

6.6.3. Test data

Configuration Band 1 (5180-5240 MHz)				
Mode	Test channel	Power Spectral Density	Limit (dBm/MHz)	Result
11a	CH36	-4.04	11	PASS
11a	CH40	-3.37	11	PASS
11a	CH48	-3.64	11	PASS
11n(HT20)	CH36	-3.88	11	PASS
11n(HT20)	CH40	-3.64	11	PASS
11n(HT20)	CH48	-3.37	11	PASS
11n(HT40)	CH38	-7.12	11	PASS
11n(HT40)	CH46	-6.73	11	PASS
11ac(VHT20)	CH36	-4.05	11	PASS
11ac(VHT20)	CH40	-4.35	11	PASS
11ac(VHT20)	CH48	-3.92	11	PASS
11ac(VHT40)	CH38	-6.86	11	PASS
11ac(VHT40)	CH46	-6.72	11	PASS
11ac(VHT80)	CH42	-10.49	11	PASS

Configuration Band 3(5745-5825MHz)

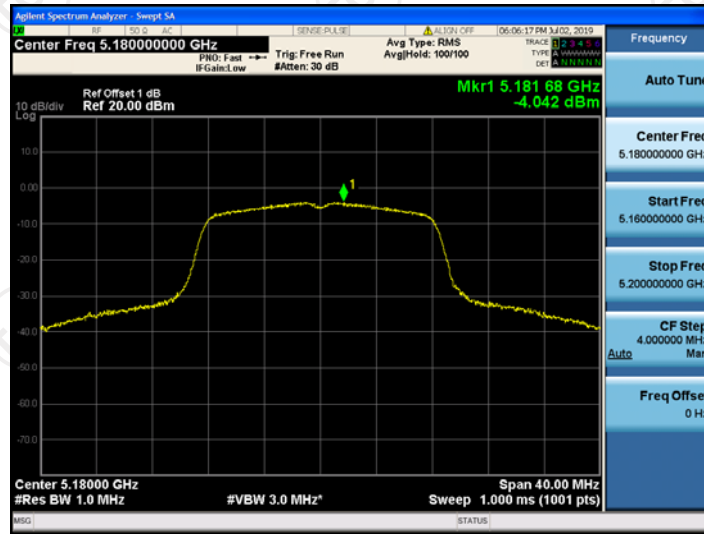
Mode	Test channel	Power Spectral Density	Limit (dBm/500KH zHz)	Result
11a	CH52	-4.35	30	PASS
11a	CH60	-5.25	30	PASS
11a	CH64	-5.46	30	PASS
11n(HT20)	CH52	-4.09	30	PASS
11n(HT20)	CH60	-5.56	30	PASS
11n(HT20)	CH64	-5.67	30	PASS
11n(HT40)	CH54	-8.04	30	PASS
11n(HT40)	CH62	-8.81	30	PASS
11ac(VHT20)	CH52	-4.57	30	PASS
11ac(VHT20)	CH60	-5.62	30	PASS
11ac(VHT20)	CH64	-6.09	30	PASS
11ac(VHT40)	CH54	-8.43	30	PASS
11ac(VHT40)	CH62	-8.81	30	PASS
11ac(VHT80)	CH58	-13.08	30	PASS

Test plots as follows:

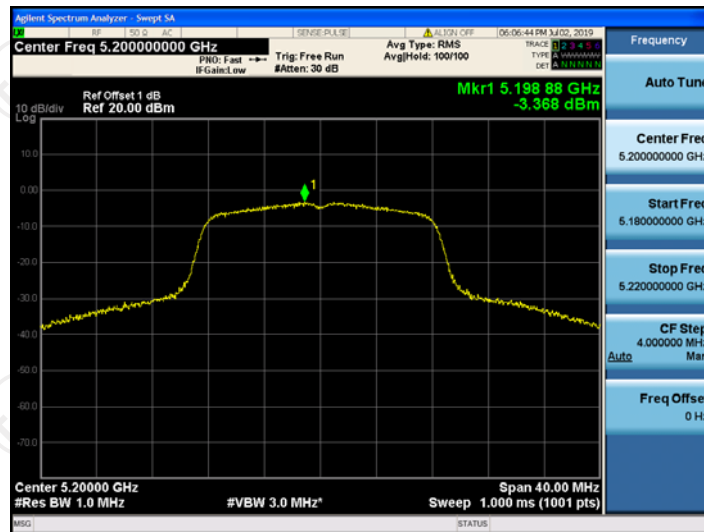
Band1 (5180-5240 MHz)

11a

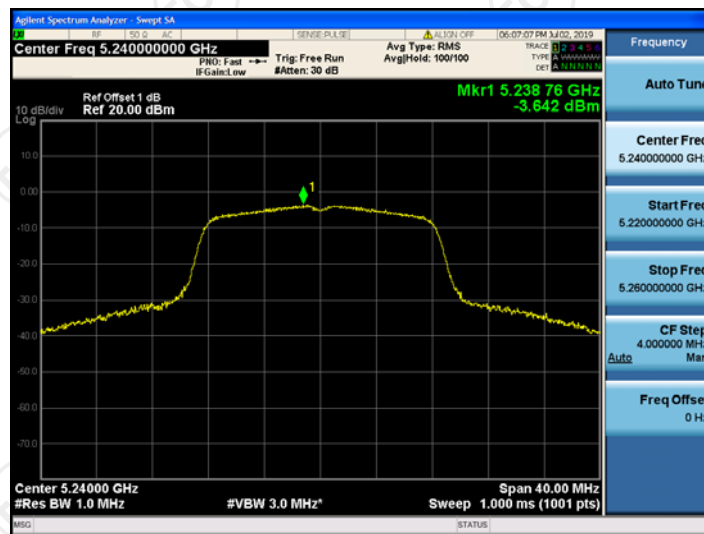
CH36



CH40

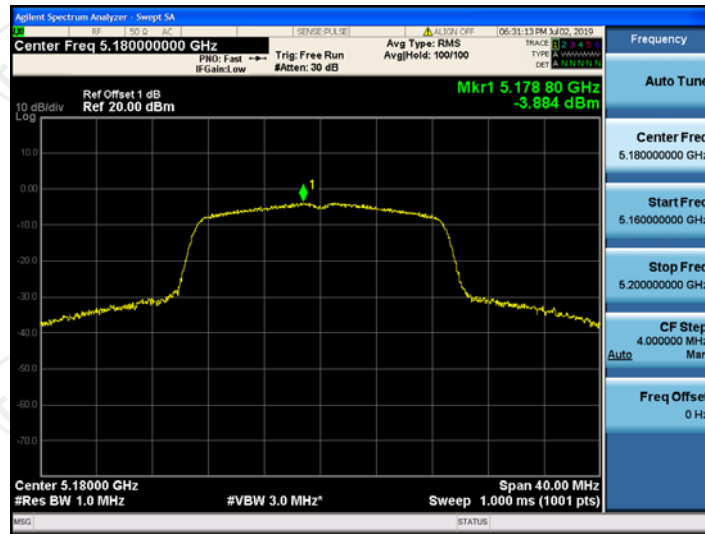


CH48

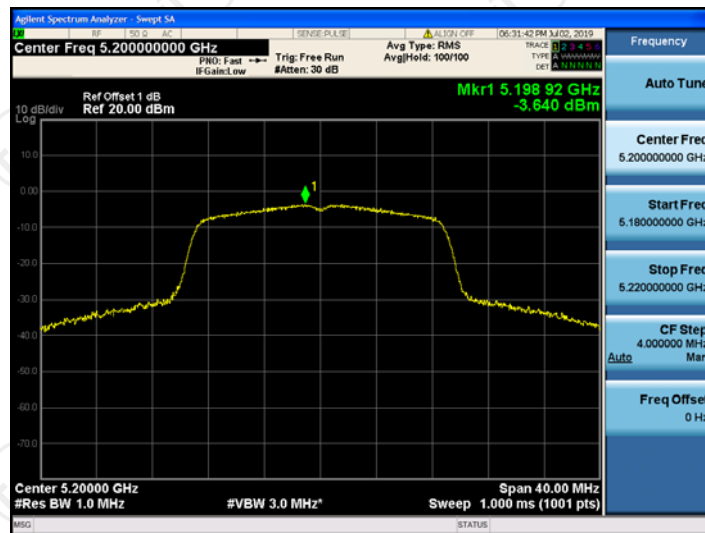


11n(HT20)

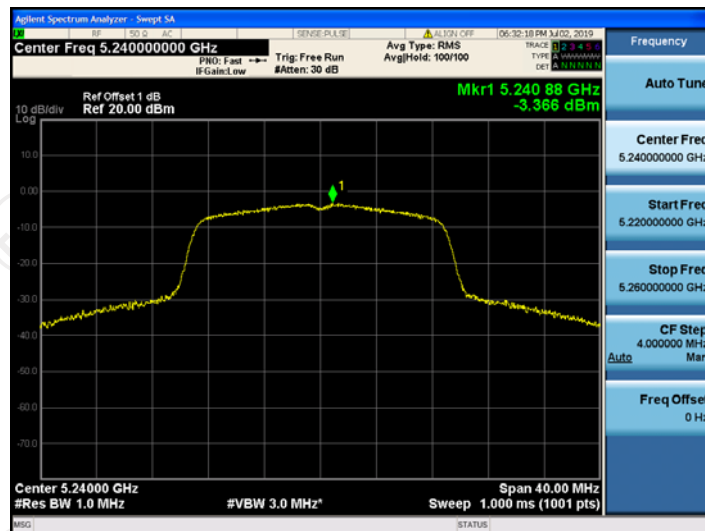
CH36



CH40

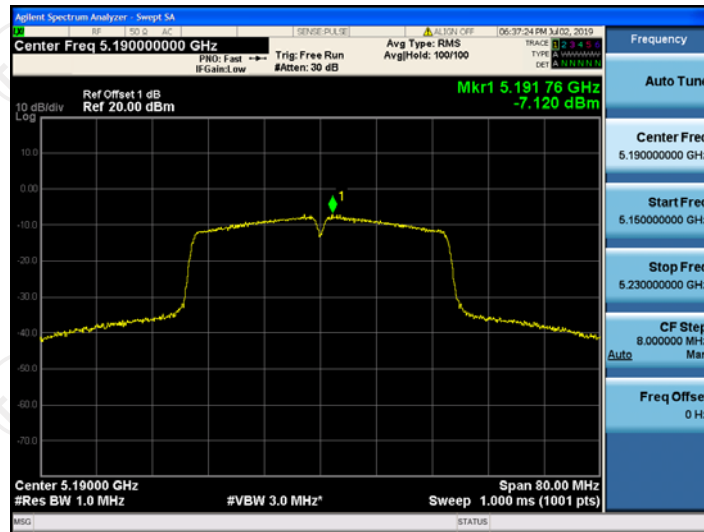


CH48

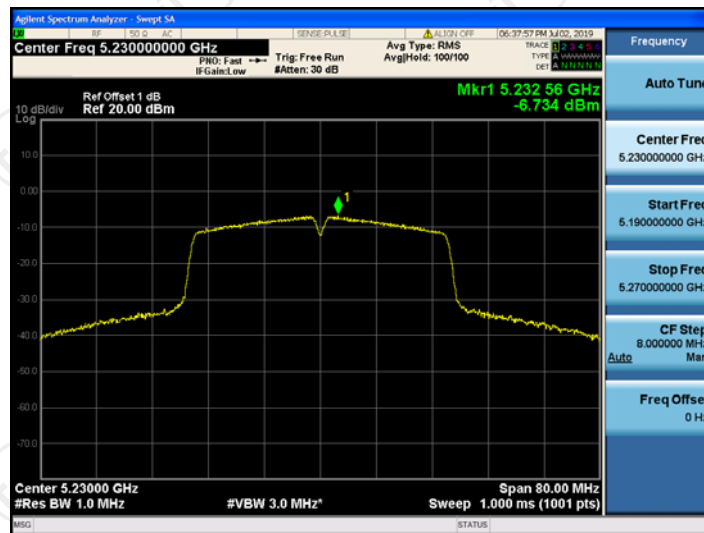


11n(HT40)

