	30.23	5.14	35.37	46.00	-10.63	Peak	VERTICAL
5	921.43	29.54	6.79	36.33	46.00	-9.67	Peak	VERTICAL
6	953.44	29.40	7.25	36.65	46.00	-9.35	Peak	VERTICAL
1	599.39	38.19	1.55	39.74	46.00	-6.26	Peak	HORIZONTAL
2	615.88	32.56	1.72	34.28	46.00	-11.72	Peak	HORIZONTAL
3	711.91	29.74	3.13	32.87	46.00	-13.13	Peak	HORIZONTAL
4	750.71	30.24	4.01	34.25	46.00	-11.75	Peak	HORIZONTAL
5	835.10	30.50	5.16	35.66	46.00	-10.34	Peak	HORIZONTAL
6	900.09	34.98	6.17	41.15	46.00	-4.85	Peak	HORIZONTAL

- 1 The measured emissions between 9kHz to 30MHz are 20dB lower against the limit, so the result is not recorded in the report.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



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#### **Radiated Spurious Emission Measurement Result (below 1GHz)**

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Mid	Test By	Barry
Temperature	25	Pol	Ver./Hor
Humidity	65 %		

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	600.36	35.98	1.58	37.56	46.00	-8.44	Peak	VERTICAL
2	720.64	30.28	3.27	33.55	46.00	-12.45	Peak	VERTICAL
3	781.75	30.75	4.41	35.16	46.00	-10.84	Peak	VERTICAL
4	827.34	30.16	5.16	35.32	46.00	-10.68	Peak	VERTICAL
5	920.46	29.51	6.78	36.29	46.00	-9.71	Peak	VERTICAL
6	944.71	31.15	7.11	38.26	46.00	-7.74	Peak	VERTICAL
1	600.36	38.21	1.58	39.79	46.00	-6.21	Peak	HORIZONTAL
2	659.53	29.92	2.44	32.36	46.00	-13.64	Peak	HORIZONTAL
3	749.74	30.46	3.97	34.43	46.00	-11.57	Peak	HORIZONTAL
4	824.43	30.53	5.18	35.71	46.00	-10.29	Peak	HORIZONTAL
5	860.32	30.21	5.47	35.68	46.00	-10.32	Peak	HORIZONTAL
6	900.09	32.85	6.17	39.02	46.00	-6.98	Peak	HORIZONTAL

- 1 The measured emissions between 9kHz to 30MHz are 20dB lower against the limit, so the result is not recorded in the report.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



Radiated Spurious Emission Measurement Result (below 1GHz)								
Operation Mode	TX MODE	Test Date	2020/12/30					
Channel Number	CH High	Test By	Barry					
Temperature	25	Pol	Ver./Hor					
Humidity	65 %							

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Radiated S	nurious	Emission	Measurement	Result (	helow	1 <b>GH</b> <sub>7</sub> )
Radiated S	purious	CHIISSIOH	wieasurement	result (	Delow	IGHZ)

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	600.36	33.26	1.58	34.84	46.00	-11.16	Peak	VERTICAL
2	670.20	29.78	2.29	32.07	46.00	-13.93	Peak	VERTICAL
3	715.79	30.21	3.16	33.37	46.00	-12.63	Peak	VERTICAL
4	742.95	30.51	3.81	34.32	46.00	-11.68	Peak	VERTICAL
5	885.54	30.13	5.91	36.04	46.00	-9.96	Peak	VERTICAL
6	944.71	30.89	7.11	38.00	46.00	-8.00	Peak	VERTICAL
1	600.36	39.02	1.58	40.60	46.00	-5.40	Peak	HORIZONTAL
2	612.00	32.52	1.77	34.29	46.00	-11.71	Peak	HORIZONTAL
3	760.41	29.67	4.41	34.08	46.00	-11.92	Peak	HORIZONTAL
4	886.51	29.66	5.91	35.57	46.00	-10.43	Peak	HORIZONTAL
5	900.09	33.07	6.17	39.24	46.00	-6.76	Peak	HORIZONTAL
6	930.16	30.73	6.93	37.66	46.00	-8.34	Peak	HORIZONTAL

- 1 The measured emissions between 9kHz to 30MHz are 20dB lower against the limit, so the result is not recorded in the report.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



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# Radiated Spurious Emission Measurement Result (below 1GHz) (Band UNII-2C, 802.11n HT40 mode)

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Low	Test By	Barry
Temperature	25	Pol	Ver./Hor
Humidity	65 %		

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	600.36	32.21	1.58	33.79	46.00	-12.21	Peak	VERTICAL
2	642.07	31.61	2.01	33.62	46.00	-12.38	Peak	VERTICAL
3	704.15	30.22	3.10	33.32	46.00	-12.68	Peak	VERTICAL
4	744.89	31.04	3.86	34.90	46.00	-11.10	Peak	VERTICAL
5	805.03	30.79	4.60	35.39	46.00	-10.61	Peak	VERTICAL
6	919.49	30.26	6.74	37.00	46.00	-9.00	Peak	VERTICAL
1	600.36	40.34	1.58	41.92	46.00	-4.08	Peak	HORIZONTAL
2	704.15	30.09	3.10	33.19	46.00	-12.81	Peak	HORIZONTAL
3	728.40	30.35	3.54	33.89	46.00	-12.11	Peak	HORIZONTAL
4	806.00	31.19	4.60	35.79	46.00	-10.21	Peak	HORIZONTAL
5	850.62	30.68	5.34	36.02	46.00	-9.98	Peak	HORIZONTAL
6	901.06	33.12	6.17	39.29	46.00	-6.71	Peak	HORIZONTAL

- 1 The measured emissions between 9kHz to 30MHz are 20dB lower against the limit, so the result is not recorded in the report.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



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#### **Radiated Spurious Emission Measurement Result (below 1GHz)**

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Mid	Test By	Barry
Temperature	25	Pol	Ver./Hor
Humidity	65 %		

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	600.36	33.75	1.58	35.33	46.00	-10.67	Peak	VERTICAL
2	697.36	29.86	3.03	32.89	46.00	-13.11	Peak	VERTICAL
3	761.38	31.32	4.40	35.72	46.00	-10.28	Peak	VERTICAL
4	792.42	30.95	4.65	35.60	46.00	-10.40	Peak	VERTICAL
5	821.52	30.33	5.04	35.37	46.00	-10.63	Peak	VERTICAL
6	888.45	30.63	5.91	36.54	46.00	-9.46	Peak	VERTICAL
1	600.36	38.43	1.58	40.01	46.00	-5.99	Peak	HORIZONTAL
2	687.66	30.60	2.86	33.46	46.00	-12.54	Peak	HORIZONTAL
3	749.74	30.38	3.97	34.35	46.00	-11.65	Peak	HORIZONTAL
4	806.97	30.26	4.60	34.86	46.00	-11.14	Peak	HORIZONTAL
5	901.06	36.70	6.17	42.87	46.00	-3.13	Peak	HORIZONTAL
6	946.65	30.98	7.15	38.13	46.00	-7.87	Peak	HORIZONTAL

- 1 The measured emissions between 9kHz to 30MHz are 20dB lower against the limit, so the result is not recorded in the report.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



<b>Radiated Spurious E</b>	Emission Measurement Result (below 1GHz)		
Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH High	Test By	Barry
Temperature	25	Pol	Ver./Hor
Humidity	65 %		

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No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	600.36	35.01	1.58	36.59	46.00	-9.41	Peak	VERTICAL
2	695.42	29.57	2.98	32.55	46.00	-13.45	Peak	VERTICAL
3	768.17	29.89	4.29	34.18	46.00	-11.82	Peak	VERTICAL
4	785.63	31.20	4.44	35.64	46.00	-10.36	Peak	VERTICAL
5	851.59	30.03	5.37	35.40	46.00	-10.60	Peak	VERTICAL
6	936.95	31.50	7.06	38.56	46.00	-7.44	Peak	VERTICAL
1	600.36	38.05	1.58	39.63	46.00	-6.37	Peak	HORIZONTAL
2	659.53	30.16	2.44	32.60	46.00	-13.40	Peak	HORIZONTAL
3	737.13	30.69	3.67	34.36	46.00	-11.64	Peak	HORIZONTAL
4	826.37	30.04	5.18	35.22	46.00	-10.78	Peak	HORIZONTAL
5	885.54	29.43	5.91	35.34	46.00	-10.66	Peak	HORIZONTAL
6	901.06	34.38	6.17	40.55	46.00	-5.45	Peak	HORIZONTAL

- 1 The measured emissions between 9kHz to 30MHz are 20dB lower against the limit, so the result is not recorded in the report.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



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# Radiated Spurious Emission Measurement Result (below 1GHz) (Band UNII-2C, 802.11ac VHT80 mode)

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Low	Test By	Barry
Temperature	25	Pol	Ver./Hor
Humidity	65 %		

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	599.39	33.24	1.55	34.79	46.00	-11.21	Peak	VERTICAL
2	691.54	29.31	2.95	32.26	46.00	-13.74	Peak	VERTICAL
3	755.56	30.45	4.22	34.67	46.00	-11.33	Peak	VERTICAL
4	822.49	29.30	5.09	34.39	46.00	-11.61	Peak	VERTICAL
5	894.27	29.84	6.03	35.87	46.00	-10.13	Peak	VERTICAL
6	935.01	29.89	7.06	36.95	46.00	-9.05	Peak	VERTICAL
1	587.75	35.09	1.17	36.26	46.00	-9.74	Peak	HORIZONTAL
2	600.36	40.47	1.58	42.05	46.00	-3.95	Peak	HORIZONTAL
3	693.48	30.18	2.96	33.14	46.00	-12.86	Peak	HORIZONTAL
4	824.43	31.45	5.18	36.63	46.00	-9.37	Peak	HORIZONTAL
5	886.51	30.94	5.91	36.85	46.00	-9.15	Peak	HORIZONTAL
6	901.06	34.14	6.17	40.31	46.00	-5.69	Peak	HORIZONTAL

- 1 The measured emissions between 9kHz to 30MHz are 20dB lower against the limit, so the result is not recorded in the report.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH High	Test By	Barry
Temperature	25	Pol	Ver /Hor
Humidity	65 %	101	· • • • • • • • • • • • • • • • • • • •

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No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	600.36	32.89	1.58	34.47	46.00	-11.53	Peak	VERTICAL
2	709.97	31.59	3.12	34.71	46.00	-11.29	Peak	VERTICAL
3	756.53	30.37	4.27	34.64	46.00	-11.36	Peak	VERTICAL
4	794.36	31.04	4.65	35.69	46.00	-10.31	Peak	VERTICAL
5	839.95	31.28	5.17	36.45	46.00	-9.55	Peak	VERTICAL
6	921.43	29.07	6.79	35.86	46.00	-10.14	Peak	VERTICAL
1	600.36	40.16	1.58	41.74	46.00	-4.26	Peak	HORIZONTAL
2	608.12	33.77	1.76	35.53	46.00	-10.47	Peak	HORIZONTAL
3	750.71	30.49	4.01	34.50	46.00	-11.50	Peak	HORIZONTAL
4	776.90	30.36	4.33	34.69	46.00	-11.31	Peak	HORIZONTAL
5	837.04	30.51	5.16	35.67	46.00	-10.33	Peak	HORIZONTAL
6	900.09	36.67	6.17	42.84	46.00	-3.16	Peak	HORIZONTAL

- 1 The measured emissions between 9kHz to 30MHz are 20dB lower against the limit, so the result is not recorded in the report.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



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# Radiated Spurious Emission Measurement Result (below 1GHz) (Band UNII-3, 802.11a mode)

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Low	Test By	Barry
Temperature	25	Pol	Ver./Hor
Humidity	65 %		

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	600.36	32.58	1.58	34.16	46.00	-11.84	Peak	VERTICAL
2	703.18	29.99	3.10	33.09	46.00	-12.91	Peak	VERTICAL
3	832.19	31.05	5.14	36.19	46.00	-9.81	Peak	VERTICAL
4	853.53	30.78	5.42	36.20	46.00	-9.80	Peak	VERTICAL
5	910.76	30.92	6.35	37.27	46.00	-8.73	Peak	VERTICAL
6	949.56	31.11	7.23	38.34	46.00	-7.66	Peak	VERTICAL
1	600.36	39.44	1.58	41.02	46.00	-4.98	Peak	HORIZONTAL
2	615.88	32.13	1.72	33.85	46.00	-12.15	Peak	HORIZONTAL
3	699.30	29.88	3.07	32.95	46.00	-13.05	Peak	HORIZONTAL
4	729.37	29.88	3.57	33.45	46.00	-12.55	Peak	HORIZONTAL
5	820.55	29.97	5.00	34.97	46.00	-11.03	Peak	HORIZONTAL
6	900.09	33.59	6.17	39.76	46.00	-6.24	Peak	HORIZONTAL

- 1 The measured emissions between 9kHz to 30MHz are 20dB lower against the limit, so the result is not recorded in the report.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



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#### **Radiated Spurious Emission Measurement Result (below 1GHz)**

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Mid	Test By	Barry
Temperature	25	Pol	Ver./Hor
Humidity	65 %		

