UNII-1_TX AC (VHT20) Mode_Ant 1							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	12.34	0.00	12.34	24.00	0.25	PASS
40	5200	11.88	0.00	11.88	24.00	0.25	PASS
48	5240	12.42	0.00	12.42	24.00	0.25	PASS

UNII-1_TX AC (VHT20) Mode_Ant 2							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	12.41	0.00	12.41	24.00	0.25	PASS
40	5200	12.25	0.00	12.25	24.00	0.25	PASS
48	5240	12.19	0.00	12.19	24.00	0.25	PASS

UNII-1_TX AC (VHT20) Mode_Total For FCC					
Channel	Frequency (MHz)	Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	15.39	24.00	0.25	PASS
40	5200	15.08	24.00	0.25	PASS
48	5240	15.32	24.00	0.25	PASS

UNII-1_TX AC (VHT20) Mode_Total For IC					
Channel	Frequency (MHz)	EIRP Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
36	5180	16.99	23.00	0.2	PASS
40	5200	16.68	23.00	0.2	PASS
48	5240	16.92	23.00	0.2	PASS

UNII-2A_TX AC (VHT20) Mode _Ant 1							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
52	5260	12.10	0.00	12.10	24.00	0.25	PASS
60	5300	11.86	0.00	11.86	24.00	0.25	PASS
64	5320	12.14	0.00	12.14	24.00	0.25	PASS

UNII-2A_TX AC (VHT20) Mode _Ant 2							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
52	5260	12.13	0.00	12.13	24.00	0.25	PASS
60	5300	12.19	0.00	12.19	24.00	0.25	PASS
64	5320	11.93	0.00	11.93	24.00	0.25	PASS

UNII-2A_TX AC (VHT20) Mode _Total					
Channel	Frequency (MHz)	Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
52	5260	15.13	24.00	0.25	PASS
60	5300	15.04	24.00	0.25	PASS
64	5320	15.05	24.00	0.25	PASS

UNII-2C_TX AC (VHT20) Mode _Ant 1							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
100	5500	12.03	0.00	12.03	24.00	0.25	PASS
120	5600	12.09	0.00	12.09	24.00	0.25	PASS
140	5700	11.79	0.00	11.79	24.00	0.25	PASS

UNII-2C_TX AC (VHT20) Mode _Ant 2							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
100	5500	12.03	0.00	12.03	24.00	0.25	PASS
120	5600	11.75	0.00	11.75	24.00	0.25	PASS
140	5700	12.20	0.00	12.20	24.00	0.25	PASS

UNII-2C_TX AC (VHT20) Mode _Total					
Channel	Frequency (MHz)	Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
100	5500	15.04	24.00	0.25	PASS
120	5600	14.93	24.00	0.25	PASS
140	5700	15.01	24.00	0.25	PASS

UNII-1_TX AC (VHT40) Mode_Ant 1							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
38	5190	11.85	0.00	11.85	24.00	0.25	PASS
46	5230	12.16	0.00	12.16	24.00	0.25	PASS

UNII-1_TX AC (VHT40) Mode_Ant 2							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
38	5190	12.64	0.00	12.64	24.00	0.25	PASS
46	5230	12.42	0.00	12.42	24.00	0.25	PASS

UNII-1_TX AC (VHT40) Mode_Total For FCC					
Channel	Frequency (MHz)	Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
38	5190	15.27	24.00	0.25	PASS
46	5230	15.30	24.00	0.25	PASS

UNII-1_TX AC (VHT40) Mode_Total For IC					
Channel	Frequency (MHz)	EIRP Power (dBm))	Max. Limit (dBm)	Max. Limit (W)	Result
38	5190	16.87	23.00	0.2	PASS
46	5230	16.90	23.00	0.2	PASS

UNII-2A_TX AC (VHT40) Mode_Ant 1							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
54	5270	11.82	0.00	11.82	24.00	0.25	PASS
62	5310	12.03	0.00	12.03	24.00	0.25	PASS

UNII-2A_TX AC (VHT40) Mode_Ant 2							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
54	5270	12.16	0.00	12.16	24.00	0.25	PASS
62	5310	12.24	0.00	12.24	24.00	0.25	PASS

UNII-2A_TX AC (VHT40) Mode_Total For FCC					
Channel	Frequency (MHz)	Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
54	5270	15.00	24.00	0.25	PASS
62	5310	15.15	24.00	0.25	PASS

UNII-2C_TX AC (VHT40) Mode_Ant 1							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
102	5510	12.11	0.00	12.11	24.00	0.25	PASS
118	5590	11.86	0.00	11.86	24.00	0.25	PASS
134	5670	11.92	0.00	11.92	24.00	0.25	PASS

UNII-2C_TX AC (VHT40) Mode_Ant 2							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
102	5510	12.13	0.00	12.13	24.00	0.25	PASS
118	5590	11.82	0.00	11.82	24.00	0.25	PASS
134	5670	11.93	0.00	11.93	24.00	0.25	PASS

UNII-2C_TX AC (VHT40) Mode_Total For FCC					
Channel	Frequency (MHz)	Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
102	5510	15.13	24.00	0.25	PASS
118	5590	14.85	24.00	0.25	PASS
134	5670	14.94	24.00	0.25	PASS

UNII-1_TX AC (VHT80) Mode_Ant 1							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
42	5210	12.08	0.00	12.08	24.00	0.25	PASS

UNII-1_TX AC (VHT80) Mode_Ant 2							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
42	5210	11.90	0.00	11.90	24.00	0.25	PASS

UNII-1_TX AC (VHT80) Mode_Total For FCC					
Channel	Frequency (MHz)	Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
42	5210	15.00	24.00	0.25	PASS

UNII-1_TX AC (VHT80) Mode_Total For IC					
Channel	Frequency (MHz)	EIRP Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
42	5210	16.60	23.00	0.2	PASS

UNII-2A_TX AC (VHT80) Mode_Ant 1							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
58	5290	11.58	0.00	11.58	24.00	0.25	PASS

UNII-2A_TX AC (VHT80) Mode_Ant 2							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
58	5290	12.16	0.00	12.16	24.00	0.25	PASS

UNII-2A_TX AC (VHT80) Mode_Total For FCC					
Channel	Frequency (MHz)	Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
58	5290	14.89	24.00	0.25	PASS

UNII-2C_TX AC (VHT80) Mode_Ant 1							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
106	5530	12.03	0.00	12.03	24.00	0.25	PASS
122	5610	11.83	0.00	11.83	24.00	0.25	PASS

UNII-2C_TX AC (VHT80) Mode_Ant 2							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
106	5530	11.49	0.00	11.49	24.00	0.25	PASS
122	5610	12.14	0.00	12.14	24.00	0.25	PASS

UNII-2C_TX AC (VHT80) Mode_Total For FCC					
Channel	Frequency (MHz)	Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
106	5530	14.78	24.00	0.25	PASS
122	5610	15.00	24.00	0.25	PASS

UNII-3_TX AC (VHT20) Mode_Ant 1							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	12.02	0.00	12.02	30.00	1.00	PASS
157	5785	12.15	0.00	12.15	30.00	1.00	PASS
165	5825	12.09	0.00	12.09	30.00	1.00	PASS

UNII-3_TX AC (VHT20) Mode_Ant 2							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	12.26	0.00	12.26	30.00	1.00	PASS
157	5785	12.04	0.00	12.04	30.00	1.00	PASS
165	5825	11.74	0.00	11.74	30.00	1.00	PASS

UNII-3_TX AC (VHT20) Mode_Total					
Channel	Frequency (MHz)	Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
149	5745	15.15	30.00	1.00	PASS
157	5785	15.11	30.00	1.00	PASS
165	5825	14.93	30.00	1.00	PASS

UNII-3_TX AC (VHT40) Mode_Ant 1							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
151	5755	11.96	0.00	11.96	30.00	1.00	PASS
159	5795	12.24	0.00	12.24	30.00	1.00	PASS

UNII-3_TX AC (VHT40) Mode_Ant 2							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
151	5755	12.44	0.00	12.44	30.00	1.00	PASS
159	5795	12.60	0.00	12.60	30.00	1.00	PASS

UNII-3_TX AC (VHT40) Mode_Total					
Channel	Frequency (MHz)	Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
151	5755	15.22	30.00	1.00	PASS
159	5795	15.43	30.00	1.00	PASS

UNII-3_TX AC (VHT80) Mode_Ant 1							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
155	5775	11.86	0.00	11.86	30.00	1.00	PASS

UNII-3_TX AC (VHT80) Mode_Ant2							
Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
155	5775	12.25	0.00	12.25	30.00	1.00	PASS

UNII-3_TX AC (VHT80) Mode_Total					
Channel	Frequency (MHz)	Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
155	5775	15.07	30.00	1.00	PASS

8. POWER SPECTRAL DENSITY TEST

8.1 LIMIT

FCC Part15, Subpart E (15.407)&RSS-247			
Section	Test Item	Limit	Frequency Range (MHz)
RSS-247 6.2.1.2	EIRP Power Spectral Density	10dBm/MHz	5150-5250
15.407(a)	Power Spectral Density	AP device:17dBm/MHz Client device:11dBm/MHz	5150-5250
15.407(a) RSS-247 6.2.4.2	Power Spectral Density	30dBm/500kHz	5725-5850

8.2 TEST PROCEDURE ANS SETTING

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.

b. Spectrum Setting:

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RBW	= 1MHz.
VBW	≥ 3MHz.
Detector	RMS
Trace average	100 trace
Sweep Time	Auto

Note:

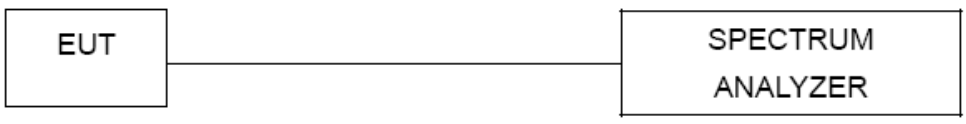
1.For UNII-3, according to KDB publication 789033 D02 General UNII Test Procedures New Rules v02r01, section II.F.5., it is acceptable to set RBW at 1MHz and VBW at 3MHz if the spectrum analyzer does not have 500kHz RBW.

2.The value measured with RBW=1MHz is to be added with 10log(500kHz/1MHz) which is -3dB. For example, if the measured value is +10dBm using RBW=1MHz (that is +10dBm/MHz), then the converted value will be +7dBm/500kHz.

