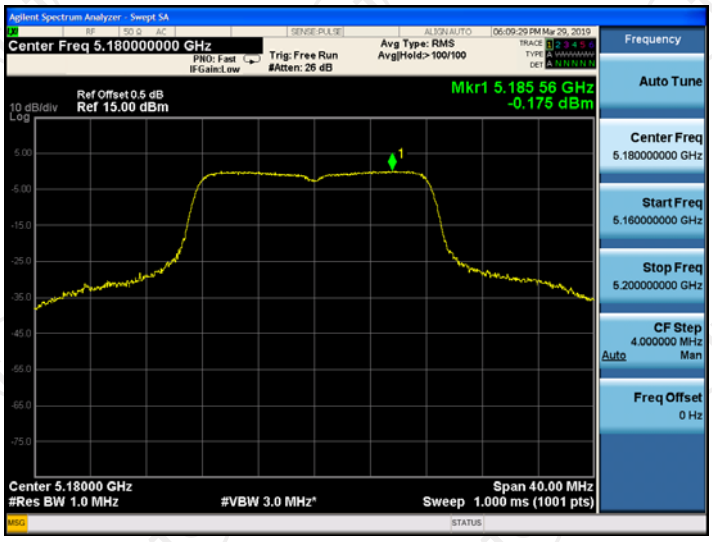
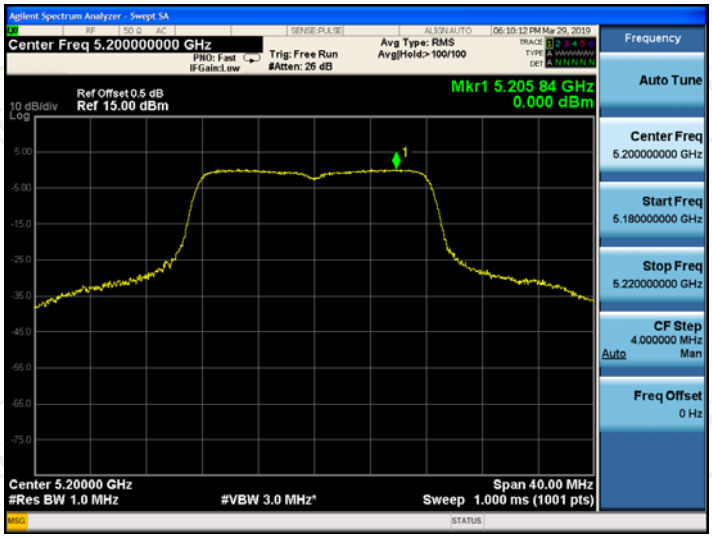
Band1 (5180-5240 MHz)

