



OPERATING BAND: UNII Band 2A  
 OPERATING FREQUENCY: 5,290,000,000 Hz  
 CHANNEL: 58  
 REFERENCE VOLTAGE: 12.0 VDC

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (kHz)	Frequency Error (kHz)
100%	12	+20(Ref)	5290043.74	43.74
100%		-30	5290018.71	18.71
100%		-20	5290062.51	62.51
100%		-10	5290038.33	38.33
100%		0	5290037.61	37.61
100%		+10	5290055.56	55.56
100%		+30	5290096.97	96.97
100%		+40	5290080.17	80.17
100%		+50	5290045.38	45.38
Max		16.00	+20	5210047.02
Min	9.00	+20	5210082.83	82.83

**Note:**

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.



OPERATING BAND: UNII Band 2C  
 OPERATING FREQUENCY: 5,530,000,000 Hz  
 CHANNEL: 106  
 REFERENCE VOLTAGE: 12.0 VDC

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (kHz)	Frequency Error (kHz)
100%	12	+20(Ref)	5530073.64	73.64
100%		-30	5530088.51	88.51
100%		-20	5530006.34	6.34
100%		-10	5530049.47	49.47
100%		0	5530097.06	97.06
100%		+10	5530043.12	43.12
100%		+30	5530050.82	50.82
100%		+40	5530093.10	93.10
100%		+50	5530024.55	24.55
Max		16.00	+20	5210069.21
Min	9.00	+20	5210095.05	95.05

**Note:**

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.



OPERATING BAND: UNII Band 3  
 OPERATING FREQUENCY: 5,775,000,000 Hz  
 CHANNEL: 155  
 REFERENCE VOLTAGE: 12.0 VDC

Voltage (%)	Power (VDC)	Temp. (°C)	Frequency (kHz)	Frequency Error (kHz)
100%	12	+20(Ref)	5775053.88	53.88
100%		-30	5775009.37	9.37
100%		-20	5775070.81	70.81
100%		-10	5775068.15	68.15
100%		0	5775039.72	39.72
100%		+10	5775086.42	86.42
100%		+30	5775009.94	9.94
100%		+40	5775044.78	44.78
100%		+50	5775071.77	71.77
Max		16.00	+20	5210015.65
Min	9.00	+20	5210038.73	38.73

**Note:**

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

## 10.7 STRADDLE CHANNEL

### 10.7.1 26dB Bandwidth

[Internal ANT\_SISO]

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26dB Bandwidth [MHz]
802.11a	UNII 2C	5720	144	5707.92	17.08
802.11n(HT20)				5706.80	18.20
802.11ac(VHT20)				5707.04	17.96
802.11a	UNII 3	5720	144	5733.28	8.28
802.11n(HT20)				5732.28	7.28
802.11ac(VHT20)				5734.00	9.00

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26dB Bandwidth [MHz]
802.11n(HT40)	UNII 2C	5710	142	5690.16	34.84
802.11ac(VHT40)				5689.92	35.08
802.11n(HT40)	UNII 3	5710	142	5730.24	5.24
802.11ac(VHT40)				5730.96	5.96

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26dB Bandwidth [MHz]
802.11ac(VHT80)	UNII 2C	5690	138	5647.88	77.12
	UNII 3	5690	138	5743.52	18.52

**Note:**

[UNII 2C] 26dB Bandwidth = 5725MHz - Measured Frequency[MHz]

[UNII 3C] 26dB Bandwidth = Measured Frequency[MHz] -5725MHz

**[External ANT\_SISO]**

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26dB Bandwidth [MHz]
802.11a	UNII 2C	5720	144	5708.96	16.04
802.11n(HT20)				5709.20	15.80
802.11ac(VHT20)				5709.16	15.84
802.11a	UNII 3	5720	144	5730.64	5.64
802.11n(HT20)				5730.76	5.76
802.11ac(VHT20)				5731.00	6.00

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26dB Bandwidth [MHz]
802.11n(HT40)	UNII 2C	5710	142	5690.08	34.92
802.11ac(VHT40)				5690.08	34.92
802.11n(HT40)	UNII 3	5710	142	5729.60	4.60
802.11ac(VHT40)				5729.76	4.76

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26dB Bandwidth [MHz]
802.11ac(VHT80)	UNII 2C	5690	138	5649.32	75.68
	UNII 3	5690	138	5730.32	5.32

**Note:**

[UNII 2C] 26dB Bandwidth = 5725MHz - Measured Frequency[MHz]

[UNII 3C] 26dB Bandwidth = Measured Frequency[MHz] -5725MHz

**[Internal ANT\_MIMO]**

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26dB Bandwidth [MHz]
802.11n(HT20)	UNII 2C	5720	144	5709.24	15.76
802.11ac(VHT20)				5709.20	15.80
802.11n(HT20)	UNII 3	5720	144	5730.72	5.72
802.11ac(VHT20)				5730.80	5.80

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26dB Bandwidth [MHz]
802.11n(HT40)	UNII 2C	5710	142	5690.32	34.68
802.11ac(VHT40)				5690.08	34.92
802.11n(HT40)	UNII 3	5710	142	5729.68	4.68
802.11ac(VHT40)				5729.84	4.84

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26dB Bandwidth [MHz]
802.11ac(VHT80)	UNII 2C	5690	138	5649.68	75.32
	UNII 3	5690	138	5730.56	5.56

**Note:**

[UNII 2C] 26dB Bandwidth = 5725MHz - Measured Frequency[MHz]

[UNII 3C] 26dB Bandwidth = Measured Frequency[MHz] -5725MHz

**[External ANT\_MIMO]**

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26dB Bandwidth [MHz]
802.11n(HT20)	UNII 2C	5720	144	5709.20	15.80
802.11ac(VHT20)				5709.32	15.68
802.11n(HT20)	UNII 3	5720	144	5730.44	5.44
802.11ac(VHT20)				5730.60	5.60

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26dB Bandwidth [MHz]
802.11n(HT40)	UNII 2C	5710	142	5690.32	34.68
802.11ac(VHT40)				5690.32	34.68
802.11n(HT40)	UNII 3	5710	142	5729.68	4.68
802.11ac(VHT40)				5729.52	4.52

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26dB Bandwidth [MHz]
802.11ac(VHT80)	UNII 2C	5690	138	5649.68	75.32
	UNII 3	5690	138	5730.20	5.20

**Note:**

[UNII 2C] 26dB Bandwidth = 5725MHz - Measured Frequency[MHz]

[UNII 3C] 26dB Bandwidth = Measured Frequency[MHz] -5725MHz



[Internal ANT\_SISO]

▣ Test Plots (26dB Bandwidth)

802.11a UNII Band



802.11n(HT20) UNII Band



802.11ac(VHT20) UNII Band







▣ Test Plots (26dB Bandwidth)

802.11n(HT40) UNII Band



802.11ac(VHT40) UNII Band



802.11ac(VHT80) UNII Band





[External ANT\_SISO]

☐ Test Plots (26dB Bandwidth)

802.11a UNII Band



802.11n(HT20) UNII Band



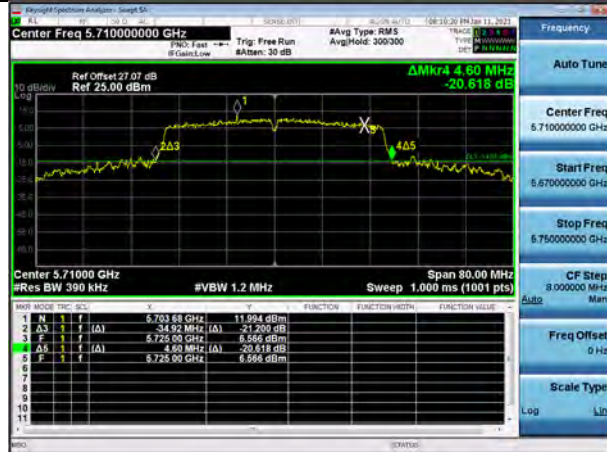
802.11ac(VHT20) UNII Band



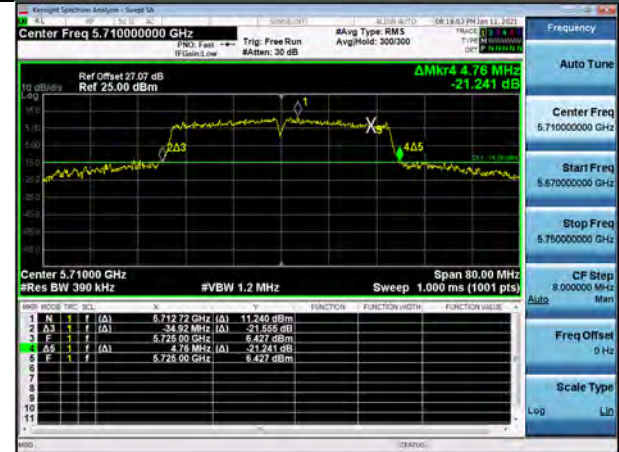


Test Plots (26dB Bandwidth)

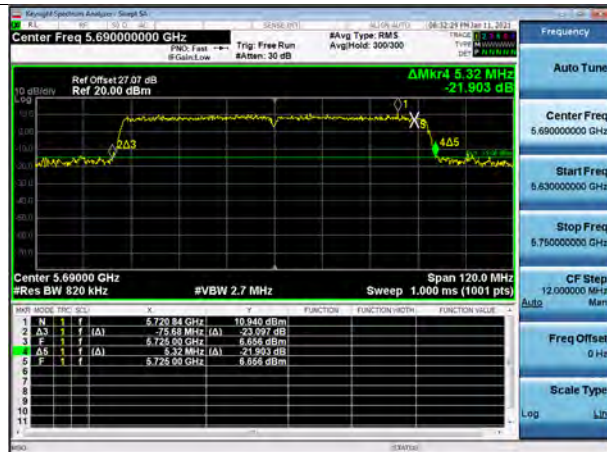
802.11n(HT40) UNII Band



802.11ac(VHT40) UNII Band



802.11ac(VHT80) UNII Band





[Internal ANT\_MIMO]

- ▣ Test Plots (26dB Bandwidth)

802.11n(HT20) UNII Band



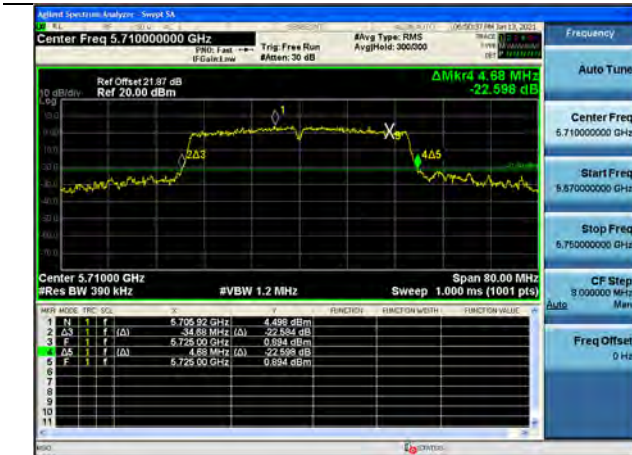
802.11ac(VHT20) UNII Band





▣ Test Plots (26dB Bandwidth)

802.11n(HT40) UNII Band



802.11ac(VHT40) UNII Band



802.11ac(VHT80) UNII Band





[External ANT\_MIMO]

- ▣ Test Plots (26dB Bandwidth)

802.11n(HT20) UNII Band

802.11ac(VHT20) UNII Band





Test Plots (26dB Bandwidth)

802.11n(HT40) UNII Band



802.11ac(VHT40) UNII Band



802.11ac(VHT80) UNII Band



### 10.7.2 6dB Bandwidth

**[Internal ANT\_SISO]**

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6dB Bandwidth [MHz]	Limit [MHz]
802.11a	UNII 3	5720	144	5728.12	3.12	> 0.5
802.11n(HT20)				5728.76	3.76	> 0.5
802.11ac(VHT20)				5728.80	3.80	> 0.5

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6dB Bandwidth [MHz]	Limit [MHz]
802.11n(HT40)	UNII 3	5710	142	5728.24	3.24	> 0.5
802.11ac(VHT40)				5728.16	3.16	> 0.5

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6dB Bandwidth [MHz]	Limit [MHz]
802.11ac(VHT80)	UNII 3	5690	138	5728.28	3.28	> 0.5