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	600.36	34.45	1.58	36.03	46.00	-9.97	Peak	VERTICAL
2	657.59	29.74	2.36	32.10	46.00	-13.90	Peak	VERTICAL
3	719.67	29.86	3.25	33.11	46.00	-12.89	Peak	VERTICAL
4	773.02	31.12	4.27	35.39	46.00	-10.61	Peak	VERTICAL
5	852.56	30.76	5.39	36.15	46.00	-9.85	Peak	VERTICAL
6	931.13	30.09	6.95	37.04	46.00	-8.96	Peak	VERTICAL
1	600.36	39.78	1.58	41.36	46.00	-4.64	Peak	HORIZONTAL
2	624.61	34.75	1.75	36.50	46.00	-9.50	Peak	HORIZONTAL
3	683.78	30.67	2.71	33.38	46.00	-12.62	Peak	HORIZONTAL
4	793.39	30.11	4.65	34.76	46.00	-11.24	Peak	HORIZONTAL
5	900.09	32.50	6.17	38.67	46.00	-7.33	Peak	HORIZONTAL
6	937.92	30.67	7.08	37.75	46.00	-8.25	Peak	HORIZONTAL

- 1 The measured emissions between 9kHz to 30MHz are 20dB lower against the limit, so the result is not recorded in the report.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



Radiated Spurious I	Emission Measurement Result (	(Delow IGHZ)	
Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH High	Test By	Barry
Temperature	25	Pol	Ver./Hor
Humidity	65 %		

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#### Radiated Spurious Emission Measurement Result (below 1GHz)

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	600.36	36.97	1.58	38.55	46.00	-7.45	Peak	VERTICAL
2	641.10	30.85	2.01	32.86	46.00	-13.14	Peak	VERTICAL
3	726.46	29.97	3.45	33.42	46.00	-12.58	Peak	VERTICAL
4	778.84	30.37	4.37	34.74	46.00	-11.26	Peak	VERTICAL
5	855.47	29.87	5.45	35.32	46.00	-10.68	Peak	VERTICAL
6	893.30	30.76	6.01	36.77	46.00	-9.23	Peak	VERTICAL
1	600.36	38.95	1.58	40.53	46.00	-5.47	Peak	HORIZONTAL
2	610.06	32.82	1.80	34.62	46.00	-11.38	Peak	HORIZONTAL
3	614.91	32.88	1.72	34.60	46.00	-11.40	Peak	HORIZONTAL
4	734.22	29.64	3.62	33.26	46.00	-12.74	Peak	HORIZONTAL
5	785.63	30.80	4.44	35.24	46.00	-10.76	Peak	HORIZONTAL
6	900.09	34.25	6.17	40.42	46.00	-5.58	Peak	HORIZONTAL

- 1 The measured emissions between 9kHz to 30MHz are 20dB lower against the limit, so the result is not recorded in the report.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



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# Radiated Spurious Emission Measurement Result (below 1GHz) (Band UNII-3, 802.11n HT20 mode)

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Low	Test By	Barry
Temperature	25	Pol	Ver./Hor
Humidity	65 %		

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	600.36	35.32	1.58	36.90	46.00	-9.10	Peak	VERTICAL
2	629.46	31.45	1.85	33.30	46.00	-12.70	Peak	VERTICAL
3	747.80	30.16	3.93	34.09	46.00	-11.91	Peak	VERTICAL
4	822.49	29.55	5.09	34.64	46.00	-11.36	Peak	VERTICAL
5	893.30	29.77	6.01	35.78	46.00	-10.22	Peak	VERTICAL
6	929.19	29.84	6.91	36.75	46.00	-9.25	Peak	VERTICAL
1	600.36	38.46	1.58	40.04	46.00	-5.96	Peak	HORIZONTAL
2	642.07	29.77	2.01	31.78	46.00	-14.22	Peak	HORIZONTAL
3	689.60	30.25	2.93	33.18	46.00	-12.82	Peak	HORIZONTAL
4	780.78	30.38	4.40	34.78	46.00	-11.22	Peak	HORIZONTAL
5	867.11	30.02	5.45	35.47	46.00	-10.53	Peak	HORIZONTAL
6	900.09	33.80	6.17	39.97	46.00	-6.03	Peak	HORIZONTAL

- 1 The measured emissions between 9kHz to 30MHz are 20dB lower against the limit, so the result is not recorded in the report.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



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#### **Radiated Spurious Emission Measurement Result (below 1GHz)**

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Mid	Test By	Barry
Temperature	25	Pol	Ver./Hor
Humidity	65 %		

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	600.36	34.31	1.58	35.89	46.00	-10.11	Peak	VERTICAL
2	612.00	31.39	1.77	33.16	46.00	-12.84	Peak	VERTICAL
3	704.15	30.64	3.10	33.74	46.00	-12.26	Peak	VERTICAL
4	746.83	30.34	3.91	34.25	46.00	-11.75	Peak	VERTICAL
5	833.16	30.15	5.14	35.29	46.00	-10.71	Peak	VERTICAL
6	931.13	30.30	6.95	37.25	46.00	-8.75	Peak	VERTICAL
1	600.36	40.38	1.58	41.96	46.00	-4.04	Peak	HORIZONTAL
2	614.91	32.66	1.72	34.38	46.00	-11.62	Peak	HORIZONTAL
3	676.02	30.10	2.45	32.55	46.00	-13.45	Peak	HORIZONTAL
4	773.02	30.45	4.27	34.72	46.00	-11.28	Peak	HORIZONTAL
5	833.16	29.88	5.14	35.02	46.00	-10.98	Peak	HORIZONTAL
6	900.09	34.08	6.17	40.25	46.00	-5.75	Peak	HORIZONTAL

- 1 The measured emissions between 9kHz to 30MHz are 20dB lower against the limit, so the result is not recorded in the report.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



Radiated Spurious I	adiated Spurious Emission Measurement Result (below 1GHz)									
Operation Mode	TX MODE	Test Date	2020/12/30							
Channel Number	CH High	Test By	Barry							
Temperature	25	Pol	Ver./Hor							
Humidity	65 %									

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Radiated S	nurious	Emission	Measurement	Result (	helow	1 <b>GH</b> <sub>7</sub> )
Radiated S	purious	CHIISSIOH	wieasurement	result (	Delow	IGHZ)

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	600.36	33.83	1.58	35.41	46.00	-10.59	Peak	VERTICAL
2	638.19	29.94	2.03	31.97	46.00	-14.03	Peak	VERTICAL
3	652.74	30.74	2.19	32.93	46.00	-13.07	Peak	VERTICAL
4	720.64	39.52	3.27	42.79	46.00	-3.21	Peak	VERTICAL
5	794.36	32.03	4.65	36.68	46.00	-9.32	Peak	VERTICAL
6	941.80	30.59	7.09	37.68	46.00	-8.32	Peak	VERTICAL
1	547.01	29.87	0.30	30.17	46.00	-15.83	Peak	HORIZONTAL
2	588.72	33.35	1.21	34.56	46.00	-11.44	Peak	HORIZONTAL
3	600.36	42.00	1.58	43.58	46.00	-2.42	Peak	HORIZONTAL
4	612.97	33.19	1.76	34.95	46.00	-11.05	Peak	HORIZONTAL
5	660.50	30.64	2.44	33.08	46.00	-12.92	Peak	HORIZONTAL
6	900.09	36.05	6.17	42.22	46.00	-3.78	Peak	HORIZONTAL

- 1 The measured emissions between 9kHz to 30MHz are 20dB lower against the limit, so the result is not recorded in the report.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



Radiated Spurious Emission Measurement Result (below 1GHz) (Band UNII-3, 802.11n HT40 mode)

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Low	Test By	Barry
Temperature	25	Pol	Ver./Hor
Humidity	65 %	1 01	••••

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No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	600.36	34.22	1.58	35.80	46.00	-10.20	Peak	VERTICAL
2	682.81	30.94	2.69	33.63	46.00	-12.37	Peak	VERTICAL
3	736.16	31.03	3.65	34.68	46.00	-11.32	Peak	VERTICAL
4	799.21	30.23	4.59	34.82	46.00	-11.18	Peak	VERTICAL
5	861.29	30.25	5.45	35.70	46.00	-10.30	Peak	VERTICAL
6	928.22	31.21	6.88	38.09	46.00	-7.91	Peak	VERTICAL
1	600.36	38.07	1.58	39.65	46.00	-6.35	Peak	HORIZONTAL
2	657.59	30.72	2.36	33.08	46.00	-12.92	Peak	HORIZONTAL
3	773.99	30.47	4.27	34.74	46.00	-11.26	Peak	HORIZONTAL
4	841.89	30.92	5.19	36.11	46.00	-9.89	Peak	HORIZONTAL
5	900.09	33.86	6.17	40.03	46.00	-5.97	Peak	HORIZONTAL
6	942.77	31.19	7.09	38.28	46.00	-7.72	Peak	HORIZONTAL

- 1 The measured emissions between 9kHz to 30MHz are 20dB lower against the limit, so the result is not recorded in the report.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



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#### **Radiated Spurious Emission Measurement Result (below 1GHz)**

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH High	Test By	Barry
Temperature	25	Pol	Ver./Hor
Humidity	65 %		

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	600.36	41.44	1.58	43.02	46.00	-2.98	Peak	VERTICAL
2	688.63	29.62	2.90	32.52	46.00	-13.48	Peak	VERTICAL
3	774.96	30.40	4.27	34.67	46.00	-11.33	Peak	VERTICAL
4	821.52	29.65	5.04	34.69	46.00	-11.31	Peak	VERTICAL
5	838.98	30.18	5.17	35.35	46.00	-10.65	Peak	VERTICAL
6	910.76	30.65	6.35	37.00	46.00	-9.00	Peak	VERTICAL
1	600.36	40.08	1.58	41.66	46.00	-4.34	Peak	HORIZONTAL
2	607.15	36.45	1.74	38.19	46.00	-7.81	Peak	HORIZONTAL
3	621.70	32.82	1.75	34.57	46.00	-11.43	Peak	HORIZONTAL
4	841.89	31.05	5.19	36.24	46.00	-9.76	Peak	HORIZONTAL
5	855.47	30.90	5.45	36.35	46.00	-9.65	Peak	HORIZONTAL
6	900.09	32.95	6.17	39.12	46.00	-6.88	Peak	HORIZONTAL

- 1 The measured emissions between 9kHz to 30MHz are 20dB lower against the limit, so the result is not recorded in the report.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



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# Radiated Spurious Emission Measurement Result (below 1GHz) (Band UNII-3, 802.11ac VHT80 mode)

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Low	Test By	Barry
Temperature	25	Pol	Ver./Hor
Humidity	65 %		

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	600.36	35.75	1.58	37.33	46.00	-8.67	Peak	VERTICAL
2	611.03	30.77	1.78	32.55	46.00	-13.45	Peak	VERTICAL
3	708.03	30.44	3.12	33.56	46.00	-12.44	Peak	VERTICAL
4	799.21	30.38	4.59	34.97	46.00	-11.03	Peak	VERTICAL
5	839.95	30.02	5.17	35.19	46.00	-10.81	Peak	VERTICAL
6	948.59	31.17	7.19	38.36	46.00	-7.64	Peak	VERTICAL
1	600.36	40.38	1.58	41.96	46.00	-4.04	Peak	HORIZONTAL
2	646.92	29.55	2.06	31.61	46.00	-14.39	Peak	HORIZONTAL
3	743.92	30.09	3.84	33.93	46.00	-12.07	Peak	HORIZONTAL
4	759.44	30.39	4.40	34.79	46.00	-11.21	Peak	HORIZONTAL
5	852.56	30.15	5.39	35.54	46.00	-10.46	Peak	HORIZONTAL
6	900.09	33.28	6.17	39.45	46.00	-6.55	Peak	HORIZONTAL

- 1 The measured emissions between 9kHz to 30MHz are 20dB lower against the limit, so the result is not recorded in the report.
- 2 Measuring frequencies from the lowest internal frequency to the 1GHz.
- 3 Radiated emissions measured in frequency range from 9kHz to 1000MHz were made with an instrument detector setting 9-90kHz/110-490kHz using PK/AV and other Frequency Band using PK/QP
- 4 Measurement result within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



Radiated Spurious Emission Measurement Result (above 1GHz) (Band UNII-1 / Band UNII-2A, 802.11a mode)

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Low	Test By	Barry
Temperature	25	Humidity	60 %

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No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	10360.00	43.75	2.66	46.41	68.20	-21.79	Peak	VERTICAL
2	15540.00	43.28	9.25	52.53	74.00	-21.47	Peak	VERTICAL
1	10360.00	43.43	2.66	46.09	68.20	-22.11	Peak	HORIZONTAL
2	15540.00	43.93	9.25	53.18	74.00	-20.82	Peak	HORIZONTAL

- 1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 2 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



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#### **Radiated Spurious Emission Measurement Result (above 1GHz)**

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Mid	Test By	Barry
Temperature	25	Humidity	60 %

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	10520.00	43.86	3.05	46.91	68.20	-21.29	Peak	VERTICAL
2	15780.00	43.14	9.47	52.61	74.00	-21.39	Peak	VERTICAL
1	10520.00	43.63	3.05	46.68	68.20	-21.52	Peak	HORIZONTAL
2	15780.00	41.99	9.47	51.46	74.00	-22.54	Peak	HORIZONTAL

Remark:

1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.

2 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



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#### **Radiated Spurious Emission Measurement Result (above 1GHz)**

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH High	Test By	Barry
Temperature	25	Humidity	60 %

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	10640.00	43.87	3.52	47.39	74.00	-26.61	Peak	VERTICAL
2	15960.00	41.77	9.57	51.34	74.00	-22.66	Peak	VERTICAL
1	10640.00	43.72	3.52	47.24	74.00	-26.76	Peak	HORIZONTAL
2	15960.00	41.18	9.57	50.75	74.00	-23.25	Peak	HORIZONTAL

Remark:

1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.

