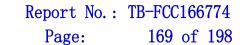




# **Attachment E-- Maximum Output Power Test Data**

Temperature: 25 °C  Test Voltage: AC 120V/		<b>25</b> ℃	Relative Humidity	: 55%
		AC 120V/6	0Hz	
			U-NII-1	
	Frequency (MHz)		Test Data	Limit
Test Mode			Conducted Power(avg)	(dBm)
			(dBm)	(ubiii)
	į	5180	14.459	
802.11a	5200		14.641	
	,	5240	14.106	
000 44	;	5180	14.355	
802.11n	;	5200	14.522	
(HT20)		5240	14.322	
200 44		5180	14.558	
802.11ac		5200	14.763	24
(HT20)	ŧ	5240	14.277	
802.11n (HT40)	į.	5190	14.653	
	;	5230	14.443	
802.11	;	5190	14.547	
ac(40)		5230	14.480	
802.11 ac(80) 5210		5210	14.490	
			Result: PASS	



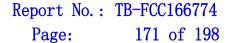


Temperature: Relative Humidity: 25 ℃ 55% **Test Voltage:** AC 120V/60Hz U-NII-3 **Test Data** Frequency Limit **Test Mode Conducted Power (avg)** (MHz) (dBm) (dBm) 5745 14.686 802.11a 5785 14.662 5825 14.830 5745 14.813 802.11n 5785 14.770 (HT20) 5825 14.853 5745 14.712 802.11ac 30 5785 14.595 (HT20) 5825 14.756 5755 802.11n 15.087 (HT40) 5795 14.924 5755 802.11 15.050 ac(40) 5795 14.929 802.11 5775 15.070 ac(80) Result: PASS

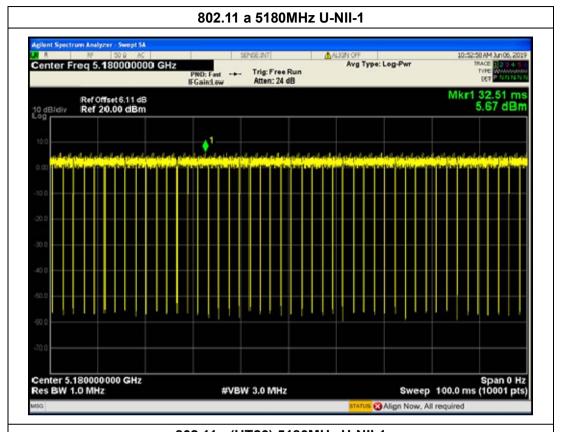


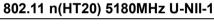
Test Mode		Duty cycle	
	802.11 a		
	802.11 n(HT20)	>98%	
	802.11 ac(HT20)		
U-NII-1	802.11 n(HT40)		
	802.11 ac(HT40)		
	802.11 ac(HT80)		
	802.11 a		
	802.11 n(HT20)		
U-NII-3	802.11 ac(HT20)		
U-MII-3	802.11 n(HT40)		
	802.11 ac(HT40)		
	802.11 ac(HT80)		