11a

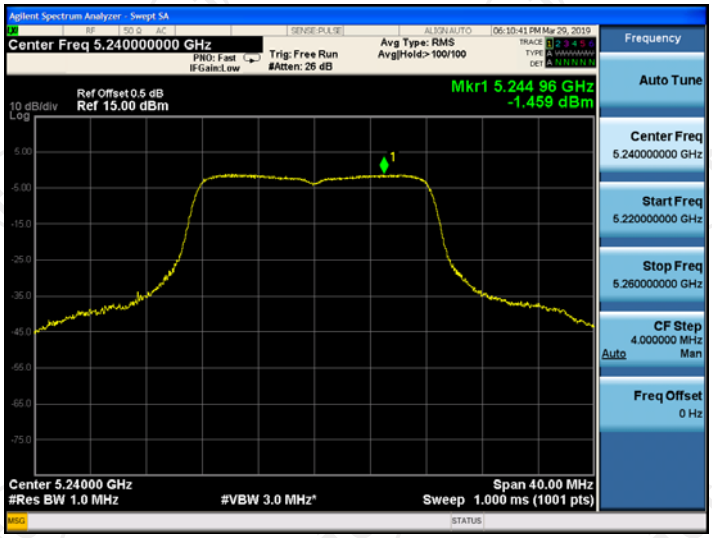
CH36



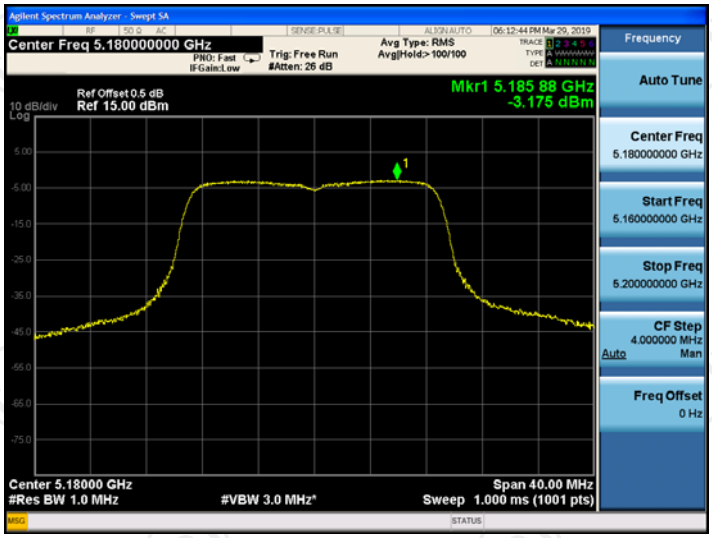
CH40



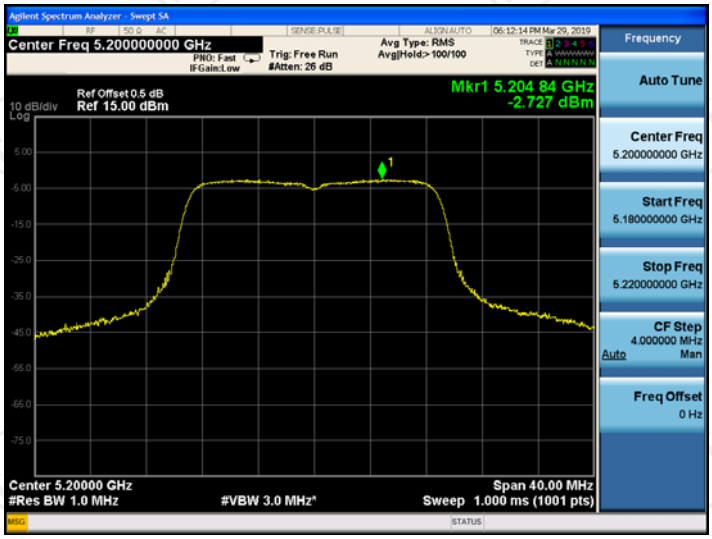
CH48



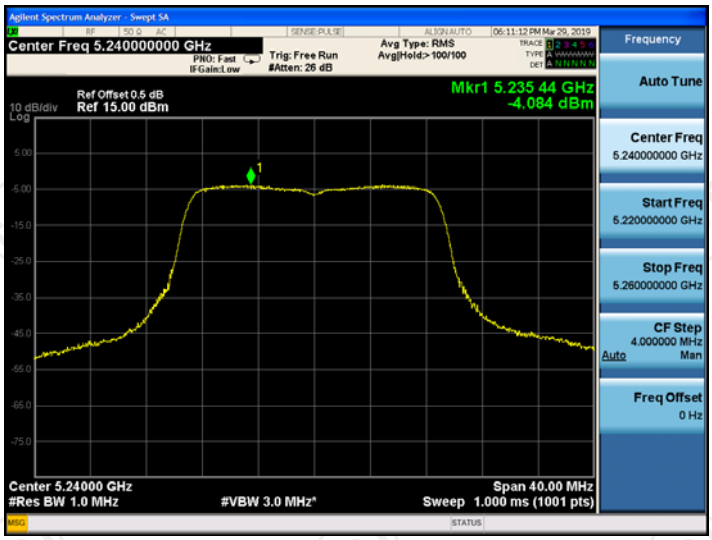
11n(HT20) CH36



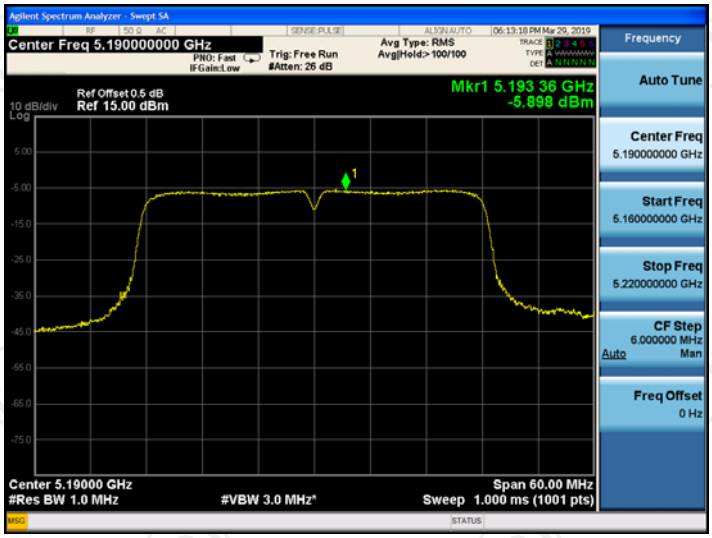
CH40



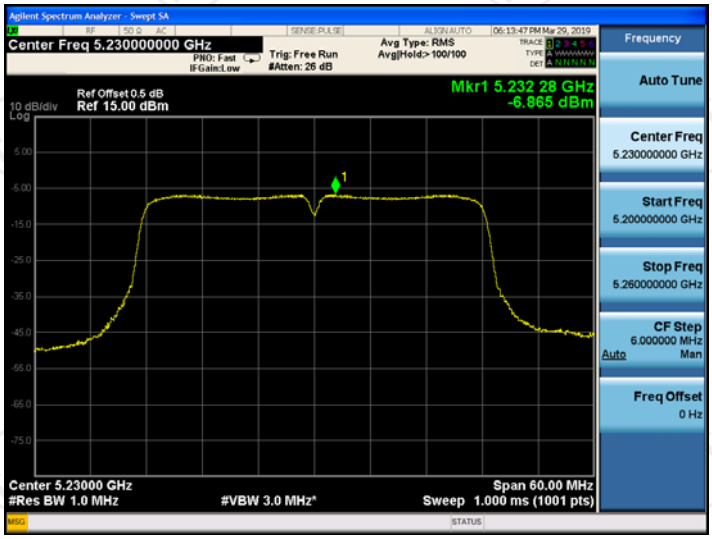
CH48



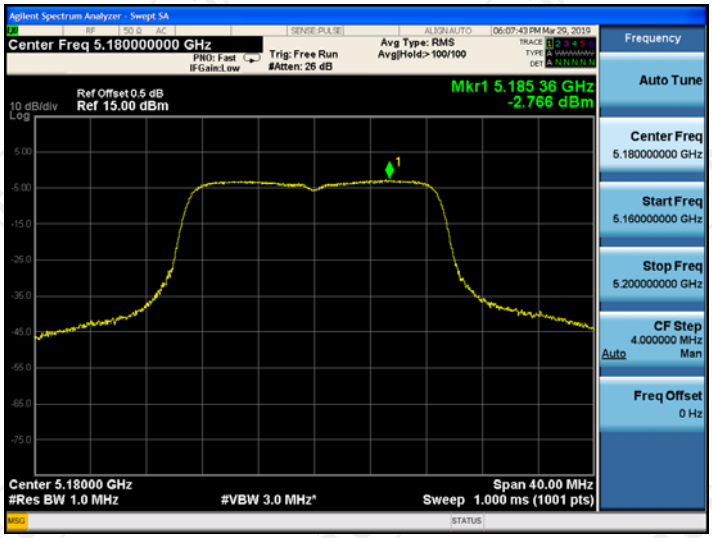
11n(HT40) CH38



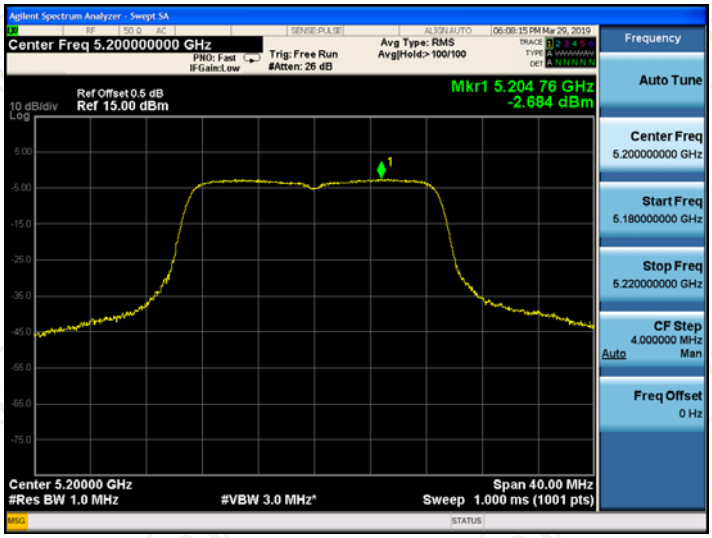
CH46



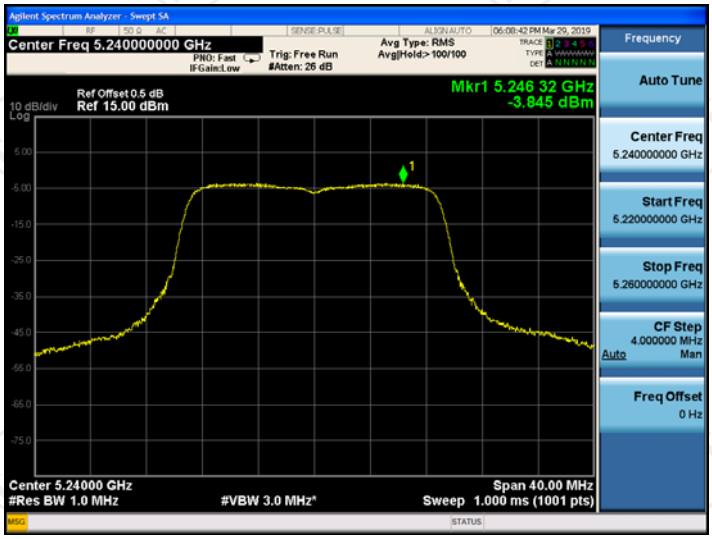
11ac(HT20) CH36



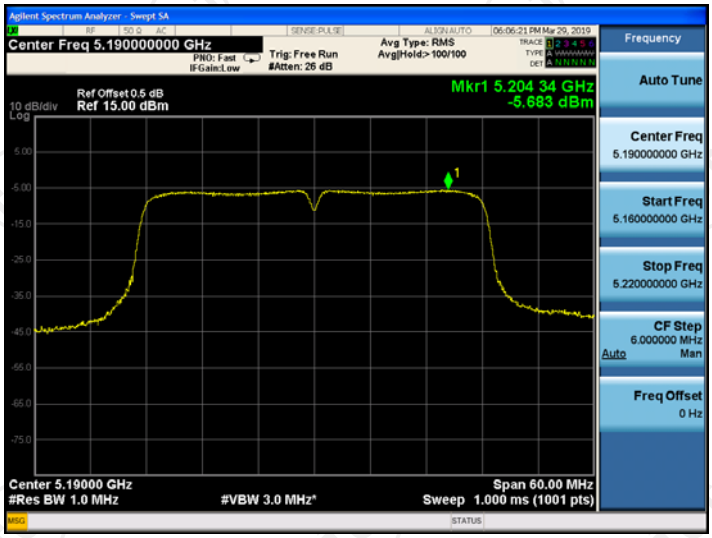
CH40



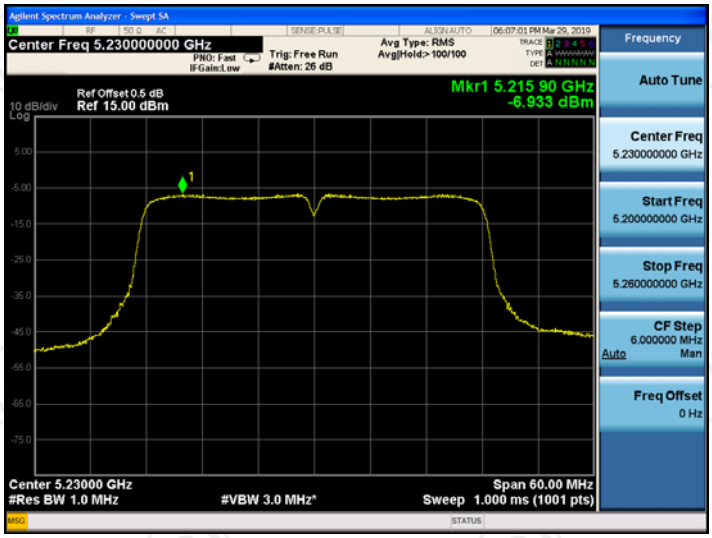
CH48



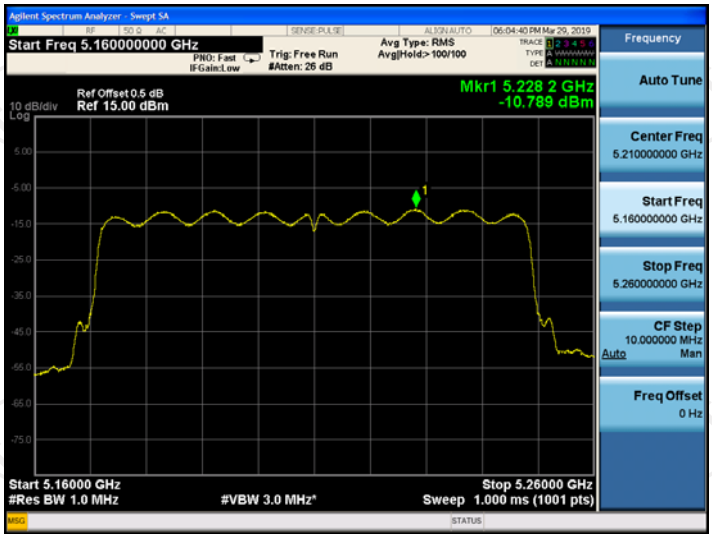
11ac(HT40) CH38



CH46



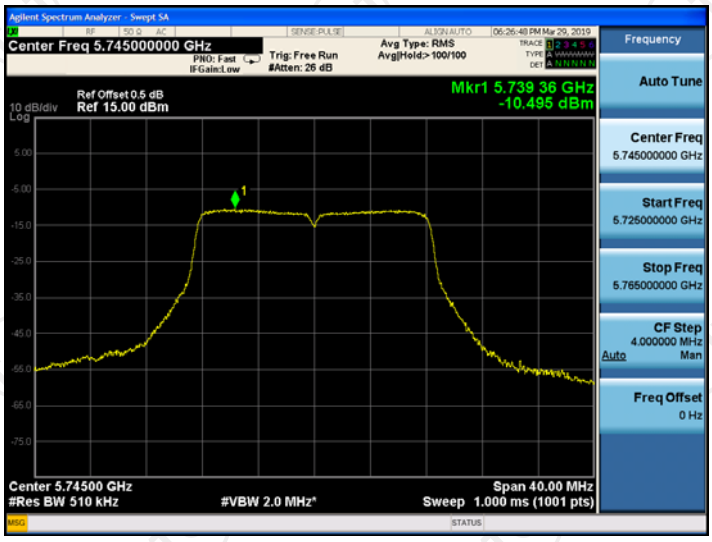
11ac(HT80) CH42



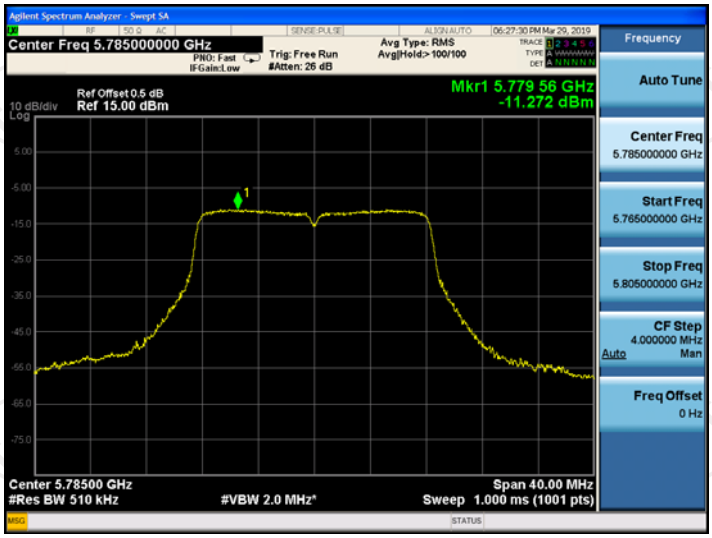
Band 3 (5745-5825MHz)

