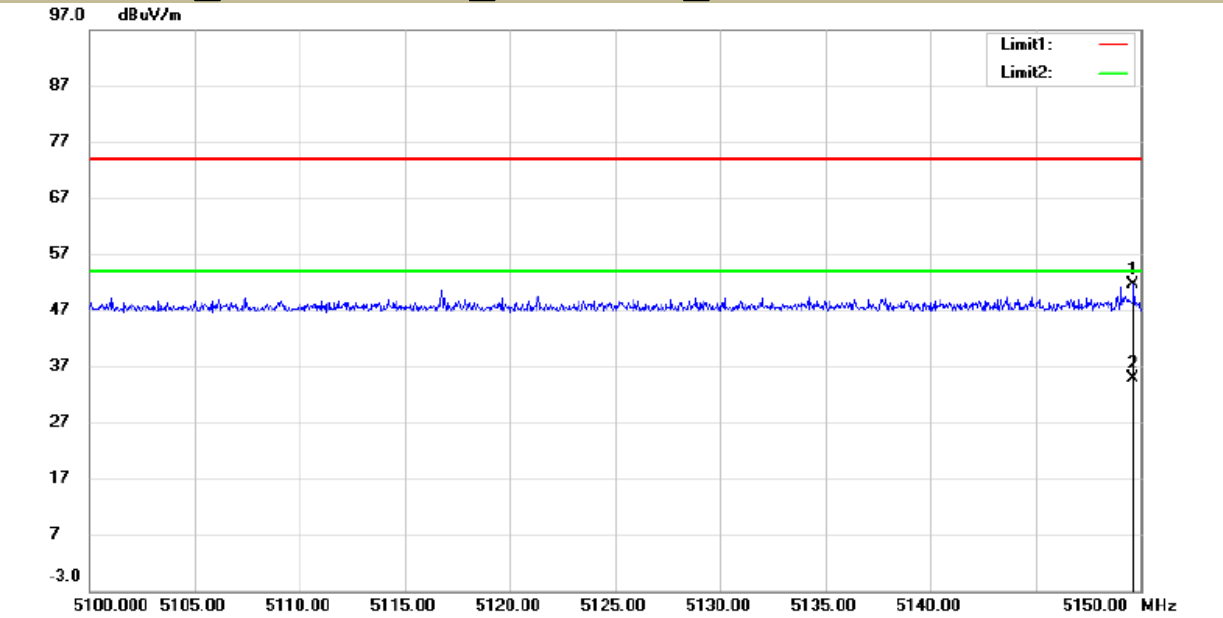


U-NII - 1

Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)

802.11ac 802.11n(HT20) 802.11n(HT40)

