# Appendix E

# **RF Test Data for 5.8G WLAN (Conducted Measurement)**

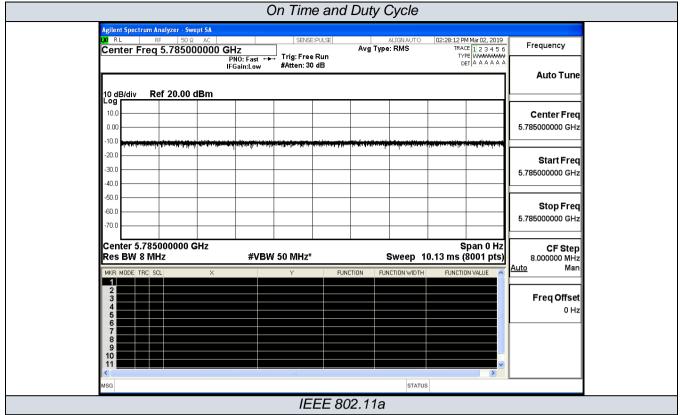
**Product Name: Android TV BOX** Trade Mark: N/A **Test Model: KM9** 

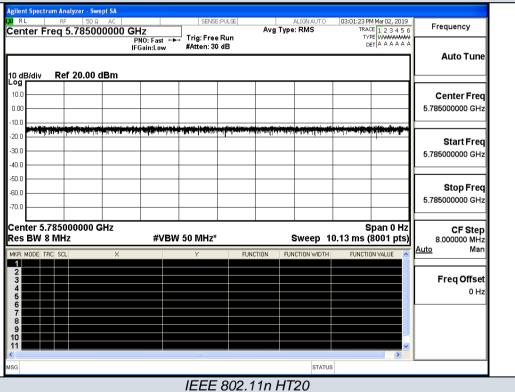
### **Environmental Conditions**

Environmental Conditions				
Temperature:	23.2 ° C			
Relative Humidity:	53.8%			
ATM Pressure:	100.0 kPa			
Test Engineer:	Wang Chuang			
Supervised by:	Jayden.Zhuo			

## **E.1 Duty Cycle**

Test Mode	Test Frequency (MHz)	Duty Cycle (%)	10log(1/x) Factor (dB)	1/B Minimum VBW (KHz)
11A	5785	100	0.00	0.01
11N20 SISO	5785	100	0.00	0.01
11N40 SISO	5755	100	0.00	0.01
11AC20 SISO	5785	100	0.00	0.01
11AC40 SISO	5755	100	0.00	0.01
11AC80 SISO	5775	100	0.00	0.01



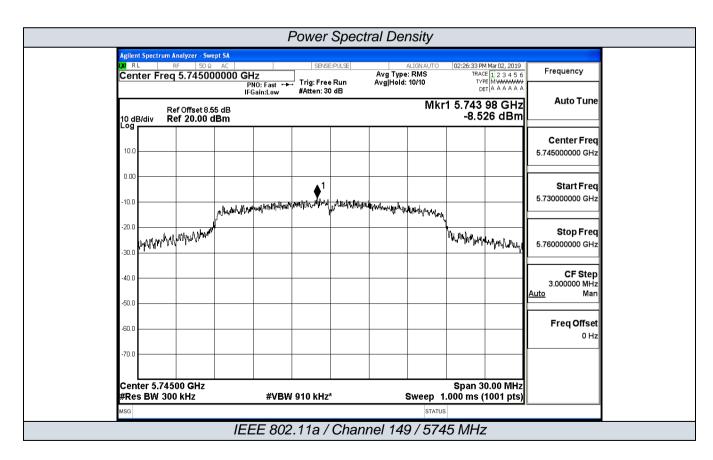


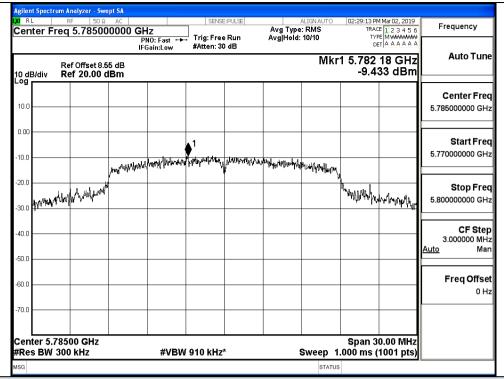
## **E.2 Maximum Conduct Output Power**

			AVG	Duty	Report		
Test Mode	Channel	Frequency	Conducted	Cycle	Conducted	Limit	
rest Mode	Oriannei	(MHz)	Power	Factor	Power	(dBm)	
			(dBm)	(dB)	(dBm)		
	149	5745	11.18	0	11.18		
IEEE 802.11a	157	5785	11.05	0	11.05	30	
	165	5825	11.56	0	1156	]	
	149	5745	11.17	0	11.17		
IEEE 802.11n HT20	157	5785	11.27	0	11.27	30	
	165	5825	11.07	0	11.07	]	
IEEE 802.11n HT40	151	5755	10.41	0	10.41	30	
1666 002.111111140	159	5795	10.18	0	10.18	30	
	149	5745	11.17	0	11.17	30	
IEEE 802.11ac VHT20	157	5785	11.68	0	11.68	30	
	165	5825	11.69	0	11.69	]	
EEE 802.11ac VHT40 151 5755 10.73 0	0	10.73	30				
ILLE 002.11ac VIII40	159	5795	10.32	0	10.32		
IEEE 802.11ac VHT80	155	5775	9.78	0	9.78	30	