CH38

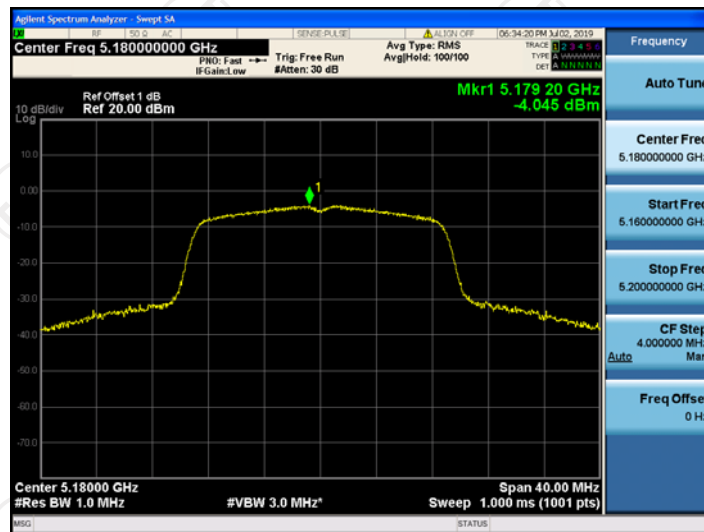


CH46

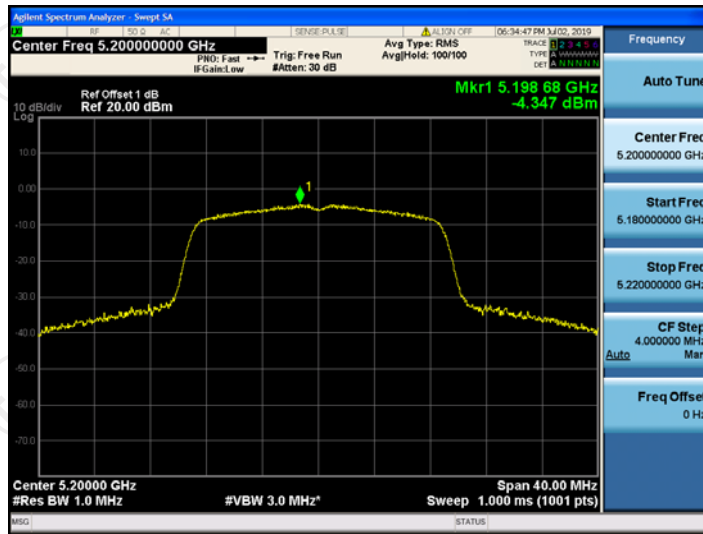


11ac(VHT20)

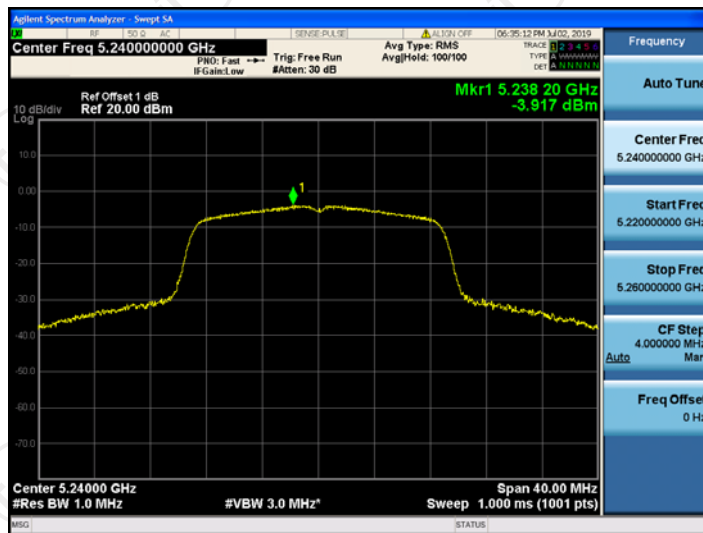
CH36



CH40

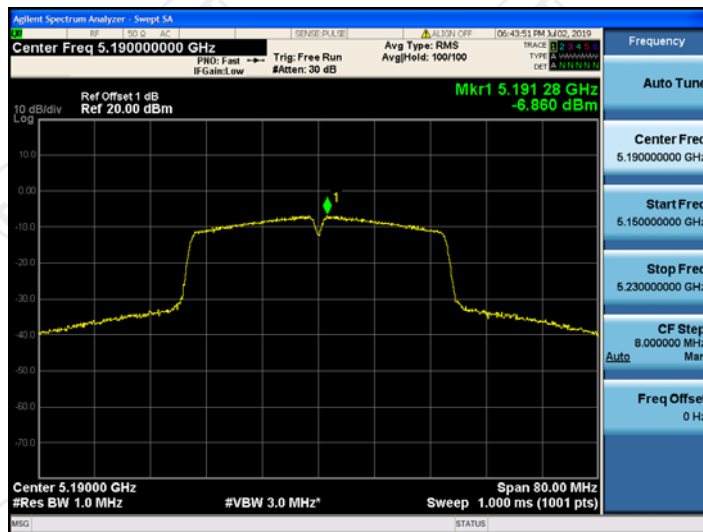


CH48

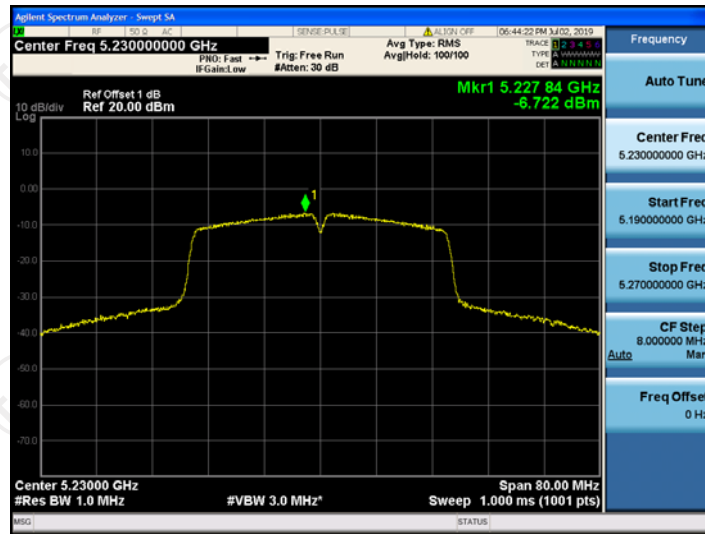


11ac(VHT40)

CH38

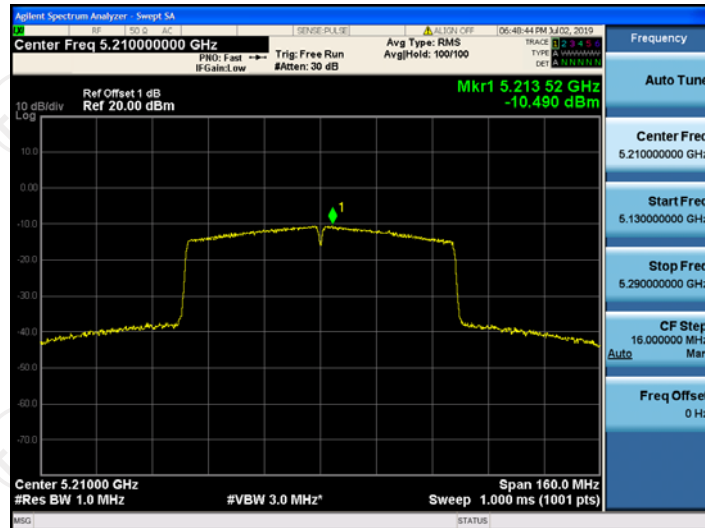


CH46



11ac(VHT80)

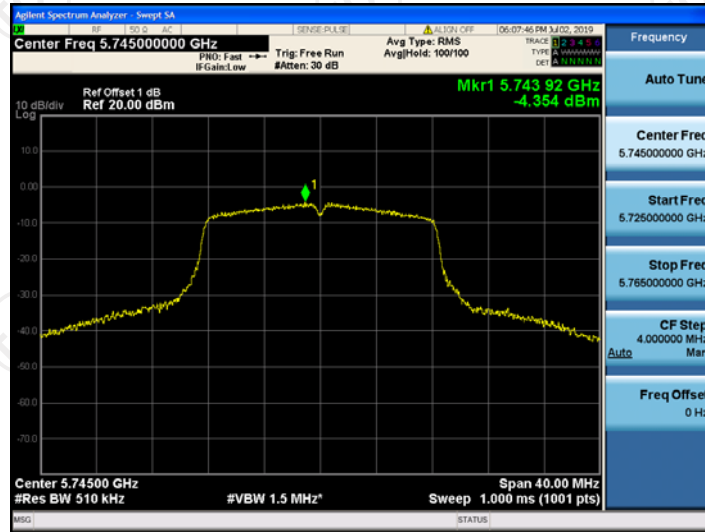
CH42



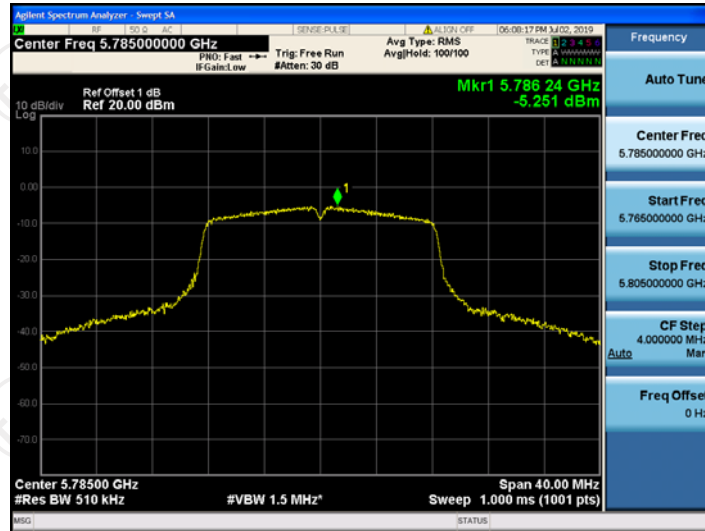
Band 3 (5745-5825MHz)