2 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



Radiated Spurious Emission Measurement Result (above 1GHz) (Band UNII-1 / Band UNII-2A, 802.11n HT20 mode)

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Low	Test By	Barry
Temperature	25	Humidity	60 %

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No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol V/H
	IVITIZ	uDuv	uD	uDu v/m	uDu v/m	uD		V/11
1	10360.00	43.73	2.66	46.39	68.20	-21.81	Peak	VERTICAL
2	15540.00	41.88	9.25	51.13	74.00	-22.87	Peak	VERTICAL
1	10360.00	43.03	2.66	45.69	68.20	-22.51	Peak	HORIZONTAL
2	15540.00	43.09	9.25	52.34	74.00	-21.66	Peak	HORIZONTAL

- 1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 2 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



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#### **Radiated Spurious Emission Measurement Result (above 1GHz)**

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Mid	Test By	Barry
Temperature	25	Humidity	60 %

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	10520.00	43.76	3.05	46.81	68.20	-21.39	Peak	VERTICAL
2	15780.00	42.54	9.47	52.01	74.00	-21.99	Peak	VERTICAL
1	10520.00	44.42	3.05	47.47	68.20	-20.73	Peak	HORIZONTAL
2	15780.00	41.87	9.47	51.34	74.00	-22.66	Peak	HORIZONTAL

Remark:

1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.

2 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



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#### **Radiated Spurious Emission Measurement Result (above 1GHz)**

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH High	Test By	Barry
Temperature	25	Humidity	60 %

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHZ	dBuv	dВ	dBuv/m	aBuv/m	dВ		V/H
1	10640.00	43.47	3.52	46.99	74.00	-27.01	Peak	VERTICAL
2	15960.00	41.27	9.57	50.84	74.00	-23.16	Peak	VERTICAL
1	10640.00	45.32	3.52	48.84	74.00	-25.16	Peak	HORIZONTAL
2	15960.00	41.87	9.57	51.44	74.00	-22.56	Peak	HORIZONTAL

Remark:

1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.

2 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



Radiated Spurious Emission Measurement Result (above 1GHz) (Band UNII-1 / Band UNII-2A, 802.11n HT40 mode)

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Low	Test By	Barry
Temperature	25	Humidity	60 %

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No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
	IVIIIZ	uDu v	чD	uDu V/III	aDu V/III	чD		• / 11
1	10380.00	43.73	2.71	46.44	68.20	-21.76	Peak	VERTICAL
2	15570.00	40.91	9.24	50.15	74.00	-23.85	Peak	VERTICAL
1	10380.00	43.46	2.71	46.17	68.20	-22.03	Peak	HORIZONTAL
2	15570.00	42.80	9.24	52.04	74.00	-21.96	Peak	HORIZONTAL

- 1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 2 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



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#### **Radiated Spurious Emission Measurement Result (above 1GHz)**

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Mid	Test By	Barry
Temperature	25	Humidity	60 %

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	10540.00	43.79	3.14	46.93	74.00	-27.07	Peak	VERTICAL
2	15810.00	40.63	9.48	50.11	74.00	-23.89	Peak	VERTICAL
1	10540.00	45.91	3.14	49.05	68.20	-19.15	Peak	HORIZONTAL
2	15810.00	41.33	9.48	50.81	74.00	-23.19	Peak	HORIZONTAL

Remark:

1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.

2 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



<b>Radiated Spurious Emi</b>	ssion Measurement Result (above 1GHz)		
Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH High	Test By	Barry
Temperature	25	Humidity	60 %

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No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	10620.00	43.19	3.47	46.66	74.00	-27.34	Peak	VERTICAL
2	15930.00	42.34	9.52	51.86	74.00	-22.14	Peak	VERTICAL
1	10620.00	44.66	3.47	48.13	74.00	-25.87	Peak	HORIZONTAL
2	15930.00	42.98	9.52	52.50	74.00	-21.50	Peak	HORIZONTAL

Remark:

1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.

2 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



# Radiated Spurious Emission Measurement Result (above 1GHz) (Band UNII-1 / Band UNII-2A, 802.11ac VHT80 mode)

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Low	Test By	Barry
Temperature	25	Humidity	60 %

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No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	10420.00	43.10	2.79	45.89	68.20	-22.31	Peak	VERTICAL
2	15630.00	42.85	9.29	52.14	74.00	-21.86	Peak	VERTICAL
1	10420.00	44.24	2.79	47.03	68.20	-21.17	Peak	HORIZONTAL
2	15630.00	42.93	9.29	52.22	74.00	-21.78	Peak	HORIZONTAL

- 1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 2 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



Operation Mode Channel Number Temperature		ation Mode nel Number perature	TY CH 25	K MODE H High				Test Date Test By Humidity	2020/12/30 Barry 60 %
	No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
	1	10580.00	44.12	3.33	47.45	68.20	-20.75	Peak	VERTICAL
	2	15870.00	43.01	9.47	52.48	74.00	-21.52	Peak	VERTICAL

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#### **Radiated Spurious Emission Measurement Result (above 1GHz)**

3.33

9.47

Remark:

1

2

10580.00

15870.00

42.60

42.57

1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.

68.20

74.00

-22.27

-21.96

Peak

Peak

HORIZONTAL

HORIZONTAL

45.93

52.04

2 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.


## Radiated Spurious Emission Measurement Result (above 1GHz) (Band UNII-2C, 802.11a mode)

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Low	Test By	Barry
Temperature	25	Humidity	60 %

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No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	11000.00	42.91	4.14	47.05	74.00	-26.95	Peak	VERTICAL
2	16500.00	42.33	10.54	52.87	68.20	-15.33	Peak	VERTICAL
1	11000.00	42.83	4.14	46.97	74.00	-27.03	Peak	HORIZONTAL
2	16500.00	39.49	10.54	50.03	68.20	-18.17	Peak	HORIZONTAL

- 1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 2 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



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## **Radiated Spurious Emission Measurement Result (above 1GHz)**

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Mid	Test By	Barry
Temperature	25	Humidity	60 %

No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	11160.00	43.51	4.46	47.97	74.00	-26.03	Peak	VERTICAL
2	16740.00	39.57	11.27	50.84	68.20	-17.36	Peak	VERTICAL
1	11160.00	44.22	4.46	48.68	74.00	-25.32	Peak	HORIZONTAL
2	16740.00	44.89	11.27	56.16	68.20	-12.04	Peak	HORIZONTAL

Remark:

1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.



## **Radiated Spurious Emission Measurement Result (above 1GHz)**

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH High	Test By	Barry
Temperature	25	Humidity	60 %

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No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	11/00/00	12 87	5.00	17.87	74.00	26.13	Deak	VERTICAL
2	11400.00	42.07	5.00	47.07	/4.00	-20.13		VERTICAL
2	17100.00	40.62	11.03	51.65	68.20	-16.55	Peak	VERTICAL
1	11400.00	42.24	5.00	47.24	74.00	-26.76	Peak	HORIZONTAL
2	17100.00	39.72	11.03	50.75	68.20	-17.45	Peak	HORIZONTAL

Remark:

1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.



## Radiated Spurious Emission Measurement Result (above 1GHz) (Band UNII-2C, 802.11n HT20 mode)

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Low	Test By	Barry
Temperature	25	Humidity	60 %

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No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	11000.00	43.53	4.14	47.67	74.00	-26.33	Peak	VERTICAL
2	16500.00	39.53	10.54	50.07	68.20	-18.13	Peak	VERTICAL
1	11000.00	43.03	4.14	47.17	74.00	-26.83	Peak	HORIZONTAL
2	16500.00	41.14	10.54	51.68	68.20	-16.52	Peak	HORIZONTAL

- 1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 2 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



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## **Radiated Spurious Emission Measurement Result (above 1GHz)**

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Mid	Test By	Barry
Temperature	25	Humidity	60 %

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	11160.00	43.38	4.46	47.84	74.00	-26.16	Peak	VERTICAL
2	16740.00	41.20	11.27	52.47	68.20	-15.73	Peak	VERTICAL
1	11160.00	43.96	4.46	48.42	74.00	-25.58	Peak	HORIZONTAL
2	16740.00	39.99	11.27	51.26	68.20	-16.94	Peak	HORIZONTAL

Remark:

1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.



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## **Radiated Spurious Emission Measurement Result (above 1GHz)**

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH High	Test By	Barry
Temperature	25	Humidity	60 %

No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	11400.00	43.09	5.00	48.09	74.00	-25.91	Peak	VERTICAL
2	17100.00	41.52	11.03	52.55	68.20	-15.65	Peak	VERTICAL
1	11400.00	42.18	5.00	47.18	74.00	-26.82	Peak	HORIZONTAL
2	17100.00	39.72	11.03	50.75	74.00	-23.25	Peak	HORIZONTAL

Remark:

1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.



## Radiated Spurious Emission Measurement Result (above 1GHz) (Band UNII-2C, 802.11n HT40 mode)

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Low	Test By	Barry
Temperature	25	Humidity	60 %

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No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	11020.00	43.95	4.17	48.12	74.00	-25.88	Peak	VERTICAL
2	16530.00	40.91	10.56	51.47	68.20	-16.73	Peak	VERTICAL
1	11020.00	43.07	4.17	47.24	74.00	-26.76	Peak	HORIZONTAL
2	16530.00	40.85	10.56	51.41	68.20	-16.79	Peak	HORIZONTAL

- 1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 2 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



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## **Radiated Spurious Emission Measurement Result (above 1GHz)**

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Mid	Test By	Barry
Temperature	25	Humidity	60 %

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	11100.00	41.91	4.30	46.21	74.00	-27.79	Peak	VERTICAL
2	16650.00	38.93	10.91	49.84	68.20	-18.36	Peak	VERTICAL
1	11100.00	43.11	4.30	47.41	74.00	-26.59	Peak	HORIZONTAL
2	16650.00	43.50	10.91	54.41	68.20	-13.79	Peak	HORIZONTAL

Remark:

1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.



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## **Radiated Spurious Emission Measurement Result (above 1GHz)**

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH High	Test By	Barry
Temperature	25	Humidity	60 %

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	11340.00	42.83	4.90	47.73	74.00	-26.27	Peak	VERTICAL
2	17010.00	40.20	11.12	51.32	68.20	-16.88	Peak	VERTICAL
1	11340.00	42.76	4.90	47.66	74.00	-26.34	Peak	HORIZONTAL
2	17010.00	42.47	11.12	53.59	68.20	-14.61	Peak	HORIZONTAL

Remark:

1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.



Radiated Spurious Emission Measurement Result (above 1GHz) (Band UNII-2C, 802.11ac VHT80 mode)

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Low	Test By	Barry
Temperature	25	Humidity	60 %

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No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	11060.00	42.37	4.24	46.61	74.00	-27.39	Peak	VERTICAL
2	16590.00	43.85	10.61	54.46	68.20	-13.74	Peak	VERTICAL
1	11060.00	42.07	4.24	46.31	74.00	-27.69	Peak	HORIZONTAL
2	16590.00	42.43	10.61	53.04	68.20	-15.16	Peak	HORIZONTAL

- 1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 2 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



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## **Radiated Spurious Emission Measurement Result (above 1GHz)**

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH High	Test By	Barry
Temperature	25	Humidity	60 %

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	11220.00	44.57	4.62	49.19	74.00	-24.81	Peak	VERTICAL
2	16830.00	43.36	11.28	54.64	68.20	-13.56	Peak	VERTICAL
1	11220.00	41.99	4.62	46.61	74.00	-27.39	Peak	HORIZONTAL
2	16830.00	42.36	11.28	53.64	68.20	-14.56	Peak	HORIZONTAL

Remark:

1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.



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## Radiated Spurious Emission Measurement Result (above 1GHz) (Band UNII-3, 802.11a mode)

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Low	Test By	Barry
Temperature	25	Humidity	60 %

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	11490.00	41.02	5.33	46.35	74.00	-27.65	Peak	VERTICAL
2	17235.00	41.99	10.76	52.75	68.20	-15.45	Peak	VERTICAL
1	11490.00	42.14	5.33	47.47	74.00	11490.00	Peak	HORIZONTAL
2	17235.00	43.64	10.76	54.40	68.20	17235.00	Peak	HORIZONTAL

- 1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 2 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



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## **Radiated Spurious Emission Measurement Result (above 1GHz)**

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Mid	Test By	Barry
Temperature	25	Humidity	60 %

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	11570.00	42.71	5.54	48.25	74.00	-25.75	Peak	VERTICAL
2	17355.00	43.25	10.68	53.93	68.20	-14.27	Peak	VERTICAL
1	11570.00	42.49	5.54	48.03	74.00	-25.97	Peak	HORIZONTAL
2	17355.00	44.06	10.68	54.74	68.20	-13.46	Peak	HORIZONTAL

Remark:

1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.



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## **Radiated Spurious Emission Measurement Result (above 1GHz)**

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH High	Test By	Barry
Temperature	25	Humidity	60 %

No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	11650.00	44.00	5.75	49.75	74.00	-24.25	Peak	VERTICAL
2	17475.00	41.42	10.42	51.84	68.20	-16.36	Peak	VERTICAL
1	11650.00	43.41	5.75	49.16	74.00	-24.84	Peak	HORIZONTAL
2	17475.00	42.30	10.42	52.72	68.20	-15.48	Peak	HORIZONTAL

Remark:

1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.