**Note:**

6dB Bandwidth = Measured Frequency[MHz] – 5725MHz





**[External ANT\_SISO]**

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6dB Bandwidth [MHz]	Limit [MHz]
802.11a	UNII 3	5720	144	5728.16	3.16	> 0.5
802.11n(HT20)				5728.80	3.80	> 0.5
802.11ac(VHT20)				5728.76	3.76	> 0.5

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6dB Bandwidth [MHz]	Limit [MHz]
802.11n(HT40)	UNII 3	5710	142	5728.24	3.24	> 0.5
802.11ac(VHT40)				5727.84	2.84	> 0.5

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6dB Bandwidth [MHz]	Limit [MHz]
802.11ac(VHT80)	UNII 3	5690	138	5728.28	3.28	> 0.5

**Note:**

6dB Bandwidth = Measured Frequency[MHz] – 5725MHz

**[Internal ANT\_MIMO]**

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6dB Bandwidth [MHz]	Limit [MHz]
802.11n(HT20)	UNII 3	5720	144	5728.76	3.76	> 0.5
802.11ac(VHT20)				5728.72	3.72	> 0.5

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6dB Bandwidth [MHz]	Limit [MHz]
802.11n(HT40)	UNII 3	5710	142	5728.16	3.16	> 0.5
802.11ac(VHT40)				5727.60	2.60	> 0.5

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6dB Bandwidth [MHz]	Limit [MHz]
802.11ac(VHT80)	UNII 3	5690	138	5727.68	2.68	> 0.5

**Note:**

6dB Bandwidth = Measured Frequency[MHz] - 5725MHz

**[External ANT\_MIMO]**

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6dB Bandwidth [MHz]	Limit [MHz]
802.11n(HT20)	UNII 3	5720	144	5728.76	3.76	> 0.5
802.11ac(VHT20)				5728.40	3.40	> 0.5

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6dB Bandwidth [MHz]	Limit [MHz]
802.11n(HT40)	UNII 3	5710	142	5727.60	2.60	> 0.5
802.11ac(VHT40)				5727.60	2.60	> 0.5

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6dB Bandwidth [MHz]	Limit [MHz]
802.11ac(VHT80)	UNII 3	5690	138	5728.28	3.28	> 0.5

**Note:**

6dB Bandwidth = Measured Frequency[MHz] - 5725MHz



[Internal ANT\_SISO]

- ▣ Test Plots(UNII 3 Band 6dB Bandwidth)

802.11a CH.144



802.11n\_HT20 CH.144

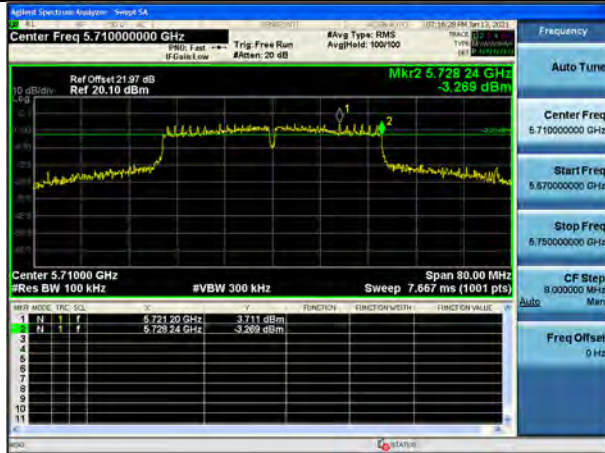


802.11ac\_VHT20 CH.144





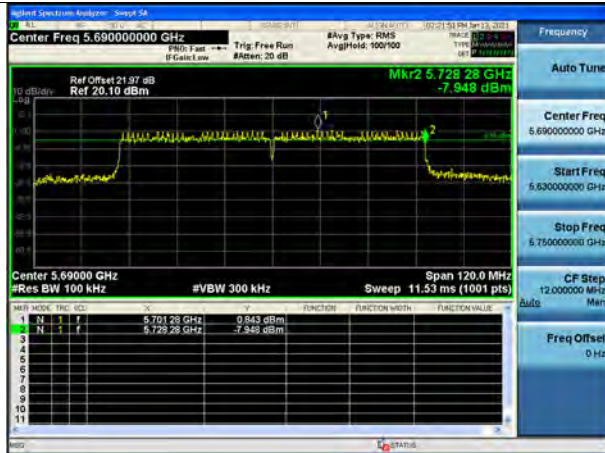
802.11n\_HT40 CH.142



802.11ac\_VHT40 CH.142



802.11ac\_VHT80 CH.138

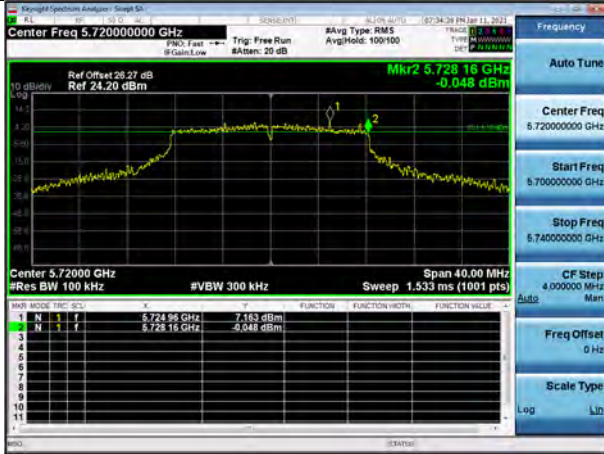




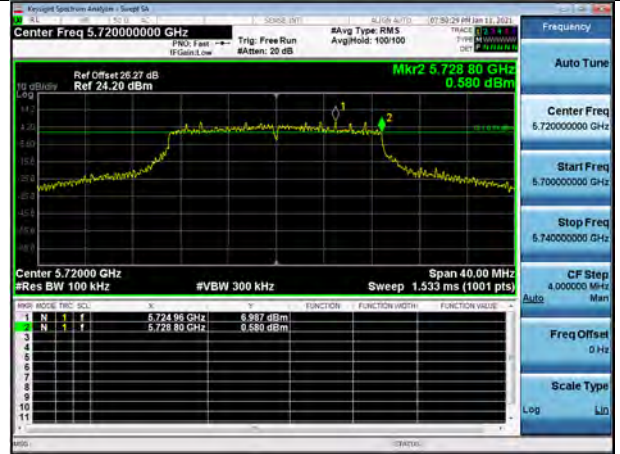
[External ANT\_SISO]

▣ Test Plots(UNII 3 Band 6dB Bandwidth)

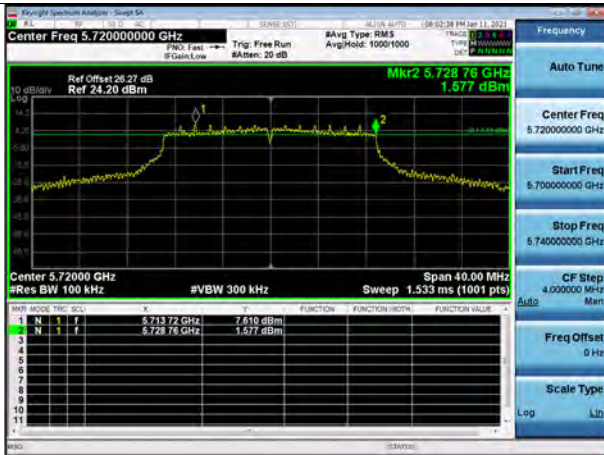
802.11a CH.144



802.11n\_HT20 CH.144



802.11ac\_VHT20 CH.144





802.11n\_HT40 CH.142



802.11ac\_VHT40 CH.142



802.11ac\_VHT80 CH.138

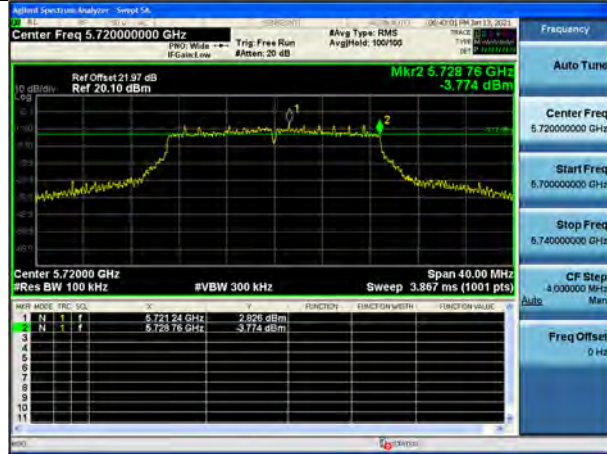




[Internal ANT\_MIMO]

- Test Plots(UNII 3 Band 6dB Bandwidth)

802.11n\_HT20 CH.144



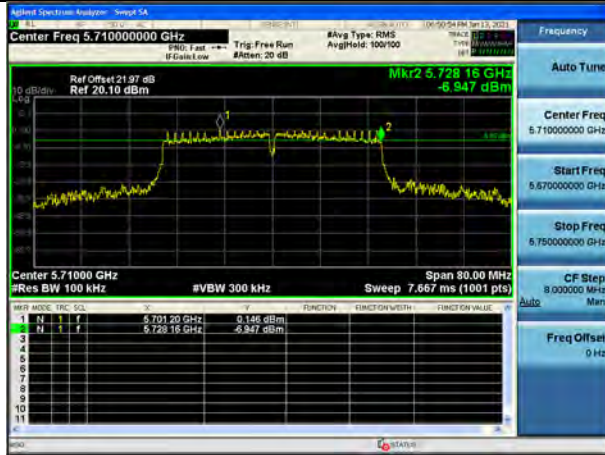
802.11ac\_VHT20 CH.144







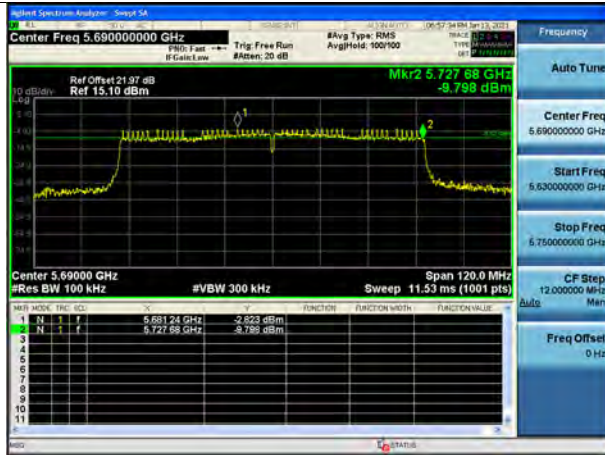
802.11n\_HT40 CH.142



802.11ac\_VHT40 CH.142



802.11ac\_VHT80 CH.138





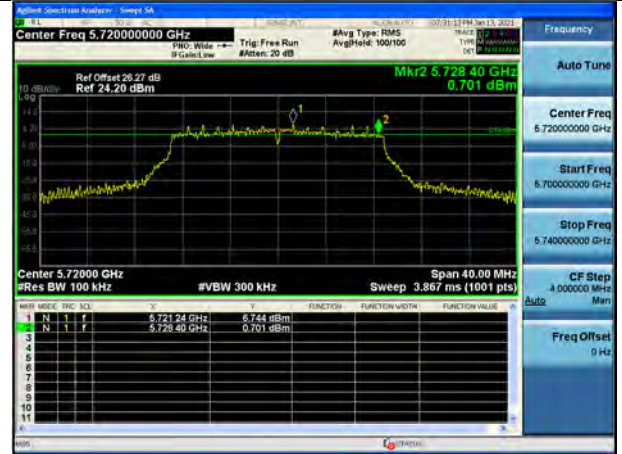
[External ANT\_MIMO]

- Test Plots(UNII 3 Band 6dB Bandwidth)