8.3 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum analyzer	KEYSIGHT	N9010A	MY55150427	2021/05/24
2	Attenuator	Mini-Circuits	BW-S10W2	101109	N/A
3	RF Cable	Mi-cable	C10-01-01-1	100309	N/A

8.4 TEST SETUP



8.5 EUT OPERATION CONDITIONS

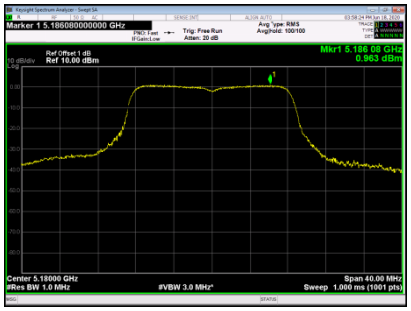
The EUT was programmed to be in continuously transmitting mode.

8.6 TEST RESULTS

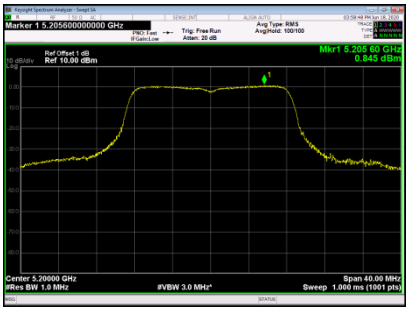
UNII-1_TX A Mode_Ant 1 For FCC						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180	0.963	0.00	0.963	11.00	PASS
40	5200	0.845	0.00	0.845	11.00	PASS
48	5240	1.764	0.00	1.764	11.00	PASS

UNII-1_TX A Mode_Ant 1 For IC						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	EIRP Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180	2.563	0.00	2.563	10.00	PASS
40	5200	2.445	0.00	2.445	10.00	PASS
48	5240	3.364	0.00	3.364	10.00	PASS

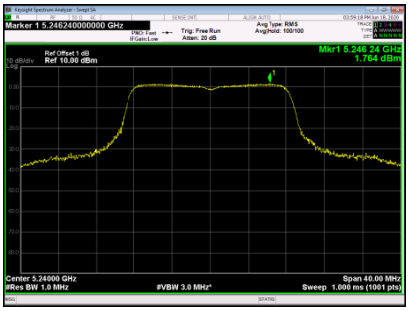
CH36



CH40



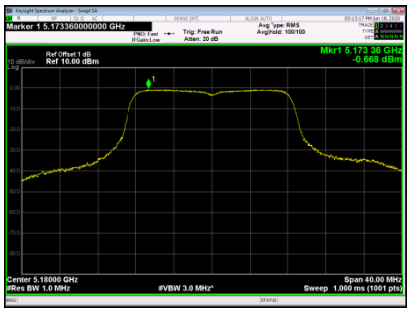
CH48



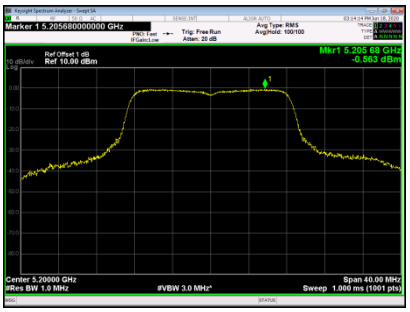
UNII-1_TX A Mode_Ant2 For FCC						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180	-0.668	0.00	-0.668	11.00	PASS
40	5200	-0.563	0.00	-0.563	11.00	PASS
48	5240	0.397	0.00	0.397	11.00	PASS

UNII-1_TX A Mode_Ant2 For IC						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	EIRP Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180	0.932	0.00	0.932	10.00	PASS
40	5200	1.037	0.00	1.037	10.00	PASS
48	5240	1.997	0.00	1.997	10.00	PASS

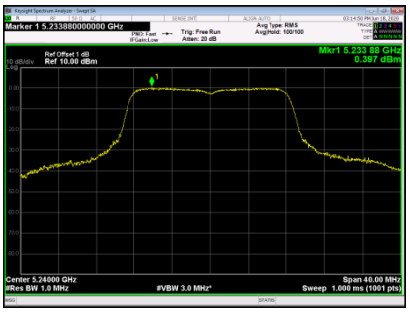
CH36



CH40

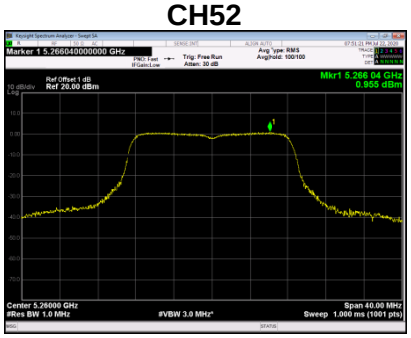


CH48

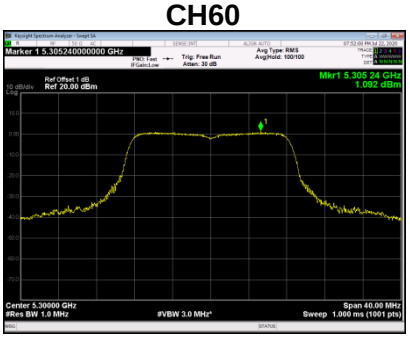


UNII-2A_TX A Mode_Ant 1						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260	0.955	0.00	0.955	11.00	PASS
60	5300	1.092	0.00	1.092	11.00	PASS
64	5320	0.743	0.00	0.743	11.00	PASS

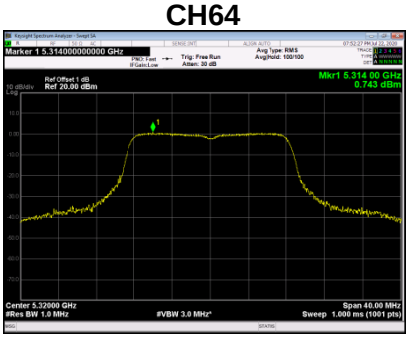
CH52



CH60

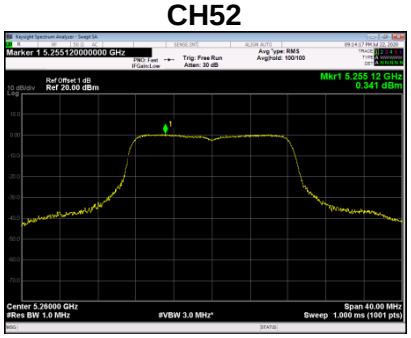


CH64

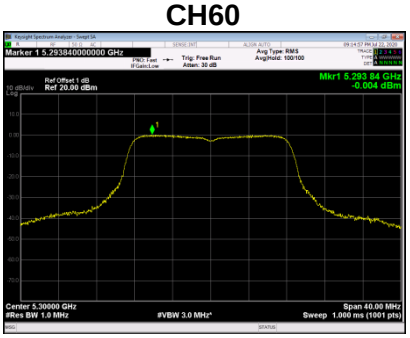


UNII-2A_TX A Mode_Ant 2						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260	0.341	0.00	0.341	11.00	PASS
60	5300	-0.004	0.00	-0.004	11.00	PASS
64	5320	-0.233	0.00	-0.233	11.00	PASS

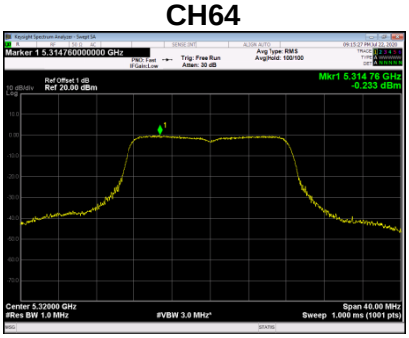
CH52



CH60

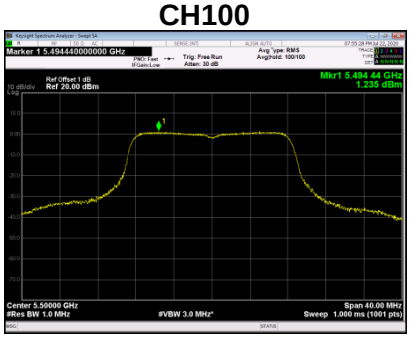


CH64

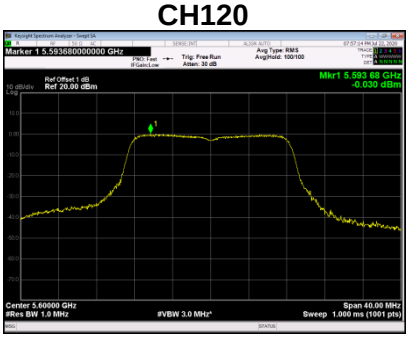


UNII-2C_TX A Mode_Ant 1						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
100	5500	1.235	0.00	1.235	11.00	PASS
120	5600	-0.030	0.00	-0.030	11.00	PASS
140	5700	-1.029	0.00	-1.029	11.00	PASS

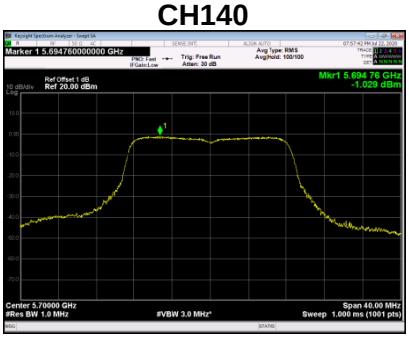
CH100



CH120

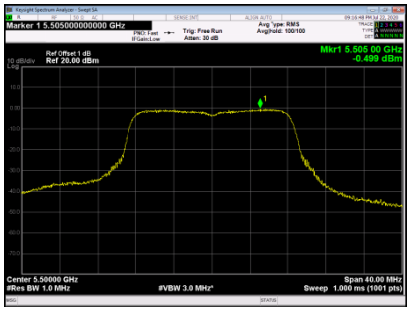


CH140

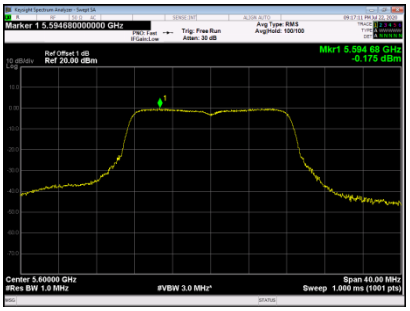


UNII-2C_TX A Mode_Ant 2						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
100	5500	-0.499	0.00	-0.499	11.00	PASS
120	5600	-0.175	0.00	-0.175	11.00	PASS
140	5700	-0.345	0.00	-0.345	11.00	PASS