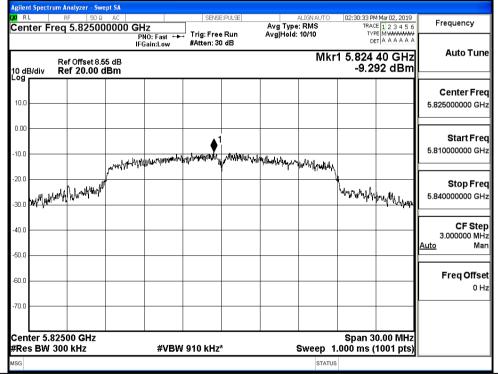
## **E.3 Power Spectral Density**

Test Mode	Channel	Frequency (MHz)	Power Density (dBm/ 300KHz)	Duty Cycle Factor (dB)	RBW Factor (dB)	Report Power Density (dBm/ 500KHz)	Limit (dBm/ 500KHz)
	149	5745	-8.526	0	2.218	-6.308	
IEEE 802.11a	157	5785	-9.433	0	2.218	-7.215	30
	165	5825	-9.292	0	2.218	-7.074	
	149	5745	-12.939	0	2.218	-10.721	
IEEE 802.11n HT20	157	5785	-12.496	0	2.218	-10.278	30
	165	5825	-13.519	0	2.218	-11.301	
IEEE 802.11n HT40	151	5755	-15.249	0	2.218	-13.031	30
ILLE 002.111111140	159	5795	-15.266	0	2.218	-13.048	30
	149	5745	-12.291	0	2.218	-10.073	30
IEEE 802.11ac VHT20	157	5785	-12.347	0	2.218	-10.129	30
	165	5825	-12.747	0	2.218	-10.529	
IEEE 802.11ac VHT40	151	5755	-15.100	0	2.218	-12.882	30
ILLE 002.11ac VII140	159	5795	-15.272	0	2.218	-13.054	
IEEE 802.11ac VHT80	155	5775	-18.814	0	2.218	-16.596	30

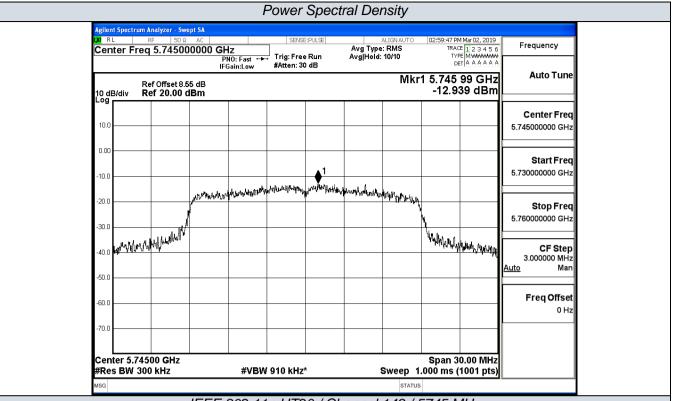


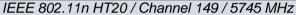


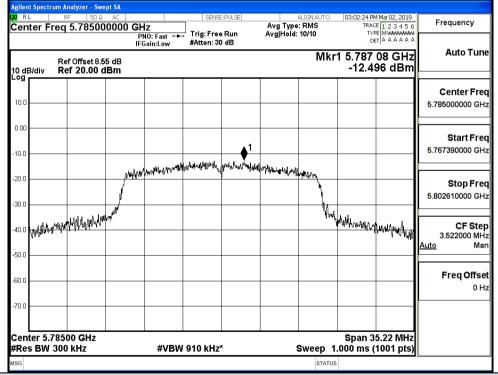
#### IEEE 802.11a / Channel 157 / 5785 MHz