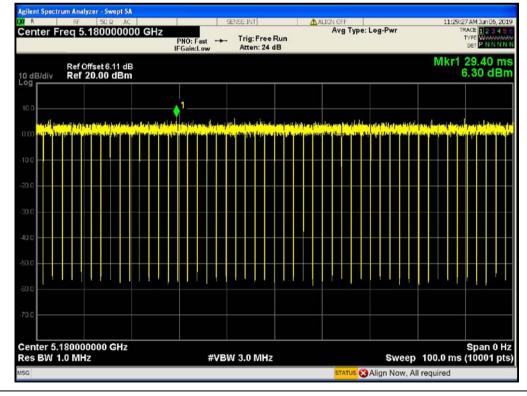
170 of 198

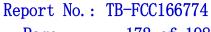






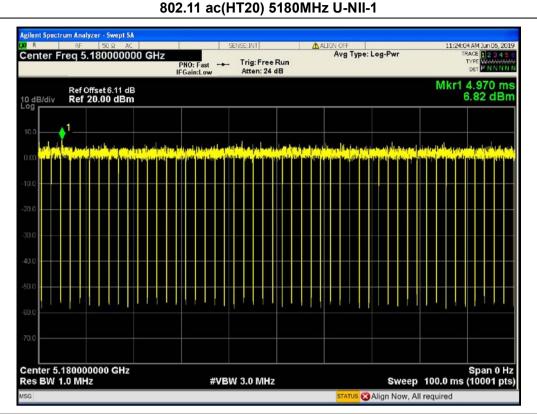


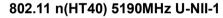


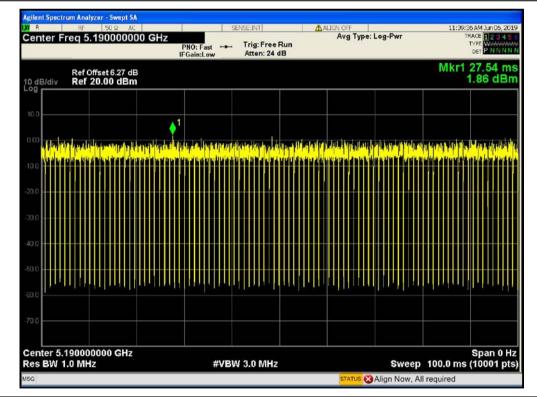




Page: 172 of 198





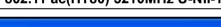


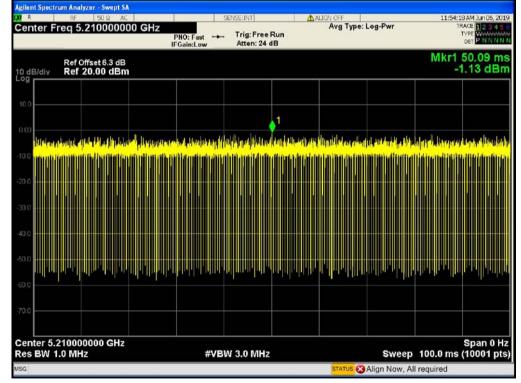


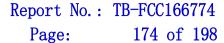


173 of 198 Page:









Span 0 Hz Sweep 100.0 ms (10001 pts)

Align Now, All required



Center 5.785000000 GHz Res BW 1.0 MHz

Aglent Spectrum Analyzer - Swept SA

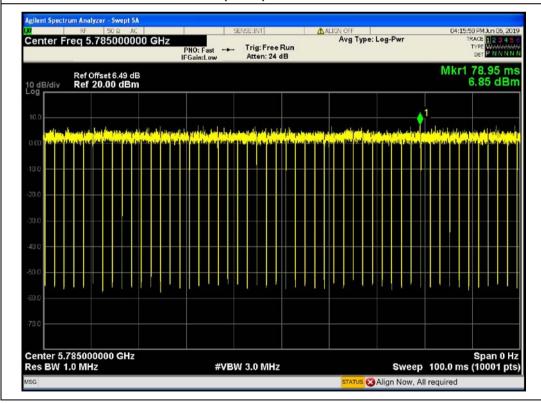
DM PR SO B AC SENSETTI ANALYSEF CORRECT TRACE IN 28 AS INC.