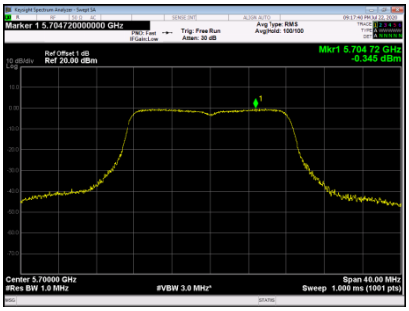
CH100



CH120

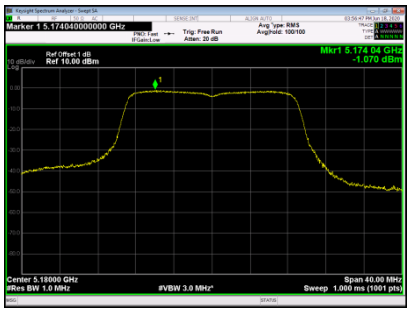


CH140

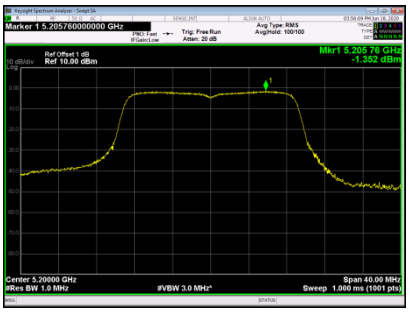


UNII-1_TX N (HT20) Mode_Ant 1						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180	-1.070	0.00	-1.070	11.00	PASS
40	5200	-1.352	0.00	-1.352	11.00	PASS
48	5240	0.097	0.00	0.097	11.00	PASS

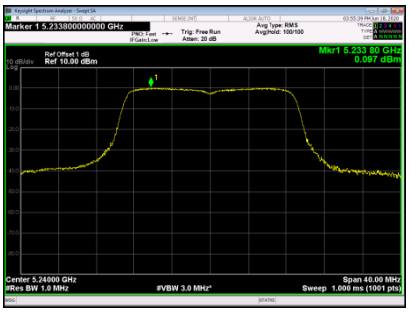
CH36



CH40

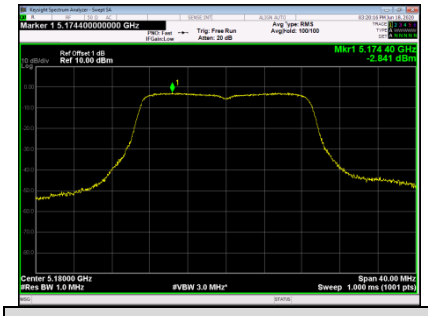


CH48

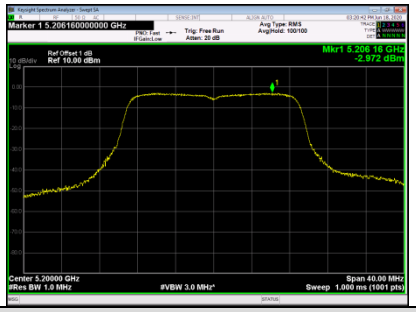


UNII-1_TX N (HT20) Mode_Ant 2						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180	-2.841	0.00	-2.841	11.00	PASS
40	5200	-2.972	0.00	-2.972	11.00	PASS
48	5240	-2.687	0.00	-2.687	11.00	PASS

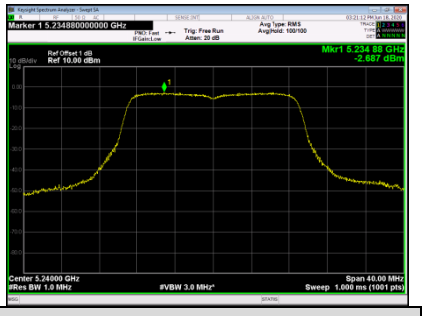
CH36



CH40



CH48

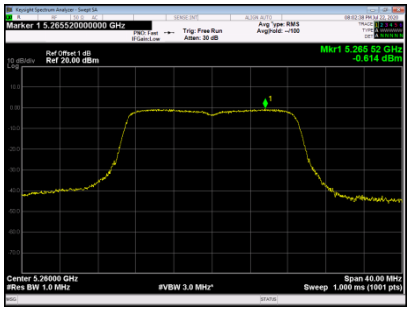


UNII-1_TX N (HT20) Mode_Total For FCC				
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180	1.144	11.00	PASS
40	5200	0.923	11.00	PASS
48	5240	1.935	11.00	PASS

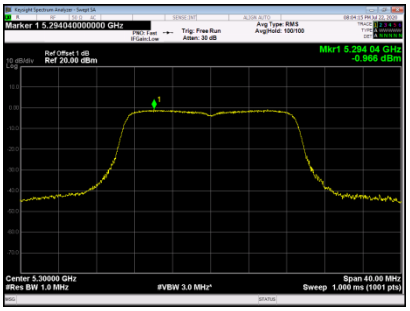
UNII-1_TX N (HT20) Mode_Total For IC				
Channel	Frequency (MHz)	EIRP Power Spectral Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180	2.744	10.00	PASS
40	5200	2.523	10.00	PASS
48	5240	3.535	10.00	PASS

UNII-2A_TX N (HT20) Mode_Ant 1						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260	-0.614	0.00	-0.614	11.00	PASS
60	5300	-0.966	0.00	-0.966	11.00	PASS
64	5320	-1.298	0.00	-1.298	11.00	PASS

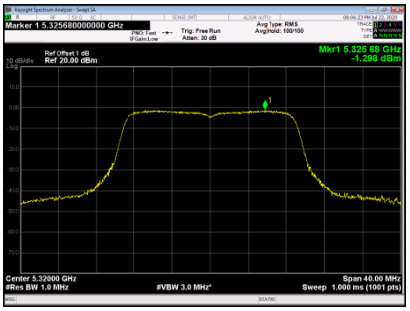
CH52



CH60

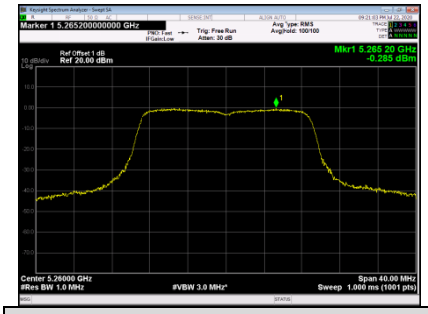


CH64

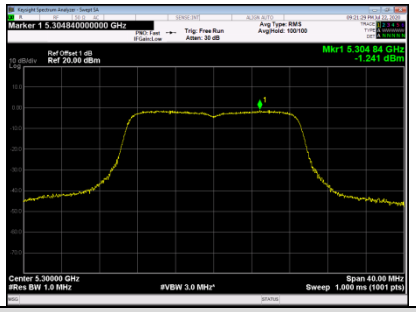


UNII-2A_TX N (HT20) Mode_Ant 2						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260	-0.285	0.00	-0.285	11.00	PASS
60	5300	-1.241	0.00	-1.241	11.00	PASS
64	5320	-1.677	0.00	-1.677	11.00	PASS

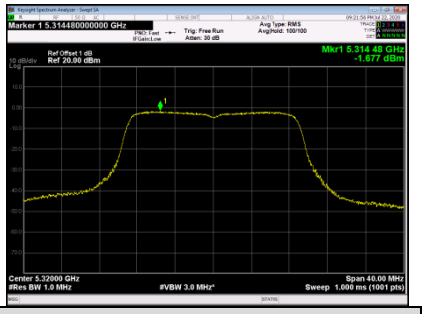
CH52



CH60



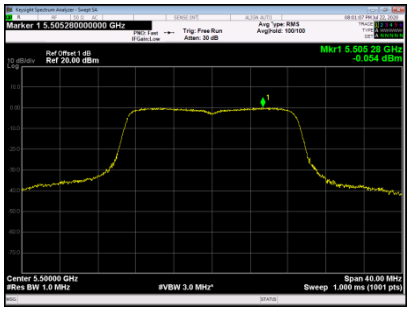
CH64



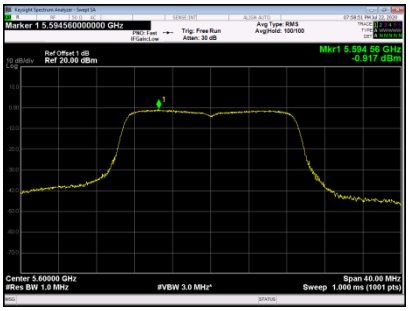
UNII-2A_TX N (HT20) Mode_Total				
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260	2.564	11.00	PASS
60	5300	1.909	11.00	PASS
64	5320	1.527	11.00	PASS

UNII-2C_TX N (HT20) Mode_Ant 1						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
100	5500	-0.054	0.00	-0.054	11.00	PASS
120	5600	-0.917	0.00	-0.917	11.00	PASS
140	5700	-2.546	0.00	-2.546	11.00	PASS

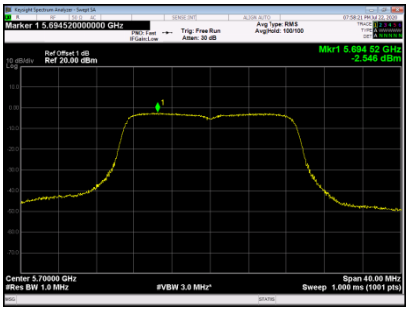
CH100



CH120

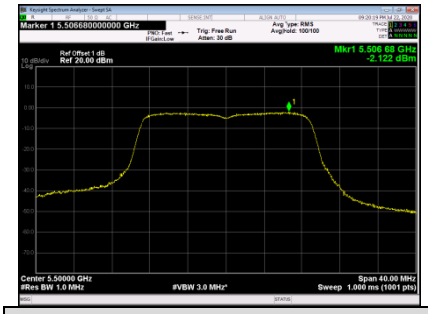


CH140

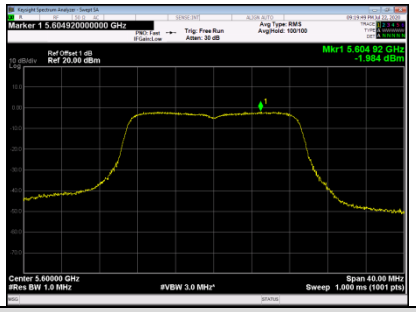


UNII-2C_TX N (HT20) Mode_Ant 2						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
100	5500	-2.122	0.00	-2.122	11.00	PASS
120	5600	-1.984	0.00	-1.984	11.00	PASS
140	5700	-1.525	0.00	-1.525	11.00	PASS