## Radiated Spurious Emission Measurement Result (above 1GHz) (Band UNII-3, 802.11n HT20 mode)

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Low	Test By	Barry
Temperature	25	Humidity	60 %

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No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	11490.00	42.45	5.33	47.78	74.00	-26.22	Peak	VERTICAL
2	17235.00	39.59	10.76	50.35	68.20	-17.85	Peak	VERTICAL
1	11490.00	41.75	5.33	47.08	74.00	-26.92	Peak	HORIZONTAL
2	17235.00	41.12	10.76	51.88	68.20	-16.32	Peak	HORIZONTAL

- 1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 2 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



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## **Radiated Spurious Emission Measurement Result (above 1GHz)**

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Mid	Test By	Barry
Temperature	25	Humidity	60 %

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	11570.00	43.54	5.54	49.08	74.00	-24.92	Peak	VERTICAL
2	17355.00	43.27	10.68	53.95	68.20	-14.25	Peak	VERTICAL
1	11570.00	42.27	5.54	47.81	74.00	-26.19	Peak	HORIZONTAL
2	17355.00	42.84	10.68	53.52	68.20	-14.68	Peak	HORIZONTAL

Remark:

1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.



Opera Chanı Temp	ation ModeTX MODETest Datenel NumberCH HighTest Byperature25Humidity					2020/12/30 Barry 60 %		
No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	11650.00	43.39	5.75	49.14	74.00	-24.86	Peak	VERTICAL
2	17475.00	42.98	10.42	53.40	68.20	-14.80	Peak	VERTICAL

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## **Radiated Spurious Emission Measurement Result (above 1GHz)**

5.75

10.42

Remark:

1

2

11650.00

17475.00

42.51

42.27

1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.

48.26

52.69

74.00

68.20

-25.74

-15.51

Peak

Peak

HORIZONTAL

HORIZONTAL



## Radiated Spurious Emission Measurement Result (above 1GHz) (Band UNII-3, 802.11n HT40 mode)

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Low	Test By	Barry
Temperature	25	Humidity	60 %

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No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	11510.00	41.95	5.39	47.34	74.00	-26.66	Peak	VERTICAL
2	17265.00	42.47	10.69	53.16	68.20	-15.04	Peak	VERTICAL
1	11510.00	43.77	5.39	49.16	74.00	-24.84	Peak	HORIZONTAL
2	17265.00	44.02	10.69	54.71	68.20	-13.49	Peak	HORIZONTAL

- 1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 2 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



Oper Char Tem	ration Mode nnel Number perature	TX CH 25	X MODE I High				Test Date Test By Humidity	2020/12/30 Barry 60 %
No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	11590.00	42.49	5.60	48.09	74.00	-25.91	Peak	VERTICAL
2	17385.00	42.52	10 70	53 22	68 20	-14 98	Peak	VERTICAL

68.20

74.00

68.20

-14.98

-26.57

-14.94

Peak

Peak

Peak

VERTICAL

HORIZONTAL

HORIZONTAL

53.22

47.43

53.26

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## **Radiated Spurious Emission Measurement Result (above 1GHz)**

10.70

5.60

10.70

Remark:

1

2

17385.00

11590.00

17385.00

42.52

41.83

42.56

- 1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 2 Measurement of data within this frequency range shown " " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



Radiated Spurious Emission Measurement Result (above 1GHz) (Band UNII-3, 802.11ac VHT80 mode)

Operation Mode	TX MODE	Test Date	2020/12/30
Channel Number	CH Low	Test By	Barry
Temperature	25	Humidity	60 %

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No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	11550.00	42.54	5.49	48.03	74.00	-25.97	Peak	VERTICAL
2	17325.00	42.76	10.65	53.41	68.20	-14.79	Peak	VERTICAL
1	11550.00	41.20	5.49	46.69	74.00	-27.31	Peak	HORIZONTAL
2	17325.00	42.31	10.65	52.96	68.20	-15.24	Peak	HORIZONTAL

- 1 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 2 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.



Operation Mode TX CH Low Test Date 2020/12/3										
Chan	nel Number	r 51	80 MHz				Test By	Barry		
Temp	perature	25	5				Humidity	65 %		
No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H		
1	5136.87	55.25	-6.36	48.89	54.00	-5.11	Average	VERTICAL		
2	5136.87	69.30	-6.36	62.94	74.00	-11.06	Peak	VERTICAL		
3	5150.00	59.78	-6.29	53.49	54.00	-0.51	Average	VERTICAL		
4	5150.00	73.41	-6.29	67.12	68.20	-1.08	Peak	VERTICAL		
5	5181.03	113.34	-6.06	107.28	F		Peak	VERTICAL		
1	5138.94	52.99	-6.35	46.64	54.00	-7.36	Average	HORIZONTAL		
2	5138.94	71.25	-6.35	64.90	74.00	-9.10	Peak	HORIZONTAL		
3	5149.98	59.81	-6.29	53.52	54.00	-0.48	Average	HORIZONTAL		
4	5149.98	77.67	-6.29	71.38	74.00	-2.62	Peak	HORIZONTAL		
5	5183.10	114.56	-6.04	108.52	F		Peak	HORIZONTAL		

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## Band Edges test (Band UNII-1 / Band UNII-2A, 802.11a mode) -Radiated

- 1 Measuring frequencies from the lowest internal frequency to the 10th of fundamental frequency
- 2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 3 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 Spectrum Peak mode IF bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- 5 Spectrum AV mode if bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 1kHz, Sweep time= 200 ms.



Temperature

Humidity

2020/12/30

Barry

65 %

Operation Mode	TX CH High	Test Date
Channel Number	5320MHz	Test By

25

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No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	5317.14	112.46	-5.68	106.78	F		Peak	VERTICAL
2	5350.00	54.98	-5.50	49.48	54.00	-4.52	Average	VERTICAL
3	5350.00	67.97	-5.50	62.47	68.20	-5.73	Peak	VERTICAL
4	5353.54	53.37	-5.49	47.88	54.00	-6.12	Average	VERTICAL
5	5353.54	68.87	-5.49	63.38	74.00	-10.62	Peak	VERTICAL
1	5319.10	113.54	-5.66	107.88	F		Peak	HORIZONTAL
2	5350.00	55.29	-5.50	49.79	54.00	-4.21	Average	HORIZONTAL
3	5350.00	65.96	-5.50	60.46	68.20	-7.74	Peak	HORIZONTAL
4	5351.16	55.34	-5.50	49.84	54.00	-4.16	Average	HORIZONTAL
5	5351.16	68.33	-5.50	62.83	74.00	-11.17	Peak	HORIZONTAL

Remark:

1 Measuring frequencies from the lowest internal frequency to the 10th of fundamental frequency

2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.

- 3 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 Spectrum Peak mode IF bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- 5 Spectrum AV mode if bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 1kHz, Sweep time= 200 ms.



Opera Chant Temp	ation Mode nel Number perature	T2 51 25	X CH Lov 80 MHz 5	V			Test Date Test By Humidity	2020/12/30 Barry 65 %
No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	5144.46	52.45	-6.32	46.13	54.00	-7.87	Average	VERTICAL
2	5144.46	69.90	-6.32	63.58	74.00	-10.42	Peak	VERTICAL
3	5150.00	56.22	-6.29	49.93	54.00	-4.07	Average	VERTICAL
4	5150.00	71.21	-6.29	64.92	68.20	-3.28	Peak	VERTICAL
5	5181.72	111.70	-6.05	105.65	F		Peak	VERTICAL
1	5147.22	52.44	-6.31	46.13	54.00	-7.87	Average	HORIZONTAL
2	5147.22	73.31	-6.31	67.00	74.00	-7.00	Peak	HORIZONTAL
3	5150.00	57.99	-6.29	51.70	54.00	-2.30	Average	HORIZONTAL
4	5150.00	73.27	-6.29	66.98	68.20	-1.22	Peak	HORIZONTAL
5	5183.10	112.88	-6.04	106.84	F		Peak	HORIZONTAL

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#### Band Edges test (Band UNII-1 / Band UNII-2A, 802.11n HT20 mode) -Radiated 2020/12/20

Remark:

1 Measuring frequencies from the lowest internal frequency to the 10th of fundamental frequency

2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.

- Measurement of data within this frequency range shown " " in the table above means the 3 reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- Spectrum Peak mode IF bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, Sweep time= 200 4 ms., the VBW setting was 3 MHz.
- Spectrum AV mode if bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, VBW ≥ 1/Ton, Sweep 5 time= 200 ms.



Operation Mode	TX CH High	Test Date
Channel Number	5320MHz	Test By
Temperature	25	Humidity

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Test Date	2020/12/30
Test By	Barry
Humidity	65 %

No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	5321.20	112.12	-5.66	106.46	F		Peak	VERTICAL
2	5350.04	53.17	-5.50	47.67	54.00	-6.33	Average	VERTICAL
3	5350.04	72.61	-5.50	67.11	74.00	-6.89	Peak	VERTICAL
4	5351.02	52.77	-5.50	47.27	54.00	-6.73	Average	VERTICAL
5	5351.02	74.22	-5.50	68.72	74.00	-5.28	Peak	VERTICAL
1	5318.68	113.52	-5.68	107.84	F		Peak	HORIZONTAL
2	5350.00	53.40	-5.50	47.90	54.00	-6.10	Average	HORIZONTAL
3	5350.00	65.46	-5.50	59.96	68.20	-8.24	Peak	HORIZONTAL
4	5350.88	55.25	-5.50	49.75	54.00	-4.25	Average	HORIZONTAL
5	5350.88	66.70	-5.50	61.20	74.00	-12.80	Peak	HORIZONTAL

Remark:

- 2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 3 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 Spectrum Peak mode IF bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- 5 Spectrum AV mode if bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, VBW ≥ 1/Ton, Sweep time= 200 ms.



Opera	2020/12/30							
Chan	nel Number	51	90 MHz				Test By	Barry
Temp	erature	25	5				Humidity	65 %
No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	5147.52	56.66	-6.31	50.35	54.00	-3.65	Average	VERTICAL
2	5147.52	71.12	-6.31	64.81	74.00	-9.19	Peak	VERTICAL
3	5150.00	55.69	-6.29	49.40	54.00	-4.60	Average	VERTICAL
4	5150.00	67.97	-6.29	61.68	68.20	-6.52	Peak	VERTICAL
5	5188.70	105.74	-6.01	99.73	F		Peak	VERTICAL
1	5141.84	53.97	-6.34	47.63	54.00	-6.37	Average	HORIZONTAL
2	5141.84	66.08	-6.34	59.74	74.00	-14.26	Peak	HORIZONTAL
3	5150.00	57.66	-6.29	51.37	54.00	-2.63	Average	HORIZONTAL
4	5150.00	67.08	-6.29	60.79	68.20	-7.41	Peak	HORIZONTAL
5	5192.25	106.83	-5.99	100.84	F		Peak	HORIZONTAL

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#### Band Edges test (Band UNII-1 / Band UNII-2A, 802.11n HT40 mode) -Radiated

- 1 Measuring frequencies from the lowest internal frequency to the 10th of fundamental frequency
- 2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 3 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 Spectrum Peak mode IF bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- 5 Spectrum AV mode if bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, VBW ≥ 1/Ton, Sweep time= 200 ms.



Peak

Average

Peak

---

-0.12

-5.95

HORIZONTAL

HORIZONTAL

HORIZONTAL

Opera	ation Mode		Test Date	2020/12/30				
Chani	nel Number	53		Test By	Barry			
Temp	erature	25	5				Humidity	65 %
_							_	
No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	5307.44	106.46	-5.73	100.73	F		Peak	VERTICAL
2	5350.00	54.99	-5.50	49.49	54.00	-4.51	Average	VERTICAL
3	5350.00	68.43	-5.50	62.93	68.20	-5.27	Peak	VERTICAL
4	5351.18	54.80	-5.50	49.30	54.00	-4.70	Average	VERTICAL
5	5351.18	69.21	-5.50	63.71	74.00	-10.29	Peak	VERTICAL

101.99

53.88

62.25

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Remark:

1

2

3

5308.34

5350.00

5350.00

107.72

59.38

67.75

-5.73

-5.50

-5.50

1 Measuring frequencies from the lowest internal frequency to the 10th of fundamental frequency

F

54.00

68.20

- 2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 3 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 Spectrum Peak mode IF bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- 5 Spectrum AV mode if bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, VBW ≥ 1/Ton, Sweep time= 200 ms.



Operation Mode TX CH Low Test Date 2020/12/30										
Chan	Barry									
Temp	erature	25	5				Humidity	65 %		
_										
No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H		
1	5135.25	55.46	-6.37	49.09	54.00	-4.91	Average	VERTICAL		
2	5135.25	69.24	-6.37	62.87	74.00	-11.13	Peak	VERTICAL		
3	5150.00	55.19	-6.29	48.90	54.00	-5.10	Average	VERTICAL		
4	5150.00	70.63	-6.29	64.34	68.20	-3.86	Peak	VERTICAL		
5	5222.25	102.99	-5.84	97.15	F		Peak	VERTICAL		
1	5143.50	55.24	-6.34	48.90	54.00	-5.10	Average	HORIZONTAL		
2	5143.50	72.81	-6.34	66.47	74.00	-7.53	Peak	HORIZONTAL		
3	5150.00	56.61	-6.29	50.32	54.00	-3.68	Average	HORIZONTAL		
4	5150.00	71.14	-6.29	64.85	68.20	-3.35	Peak	HORIZONTAL		
5	5199.00	105.22	-5.93	99.29	F		Peak	HORIZONTAL		

#### Band Edges test (Band UNII-1 / Band UNII-2A, 802.11ac VHT80 mode) -Radiated

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- 1 Measuring frequencies from the lowest internal frequency to the 10th of fundamental frequency
- 2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 3 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 Spectrum Peak mode IF bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- 5 Spectrum AV mode if bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, VBW ≥ 1/Ton, Sweep time= 200 ms.