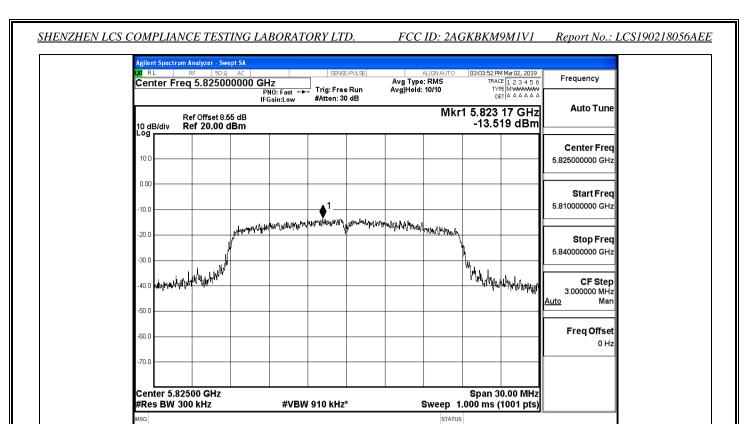
IEEE 802.11a / Channel 165 / 5825 MHz



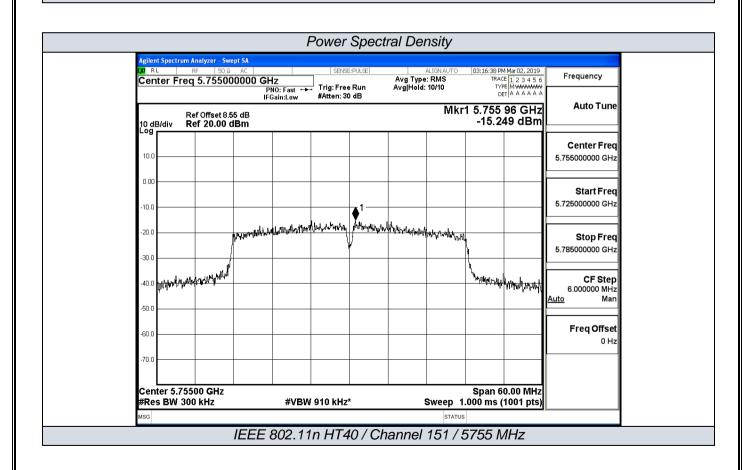


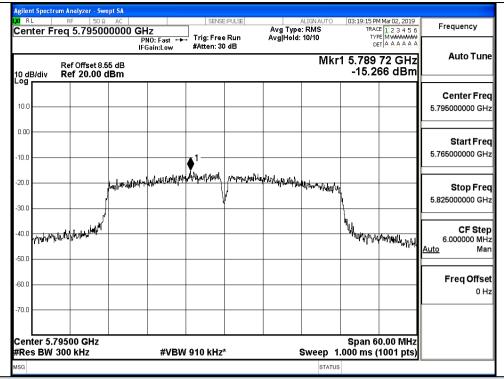


IEEE 802.11n HT20 / Channel 157 / 5785 MHz

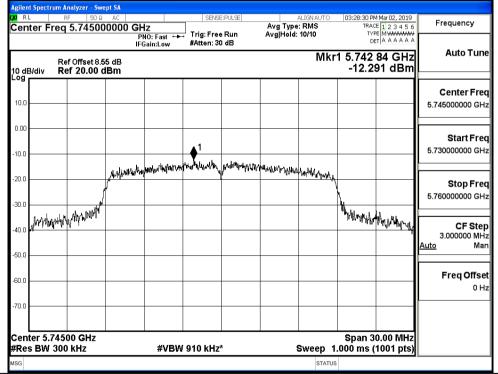


IEEE 802.11n HT20 / Channel 165 / 5825 MHz

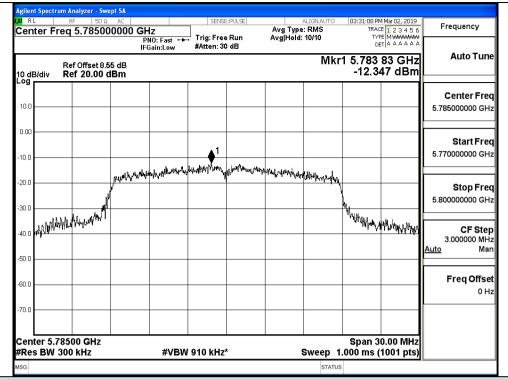




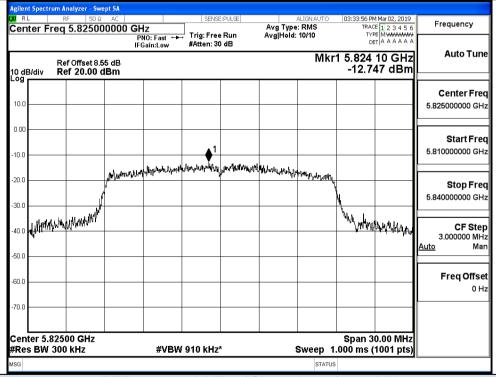
#### IEEE 802.11n HT40 / Channel 159 / 5795 MHz



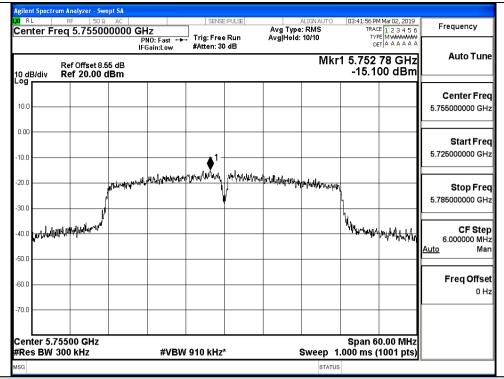
IEEE 802.11ac VHT20 / Channel 149 / 5745 MHz