802.11n\_HT20 CH.144

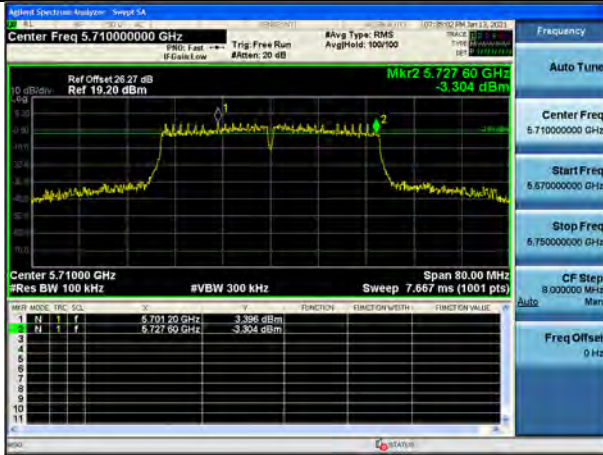


802.11ac\_VHT20 CH.144





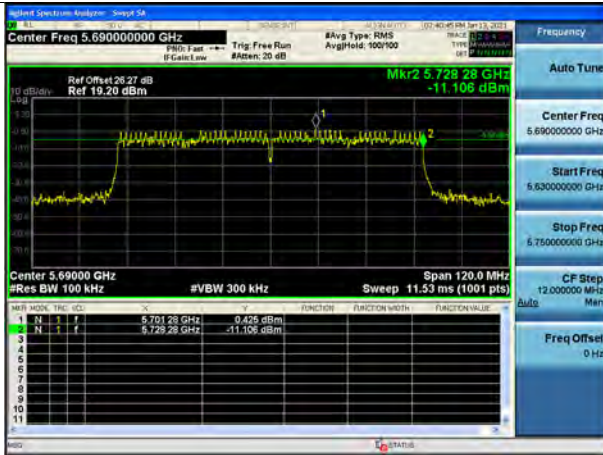
802.11n\_HT40 CH.142



802.11ac\_VHT40 CH.142



802.11ac\_VHT80 CH.138



### 10.7.3 Output Power

[Internal ANT\_SISO]

Mode	Frequency [MHz]	Channel	Total Power (dBm)	Limit (dBm)
802.11a	5720 (UNII 2C Band)	144	17.32	23.32
802.11n(HT20)			17.30	23.60
802.11ac(VHT20)			17.23	23.54
802.11a	5720 (UNII 3 Band)	144	10.31	30.00
802.11n(HT20)			10.86	30.00
802.11ac(VHT20)			10.84	30.00

Mode	Frequency [MHz]	Channel	Total Power (dBm)	Limit (dBm)
802.11n(HT40)	5710 (UNII 2C Band)	142	17.24	23.98
802.11ac(VHT40)			17.22	23.98
802.11n(HT40)	5710 (UNII 3 Band)	142	5.99	30.00
802.11ac(VHT40)			5.91	30.00

Mode	Frequency [MHz]	Channel	Total Power (dBm)	Limit (dBm)
802.11ac(VHT80)	5690 (UNII 2C Band)	138	16.44	23.98
	5690 (UNII 3 Band)	138	3.83	30.00



[External ANT\_SISO]

Mode	Frequency [MHz]	Channel	Total Power (dBm)	Limit (dBm)
802.11a	5720 (UNII 2C Band)	144	19.39	23.05
802.11n(HT20)			19.06	22.99
802.11ac(VHT20)			19.16	23.00
802.11a	5720 (UNII 3 Band)	144	11.09	30.00
802.11n(HT20)			11.19	30.00
802.11ac(VHT20)			11.31	30.00

Mode	Frequency [MHz]	Channel	Total Power (dBm)	Limit (dBm)
802.11n(HT40)	5710 (UNII 2C Band)	142	20.12	23.98
802.11ac(VHT40)			20.02	23.98
802.11n(HT40)	5710 (UNII 3 Band)	142	7.49	30.00
802.11ac(VHT40)			7.52	30.00

Mode	Frequency [MHz]	Channel	Total Power (dBm)	Limit (dBm)
802.11ac(VHT80)	5690 (UNII 2C Band)	138	19.95	23.98
	5690 (UNII 3 Band)	138	5.28	30.00



[Internal ANT\_MIMO]

Mode	Frequency [MHz]	Channel	Total Power (dBm)	Limit (dBm)
802.11n(HT20)	5720	144	12.83	23.98
802.11ac(VHT20)	(UNII 2C Band)		13.01	23.98
802.11n(HT20)	5720	144	6.06	30.00
802.11ac(VHT20)	(UNII 3 Band)		6.36	30.00

Mode	Frequency [MHz]	Channel	Total Power (dBm)	Limit (dBm)
802.11n(HT40)	5710	142	13.74	23.98
802.11ac(VHT40)	(UNII 2C Band)		13.80	23.98
802.11n(HT40)	5710	142	2.81	30.00
802.11ac(VHT40)	(UNII 3 Band)		2.65	30.00

Mode	Frequency [MHz]	Channel	Total Power (dBm)	Limit (dBm)
802.11ac(VHT80)	5690 (UNII 2C Band)	138	13.07	23.98
	5690 (UNII 3 Band)	138	-0.50	30.00



[External ANT\_MIMO]

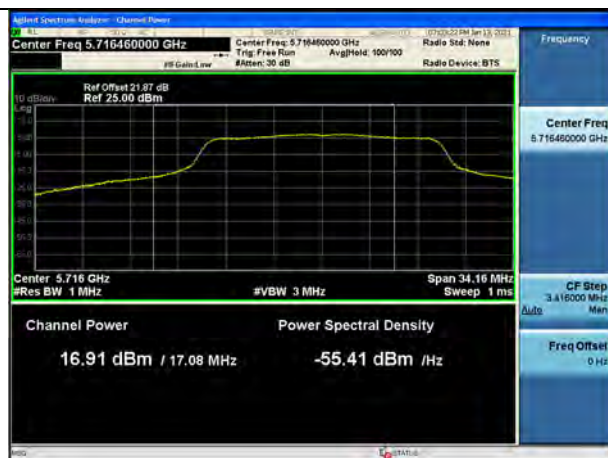
Mode	Frequency [MHz]	Channel	Total Power (dBm)	Limit (dBm)
802.11n(HT20)	5720	144	17.36	23.98
802.11ac(VHT20)	(UNII 2C Band)		17.78	23.98
802.11n(HT20)	5720	144	9.66	30.00
802.11ac(VHT20)	(UNII 3 Band)		10.16	30.00

Mode	Frequency [MHz]	Channel	Total Power (dBm)	Limit (dBm)
802.11n(HT40)	5710	142	17.61	23.98
802.11ac(VHT40)	(UNII 2C Band)		17.59	23.98
802.11n(HT40)	5710	142	5.37	30.00
802.11ac(VHT40)	(UNII 3 Band)		5.40	30.00

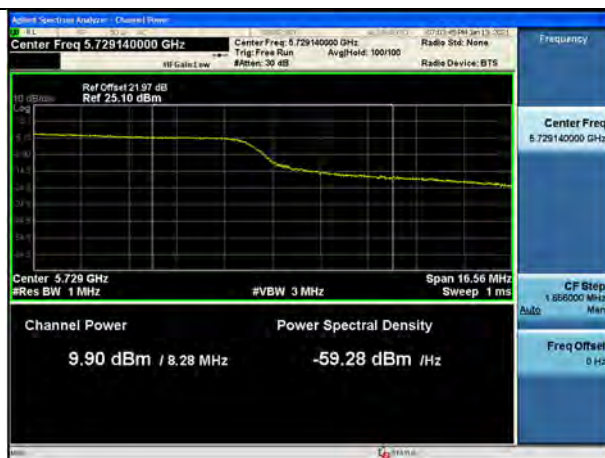
Mode	Frequency [MHz]	Channel	Total Power (dBm)	Limit (dBm)
802.11ac(VHT80)	5690 (UNII 2C Band)	138	16.99	23.98
	5690 (UNII 3 Band)	138	3.12	30.00

Test Plots\_[Internal ANT\_SISO]

802.11a UNII 2C Band



802.11a UNII 3 Band



802.11n(HT20) UNII 2C Band



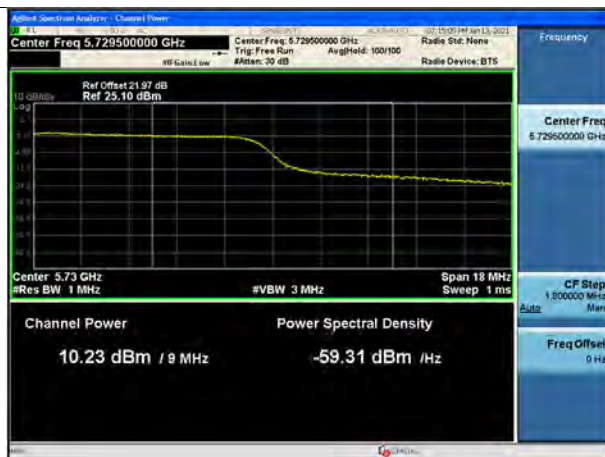
802.11n(HT20) UNII 3 Band



802.11ac(VHT20) UNII 2C Band



802.11ac(VHT20) UNII 3 Band





802.11n(HT40) UNII 2C Band



802.11n(HT40) UNII 3 Band



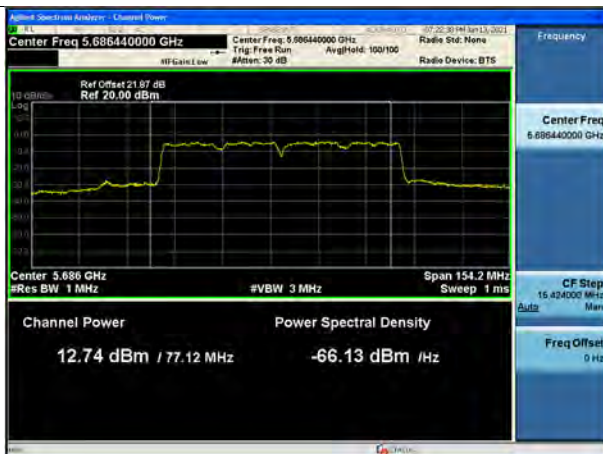
802.11ac(VHT40) UNII 2C Band



802.11ac(VHT40) UNII 3 Band



802.11ac(VHT80) UNII 2C Band



802.11ac(VHT80) UNII 3 Band

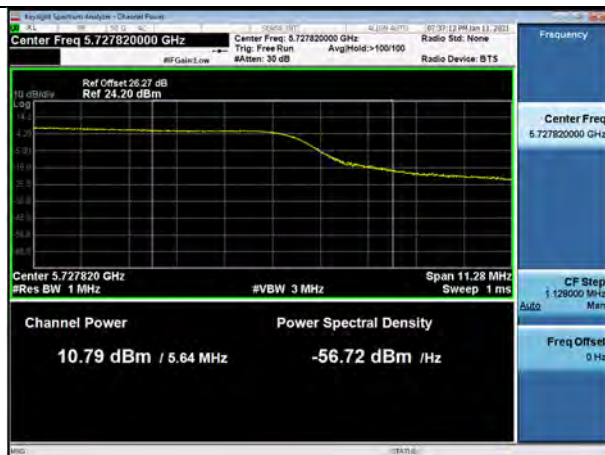


▣ Test Plots\_[External ANT\_SISO]

802.11a UNII 2C Band



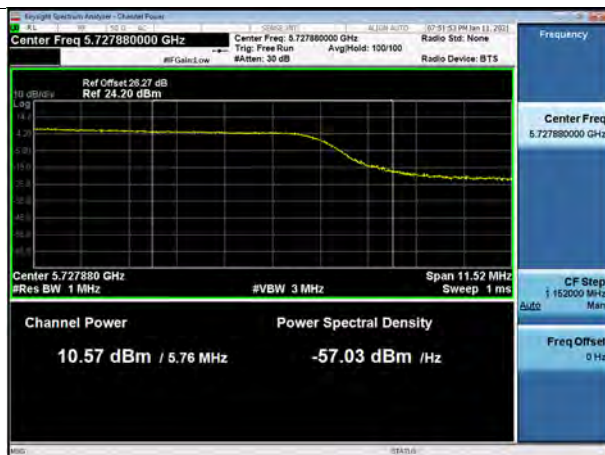
802.11a UNII 3 Band



802.11n(HT20) UNII 2C Band



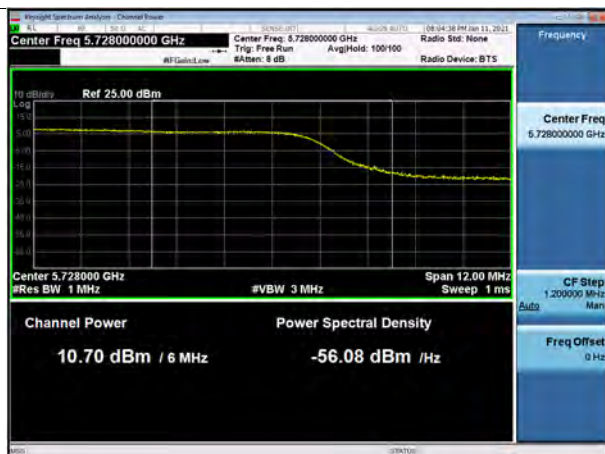
802.11n(HT20) UNII 3 Band



802.11ac(VHT20) UNII 2C Band



802.11ac(VHT20) UNII 3 Band



802.11n(HT40) UNII 2C Band



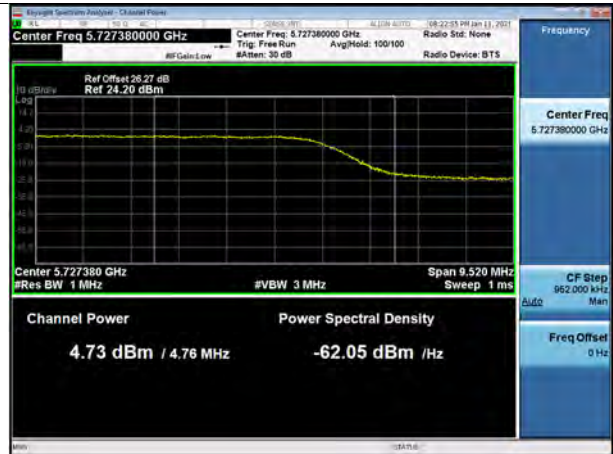
802.11n(HT40) UNII 3 Band



802.11ac(VHT40) UNII 2C Band



802.11ac(VHT40) UNII 3 Band



802.11ac(VHT80) UNII 2C Band



802.11ac(VHT80) UNII 3 Band



Test Plots [Internal ANT\_MIMO]