11a

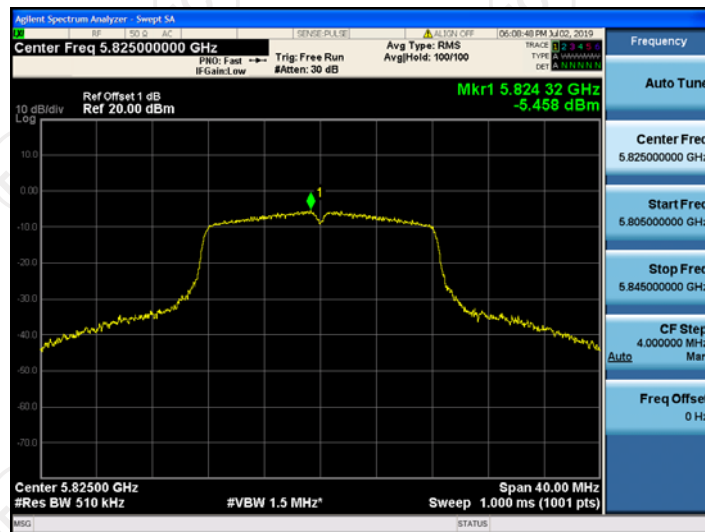
CH149



CH157

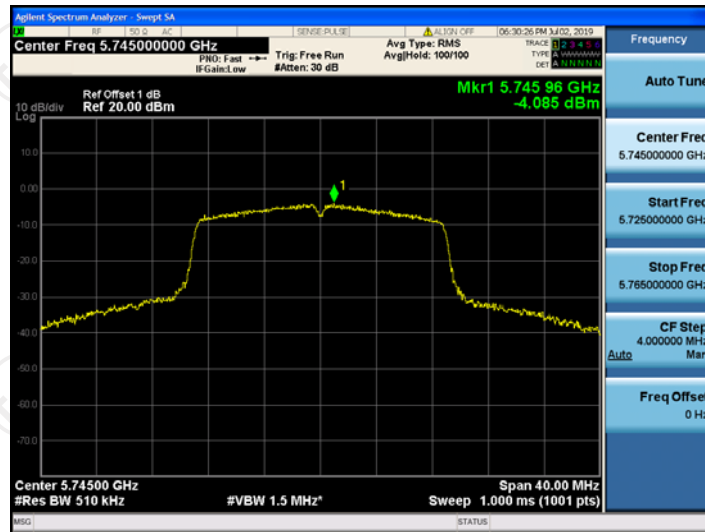


CH165

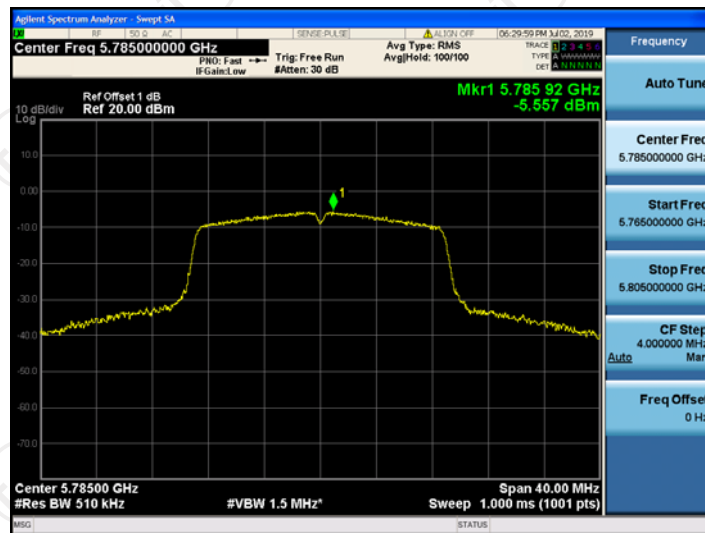


11n(HT20)

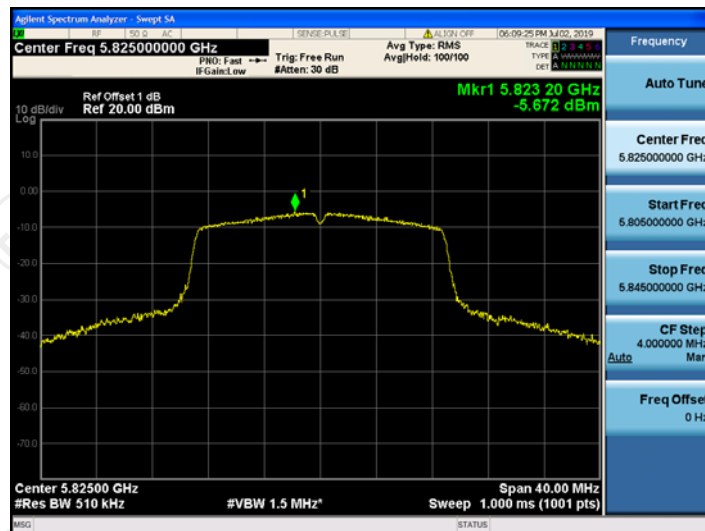
CH149



CH157

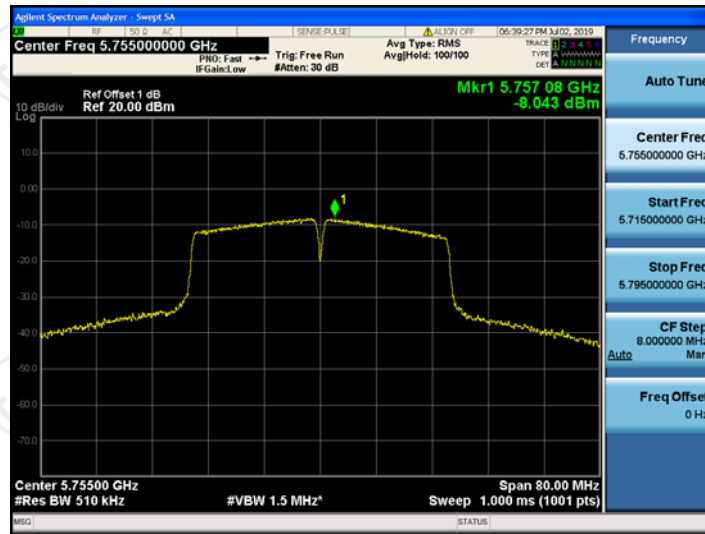


CH165

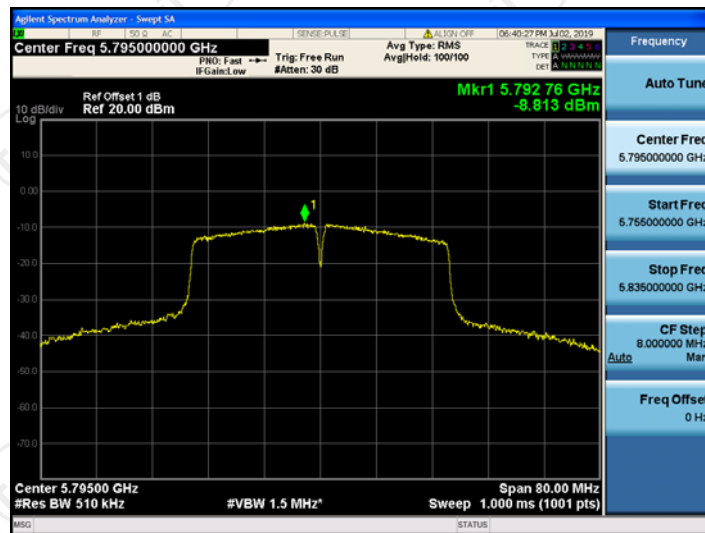


11n(HT40)

CH151

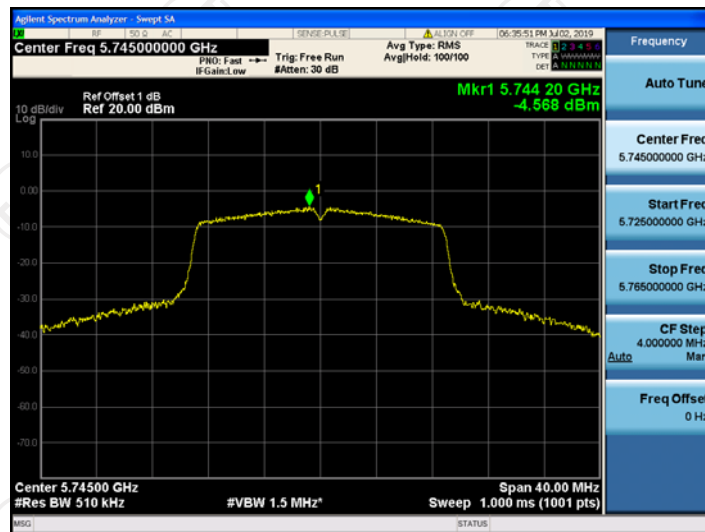


CH159

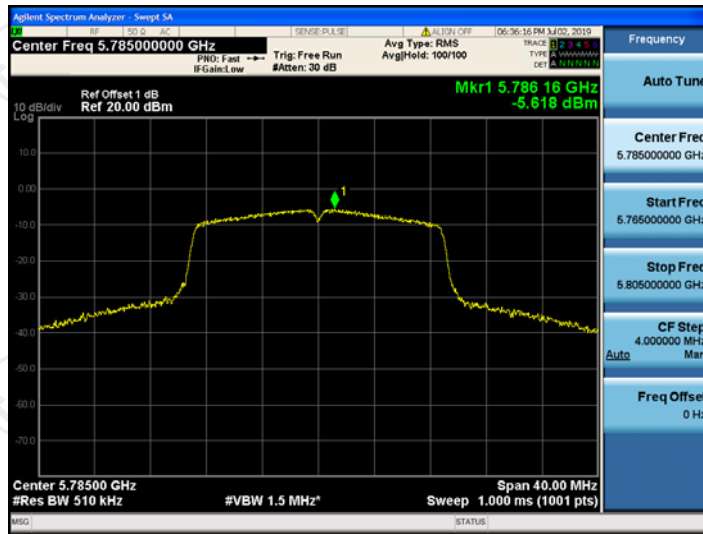


11ac(VHT20)