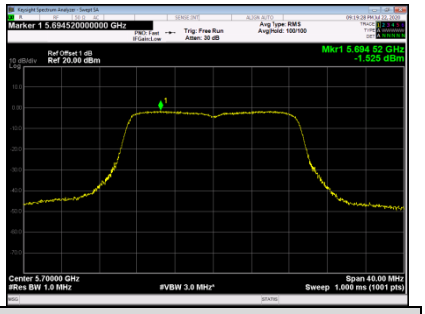
CH100



CH120



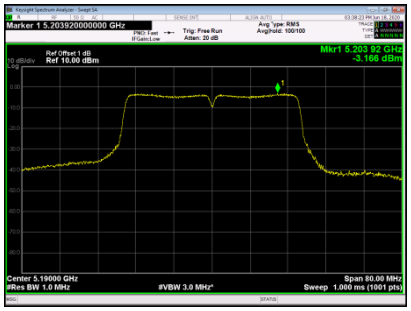
CH140



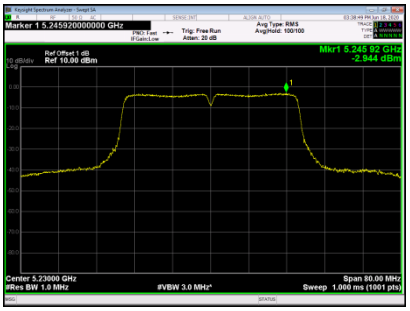
UNII-2C_TX N (HT20) Mode_Total				
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
100	5500	2.044	11.00	PASS
120	5600	1.592	11.00	PASS
140	5700	1.005	11.00	PASS

UNII-1_TX N (HT40) Mode_Ant 1						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190	-3.166	0.00	-3.166	11.00	PASS
46	5230	-2.944	0.00	-2.944	11.00	PASS

CH38

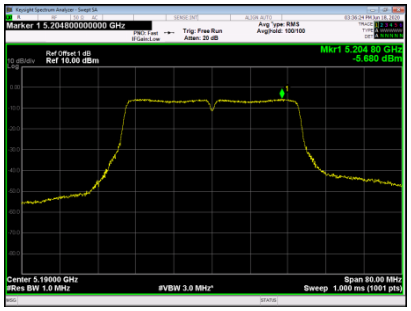


CH46

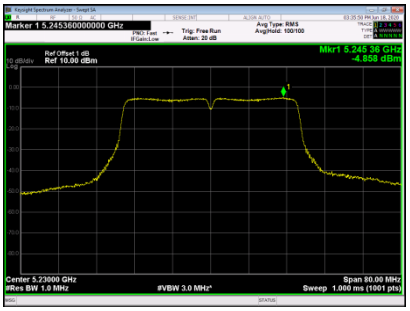


UNII-1_TX N (HT40) Mode_Ant2						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190	-5.680	0.00	-5.680	11.00	PASS
46	5230	-4.858	0.00	-4.858	11.00	PASS

CH38



CH46

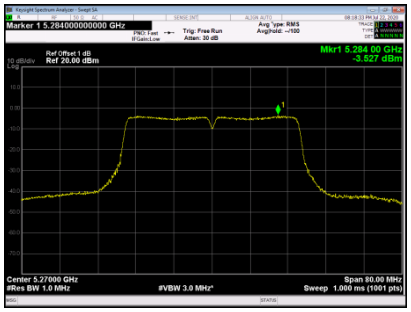


UNII-1_TX N (HT40) Mode _Total For FCC				
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190	-1.233	11.00	PASS
46	5230	-0.786	11.00	PASS

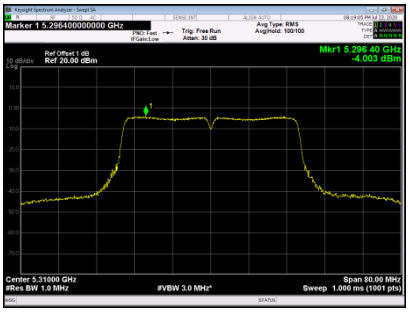
UNII-1_TX N (HT40) Mode _Total For IC				
Channel	Frequency (MHz)	EIRP Power Spectral Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190	0.367	10.00	PASS
46	5230	0.814	10.00	PASS

UNII-2A_TX N (HT40) Mode_Ant 1						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270	-3.527	0.00	-3.527	11.00	PASS
62	5310	-4.003	0.00	-4.003	11.00	PASS

CH54

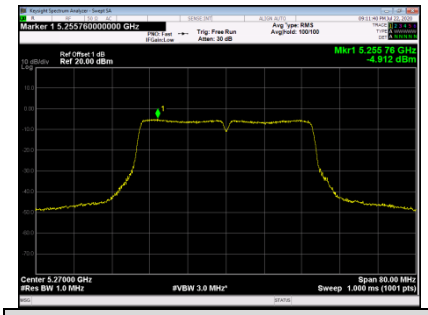


CH62

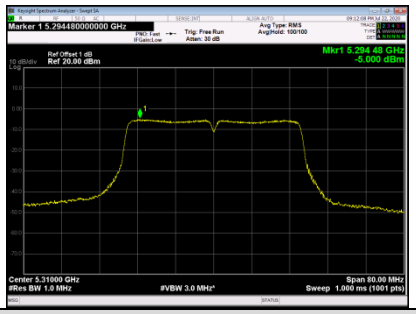


UNII-2A_TX N (HT40) Mode _Ant 2						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270	-4.912	0.00	-4.912	11.00	PASS
62	5310	-5.000	0.00	-5.000	11.00	PASS

CH54



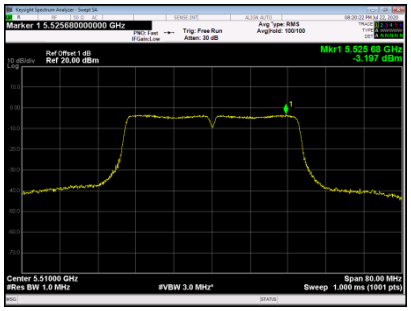
CH62



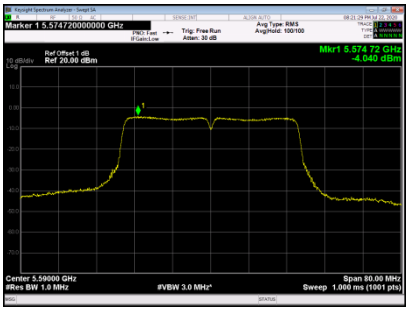
UNII-2A_TX N (HT40) Mode _Total				
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270	-1.154	11.00	PASS
62	5310	-1.463	11.00	PASS

UNII-2C_TX N (HT40) Mode_Ant 1						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
102	5510	-3.197	0.00	-3.197	11.00	PASS
118	5590	-4.040	0.00	-4.040	11.00	PASS
134	5670	-4.461	0.00	-4.461	11.00	PASS

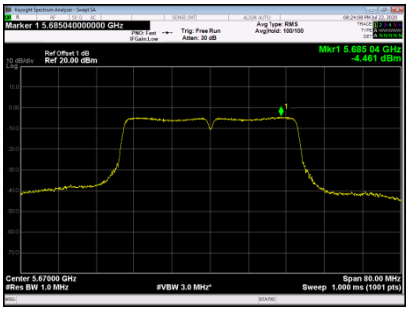
CH102



CH118

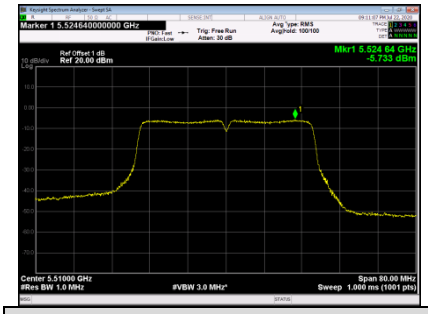


CH134

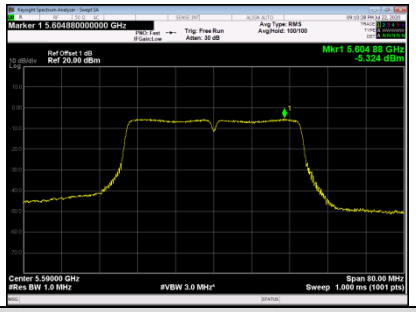


UNII-2C_TX N (HT40) Mode _Ant 2						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
102	5510	-5.733	0.00	-5.733	11.00	PASS
118	5590	-5.324	0.00	-5.324	11.00	PASS
134	5670	-4.906	0.00	-4.906	11.00	PASS

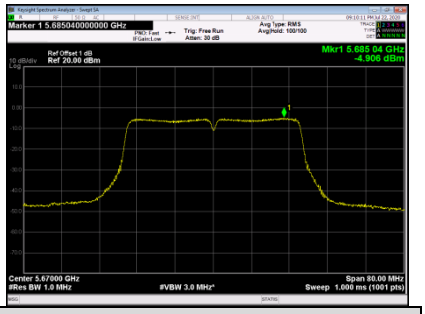
CH102



CH118



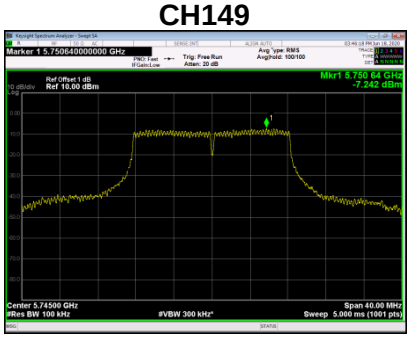
CH134



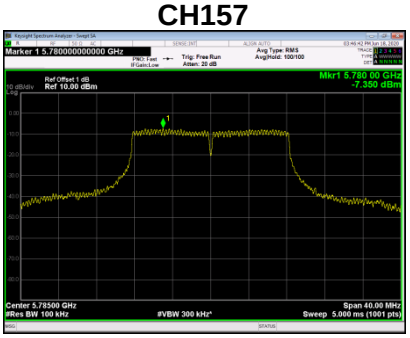
UNII-2C_TX N (HT40) Mode _Total				
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
102	5510	-1.272	11.00	PASS
118	5590	-1.624	11.00	PASS
134	5670	-1.668	11.00	PASS

UNII-3_TX A Mode_Ant 1						
Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
149	5745	-7.242	0.00	-7.242	30.00	PASS
157	5785	-7.350	0.00	-7.350	30.00	PASS
165	5825	-7.176	0.00	-7.176	30.00	PASS