802.11n(HT20) UNII 2C Band



802.11n(HT20) UNII 3 Band



802.11ac(VHT20) UNII 2C Band



802.11ac(VHT20) UNII 3 Band



802.11n(HT40) UNII 2C Band



802.11n(HT40) UNII 3 Band



802.11ac(VHT40) UNII 2C Band



802.11ac(VHT40) UNII 3 Band



802.11ac(VHT80) UNII 2C Band



802.11ac(VHT80) UNII 3 Band



▣ Test Plots\_[External ANT\_MIMO]

802.11n(HT20) UNII 2C Band



802.11n(HT20) UNII 3 Band



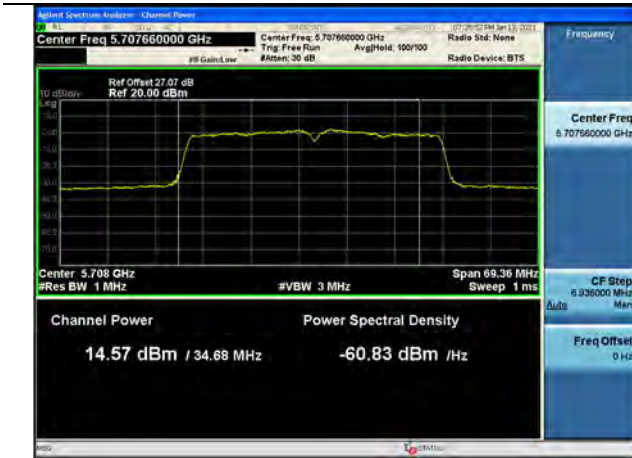
802.11ac(VHT20) UNII 2C Band



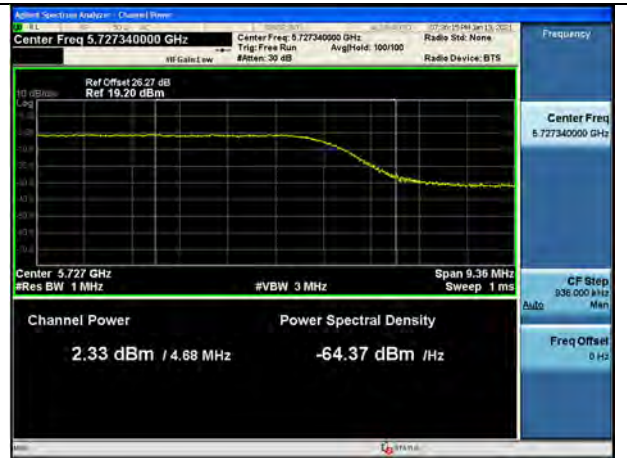
802.11ac(VHT20) UNII 3 Band



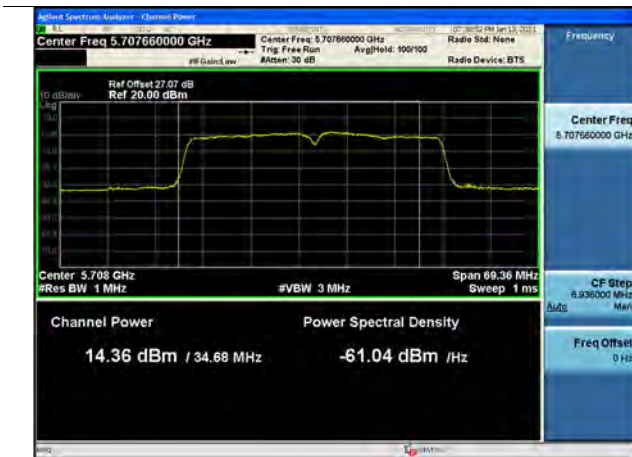
802.11n(HT40) UNII 2C Band



802.11n(HT40) UNII 3 Band



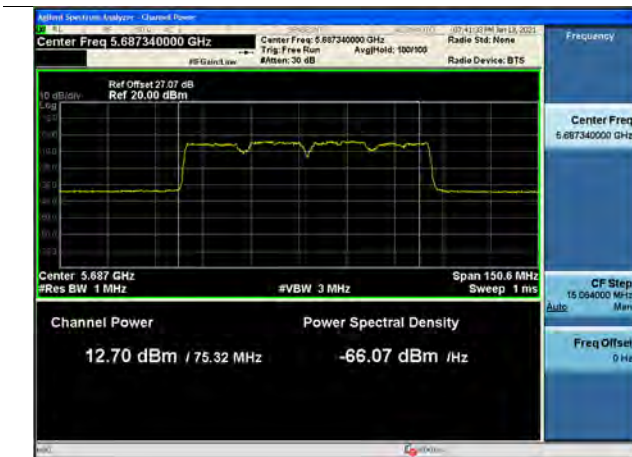
802.11ac(VHT40) UNII 2C Band



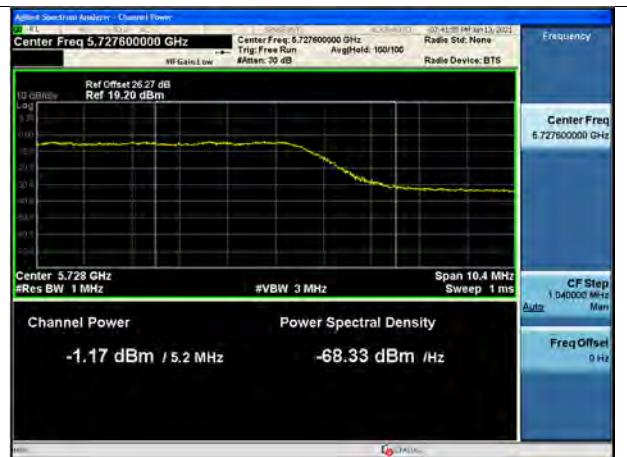
802.11ac(VHT40) UNII 3 Band



802.11ac(VHT80) UNII 2C Band



802.11ac(VHT80) UNII 3 Band



### 10.7.4 Power Spectral Density

**[Internal ANT\_SISO]**

Mode	Frequency [MHz]	Channel	Total PSD (dBm)	Limit (dBm)
802.11a	5720 (UNII 2C Band)	144	7.843	11.00
802.11n(HT20)			7.686	11.00
802.11ac(VHT20)			7.792	11.00
802.11a	5720 (UNII 3 Band)	144	2.868	30.00
802.11n(HT20)			2.975	30.00
802.11ac(VHT20)			2.554	30.00

Mode	Frequency [MHz]	Channel	Total PSD (dBm)	Limit (dBm)
802.11n(HT40)	5710 (UNII 2C Band)	142	4.316	11.00
802.11ac(VHT40)			4.206	11.00
802.11n(HT40)	5710 (UNII 3 Band)	142	-1.068	30.00
802.11ac(VHT40)			-1.345	30.00

Mode	Frequency [MHz]	Channel	Total PSD (dBm)	Limit (dBm)
802.11ac(VHT80)	5690 (UNII 2C Band)	138	-0.321	11.00
	5690 (UNII 3 Band)	138	-3.596	30.00





[External ANT\_SISO]

Mode	Frequency [MHz]	Channel	Total PSD (dBm)	Limit (dBm)
802.11a	5720 (UNII 2C Band)	144	9.694	11.00
802.11n(HT20)			9.251	11.00
802.11ac(VHT20)			9.275	11.00
802.11a	5720 (UNII 3 Band)	144	4.046	30.00
802.11n(HT20)			3.528	30.00
802.11ac(VHT20)			3.494	30.00

Mode	Frequency [MHz]	Channel	Total PSD (dBm)	Limit (dBm)
802.11n(HT40)	5710 (UNII 2C Band)	142	6.853	11.00
802.11ac(VHT40)			6.612	11.00
802.11n(HT40)	5710 (UNII 3 Band)	142	0.857	30.00
802.11ac(VHT40)			0.598	30.00

Mode	Frequency [MHz]	Channel	Total PSD (dBm)	Limit (dBm)
802.11ac(VHT80)	5690 (UNII 2C Band)	138	3.466	11.00
	5690 (UNII 3 Band)	138	-1.126	30.00



[Internal ANT\_MIMO]

Mode	Frequency [MHz]	Channel	Total PSD (dBm)	Limit (dBm)
802.11n(HT20)	5720	144	3.551	11.00
802.11ac(VHT20)	(UNII 2C Band)		4.015	11.00
802.11n(HT20)	5720	144	-1.262	30.00
802.11ac(VHT20)	(UNII 3 Band)		-1.380	30.00

Mode	Frequency [MHz]	Channel	Total PSD (dBm)	Limit (dBm)
802.11n(HT40)	5710	142	1.557	11.00
802.11ac(VHT40)	(UNII 2C Band)		1.196	11.00
802.11n(HT40)	5710	142	-2.599	30.00
802.11ac(VHT40)	(UNII 3 Band)		-4.887	30.00

Mode	Frequency [MHz]	Channel	Total PSD (dBm)	Limit (dBm)
802.11ac(VHT80)	5690 (UNII 2C Band)	138	-2.548	11.00
	5690 (UNII 3 Band)	138	-7.784	30.00

[External ANT\_MIMO]

Mode	Frequency [MHz]	Channel	Total PSD (dBm)	Limit (dBm)
802.11n(HT20)	5720	144	7.829	11.00
802.11ac(VHT20)	(UNII 2C Band)		8.416	11.00
802.11n(HT20)	5720	144	2.230	30.00
802.11ac(VHT20)	(UNII 3 Band)		2.272	30.00

Mode	Frequency [MHz]	Channel	Total PSD (dBm)	Limit (dBm)
802.11n(HT40)	5710	142	5.425	11.00
802.11ac(VHT40)	(UNII 2C Band)		5.071	11.00
802.11n(HT40)	5710	142	-0.812	30.00
802.11ac(VHT40)	(UNII 3 Band)		-1.014	30.00

Mode	Frequency [MHz]	Channel	Total PSD (dBm)	Limit (dBm)
802.11ac(VHT80)	5690 (UNII 2C Band)	138	1.192	11.00
	5690 (UNII 3 Band)	138	-3.283	30.00

Test Plots [Internal ANT\_SISO]