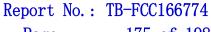
Center Freq 5.7850000000 GHz

PHO: Fast In Community of the C

### 802.11 n(HT20) 5785MHz U-NII-3

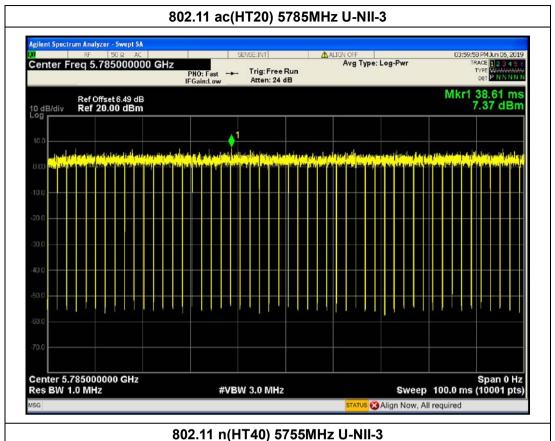
#VBW 3.0 MHz

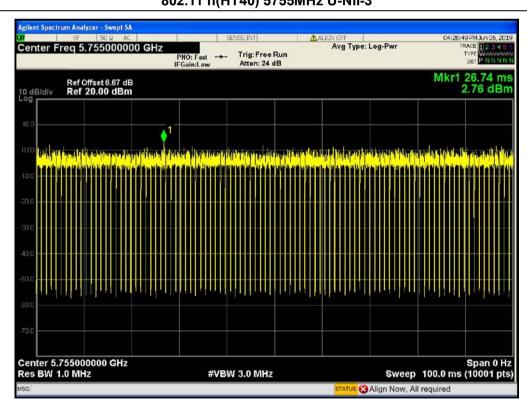


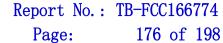




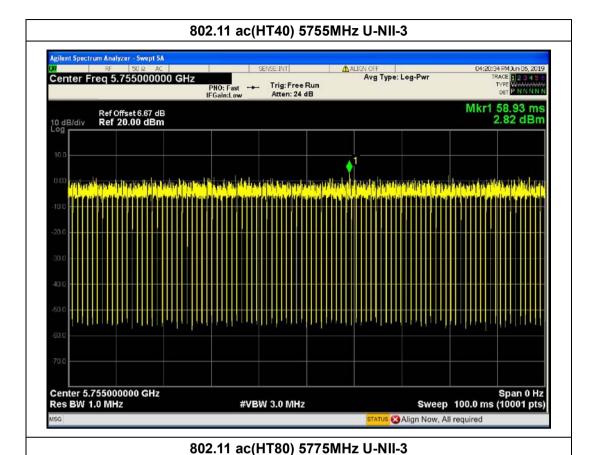
Page: 175 of 198

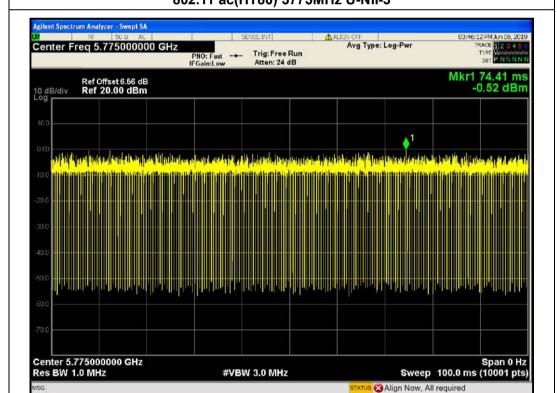












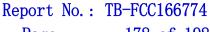




Page: 177 of 198

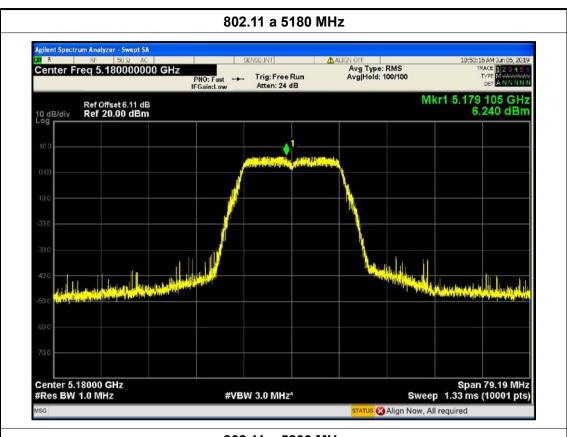
# **Attachment F-- Power Spectral Density Test Data**

EUT:	AV 1000 AC Wi-Fi	MadalNassa	PA7			
	Powerline Extender	Model Name :				
Temperature:	25 ℃	Relative Humidity:	55%			
Test Voltage:	AC 120V/60Hz					
U-NII-1						
	Eroguenev	Test Data	Limit			
Test Mode	Frequency (MHz)	Power Density	(dBm)			
	(141112)	(dBm/MHz)	(ubiii)			
	5180	6.240				
802.11a	5200	6.601				
	5240	5.964				
802.11n (HT20)	5180	6.336				
	5200	6.719				
	5240	5.758				
	5180	7.091	11			
802.11ac (HT20)	5200	7.077	11			
	5240	6.643				
000 44~ (UT40)	5190	3.635				
802.11n (HT40)	5230	3.377				
802.11ac(40)	5190	3.389				
002. i iac(40)	5230	3.399				
802.11ac(80)	5210	1.571				
	Resu	It: PASS				
Test plots please refer to below pages:						