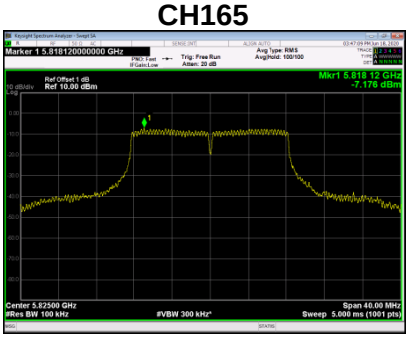
CH149



CH157

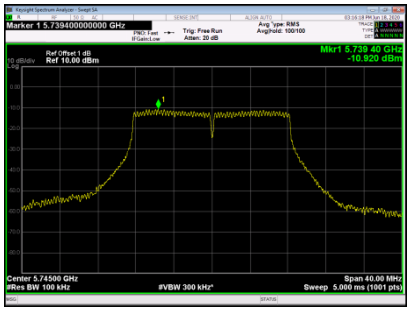


CH165

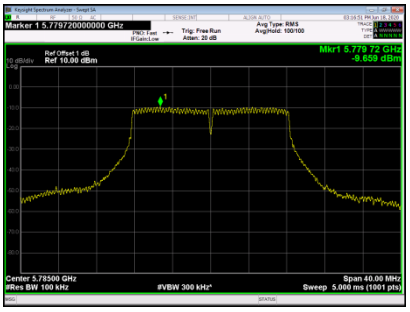


UNII-3_TX A Mode_Ant2						
Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
149	5745	-10.920	0.00	-10.920	30.00	PASS
157	5785	-9.659	0.00	-9.659	30.00	PASS
165	5825	-9.821	0.00	-9.821	30.00	PASS

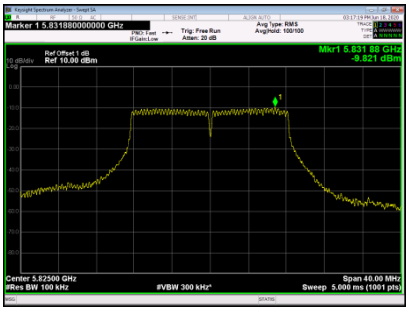
CH149



CH157

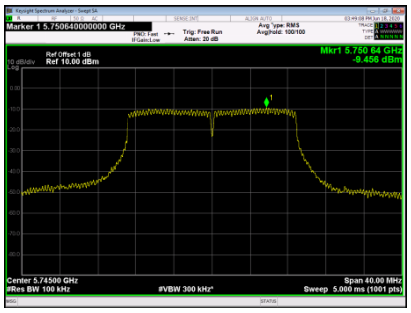


CH165

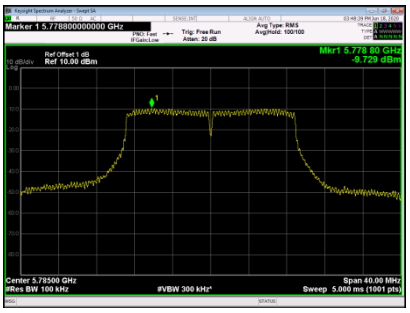


UNII-3_TX N (HT20) Mode_Ant 1						
Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
149	5745	-9.456	0.00	-9.456	30.00	PASS
157	5785	-9.729	0.00	-9.729	30.00	PASS
165	5825	-9.480	0.00	-9.480	30.00	PASS

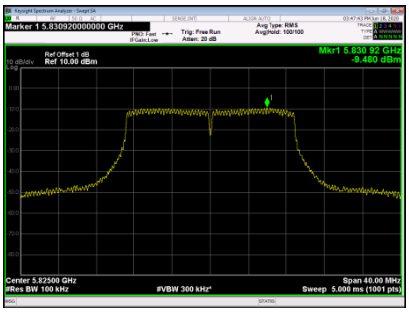
CH149



CH157

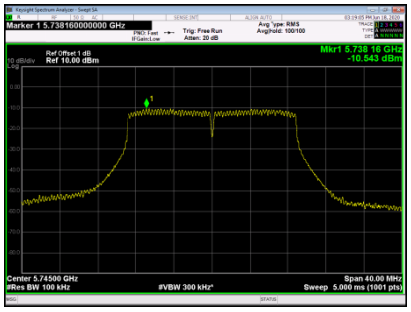


CH165

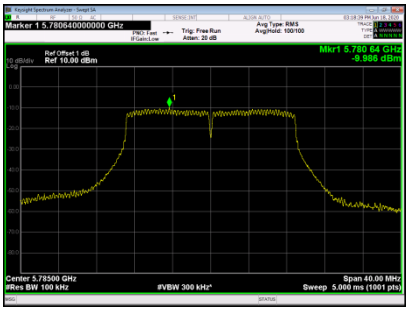


UNII-3_TX N (HT20) Mode_Ant2						
Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
149	5745	-10.543	0.00	-10.543	30.00	PASS
157	5785	-9.986	0.00	-9.986	30.00	PASS
165	5825	-9.848	0.00	-9.848	30.00	PASS

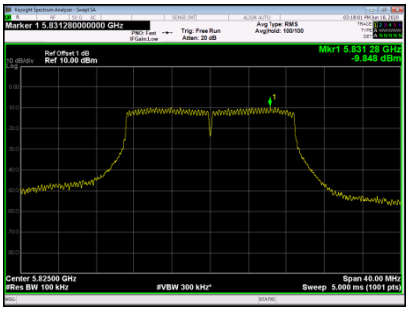
CH149



CH157



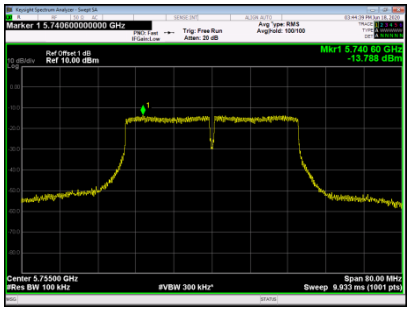
CH165



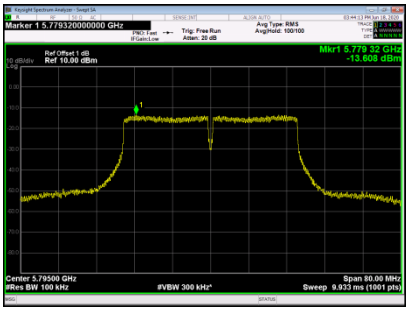
UNII-3_TX N (HT20) Mode_Total				
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Max. Limit (dBm/500 kHz)	Result
149	5745	-6.955	30.00	PASS
157	5785	-6.845	30.00	PASS
165	5825	-6.650	30.00	PASS

UNII-3_TX N (HT40) Mode_Ant 1						
Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
151	5755	-13.788	0.00	-13.788	30.00	PASS
159	5795	-13.608	0.00	-13.608	30.00	PASS

CH151

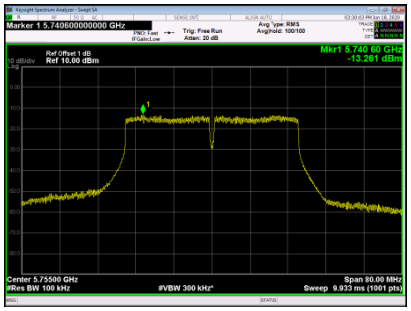


CH159

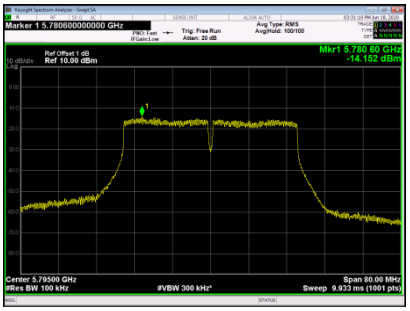


UNII-3_TX N (HT40) Mode_Ant2						
Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
151	5755	-13.261	0.00	-13.261	30.00	PASS
159	5795	-14.152	0.00	-14.152	30.00	PASS

CH151



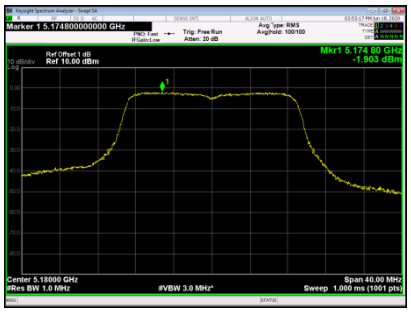
CH159



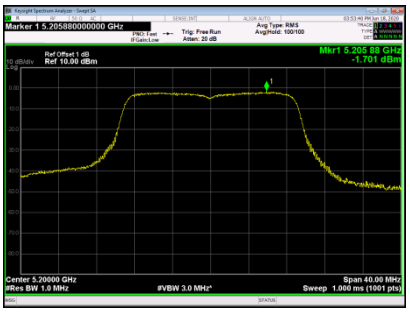
UNII-3_TX N (HT40) Mode_Total				
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Max. Limit (dBm/500 kHz)	Result
151	5755	-10.506	30.00	PASS
159	5795	-10.861	30.00	PASS

UNII-1_TX AC (VHT20) Mode_Ant 1						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180	-1.903	0.00	-1.903	11.00	PASS
40	5200	-1.701	0.00	-1.701	11.00	PASS
48	5240	-0.869	0.00	-0.869	11.00	PASS

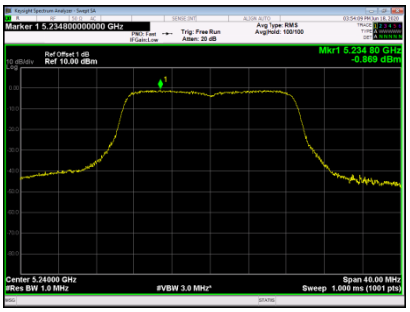
CH36



CH40

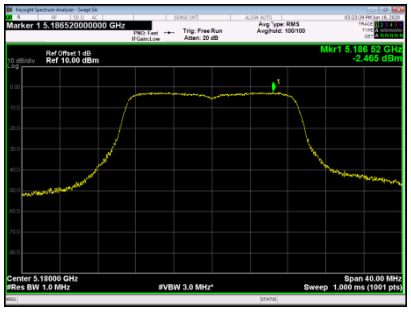


CH48

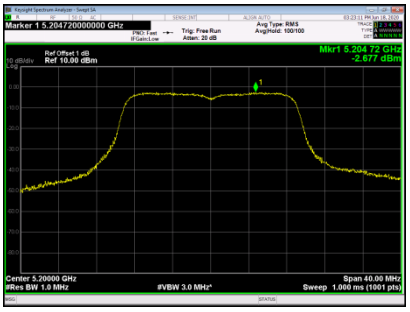


UNII-1_TX AC (VHT20) Mode_Ant2						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180	-2.465	0.00	-2.465	11.00	PASS
40	5200	-2.677	0.00	-2.677	11.00	PASS
48	5240	-2.071	0.00	-2.071	11.00	PASS

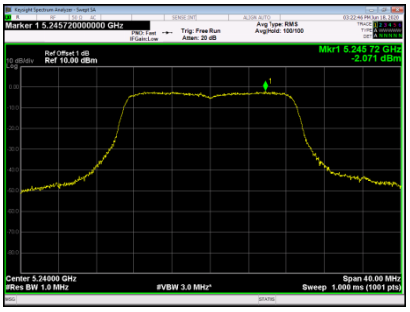
CH36



CH40



CH48

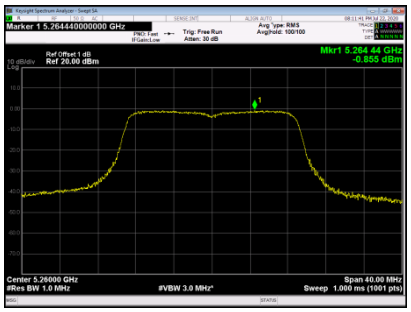


UNII-1_TX AC (VHT20) Mode_Total For FCC				
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180	0.835	11.00	PASS
40	5200	0.849	11.00	PASS
48	5240	1.582	11.00	PASS