802.11a UNII 2C Band



802.11a UNII 3 Band



802.11n(HT20) UNII 2C Band



802.11n(HT20) UNII 3 Band



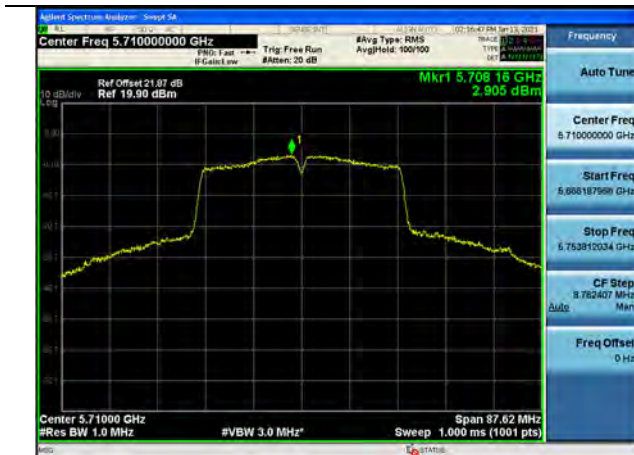
802.11ac(VHT20) UNII 2C Band



802.11ac(VHT20) UNII 3 Band



802.11n(HT40) UNII 2C Band



802.11n(HT40) UNII 3 Band



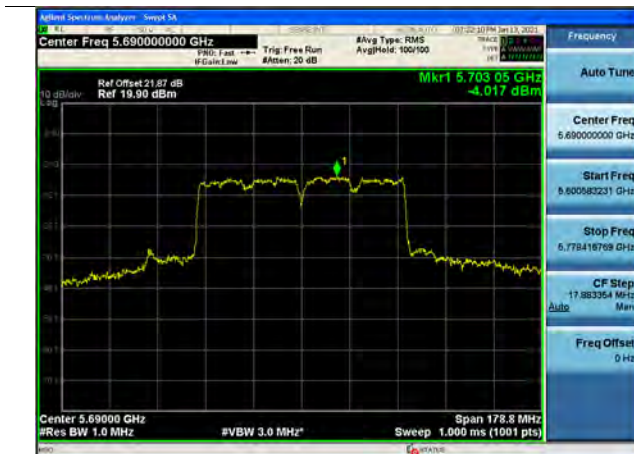
802.11ac(VHT40) UNII 2C Band



802.11ac(VHT40) UNII 3 Band



802.11ac(VHT80) UNII 2C Band



802.11ac(VHT80) UNII 3 Band



Test Plots [External ANT\_SISO]

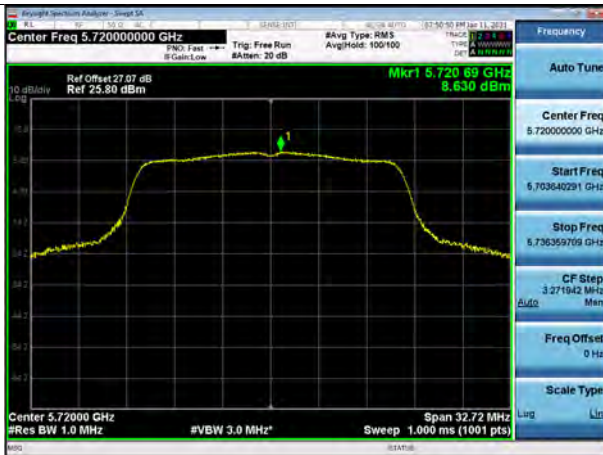
802.11a UNII 2C Band



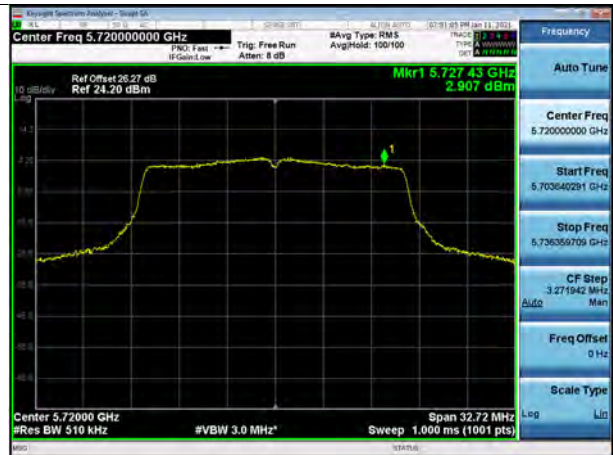
802.11a UNII 3 Band



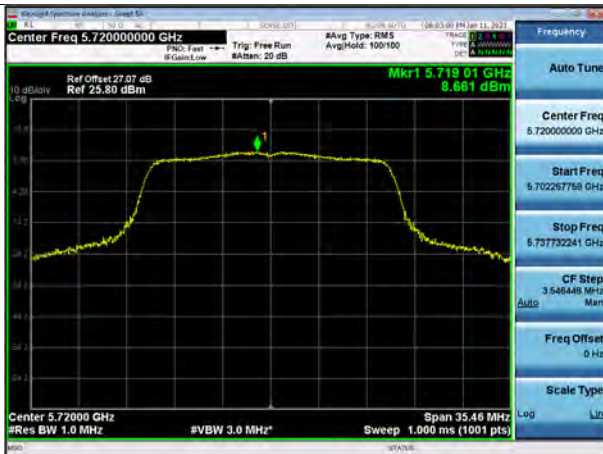
802.11n(HT20) UNII 2C Band



802.11n(HT20) UNII 3 Band



802.11ac(VHT20) UNII 2C Band



802.11ac(VHT20) UNII 3 Band



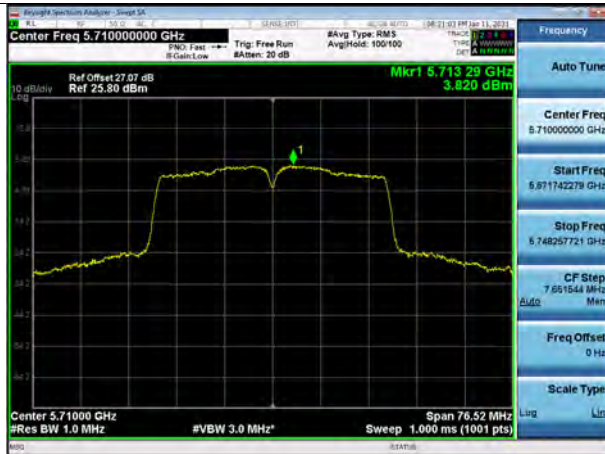
802.11n(HT40) UNII 2C Band



802.11n(HT40) UNII 3 Band



802.11ac(VHT40) UNII 2C Band



802.11ac(VHT40) UNII 3 Band



802.11ac(VHT80) UNII 2C Band



802.11ac(VHT80) UNII 3 Band



Test Plots [Internal ANT\_MIMO]

802.11n(HT20) UNII 2C Band



802.11n(HT20) UNII 3 Band



802.11ac(VHT20) UNII 2C Band



802.11ac(VHT20) UNII 3 Band







802.11n(HT40) UNII 2C Band



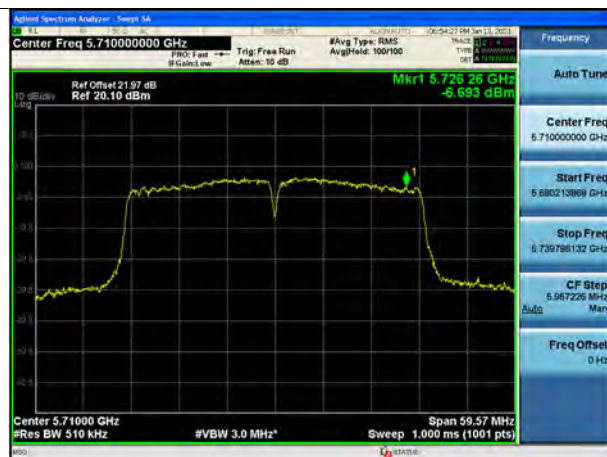
802.11n(HT40) UNII 3 Band



802.11ac(VHT40) UNII 2C Band



802.11ac(VHT40) UNII 3 Band



802.11ac(VHT80) UNII 2C Band

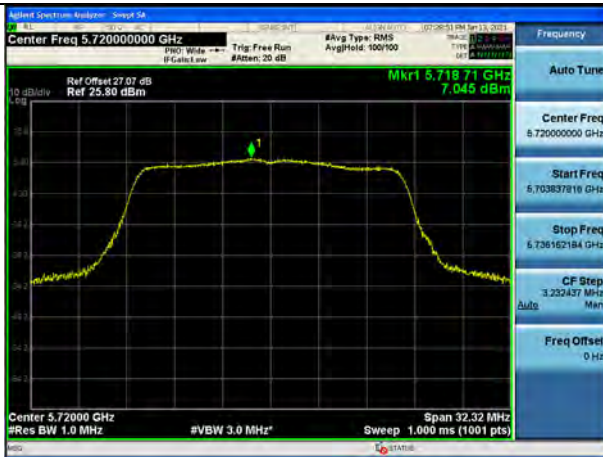


802.11ac(VHT80) UNII 3 Band



Test Plots [External ANT\_MIMO]

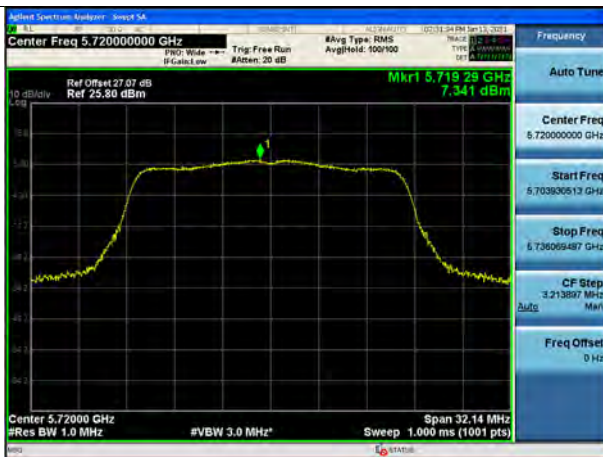
802.11n(HT20) UNII 2C Band



802.11n(HT20) UNII 3 Band



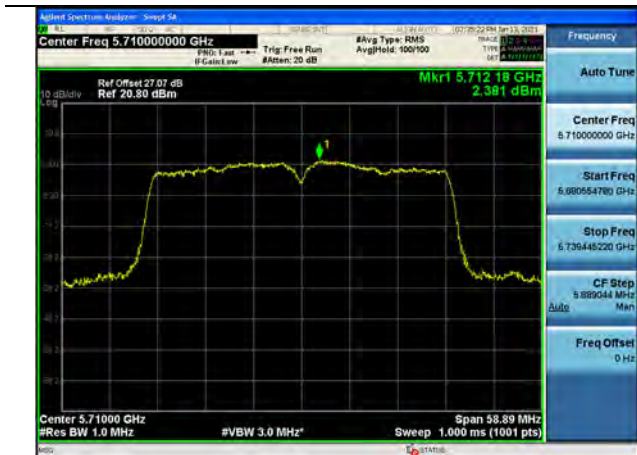
802.11ac(VHT20) UNII 2C Band



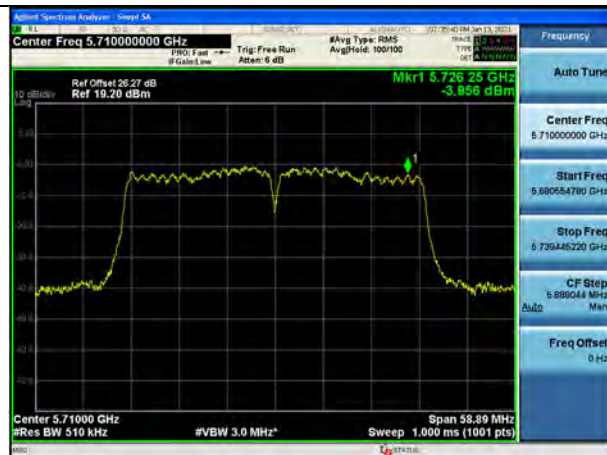
802.11ac(VHT20) UNII 3 Band



802.11n(HT40) UNII 2C Band



802.11n(HT40) UNII 3 Band



802.11ac(VHT40) UNII 2C Band



802.11ac(VHT40) UNII 3 Band



802.11ac(VHT80) UNII 2C Band



802.11ac(VHT80) UNII 3 Band



### 10.8 RADIATED SPURIOUS EMISSIONS

#### Frequency Range : 9 kHz – 30MHz

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dBuV/m	dBm/m	dBm	(H/V)	dBuV/m	dBuV/m	dB

No Critical peaks found

**Note:**

1. The reading of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.
2. Distance extrapolation factor =  $40\log(\text{specific distance} / \text{test distance})$  (dB)
3. Limit line = specific Limits (dBuV) + Distance extrapolation factor

#### Frequency Range : Below 1 GHz

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin
MHz	dBuV/m	dBm/m	dBm	(H/V)	dBuV/m	dBuV/m	dB

No Critical peaks found

**Note:**

1. Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Quasi peak detector mode



**Frequency Range : Above 1 GHz**

**[External Ant SISO]**

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency	Reading	ANT+CL-AMP G	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
10360	45.61	5.63	V	51.24	68.20	16.96	PK
15540	46.94	6.11	V	53.05	73.98	20.93	PK
15540	32.53	6.11	V	38.64	53.98	15.34	AV
10360	44.58	5.63	H	50.21	68.20	17.99	PK
15540	45.69	6.11	H	51.80	73.98	22.18	PK
15540	31.63	6.11	H	37.74	53.98	16.24	AV