Operation Mode	TX CH High
Channel Number	5290MHz
Temperature	25

Test Date	2020/12/30
Test By	Barry
Humidity	65 %

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	5286.80	103.01	-5.76	97.25	F		Peak	VERTICAL
2	5350.00	53.23	-5.50	47.73	54.00	-6.27	Average	VERTICAL
3	5350.00	68.90	-5.50	63.40	68.20	-4.80	Peak	VERTICAL
1	5293.80	105.07	-5.77	99.30	F		Peak	HORIZONTAL
2	5350.00	57.70	-5.50	52.20	54.00	-1.80	Average	HORIZONTAL
3	5350.00	70.31	-5.50	64.81	68.20	-3.39	Peak	HORIZONTAL
4	5353.40	54.99	-5.49	49.50	54.00	-4.50	Average	HORIZONTAL
5	5353.40	74.60	-5.49	69.11	74.00	-4.89	Peak	HORIZONTAL

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- 1 Measuring frequencies from the lowest internal frequency to the 10th of fundamental frequency
- 2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 3 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 Spectrum Peak mode IF bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- 5 Spectrum AV mode if bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, VBW ≥ 1/Ton, Sweep time= 200 ms.

2020/12/30

Barry

Test Date

Test By



Operation Mode

Channel Number

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Temp	erature	25	i				Humidity	65 %
No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	5457.53	51.96	-5.26	46.70	54.00	-7.30	Average	VERTICAL
2	5457.53	66.11	-5.26	60.85	74.00	-13.15	Peak	VERTICAL
3	5470.00	70.33	-5.26	65.07	68.20	-3.13	Peak	VERTICAL
4	5498.34	111.66	-5.28	106.38	F		Peak	VERTICAL
1	5458.85	52.27	-5.26	47.01	54.00	-6.99	Average	HORIZONTAL
2	5458.85	66.54	-5.26	61.28	74.00	-12.72	Peak	HORIZONTAL
3	5470.00	68.92	-5.26	63.66	68.20	-4.54	Peak	HORIZONTAL
4	5498.23	114.66	-5.28	109.38	F		Peak	HORIZONTAL

## Band Edges test (Band UNII-2C, 802.11a mode) -Radiated

TX CH Low

5500 MHz

Remark:

- 2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 3 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 Spectrum Peak mode IF bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- 5 Spectrum AV mode if bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 1kHz, Sweep time= 200 ms.



Operation Mode	TX CH High	Test
Channel Number	5700MHz	Test
Temperature	25	Hum

Fest Date	2020/12/30
Гest By	Barry
Humidity	65 %

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	5698.96	111.78	-4.82	106.96	F		Peak	VERTICAL
2	5725.00	69.00	-4.73	64.27	68.20	-3.93	Peak	VERTICAL
1	5698.96	114.16	-4.82	109.34	F		Peak	HORIZONTAL
2	5725.00	71.91	-4.73	67.18	68.20	-1.02	Peak	HORIZONTAL

Remark:

- 2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 3 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 Spectrum Peak mode IF bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- 5 Spectrum AV mode if bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 1kHz, Sweep time= 200 ms.

HORIZONTAL

HORIZONTAL

Peak

Peak



Opera Chann Temp	ntion Mode nel Number reature	- T2 55 25	X CH Low 600 MHz	V			Test Date Test By Humidity	2020/12/30 Barry 65 %
No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	5458.08	51.70	-5.26	46.44	54.00	-7.56	Average	VERTICAL
2	5458.08	64.18	-5.26	58.92	74.00	-15.08	Peak	VERTICAL
3	5470.00	68.43	-5.26	63.17	68.20	-5.03	Peak	VERTICAL
4	5498.78	113.31	-5.28	108.03	F		Peak	VERTICAL
1	5458.63	52.15	-5.26	46.89	54.00	-7.11	Average	HORIZONTAL
2	5458 63	66 03	-5 26	60 77	74 00	-13 23	Peak	HORIZONTAL

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## Band Edges test (Band UNII-2C, 802.11n HT20 mode) -Radiated

Remark:

3

4

5470.00

5501.20

70.14

113.64

-5.26

-5.28

1 Measuring frequencies from the lowest internal frequency to the 10th of fundamental frequency

68.20

F

-3.32

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64.88

108.36

- 2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- Measurement of data within this frequency range shown " " in the table above means the 3 reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- Spectrum Peak mode IF bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, Sweep time= 200 4 ms., the VBW setting was 3 MHz.
- Spectrum AV mode if bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, VBW  $\geq$  1/Ton, Sweep 5 time= 200 ms.



Operation Mode	TX CH High	Test Date	2020/12/30
Channel Number	5700MHz	Test By	Barry
Temperature	25	Humidity	65 %

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	5698.80	110.22	-4.82	105.40	F		Peak	VERTICAL
2	5725.00	68.40	-4.73	63.67	68.20	-4.53	Peak	VERTICAL
1	5696.56	114.61	-4.83	109.78	F		Peak	HORIZONTAL
2	5725.00	68.97	-4.73	64.24	68.20	-3.96	Peak	HORIZONTAL

Remark:

- 2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 3 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 Spectrum Peak mode IF bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- 5 Spectrum AV mode if bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, VBW ≥ 1/Ton, Sweep time= 200 ms.



Opera Chani Temp	ntion Mode nel Number perature	T2 55 25	X CH Low 10 MHz	V	,		Test Date Test By Humidity	2020/12/30 Barry 65 %
No	Freq MHz	Reading dBuV	Factor dB	Level dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol V/H
1	5459.80	55.24	-5.26	49.98	54.00	-4.02	Average	VERTICAL
2	5459.80	65.01	-5.26	59.75	74.00	-14.25	Peak	VERTICAL
3	5460.06	65.14	-5.26	59.88	68.20	-8.32	Peak	VERTICAL
4	5470.00	70.10	-5.26	64.84	68.20	-3.36	Peak	VERTICAL
5	5512.06	107.29	-5.26	102.03	F		Peak	VERTICAL
1	5459.80	55.27	-5.26	50.01	54.00	-3.99	Average	HORIZONTAL
2	5459.80	69.49	-5.26	64.23	74.00	-9.77	Peak	HORIZONTAL
3	5460.06	70.21	-5.26	64.95	68.20	-3.25	Peak	HORIZONTAL
4	5470.00	73.06	-5.26	67.80	68.20	-0.40	Peak	HORIZONTAL
5	5512.84	109.22	-5.26	103.96	F		Peak	HORIZONTAL

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# Band Edges test (Band UNII-2C, 802.11n HT40 mode) -RadiatedOperation ModeTX CH Low

Remark:

- Field strength limits for frequency above 1000MHz are based on average limits. However, Peak 2 mode field strength shall not exceed the average limits specified plus 20dB.
- Measurement of data within this frequency range shown "-" in the table above means the read-3 ing of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- Spectrum Peak mode IF bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, Sweep time= 200 4 ms., the VBW setting was 3 MHz.
- Spectrum AV mode if bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, VBW ≥ 1/Ton, Sweep 5 time= 200 ms.



Operation Mode	TX CH High	Test Date	2020/12/30
Channel Number	5670MHz	Test By	Barry
Temperature	25	Humidity	65 %

No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	5668.20	105.41	-5.00	100.41	F		Peak	VERTICAL
2	5725.00	57.91	-4.73	53.18	68.20	-15.02	Peak	VERTICAL
1	5665.80	110.11	-5.02	105.09	F		Peak	HORIZONTAL
2	5725.00	58.69	-4.73	53.96	68.20	-14.24	Peak	HORIZONTAL

Remark:

- 2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 3 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 Spectrum Peak mode IF bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- 5 Spectrum AV mode if bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, VBW ≥ 1/Ton, Sweep time= 200 ms.



Opera Chant Temp	ation Mode nel Number perature	TX 55 25	X CH Low 30 MHz	7			Test Date Test By Humidity	2020/12/30 Barry 65 %
No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	5440.97	53.99	-5.27	48.72	54.00	-5.28	Average	VERTICAL
2	5440.97	69.16	-5.27	63.89	74.00	-10.11	Peak	VERTICAL
3	5470.00	69.51	-5.26	64.25	68.20	-3.95	Peak	VERTICAL
4	5533.28	104.92	-5.22	99.70	F		Peak	VERTICAL
1	5450.49	57.66	-5.25	52.41	54.00	-1.59	Average	HORIZONTAL
2	5450.49	68.27	-5.25	63.02	74.00	-10.98	Peak	HORIZONTAL
3	5470.04	67.09	-5.26	61.83	68.20	-6.37	Peak	HORIZONTAL
4	5528.52	105.82	-5.23	100.59	F		Peak	HORIZONTAL

## Band Edges test (Band UNII-2C, 802.11ac VHT80 mode) -Radiated

Remark:

- 2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- Measurement of data within this frequency range shown " " in the table above means the 3 reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- Spectrum Peak mode IF bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, Sweep time= 200 4 ms., the VBW setting was 3 MHz.
- Spectrum AV mode if bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 2kHz, Sweep 5 time= 200 ms.



Operation Mode	TX CH High	Test Date	2020/12/30
Channel Number	5610MHz	Test By	Barry
Temperature	25	Humidity	65 %

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No	Freq	Reading	Factor	Level	Limit	Margin	Remark	Pol
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB		V/H
1	5612.84	103.60	-5.18	98.42	F		Peak	VERTICAL
2	5725.00	57.10	-4.73	52.37	68.20	-15.83	Peak	VERTICAL
1	5607.80	106.24	-5.18	101.06	F		Peak	HORIZONTAL
2	5725.00	59.60	-4.73	54.87	68.20	-13.33	Peak	HORIZONTAL

- 1 Measuring frequencies from the lowest internal frequency to the 10th of fundamental frequency
- 2 Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- 3 Measurement of data within this frequency range shown "-" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 Spectrum Peak mode IF bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- 5 Spectrum AV mode if bandwidth Setting : 1GHz- 40GHz, RBW= 1MHz, VBW= 2kHz, Sweep time= 200 ms.


#### Band Edges test (Band UNII-3, 802.11a mode) - Radiated

Operation Mode	TX CH Low	Test Date	2020/12/23
Channel Number	5745 MHz	Test By	Barry
Temperature	25	Humidity	65 %



Condition: limit\FCC\NCC 5G B4 MASK.csv 3m factor\966 3117 V 1-18G.csv Vertical : RBW:1000kHz VBW:1000kHz SWT:Auto DET:Positive

EUT : Mode : 5G B4 a mode low ch Note :

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Pol/Phase
-	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1 2 3 4 5 6 PP	5609.455 5614.725 5622.630 5629.760 5639.990 5644.950	60.10 60.74 59.86 60.19 60.17 61.89	-4.62 -4.64 -4.65 -4.67 -4.69 -4.71	55.48 56.10 55.21 55.52 55.48 57.18	68.20 68.20 68.20 68.20 68.20 68.20 68.20	-12.72 -12.10 -12.99 -12.68 -12.72 -11.02	Vertical Vertical Vertical Vertical Vertical Vertical

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EUT							
Mode	:	5G	B <b>4</b>	а	mode	low	ch

Note :

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Pol/Phase
-	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1 PP 2 3 4 5 6	5600.155 5612.400 5623.715 5631.465 5634.875 5640.455	61.65 59.96 59.84 60.78 60.95 60.80	-4.60 -4.63 -4.65 -4.68 -4.68 -4.68	57.05 55.33 55.19 56.10 56.27 56.11	68.20 68.20 68.20 68.20 68.20 68.20	-11.15 -12.87 -13.01 -12.10 -11.93 -12.09	Horizontal Horizontal Horizontal Horizontal Horizontal Horizontal



Operation Mode	TX CH High	
Channel Number	5825MHz	
Temperature	25	

Test Date	2020/12/23
Test By	Barry
Humidity	65 %



Condition: limit\FCC\NCC 5G B4 MASK.csv 3m factor\966 3117 V 1-18G.csv Vertical : RBW:1000kHz VBW:1000kHz SWT:Auto DET:Positive

EUT	:							
Mode	:	5G	8 <b>4</b>	а	mode	high	ch	
Note	:							

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Pol/Phase
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1 2 3 4 PP 5 6	5935.990 5944.130 5950.605 5966.145 5975.395 5986.495	61.45 62.50 61.91 62.77 62.01 62.61	-3.87 -3.88 -3.88 -3.82 -3.78 -3.74	57.58 58.62 58.03 58.95 58.23 58.87	68.20 68.20 68.20 68.20 68.20 68.20	-10.62 -9.58 -10.17 -9.25 -9.97 -9.33	Vertical Vertical Vertical Vertical Vertical Vertical





#### Condition: limit\FCC\NCC 5G B4 MASK.csv 3m factor\966 9120D H 1-18G.csv Horizont : RBW:1000kHz VBW:1000kHz SWT:Auto DET:Positive

EUT	:						
Mode	:	5G	B <b>4</b>	а	mode	high	ch
Note	:						