11a

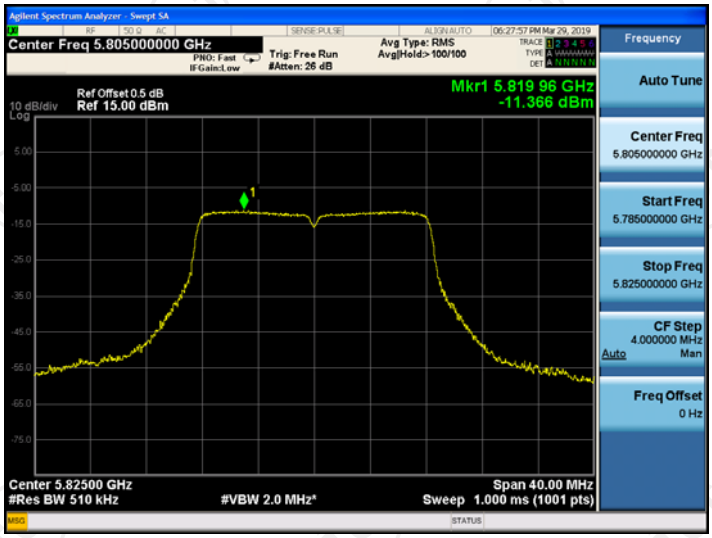
CH149



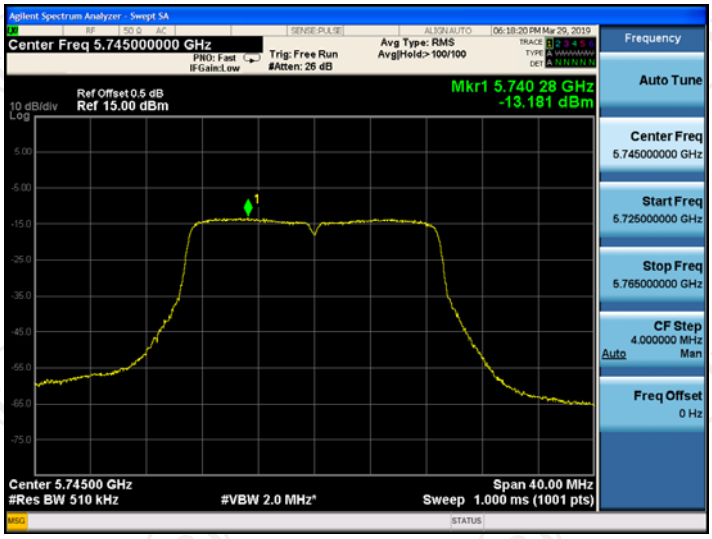
CH157



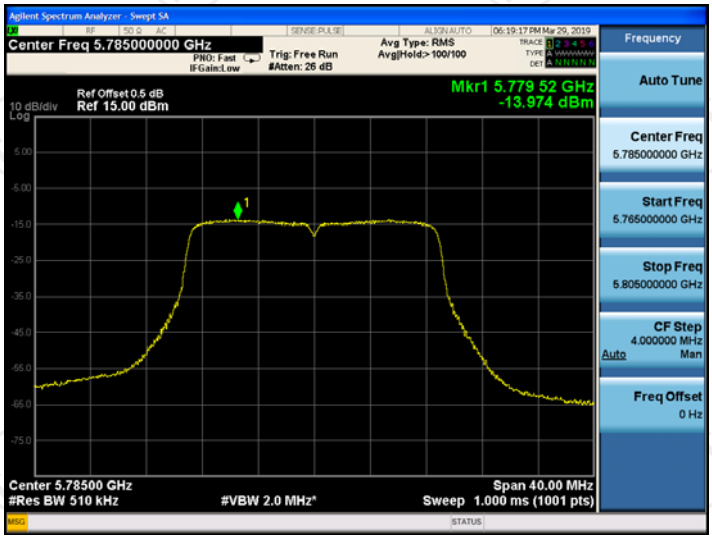
CH165



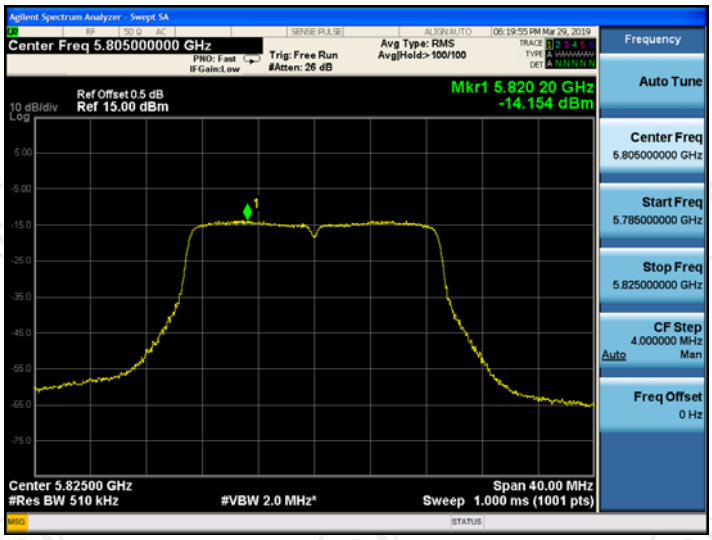
11n(HT20) CH149



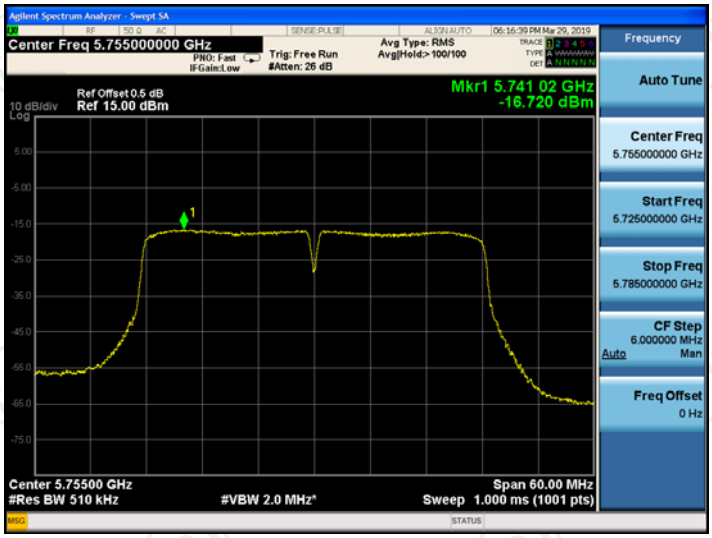
CH157



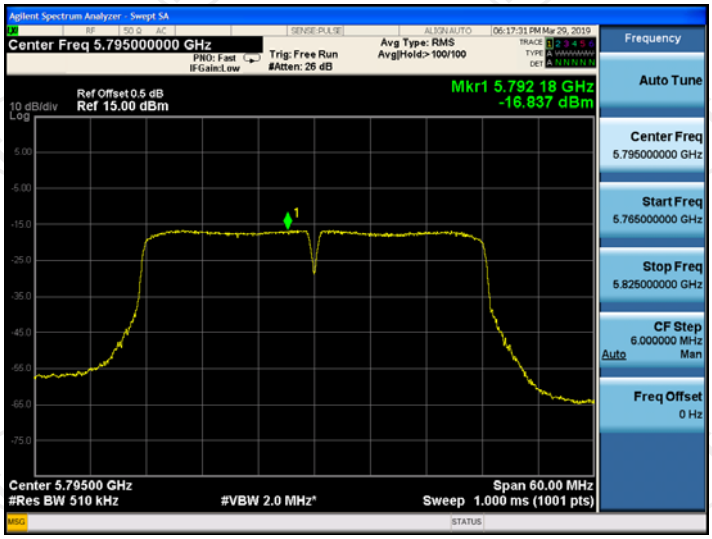
CH165



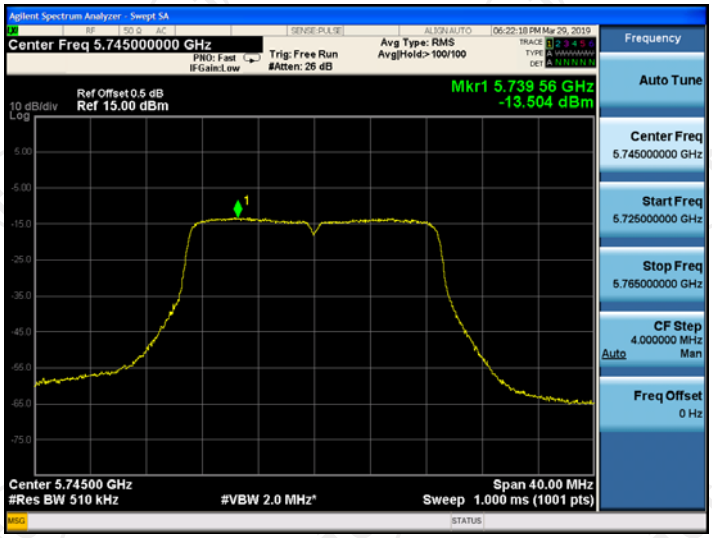
11n(HT40) CH151



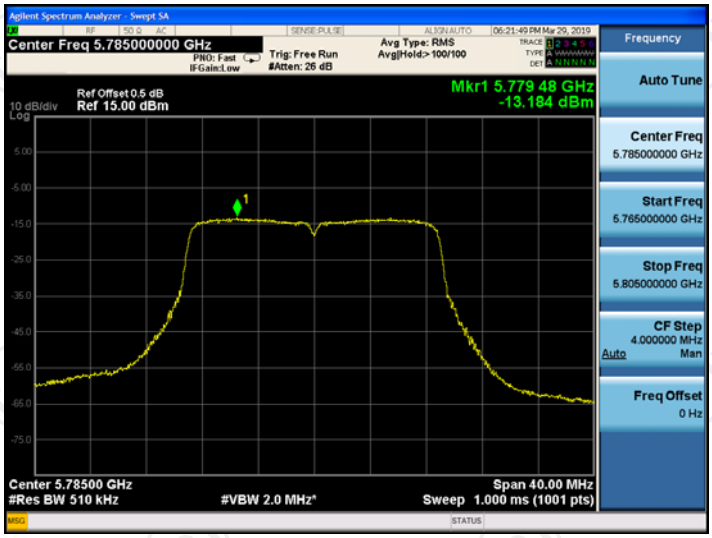
CH159



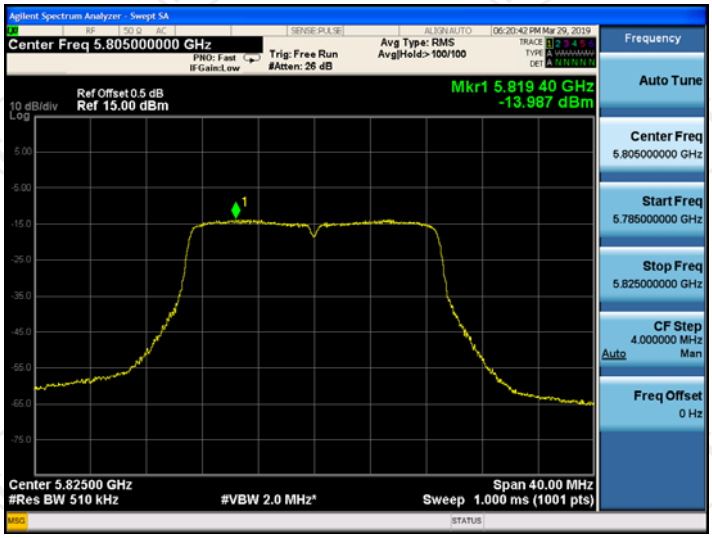
11ac(HT20) CH149



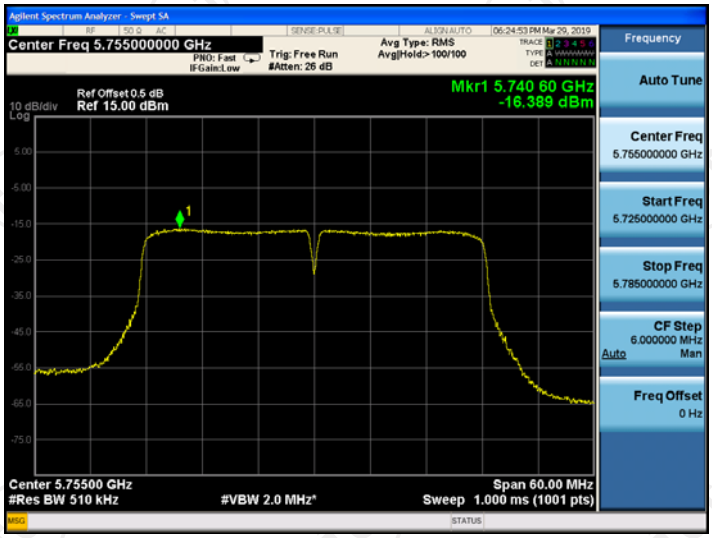
CH157



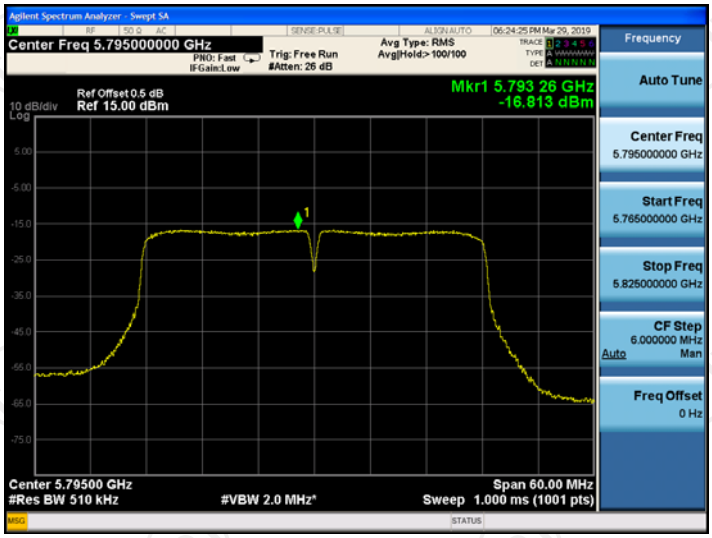
CH165



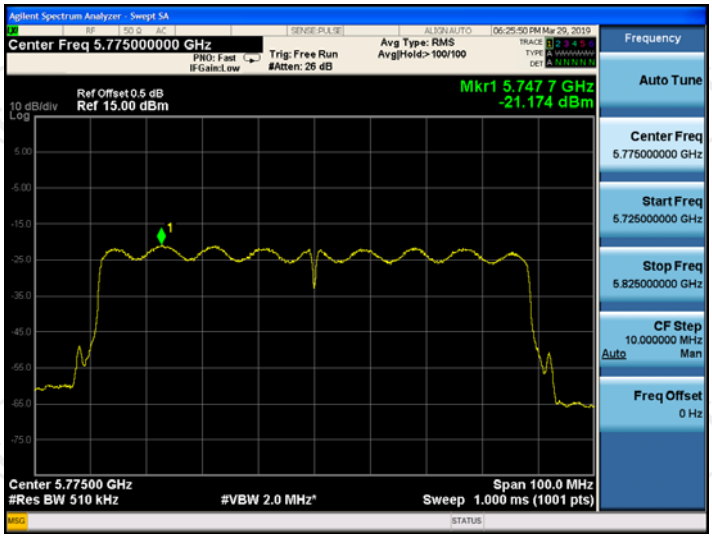
11ac(HT40) CH151



CH159

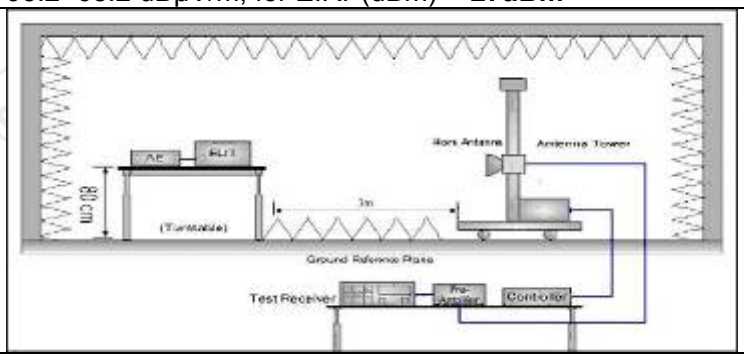


11ac(HT80) CH42



6.7. Band edge

6.7.1. Test Specification

Test Requirement:	FCC CFR47 Part 15E Section 15.407
Test Method:	ANSI C63.10 2013
Limit:	For Band 1&2A&2C: E[dBμV/m] = EIRP[dBm] + 95.2=68.2 dBμV/m, for EIRP(dBm)= **-27dBm** For Band 3(5715-5725MHz&5850-5860MHz): E[dBμV/m] = EIRP[dBm] + 95.2=78.2 dBμV/m, for EIRP(dBm)= **-17dBm;** For Band 3(other un-restricted band):E[dBμV/m] = EIRP[dBm] + 95.2=68.2 dBμV/m, for EIRP(dBm)= **-27dBm**
Test Setup:	
Test Mode:	Transmitting mode with modulation
Test Procedure:	1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. 4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak,

	quasipeak or average method as specified and then reported in a data sheet.
Test Result:	PASS

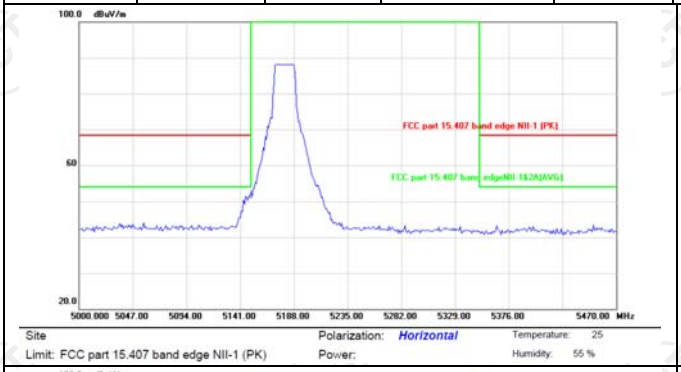
6.7.2. Test Instruments

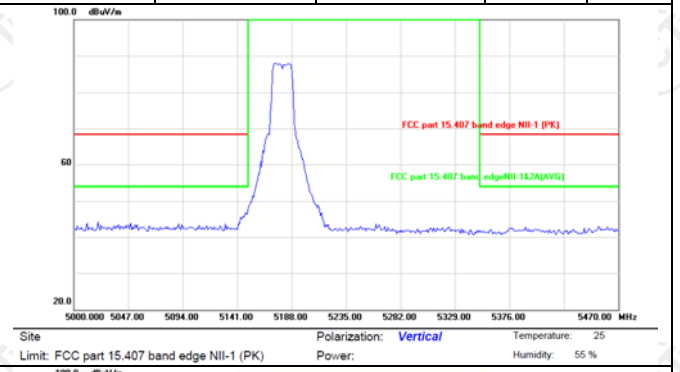
Radiated Emission Test Site (966)				
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
Test Receiver	ROHDE&SCHWARZ	ESIB7	100197	Jul. 17, 2019
Spectrum Analyzer	ROHDE&SCHWARZ	FSQ40	200061	Sep. 20, 2019
Spectrum Analyzer	ROHDE&SCHWARZ	FSP40	100056	Sep. 20, 2019
Spectrum Analyzer	Agilent	N9020A	MY49100619	Sep. 20, 2019
Pre-amplifier	EM Electronics Corporation CO.,LTD	EM30265	07032613	Sep. 16, 2019
Pre-amplifier	HP	8447D	2727A05017	Sep. 16, 2019
Loop antenna	ZHINAN	ZN30900A	12024	Oct. 20, 2019
Broadband Antenna	Schwarzbeck	VULB9163	340	Sep. 02, 2019
Horn Antenna	Schwarzbeck	BBHA 9120D	631	Oct. 20, 2019
Coax cable (9KHz-1GHz)	TCT	RE-low-01	N/A	Sep. 16, 2019
Coax cable (9KHz-40GHz)	TCT	RE-high-02	N/A	Sep. 16, 2019
Coax cable (9KHz-1GHz)	TCT	RE-low-03	N/A	Sep. 16, 2019
Coax cable (9KHz-40GHz)	TCT	RE-high-04	N/A	Sep. 16, 2019
Antenna Mast	Keleto	CC-A-4M	N/A	N/A
EMI Test Software	Shurple Technology	EZ-EMC	N/A	N/A

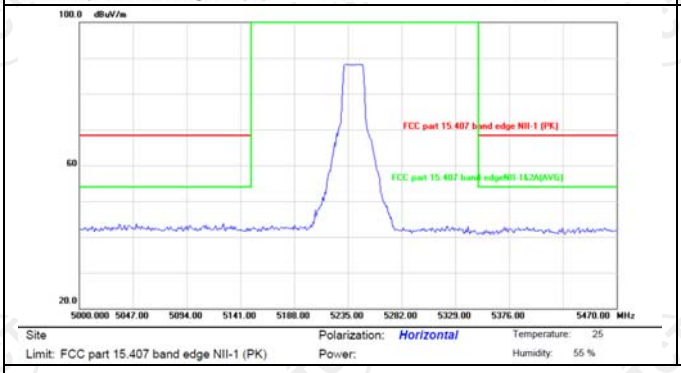
Note: *The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).*

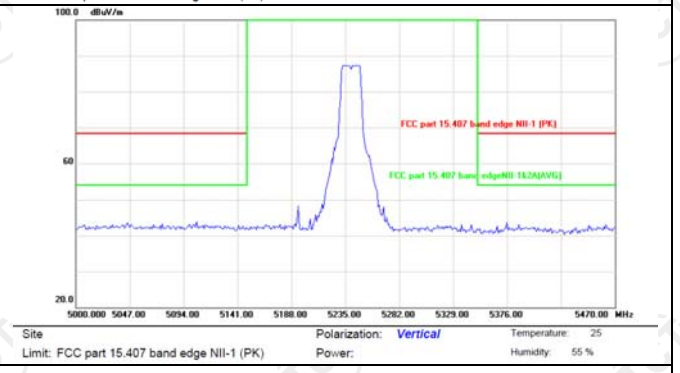
6.7.3. Test Data

802.11 a	CH	Freq. (MHz)	Read_level (dBuV/m)	Factor (dB)	Peak (dBuV/m)	Limit (dBuV/m) (Peak)	Limit (dBuV/m) (Avg)	Over	Ant. Pol. H/V
Band 1	Lowest	5150	45.25	5.82	51.07	68.2	54	-2.93	H
		5150	41.32	5.82	47.14	68.2	54	-6.86	V
	Highest	5350	43.26	6.17	49.43	68.2	54	-4.57	H
		5350	39.25	6.17	45.42	68.2	54	-8.58	V

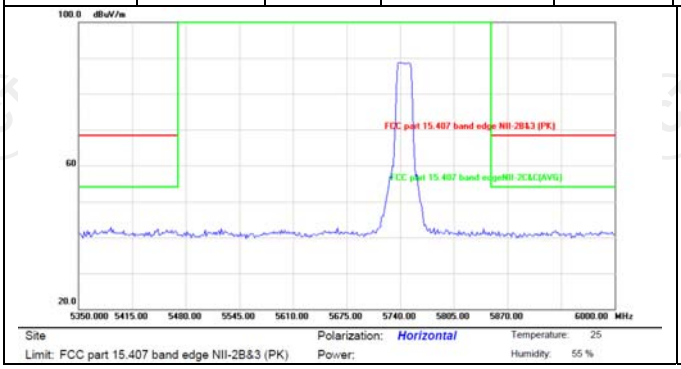


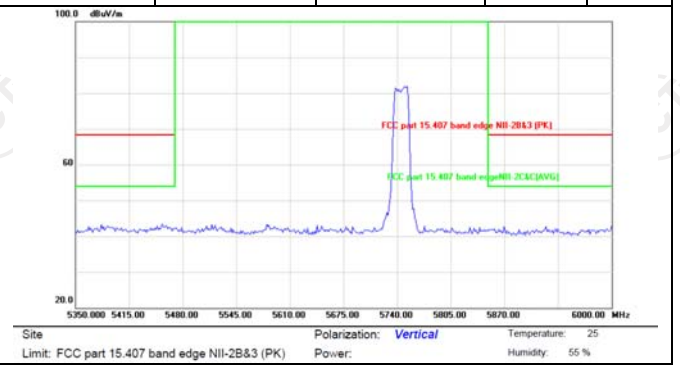


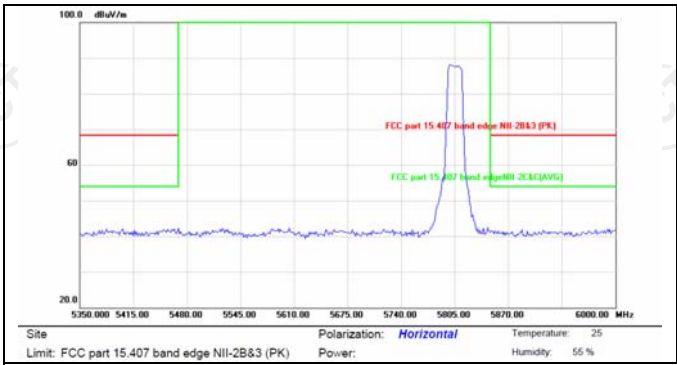


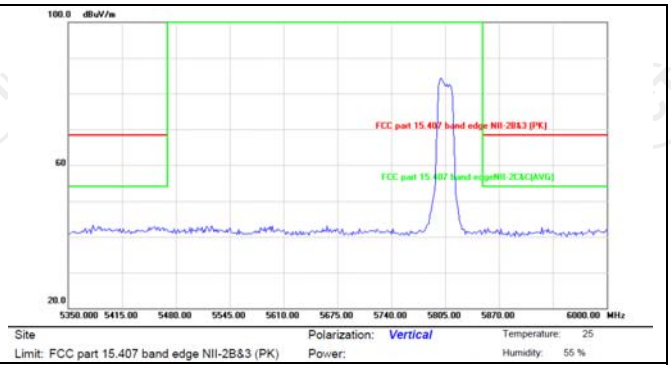


Band 3	Lowest	5470	41.89	8.61	50.5	78.2	54	-3.50	H
		5470	40.35	8.61	48.96	78.2	54	-5.04	V
	Highest	5850	42.26	8.87	51.13	78.2	54	-2.87	H
		5850	40.20	8.87	49.07	78.2	54	-4.93	V



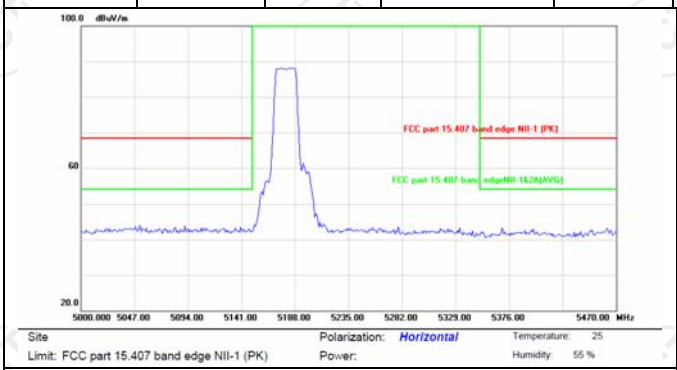


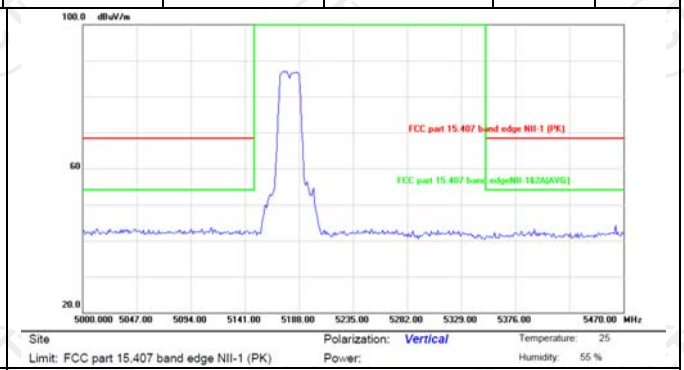


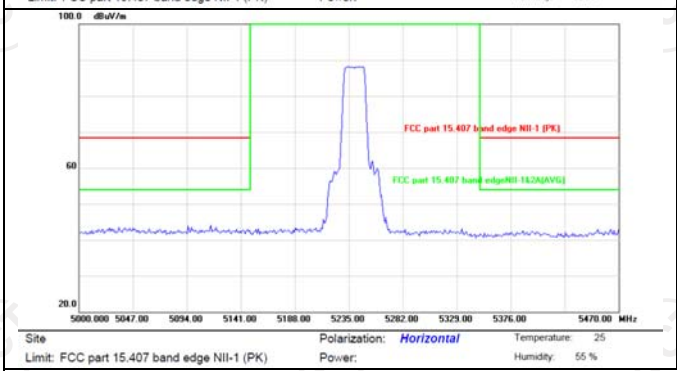


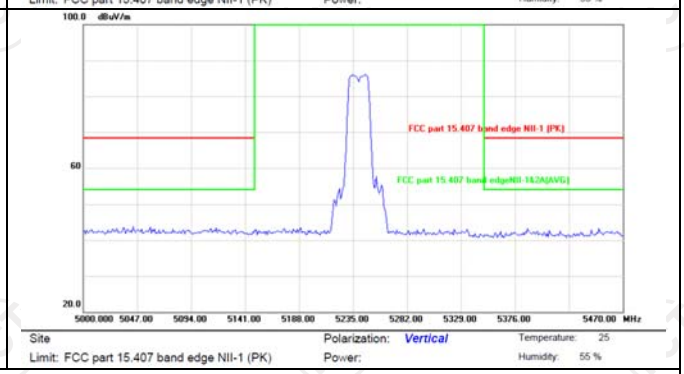
Remark: Factor(dB)=Ant. Factor+Cable Loss-Amp. Factor