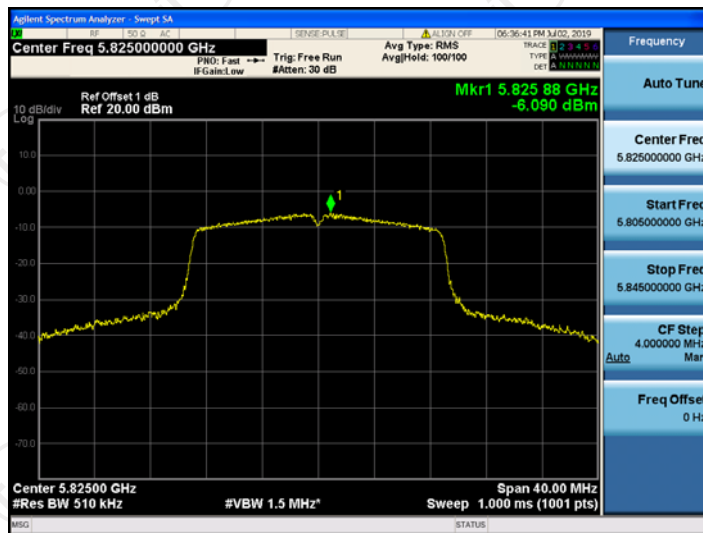
CH149



CH157

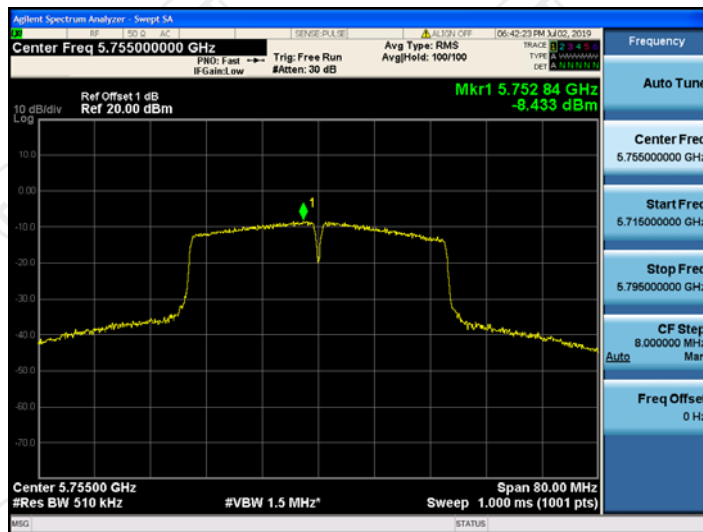


CH165

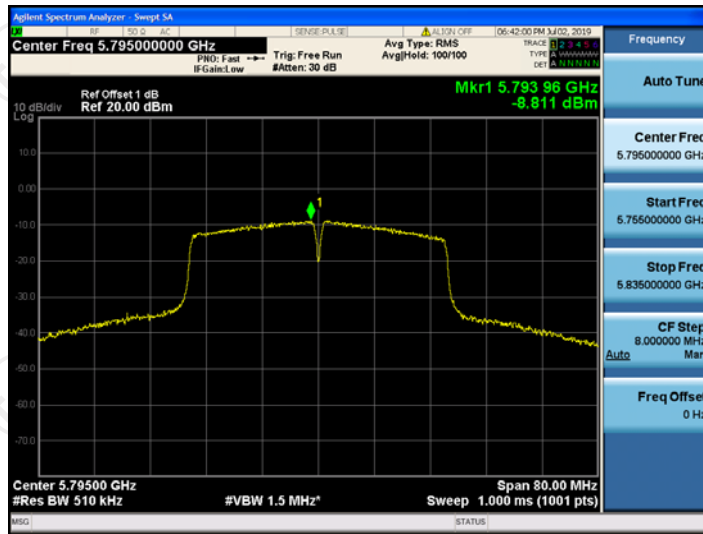


11ac(VHT40)

CH151

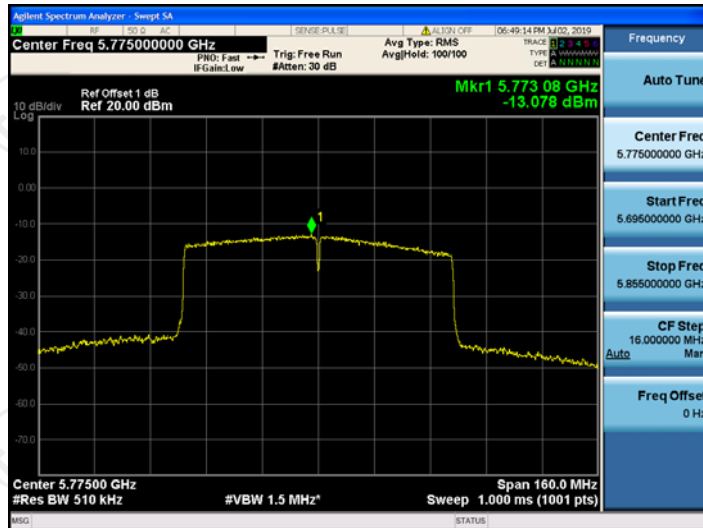


CH159



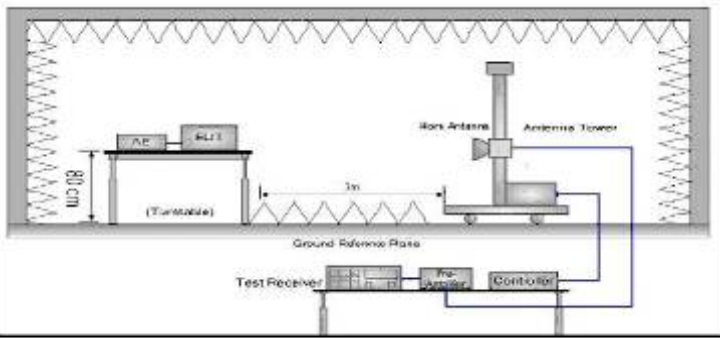
11ac(VHT80)

CH155



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: $E[\text{dB}\mu\text{V}/\text{m}] = \text{EIRP}[\text{dBm}] + 95.2 = 68.2$ dB $\mu\text{V}/\text{m}$, for EIRP(dBm)= -27dBm For Band 3(5715-5725MHz&5850-5860MHz): $E[\text{dB}\mu\text{V}/\text{m}] = \text{EIRP}[\text{dBm}] + 95.2 = 78.2$ dB $\mu\text{V}/\text{m}$, for EIRP(dBm)= -17dBm ; For Band 3(other un-restricted band): $E[\text{dB}\mu\text{V}/\text{m}] = \text{EIRP}[\text{dBm}] + 95.2 = 68.2$ dB $\mu\text{V}/\text{m}$, for EIRP(dBm)= -27dBm
Test Setup:	 <p>The diagram illustrates the test setup. It shows a rotating table (0.8m high) with an EUT on top, positioned 3m away from a horn antenna mounted on an antenna tower. The antenna tower height is adjustable from 1m to 4m. A ground reference plane is shown below the table and antenna. The test receiver system, including a Test Receiver, Pre-Amplifier, and Controller, is connected to the antenna tower.</p>
Test Mode:	Transmitting mode with modulation
Test Procedure:	<ol style="list-style-type: none"> 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&SCHW ARZ	ESIB7	100197	Jul. 29, 2020
Spectrum Analyzer	ROHDE&SCHW ARZ	FSQ40	200061	Sep. 11, 2020
Spectrum Analyzer	Agilent	N9020A	MY49100619	Sep. 11, 2020
Pre-amplifier	EM Electronics Corporation CO.,LTD	EM30265	07032613	Sep. 08, 2020
Pre-amplifier	HP	8447D	2727A05017	Sep. 08, 2020
Loop antenna	ZHINAN	ZN30900A	12024	Oct. 20, 2019
Broadband Antenna	Schwarzbeck	VULB9163	340	Sep. 06, 2020
Horn Antenna	Schwarzbeck	BBHA 9120D	631	Sep. 06, 2020
Horn Antenna	A-INFO	LB-180400-KF	J211020657	Sep. 06, 2020
Coax cable (9KHz-40GHz)	TCT	RE-high-02	N/A	Sep. 08, 2020
Coax cable (9KHz-40GHz)	TCT	RE-high-04	N/A	Sep. 08, 2020
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	43.30	5.82	49.12	68.2	54	-4.88	H
		5150	38.77	5.82	44.59	68.2	54	-9.41	V
	Highest	5350	42.52	6.52	49.04	68.2	54	-4.96	H
		5350	39.47	6.52	45.99	68.2	54	-8.01	V
Band 3	Lowest	5470	43.88	5.82	49.7	68.2	54	-4.30	H
		5470	38.32	5.82	44.14	68.2	54	-9.86	V
	Highest	5850	46.51	6.52	53.03	68.2	54	-0.97	H
		5850	42.70	6.52	49.22	68.2	54	-4.78	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	45.26	6.96	52.22	68.2	54	-1.78	H
		5150	41.35	6.96	48.31	68.2	54	-5.69	V
	Highest	5350	43.24	8.21	51.45	68.2	54	-2.55	H
		5350	39.25	8.21	47.46	68.2	54	-6.54	V
Band 3	Lowest	5470	43.24	8.21	51.45	78.2	54	-2.55	H
		5470	43.24	8.21	51.45	78.2	54	-2.55	V
	Highest	5850	42.26	8.87	51.13	78.2	54	-2.87	H
		5850	40.28	8.87	49.15	78.2	54	-4.85	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	43.69	5.82	49.51	68.2	54	-4.49	H
		5150	38.77	5.82	44.59	68.2	54	-9.41	V
	Highest	5350	42.38	6.52	48.90	68.2	54	-5.10	H
		5350	39.74	6.52	46.26	68.2	54	-7.74	V
Band 3	Lowest	5470	43.8	5.82	49.62	68.2	54	-4.38	H
		5470	38.33	5.82	44.15	68.2	54	-9.85	V
	Highest	5850	45.36	6.52	51.88	68.2	54	-2.12	H
		5850	42.8	6.52	49.32	68.2	54	-4.68	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	45.38	6.96	52.34	68.2	54	-1.66	H
		5150	41.47	6.96	48.43	68.2	54	-5.57	V
	Highest	5350	43.36	8.21	51.57	68.2	54	-2.43	H
		5350	39.25	8.21	47.46	68.2	54	-6.54	V
Band 3	Lowest	5470	43.24	8.21	51.45	78.2	54	-2.55	H
		5470	43.24	8.21	51.45	78.2	54	-2.55	V
	Highest	5850	42.26	8.87	51.13	78.2	54	-2.87	H
		5850	40.28	8.87	49.15	78.2	54	-4.85	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	43.9	5.82	49.72	68.2	54	-4.28	H
		5150	38.98	5.82	44.80	68.2	54	-9.20	V
	Highest	5350	42.59	6.52	49.11	68.2	54	-4.89	H
		5350	39.95	6.52	46.47	68.2	54	-7.53	V
Band 3	Lowest	5470	44.01	5.82	49.83	68.2	54	-4.17	H
		5470	38.54	5.82	44.36	68.2	54	-9.64	V
	Highest	5850	45.57	6.52	52.09	68.2	54	-1.91	H
		5850	43.01	6.52	49.53	68.2	54	-4.47	V