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5200 MHz
Channel No.	40 Ch

Frequency	Reading	ANT+CL-AMP G	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
10400	45.21	5.06	V	50.27	68.20	17.93	PK
15600	48.43	4.93	V	53.36	73.98	20.62	PK
15600	33.06	4.93	V	37.99	53.98	15.99	AV
10400	44.39	5.06	H	49.45	68.20	18.75	PK
15600	47.32	4.93	H	52.25	73.98	21.73	PK
15600	32.50	4.93	H	37.43	53.98	16.55	AV



Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5240 MHz
Channel No.	48 Ch

Frequency	Reading	ANT+CL-AMP G	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
10480	45.97	5.81	V	51.78	68.20	16.42	PK
15720	46.01	4.48	V	50.49	73.98	23.49	PK
15720	31.44	4.48	V	35.92	53.98	18.06	AV
10480	44.67	5.81	H	50.48	68.20	17.72	PK
15720	45.37	4.48	H	49.85	73.98	24.13	PK
15720	31.08	4.48	H	35.56	53.98	18.42	AV

Band :	UNII 2A
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5260 MHz
Channel No.	52 Ch

Frequency	Reading	ANT+CL-AMP G	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
10520	46.01	5.64	V	51.65	68.20	16.55	PK
15780	43.88	5.17	V	49.05	73.98	24.93	PK
15780	30.34	5.17	V	35.51	53.98	18.47	AV
10520	45.28	5.64	H	50.92	68.20	17.28	PK
15780	43.09	5.17	H	48.26	73.98	25.72	PK
15780	30.11	5.17	H	35.28	53.98	18.70	AV



Band :	UNII 2A
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5300 MHz
Channel No.	60 Ch

Frequency	Reading	ANT+CL-AMP G	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
10600	46.48	5.90	V	52.38	73.98	21.60	PK
10600	33.22	5.90	V	39.12	53.98	14.86	AV
15900	43.80	5.96	V	49.76	73.98	24.22	PK
15900	30.25	5.96	V	36.21	53.98	17.77	AV
10600	45.81	5.90	H	51.71	73.98	22.27	PK
10600	32.34	5.90	H	38.24	53.98	15.74	AV
15900	42.64	5.96	H	48.60	73.98	25.38	PK
15900	30.21	5.96	H	36.17	53.98	17.81	AV

Band :	UNII 2A
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency	Reading	ANT+CL-AMP G	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
10640	48.34	6.01	V	54.35	73.98	19.63	PK
10640	34.98	6.01	V	40.99	53.98	12.99	AV
15960	44.44	5.20	V	49.64	73.98	24.34	PK
15960	30.28	5.20	V	35.48	53.98	18.50	AV
10640	47.31	6.01	H	53.32	73.98	20.66	PK
10640	33.58	6.01	H	39.59	53.98	14.39	AV
15960	43.57	5.20	H	48.77	73.98	25.21	PK
15960	30.01	5.20	H	35.21	53.98	18.77	AV



Band :	UNII 2C
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5500 MHz
Channel No.	100 Ch

Frequency	Reading	ANT+CL-AMP G	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
11000	48.74	6.10	V	54.84	73.98	19.14	PK
11000	34.92	6.10	V	41.02	53.98	12.96	AV
16500	46.49	7.83	V	54.32	68.20	13.88	PK
11000	47.36	6.10	H	53.46	73.98	20.52	PK
11000	33.85	6.10	H	39.95	53.98	14.03	AV
16500	45.80	7.83	H	53.63	68.20	14.57	PK

Band :	UNII 2C
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5580 MHz
Channel No.	116 Ch

Frequency	Reading	ANT+CL-AMP G	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
11160	48.92	5.39	V	54.31	73.98	19.67	PK
11160	34.25	5.39	V	39.64	53.98	14.34	AV
16740	48.18	9.32	V	57.50	68.20	10.70	PK
11160	47.67	5.39	H	53.06	73.98	20.92	PK
11160	33.52	5.39	H	38.91	53.98	15.07	AV
16740	47.69	9.32	H	57.01	68.20	11.19	PK





Band :	UNII 2C
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5720 MHz
Channel No.	144 Ch

Frequency	Reading	ANT+CL-AMP G	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
11440	49.52	6.02	V	55.54	73.98	18.44	PK
11440	35.08	6.02	V	41.10	53.98	12.88	AV
17160	46.36	9.78	V	56.14	68.20	12.06	PK
11440	48.44	6.02	H	54.46	73.98	19.52	PK
11440	34.29	6.02	H	40.31	53.98	13.67	AV
17160	46.66	9.78	H	56.44	68.20	11.76	PK

Band :	UNII 3
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5745MHz
Channel No.	149 Ch

Frequency	Reading	ANT+CL-AMP G	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
11490	54.12	6.06	V	60.18	73.98	13.80	PK
11490	38.74	6.06	V	44.80	53.98	9.18	AV
17235	46.34	10.88	V	57.22	68.20	10.98	PK
11490	53.60	6.06	H	59.66	73.98	14.32	PK
11490	37.90	6.06	H	43.96	53.98	10.02	AV
17235	45.98	10.88	H	56.86	68.20	11.34	PK



Band :	UNII 3
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5785 MHz
Channel No.	157 Ch

Frequency	Reading	ANT+CL-AMP G	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
11570	55.03	6.77	V	61.80	73.98	12.18	PK
11570	40.03	6.77	V	46.80	53.98	7.18	AV
17355	45.88	11.73	V	57.61	68.20	10.59	PK
11570	53.98	6.77	H	60.75	73.98	13.23	PK
11570	38.69	6.77	H	45.46	53.98	8.52	AV
17355	44.93	10.98	H	55.91	68.20	12.29	PK

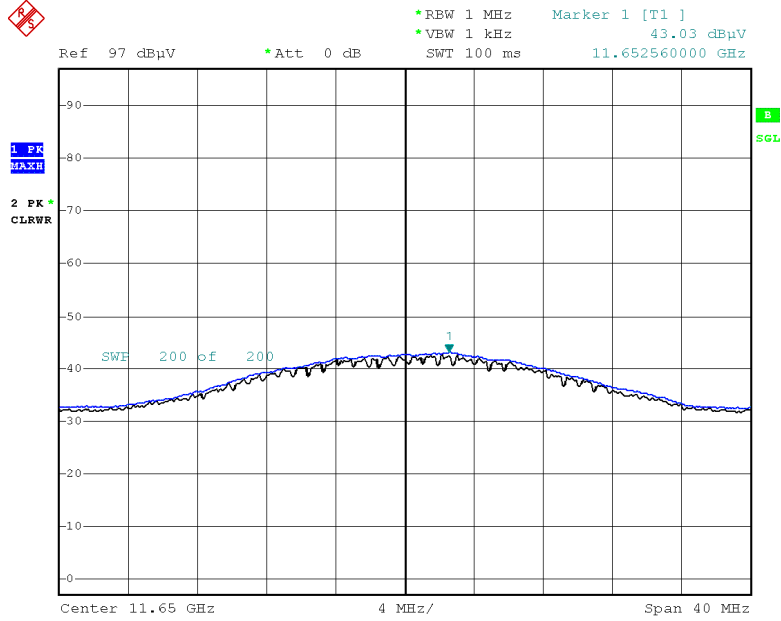
Band :	UNII 3
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5825 MHz
Channel No.	165 Ch

Frequency	Reading	ANT+CL-AMP G	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
11650	58.04	6.38	V	64.42	73.98	9.56	PK
11650	43.03	6.38	V	49.41	53.98	4.57	AV
17475	48.94	11.29	V	60.23	68.20	7.97	PK
11650	57.45	6.38	H	63.83	73.98	10.15	PK
11650	42.95	6.38	H	49.33	53.98	4.65	AV
17475	49.84	11.29	H	61.13	68.20	7.07	PK



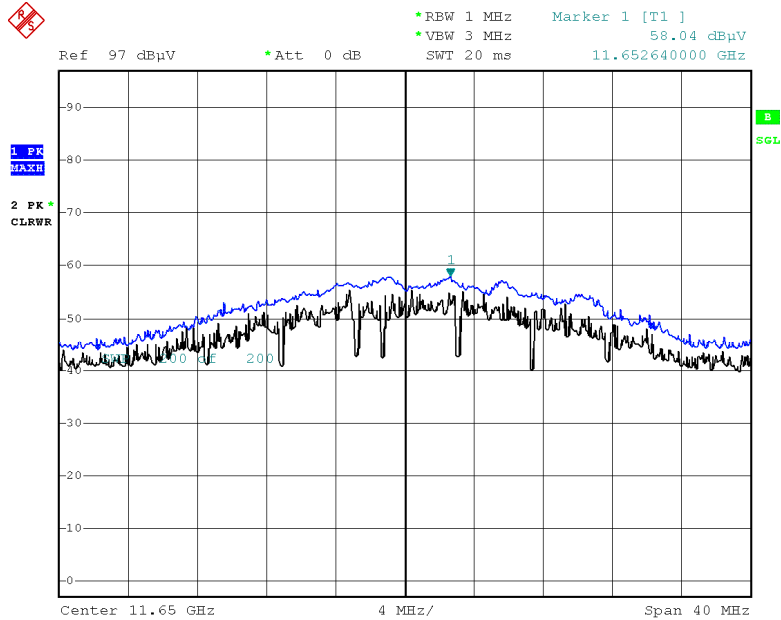
Test Plots

Average Reading (802.11a, Ch.165 2nd Harmonic, X-V)



Date: 5.JAN.2021 10:38:32

Peak Reading (802.11a, Ch.165 2nd Harmonic, X-V)



Date: 5.JAN.2021 10:38:47

**Note:**

Only the worst case plots for Radiated Spurious Emissions.

### 10.9 RADIATED RESTRICTED BAND EDGE

#### [External Ant SISO]

Band :	UNII 1
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency	Reading	CL+AF+DF-AG	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
5150	45.23	12.69	H	57.92	73.98	16.06	PK
5150	30.22	12.69	H	42.91	53.98	11.07	AV
5150	45.92	12.69	V	58.61	73.98	15.37	PK
5150	30.72	12.69	V	43.41	53.98	10.57	AV

Band :	UNII 2A
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency	Reading	CL+AF+DF-AG	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
5350	44.36	12.36	H	56.72	73.98	17.26	PK
5350	30.17	12.36	H	42.53	53.98	11.45	AV
5350	45.44	12.36	V	57.80	73.98	16.18	PK
5350	30.48	12.36	V	42.84	53.98	11.14	AV



Band :	UNII 2C
Operation Mode:	802.11 a
Transfer Rate:	6 Mbps
Operating Frequency	5500 MHz
Channel No.	100 Ch

Frequency	Reading	CL+AF+DF-AG	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
5460	44.09	12.83	H	56.92	73.98	17.06	PK
5460	30.27	12.83	H	43.10	53.98	10.88	AV
5470	48.03	13.04	H	61.07	68.20	7.13	PK
5460	45.79	12.83	V	58.62	73.98	15.36	PK
5460	31.06	12.83	V	43.89	53.98	10.09	AV
5470	48.98	13.04	V	62.02	68.20	6.18	PK



Band :	UNII 1
Operation Mode:	802.11 n_HT20
Transfer MCS Index:	0
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency	Reading	CL+AF+DF-AG	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
5150	45.33	12.69	H	58.02	73.98	15.96	PK
5150	30.18	12.69	H	42.87	53.98	11.11	AV
5150	46.03	12.69	V	58.72	73.98	15.26	PK
5150	30.61	12.69	V	43.30	53.98	10.68	AV

Band :	UNII 2A
Operation Mode:	802.11 n_HT20
Transfer MCS Index:	0
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency	Reading	CL+AF+DF-AG	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
5350	44.68	12.36	H	57.04	73.98	16.94	PK
5350	30.29	12.36	H	42.65	53.98	11.33	AV
5350	45.81	12.36	V	58.17	73.98	15.81	PK
5350	30.53	12.36	V	42.89	53.98	11.09	AV



Band :	UNII 2C
Operation Mode:	802.11 n_HT20
Transfer MCS Index:	0
Operating Frequency	5500 MHz
Channel No.	100 Ch

Frequency	Reading	CL+AF+DF-AG	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
5460	46.51	12.83	H	59.34	73.98	14.64	PK
5460	30.54	12.83	H	43.37	53.98	10.61	AV
5470	48.60	13.04	H	61.64	68.20	6.56	PK
5460	46.95	12.83	V	59.78	73.98	14.20	PK
5460	30.87	12.83	V	43.70	53.98	10.28	AV
5470	49.62	13.04	V	62.66	68.20	5.54	PK