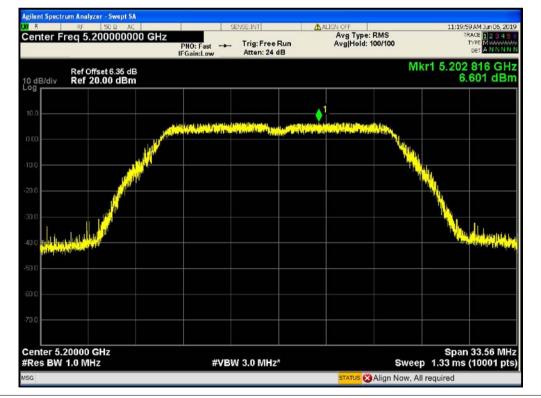




Page: 178 of 198



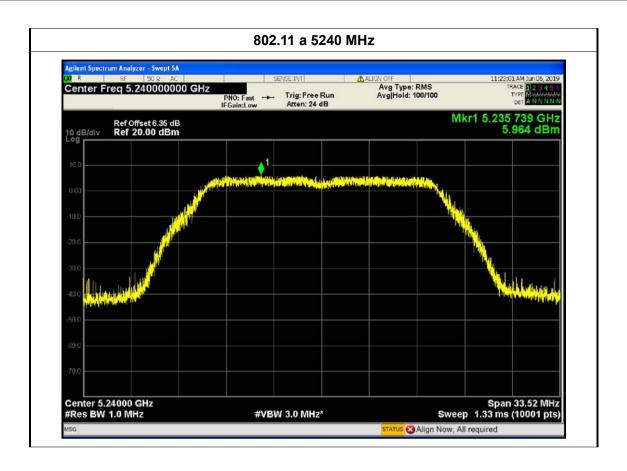
### 802.11 a 5200 MHz

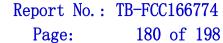




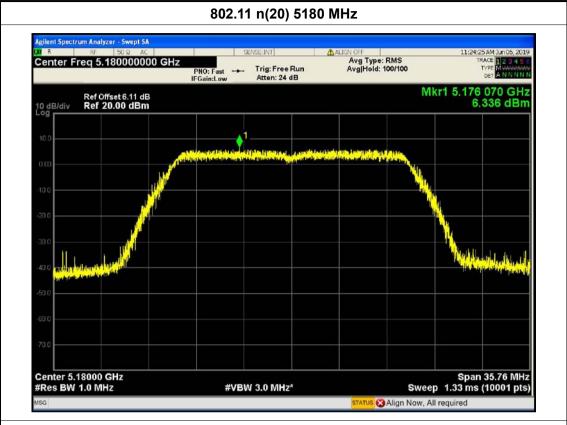


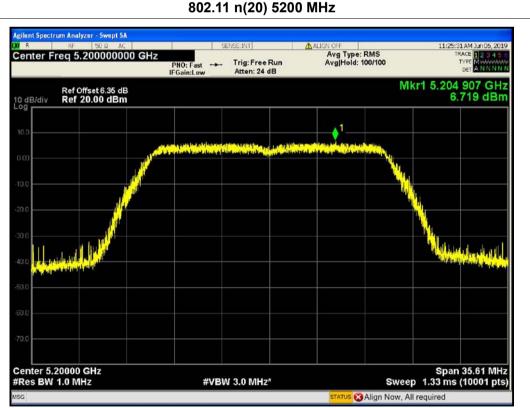
Page: 179 of 198

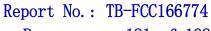






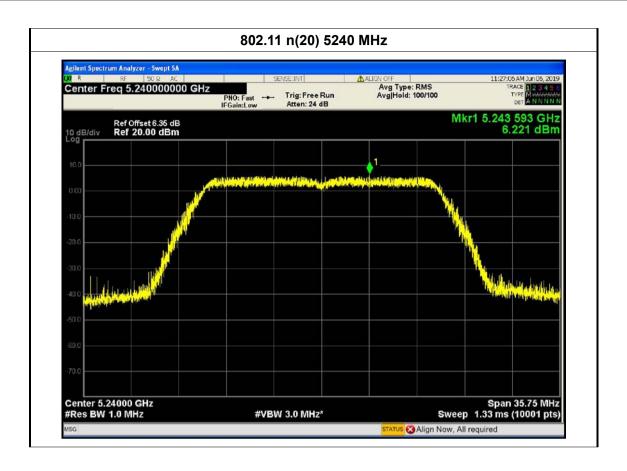


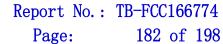






Page: 181 of 198







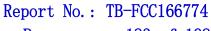
Center 5.20000 GHz #Res BW 1.0 MHz

802.11 ac(20) 5180 MHz Avg Type: RMS Avg|Hold: 100/100 Center Freg 5.180000000 GHz Trig: Free Run Atten: 24 dB PNO: Fast Mkr1 5.175 233 GHz 7.091 dBm Ref Offset 6.11 dB Ref 20.00 dBm Center 5.18000 GHz #Res BW 1.0 MHz Span 35.76 MHz Sweep 1.33 ms (10001 pts) #VBW 3.0 MHz\* STATUS Align Now, All required 802.11 ac(20) 5200 MHz Avg Type: RMS Avg|Hold: 100/100 Center Freg 5.200000000 GHz Trig: Free Run Atten: 24 dB PNO: Fast ---Mkr1 5.201 627 GHz 7.077 dBm Ref Offset 6.35 dB Ref 20.00 dBm

#VBW 3.0 MHz\*

Span 35.85 MHz Sweep 1.33 ms (10001 pts)

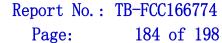
STATUS Align Now, All required





Page: 183 of 198







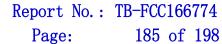
Center 5.23000 GHz #Res BW 1.0 MHz