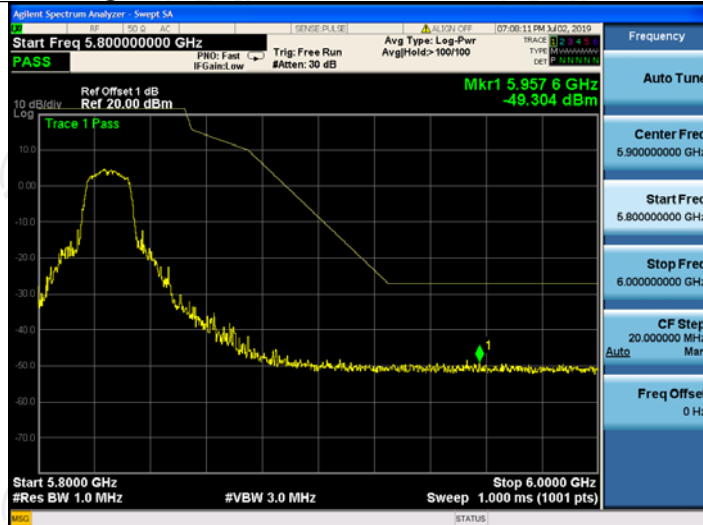
Remark: Factor(dB)=Ant. Factor + Cable Loss-Amp. Factor

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	Lowest	5150	45.16	5.82	50.98	68.2	54	-3.02	H
		5150	41.27	5.82	47.09	68.2	54	-6.91	V
	Highest	5350	43.33	6.52	49.85	68.2	54	-4.15	H
		5350	39.51	6.52	46.03	68.2	54	-7.97	V
Band 3	Lowest	5470	43.66	5.82	49.48	68.2	54	-4.52	H
		5470	43.47	5.82	49.29	68.2	54	-4.71	V
	Highest	5850	42.51	6.52	49.03	68.2	54	-4.97	H
		5850	40.82	6.52	47.34	68.2	54	-6.66	V

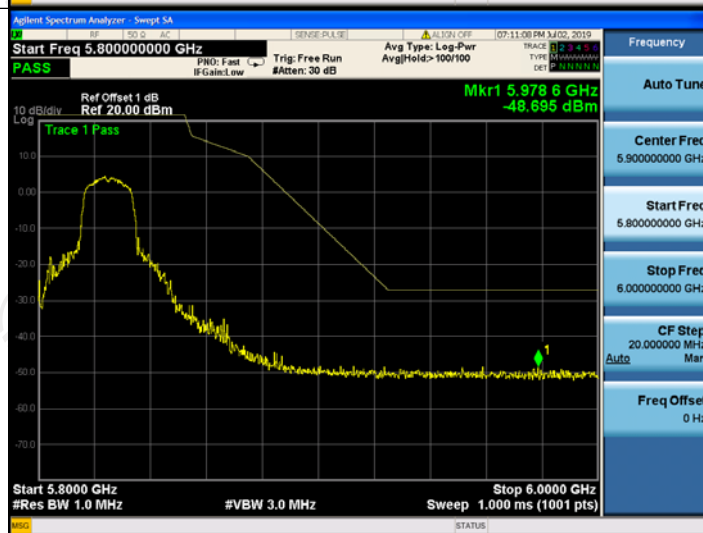
Remark: Factor(dB)=Ant. Factor + Cable Loss-Amp. Factor

Band 3 Band-edge for RF Conducted Emissions

802.11a
/HCH

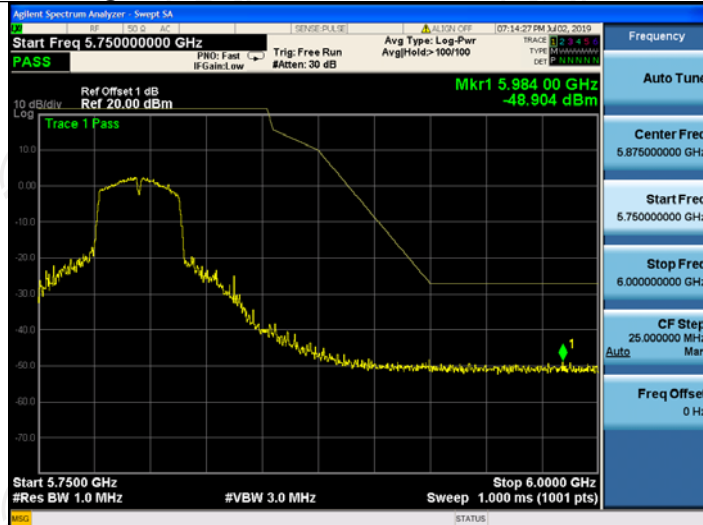


802.11n
HT20/HCH

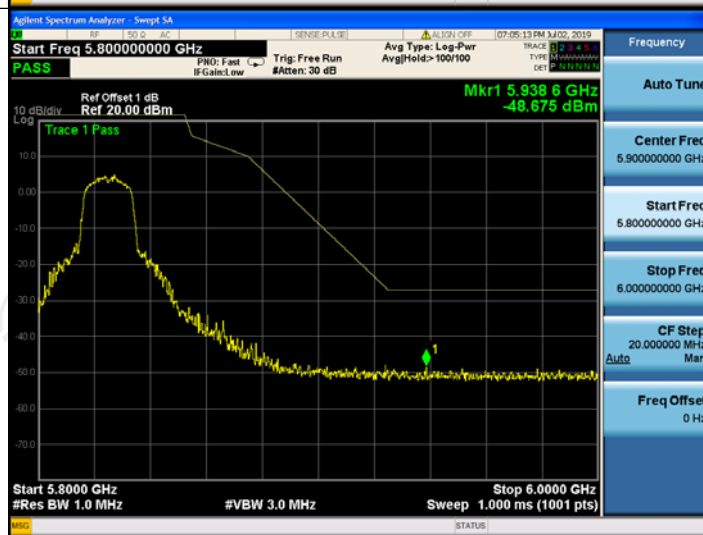


Band 3 Band-edge for RF Conducted Emissions

802.11n
HT40/HCH



802.11ac
HT20/HCH

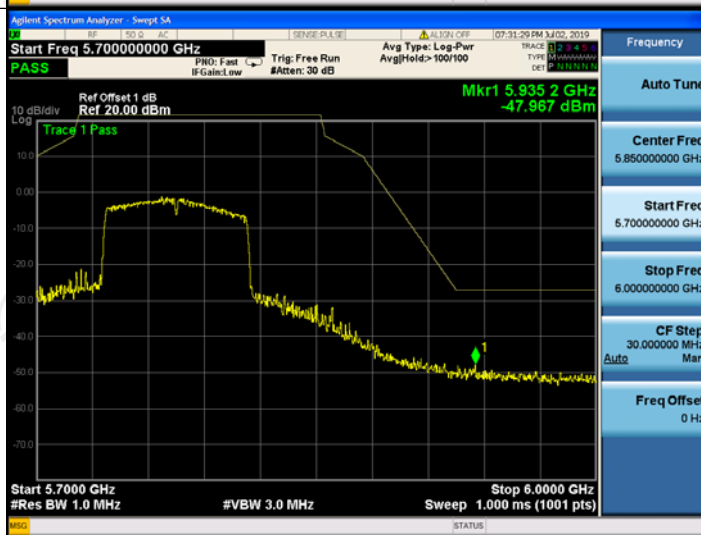


Band 3 Band-edge for RF Conducted Emissions

802.11ac
HT40/HCH



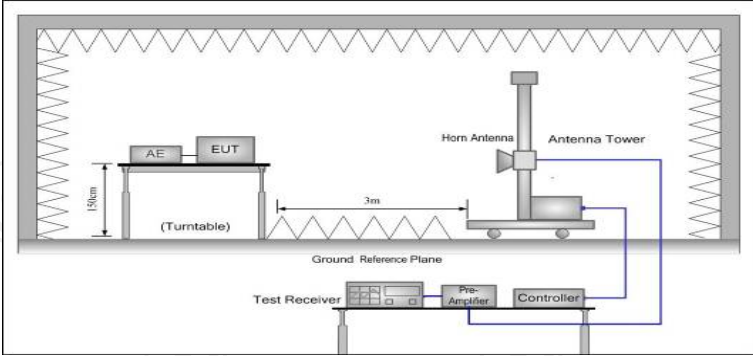
802.11ac
HT80/HCH



6.8. Spurious Emission

6.8.1. Restrict Bands Measurement

6.8.1.1. Test Specification

Test Requirement:	FCC CFR47 Part 15 Section 15.407 & 15.209 & 15.205				
Test Method:	KDB 789033 D02 v02r01				
Frequency Range:	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				
Measurement Distance:	3 m				
Antenna Polarization:	Horizontal & Vertical				
Operation mode:	Transmitting mode with modulation				
Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
		RMS	1MHz	3MHz	Average Value
Limit:	Frequency	Limit (dBuV/m @3m)	Remark		
	Above 1GHz	74	Peak Value		
		54	Average Value		
Test setup:	<p>Above 1GHz</p> 				
Test Procedure:	<ol style="list-style-type: none"> The testing follows FCC KDB Publication No. 789033 D02 General UNII Test Procedures New Rules v02r01. Section G) Unwanted emissions measurement. 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 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 \geq 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 \geq 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 during radiated emissions above 1GHz measurement.

Test results:

PASS

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. 29, 2020
Spectrum Analyzer	ROHDE&SCHWARZ	FSQ40	200061	Sep. 11, 2020
Spectrum Analyzer	Agilent	N9020A	MY49100619	Sep. 11, 2020
Pre-amplifier	EM Electronics Corporation CO.,LTD	EM30265	07032613	Sep. 08, 2020
Pre-amplifier	HP	8447D	2727A05017	Sep. 08, 2020
Loop antenna	ZHINAN	ZN30900A	12024	Oct. 20, 2019
Broadband Antenna	Schwarzbeck	VULB9163	340	Sep. 06, 2020
Horn Antenna	Schwarzbeck	BBHA 9120D	631	Sep. 06, 2020
Horn Antenna	A-INFO	LB-180400-KF	J211020657	Sep. 06, 2020
Coax cable (9KHz-40GHz)	TCT	RE-high-02	N/A	Sep. 08, 2020
Coax cable (9KHz-40GHz)	TCT	RE-high-04	N/A	Sep. 08, 2020
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).