Band :	UNII 1
Operation Mode:	802.11 ac_VHT20
Transfer MCS Index:	0
Operating Frequency	5180 MHz
Channel No.	36 Ch

Frequency	Reading	CL+AF+DF-AG	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
5150	46.37	12.69	H	59.06	73.98	14.92	PK
5150	30.22	12.69	H	42.91	53.98	11.07	AV
5150	47.43	12.69	V	60.12	73.98	13.86	PK
5150	30.63	12.69	V	43.32	53.98	10.66	AV

Band :	UNII 2A
Operation Mode:	802.11 ac_VHT20
Transfer MCS Index:	0
Operating Frequency	5320 MHz
Channel No.	64 Ch

Frequency	Reading	CL+AF+DF-AG	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
5350	45.61	12.36	H	57.97	73.98	16.01	PK
5350	30.42	12.36	H	42.78	53.98	11.20	AV
5350	45.88	12.36	V	58.24	73.98	15.74	PK
5350	30.49	12.36	V	42.85	53.98	11.13	AV





Band :	UNII 2C
Operation Mode:	802.11 ac_VHT20
Transfer MCS Index:	0
Operating Frequency	5500 MHz
Channel No.	100 Ch

Frequency	Reading	CL+AF+DF-AG	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
5460	46.99	12.83	H	59.82	73.98	14.16	PK
5460	30.94	12.83	H	43.77	53.98	10.21	AV
5470	49.63	13.04	H	62.67	68.20	5.53	PK
5460	47.37	12.83	V	60.20	73.98	13.78	PK
5460	31.38	12.83	V	44.21	53.98	9.77	AV
5470	50.47	13.04	V	63.51	68.20	4.69	PK



Band :	UNII 1
Operation Mode:	802.11 n_HT40
Transfer MCS Index:	0
Operating Frequency	5190 MHz
Channel No.	38 Ch

Frequency	Reading	CL+AF+DF-AG	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
5150	51.36	12.69	H	64.05	73.98	9.93	PK
5150	33.25	12.69	H	45.94	53.98	8.04	AV
5150	53.00	12.69	V	65.69	73.98	8.29	PK
5150	34.33	12.69	V	47.02	53.98	6.96	AV

Band :	UNII 1
Operation Mode:	802.11 n_HT40
Transfer MCS Index:	0
Operating Frequency	5310 MHz
Channel No.	62 Ch

Frequency	Reading	CL+AF+DF-AG	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
5350	48.96	12.36	H	61.32	73.98	12.66	PK
5350	33.15	12.36	H	45.51	53.98	8.47	AV
5350	50.01	12.36	V	62.37	73.98	11.61	PK
5350	34.12	12.36	V	46.48	53.98	7.50	AV



Band :	UNII 2C
Operation Mode:	802.11 n_HT40
Transfer MCS Index:	0
Operating Frequency	5510 MHz
Channel No.	102 Ch

Frequency	Reading	CL+AF+DF-AG	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
5460	44.29	12.83	H	57.12	73.98	16.86	PK
5460	31.21	12.83	H	44.04	53.98	9.94	AV
5470	48.25	13.04	H	61.29	68.20	6.91	PK
5460	44.73	12.83	V	57.56	73.98	16.42	PK
5460	31.51	12.83	V	44.34	53.98	9.64	AV
5470	49.81	13.04	V	62.85	68.20	5.35	PK



Band :	UNII 1
Operation Mode:	802.11 ac_VHT40
Transfer MCS Index:	0
Operating Frequency	5190 MHz
Channel No.	38 Ch

Frequency	Reading	CL+AF+DF-AG	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
5150	50.33	12.69	H	63.02	73.98	10.96	PK
5150	33.28	12.69	H	45.97	53.98	8.01	AV
5150	51.45	12.69	V	64.14	73.98	9.84	PK
5150	33.98	12.69	V	46.67	53.98	7.31	AV

Band :	UNII 1
Operation Mode:	802.11 ac_VHT40
Transfer MCS Index:	0
Operating Frequency	5310 MHz
Channel No.	62 Ch

Frequency	Reading	CL+AF+DF-AG	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
5350	47.94	12.36	H	60.30	73.98	13.68	PK
5350	33.86	12.36	H	46.22	53.98	7.76	AV
5350	48.33	12.36	V	60.69	73.98	13.29	PK
5350	34.67	12.36	V	47.03	53.98	6.95	AV



Band :	UNII 2C
Operation Mode:	802.11 ac_VHT40
Transfer MCS Index:	0
Operating Frequency	5510 MHz
Channel No.	102 Ch

Frequency	Reading	CL+AF+DF-AG	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
5460	44.74	12.83	H	57.57	73.98	16.41	PK
5460	31.03	12.83	H	43.86	53.98	10.12	AV
5470	49.80	13.04	H	62.84	68.20	5.36	PK
5460	45.61	12.83	V	58.44	73.98	15.54	PK
5460	31.44	12.83	V	44.27	53.98	9.71	AV
5470	50.65	13.04	V	63.69	68.20	4.51	PK



Band :	UNII 1
Operation Mode:	802.11 ac_VHT80
Transfer MCS Index:	0
Operating Frequency	5210 MHz
Channel No.	42 Ch

Frequency	Reading	CL+AF+DF-AG	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
5150	49.99	12.69	H	62.68	73.98	11.30	PK
5150	35.80	12.69	H	48.49	53.98	5.49	AV
5150	51.85	12.69	V	64.54	73.98	9.44	PK
5150	37.39	12.69	V	50.08	53.98	3.90	AV

Band :	UNII 2A
Operation Mode:	802.11 ac_VHT80
Transfer MCS Index:	0
Operating Frequency	5290 MHz
Channel No.	58 Ch

Frequency	Reading	CL+AF+DF-AG	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
5350	49.38	12.36	H	61.74	73.98	12.24	PK
5350	36.75	12.36	H	49.11	53.98	4.87	AV
5350	50.94	12.36	V	63.30	73.98	10.68	PK
5350	37.68	12.36	V	50.04	53.98	3.94	AV

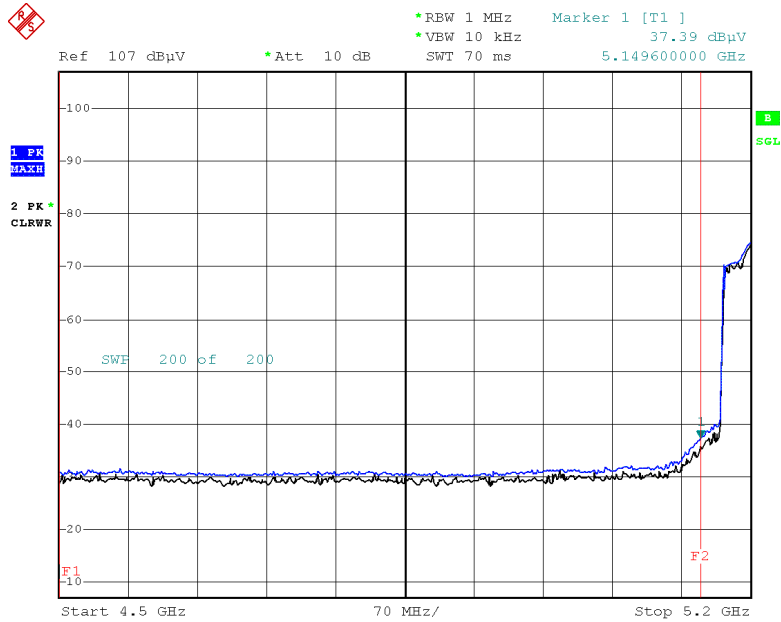


Band :	UNII 2C
Operation Mode:	802.11 ac_VHT80
Transfer MCS Index:	0
Operating Frequency	5530 MHz
Channel No.	106 Ch

Frequency	Reading	CL+AF+DF-AG	ANT. POL	Total	Limit	Margin	Detect
[MHz]	dBuV	[dB]	[H/V]	[dBuV/m]	[dBuV/m]	[dB]	
5460	46.54	12.83	H	59.37	73.98	14.61	PK
5460	32.17	12.83	H	45.00	53.98	8.98	AV
5470	49.61	13.04	H	62.65	68.20	5.55	PK
5460	47.83	12.83	V	60.66	73.98	13.32	PK
5460	33.08	12.83	V	45.91	53.98	8.07	AV
5470	50.78	13.04	V	63.82	68.20	4.38	PK

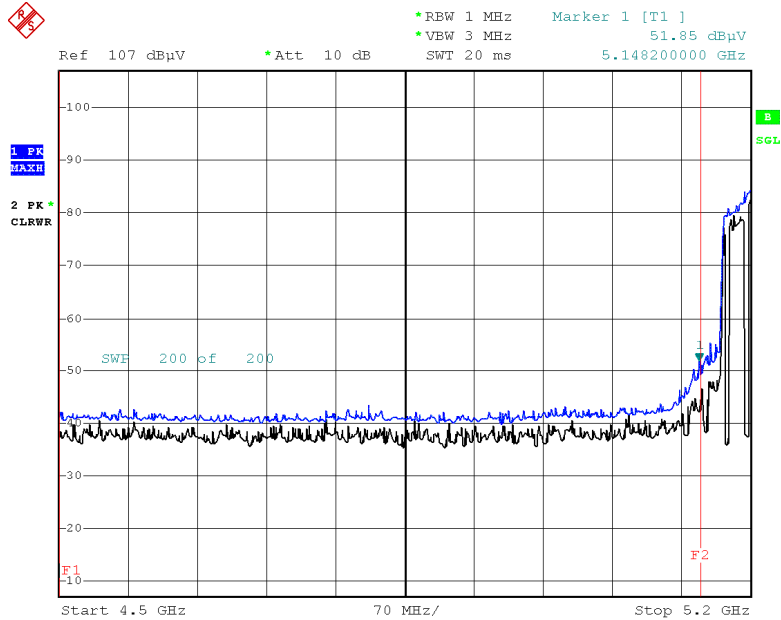
Test Plots(UNII 1, 2A, 2C)

Average Reading (802.11ac(VHT80), Ch.42, X-V)



Date: 4.JAN.2021 20:08:25

Peak Reading (802.11ac(VHT80), Ch.42, X-V)



Date: 4.JAN.2021 20:09:17

**Note:**

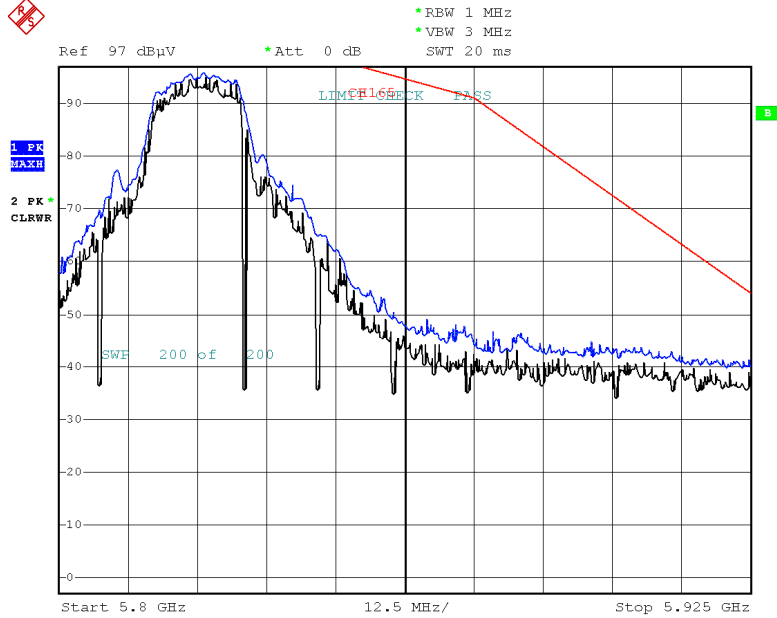
Only the worst case plots for Radiated Restricted Band Edge.