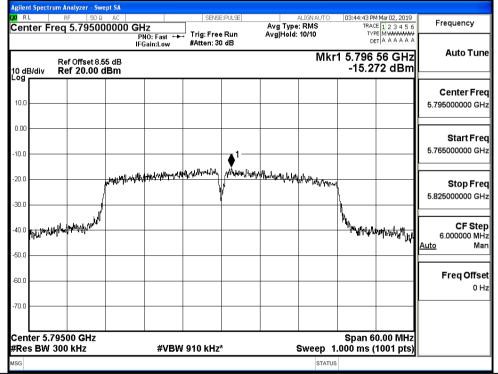
#### IEEE 802.11ac VHT20 / Channel 157 / 5785 MHz



IEEE 802.11ac VHT20 / Channel 165 / 5825 MHz



#### IEEE 802.11ac VHT40 / Channel 151 / 5755 MHz



IEEE 802.11ac VHT40 / Channel 159 / 5795 MHz

#VBW 910 kHz\*

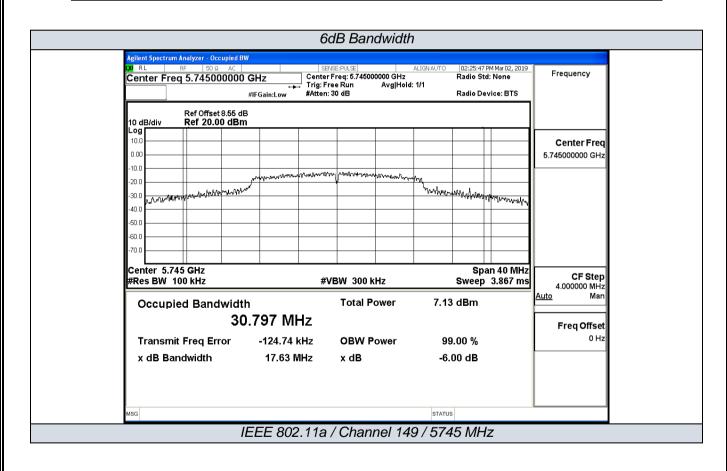
Span 120.0 MHz Sweep 1.667 ms (1001 pts)

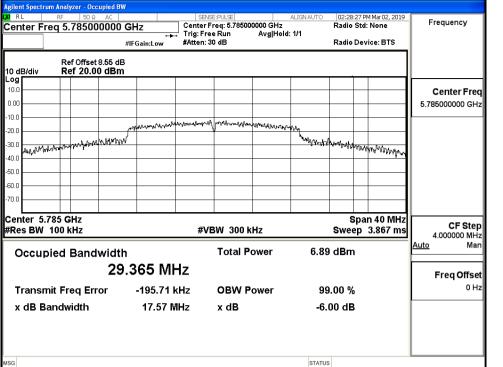
STATUS

Center 5.77500 GHz #Res BW 300 kHz

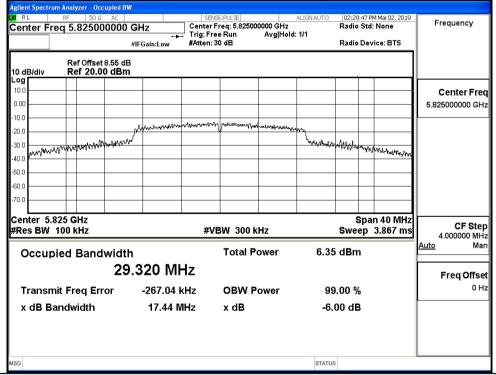
### **E.4 Emission Bandwidth**

Test Mode	Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)
	149	5745	17.630	
IEEE 802.11a	157	5785	17.570	>=0.5
	165	5825	17.440	
	149	5745	17.160	
IEEE 802.11n HT20	157	5785	17.610	>=0.5
	165	5825	17.560	
IEEE 802.11n HT40	151	151 5755 36.370	>=0.5	
1222 002.111111140	159	5795	36.070	/=0.5
	149	5745	17.580	>=0.5
IEEE 802.11ac VHT20	157	5785	17.620	/=0.5
	165	5825	17.620	
IEEE 802.11ac VHT40	151	5755	36.340	>=0.5
ILLE 002.11ac VIII40	159	5795	36.130	
IEEE 802.11ac VHT80	155	5775	76.130	>=0.5