802.11 n HT20	CH	Freq. (MHz)	Read_level (dBuV/m)	Factor (dB)	Peak (dBuV/m)	Limit (dBuV/m) (Peak)	Limit (dBuV/m) (Avg)	Over	Ant. Pol. H/V
Band 1	Lowest	5150	43.81	5.82	49.63	68.2	54	-4.37	H
		5150	38.36	5.82	44.18	68.2	54	-9.82	V
	Highest	5350	45.38	6.17	51.55	68.2	54	-2.45	H
		5350	42.48	6.17	48.65	68.2	54	-5.35	V

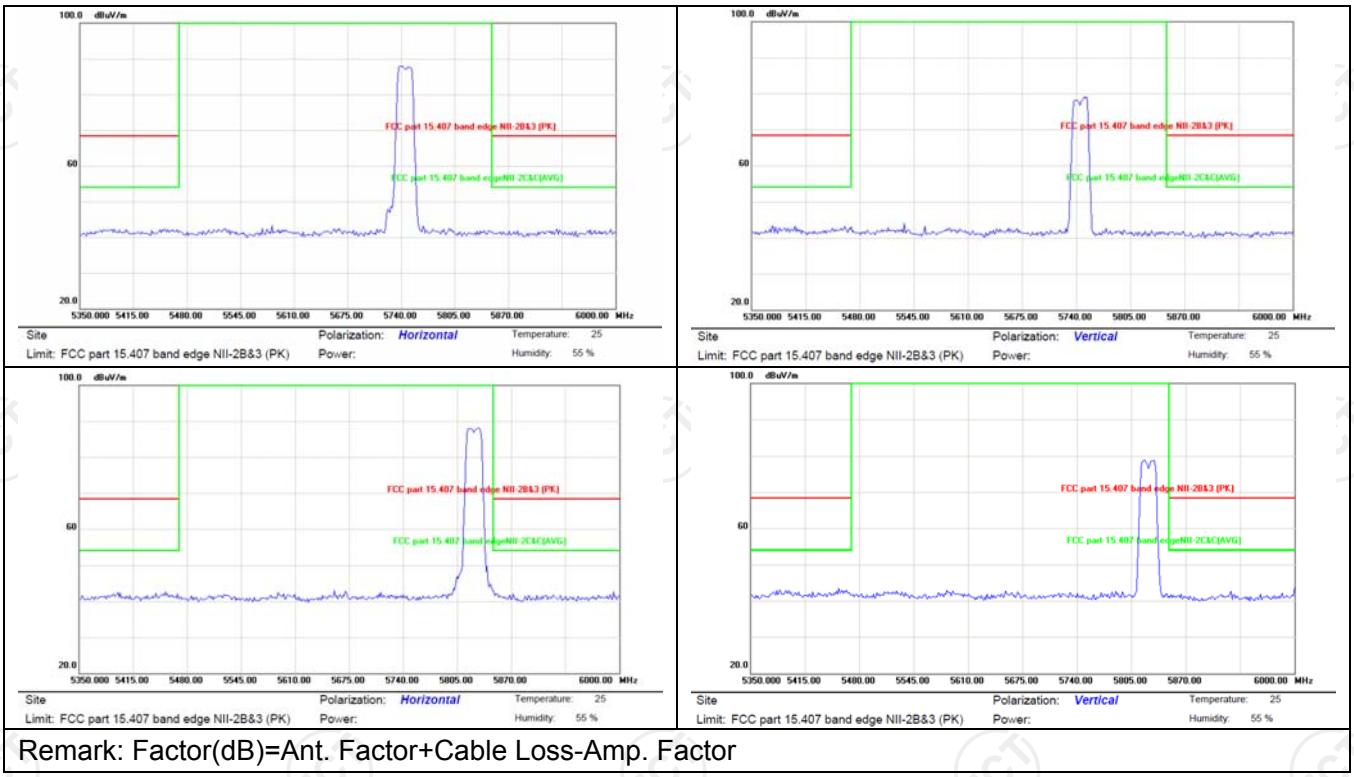






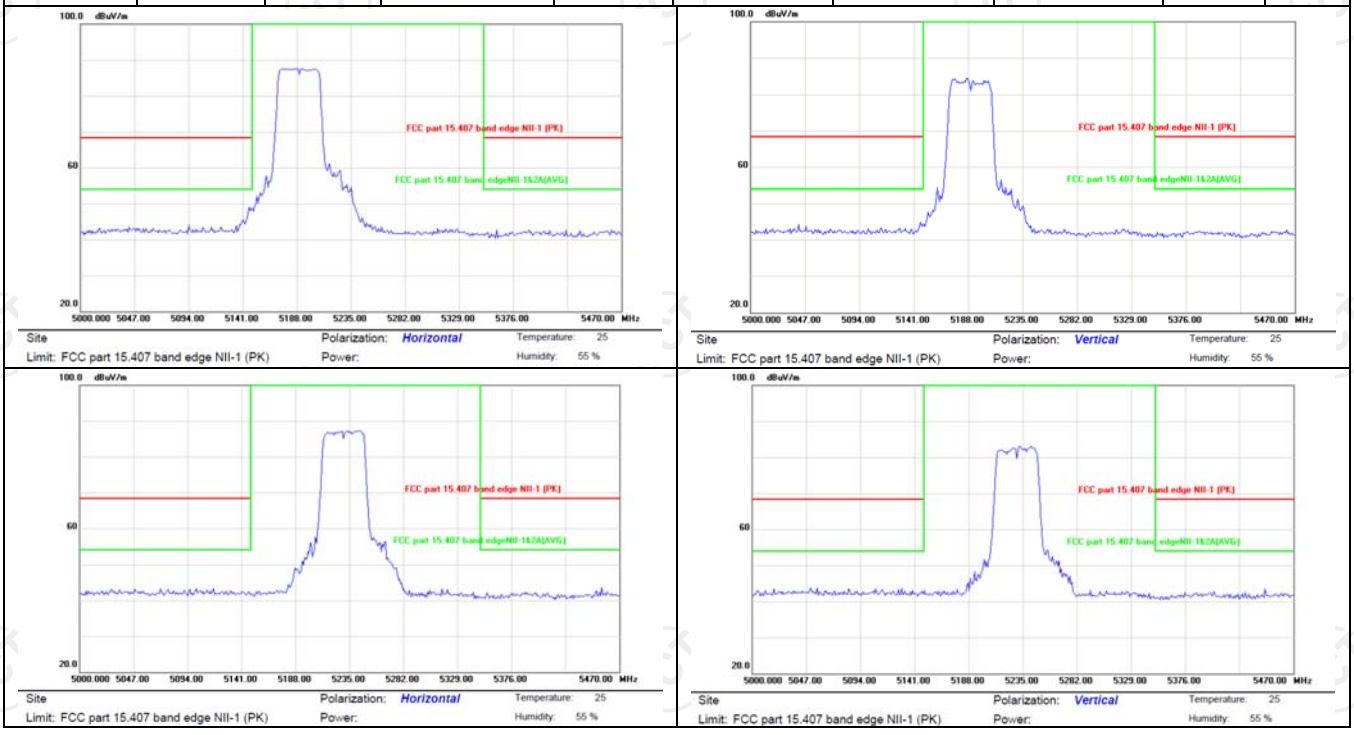


Band 3	Lowest	5470	43.69	8.21	51.90	68.2	54	-2.10	H
		5470	43.61	8.21	51.82	68.2	54	-2.18	V
	Highest	5850	41.72	8.87	50.59	78.2	54	-3.41	H
		5850	39.49	8.87	48.36	78.2	54	-5.64	V

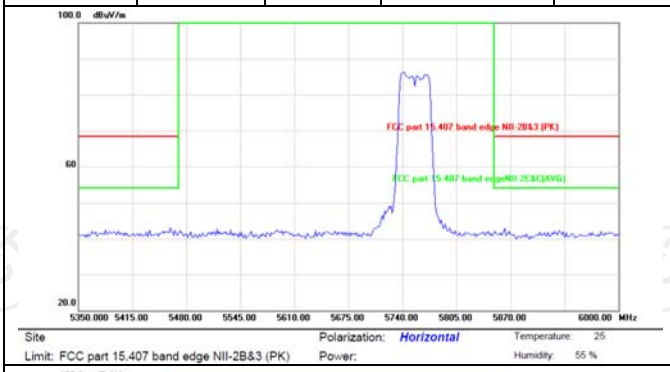


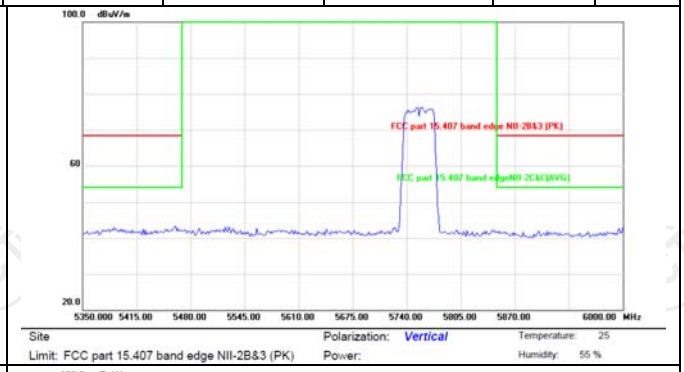
Remark: Factor(dB)=Ant. Factor+Cable Loss-Amp. Factor

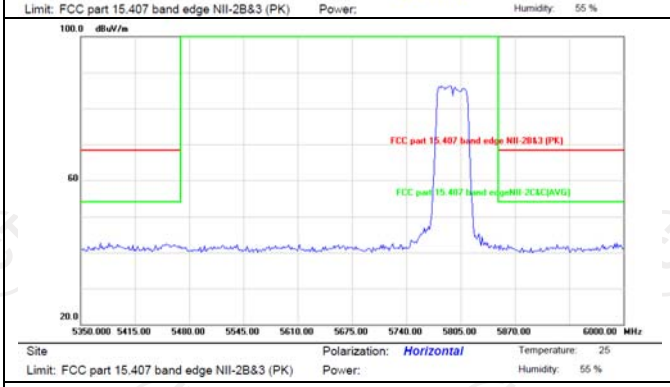
802.11 n HT40	CH	Freq. (MHz)	Read_level (dBuV/m)	Factor (dB)	Peak (dBuV/m)	Limit (dBuV/m) (Peak)	Limit (dBuV/m) (Avg)	Over	Ant. Pol. H/V
Band 1	Lowest	5150	43.89	5.82	49.71	68.2	54	-4.29	H
		5150	38.31	5.82	44.13	68.2	54	-9.87	V
	Highest	5350	45.36	6.17	51.53	68.2	54	-2.47	H
		5350	42.79	6.17	48.96	68.2	54	-5.04	V

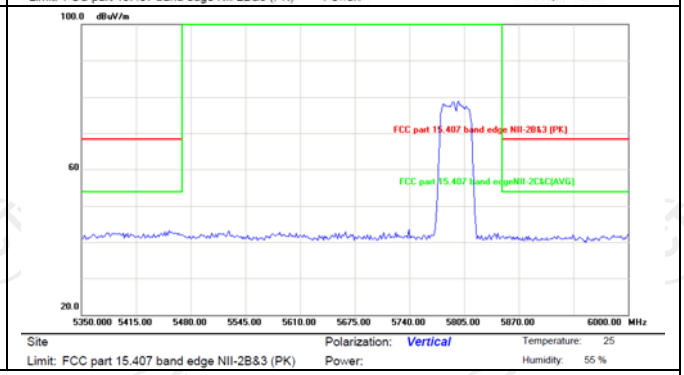


Band 3	Lowest	5470	43.62	8.21	51.83	68.2	54	-2.17	H
		5470	43.68	8.21	51.89	68.2	54	-2.11	V
	Highest	5850	41.73	8.87	50.60	78.2	54	-3.40	H
		5850	39.45	8.87	48.32	78.2	54	-5.68	V



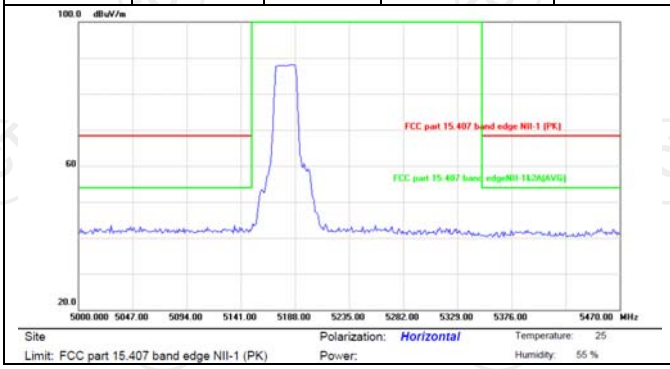


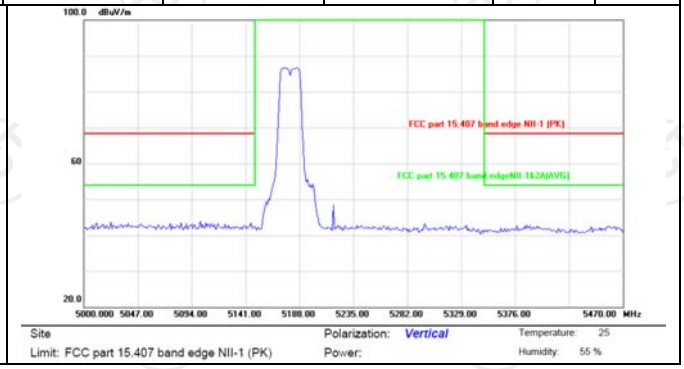


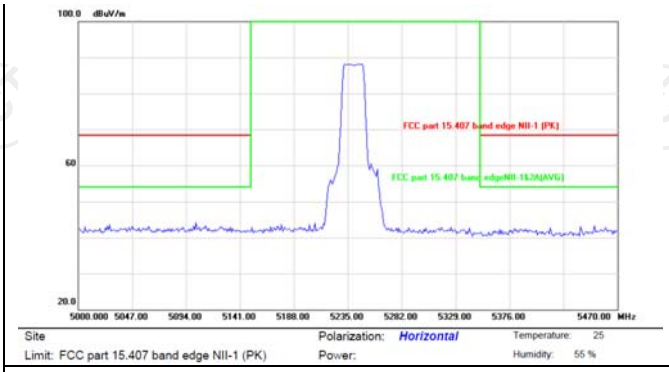


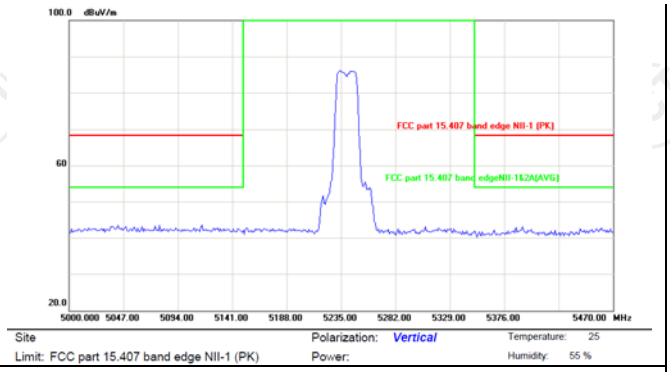
Remark: Factor(dB)=Ant. Factor+Cable Loss-Amp. Factor

802.11 ac HT20	CH	Freq. (MHz)	Read_level (dBuV/m)	Factor (dB)	Peak (dBuV/m)	Limit (dBuV/m) (Peak)	Limit (dBuV/m) (Avg)	Over	Ant. Pol. H/V
Band 1	Lowest	5150	43.67	5.82	49.49	68.2	54	-4.51	H
		5150	38.49	5.82	44.31	68.2	54	-9.69	V
	Highest	5350	45.81	6.17	51.98	68.2	54	-2.02	H
		5350	42.72	6.17	48.89	68.2	54	-5.11	V