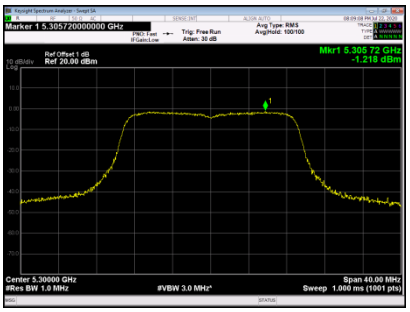
UNII-1_TX AC (VHT20) Mode_Total For IC				
Channel	Frequency (MHz)	EIRP Power Spectral Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180	2.435	10.00	PASS
40	5200	2.449	10.00	PASS
48	5240	3.182	10.00	PASS

UNII-2A_TX AC (VHT20) Mode_Ant 1						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260	-0.855	0.00	-0.855	11.00	PASS
60	5300	-1.218	0.00	-1.218	11.00	PASS
64	5320	-1.195	0.00	-1.195	11.00	PASS

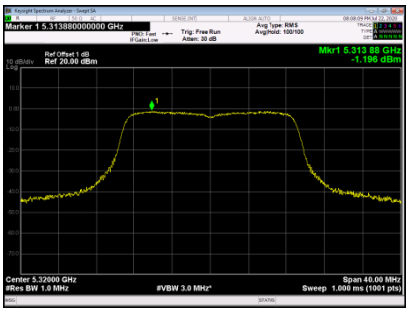
CH52



CH60

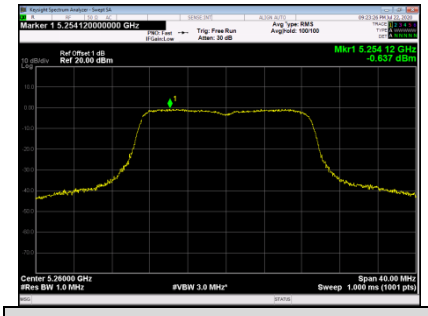


CH64

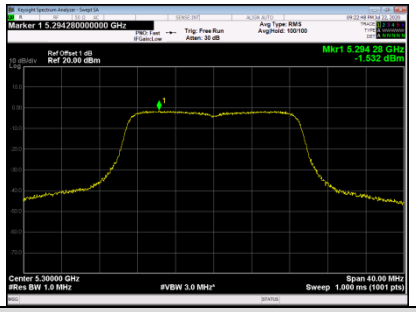


UNII-2A_TX AC (VHT20) Mode _Ant 2						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260	-0.637	0.00	-0.637	11.00	PASS
60	5300	-1.532	0.00	-1.532	11.00	PASS
64	5320	-1.460	0.00	-1.460	11.00	PASS

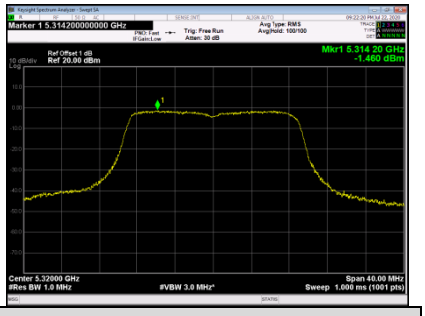
CH52



CH60



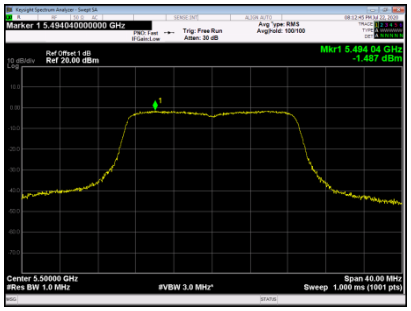
CH64



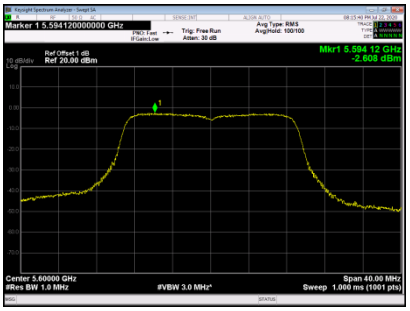
UNII-2A_TX AC (VHT20) Mode _Total				
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260	2.266	11.00	PASS
60	5300	1.638	11.00	PASS
64	5320	1.685	11.00	PASS

UNII-2C_TX AC (VHT20) Mode_Ant 1						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
100	5500	-1.487	0.00	-1.487	11.00	PASS
120	5600	-2.608	0.00	-2.608	11.00	PASS
140	5700	-2.239	0.00	-2.239	11.00	PASS

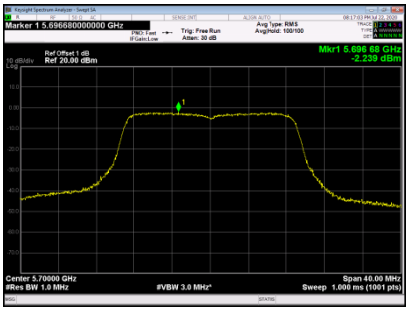
CH100



CH120

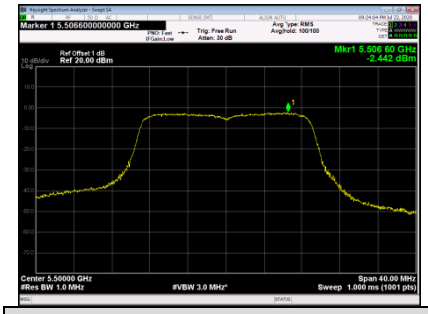


CH140

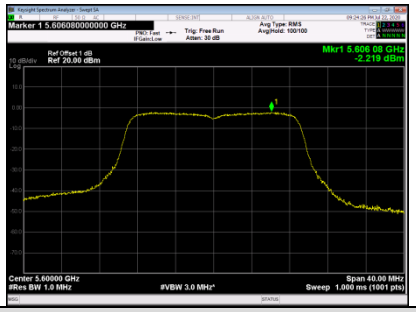


UNII-2C_TX AC (VHT20) Mode_Ant 2						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
100	5500	-2.442	0.00	-2.442	11.00	PASS
120	5600	-2.219	0.00	-2.219	11.00	PASS
140	5700	-2.099	0.00	-2.099	11.00	PASS

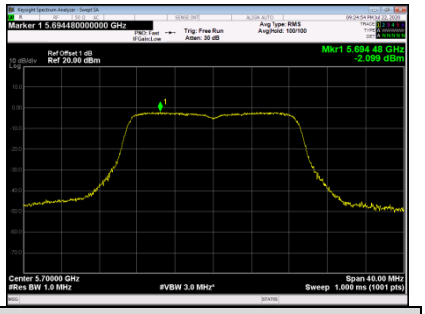
CH100



CH120



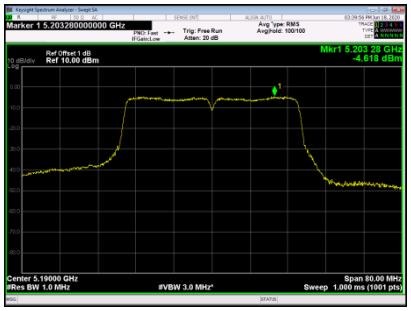
CH140



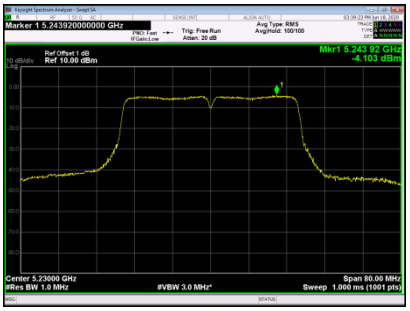
UNII-2C_TX AC (VHT20) Mode_Total				
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
100	5500	1.072	11.00	PASS
120	5600	0.601	11.00	PASS
140	5700	0.842	11.00	PASS

UNII-1_TX AC (VHT40) Mode_Ant 1						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190	-4.618	0.00	-4.618	11.00	PASS
46	5230	-4.103	0.00	-4.103	11.00	PASS

CH38

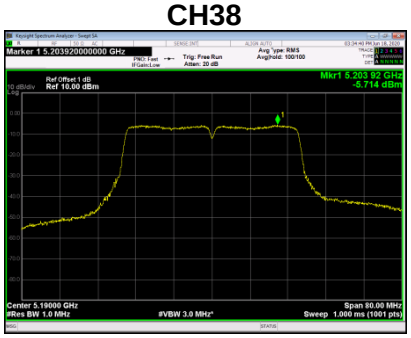


CH46

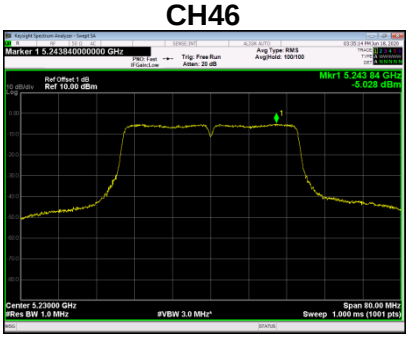


UNII-1_TX AC (VHT40) Mode_Ant2						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190	-5.714	0.00	-5.714	11.00	PASS
46	5230	-5.028	0.00	-5.028	11.00	PASS

CH38



CH46

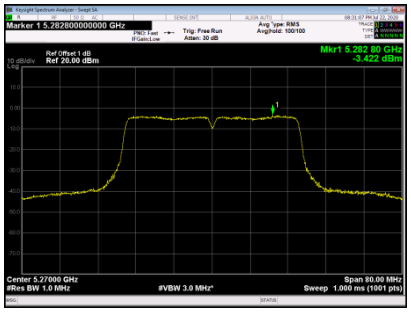


UNII-1_TX AC (VHT40) Mode_Total For FCC				
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190	-2.121	11.00	PASS
46	5230	-1.531	11.00	PASS

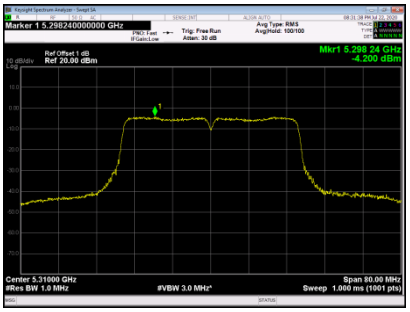
UNII-1_TX AC (VHT40) Mode_Total For IC				
Channel	Frequency (MHz)	EIRP Power Spectral Density(dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190	-0.521	10.00	PASS
46	5230	0.069	10.00	PASS