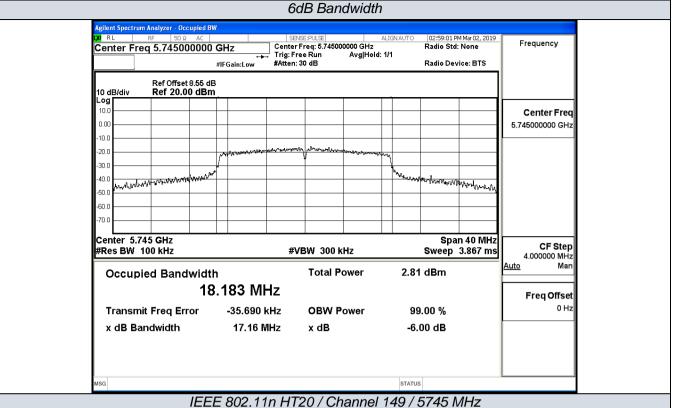


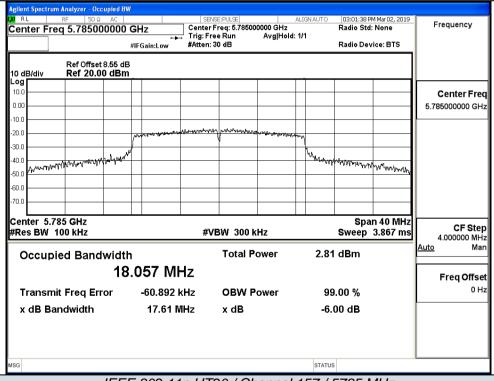


#### IEEE 802.11a / Channel 157 / 5785 MHz



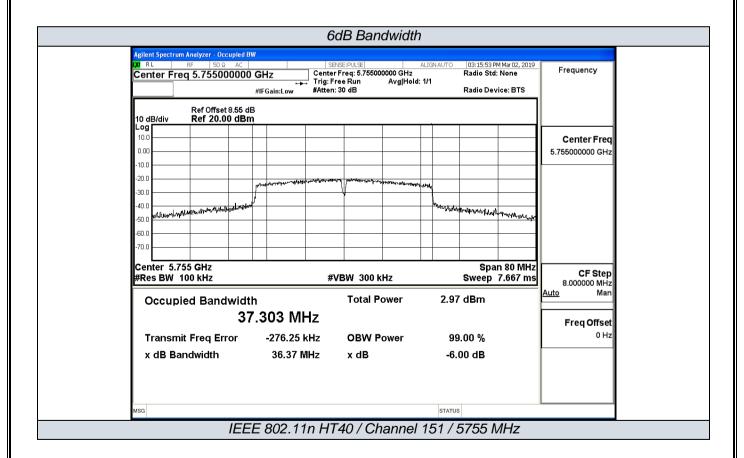
IEEE 802.11a / Channel 165 / 5825 MHz

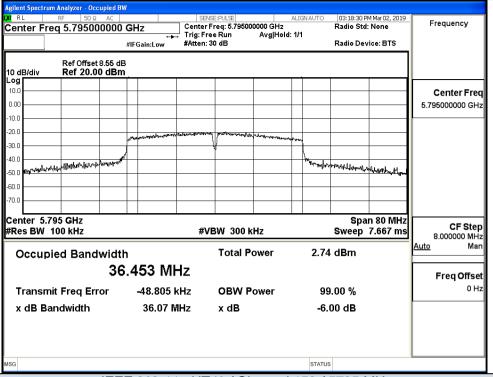




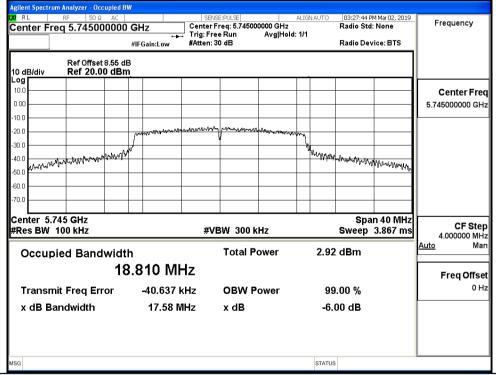
IEEE 802.11n HT20 / Channel 157 / 5785 MHz

IEEE 802.11n HT20 / Channel 165 / 5825 MHz

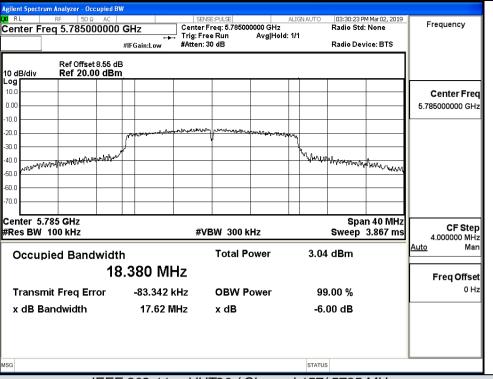




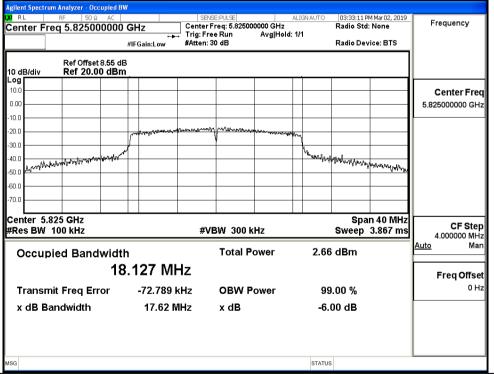
#### IEEE 802.11n HT40 / Channel 159 / 5795 MHz