	-	Read			Limit	0ver	
	Freq	Level	Factor	Level	Line	Limit	Pol/Phase
-	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	5938.025	61.18	-6.24	54.94	68.20	<b>-13.2</b> 6	Horizontal
2	5940.800	61.97	-6.23	55.74	68.20	-12.46	Horizontal
3	5954.860	62.01	-6.19	55.82	68.20	-12.38	Horizontal
4 PP	5975.395	61.93	-6.10	55.83	68.20	-12.37	Horizontal
5	5987.050	61.41	-6.05	55.36	68.20	-12.84	Horizontal
6	5995.375	61.32	-6.02	55.30	68.20	-12.90	Horizontal



### Band Edges test (Band UNII-3, 802.11n HT20 mode) –Radiated

Operation Mode	TX CH Low	Test Date	2020/12/23
Channel Number	5745 MHz	Test By	Barry
Temperature	25	Humidity	65 %



Condition: limit\FCC\NCC 5G B4 MASK.csv 3m factor\966 9120D V 1-18G.csv Vertical : RBW:1000kHz VBW:1000kHz SWT:Auto DET:Positive

EUT	:							
Mode	:	5G	84	n20	mode	low	ch	
Note	:							

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Pol/Phase
-	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	5610.540	60.72	-7.43	53.29	68.20	-14.91	Vertical
2	5616.430	61.25	-7.41	53.84	68.20	-14.36	Vertical
3	5618.755	60.82	-7.40	53.42	68.20	-14.78	Vertical
4	5622.165	61.69	-7.39	54.30	68.20	-13.90	Vertical
5	5639.835	61.00	-7.32	53.68	68.20	-14.52	Vertical
6 PP	5645.570	62.10	-7.30	54.80	68.20	-13.40	Vertical





Condition: limit\FCC\NCC 5G B4 MASK.csv 3m factor\966 3117 H 1-18G.csv Horizonta : RBW:1000kHz VBW:1000kHz SWT:Auto DET:Positive

EUT	:						
Mode	:	5G	84	n20	mode	low	ch
Note	:						

Freq	Read Level	Factor	Level	Limit Line	Over Limit	Pol/Phase
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
5605.735	61.69	-4.61	57.08	68.20	-11.12	Horizontal
5611.470	60.41	-4.63	55.78	68.20	-12.42	Horizontal
5619.220	60.85	-4.65	56.20	68.20	-12.00	Horizontal
5629.605	61.06	-4.67	56.39	68.20	-11.81	Horizontal
5640.765	60.89	-4.69	56.20	68.20	-12.00	Horizontal
5647.585	6 <b>0.4</b> 7	-4.70	55.77	68.20	-12.43	Horizontal
	Freq MHz 5605.735 5611.470 5619.220 5629.605 5640.765 5647.585	Read           Freq         Level           MHz         dBuV           5605.735         61.69           5611.470         60.41           5619.220         60.85           5629.605         61.06           5640.765         60.89           5647.585         60.47	Read           Freq         Level Factor           MHz         dBuV         dB/m           5605.735         61.69         -4.61           5611.470         60.41         -4.63           5619.220         60.85         -4.65           5629.605         61.06         -4.67           5640.765         60.89         -4.69           5647.585         60.47         -4.70	Read           Freq         Level         Factor         Level           MHz         dBuV         dB/m         dBuV/m           5605.735         61.69         -4.61         57.08           5611.470         60.41         -4.63         55.78           5619.220         60.85         -4.65         56.20           5629.605         61.06         -4.67         56.39           5640.765         60.89         -4.69         56.20           5647.585         60.47         -4.70         55.77	Read         Limit           Freq         Level         Factor         Level         Line           MHz         dBuV         dB/m         dBuV/m         dBuV/m           5605.735         61.69         -4.61         57.08         68.20           5611.470         60.41         -4.63         55.78         68.20           5619.220         60.85         -4.65         56.20         68.20           5629.605         61.06         -4.67         56.39         68.20           5640.765         60.89         -4.69         56.20         68.20           5647.585         60.47         -4.70         55.77         68.20	Read         Limit         Over           Freq         Level         Factor         Level         Line         Limit           MHz         dBuV         dB/m         dBuV/m         dBuV/m         dBuV/m         dB           5605.735         61.69         -4.61         57.08         68.20         -11.12           5611.470         60.41         -4.63         55.78         68.20         -12.42           5619.220         60.85         -4.65         56.20         68.20         -12.00           5629.605         61.06         -4.67         56.39         68.20         -11.81           5640.765         60.89         -4.69         56.20         68.20         -12.00           5647.585         60.47         -4.70         55.77         68.20         -12.43



Operation Mode	TX CH High
Channel Number	5825 MHz
Temperature	25

Test Date	2020/12/23
Test By	Barry
Humidity	65 %



Condition: limit\FCC\NCC 5G B4 MASK.csv 3m factor\966 3117 V 1-18G.csv Vertical : RBW:1000kHz VBW:1000kHz SWT:Auto DET:Positive

EUT : Mode : 5G B4 n2θ mode high ch Note :

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Pol/Phase
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	5934.325	62.54	-3.88	58.66	68.20	-9.54	Vertical
2	5938.765	61.29	-3.88	57.41	68.20	-10.79	Vertical
3	5954.490	61.31	-3.87	57.44	68.20	-10.76	Vertical
4	5969.105	61.32	-3.80	57.52	68.20	-10.68	Vertical
5	5981.500	61.48	-3.76	57.72	68.20	-10.48	Vertical
6 PP	5984.645	62.73	-3.75	58.98	68.20	-9.22	Vertical





Condition: limit\FCC\NCC 5G B4 MASK.csv 3m factor\966 3117 H 1-18G.csv Horizonta : RBW:1000kHz VBW:1000kHz SWT:Auto DET:Positive

EUT	:						
Mode	:	5G	84	n20	mode	high	ch
Note	:						

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Pol/Phase
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	5 <b>9</b> 36.915	62.65	-3.87	58.78	68.20	-9.42	Horizontal
2	5945.610	61.87	-3.87	58.00	68.20	-10.20	Horizontal
3	5955.785	62.30	-3.85	58.45	68.20	-9.75	Horizontal
4	5960.595	62.82	-3.84	58.98	68.20	-9.22	Horizontal
5	5971.140	61.57	-3.80	57.77	68.20	-10.43	Horizontal
6	PP 5987.975	63.00	-3.73	59.27	68.20	-8.93	Horizontal





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#### Band Edges test (Band UNII-3, 802.11n HT40 mode) –Radiated

Operation Mode	TX CH Low	Test Date	2020/12/23
Channel Number	5755 MHz	Test By	Barry
Temperature	25	Humidity	65 %



Condition: limit\FCC\NCC 5G B4 MASK.csv 3m factor\966 3117 V 1-18G.csv Vertical : RBW:1000kHz VBW:1000kHz SWT:Auto DET:Positive EUT :

Mode	:	5G	84	n40	mode	low	ch
Note	:						

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Pol/Phase
-	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1 PP	5602.975	61.61	-4.61	57.00	68.20	-11.20	Vertical
3	5612.850	61.00	-4.63	56.36	68.20	-11.95	Vertical
4 5	5631.150 5644.975	61.34 61.04	-4.67 -4.71	56.67 56.33	68.20 68.20	-11.53 -11.87	Vertical Vertical
6	5650.225	61.63	-4.71	56.92	68.37	-11.45	Vertical





Condition: limit\FCC\NCC 5G B4 MASK.csv 3m factor\966 3117 H 1-18G.csv Horizonta : RBW:1000kHz VBW:1000kHz SWT:Auto DET:Positive EUT :

Mode	:	5G	8 <b>4</b>	n40	mode	low	ch
Note	:						

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Pol/Phase
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1 2 3 PI 4 5 6	5601.575 5612.250 5618.025 5628.175 5639.200 5646.025	61.76 60.77 61.93 61.21 61.91 60.64	-4.61 -4.63 -4.64 -4.66 -4.69 -4.70	57.15 56.14 57.29 56.55 57.22 55.94	68.20 68.20 68.20 68.20 68.20 68.20	-11.05 -12.06 -10.91 -11.65 -10.98 -12.26	Horizontal Horizontal Horizontal Horizontal Horizontal Horizontal



Operation Mode	TX CH High	Test Date	2020/12/23
Channel Number	5795MHz	Test By	Barry
Temperature	25	Humidity	65 %



Condition: limit\FCC\NCC 5G B4 MASK.csv 3m factor\966 3117 V 1-18G.csv Vertical : RBW:1000kHz VBW:1000kHz SWT:Auto DET:Positive EUT :

Mode : 5G B4 n40 mode high ch Note :

 Read
 Limit
 Over

 Freq
 Level
 Factor
 Level
 Line
 Limit
 Pol/Phase

 MHz
 dBuV
 dB/m
 dBuV/m
 dBuV/m
 dB
 dB

 1
 5944.650
 62.19
 -3.88
 58.31
 68.20
 -9.89
 Vertical

 2
 5957.700
 62.49
 -3.84
 58.65
 68.20
 -9.55
 Vertical

 3
 5977.725
 61.40
 -3.77
 57.63
 68.20
 -10.57
 Vertical

 4
 PP
 5986.275
 63.31
 -3.74
 59.57
 68.20
 -9.81
 Vertical

 5
 5990.775
 62.12
 -3.73
 58.39
 68.20
 -9.81
 Vertical

 6
 5998.650
 61.43
 -3.69
 57.74
 68.20
 -9.81
 Vertical

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Condition: limit\FCC\NCC 5G B4 MASK.csv 3m factor\966 3117 H 1-18G.csv Horizont@ : RBW:1000kHz VBW:1000kHz SWT:Auto DET:Positive

EUT Mo

:

ode	:	5G	84	n40	mode	high	ch
ote	:						

Note

	Freq	Read Level	Factor	Leve1	Limit Line	Over Limit	Pol/Phase
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1 2 3 PP 4 5 6	5941.050 5951.175 5964.675 5983.125 5993.475 5998.200	61.18 61.85 62.17 61.61 61.62 61.13	-3.88 -3.88 -3.83 -3.75 -3.72 -3.69	57.30 57.97 58.34 57.86 57.90 57.44	68.20 68.20 68.20 68.20 68.20 68.20	-10.90 -10.23 -9.86 -10.34 -10.30 -10.76	Horizontal Horizontal Horizontal Horizontal Horizontal Horizontal



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#### Band Edges test (Band UNII-3, 802.11ac VHT80 mode) –Radiated

Operation Mode	TX CH Low	Test Date	2020/12/23
Channel Number	5775 MHz	Test By	Barry
Temperature	25	Humidity	65 %





EUT								
Mode	:	5G	84	ac80	mode	low	ch	
Note	:							

		Read			Limit	Over	
	Freq	Level	Factor	Level	Line	Limit	Pol/Phase
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1	5601.935	61.76	-4.61	57.15	68.20	-11.05	Vertical
2	5611.825	60.95	-4.63	56.32	68.20	-11.88	Vertical
3	5619.995	62.71	-4.65	58.06	68.20	-10.14	Vertical
4	5627.520	63.15	-4.66	58.49	68.20	-9.71	Vertical
5	5637.625	62.78	-4.68	58.10	68.20	-10.10	Vertical
6 PP	5650.095	66.41	-4.71	61.70	68.27	-6.57	Vertical







Condition: limit\FCC\NCC 5G B4 MASK.csv 3m factor\966 3117 H 1-18G.csv Horizonta : RBW:1000kHz VBW:1000kHz SWT:Auto DET:Positive

EUT							
Mode	:	5G	B <b>4</b>	ac80	mode	low	ch
Note	:						

	Read			Limit	0ver	
Freq	Level	Factor	Level	Line	Limit	Pol/Phase
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
5606.020	62.29	-4.61	57.68	68.20	-10.52	Horizontal
5612.470	62.10	-4.63	57.47	68.20	-10.73	Horizontal
5618.705	62.96	-4.64	58.32	68.20	-9.88	Horizontal
5626.875	63.06	-4.66	58.40	68.20	-9.80	Horizontal
5634.400	64.06	-4.69	59.37	68.20	-8.83	Horizontal
5645.795	63.06	-4.70	58.36	68.20	-9.84	Horizontal
	Freq MHz 5606.020 5612.470 5618.705 5626.875 5634.400 5645.795	Read           Freq         Level           MHz         dBuV           5606.020         62.29           5612.470         62.10           5618.705         62.96           5626.875         63.06           5634.400         64.06           5645.795         63.06	Read           Freq         Level         Factor           MHz         dBuV         dB/m           5606.020         62.29         -4.61           5612.470         62.10         -4.63           5618.705         62.96         -4.64           5626.875         63.06         -4.66           5634.400         64.06         -4.69           5645.795         63.06         -4.70	Read           Freq         Level         Factor         Level           MHz         dBuV         dB/m         dBuV/m           5606.020         62.29         -4.61         57.68           5612.470         62.10         -4.63         57.47           5618.705         62.96         -4.64         58.32           5626.875         63.06         -4.69         59.37           5645.795         63.06         -4.70         58.36	Read         Limit           Freq         Level         Factor         Level         Line           MHz         dBuV         dB/m         dBuV/m         dBuV/m           5606.020         62.29         -4.61         57.68         68.20           5612.470         62.10         -4.63         57.47         68.20           5618.705         62.96         -4.64         58.32         68.20           5626.875         63.06         -4.66         58.40         68.20           5634.400         64.06         -4.69         59.37         68.20           5645.795         63.06         -4.70         58.36         68.20	Read         Limit         Over           Freq         Level         Factor         Level         Line         Limit           MHz         dBuV         dB/m         dBuV/m         dBuV/m         dBuV/m         dB           5606.020         62.29         -4.61         57.68         68.20         -10.52           5612.470         62.10         -4.63         57.47         68.20         -10.73           5618.705         62.96         -4.64         58.32         68.20         -9.88           5626.875         63.06         -4.66         58.40         68.20         -9.80           5634.400         64.06         -4.69         59.37         68.20         -9.84           5645.795         63.06         -4.70         58.36         68.20         -9.84