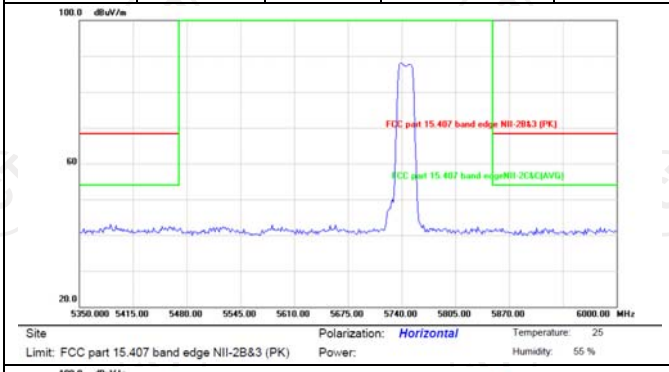


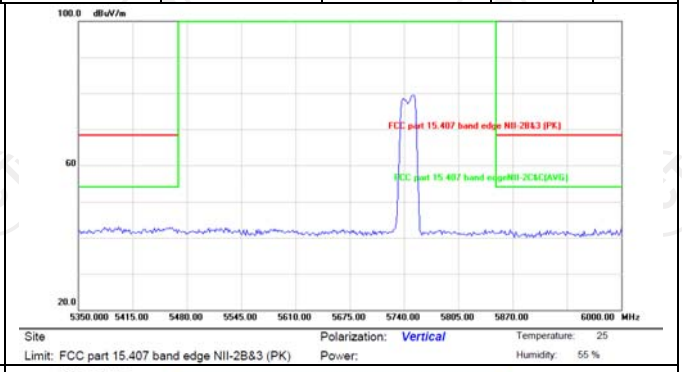


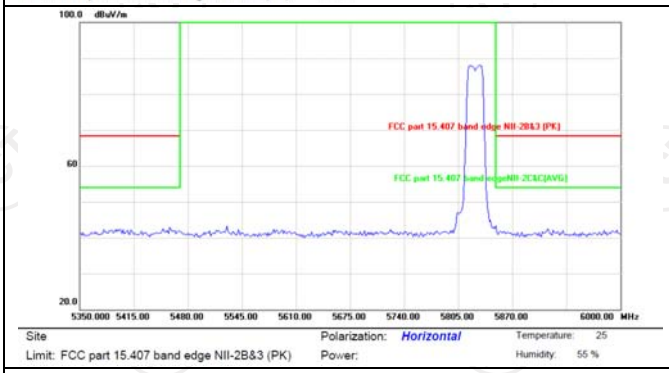


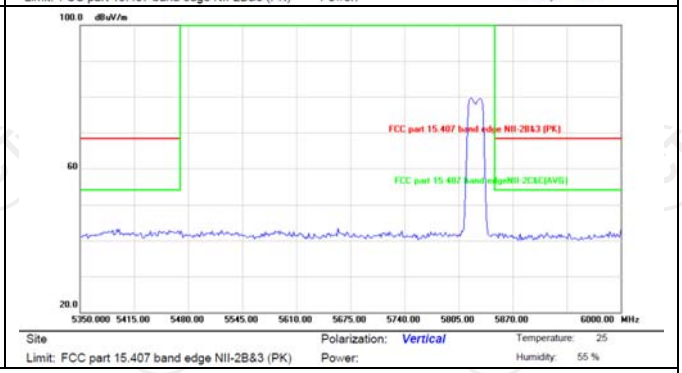


Band 3	Lowest	5470	42.11	8.61	50.72	78.2	54	-3.28	H
		5470	40.36	8.61	48.97	78.2	54	-5.03	V
	Highest	5850	41.78	8.87	50.65	78.2	54	-3.35	H
		5850	39.43	8.87	48.30	78.2	54	-5.70	V



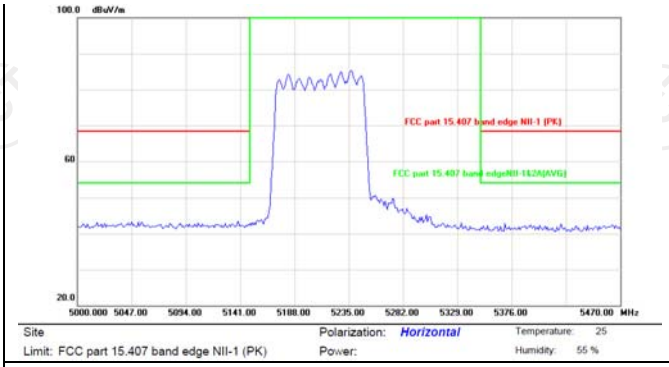


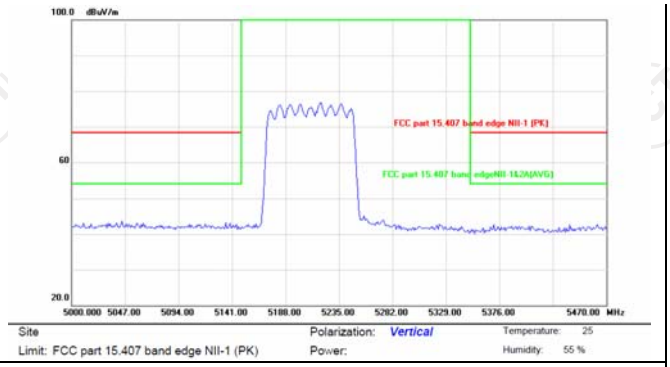




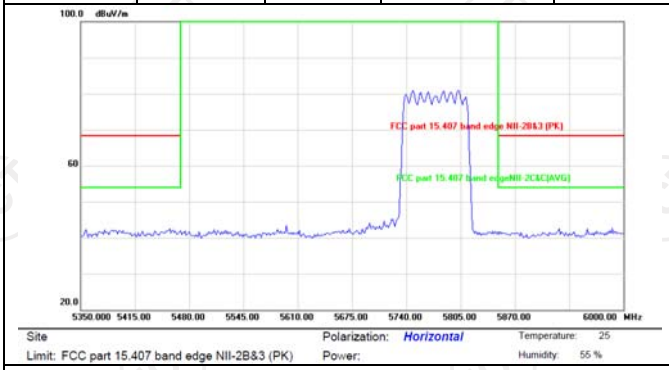
Remark: Factor(dB)=Ant. Factor+Cable Loss-Amp. Factor

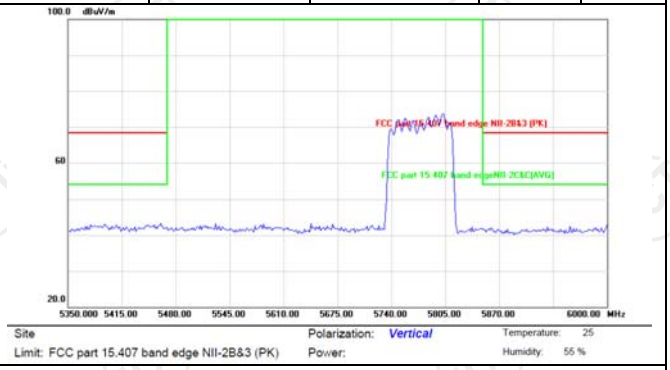
802.11 ac HT80	CH	Freq. (MHz)	Read_level (dBuV/m)	Factor (dB)	Peak (dBuV/m)	Limit (dBuV/m) (Peak)	Limit (dBuV/m) (Avg)	Over	Ant. Pol. H/V
Band 1	5210	5150	45.25	5.82	51.07	68.2	54	-2.93	H
		5150	41.32	5.82	47.14	68.2	54	-6.86	V
		5350	43.26	6.17	49.43	68.2	54	-4.57	H
		5350	39.25	6.17	45.42	68.2	54	-8.58	V





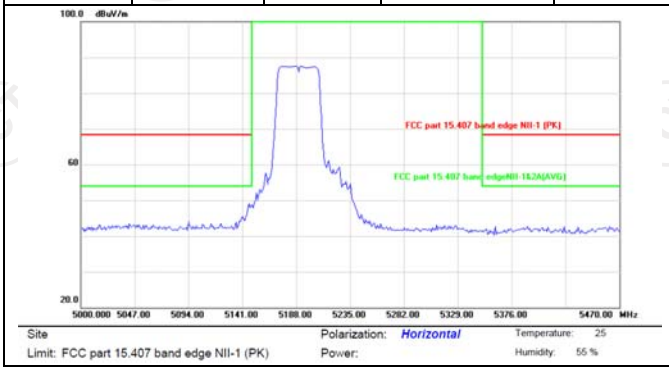
Band 3	5790	5470	43.21	8.21	51.42	78.2	54	-2.58	H
		5470	43.27	8.21	51.48	78.2	54	-2.52	V
		5850	42.34	8.87	51.21	78.2	54	-2.79	H
		5850	40.87	8.87	49.74	78.2	54	-4.26	V

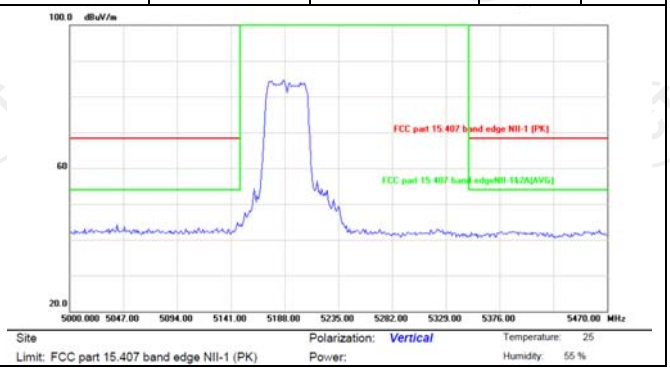


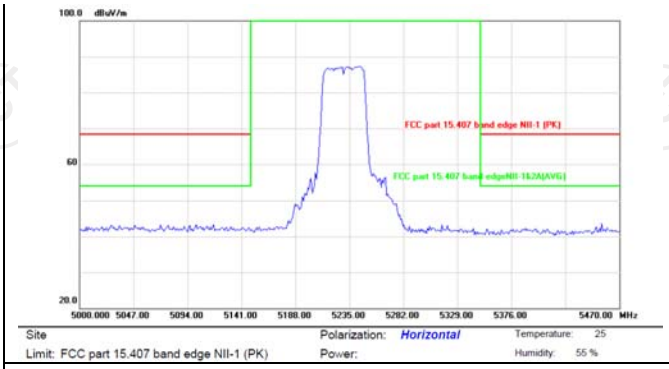


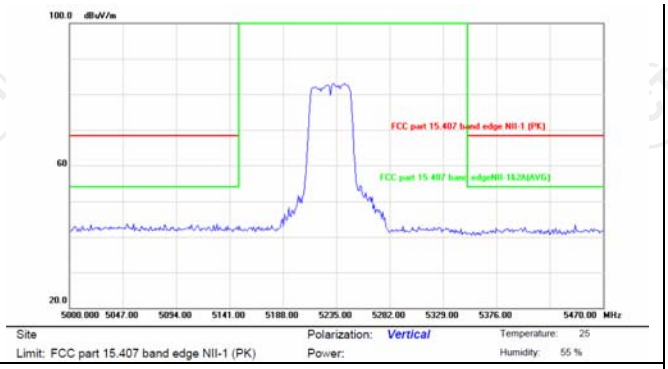
Remark: Factor(dB)=Ant. Factor+Cable Loss-Amp. Factor

802.11 ac HT40	CH	Freq. (MHz)	Read_level (dBuV/m)	Factor (dB)	Peak (dBuV/m)	Limit (dBuV/m) (Peak)	Limit (dBuV/m) (Avg)	Over	Ant. Pol. H/V
Band 1	Lowest	5150	45.23	5.82	51.05	68.2	54	-2.95	H
		5150	41.39	5.82	47.21	68.2	54	-6.79	V
	Highest	5350	43.24	6.17	49.41	68.2	54	-4.59	H
		5350	39.35	6.17	45.52	68.2	54	-8.48	V

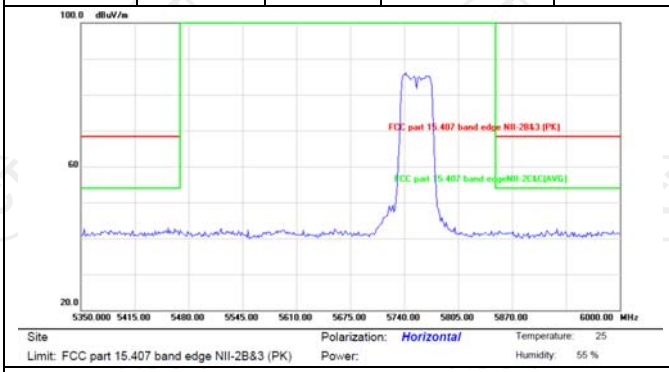


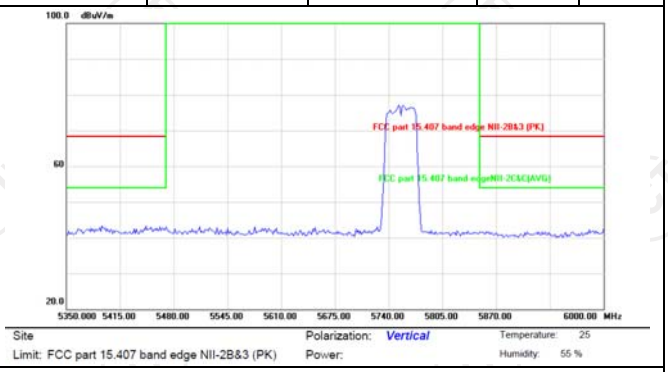


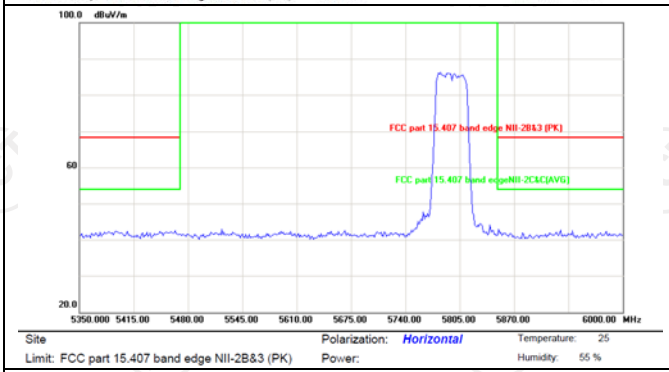


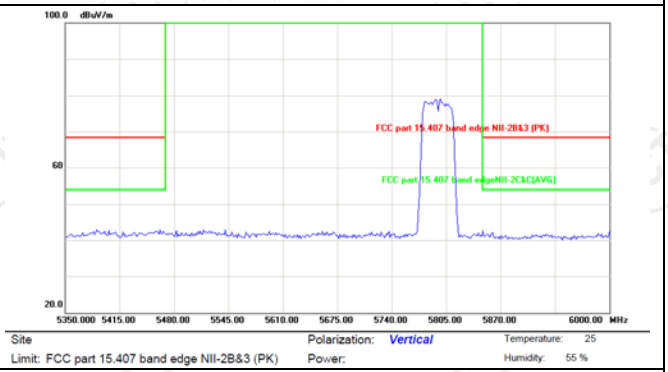


Band 3	Lowest	5470	41.75	8.61	50.36	78.2	54	-3.64	H
		5470	40.06	8.61	48.67	78.2	54	-5.33	V
	Highest	5850	42.36	8.87	51.23	78.2	54	-2.77	H
		5850	40.18	8.87	49.05	78.2	54	-4.95	V

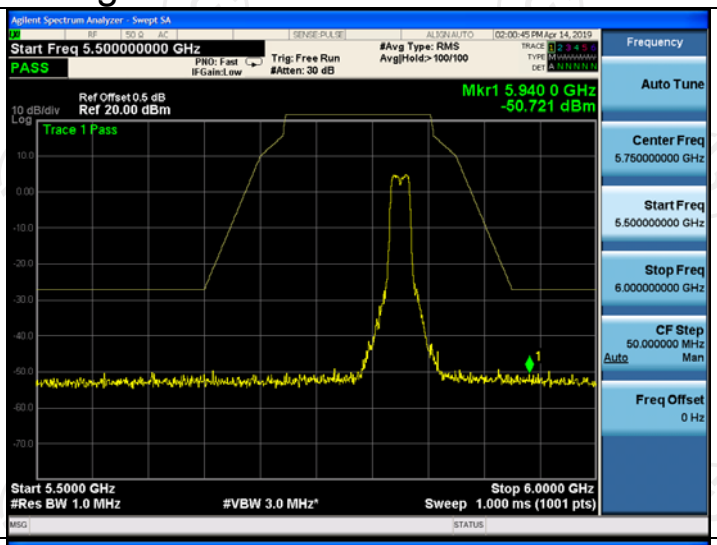
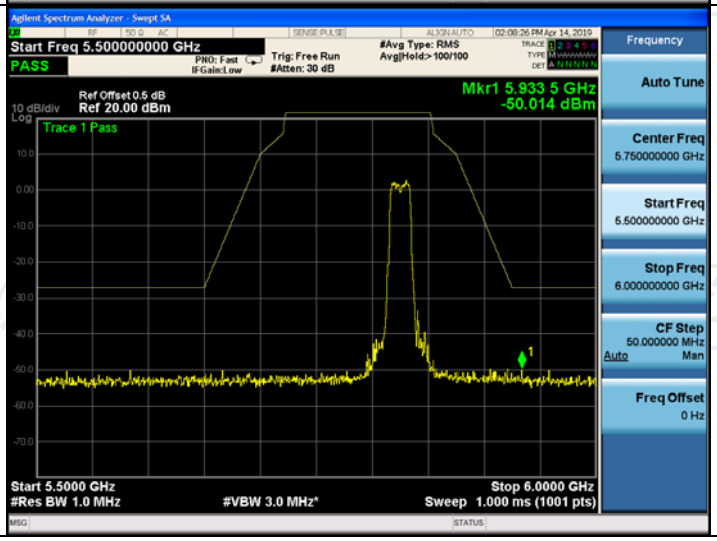