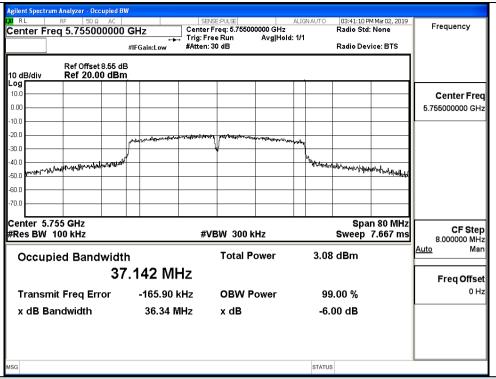
IEEE 802.11ac VHT20 / Channel 149 / 5745 MHz



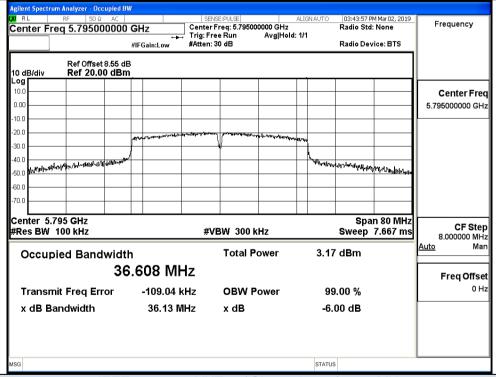
#### IEEE 802.11ac VHT20 / Channel 157/5785 MHz



IEEE 802.11ac VHT20 / Channel 165 / 5825 MHz



#### IEEE 802.11ac VHT40 / Channel 151 / 5755 MHz

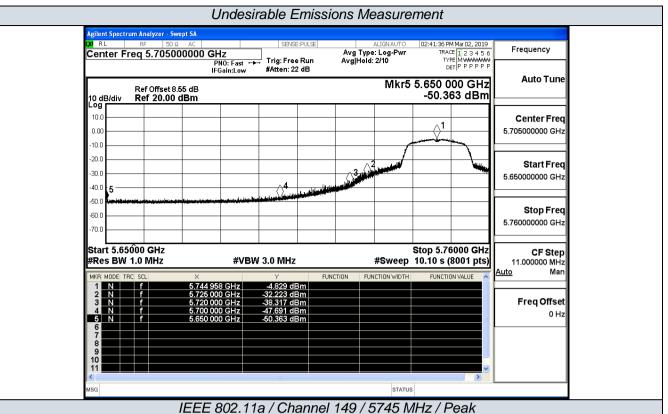


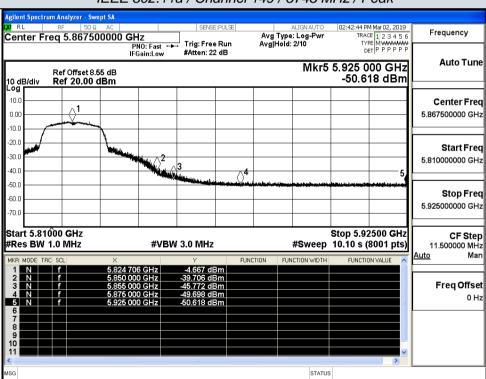
IEEE 802.11ac VHT40 / Channel 159 / 579 5MHz