Operation Mode	TX CH High	Test Date	2020/12/30
Channel Number	5775MHz	Test By	Barry
Temperature	25	Humidity	65 %



Condition: limit\FCC\NCC 5G B4 MASK.csv 3m factor\966 3117 V 1-18G.csv Vertical : RBW:1000kHz VBW:1000kHz SWT:Auto DET:Positive

EUT	:							
Mode	:	5G	B <b>4</b>	ac80	mode	low	ch	
Note	:							

Freq	Read Level	Factor	Level	Limit Line	Over Limit	Pol/Phase	
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
5930.835	62.48	-3.87	58.61	68.20	-9.59	Vertical	
5941.700	62.80	-3.88	58.92	68.20	-9.28	Vertical	
5959.190	62.49	-3.84	58.65	68.20	-9.55	Vertical	
5969.260	61.68	-3.80	57.88	68.20	-10.32	Vertical	
P 5983.040	62.67	-3.75	58.92	68.20	-9.28	Vertical	
5996.820	62.54	-3.70	58.84	68.20	-9.36	Vertical	
	Freq MHz 5930.835 5941.700 5959.190 5969.260 P 5983.040 5996.820	Read Freq Level MHz dBuV 5930.835 62.48 5941.700 62.80 5959.190 62.49 5969.260 61.68 P 5983.040 62.67 5996.820 62.54	Read           Freq         Level         Factor           MHz         dBuV         dB/m           5930.835         62.48         -3.87           5941.700         62.80         -3.88           5959.190         62.49         -3.84           5969.260         61.68         -3.80           P         5983.040         62.67         -3.75           5996.820         62.54         -3.70	Read           Freq         Level         Factor         Level           MHz         dBuV         dB/m         dBuV/m           5930.835         62.48         -3.87         58.61           5941.700         62.80         -3.88         58.92           5959.190         62.49         -3.84         58.65           5969.260         61.68         -3.80         57.88           P         5936.820         62.54         -3.70         58.84	Read         Limit           Freq         Level Factor         Level         Line           MHz         dBuV         dB/m         dBuV/m         dBuV/m           5930.835         62.48         -3.87         58.61         68.20           5941.700         62.80         -3.88         58.92         68.20           5959.190         62.49         -3.84         58.65         68.20           5969.260         61.68         -3.80         57.88         68.20           59968.200         62.67         -3.75         58.92         68.20           5996.820         62.54         -3.70         58.84         68.20	Read         Limit         Over           Freq         Level         Factor         Level         Line         Limit           MHz         dBuV         dB/m         dBuV/m         dBuV/m         dB           5930.835         62.48         -3.87         58.61         68.20         -9.59           5941.700         62.80         -3.88         58.92         68.20         -9.28           5959.190         62.49         -3.84         58.65         68.20         -9.55           5969.260         61.68         -3.80         57.88         68.20         -9.28           \$996.820         62.67         -3.75         58.92         68.20         -9.28           \$996.820         62.54         -3.70         58.84         68.20         -9.28	Read         Limit         Over           Freq         Level         Factor         Level         Line         Limit         Pol/Phase           MHz         dBuV         dB/m         dBuV/m         dBuV/m         dB         dB           5930.835         62.48         -3.87         58.61         68.20         -9.59         Vertical           5941.700         62.80         -3.88         58.92         68.20         -9.28         Vertical           5959.190         62.49         -3.84         58.65         68.20         -9.55         Vertical           5969.260         61.68         -3.80         57.88         68.20         -9.28         Vertical           5983.040         62.67         -3.75         58.92         68.20         -9.28         Vertical           5996.820         62.54         -3.70         58.84         68.20         -9.28         Vertical





Condition: limit\FCC\NCC 5G B4 MASK.csv 3m factor\966 3117 H 1-18G.csv Horizonta : RBW:1000kHz VBW:1000kHz SWT:Auto DET:Positive

EUT	:					
Mode	:	5G	B <b>4</b>	ac80	mode	low
Note	:					

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Pol/Phase
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
1 2 PP 3 4 5	5930.040 5945.145 5953.095 5968.730 5985.955 5993.110	62.77 63.61 62.76 61.26 61.63 61.88	-3.87 -3.87 -3.87 -3.80 -3.74 -3.72	58.90 59.74 58.89 57.46 57.89 58.16	68.20 68.20 68.20 68.20 68.20 68.20	-9.30 -8.46 -9.31 -10.74 -10.31 -10.04	Horizontal Horizontal Horizontal Horizontal Horizontal Horizontal

ch



### 10. Transmission in the Absence of Data

#### **10.1. Standard Applicable**

According to §15.407(c)

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment automization a description of how this requirement is met.

#### 10.2. Result:

Pass, the device is compliance with 802.11 a/ b/g/n ac standard, the short control signal is appear during no transmission period.



### 11. Antenna Requirement

### **11.1. Standard Applicable**

According to §15.203, Antenna requirement.

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of Sections 15.211, 15.213, 15.217, 15.219, or 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with Section 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this Part are not exceeded.

### 11.2. Antenna Connected Construction

The directional gins of antenna used for transmitting is below table, and the antenna connector is designed with unique type RF connector and no consideration of replacement. Please see EUT photo and antenna spec. for details.

	PCB Antenna	Gain
1	WiFi 5G Antenna UNII-1	4.93dBi
2	WiFi 5G Antenna UNII-2A	4.93dBi
3	WiFi 5G Antenna UNII-2C	4.57dBi
4	WiFi 5G Antenna UNII-3	4.66dBi

Antenna Designation:



### 12. TPC and DFS Measurement

### 12.1. TPC: Standard Applicable

According to §15.407(h)(1), Transmit power control (TPC). U-NII devices operating in the 5.25-5.35 GHz band and the 5.47-5.725 GHz band shall employ a TPC mechanism. The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm. A TPC mechanism is not required for systems with an e.i.r.p. of less than 500 mW.

#### 12.2. DFS: Standard Applicable

According to §15.407(h)(2), Radar Detection Function of Dynamic Frequency Selection (DFS). U-NII devices operating in the 5.25-5.35 GHz and 5.47-5.725 GHz bands shall employ a DFS radar detection.



# 13.2.1. Limit

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 Table 1: Applicability of DFS requirements prior to use of a channel

	<b>Operational Mode</b>				
Requirement	Slave	Client(without radar detection)	Client(with radar detection)		
Non-occupancy Period	Yes	Not required	Yes		
DFS Detection Threshold	Yes	Not required	Yes		
Channel Availability Check Time	Yes	Not required	Not required		
Uniform Spreading	Yes	Not required	Not required		
U-NII Detection Band- width	Yes	Not required	Yes		

### Table 2: Applicability of DFS requirements during normal operation

	<b>Operational Mode</b>				
Requirement	Slave	Client(without radar detection)	Client(with radar detection)		
DFS Detection Threshold	Yes	Not required	Yes		
Channel Closing Transmis- sion Time	Yes	Yes	Yes		
Channel Move Time	Yes	Yes	Yes		
U-NII Detection Bandwidth	Yes	Not required	Yes		



## Refer to KDB Number: 905462 APPENDIX B COMPLIANCE MEASUREMENT PROCE-DURES FOR UNLICENSED-NATIONAL INFORMATION INFRASTRUCTURE DEVICES OPERATING IN THE 5.25-5.35 GHz AND 5.47-5.725 GHz BANDS INCORPORATING DYNAMIC FREQUENCY SELECTION.

#### Table 3: Interference Threshold values, Master or Client incorporating In-Service Monitoring

Maximum Transmit Power	Value				
	(see note)				
≥ 200 milliwatt	-64 dBm				
< 200 milliwatt	-62 dBm				
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna					
Note 2: Throughout these test procedures an additional 1 dB has been added to the					
amplitude of the test transmission waveforms to account for variations in measurement					
equipment. This will ensure that the test signal is at or	above the detection threshold level				

#### **Table 4: DFS Response requirement values**

to trigger a DFS response.

Parameter	Value
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds
	See Note 1.
Channel Closing Transmission Time	200 milliseconds + an
	aggregate of 60
	milliseconds over
	remaining 10 second
	period.
	See Notes 1 and 2.
U-NII Detection Bandwidth	Minimum 80% of the U-
	NII 99% transmission
	power bandwidth. See
	Note 3.

Note 1: The instant that the *Channel Move Time* and the *Channel Closing Transmission Time* begins is as follows:

- · For the Short Pulse Radar Test Signals this instant is the end of the Burst.
- For the Frequency Hopping radar Test Signal, this instant is the end of the last radar Burst generated.
- For the Long Pulse Radar Test Signal this instant is the end of the 12 second period defining the Radar Waveform.

**Note 2:** The *Channel Closing Transmission Time* is comprised of 200 milliseconds starting at the beginning of the *Channel Move Time* plus any additional intermittent control signals required to facilitate a *Channel* move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

Note 3: During the *U-NII Detection Bandwidth* detection test, radar type 1 is used and for each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.



#### **Table 5: Radar Test Waveforms**

#### Short Pulse Radar

Radar	Pulse Width	PRI	Number of Pulses	Minimum	Minimum				
Туре	(µsec)	(µsec)		Percentage of	Number of				
				Successful	Trials				
				Detection					
0	1	1428	18	See Note 1	See Note 1				
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a Test B: 15 unique PRI values randomly selected within the range of 518-3066 µsec, with a minimum increment of 1 µsec, excluding PRI values selected in Test A	$\frac{\text{Roundup}}{\left\{ \begin{pmatrix} \frac{1}{360} \end{pmatrix}}, \\ \left( \frac{19 \cdot 10^6}{\text{PRI}_{\mu \text{sec}}} \right) \right\}}$	60%	30				
2	1-5	150-230	23-29	60%	30				
3	6-10	200-500	16-18	60%	30				
4	11-20	200-500	12-16	60%	30				
Aggregate ()	Aggregate (Radar Types 1-4) 80% 120								
Note 1: She	ort Pulse Rada	r Type 0 should be u	used for the detection ba	ndwidth test, ch	annel move				
time, and c	time, and channel closing time tests.								

A minimum of 30 unique waveforms are required for each of the Short Pulse Radar Types 2 through 4. For Short Pulse Radar Type 1, the same waveform is used a minimum of 30 times. If more than 30 waveforms are used for Short Pulse Radar Types 2 through 4, then each additional waveform must also be unique and not repeated from the previous waveforms

#### Long Pulse Radar

Radar	Pulse	Chirp	PRI	Number of	Number of	Minimum	Minimum
Туре	Width	Width	(µsec)	Pulses per	Bursts	Percentage of	Trials
	(µsec)	(MHz)		Burst		Successful	
						Detection	
5	50-100	5-20	1000-	1-3	8-20	80%	30
			2000				

The parameters for this waveform are randomly chosen. Thirty unique waveforms are required for the Long Pulse Radar Type waveforms. If more than 30 waveforms are used for the Long Pulse Radar Type waveforms, then each additional waveform must also be unique and not repeated from the previous waveforms.



#### **Frequency Hopping Radar**

Radar Type	Pulse Width (µsec)	PRI (µsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Trials
6	1	333	9	.333	300	70%	30

For the Frequency Hopping Radar Type, the same *Burst* parameters are used for each waveform. The hopping sequence is different for each waveform and a 100-length segment is selected from the hopping sequence defined by the following algorithm: 3

The first frequency in a hopping sequence is selected randomly from the group of 475 integer frequencies from 5250 - 5724 MHz. Next, the frequency that was just chosen is removed from the group and a frequency is randomly selected from the remaining 474 frequencies in the group. This process continues until all 475 frequencies are chosen for the set. For selection of a random frequency, the frequencies remaining within the group are always treated as equally likely.



### 13.2.2. Test Setup

#### Setup for Master with injection at the Master



#### Setup for Client with injection at the Master



#### Setup for Client with injection at the Client



Note: device under test are configured with AP as IP based by streaming MPEG video, 30 frames per seconds

#### International Standards Laboratory Corp.



### **12.3. Test Equipment Used:**

Location Conducted	Equipment Name	Brand	Model	S/N	Last Cal. Date	Next Cal. Date
Conducted (DFS)	Signal Generator	Agilent	E4438C	MY49071550	12/27/2020	12/27/2021
Conducted (DFS)	Signal Generator	Keysight	N5182B	MY53052399	12/30/2020	12/30/2021
Conducted (DFS)	Spectrum analyzer	Keysight	N9010A	MY56070257	09/23/2020	09/23/2021
Conducted (DFS)	AP Router	Synology	RT1900ac	15B0N3N369502	NA	NA
Conducted (DFS)	USB Adapter	D-Link	DWA-182	QBYS1D800007 3	NA	NA
Conducted (DFS)	Test Box	Keysight	AD211A	NA	NA	NA
Conducted (DFS)	Test Box	Keysight	AD191A	NA	NA	NA
Conducted (DFS)	Direction Coupler	Krytar	1821S	1461	NA	NA
Conducted (DFS)	Splitter	Mini-Circuits	ZN2PD-63-S	UU97201111	NA	NA
Conducted (DFS)	Attenuator	Woken	Watt-65m3502	11051601	NA	NA
Conducted (DFS)	Software	Agilent	Adaptive TEST	NA	NA	NA
Conducted (DFS)	Cable	Draka	NA	NA	NA	NA
Conducted (DFS)	Test Software	Keysight	N9607B DFS Radar Profiles	NA	NA	NA
Conducted (DFS)	Test Software	Keysight	ETSI Standard test system	NA	NA	NA
Conducted (TS8997)	Wideband Radio Communication Tester	R&S	CMW500	168811	07/19/2020	07/19/2021
Conducted (TS8997)	Signal Generator	R&S	SMB100B	101085	10/28/2020	10/28/2021
Conducted (TS8997)	Vector Signal Gen- erator	R&S	SMBV100A	263246	10/28/2020	10/28/2021
Conducted (TS8997)	Signal analyzer 40GHz	R&S	FSV40	101884	10/20/2020	10/20/2021
Conducted (TS8997)	OSP150 extension unit CAM-BUS	R&S	OSP150	101107	04/06/2020	04/06/2021
Conducted (TS8997)	Test Software	R&S	EMC32	NA	NA	NA

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#### 12.3.1. Description of EUT :

EUT operates over the 5250-5350MHz and 5470-5725MHz ranges and EUT is a slave device (client equipment) w/o radar detection and DFS capability.