802.11 n(40) 5190 MHz Avg Type: RMS Avg|Hold: 100/100 Center Freg 5.190000000 GHz Trig: Free Run Atten: 24 dB PNO: Fast ---Mkr1 5.192 569 GHz 3.635 dBm Ref Offset 6.27 dB Ref 20.00 dBm Center 5.19000 GHz #Res BW 1.0 MHz Span 72.37 MHz Sweep 1.33 ms (10001 pts) #VBW 3.0 MHz\* STATUS Align Now, All required 802.11 n(40) 5230 MHz Avg Type: RMS Avg|Hold: 100/100 Center Freg 5.230000000 GHz PNO: Fast Trig: Free Run
IFGain:Low Atten: 24 dB Mkr1 5.219 311 GHz 3.377 dBm Ref Offset 6.33 dB Ref 20.00 dBm

#VBW 3.0 MHz\*

Span 72.22 MHz Sweep 1.33 ms (10001 pts)

STATUS Align Now, All required





802.11 ac(40) 5190 MHz Avg Type: RMS Avg|Hold: 100/100 Center Freg 5.190000000 GHz Trig: Free Run Atten: 24 dB PNO: Fast ---Mkr1 5.186 987 GHz 3.389 dBm Ref Offset 6.27 dB Ref 20.00 dBm M Center 5.19000 GHz #Res BW 1.0 MHz Span 72.25 MHz Sweep 1.33 ms (10001 pts) #VBW 3.0 MHz\* STATUS Align Now, All required 802.11 ac(40) 5230 MHz Avg Type: RMS Avg|Hold: 100/100 Center Freg 5.230000000 GHz PNO: Fast Trig: Free Run
IFGain:Low Atten: 24 dB Mkr1 5.222 959 GHz 3.399 dBm Ref Offset 6.33 dB Ref 20.00 dBm Center 5.23000 GHz #Res BW 1.0 MHz Span 72.51 MHz Sweep 1.33 ms (10001 pts) #VBW 3.0 MHz\* STATUS Align Now, All required