## **E.5 Undesirable Emissions Measurement**

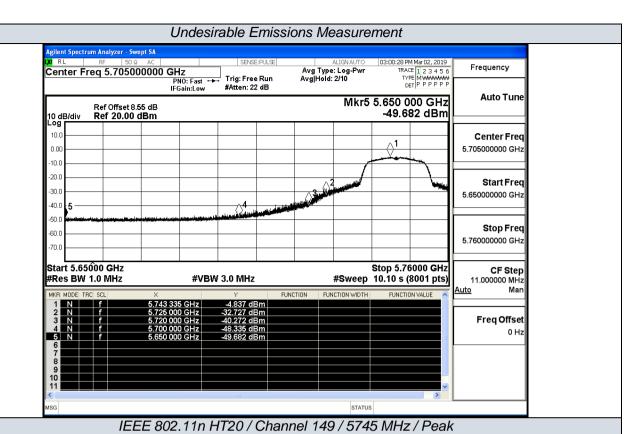
Test Mode	Channel	Frequency (MHz)	Conducted Power	Antenna Gain	EIRP (dBm/MHz)	Detector	Limit (dBm/MHz)
			(dBm)	(dBi)	,		
		5650.0	-50.363	3.00	-47.363	Peak	-27.0
	149	5700.0	-47.691	3.00	-44.691	Peak	10.0
		5720.0	-38.317	3.00	-35.317	Peak	15.6
11A		5725.0	-32.223	3.00	-29.223	Peak	27.0
, .		5850.0	-39.706	3.00	-36.706	Peak	27.0
	165	5855.0	-45.772	3.00	-42.772	Peak	15.6
		5875.0	-49.698	3.00	-46.698	Peak	10.0
		5925.0	-50.618	3.00	-47.618	Peak	-27.0
		5650.0	-49.682	3.00	-46.682	Peak	-27.0
	149	5700.0	-48.335	3.00	-45.335	Peak	10.0
		5720.0	-40.272	3.00	-37.272	Peak	15.6
11N20		5725.0	-32.727	3.00	-29.727	Peak	27.0
SISO		5850.0	-42.855	3.00	-39.855	Peak	27.0
	165	5855.0	-45.626	3.00	-42.626	Peak	15.6
	100	5875.0	-50.255	3.00	-47.255	Peak	10.0
		5925.0	-50.197	3.00	-47.197	Peak	-27.0
		5650.0	-49.843	3.00	-46.843	Peak	-27.0
	151	5700.0	-42.636	3.00	-39.636	Peak	10.0
	131	5720.0	-32.298	3.00	-29.298	Peak	15.6
11N40		5725.0	-31.854	3.00	-28.854	Peak	27.0
SISO		5850.0	-47.215	3.00	-44.215	Peak	27.0
	159	5855.0	-48.032	3.00	-45.032	Peak	15.6
	139	5875.0	-50.281	3.00	-47.281	Peak	10.0
		5925.0	-50.139	3.00	-47.139	Peak	-27.0
		5650.0	-50.271	3.00	-47.271	Peak	-27.0
	149	5700.0	-46.930	3.00	-43.930	Peak	10.0
	149	5720.0	-37.442	3.00	-34.442	Peak	15.6
11NAC20		5725.0	-32.251	3.00	-29.251	Peak	27.0
SISO		5850.0	-39.727	3.00	-36.727	Peak	27.0
	165	5855.0	-44.144	3.00	-41.144	Peak	15.6
	100	5875.0	-49.889	3.00	-46.889	Peak	10.0
		5925.0	-50.305	3.00	-47.305	Peak	-27.0
		5650.0	-50.057	3.00	-47.057	Peak	-27.0
	151	5700.0	-43.036	3.00	-40.036	Peak	10.0
	151	5720.0	-32.830	3.00	-29.830	Peak	15.6
11AC40		5725.0	-29.051	3.00	-26.051	Peak	27.0
SISO		5850.0	-46.429	3.00	-43.429	Peak	27.0
	150	5855.0	-45.752	3.00	-42.752	Peak	15.6
	159	5875.0	-50.189	3.00	-47.189	Peak	10.0
		5925.0	-50.513	3.00	-47.513	Peak	-27.0
		5650.0	-52.570	3.00	-49.570	Peak	-27.0
		5700.0	-48.418	3.00	-45.418	Peak	10.0
11AC80	455	5720.0	-46.760	3.00	-43.760	Peak	15.6
SISO	155	5725.0	-45.469	3.00	-42.469	Peak	27.0
		5850.0	-48.918	3.00	-45.918	Peak	27.0
		5855.0	-46.554	3.00	-43.554	Peak	15.6

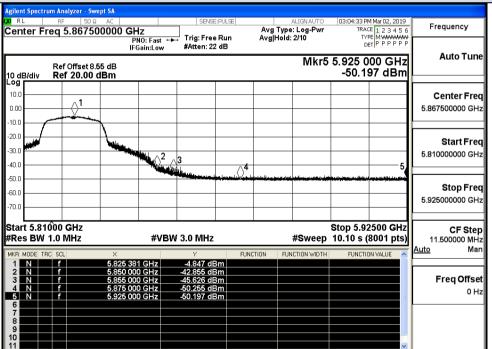
ENZHEN LCS COMPLI	ANCE TESTING LABORATORY LTD.		FCC ID: 2AGKBKM9M1V1		Report No.: LCS190218056AEE			
	5875.0 -49.341		3.00	3.00 -46.341		Peak 10.0		
	5925.0	-49.418	3.00	-46.418	Peak	-27.0		
<u> </u>								





IEEE 802.11a / Channel 165 / 5825 MHz / Peak



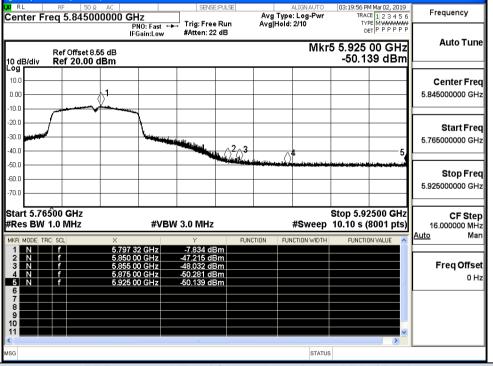


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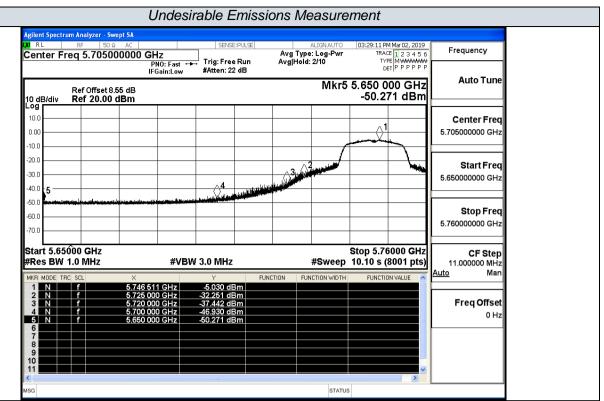
IEEE 802.11n HT20 / Channel 165 / 5825 MHz / Peak