UNII-2A_TX AC (VHT40) Mode_Ant 1						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270	-3.422	0.00	-3.422	11.00	PASS
62	5310	-4.200	0.00	-4.200	11.00	PASS

CH54

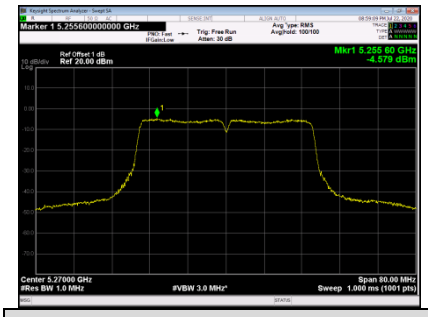


CH62

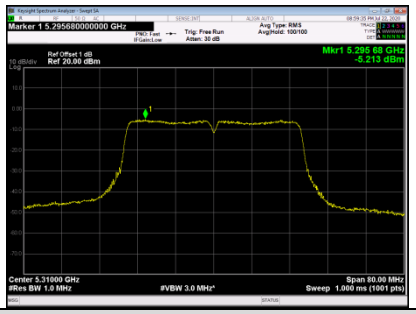


UNII-2A_TX AC (VHT40) Mode _Ant 2						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270	-4.579	0.00	-4.579	11.00	PASS
62	5310	-5.213	0.00	-5.213	11.00	PASS

CH54



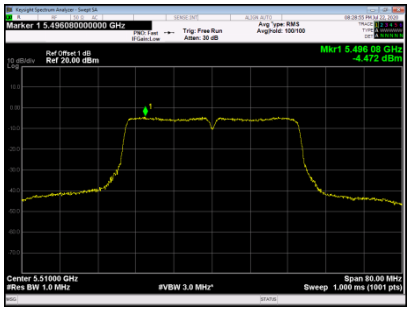
CH62



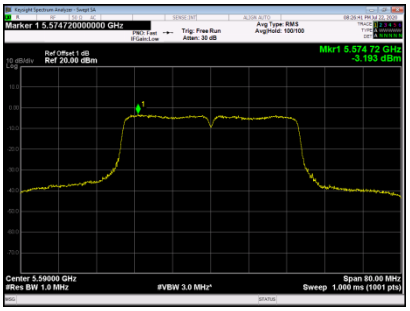
UNII-2A_TX AC (VHT40) Mode _Total				
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270	-0.952	11.00	PASS
62	5310	-1.667	11.00	PASS

UNII-2C_TX AC (VHT40) Mode_Ant 1						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
102	5510	-4.472	0.00	-4.472	11.00	PASS
118	5590	-3.193	0.00	-3.193	11.00	PASS
134	5670	-4.984	0.00	-4.984	11.00	PASS

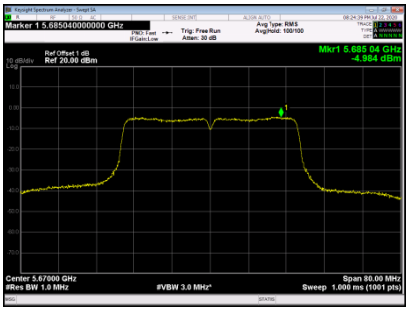
CH102



CH118

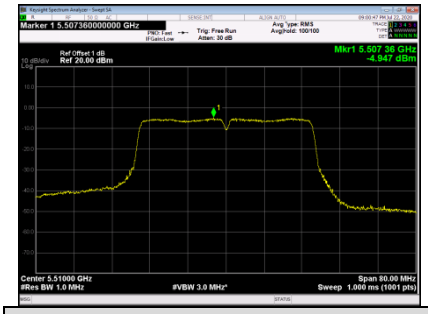


CH134

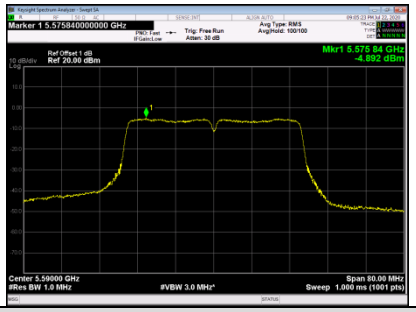


UNII-2C_TX AC (VHT40) Mode _Ant 2						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
102	5510	-4.947	0.00	-4.947	11.00	PASS
118	5590	-4.892	0.00	-4.892	11.00	PASS
134	5670	-4.586	0.00	-4.586	11.00	PASS

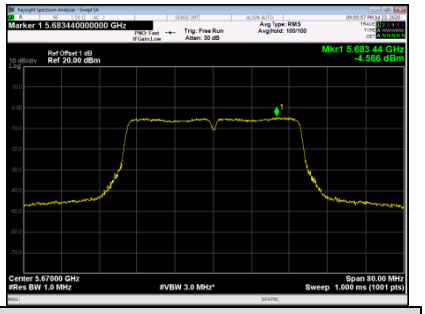
CH102



CH118



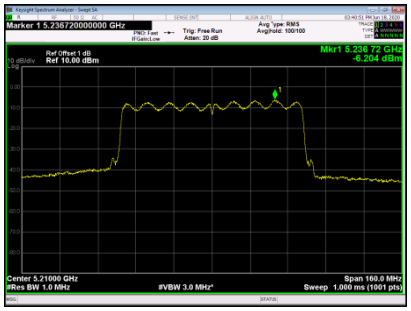
CH134



UNII-2C_TX AC (VHT40) Mode _Total				
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
102	5510	-1.693	11.00	PASS
118	5590	-0.950	11.00	PASS
134	5670	-1.770	11.00	PASS

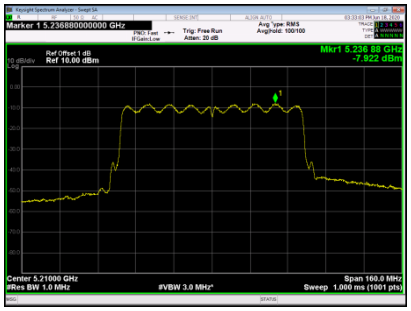
UNII-1_TX AC (VHT80) Mode_Ant 1						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210	-6.204	0.00	-6.204	11.00	PASS

CH42



UNII-1_TX AC (VHT80) Mode_Ant2						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210	-7.922	0.00	-7.922	11.00	PASS

CH42

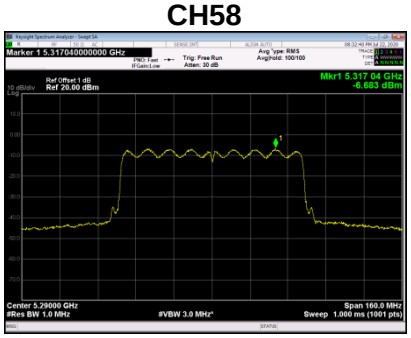


UNII-1_TX AC (VHT80) Mode_Total For FCC				
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210	-3.968	11.00	PASS

UNII-1_TX AC (VHT80) Mode_Total For IC				
Channel	Frequency (MHz)	EIRP Power Spectral Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210	-2.368	10.00	PASS

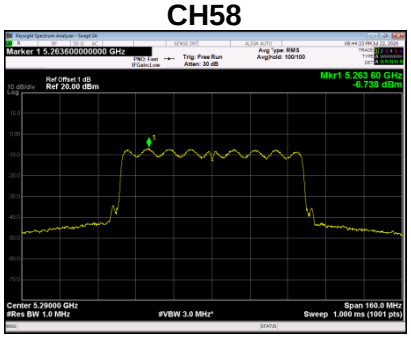
UNII-2A_TX AC (VHT80) Mode_Ant 1						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
58	5290	-6.683	0.00	-6.683	11.00	PASS

CH58



UNII-2A_TX AC (VHT80) Mode_Ant2						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
58	5290	-6.738	0.00	-6.738	11.00	PASS

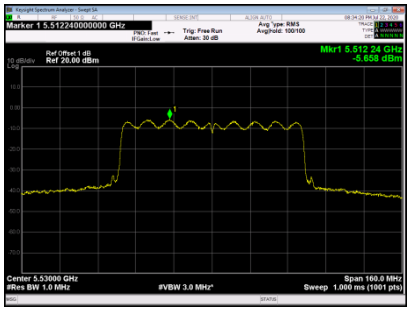
CH58



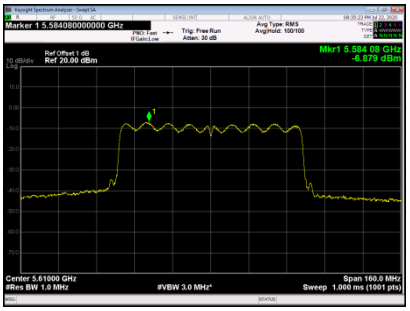
UNII-2A_TX AC (VHT80) Mode_Total				
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
58	5290	-3.700	11.00	PASS

UNII-2C_TX AC (VHT80) Mode_Ant 1						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
106	5530	-5.658	0.00	-5.658	11.00	PASS
122	5610	-6.879	0.00	-6.879	11.00	PASS

CH106

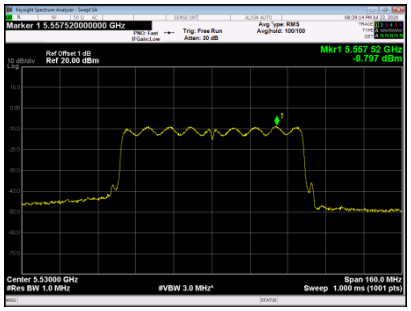


CH122

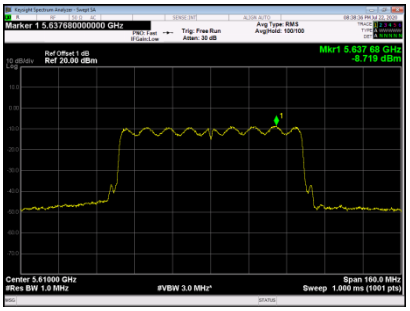


UNII-2C_TX AC (VHT80) Mode_Ant2						
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Result
106	5530	-8.797	0.00	-8.797	11.00	PASS
122	5610	-8.719	0.00	-8.719	11.00	PASS