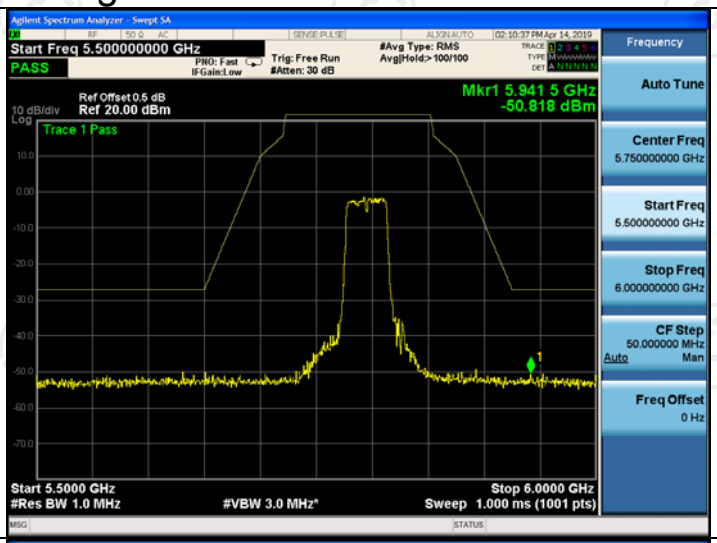
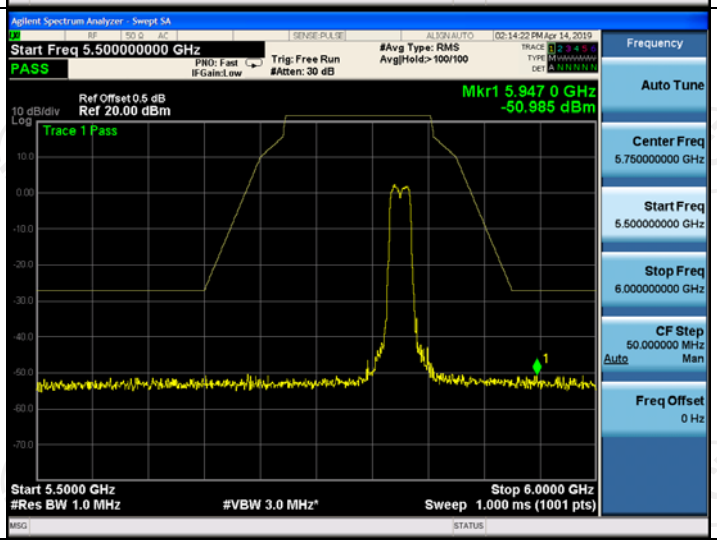


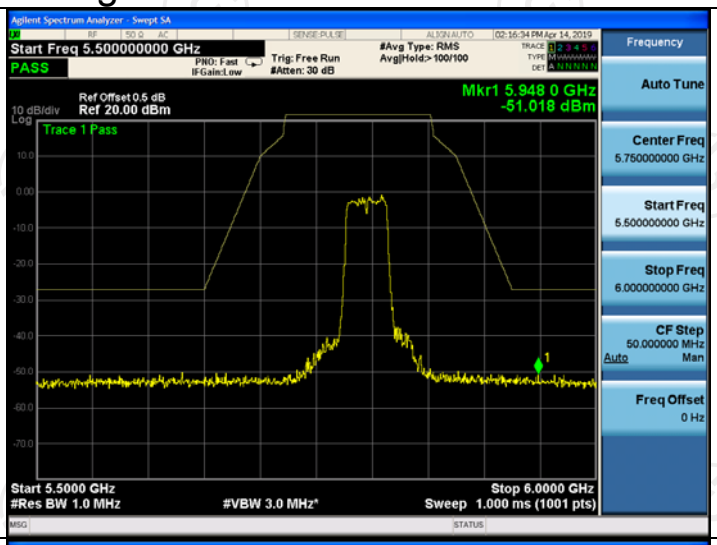
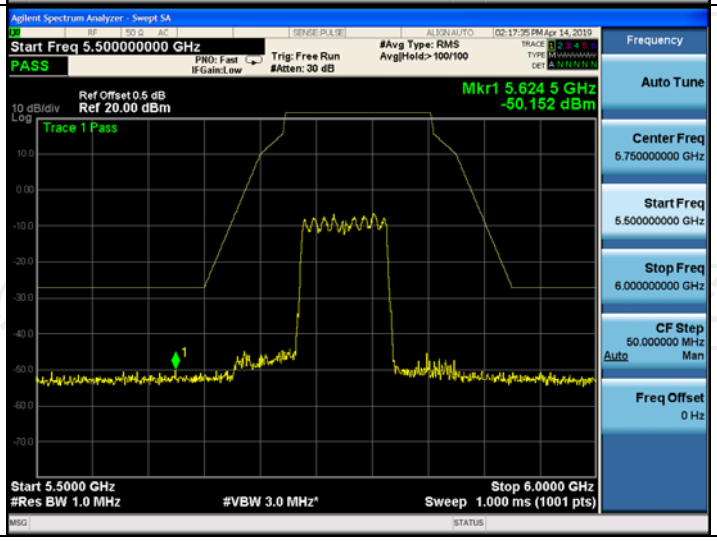




Remark: Factor(dB)=Ant. Factor+Cable Loss-Amp. Factor

Band 3 Band-edge for RF Conducted Emissions		
802.11a /HCH		
802.11n HT20 / HCH		

Band 3 Band-edge for RF Conducted Emissions			
802.11n HT40 /HCH			
802.11ac HT20 / HCH			

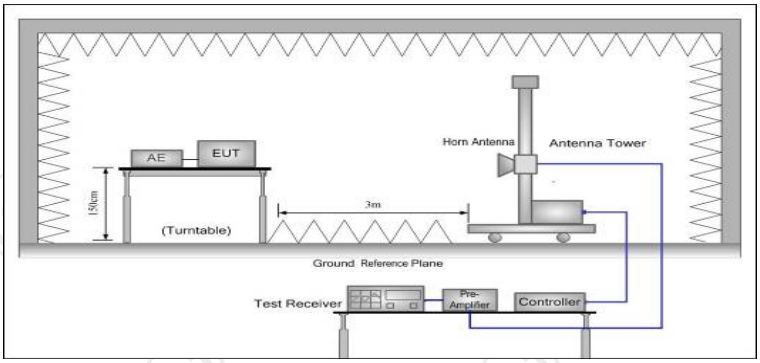
Band 3 Band-edge for RF Conducted Emissions		
802.11ac HT40 / HCH		
802.11ac HT80 / HCH		

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

6.8. Spurious Emission

6.8.1. Restrict Bands Measurement

6.8.1.1. Test Specification

<table>
<tr><td>Test Requirement:</td><td>FCC CFR47 Part 15 Section 15.407 & 15.209 & 15.205</td></tr>
<tr><td>Test Method:</td><td>KDB 789033 D02 v02</td></tr>
<tr><td>Frequency Range:</td><td>Band 1 & 2A: 4.5 GHz to 5.15 GHz and 5.35GHz to 5.46GHz
Band 2C &3: 5.35 GHz to 5.46 GHz</td></tr>
<tr><td>Measurement Distance:</td><td>3 m</td></tr>
<tr><td>Antenna Polarization:</td><td>Horizontal & Vertical</td></tr>
<tr><td>Operation mode:</td><td>Transmitting mode with modulation</td></tr>
<tr><td>Receiver Setup:</td><td>
<table>
<tr><td>Frequency</td><td>Detector</td><td>RBW</td><td>VBW</td><td>Remark</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr>
<tr><td>RMS</td><td>1MHz</td><td>3MHz</td><td>Average Value</td></tr>
</table>
</td></tr>
<tr><td>Limit:</td><td>
<table>
<tr><td>Frequency</td><td>Limit (dBuV/m @3m)</td><td>Remark</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>74</td><td>Peak Value</td></tr>
<tr><td>54</td><td>Average Value</td></tr>
</table>
</td></tr>
<tr><td>Test setup:</td><td>Above 1GHz
 
</td></tr>
<tr><td>Test Procedure:</td><td>1. The testing follows FCC KDB Publication No. 789033 D02 General UNII Test Procedures New Rules v02. Section G) Unwanted emissions measurement.
2. For the radiated emission test below 1GHz:
The EUT was placed on a turntable with 0.8 meter above ground. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum</td></tr>
</table>

	reading. A pre-amp and a high PASS filter are used for the test in order to get better signal level. For the radiated emission test above 1GHz: Place the measurement antenna on a turntable with 1.5 meter above ground, which is away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane. 3. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level 4. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported. 5. Use the following spectrum analyzer settings: (1) Span shall wide enough to fully capture the emission being measured; (2) Set RBW=100 kHz for f < 1 GHz; VBW ≥RBW; Sweep = auto; Detector function = peak; Trace = max hold; (3) Set RBW = 1 MHz, VBW= 3MHz for f＞1 GHz for peak measurement. For average measurement: VBW = 10 Hz, when duty cycle is no less than 98 percent. VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation. (4) A 5.8GHz high –PASS filter is used druing radiated emissions above 1GHz measurement.
Test results:	PASS

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

6.8.1.1 Test Instruments

Radiated Emission Test Site (966)				
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
Test Receiver	ROHDE&SCHWARZ	ESIB7	100197	Jul. 17, 2019
Spectrum Analyzer	ROHDE&SCHWARZ	FSP40	100056	Sep. 20, 2019
Spectrum Analyzer	Agilent	N9020A	MY49100619	Sep. 20, 2019
Pre-amplifier	EM Electronics Corporation CO.,LTD	EM30265	07032613	Sep. 16, 2019
Pre-amplifier	HP	8447D	2727A05017	Sep. 16, 2019
Loop antenna	ZHINAN	ZN30900A	12024	Oct. 20, 2019
Broadband Antenna	Schwarzbeck	VULB9163	340	Sep. 02, 2019
Horn Antenna	Schwarzbeck	BBHA 9120D	631	Oct. 20, 2019
Horn Antenna	A-INFO	LB-180400-KF	J211020657	Sep. 16, 2019
Coax cable (9KHz-1GHz)	TCT	RE-low-01	N/A	Sep. 16, 2019
Coax cable (9KHz-40GHz)	TCT	RE-high-02	N/A	Sep. 16, 2019
Coax cable (9KHz-1GHz)	TCT	RE-low-03	N/A	Sep. 16, 2019
Coax cable (9KHz-40GHz)	TCT	RE-high-04	N/A	Sep. 16, 2019
Antenna Mast	Keleto	RE-AM	N/A	N/A
EMI Test Software	Shurple Technology	EZ-EMC	N/A	N/A

Note: *The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).*

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

6.8.1.2 Test Data

Restrict band around fundamental

11a CH36: 5180MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
5142.20	H	40.62	---	5.79	46.41	---	74	54	-7.59
5150.00	H	39.51	---	5.82	45.33	---	74	54	-8.67
5142.20	V	41.12	---	5.79	46.91	---	74	54	-7.09
5150.00	V	39.79	---	5.82	45.61	---	74	54	-8.39
11a CH64: 5320MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
5337.50	H	40.62	---	5.85	46.47	---	74	54	-7.53
5360.00	H	39.51	---	5.91	45.42	---	74	54	-8.58
5342.90	V	41.12	---	5.86	46.98	---	74	54	-7.02
5360.00	V	39.79	---	5.91	45.70	---	74	54	-8.30

11n (HT20) CH36: 5180MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (DbμV)	AV reading (dBuV)	Correction Factor (Db/m)	Emission Level		Peak limit (DbμV/m)	AV limit (DbμV/m)	Margin (Db)
					Peak (DbμV/m)	AV (DbμV/m)			
5142.20	H	42.31	---	5.79	48.1	---	74	54	-5.90
5150.00	H	40.55	---	5.82	46.37	---	74	54	-7.63
5142.20	V	41.81	---	5.79	47.6	---	74	54	-6.40
5150.00	V	43.25	---	5.82	49.07	---	74	54	-4.93
11n (HT20) CH64: 5320MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (DbμV)	AV reading (DbμV)	Correction Factor (Db/m)	Emission Level		Peak limit (DbμV/m)	AV limit (DbμV/m)	Margin (Db)
					Peak (DbμV/m)	AV (DbμV/m)			
5334.20	H	43.95	---	5.85	49.8	---	74	54	-4.2
5360.00	H	42.52	---	5.91	48.43	---	74	54	-5.57
5337.70	V	40.27	---	5.86	46.13	---	74	54	-7.87
5360.00	V	41.55	---	5.91	47.46	---	74	54	-6.54
11n(HT40) CH38: 5190MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
5135.98	H	44.12		5.80	49.92		74	54	-4.08
5150.00	H	42.25	---	5.82	48.07	---	74	54	-5.93
5135.98	V	41.17	---	5.80	46.97	---	74	54	-7.03
5150.00	V	42.52	---	5.82	48.34	---	74	54	-5.66
11n(HT40) CH62: 5310MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
5334.60	H	40.86	---	5.86	46.72	---	74	54	-7.28
5360.00	H	42.42	---	5.91	48.33	---	74	54	-5.67
5331.4	V	41.86	---	5.85	47.71	---	74	54	-6.29
5360.00	V	42.06	---	5.91	47.97	---	74	54	-6.03

11ac(HT20) CH36: 5180MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
5142.20	H	40.62	---	5.79	46.41	---	74	54	-7.59

5150.00	H	39.51	---	5.82	45.33	---	74	54	-8.67
5142.20	V	41.12	---	5.79	46.91	---	74	54	-7.09
5150.00	V	39.79	---	5.82	45.61	---	74	54	-8.39
11ac(HT20) CH64: 5320MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)
					Peak (dBµV/m)	AV (dBµV/m)			
5332.4	H	41.63	---	5.85	47.48	---	74	54	-6.52
5360.00	H	40.35	---	5.91	46.26	---	74	54	-7.74
5331.3	V	40.67	---	5.86	46.53	---	74	54	-7.47
5360.00	V	39.57	---	5.91	45.48	---	74	54	-8.52
11ac(HT40) CH38: 5190MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)
					Peak (dBµV/m)	AV (dBµV/m)			
5142.20	H	40.82	---	5.80	46.63	---	74	54	-7.37
5150.00	H	39.64	---	5.82	45.06	---	74	54	-8.94
5142.20	V	40.54	---	5.80	46.23	---	74	54	-7.77
5150.00	V	40.35	---	5.82	45.18	---	74	54	-8.82
11ac(HT40) CH62: 5310MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)
					Peak (dBµV/m)	AV (dBµV/m)			
5333.40	H	41.35	---	5.86	47.21	---	74	54	-6.79
5360.00	H	39.61	---	5.91	45.52	---	74	54	-8.48
5340.50	V	40.34	---	5.85	46.19	---	74	54	-7.81
5360.00	V	39.35	---	5.91	45.26	---	74	54	-8.74

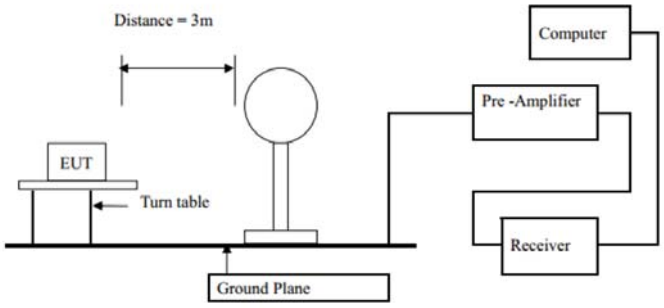
11a CH100: 5500MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)
					Peak (dBµV/m)	AV (dBµV/m)			
5416.24	H	40.14	---	6.23	46.37	---	74	54	-7.63
5460.00	H	39.27	---	6.48	45.75	---	74	54	-8.25
5453.64	V	40.26	---	6.34	46.60	---	74	54	-7.40
5460.00	V	39.34	---	6.48	45.82	---	74	54	-8.18
11n CH100: 5500MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)
					Peak (dBµV/m)	AV (dBµV/m)			
5423.60	H	40.34	---	6.25	46.59	---	74	54	-7.41
5460.00	H	39.34	---	6.48	45.82	---	74	54	-8.18
5446.40	V	40.35	---	6.31	46.66	---	74	54	-7.34
5460.00	V	39.27	---	6.48	45.75	---	74	54	-8.25
11n(HT40) CH102: 5510MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)
					Peak (dBµV/m)	AV (dBµV/m)			
5427.30	H	40.35	---	6.25	46.60	---	74	54	-7.40
5460.00	H	39.46	---	6.48	45.94	---	74	54	-8.06
5434.10	V	40.64	---	6.32	46.96	---	74	54	-7.04
5460.00	V	39.43	---	6.48	45.91	---	74	54	-8.09
11ac CH100: 5500MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBµV)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBµV/m)	AV limit (dBµV/m)	Margin (dB)
					Peak (dBµV/m)	AV (dBµV/m)			
5435.40	H	40.54	---	6.29	46.83	---	74	54	-7.17
5460.00	H	39.31	---	6.48	45.79	---	74	54	-8.21
5428.64	V	40.39	---	6.25	46.64	---	74	54	-7.36