#### Undesirable Emissions Measurement RL | RF | 50Ω AC | Center Freq 5.715000000 GHz Frequency PNO: Fast → Trig: Free Run IFGain:Low #Atten: 22 dB **Auto Tune** Mkr5 5.650 000 GHz Ref Offset 8.55 dB Ref 20.00 dBm -49.843 dBm 10 dB/div Log 10.0 Center Freq 5.715000000 GHz 0.00 -20.0 Start Freq 30.0 5.650000000 GHz 40.0 -50.0 Stop Freq -60.0 5.780000000 GHz Start 5.65000 GHz Stop 5.78000 GHz **CF Step** 13.000000 MHz #Sweep 10.10 s (8001 pts) #Res BW 1.0 MHz **#VBW 3.0 MHz** Man <u>Auto</u> FUNCTION WIDTH Freq Offset 0 Hz

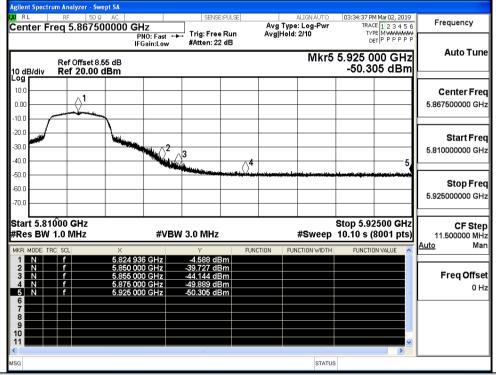




IEEE 802.11n HT40 / Channel 159 / 5795 MHz / Peak



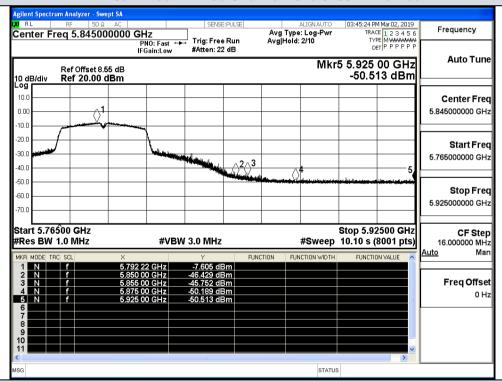




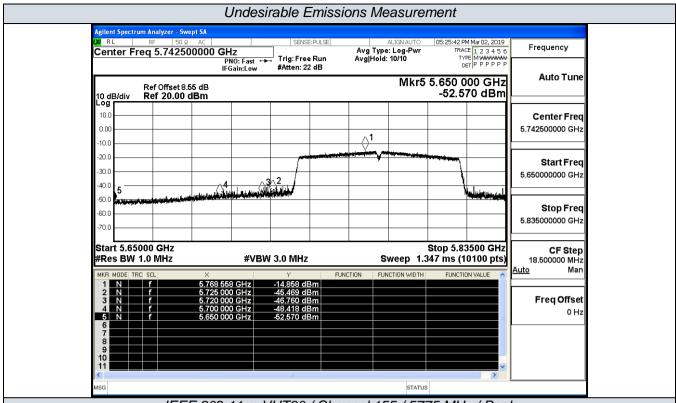
IEEE 802.11ac VHT20 / Channel 165 / 5825 MHz / Peak

#### Undesirable Emissions Measurement RL | RF | 50Ω AC | Center Freq 5.715000000 GHz Frequency PNO: Fast → Trig: Free Run IFGain:Low #Atten: 22 dB **Auto Tune** Mkr5 5.650 000 GHz Ref Offset 8.55 dB Ref 20.00 dBm -50.057 dBm 10 dB/div Log 10.0 Center Freq 5.715000000 GHz 0.00 -20.0 <u>\3 (\</u> Start Freq 30.0 5.650000000 GHz 40.0 -50.0 Stop Freq -60.0 5.780000000 GHz Start 5.65000 GHz Stop 5.78000 GHz **CF Step** 13.000000 MHz #Sweep 10.10 s (8001 pts) #Res BW 1.0 MHz **#VBW 3.0 MHz** <u>Auto</u> FUNCTION WIDTH Freq Offset 0 Hz

#### IEEE 802.11ac VHT40 / Channel 151 / 5755 MHz / Peak



IEEE 802.11ac VHT40 / Channel 159 / 5795 MHz / Peak



IEEE 802.11ac VHT80 / Channel 155 / 5775 MHz / Peak

IEEE 802.11ac VHT80 / Channel 155 / 5775 MHz / Peak