6.8.1.2 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	42.35	---	5.79	48.14	---	74	54	-5.86
5150.00	H	39.52	---	5.82	45.34	---	74	54	-8.66
5142.20	V	40.14	---	5.79	45.93	---	74	54	-8.07
5150.00	V	41.55	---	5.82	47.37	---	74	54	-6.63

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	41.47	---	5.85	47.32	---	74	54	-6.68
5360.00	H	39.62	---	5.91	45.53	---	74	54	-8.47
5342.90	V	43.29	---	5.86	49.15	---	74	54	-4.85
5360.00	V	38.81	---	5.91	44.72	---	74	54	-9.28

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	43.28	---	5.79	49.07	---	74	54	-4.93
5150.00	H	41.51	---	5.82	47.33	---	74	54	-6.67
5142.20	V	40.95	---	5.79	46.74	---	74	54	-7.26
5150.00	V	42.33	---	5.82	48.15	---	74	54	-5.85

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	42.73	---	5.85	48.58	---	74	54	-5.42
5360.00	H	40.14	---	5.91	46.05	---	74	54	-7.95
5337.70	V	39.53	---	5.86	45.39	---	74	54	-8.61
5360.00	V	40.48	---	5.91	46.39	---	74	54	-7.61

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	45.11	---	5.80	50.91	---	74	54	-3.09
5150.00	H	43.77	---	5.82	49.59	---	74	54	-4.41
5135.98	V	42.59	---	5.80	48.39	---	74	54	-5.61
5150.00	V	40.54	---	5.82	46.36	---	74	54	-7.64

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	43.82	---	5.86	49.68	---	74	54	-4.32
5360.00	H	42.43	---	5.91	48.34	---	74	54	-5.66
5331.4	V	41.85	---	5.85	47.70	---	74	54	-6.30
5360.00	V	40.67	---	5.91	46.58	---	74	54	-7.42

11ac(VHT20) CH36: 5180MHz

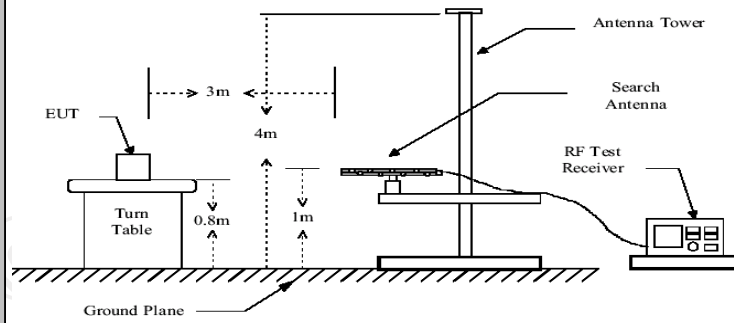
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dBμV)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level		Peak limit (dBμV/m)	AV limit (dBμV/m)	Margin (dB)
					Peak (dBμV/m)	AV (dBμV/m)			
5142.20	H	42.62	---	5.79	48.41	---	74	54	-5.59
5150.00	H	38.53	---	5.82	44.35	---	74	54	-9.65

5142.20	V	43.21	---	5.79	49.00	---	74	54	-5.00
5150.00	V	41.44	---	5.82	47.26	---	74	54	-6.74
11ac(VHT20) CH64: 5320MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dB μ V)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level		Peak limit (dB μ V/m)	AV limit (dB μ V/m)	Margin (dB)
					Peak (dB μ V/m)	AV (dB μ V/m)			
5332.4	H	42.73	---	5.85	48.58	---	74	54	-5.42
5360.00	H	41.16	---	5.91	47.07	---	74	54	-6.93
5331.3	V	40.79	---	5.86	46.65	---	74	54	-7.35
5360.00	V	39.52	---	5.91	45.43	---	74	54	-8.57
11ac(VHT40) CH38: 5190MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dB μ V)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level		Peak limit (dB μ V/m)	AV limit (dB μ V/m)	Margin (dB)
					Peak (dB μ V/m)	AV (dB μ V/m)			
5142.20	H	42.86	---	5.80	48.66	---	74	54	-5.34
5150.00	H	39.65	---	5.82	45.47	---	74	54	-8.53
5142.20	V	43.52	---	5.80	49.32	---	74	54	-4.68
5150.00	V	41.98	---	5.82	47.80	---	74	54	-6.20
11ac(VHT40) CH62: 5310MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dB μ V)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level		Peak limit (dB μ V/m)	AV limit (dB μ V/m)	Margin (dB)
					Peak (dB μ V/m)	AV (dB μ V/m)			
5333.40	H	41.74	---	5.86	47.60	---	74	54	-6.40
5360.00	H	37.66	---	5.91	43.57	---	74	54	-10.43
5340.50	V	42.43	---	5.85	48.28	---	74	54	-5.72
5360.00	V	40.53	---	5.91	46.44	---	74	54	-7.56
11ac(VHT80) CH42: 5210MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dB μ V)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level		Peak limit (dB μ V/m)	AV limit (dB μ V/m)	Margin (dB)
					Peak (dB μ V/m)	AV (dB μ V/m)			
5142.20	H	41.80	---	5.80	47.60	---	74	54	-6.40
5150.00	H	39.42	---	5.82	45.24	---	74	54	-8.76
5142.20	V	40.36	---	5.80	46.16	---	74	54	-7.84
5150.00	V	38.79	---	5.82	44.61	---	74	54	-9.39
11ac(VHT80) CH58: 5290MHz									
Frequency (MHz)	Ant. Pol. H/V	Peak reading (dB μ V)	AV reading (dBuV)	Correction Factor (dB/m)	Emission Level		Peak limit (dB μ V/m)	AV limit (dB μ V/m)	Margin (dB)
					Peak (dB μ V/m)	AV (dB μ V/m)			
5329.30	H	43.21	---	5.85	49.06	---	74	54	-4.94
5360.00	H	40.32	---	5.91	46.23	---	74	54	-7.77
5313.70	V	42.52	---	5.86	48.38	---	74	54	-5.62
5360.00	V	39.61	---	5.91	45.52	---	74	54	-8.48

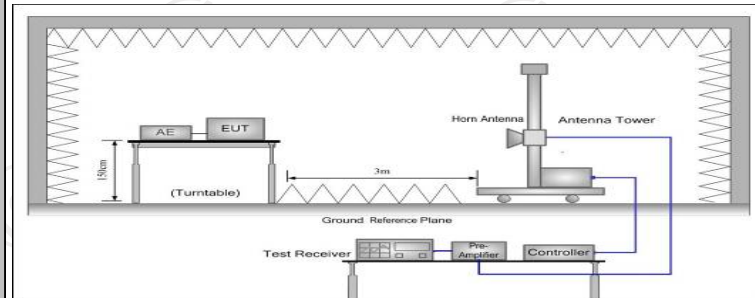
6.8.2. Unwanted Emissions out of the Restricted Bands

6.8.2.1. Test Specification

Test Requirement:	FCC CFR47 Part 15 Section 15.407 & 15.209 & 15.205				
Test Method:	KDB 789033 D02 v02r01				
Frequency Range:	9kHz to 40GHz				
Measurement Distance:	3 m				
Antenna Polarization:	Horizontal & Vertical				
Operation mode:	Transmitting mode with modulation				
Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	9kHz- 150kHz	Quasi-peak	200Hz	1kHz	Quasi-peak Value
	150kHz- 30MHz	Quasi-peak	9kHz	30kHz	Quasi-peak Value
	30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak Value
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
		Peak	1MHz	10Hz	Average Value
Limit:	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,				
	Frequency	Field Strength (microvolts/meter)	Measurement Distance (meters)		
	0.009-0.490	2400/F(KHz)	300		
	0.490-1.705	24000/F(KHz)	30		
	1.705-30	30	30		
	30-88	100	3		
	88-216	150	3		
	216-960	200	3		
	Above 960	500	3		
	Frequency	Limit (dBuV/m @3m)	Detector		
Above 1G	74.0	Peak			
	54.0	Average			
Test setup:	For radiated emissions below 30MHz				
	<p>Distance = 3m</p> <p>EUT</p> <p>Turn table</p> <p>Ground Plane</p> <p>Computer</p> <p>Pre-Amplifier</p> <p>Receiver</p>				
	30MHz to 1GHz				



Above 1GHz



Test Procedure:

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter diameter. 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 rotating 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, quasi-peak or average method as specified and then reported in a data sheet.

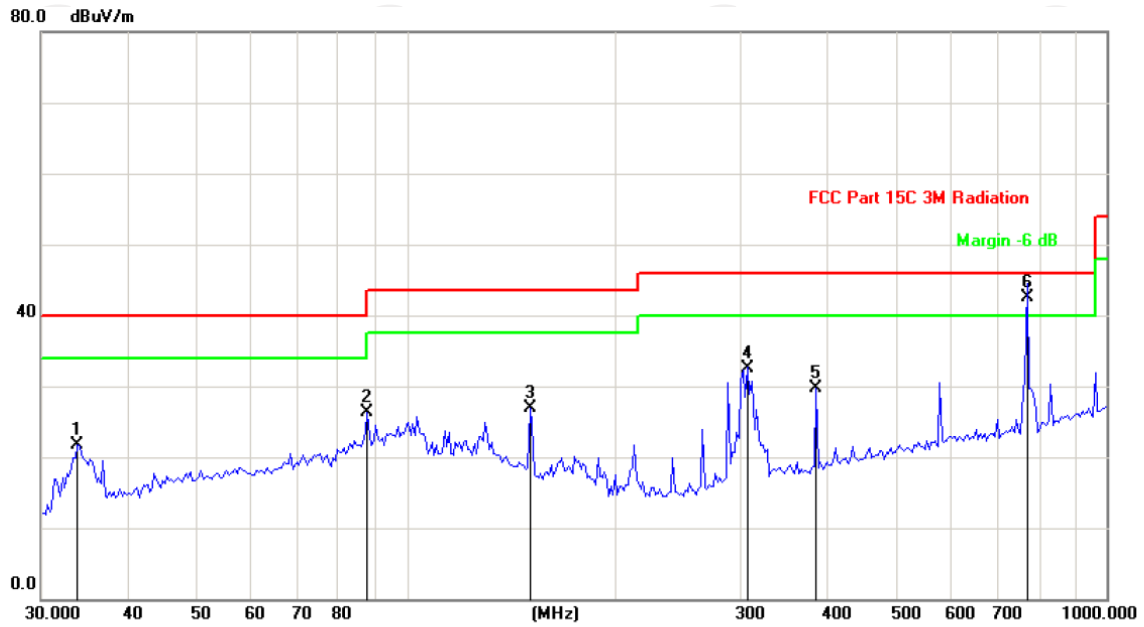
Test results:

PASS

6.8.3. Test Data

Please refer to following diagram for individual
Below 1GHz

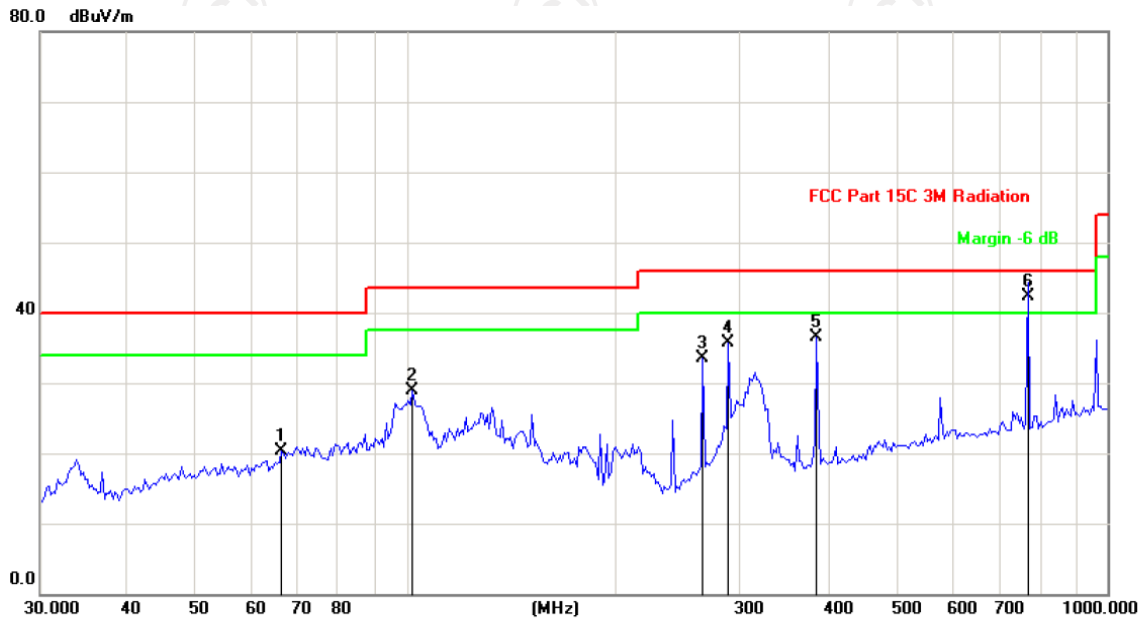
Horizontal:



Site: Polarization: *Horizontal* Temperature: 25
Limit: FCC Part 15C 3M Radiation Power: AC 120V/60Hz Humidity: 55 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB/m	Over dB	Detector
1		33.8067	32.77	-11.02	21.75	40.00	-18.25	QP
2		87.9136	38.05	-11.71	26.34	40.00	-13.66	QP
3		149.9676	43.08	-16.26	26.82	43.50	-16.68	QP
4		307.1053	43.35	-10.75	32.60	46.00	-13.40	QP
5		384.5447	38.86	-9.18	29.68	46.00	-16.32	QP
6	*	771.0475	46.96	-4.55	42.41	46.00	-3.59	QP

Vertical:



Site: Polarization: **Vertical** Temperature: 25
 Limit: FCC Part 15C 3M Radiation Power: AC 120V/60Hz Humidity: 55 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB/m	Over dB	Detector
1		66.3713	34.84	-14.45	20.39	40.00	-19.61	QP
2		101.8931	37.00	-8.17	28.83	43.50	-14.67	QP
3		264.9707	45.58	-12.07	33.51	46.00	-12.49	QP
4		288.2839	47.08	-11.31	35.77	46.00	-10.23	QP
5		384.5446	45.60	-9.18	36.42	46.00	-9.58	QP
6	*	771.0475	46.76	-4.55	42.21	46.00	-3.79	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(VHT20), 802.11ac(VHT40) 802.11nac(VHT80), and the worst case Mode (Lowest channel and 11a) was submitted only.

Modulation Type: Band 1

11a 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	40.79	---	8.02	48.81	---	74	54	-5.19
15540	H	42.58	---	9.87	52.45	---	74	54	-1.55
---	H	---	---	---	---	---	---	---	---
10360	V	39.42	---	8.02	47.44	---	74	54	-6.56
15540	V	42.29	---	9.87	52.16	---	74	54	-1.84
---	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	41.23	---	7.97	49.2	---	74	54	-4.80
15600	H	40.51	---	9.83	50.34	---	74	54	-3.66
---	H	---	---	---	---	---	---	---	---
10400	V	42.27	---	7.97	50.24	---	74	54	-3.76
15600	V	40.45	---	9.83	50.28	---	74	54	-3.72
---	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	40.75	---	7.97	48.72	---	74	54	-5.28
15720	H	41.92	---	9.83	51.75	---	74	54	-2.25
---	H	---	---	---	---	---	---	---	---
10480	V	41.46	---	7.97	49.43	---	74	54	-4.57
15720	V	39.23	---	9.83	49.06	---	74	54	-4.94
---	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	41.53	---	8.02	49.55	---	74	54	-4.45
15540	H	42.47	---	9.87	52.34	---	74	54	-1.66
---	H	---	---	---	---	---	---	---	---
10360	V	41.21	---	8.02	49.23	---	74	54	-4.77
15540	V	39.88	---	9.87	49.75	---	74	54	-4.25
---	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	40.45	---	7.97	48.42	---	74	54	-5.58
15600	H	41.69	---	9.83	51.52	---	74	54	-2.48
---	H	---	---	---	---	---	---	---	---
10400	V	43.33	---	7.97	51.3	---	74	54	-2.70
15600	V	40.66	---	9.83	50.49	---	74	54	-3.51
---	V	---	---	---	---	---	---	---	---

11n(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	40.59	---	7.97	48.56	---	74	54	-5.44
15720	H	39.41	---	9.83	49.24	---	74	54	-4.76
---	H	---	---	---	---	---	---	---	---
10480	V	41.27	---	7.97	49.24	---	74	54	-4.76
15720	V	40.66	---	9.83	50.49	---	74	54	-3.51
---	V	---	---	---	---	---	---	---	---

11n(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	42.39	---	7.75	50.14	---	74	54	-3.86
15570	H	42.55	---	9.87	52.42	---	74	54	-1.58
---	H	---	---	---	---	---	---	---	---
10380	V	41.41	---	7.75	49.16	---	74	54	-4.84
15570	V	40.59	---	9.87	50.46	---	74	54	-3.54
---	V	---	---	---	---	---	---	---	---

11n(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	42.65	---	7.97	50.78	---	74	54	-3.22
15690	H	40.27	---	9.83	50.55	---	74	54	-3.45
---	H	---	---	---	---	---	---	---	---
10460	V	43.44	---	7.97	51.66	---	74	54	-2.34
15690	V	41.61	---	9.83	51.38	---	74	54	-2.62
---	V	---	---	---	---	---	---	---	---

11ac(VHT20) 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	43.49	---	8.02	51.51	---	74	54	-2.49
15540	H	42.57	---	9.87	52.44	---	74	54	-1.56
---	H	---	---	---	---	---	---	---	---
10360	V	40.81	---	8.02	48.83	---	74	54	-5.17
15540	V	42.61	---	9.87	52.48	---	74	54	-1.52
---	V	---	---	---	---	---	---	---	---

11ac(VHT20) 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	42.72	---	7.97	50.69	---	74	54	-3.31
15600	H	41.62	---	9.83	51.45	---	74	54	-2.55
---	H	---	---	---	---	---	---	---	---
10400	V	41.93	---	7.97	49.9	---	74	54	-4.10
15600	V	40.43	---	9.83	50.26	---	74	54	-3.74
---	V	---	---	---	---	---	---	---	---

11ac(VHT20) 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	39.22	---	7.97	47.19	---	74	54	-6.81
15720	H	42.79	---	9.83	52.62	---	74	54	-1.38
---	H	---	---	---	---	---	---	---	---
10480	V	41.52	---	7.97	49.49	---	74	54	-4.51
15720	V	42.91	---	9.83	52.74	---	74	54	-1.26
---	V	---	---	---	---	---	---	---	---

11ac(VHT40) 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	43.49	---	7.75	51.24	---	74	54	-2.76
15570	H	41.37	---	9.87	51.24	---	74	54	-2.76
---	H	---	---	---	---	---	---	---	---
10380	V	40.88	---	7.75	48.63	---	74	54	-5.37
15570	V	42.62	---	9.87	52.49	---	74	54	-1.51
---	V	---	---	---	---	---	---	---	---

11ac(VHT40) 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	41.51	---	7.97	49.48	---	74	54	-4.52
15690	H	42.77	---	9.83	52.6	---	74	54	-1.40
---	H	---	---	---	---	---	---	---	---
10460	V	42.31	---	7.97	50.28	---	74	54	-3.72
15690	V	40.58	---	9.83	50.41	---	74	54	-3.59
---	V	---	---	---	---	---	---	---	---

11ac(VHT80) CH42:5210

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)			
10420	H	42.21	---	7.96	50.17	---	74	54	-3.83
15630	H	41.57	---	9.84	51.41	---	74	54	-2.59
---	H	---	---	---	---	---	---	---	---
10420	V	42.35	---	7.96	50.31	---	74	54	-3.69
15630	V	41.44	---	9.84	51.28	---	74	54	-2.72
---	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 (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	40.25	---	8.09	48.34	---	74	54	-5.66
17235	H	39.65	---	9.67	49.32	---	74	54	-4.68
---	H	---	---	---	---	---	---	---	---
11490	V	42.37	---	8.09	50.46	---	74	54	-3.54
17235	V	42.8	---	9.67	52.47	---	74	54	-1.53
---	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	42.08	---	8.10	50.18	---	74	54	-3.82
17355	H	41.15	---	9.65	50.80	---	74	54	-3.20
---	H	---	---	---	---	---	---	---	---
11570	V	40.69	---	8.10	48.79	---	74	54	-5.21
17355	V	41.81	---	9.65	51.46	---	74	54	-2.54
---	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	40.11	---	8.12	48.23	---	74	54	-5.77
17475	H	39.12	---	9.62	48.74	---	74	54	-5.26
---	H	---	---	---	---	---	---	---	---
11650	V	41.46	---	8.12	49.58	---	74	54	-4.42
17475	V	40.89	---	9.62	50.51	---	74	54	-3.49
---	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	41.65	---	8.09	49.74	---	74	54	-4.26
17265	H	40.51	---	9.67	50.18	---	74	54	-3.82
---	H	---	---	---	---	---	---	---	---
11510	V	42.16	---	8.09	50.25	---	74	54	-3.75
17265	V	40.83	---	9.67	50.50	---	74	54	-3.50
---	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	41.92	---	8.10	50.02	---	74	54	-3.98
17355	H	42.72	---	9.65	52.37	---	74	54	-1.63
---	H	---	---	---	---	---	---	---	---
11570	V	40.16	---	8.10	48.26	---	74	54	-5.74
17355	V	40.93	---	9.65	50.58	---	74	54	-3.42
---	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	40.17	---	8.12	48.29	---	74	54	-5.71
17475	H	39.44	---	9.62	49.06	---	74	54	-4.94
---	H	---	---	---	---	---	---	---	---
11650	V	43.82	---	8.12	51.94	---	74	54	-2.06
17475	V	41.59	---	9.62	51.21	---	74	54	-2.79
---	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	42.99	---	8.09	51.08	---	74	54	-2.92
17265	H	43.81	---	9.67	53.48	---	74	54	-0.52
---	H	---	---	---	---	---	---	---	---
11510	V	42.85	---	8.09	50.94	---	74	54	-3.06
17265	V	41.97	---	9.67	51.64	---	74	54	-2.36
---	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	41.61	---	8.10	49.71	---	74	54	-4.29
17385	H	42.66	---	9.65	52.31	---	74	54	-1.69
---	H	---	---	---	---	---	---	---	---
11590	V	41.33	---	8.10	49.43	---	74	54	-4.57
17385	V	39.28	---	9.65	48.93	---	74	54	-5.07
---	V	---	---	---	---	---	---	---	---