5460.00	V	39.47	---	6.48	45.95	---	74	54	-8.05
11ac(HT40) CH102: 5510MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
5434.40	H	40.46	---	6.28	46.74	---	74	54	-7.26
5460.00	H	39.37	---	6.48	45.85	---	74	54	-8.15
5428.67	V	40.57	---	6.25	46.82	---	74	54	-7.18
5460.00	V	39.35	---	6.48	45.83	---	74	54	-8.17
11ac(HT80) CH106: 5530MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
5423.62	H	40.26	---	6.21	46.47	---	74	54	-7.53
5460.00	H	39.17	---	6.48	45.65	---	74	54	-8.35
5442.70	V	40.39	---	6.36	46.75	---	74	54	-7.25
5460.00	V	39.37	---	6.48	45.85	---	74	54	-8.15

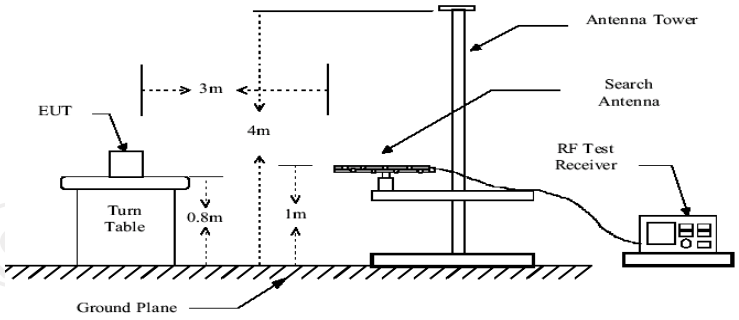
Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

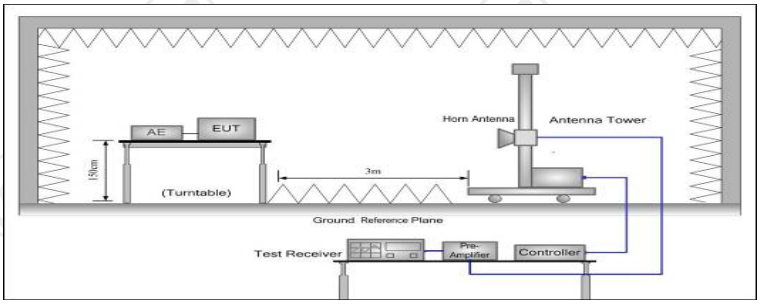
6.8.2. Unwanted Emissions out of the Restricted Bands

6.8.2.1. Test Specification

<table>
<tr><td>Test Requirement:</td><td>FCC CFR47 Part 15 Section 15.407 & 15.209 & 15.205</td></tr>
<tr><td>Test Method:</td><td>KDB 789033 D02 v02</td></tr>
<tr><td>Frequency Range:</td><td>9kHz to 40GHz</td></tr>
<tr><td>Measurement Distance:</td><td>3 m</td></tr>
<tr><td>Antenna Polarization:</td><td>Horizontal & Vertical</td></tr>
<tr><td>Operation mode:</td><td>Transmitting mode with modulation</td></tr>
<tr><td>Receiver Setup:</td><td>
<table>
<tr><td>Frequency</td><td>Detector</td><td>RBW</td><td>VBW</td><td>Remark</td></tr>
<tr><td>9kHz- 150kHz</td><td>Quasi-peak</td><td>200Hz</td><td>1kHz</td><td>Quasi-peak Value</td></tr>
<tr><td>150kHz-30MHz</td><td>Quasi-peak</td><td>9kHz</td><td>30kHz</td><td>Quasi-peak Value</td></tr>
<tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>100KHz</td><td>300KHz</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr>
<tr><td>Peak</td><td>1MHz</td><td>10Hz</td><td>Average Value</td></tr>
</table>
</td></tr>
<tr><td>Limit:</td><td>Unwanted spurious emissions fallen in restricted bands per FCC Part15.205 shall comply with the general field strength limits set forth in § 15.209 as below table,
<table>
<tr><td>Frequency</td><td>Field Strength (microvolts/meter)</td><td>Measurement Distance (meters)</td></tr>
<tr><td>0.009-0.490</td><td>2400/F(KHz)</td><td>300</td></tr>
<tr><td>0.490-1.705</td><td>24000/F(KHz)</td><td>30</td></tr>
<tr><td>1.705-30</td><td>30</td><td>30</td></tr>
<tr><td>30-88</td><td>100</td><td>3</td></tr>
<tr><td>88-216</td><td>150</td><td>3</td></tr>
<tr><td>216-960</td><td>200</td><td>3</td></tr>
<tr><td>Above 960</td><td>500</td><td>3</td></tr>
</table>
<table>
<tr><td>Frequency</td><td>Limit (dBuV/m @3m)</td><td>Detector</td></tr>
<tr><td rowspan="2">Above 1G</td><td>74.0</td><td>Peak</td></tr>
<tr><td>54.0</td><td>Average</td></tr>
</table>
</td></tr>
<tr><td>Test setup:</td><td>For radiated emissions below 30MHz


30MHz to 1GHz</td></tr>
</table>

<table>
<tr><td></td><td> 

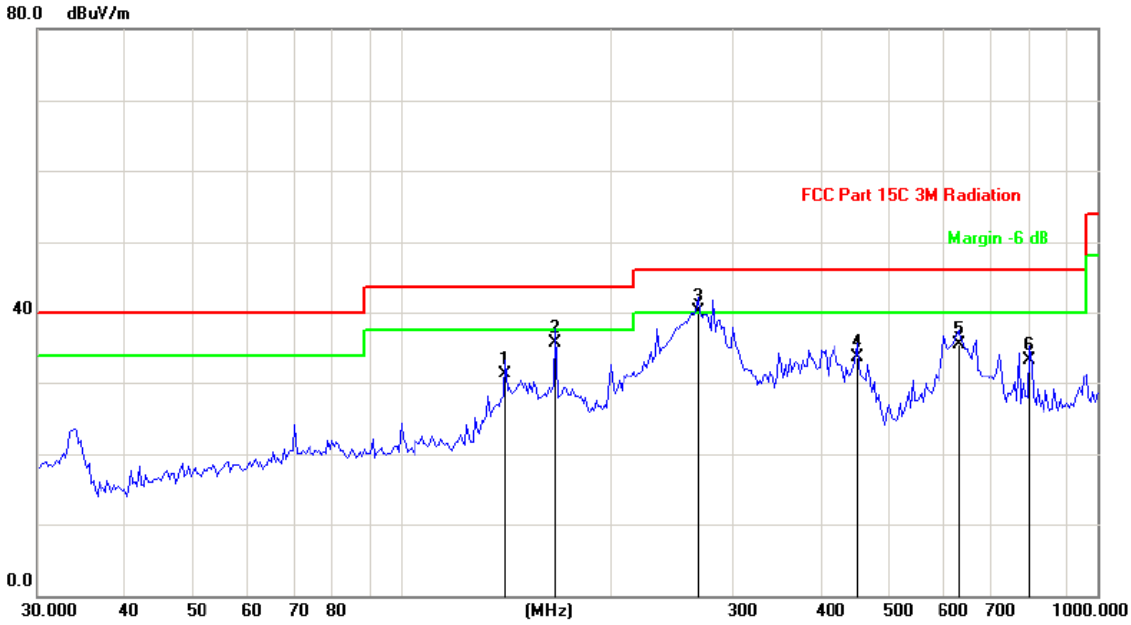
Above 1GHz

</td></tr>
<tr><td>Test Procedure:</td><td>1. The EUT was placed on the top of a rotating table 0.8 meters above the groundat a 3 meter camber. The table was rotated 360 degrees todetermine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, whichwas mounted on the top of a variable-height antenna tower.
3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and thenthe antenna was tuned to heights from 1 meter to 4 meters and the rotatablewas turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and SpecifiedBandwidth with Maximum Hold Mode.
6. If the emission level of the EUT in peak mode was 10dB lower than the limitspecified, then testing could be stopped and the peak values of the EUT wouldbe reported. Otherwise the emissions that did not have 10dB margin would bere-tested one by one using peak, quasi-peak or average method as specified andthen reported in a data sheet.</td></tr>
<tr><td>Test results:</td><td>PASS</td></tr>
</table>

6.8.3. Test Data

Please refer to following diagram for individual

Below 1GHz

Horizontal:



Site

Limit: FCC Part 15C 3M Radiation

Polarization: *Horizontal*

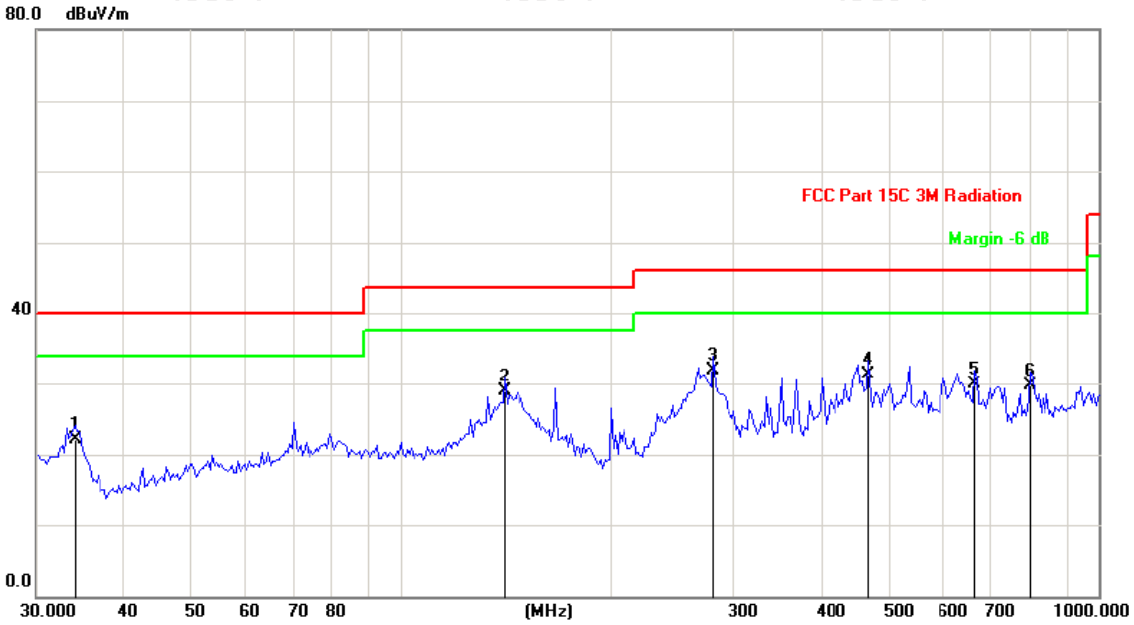
Power: DC 3.7V

Temperature: 25

Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		140.7767	47.48	-16.10	31.38	43.50	-12.12	QP			
2		166.6385	51.26	-15.50	35.76	43.50	-7.74	QP			
3	*	266.8395	52.02	-12.01	40.01	46.00	-5.99	QP			
4		452.0013	41.95	-8.28	33.67	46.00	-12.33	QP			
5		633.3285	41.23	-5.65	35.58	46.00	-10.42	QP			
6		798.6205	38.01	-4.67	33.34	46.00	-12.66	QP			

Vertical:



Site

Polarization: *Vertical*

Temperature: 25

Limit: FCC Part 15C 3M Radiation

Power: DC 3.7V

Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		34.0451	33.20	-11.02	22.18	40.00	-17.82	QP			
2		140.7767	44.95	-16.10	28.85	43.50	-14.65	QP			
3	*	280.2936	43.54	-11.57	31.97	46.00	-14.03	QP			
4		468.1650	39.34	-7.99	31.35	46.00	-14.65	QP			
5		665.2610	35.50	-5.55	29.95	46.00	-16.05	QP			
6		798.6205	34.29	-4.67	29.62	46.00	-16.38	QP			

Note: *1.The low frequency, which started from 9KHz~30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported*

2. Measurements were conducted in all three channels (high, middle, low) and all modulation (802.11a, 802.11n(HT20), 802.11n(HT40), 802.11ac(HT20), 802.11ac(HT40) 802.11nac(HT80), and the worst case Mode (Lowest channel and 802.11a) was submitted only.

Modulation Type: Band 1									
11a CH36: 5180MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
10360	H	41.47	---	8.02	49.49	---	74	54	-4.51
15540	H	41.01	---	9.87	50.88	---	74	54	-3.12
---	H	---	---	---	---	---	---	---	---
10360	V	40.87	---	8.02	48.89	---	74	54	-5.11
15540	V	42.31	---	9.87	52.18	---	74	54	-1.82
---	V	---	---	---	---	---	---	---	---
11a CH40: 5200MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
10400	H	40.36	---	7.97	48.33	---	74	54	-5.67
15600	H	41.12	---	9.83	50.95	---	74	54	-3.05
---	H	---	---	---	---	---	---	---	---
10400	V	41.41	---	7.97	49.38	---	74	54	-4.62
15600	V	40.36	---	9.83	50.19	---	74	54	-3.81
---	V	---	---	---	---	---	---	---	---
11a CH48: 5240MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
10480	H	40.36	---	7.97	48.33	---	74	54	-5.67
15720	H	41.76	---	9.83	51.59	---	74	54	-2.41
---	H	---	---	---	---	---	---	---	---
10480	V	41.41	---	7.97	49.38	---	74	54	-4.62
15720	V	40.36	---	9.83	50.19	---	74	54	-3.81
---	V	---	---	---	---	---	---	---	---
11n(HT20) CH36: 5180MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
10360	H	41.38	---	8.02	49.40	---	74	54	-4.6
15540	H	42.45	---	9.87	52.32	---	74	54	-1.68
---	H	---	---	---	---	---	---	---	---
10360	V	40.62	---	8.02	48.64	---	74	54	-5.36
15540	V	41.98	---	9.87	51.85	---	74	54	-2.15
---	V	---	---	---	---	---	---	---	---
11n(HT20) CH40: 5200MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
10400	H	40.36	---	7.97	48.22	---	74	54	-5.78
15600	H	41.76	---	9.83	51.36	---	74	54	-2.64
---	H	---	---	---	---	---	---	---	---
10400	V	41.25	---	7.97	49.22	---	74	54	-4.78
15600	V	40.22	---	9.83	50.05	---	74	54	-3.95
---	V	---	---	---	---	---	---	---	---

Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level Peak (dBμV/m)	Emission Level AV (dBμV/m)	Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
10480	H	40.36	---	7.97	48.33	---	74	54	-5.67
15720	H	41.76	---	9.83	51.59	---	74	54	-2.41
---	H	---	---	---	---	---	---	---	---
10480	V	41.19	---	7.97	49.16	---	74	54	-4.84
15720	V	40.31	---	9.83	50.14	---	74	54	-3.86
---	V	---	---	---	---	---	---	---	---

11n(HT40)CH38: 5190MHz

Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level Peak (dBμV/m)	Emission Level AV (dBμV/m)	Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
10380	H	39.41	---	7.75	47.16	---	74	54	-6.84
15570	H	40.62	---	9.87	50.49	---	74	54	-3.51
---	H	---	---	---	---	---	---	---	---
10380	V	40.33	---	7.75	48.08	---	74	54	-5.92
15570	V	42.17	---	9.87	52.04	---	74	54	-1.96
---	V	---	---	---	---	---	---	---	---

11n(HT40)CH46: 5230MHz

Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level Peak (dBμV/m)	Emission Level AV (dBμV/m)	Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
10460	H	42.31	---	7.97	50.28	---	74	54	-3.72
15690	H	41.18	---	9.83	51.01	---	74	54	-2.99
---	H	---	---	---	---	---	---	---	---
10460	V	41.82	---	7.97	49.79	---	74	54	-4.21
15690	V	40.79	---	9.83	50.62	---	74	54	-3.38
---	V	---	---	---	---	----	---	---	---

11ac(HT20) CH36: 5180MHz

Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level Peak (dBμV/m)	Emission Level AV (dBμV/m)	Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
10360	H	41.36	---	8.02	49.38	---	74	54	-4.62
15540	H	42.38	---	9.87	52.25	---	74	54	-1.75
---	H	---	---	---	---	---	---	---	---
10360	V	40.81	---	8.02	48.83	---	74	54	-5.17
15540	V	42.16	---	9.87	52.03	---	74	54	-1.97
---	V	---	---	---	---	---	---	---	---