The EUT utilizes the 802.11n architecture, with a nominal channel bandwidth of 80MHz WLAN traffic is generated by streaming the mpeg file from the master to slave in full monitor video mode using the media player.

The rated output power of the master unit is >23dBm(EIRP).therefore the required interference threshold level is -64dBm. The master device as employed for the applicable DFS test is router whose FCC ID= YOR-RT1900AC for Synology

#### 12.4. Test results

Requirement	Operational Mode: Client(without radar detection)				
	Test Result	Remark			
Non-occupancy Period	No transmission in 30mins. (test results), pass (Remark)	Pass			
DFS Detection Threshold	N/A	N/A			
Channel Closing Transmis-	Less than 200ms, Refer to next	Pass			
sion Time	page for plots.				
<b>Channel Move Time</b>	Less than 10s, Refer to next	Pass			
	page for plots.				
U-NII Detection Bandwidth	N/A	N/A			

#### Applicability of DFS requirements during normal operation

Input Level to Master AP= -64dBm



## DFS In-Service Monitoring (5290 MHz; 80 MHz)

Test according to FCC title 47 part 15 15.407(h), KDB 905462 D02 U-NII DFS Compliance Procedures New Rules v02

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.

Expanded uncertainty (K=2) for Channel Closing Transmission Time in the first 200 ms: <1.634%

Expanded Uncertainty (K=2) for Channel Closing Transmission Time for the remaining channel move time

period:<2.221%

Expanded Uncertainty (K=2) for Channel Move Time:<0.1%

#### **Measurement Summary**

DUT Frequency	Radar Type	Type of Measurement value	Overall
(MHz)	No.		Result
5290.000000	0	First of all Transmitt Test	
5290.000000	0	Channel Move Time	PASS
5290.000000	0	Channel Closing Transmission Time	PASS
5290.000000	0	Non-occupancy period	PASS

(continuation of the "Measurement Summary" table from column 4 ...)

DUT Frequency (MHz)	Overall Comment
5290.000000	not performed / not finished
5290.000000	
5290.000000	
5290.000000	

### **Channel Move Time Detailed Results**

DUT Frequency (MHz)	Radar Type No.	CMT Tx Time	CMT Limit (s)	CMT Result	CMT Comment
5290.000000	0	4.090	10.000	PASS	Tx Time value is last trailing edge found within sweep. See Note 1.

### **Channel Closing Transmission Time Detailed Results**

DUT Frequency (MHz)	Radar Type No.	CCTT Type of Value	CCTT No. of Pulses found	CCTT Tx Time (ms)
5290.000000	0	first 200 ms	5	1.224
5290.000000	0	remaining 10.0 second(s) period	198	35.664

(continuation of the "Channel Closing Transmission Time Detailed Results" table from column 5 ...)

DUT Frequency	ССТТ Тх	CCTT Result	CCTT Comment
(MHz)	Time Limit		
	(ms)		
5290.000000	200.000	PASS	See Note 1.
5290.000000	60.000	PASS	See Note 1.



### Non-occupancy period Detailed Results

DUT Frequency (MHz)	Radar Type No.	NOP No. of Pulses found	NOP No. of Pulses Limit	NOP Tx Time (s)	NOP Tx Time Limit (s)	NOP Result
5290.000000	0	0	0	0.000	0.000	PASS

# **Transmitting Test Detailed Results**

DUT Frequency	Tx-Test	Tx-Test Comment
(MHz)	Result	
5290.000000		not performed / not finished

## **Radar level verification**

IF(( {DFS Mode(0/1/2)}=0)or( {DFS Mode(0/1/2)}=1), IF((dBm2W( {Nominal Power[dBm]})>0.2), -64, IF(( {Configured PSD[dBm]}<10), -62, -64))+ {Attenuation Vector Generator to DUT[dB]}, -50+ {Attenuation Vector Generator to COMP[dB]})+ {Radar Signal Level Offset[dB]}	Given setting / formula to calculate Vector Generator level	
Configured DUT EIRP:	100.00	mW
Configured DUT PSD:	-10.00	dBm/MHz
Requirement of the Detection threshold value for this given values acc. to FCC clause 5.2 / Table 3	-62	dBm
Vector Generator level setting	-7.06	dBm
Configured overall pathloss from Vector Generator RF out to DUT connector of 'DUT to OSP'-cable	53.94	dB
Given additional level added to the amplitude of the waveform to account for variations in measurement equipment acc. to FCC clause 5.2 / Table 3 / Note 2	1.00	dB
This results in the following radar signal level at the DUT	-61.00	dBm



# **Additional Information**

Note 1:	Because of the radar pulse event at the beginning, the investigation of the trace begins with an offset of 28.7 ms conforming to the end of the Radar burst.
Note 2:	Channel move time (CMT) / channel closing transmission time (CCTT) measurement was made with hi resolution video sweep using OSP DAQ channel
Note 3:	Because of the substantially higher sampling rate of the video signal the results for CCTT and CMT are more accurate than in the graphics visible. Reached timing accuracy of the video trace: approx 4 us
Note 4:	The Non-Occupancy Period trace starts at the end of the Channel move time trace (20.000 secs.) Labeling of the x-axis (time) is relative to its beginning (0 secs.)



**Channel Move Time** 





Non-occupancy period



# **Channel Move Time; Channel Closing Transmission Time**

Setting	Instrument	Target Value
Center Frequency	5.29000 GHz	5.29000 GHz
Span	ZeroSpan	ZeroSpan
RBW	3.000 MHz	>= 3.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	30001	~ 30001
Sweeptime	20.000 s	20.000 s
Reference Level	-20.000 dBm	-20.000 dBm
Attenuation	0.000 dB	0.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Clear Write	Clear Write
Sweeptype	Sweep	AUTO
Preamp	off	off
Trigger	External	External
Trigger Offset	0.000 s	0.000 s



Setting	Instrument	Target Value
<b>Center Frequency</b>	5.29000 GHz	5.29000 GHz
Span	ZeroSpan	ZeroSpan
RBW	3.000 MHz	>= 3.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	30001	~ 30001
Sweeptime	1.860 ks	1.860 ks
Reference Level	-20.000 dBm	-20.000 dBm
Attenuation	0.000 dB	0.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Clear Write	Clear Write
Sweeptype	Sweep	AUTO
Preamp	off	off

## Non-occupancy period

# **OSP Video Detector**

Setting	Instrument	Target	
	Value	Value	
Measurement Time	20.000 s	20.000 s	
Samplerate	2500 kHz	2500 kHz	
Tracepoints	5000000	5000000	
Time resolution	4.000 us	4.000 us	
Detector	Peak	Peak	

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## DFS In-Service Monitoring (5530 MHz; 80 MHz)

Customized settings.

Test according to FCC title 47 part 15 ?5.407(h), KDB 905462 D02 U-NII DFS Compliance Procedures New Rules v02

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.

Expanded uncertainty (K=2) for Channel Closing Transmission Time in the first 200 ms: <3.452%

Expanded Uncertainty (K=2) for Channel Closing Transmission Time for the remaining channel move time peri-

od:<3.379%

Expanded Uncertainty (K=2) for Channel Move Time:<0.1%

#### **Measurement Summary**

DUT Frequency (MHz)	Radar Type No.	Type of Measurement value	Overall Result
5530.000000	0	First of all Transmitt Test	
5530.000000	0	Channel Move Time	PASS
5530.000000	0	Channel Closing Transmission Time	PASS
5530.000000	0	Non-occupancy period	PASS

(continuation of the "Measurement Summary" table from column 4 ...)

DUT Frequency	Overall Comment
(MHz)	
5530.000000	not performed / not finished
5530.000000	
5530.000000	
5530.000000	

### **Channel Move Time Detailed Results**

DUT Frequency (MHz)	Radar Type No.	CMT Tx Time (s)	CMT Limit (s)	CMT Result	CMT Comment
5530.000000	0	4.091	10.000	PASS	Tx Time value is last trailing edge found within sweep. See Note 1.



Channel Closing Transmission Time Detailed Results					
DUT Frequency	Radar Type	CCTT Type of Value	CCTT No. of	ССТТ Тх	
(MHz)	No.		Pulses found	Time	
				(ms)	
5530.000000	0	first 200 ms	100	11.588	
5530.000000	0	remaining 10.0 second(s) period	292	34.568	

## Channel Closing Transmission Time Detailed Posults

(continuation of the "Channel Closing Transmission Time Detailed Results" table from column 5 ...)

DUT Frequency (MHz)	CCTT Tx Time Limit (ms)	CCTT Result	CCTT Comment
5530.000000	200.000	PASS	See Note 1.
5530.000000	60.000	PASS	See Note 1.

## Non-occupancy period Detailed Results

DUT Frequency (MHz)	Radar Type No.	NOP No. of Pulses found	NOP No. of Pulses Limit	NOP Tx Time	NOP Tx Time Limit	NOP Result
				(s)	(s)	
5530.000000	0	0	0	0.000	0.000	PASS

## **Transmitting Test Detailed Results**

DUT Frequency (MHz)	Tx-Test Result	Tx-Test Comment
5530.000000		not performed / not finished



## **Radar level verification**

Description / Formula	Value	Unit
IF(( {DFS Mode(0/1/2)}=0)or( {DFS Mode(0/1/2)}=1), IF((dBm2W( {Nominal Power[dBm]})>0.2), -64, IF(( {Configured PSD[dBm]}<10), -62, -64))+ {Attenuation Vector Generator to DUT[dB]}, -50+ {Attenuation Vector Generator to COMP[dB]})+ {Radar Signal Level Offset[dB]}	Given setting / formula to calculate Vector Generator level	
Configured DUT EIRP:	100.00	mW
Configured DUT PSD:	-10.00	dBm/MHz
Requirement of the Detection threshold value for this given values acc. to FCC clause 5.2 / Table 3	-62	dBm
Vector Generator level setting	4.02	dBm
Configured overall pathloss from Vector Generator RF out to DUT connector of 'DUT to OSP'-cable	56.02	dB
Given additional level added to the amplitude of the waveform to account for variations in measurement equipment acc. to FCC clause 5.2 / Table 3 / Note 2	10.00	dB
This results in the following radar signal level at the DUT	-52.00	dBm

## **Additional Information**

Note	Description
Note 1:	Because of the radar pulse event at the beginning, the investigation of the trace begins with an offset of 28.7 ms conforming to the end of the Radar burst.
Note 2:	Channel move time (CMT) / channel closing transmission time (CCTT) measurement was made with hi resolution video sweep using OSP DAQ channel
Note 3:	Because of the substantially higher sampling rate of the video signal the results for CCTT and CMT are more accurate than in the graphics visible. Reached timing accuracy of the video trace: approx 4 us
Note 4:	The Non-Occupancy Period trace starts at the end of the Channel move time trace (20.000 secs.) Labeling of the x-axis (time) is relative to its beginning (0 secs.)





1000

Time in s

Threshold

**International Standards Laboratory Corp.** 

Non-occupancy period

500

0

1860

1500



## Channel Move Time; Channel Closing Transmission Time

Setting	Instrument Value	Target Value
Center Frequency	5.53000 GHz	5.53000 GHz
Span	ZeroSpan	ZeroSpan
RBW	3.000 MHz	>= 3.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	30001	~ 30001
Sweeptime	20.000 s	20.000 s
Reference Level	-20.000 dBm	-20.000 dBm
Attenuation	0.000 dB	0.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Clear Write	Clear Write
Sweeptype	Sweep	AUTO
Preamp	off	off
Trigger	External	External
Trigger Offset	0.000 s	0.000 s

### Non-occupancy period

Setting	Instrument Value	Target Value
Center Frequency	5.53000 GHz	5.53000 GHz
Span	ZeroSpan	ZeroSpan
RBW	3.000 MHz	>= 3.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	30001	~ 30001
Sweeptime	1.860 ks	1.860 ks
Reference Level	-20.000 dBm	-20.000 dBm
Attenuation	0.000 dB	0.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	1	1
Filter	3 dB	3 dB
Trace Mode	Clear Write	Clear Write
Sweeptype	Sweep	AUTO
Preamp	off	off

### **OSP Video Detector**

Setting	Instrument Value	Target Value
Measurement Time	20.000 s	20.000 s
Samplerate	2500 kHz	2500 kHz
Tracepoints	5000000	5000000
Time resolution	4.000 us	4.000 us
Detector	Peak	Peak