5180 5200 5240 Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 29.5 C

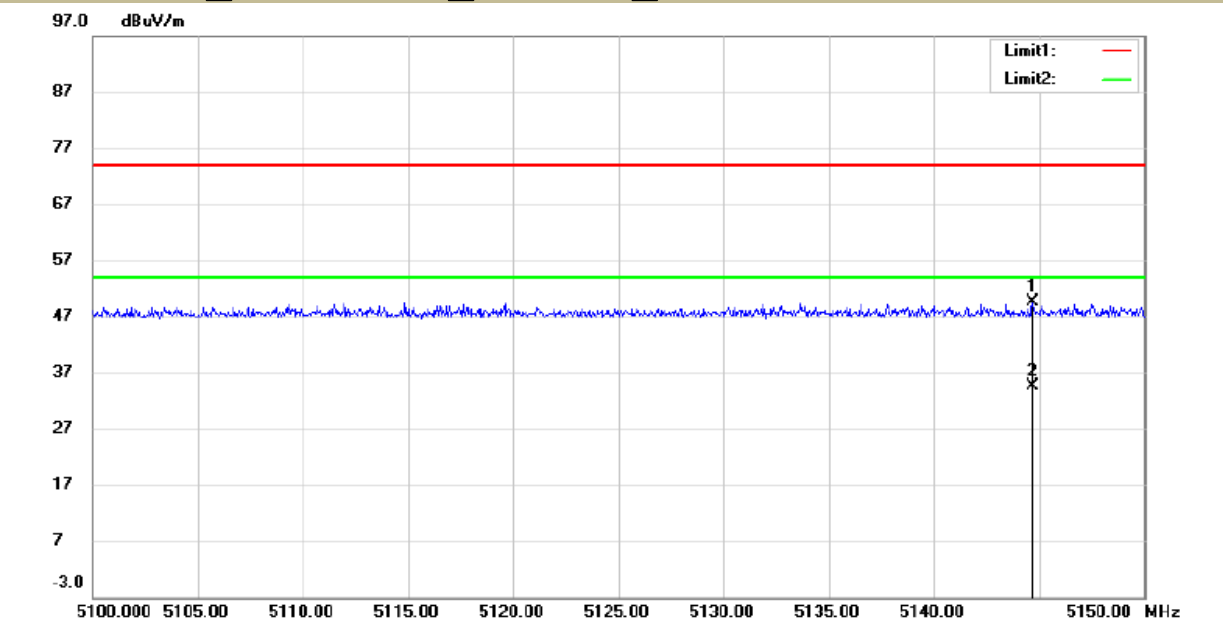
Limit: (RE)FCC PART 15 CLASS B Power: AC 30V Humidity: 48 %

U-NII - 1

Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)

802.11ac 802.11n(HT20) 802.11n(HT40)

5180 5200 5240 Ant.Pol V



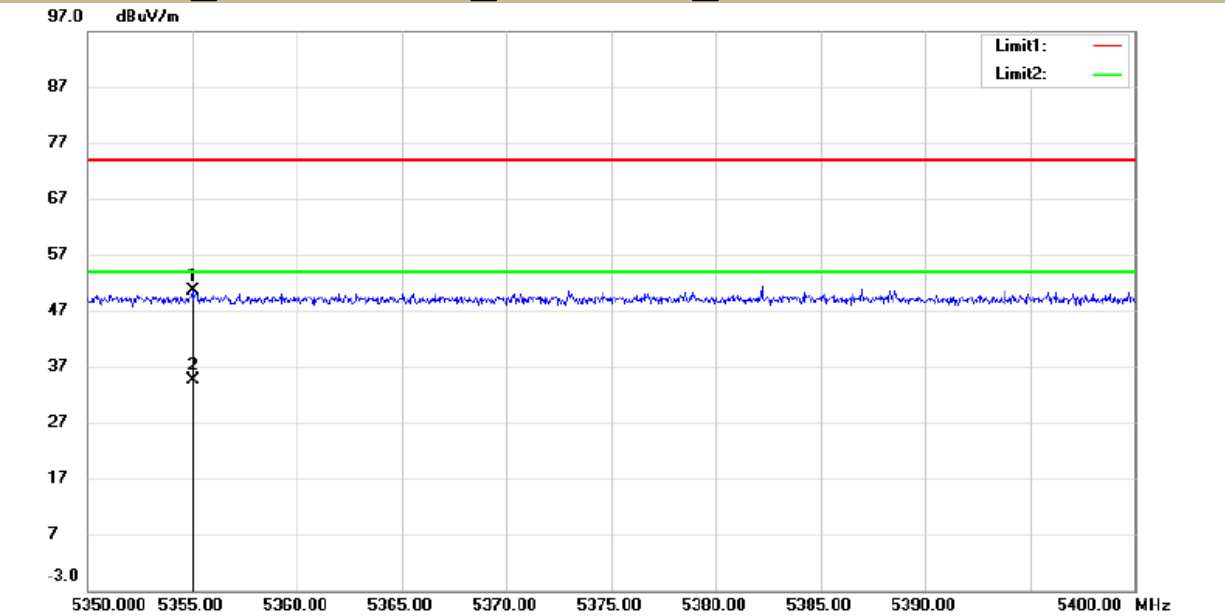
Site 3m Chamber #1 Polarization: **Vertical** Temperature: 29.5 C