11ac(HT20) CH40: 5200MHz

Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level Peak (dBμV/m)	Emission Level AV (dBμV/m)	Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
10400	H	40.14	---	7.97	48.11	---	74	54	-5.89
15600	H	41.53	---	9.83	51.36	---	74	54	-2.64
---	H	---	---	---	---	---	---	---	---
10400	V	41.41	---	7.97	49.38	---	74	54	-4.62
15600	V	40.36	---	9.83	50.19	---	74	54	-3.81
---	V	---	---	---	---	---	---	---	---

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

11ac(HT20) CH48: 5240MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
10480	H	39.37	---	7.97	47.34	---	74	54	-6.66
15720	H	40.55	---	9.83	50.38	---	74	54	-3.62
---	H	---	---	---	---	---	---	---	---
10480	V	40.18	---	7.97	48.15	---	74	54	-5.85
15720	V	42.11	---	9.83	51.94	---	74	54	-2.06
---	V	---	---	---	---	---	---	---	---
11ac(HT40) CH38: 5190MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
10380	H	39.35	---	7.75	47.1	---	74	54	-6.9
15570	H	40.42	---	9.87	50.29	---	74	54	-3.71
---	H	---	---	---	---	---	---	---	---
10380	V	40.16	---	7.75	47.91	---	74	54	-6.09
15570	V	42.05	---	9.87	51.92	---	74	54	-2.08
---	V	---	---	---	---	---	---	---	---
11ac(HT40) CH46: 5230MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
10460	H	41.68	---	7.97	49.65	---	74	54	-4.35
15690	H	40.81	---	9.83	50.64	---	74	54	-3.36
---	H	---	---	---	---	---	---	---	---
10460	V	41.75	---	7.97	49.72	---	74	54	-4.28
15690	V	40.59	---	9.83	50.42	---	74	54	-3.58
---	V	---	---	---	---	----	---	---	---
11ac(HT80) CH155: 5775MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
11550	H	38.67	---	8.09	46.76	---	74	54	-7.24
17325	H	36.49	---	9.66	46.15	---	74	54	-7.85
---	H	---	---	---	---	---	---	---	---
11550	V	39.35	---	8.09	47.44	---	74	54	-6.56
17325	V	37.68	---	9.66	47.34	---	74	54	-6.66
---	V	---	---	---	---	---	---	---	---

Note:

1. *Emission Level=Peak Reading + Correction Factor; Correction Factor= Antenna Factor + Cable loss – Pre-amplifier*
2. *Margin (dB) = Emission Level (Peak) (dBμV/m)-Average limit (dBμV/m)*
3. *The emission levels of other frequencies are very lower than the limit and not show in test report.*
4. *Measurements were conducted from 1 GHz to the 10th harmonic of highest fundamental frequency. The highest test frequency is 40GHz.*
5. *Data of measurement shown "---"in the above table mean that the reading of emissions is attenuated more than 20 dB below the limits or the field strength is too small to be measured.*

Modulation Type: Band 3									
11a(HT20) CH149: 5745MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
11490	H	40.62	---	8.09	48.71	---	74	54	-5.29
17235	H	39.51	---	9.67	49.18	---	74	54	-4.82
---	H	---	---	---	---	---	---	---	---
11490	V	41.12	---	8.09	49.21	---	74	54	-4.79
17235	V	39.79	---	9.67	49.46	---	74	54	-4.54
---	V	---	---	---	---	---	---	---	---
11a(HT20) CH157: 5785MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
11570	H	40.55	---	8.10	48.65	---	74	54	-5.35
17355	H	39.52	---	9.65	49.17	---	74	54	-4.83
---	H	---	---	---	---	---	---	---	---
11570	V	41.08	---	8.10	49.18	---	74	54	-4.82
17355	V	39.83	---	9.65	49.48	---	74	54	-4.52
---	V	---	---	---	---	---	---	---	---
11a(HT20) CH161: 5825MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
11650	H	40.43	---	8.12	48.55	---	74	54	-5.45
17475	H	39.64	---	9.62	49.26	---	74	54	-4.74
---	H	---	---	---	---	---	---	---	---
11650	V	41.3	---	8.12	49.42	---	74	54	-4.58
17475	V	40.12	---	9.62	49.74	---	74	54	-4.26
---	V	---	---	---	---	---	---	---	---
11n(HT20) CH151: 5745MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
11510	H	40.28	---	8.09	48.37	---	74	54	-5.63
17265	H	39.51	---	9.67	49.18	---	74	54	-4.82
---	H	---	---	---	---	---	---	---	---
11510	V	41.22	---	8.09	49.31	---	74	54	-4.69
17265	V	40.36	---	9.67	50.03	---	74	54	-3.97
---	V	---	---	---	---	---	---	---	---
11n(HT20) CH157: 5785MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
11570	H	40.27	---	8.10	48.37	---	74	54	-5.63
17355	H	39.63	---	9.65	49.28	---	74	54	-4.72
---	H	---	---	---	---	---	---	---	---
11570	V	41.31	---	8.10	49.41	---	74	54	-4.59
17355	V	40.43	---	9.65	50.08	---	74	54	-3.92
---	V	---	---	---	---	---	---	---	---

11n(HT20) CH165: 5825MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
11650	H	40.41	---	8.12	48.53	---	74	54	-5.47
17475	H	39.52	---	9.62	49.14	---	74	54	-4.86
---	H	---	---	---	---	---	---	---	---
11650	V	41.4	---	8.12	49.52	---	74	54	-4.48
17475	V	40.52	---	9.62	50.14	---	74	54	-3.86
---	V	---	---	---	---	---	---	---	---

11n(HT40) CH151: 5755MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
11510	H	39.82	---	8.09	47.91	---	74	54	-6.09
17265	H	37.54	---	9.67	47.21	---	74	54	-6.79
---	H	---	---	---	---	---	---	---	---
11510	V	40.31	---	8.09	48.4	---	74	54	-5.6
17265	V	39.52	---	9.67	49.19	---	74	54	-4.81
---	V	---	---	---	---	---	---	---	---

11n(HT40) CH159: 5795MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
11590	H	39.93	---	8.10	48.03	---	74	54	-5.97
17385	H	37.76	---	9.65	47.41	---	74	54	-6.59
---	H	---	---	---	---	---	---	---	---
11590	V	40.39	---	8.10	48.49	---	74	54	-5.51
17385	V	39.57	---	9.65	49.22	---	74	54	-4.78
---	V	---	---	---	---	---	---	---	---

11ac(HT40) CH149: 5745MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
11490	H	40.53	---	8.09	48.62	---	74	54	-5.38
17235	H	38.91	---	9.67	48.58	---	74	54	-5.42
---	H	---	---	---	---	---	---	---	---
11490	V	40.86	---	8.09	48.95	---	74	54	-5.05
17235	V	40.35	---	9.67	50.02	---	74	54	-3.98
---	V	---	---	---	---	---	---	---	---

11ac(HT20) CH157: 5785MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
11570	H	40.47	---	8.10	48.57	---	74	54	-5.43
17355	H	38.76	---	9.65	48.41	---	74	54	-5.59
---	H	---	---	---	---	---	---	---	---
11570	V	40.82	---	8.10	48.92	---	74	54	-5.08
17355	V	40.53	---	9.65	50.18	---	74	54	-3.82
---	V	---	---	---	---	---	---	---	---

11ac(HT20) CH165: 5825MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
11650	H	40.31	---	8.12	48.43	---	74	54	-5.57
17475	H	38.67	---	9.62	48.29	---	74	54	-5.71
---	H	---	---	---	---	---	---	---	---
11650	V	40.73	---	8.12	48.85	---	74	54	-4.10
17475	V	40.17	---	9.62	49.79	---	74	54	-5.66
---	V	---	---	---	---	---	---	---	---

11ac(HT40) CH151: 5755MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
11510	H	39.42	---	8.09	47.51	---	74	54	-6.49
17265	H	37.51	---	9.67	47.18	---	74	54	-6.82
---	H	---	---	---	---	---	---	---	---
11510	V	40.04	---	8.09	48.13	---	74	54	-5.87
17265	V	39.48	---	9.67	49.15	---	74	54	-4.85
---	V	---	---	---	---	---	---	---	---

11ac(HT40) CH159: 5795MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
11590	H	39.51	---	8.10	47.61	---	74	54	-6.39
17385	H	38.63	---	9.65	48.28	---	74	54	-5.72
---	H	---	---	---	---	---	---	---	---
11590	V	40.15	---	8.10	48.25	---	74	54	-5.75
17385	V	39.63	---	9.65	49.28	---	74	54	-4.72
---	V	---	---	---	---	---	---	---	---

11ac(HT80) CH155: 5775MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBμV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
11550	H	38.67	---	8.09	46.76	---	74	54	-7.24
17325	H	36.49	---	9.66	46.15	---	74	54	-7.85
---	H	---	---	---	---	---	---	---	---
11550	V	39.35	---	8.09	47.44	---	74	54	-6.56
17325	V	37.68	---	9.66	47.34	---	74	54	-6.66
---	V	---	---	---	---	---	---	---	---

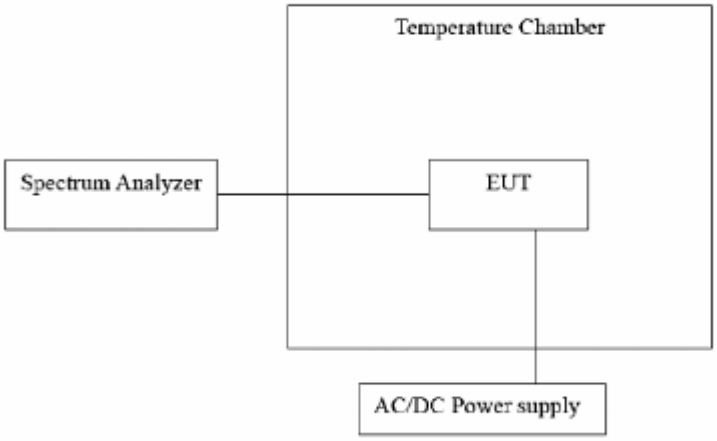
Note:

1. *Emission Level=Peak Reading + Correction Factor; Correction Factor= Antenna Factor + Cable loss – Pre-amplifier*
2. *Margin (dB) = Emission Level (Peak) (dBμV/m)-Average limit (dBμV/m)*
3. *The emission levels of other frequencies are very lower than the limit and not show in test report.*
4. *Measurements were conducted from 1 GHz to the 10th harmonic of highest fundamental frequency. The highest test frequency is 40GHz.*
5. *Data of measurement shown "---"in the above table mean that the reading of emissions is attenuated more than 20 dB below the limits or the field strength is too small to be measured.*

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

6.9. Frequency Stability Measurement

6.9.1. Test Specification

Test Requirement:	FCC Part15 Section 15.407(g) &Part2 J Section 2.1055
Test Method:	ANSI C63.10: 2013
Limit:	The frequency tolerance shall be maintained within the band of operation frequency over a temperature variation of 0 degrees to 45 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.
Test Setup:	
Test Procedure:	The EUT was placed inside the environmental test chamber and powered by nominal AC/DC voltage. b. Turn the EUT on and couple its output to a spectrum analyzer. c. Turn the EUT off and set the chamber to the highest temperature specified. d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize. e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature. f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.
Test Result:	PASS
Remark:	Pre-scan was performed at Antenna 0 and Antenna 1, the worst case was found. Only the test data of Antenna 0 was shown in this report.

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

Test plots as follows:

Test mode:	802.11ac(HT20)	Frequency(MHz):	5180
Temperature (°C)	Voltage(VAC)	Measurement Frequency(MHz)	Delta Frequency(Hz)	Result
45	5V	5180.0086	8600	PASS
35		5180.0065	6500	PASS
25		5180.0066	6600	PASS
15		5180.0071	7100	PASS
5		5180.0037	3700	PASS
0		5180.0042	4200	PASS
20	4.75	5180.0055	5500	PASS
	5	5180.0034	3400	PASS
	5.25	5180.0051	5100	PASS

Test mode:	802.11ac(HT20)	Frequency(MHz):	5200
Temperature (°C)	Voltage(VAC)	Measurement Frequency(MHz)	Delta Frequency(Hz)	Result
45	5V	5200.0090	9000	PASS
35		5200.0089	8900	PASS
25		5200.0078	7800	PASS
15		5200.0042	4200	PASS
5		5200.0065	6500	PASS
0		5200.0057	5700	PASS
20	4.75	5200.0048	4800	PASS
	5	5200.0031	3100	PASS
	5.25	5200.0020	2000	PASS

Test mode:	802.11ac(HT20)	Frequency(MHz):	5240
Temperature (°C)	Voltage(VAC)	Measurement Frequency(MHz)	Delta Frequency(Hz)	Result
45	5V	5240.0043	4300	PASS
35		5240.0028	2800	PASS
25		5240.0025	2500	PASS
15		5239.9991	-900	PASS
5		5239.9983	-1700	PASS
0		5239.9979	-2100	PASS
20	4.75	5240.0034	3400	PASS
	5	5240.0010	1000	PASS
	5.25	5239.9987	-1300	PASS

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

Test mode:	802.11ac(HT20)	Frequency(MHz):	5745

Temperature (°C)	Voltage(VAC)	Measurement Frequency(MHz)	Delta Frequency(Hz)	Result
45	5V	5745.0118	11800	PASS
35		5745.0086	8600	PASS
25		5745.0078	7800	PASS
15		5745.0035	3500	PASS
5		5744.9962	-3800	PASS
0		5744.9984	-1600	PASS
20	4.75	5745.0013	1300	PASS
	5	5745.0014	1400	PASS
	5.25	5745.0028	2800	PASS

Test mode:	802.11ac(HT20)	Frequency(MHz):	5785

Temperature (°C)	Voltage(VAC)	Measurement Frequency(MHz)	Delta Frequency(Hz)	Result
45	5V	5785.0082	8200	PASS
35		5785.0029	2900	PASS
25		5785.0021	2100	PASS
15		5785.0008	800	PASS
5		5785.0028	2800	PASS
0		5785.0037	3700	PASS
20	4.75	5785.0033	3300	PASS
	5	5785.0012	1200	PASS
	5.25	5784.9976	-2400	PASS

Test mode:	802.11ac(HT20)	Frequency(MHz):	5825

Temperature (°C)	Voltage(VAC)	Measurement Frequency(MHz)	Delta Frequency(Hz)	Result
45	5V	5825.0097	9700	PASS
35		5825.0044	4400	PASS
25		5825.0022	2200	PASS
15		5824.9989	-1100	PASS
5		5824.9975	-2500	PASS
0		5824.9964	-3600	PASS
20	4.75	5825.0032	3200	PASS
	5	5825.0017	1700	PASS
	5.25	5825.0025	2500	PASS

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

Test mode:	802.11ac(HT40)	Frequency(MHz):	5190

Temperature (°C)	Voltage(VAC)	Measurement Frequency(MHz)	Delta Frequency(Hz)	Result
45	5V	5190.0122	12200	PASS
35		5190.0110	11000	PASS
25		5190.0104	10400	PASS
15		5190.0036	3600	PASS
5		5190.0068	6800	PASS
0		5190.0072	7200	PASS
20	4.75	5189.9930	-7000	PASS
	5	5189.9978	-2200	PASS
	5.25	5190.0046	4600	PASS

Test mode:	802.11ac(HT40)	Frequency(MHz):	5230

Temperature (°C)	Voltage(VAC)	Measurement Frequency(MHz)	Delta Frequency(Hz)	Result
45	5V	5230.0128	12800	PASS
35		5230.0120	12000	PASS
25		5230.0095	9500	PASS
15		5229.9983	-1700	PASS
5		5229.9981	-1900	PASS
0		5230.0053	5300	PASS
20	4.75	5230.0047	4700	PASS
	5	5230.0020	2000	PASS
	5.25	5229.9978	-2200	PASS

Test mode:	802.11ac(HT40)	Frequency(MHz):	5755

Temperature (°C)	Voltage(VAC)	Measurement Frequency(MHz)	Delta Frequency(Hz)	Result
45	5V	5755.0273	27300	PASS
35		5755.0120	12000	PASS
25		5755.0117	11700	PASS
15		5755.0096	9600	PASS
5		5755.0035	3500	PASS
0		5755.0077	7700	PASS
20	4.75	5755.0043	4300	PASS
	5	5755.0039	3900	PASS
	5.25	5755.0061	6100	PASS

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

Test mode:	802.11ac(HT40)	Frequency(MHz):	5795

Temperature (°C)	Voltage(VAC)	Measurement Frequency(MHz)	Delta Frequency(Hz)	Result
45	5V	5795.0084	8400	PASS
35		5795.0021	2100	PASS
25		5795.0034	3400	PASS
15		5795.0016	1600	PASS
5		5795.0046	4600	PASS
0		5795.0059	5900	PASS
20	4.75	5795.0071	7100	PASS
	5	5794.9970	-3000	PASS
	5.25	5795.0065	6500	PASS

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

Appendix A: Photographs of Test Setup

Refer to test report TCT190321E014

Appendix B: Photographs of EUT

Refer to test report TCT190321E014

*******END OF REPORT*******

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com