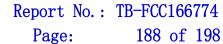
Page: 186 of 198





EUT: AV 1000 AC Wi-Fi Model Name: PA7 Powerline Extender Temperature: 25 ℃ **Relative Humidity:** 55% **Test Voltage:** AC 120V/60Hz U-NII-3 **Test Data Frequency** Limit **Test Mode Power Density** (MHz) (dBm) (dBm/MHz) 5745 2.600 802.11a 5785 3.398 5825 3.061 5745 3.221 5785 802.11n (HT20) 3.435 5825 3.039 5745 3.181 30 802.11ac (HT20) 5785 3.062 5825 3.691 5755 0.788 802.11n (HT40) 5795 0.473 5755 1.124 802.11ac(40) 5795 0.521 802.11ac(80) 5775 -2.728 Result: **PASS** 

Test plots please refer to below pages:





Center 5.78500 GHz #Res BW 510 kHz

802.11 a 5745 MHz gilent Spectrum Analyzer - Swept SA Avg Type: RMS Avg|Hold: 100/100 Center Freg 5.745000000 GHz Trig: Free Run Atten: 24 dB PNO: Fast ---Mkr1 5.750 714 GHz 2.600 dBm Ref Offset 6.47 dB Ref 20.00 dBm Center 5.74500 GHz #Res BW 510 kHz Span 32.99 MHz Sweep 1.33 ms (10001 pts) #VBW 1.5 MHz\* S Align Now, All required 802.11 a 5785 MHz gilent Spectrum Analyzer - Swept SA Avg Type: RMS Avg|Hold: 100/100 Center Freg 5.785000000 GHz Trig: Free Run Atten: 24 dB PNO: Fast IFGain:Low Mkr1 5.783 427 GHz 3.398 dBm Ref Offset 6.49 dB Ref 20.00 dBm

#VBW 1.5 MHz\*

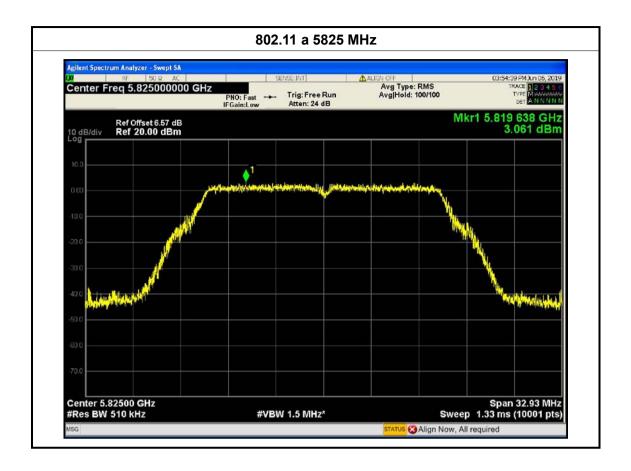
Span 32.97 MHz Sweep 1.33 ms (10001 pts)

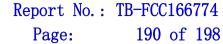
STATUS Align Now, All required





Page: 189 of 198







Center 5.78500 GHz #Res BW 510 kHz

802.11 n(20) 5745 MHz ilent Spectrum Analyzer - Swept SA Avg Type: RMS Avg|Hold: 100/100 Center Freg 5.745000000 GHz Trig: Free Run Atten: 24 dB PNO: Fast ---Mkr1 5.751 036 GHz 3.221 dBm Ref Offset 6.47 dB Ref 20.00 dBm A HARTING BERTANDA Center 5.74500 GHz #Res BW 510 kHz Span 35.36 MHz Sweep 1.33 ms (10001 pts) #VBW 1.5 MHz\* S Align Now, All required 802.11 n(20) 5785 MHz gilent Spectrum Analyzer - Swept SA Avg Type: RMS Avg|Hold: 100/100 Center Freq 5.785000000 GHz Trig: Free Run Atten: 24 dB PNO: Fast IFGain:Low Mkr1 5.782 105 GHz 3.435 dBm Ref Offset 6.49 dB Ref 20.00 dBm