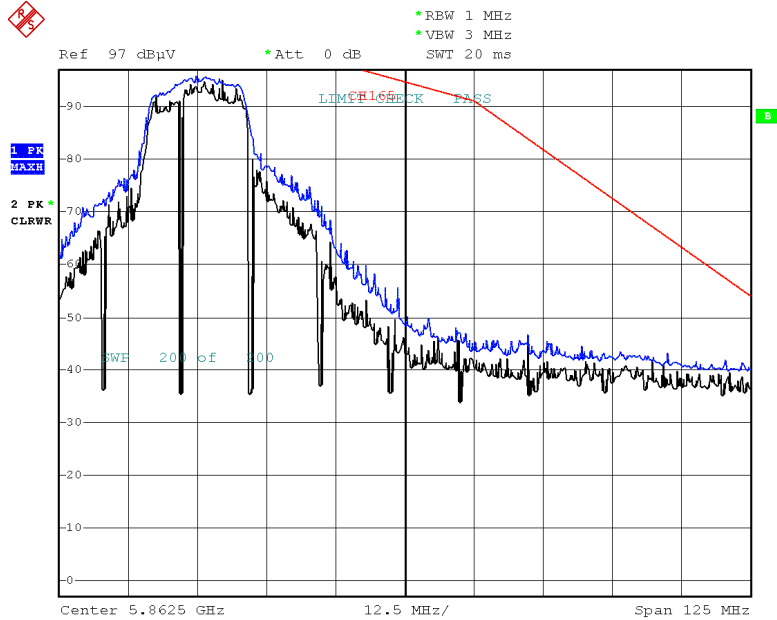
▣ Test Plots(UNII 3)

Peak Reading (802.11a, Ch.165)



Date: 7.JAN.2021 08:12:37

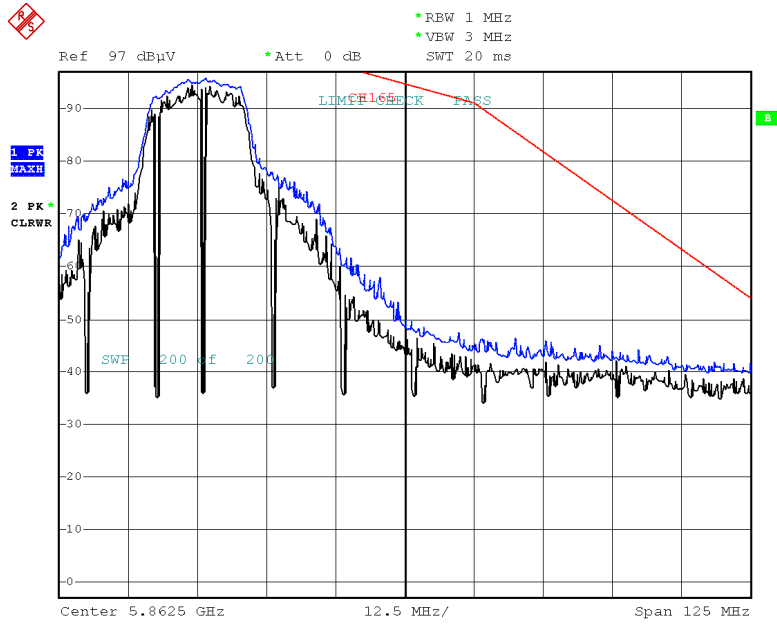
Peak Reading (802.11n\_HT20, Ch.165)



Date: 7.JAN.2021 08:14:23

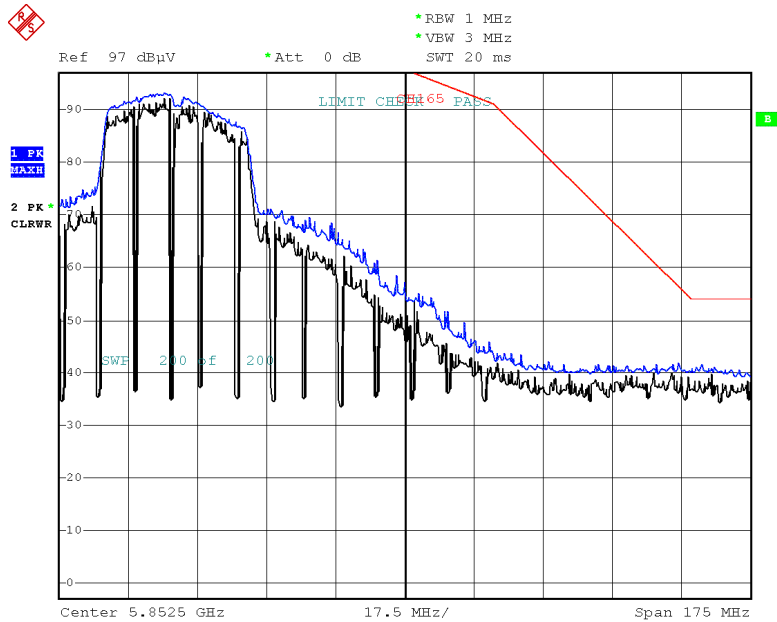


Peak Reading (802.11ac\_VHT20, Ch.165)



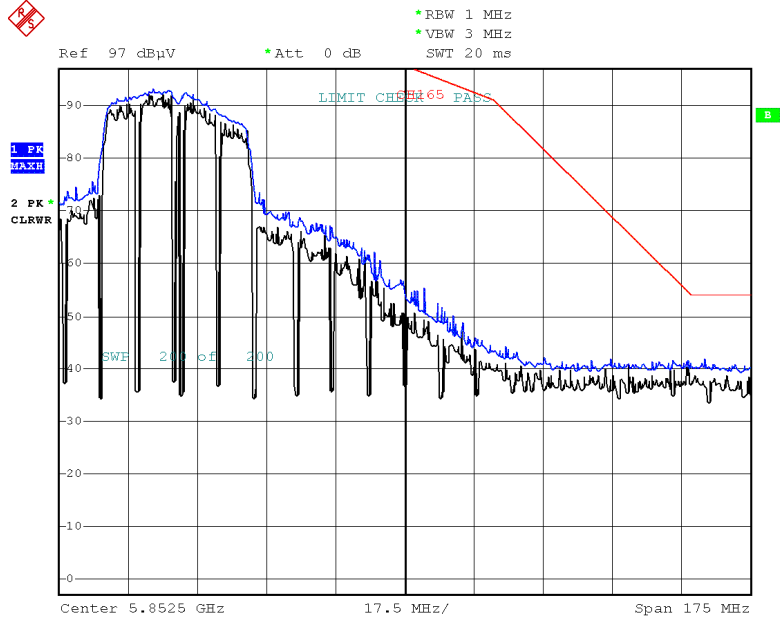
Date: 7.JAN.2021 08:15:23

Peak Reading (802.11n\_HT40, Ch.159)



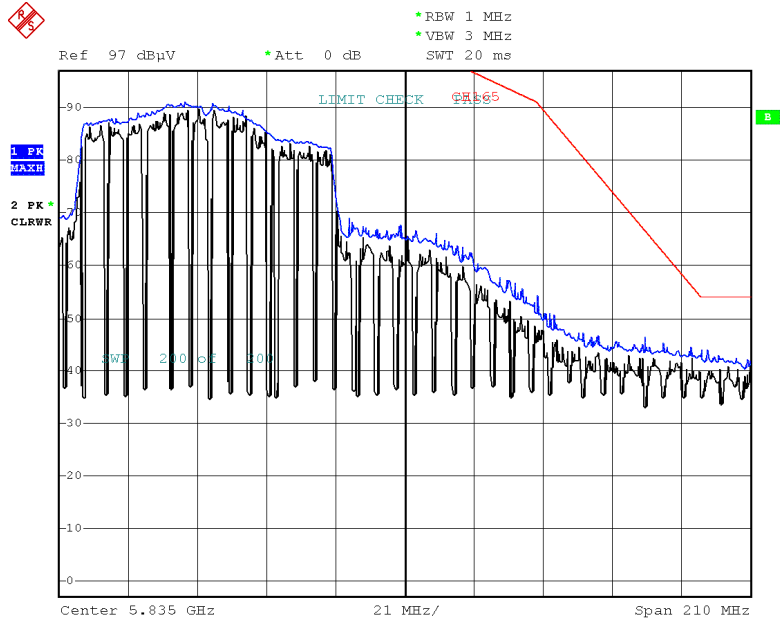
Date: 7.JAN.2021 08:24:08

### Peak Reading (802.11ac\_VHT40, Ch.159)



Date: 7.JAN.2021 08:24:59

### Peak Reading (802.11ac\_VHT80, Ch.155)



Date: 7.JAN.2021 08:35:21

## 11. LIST OF TEST EQUIPMENT

### Conducted Test

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Rohde & Schwarz	ENV216 / LISN	09/04/2020	Annual	102245
Rohde & Schwarz	ESCI / Test Receiver	06/10/2020	Annual	100584
ESPAC	SU-642 /Temperature Chamber	03/18/2020	Annual	0093008124
Agilent	N9030A / Signal Analyzer	01/11/2021	Annual	MY49431210
Rohde & Schwarz	OSP 120 / Power Measurement Set	07/02/2020	Annual	101231
Agilent	N1911A / Power Meter	04/07/2020	Annual	MY45100523
Keysight	N1921A / Power Sensor	06/08/2020	Annual	MY57820067
Agilent	87300B / Directional Coupler	11/10/2020	Annual	3116A03621
Hewlett Packard	11667B / Power Splitter	05/25/2020	Annual	05001
Hewlett Packard	E3632A / DC Power Supply	06/12/2020	Annual	KR75303960
Agilent	8493C / Attenuator(10 dB)	06/26/2020	Annual	07560
Rohde & Schwarz	EMC32 / Software	N/A	N/A	N/A
HCT CO., LTD.	FCC WLAN&BT&BLE Conducted Test Software v3.0	N/A	N/A	N/A
Rohde & Schwarz	CBT / Bluetooth Tester	05/12/2020	Annual	100422
Agilent	11636A / Power Divider	07/24/2020	Annual	9109
Agilent	N5182A / Vector Signal Generator	08/26/2020	Annual	MY50140312

**Note:**

1. Equipment listed above that calibrated during the testing period was set for test after the calibration.
2. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

**Radiated Test**

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.
Innco system	CO3000 / Controller(Antenna mast)	N/A	N/A	CO3000-4p
Innco system	MA4640/800-XP-EP / Antenna Position Tower	N/A	N/A	N/A
Emco	2090 / Controller	N/A	N/A	060520
Ets	Turn Table	N/A	N/A	N/A
Rohde & Schwarz	Loop Antenna	05/18/2020	Biennial	1513-175
Schwarzbeck	VULB 9160 / Hybrid Antenna	08/19/2020	Biennial	9160-3368
Schwarzbeck	VULB 9168 / Hybrid Antenna	09/04/2020	Biennial	9168-0895
Schwarzbeck	BBHA 9120D / Horn Antenna	11/18/2019	Biennial	9120D-1191
Schwarzbeck	BBHA9170 / Horn Antenna(15 GHz ~ 40 GHz)	11/29/2019	Biennial	BBHA9170541
Rohde & Schwarz	FSP(9 kHz ~ 30 GHz) / Spectrum Analyzer	09/14/2020	Annual	836650/016
Rohde & Schwarz	FSV40-N / Spectrum Analyzer	09/22/2020	Annual	101068-SZ
Wainwright Instruments	WRCJV2400/2483.5-2370/2520-60/12SS / Band Reject Filter	01/06/2021	Annual	2
Wainwright Instruments	WRCJV5100/5850-40/50-8EEK / Band Reject Filter	02/10/2020	Annual	1
CERNEX	CBLU1183540B-01/Broadband Bench Top LNA 56-10 / Attenuator(10 dB)	12/23/2020	Annual	N/A
WEINSCHEL				
CERNEX	CBL06185030 / Broadband Low Noise Amplifier 18B-03 / Attenuator (3 dB)	12/23/2020	Annual	N/A
Api tech.				
Wainwright Instruments	WHKX10-2700-3000-18000-40SS / High Pass Filter	12/23/2020	Annual	N/A
Wainwright Instruments	WHKX8-6090-7000-18000-40SS / High Pass Filter	12/23/2020	Annual	N/A
T&M SYSTEM	COAXIAL ATTENUATOR / Thru	12/23/2020	Annual	N/A
CERNEX	CBL18265035 / Power Amplifier	12/04/2020	Annual	22966
CERNEX	CBL26405040 / Power Amplifier	03/23/2020	Annual	25956
TESCOM	TC-3000C / Bluetooth Tester	03/18/2020	Annual	3000C000276

**Note:**

1. Equipment listed above that calibrated during the testing period was set for test after the calibration.
2. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.
3. Especially, all antenna for measurement is calibrated in accordance with the requirements of C63.5(Version : 2017).



## 12. ANNEX A\_ TEST SETUP PHOTO

Please refer to test setup photo file no. as follows;

No.	Description
1	HCT-RF-2101-FC124-P