CH106



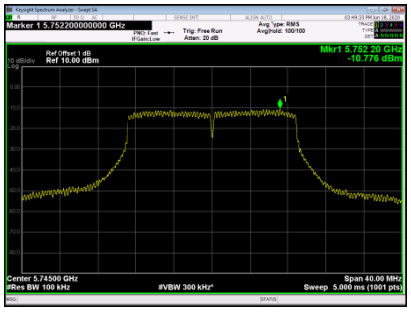
CH122



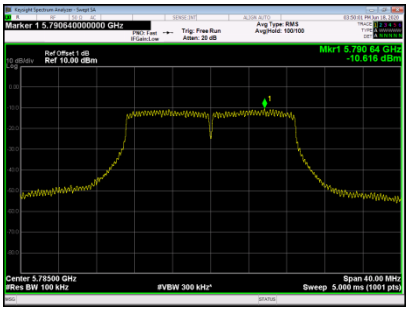
UNII-2C_TX AC (VHT80) Mode_Total				
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
106	5530	-3.940	11.00	PASS
122	5610	-4.692	11.00	PASS

UNII-3_TX AC (VHT20) Mode_Ant 1						
Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
149	5745	-10.776	0.00	-10.776	30.00	PASS
157	5785	-10.616	0.00	-10.616	30.00	PASS
165	5825	-11.037	0.00	-11.037	30.00	PASS

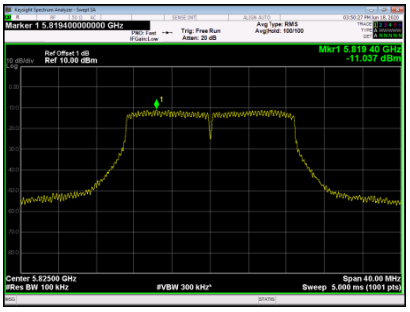
CH149



CH157

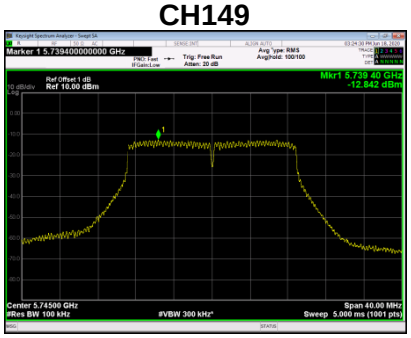


CH165

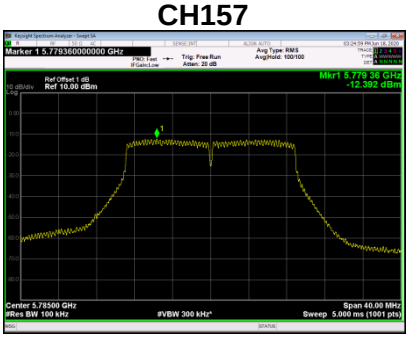


UNII-3_TX AC (VHT20) Mode_Ant2						
Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
149	5745	-12.842	0.00	-12.842	30.00	PASS
157	5785	-12.392	0.00	-12.392	30.00	PASS
165	5825	-12.209	0.00	-12.209	30.00	PASS

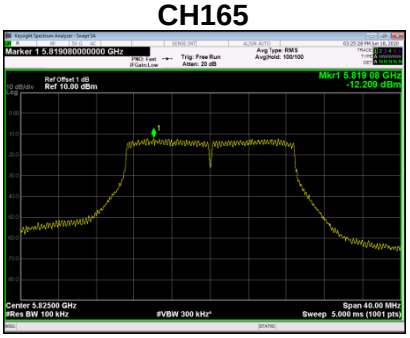
CH149



CH157



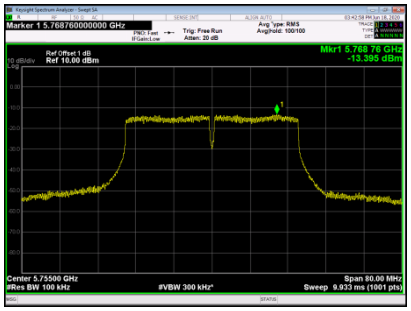
CH165



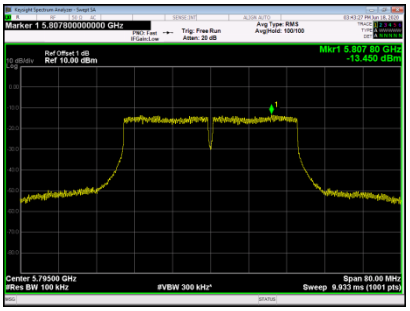
UNII-3_TX AC (VHT20) Mode_Total				
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Max. Limit (dBm/500 kHz)	Result
149	5745	-8.677	30.00	PASS
157	5785	-8.404	30.00	PASS
165	5825	-8.573	30.00	PASS

UNII-3_TX AC (VHT40) Mode_Ant 1						
Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
151	5755	-13.395	0.00	-13.395	30.00	PASS
159	5795	-13.450	0.00	-13.450	30.00	PASS

CH151

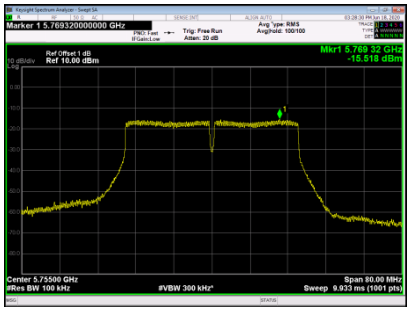


CH159

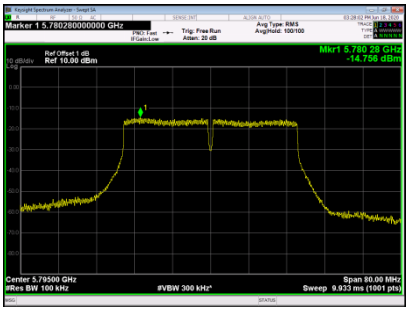


UNII-3_TX AC (VHT40) Mode_Ant2						
Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
151	5755	-15.518	0.00	-15.518	30.00	PASS
159	5795	-14.756	0.00	-14.756	30.00	PASS

CH151



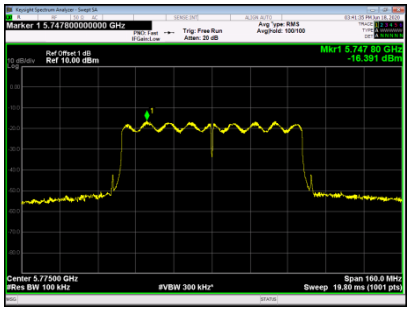
CH159



UNII-3_TX AC (VHT40) Mode_Total				
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Max. Limit (dBm/500 kHz)	Result
151	5755	-11.318	30.00	PASS
159	5795	-11.044	30.00	PASS

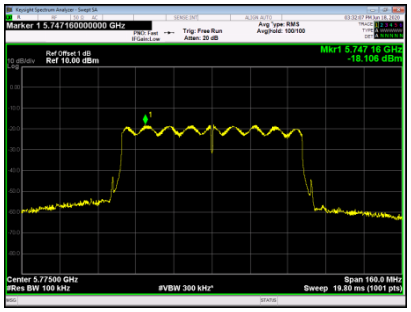
UNII-3_TX AC (VHT80) Mode_Ant 1						
Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
155	5775	-16.391	0.00	-16.391	30.00	PASS

CH155



UNII-3_TX AC (VHT80) Mode_Ant2						
Channel	Frequency (MHz)	Power Spectral Density (dBm/500 kHz)	Duty Factor	Power Spectral Density + Duty Factor (dBm/500 kHz)	Max. Limit (dBm/500 kHz)	Result
155	5775	-18.106	0.00	-18.106	30.00	PASS

CH155



UNII-3_TX AC (VHT80) Mode_Total				
Channel	Frequency (MHz)	Power Spectral Density (dBm/MHz)	Max. Limit (dBm/500 kHz)	Result
155	5775	-14.154	30.00	PASS

9. FREQUENCY STABILITY MEASUREMENT

9.1 LIMIT

FCC Part15, Subpart E (15.407)&RSS-GEN			
Section	Test Item	Limit	Frequency Range (MHz)
15.407(g) RSS-GEN 6.11	Frequency Stability	Specified in the user's manual	5150-5250
			5725-5850

9.2 TEST PROCEDURE AND SETTING

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.

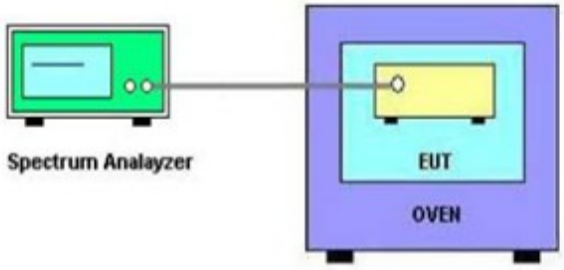
b. Spectrum Setting:

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Entire absence of modulation emissions bandwidth
RBW	10 kHz
VBW	10kHz
Sweep Time	Auto

9.3 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum analyzer	KEYSIGHT	N9010A	MY55150427	2021/05/24
2	Attenuator	Mini-Circuits	BW-S10W2	101109	N/A
3	RF Cable	Mi-cable	C10-01-01-1	100309	N/A
4	Temperature conditioning	Guan Jian.HTH1000	-20-130℃	GJ1000-10D001	N/A
5	DC Power Supply	G.KE	IPR-10010D	010931954	N/A

9.4 TEST SETUP



9.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

9.6 TEST RESULTS

	Temperature vs. Frequency Stability-UNII-1	
Voltage	Temperature	Measurement Frequency (MHz)
5V	(℃)	5180
	-20	5180.0018
	25	5180.0026
	50	5180.0009
2.7V	25	5180.0019
Max. Deviation (MHz)		0.0026
Max. Deviation (ppm)		0.50

	Temperature vs. Frequency Stability-UNII-2A	
Voltage	Temperature	Measurement Frequency (MHz)
5V	(℃)	5260
	-20	5260.0011
	25	5260.0018
	50	5260.0015
2.7V	25	5260.0016
Max. Deviation (MHz)		0.0018
Max. Deviation (ppm)		3.42

	Temperature vs. Frequency Stability-UNII-2C	
Voltage	Temperature	Measurement Frequency (MHz)
5V	(℃)	5500
	-20	5500.0009
	25	5500.0012
	50	5500.0005
2.7V	25	5500.0010
Max. Deviation (MHz)		0.0012
Max. Deviation (ppm)		0.22

	Temperature vs. Frequency Stability-UNII-3	
Voltage	Temperature	Measurement Frequency (MHz)
5V	(℃)	5745
	-20	5745.0002
	25	5745.0008
	50	5745.0002
2.7V	25	5745.0001
Max. Deviation (MHz)		0.0008
Max. Deviation (ppm)		0.14

Note: 2.7 V is the end point voltage, and products below 2.7V will cease working.

END OF TEST REPORT