#VBW 1.5 MHz\*

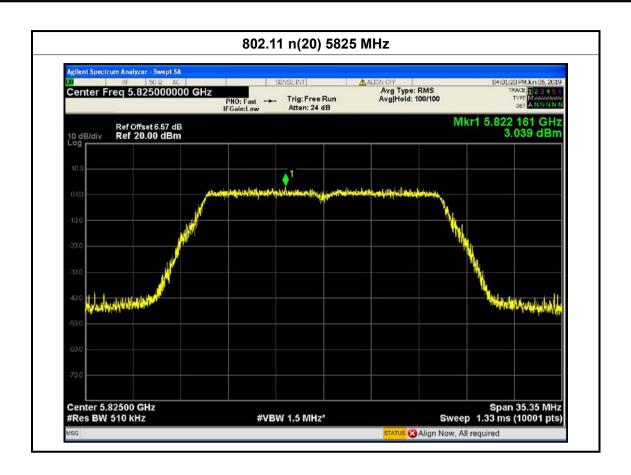
Span 35.34 MHz Sweep 1.33 ms (10001 pts)

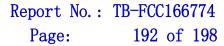
STATUS Align Now, All required





Page: 191 of 198







A de antidos de la companio

Center 5.78500 GHz #Res BW 510 kHz

802.11 ac(20) 5745 MHz ilent Spectrum Analyzer - Swept SA Avg Type: RMS Avg|Hold: 100/100 Center Freg 5.745000000 GHz Trig: Free Run Atten: 24 dB PNO: Fast Mkr1 5.741 563 GHz 3.181 dBm Ref Offset 6.47 dB Ref 20.00 dBm Center 5.74500 GHz #Res BW 510 kHz Span 35.32 MHz Sweep 1.33 ms (10001 pts) #VBW 1.5 MHz\* STATUS Align Now, All required 802.11 ac(20) 5785 MHz gilent Spectrum Analyzer - Swept SA Avg Type: RMS Avg|Hold: 100/100 Center Freg 5.785000000 GHz Trig: Free Run Atten: 24 dB PNO: Fast ---Mkr1 5.783 119 GHz 3.062 dBm Ref Offset 6.49 dB Ref 20.00 dBm

#VBW 1.5 MHz\*

Span 35.36 MHz Sweep 1.33 ms (10001 pts)