11ac(VHT40) 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	42.39	---	8.09	50.48	---	74	54	-3.52
17235	H	42.55	---	9.67	52.22	---	74	54	-1.78
---	H	---	---	---	---	---	---	---	---
11490	V	41.71	---	8.09	49.8	---	74	54	-4.20
17235	V	43.59	---	9.67	53.26	---	74	54	-0.74
---	V	---	---	---	---	---	---	---	---

11ac(VHT20) 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	40.75	---	8.10	48.85	---	74	54	-5.15
17355	H	38.62	---	9.65	48.27	---	74	54	-5.73
---	H	---	---	---	---	---	---	---	---
11570	V	39.45	---	8.10	47.55	---	74	54	-6.45
17355	V	40.57	---	9.65	50.22	---	74	54	-3.78
---	V	---	---	---	---	---	---	---	---

11ac(VHT20) 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	41.68	---	8.12	49.80	---	74	54	-4.20
17475	H	40.37	---	9.62	49.99	---	74	54	-4.01
---	H	---	---	---	---	---	---	---	---
11650	V	41.88	---	8.12	50.00	---	74	54	-4.00
17475	V	42.64	---	9.62	52.26	---	74	54	-1.74
---	V	---	---	---	---	---	---	---	---

11ac(VHT40) 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	41.74	---	8.12	49.86	---	74	54	-4.14
17265	H	39.36	---	9.62	48.98	---	74	54	-5.02
---	H	---	---	---	---	---	---	---	---
11510	V	42.21	---	8.09	50.30	---	74	54	-3.70
17265	V	39.33	---	9.67	49.00	---	74	54	-5.00
---	V	---	---	---	---	---	---	---	---

11ac(VHT40) 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	41.61	---	8.1	49.71	---	74	54	-4.29
17385	H	39.44	---	9.65	49.09	---	74	54	-4.91
---	H	---	---	---	---	---	---	---	---
11590	V	42.22	---	8.10	50.32	---	74	54	-3.68
17385	V	41.66	---	9.65	51.31	---	74	54	-2.69
---	V	---	---	---	---	---	---	---	---

11ac(VHT80) 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	41.57	---	8.09	49.66	---	74	54	-4.34
17325	H	42.89	---	9.66	52.55	---	74	54	-1.45
---	H	---	---	---	---	---	---	---	---
11550	V	42.55	---	8.09	50.64	---	74	54	-3.36
17325	V	40.32	---	9.66	49.98	---	74	54	-4.02
---	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.

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:	<pre> graph LR SA[Spectrum Analyzer] --- EUT[EUT] subgraph TC [Temperature Chamber] EUT end P[AC/DC Power supply] --- EUT </pre>
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 all models(11a,11n,11ac), the worst case (11ac) was found and test data was shown in this report.

Test plots as follows:

Test mode:		802.11ac(VHT20)	Frequency(MHz):	5180
Temperature (°C)	Voltage(VDC)	Measurement Frequency(MHz)	Delta Frequency(Hz)	Result
45	3.7V	5180.0095	9500	PASS
35		5180.0068	6800	PASS
25		5179.9878	-12200	PASS
15		5179.9983	-1700	PASS
5		5180.0025	2500	PASS
0		5180.0049	4900	PASS
20		4.3	5179.9831	-16900
	3.8	5180.0030	3000	PASS
	3.6	5179.9825	-17500	PASS

Test mode:		802.11ac(VHT20)	Frequency(MHz):	5200
Temperature (°C)	Voltage(VDC)	Measurement Frequency(MHz)	Delta Frequency(Hz)	Result
45	3.7V	5200.0090	9000	PASS
35		5200.0081	8100	PASS
25		5200.0072	7200	PASS
15		5200.0046	4600	PASS
5		5199.9980	-2000	PASS
0		5199.9879	-12100	PASS
20		4.3	5199.9957	-4300
	3.8	5200.0037	3700	PASS
	3.6	5200.0055	5500	PASS

Test mode:		802.11ac(VHT20)	Frequency(MHz):	5240
Temperature (°C)	Voltage(VDC)	Measurement Frequency(MHz)	Delta Frequency(Hz)	Result
45	3.7V	5240.0044	4400	PASS
35		5240.0022	2200	PASS
25		5240.0029	2900	PASS
15		5239.9991	-900	PASS
5		5239.9983	-1700	PASS
0		5239.9979	-2100	PASS
20		4.3	5240.0031	3100
	3.8	5240.0019	1900	PASS
	3.6	5239.9985	-1500	PASS

Test mode:		802.11ac(VHT20)	Frequency(MHz):	5745
Temperature (°C)	Voltage(VDC)	Measurement Frequency(MHz)	Delta Frequency(Hz)	Result
45	3.7V	5745.0020	2000	PASS
35		5745.0018	1800	PASS
25		5744.9960	-4000	PASS
15		5744.9955	-4500	PASS
5		5745.0032	3200	PASS
0		5745.0051	5100	PASS
20	4.3	5745.0071	7100	PASS
	3.8	5745.0079	7900	PASS
	3.6	5745.0021	2100	PASS

Test mode:		802.11ac(VHT20)	Frequency(MHz):	5785
Temperature (°C)	Voltage(VDC)	Measurement Frequency(MHz)	Delta Frequency(Hz)	Result
45	3.7V	5785.0077	7700	PASS
35		5785.0036	3600	PASS
25		5785.0025	2500	PASS
15		5785.0010	1000	PASS
5		5785.0030	3000	PASS
0		5785.0046	4600	PASS
20	4.3	5785.0049	4900	PASS
	3.8	5785.0034	3400	PASS
	3.6	5784.9975	-2500	PASS

Test mode:		802.11ac(VHT20)	Frequency(MHz):	5825
Temperature (°C)	Voltage(VDC)	Measurement Frequency(MHz)	Delta Frequency(Hz)	Result
45	3.7V	5824.9813	-18700	PASS
35		5825.0076	7600	PASS
25		5824.9953	-4700	PASS
15		5824.9985	-1500	PASS
5		5825.0019	1900	PASS
0		5825.0052	5200	PASS
20	4.3	5825.0048	4800	PASS
	3.8	5824.9987	-1300	PASS
	3.6	5825.0038	3800	PASS

Test mode:		802.11ac(VHT40)	Frequency(MHz):	5190
Temperature (°C)	Voltage(VDC)	Measurement Frequency(MHz)	Delta Frequency(Hz)	Result
45	3.7V	5190.0122	12200	PASS
35		5190.0112	11200	PASS
25		5190.0109	10900	PASS
15		5190.0029	2900	PASS
5		5190.0068	6800	PASS
0		5190.0074	7400	PASS
20	4.3	5189.9910	-9000	PASS
	3.8	5189.9978	-2200	PASS
	3.6	5190.0049	4900	PASS

Test mode:		802.11ac(VHT40)	Frequency(MHz):	5230
Temperature (°C)	Voltage(VDC)	Measurement Frequency(MHz)	Delta Frequency(Hz)	Result
45	3.7V	5230.0121	12100	PASS
35		5230.0128	12800	PASS
25		5230.0095	9500	PASS
15		5229.9988	-1200	PASS
5		5229.9981	-1900	PASS
0		5230.0059	5900	PASS
20	4.3	5230.0044	4400	PASS
	3.8	5230.0023	2300	PASS
	3.6	5229.9978	-2200	PASS

Test mode:		802.11ac(VHT40)	Frequency(MHz):	5755
Temperature (°C)	Voltage(VDC)	Measurement Frequency(MHz)	Delta Frequency(Hz)	Result
45	3.7V	5755.0279	27900	PASS
35		5755.0128	12800	PASS
25		5755.0113	11300	PASS
15		5755.0091	9100	PASS
5		5755.0031	3100	PASS
0		5755.0070	7000	PASS
20	4.3	5755.0044	4400	PASS
	3.8	5755.0026	2600	PASS
	3.6	5755.0067	6700	PASS

Test mode:		802.11ac(VHT40)	Frequency(MHz):	5795
Temperature (°C)	Voltage(VDC)	Measurement Frequency(MHz)	Delta Frequency(Hz)	Result
45	3.7V	5794.9802	-19800	PASS
35		5794.9843	-15700	PASS
25		5795.0055	5500	PASS
15		5795.0037	3700	PASS
5		5795.0024	2400	PASS
0		5795.0059	5900	PASS
20	4.3	5795.0048	4800	PASS
	3.8	5794.9983	-1700	PASS
	3.6	5795.0052	5200	PASS

Test mode:		802.11ac(VHT80)	Frequency(MHz):	5210
Temperature (°C)	Voltage(VDC)	Measurement Frequency(MHz)	Delta Frequency(Hz)	Result
45	3.7V	5210.0076	7600	PASS
35		5210.0061	6100	PASS
25		5210.0045	4500	PASS
15		5210.0058	5800	PASS
5		5210.0083	8300	PASS
0		5210.0096	9600	PASS
20	4.3	5210.0083	8300	PASS
	3.8	5210.0067	6700	PASS
	3.6	5210.0071	7100	PASS

Test mode:		802.11ac(VHT80)	Frequency(MHz):	5775
Temperature (°C)	Voltage(VDC)	Measurement Frequency(MHz)	Delta Frequency(Hz)	Result
45	3.7V	5775.0088	8800	PASS
35		5775.0063	6300	PASS
25		5775.0051	5100	PASS
15		5774.9938	-6200	PASS
5		5774.9921	-7900	PASS
0		5774.9906	-9400	PASS
20	4.3	5775.0081	8100	PASS
	3.8	5775.0046	4600	PASS
	3.6	5775.0076	7600	PASS

Appendix A: Photographs of Test Setup

Refer to the test report No. TCT190614E012

Appendix B: Photographs of EUT

Refer to the test report No. TCT190614E012

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