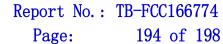
S Align Now, All required





Page: 193 of 198





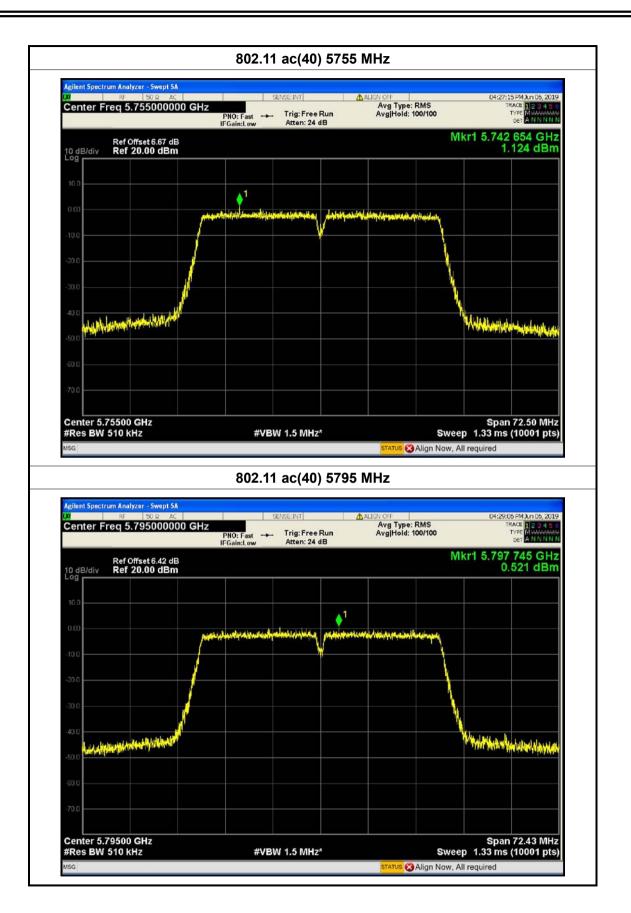


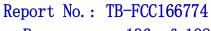
802.11 n(40) 5755 MHz ilent Spectrum Analyzer - Swept SA Avg Type: RMS Avg|Hold: 100/100 Center Freg 5.755000000 GHz Trig: Free Run Atten: 24 dB PNO: Fast ---Mkr1 5.763 080 GHz 0.788 dBm Ref Offset 6.67 dB Ref 20.00 dBm od fraging advisor by the fisher places of المرادية وطنينه والانجازال إدعابه Center 5.75500 GHz #Res BW 510 kHz Span 72.46 MHz Sweep 1.33 ms (10001 pts) #VBW 1.5 MHz\* S Align Now, All required 802.11 n(40) 5795 MHz gilent Spectrum Analyzer - Swept SA Avg Type: RMS Avg|Hold: 100/100 Center Freg 5.795000000 GHz PNO: Fast Trig: Free Run
IFGain:Low Atten: 24 dB Mkr1 5.790 832 GHz 0.473 dBm Ref Offset 6.42 dB Ref 20.00 dBm Center 5.79500 GHz #Res BW 510 kHz Span 72.36 MHz Sweep 1.33 ms (10001 pts) #VBW 1.5 MHz\* STATUS Align Now, All required





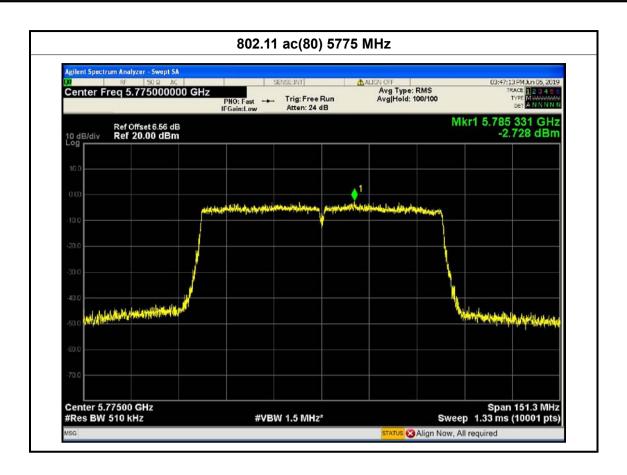
195 of 198 Page:







Page: 196 of 198



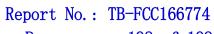




Page: 197 of 198

# **Attachment G----Frequency Stability Measurement Data**

801.11a U-NII-1: 5180 MHz				
Voltage vs. Frequency Stability				
Voltage (V)	Measurement Frequency (MHz)			
132	5179.973			
120	5179.975			
118	5179.987			
Max. Deviation (MHz)	0.027			
Max. Deviation (ppm)	5.21			
Temperature vs. Frequency Stability				
Temperature (℃)	Measurement Frequency (MHz)			
0	5179.965			
10	5179.968			
20	5179.971			
30	5179.977			
40	5179.982			
50	5179.985			
Max. Deviation (MHz)	0.035			
Max. Deviation (ppm)	6.76			
Limit (ppm)	25			
Result	Pass			





Page: 198 of 198

801.11a U-NII-3: 5745 MHz				
Voltage vs. Frequency Stability				
Voltage (V)	Measurement Frequency (MHz)			
132	5744.968			
120	5744.972			
118	5744.976			
Max. Deviation (MHz)	0.032			
Max. Deviation (ppm)	5.57			
Temperature vs. Frequency Stability				
Temperature (℃)	Measurement Frequency (MHz)			
0	5744.952			
10	5744.940			
20	5744.943			
30	5744.957			
40	5744.961			
50	5744.973			
Max. Deviation (MHz)	0.06			
Max. Deviation (ppm)	10.44			
Limit (ppm)	25			
Result	Pass			

----END OF REPORT----