Limit: (RE)FCC PART 15 CLASS B Power: AC 30V Humidity: 48 %

U-NII - 1

Test Model Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)

5180 802.11ac 5200 802.11n(HT20) 802.11n(HT40) Ant.Pol H

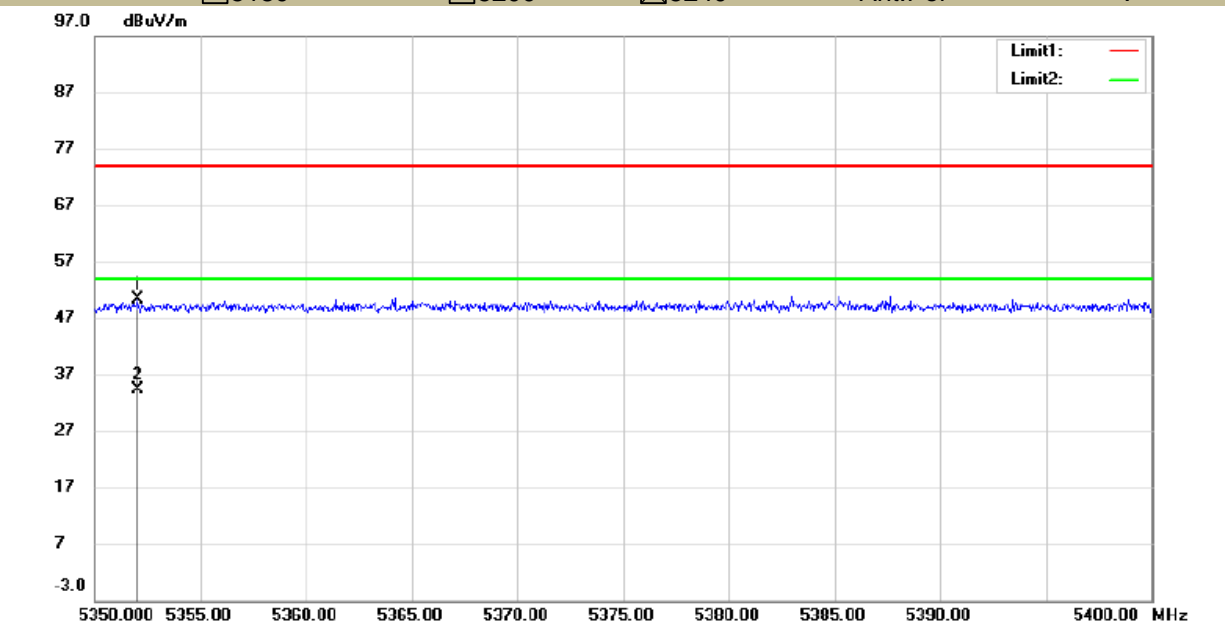


Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 29.5 C
 Limit: (RE)FCC PART 15 CLASS B Power: AC 120V/60Hz Humidity: 48 %

U-NII - 1

Test Model Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)

5180 802.11ac 5200 802.11n(HT20) 802.11n(HT40) Ant.Pol V



Site 3m Chamber #1 Polarization: **Vertical** Temperature: 29.5 C
 Limit: (RE)FCC PART 15 CLASS B Power: AC 30V Humidity: 48 %

- For Undesirable radiated Spurious Emission in U-NII -2A
 - All the modes 802.11a/n/ac has been tested and the worst result antenna 1 802.11ac recorded as below:
- : Undesirable radiated Spurious Emission Above 1GHz (1GHz to 40GHz)

Test mode: 802.11ac Frequency(MHz): 5260

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
3347.37	V	40.76	-54.47	-27	-27.47
5631.87	V	46.95	-48.28	-27	-21.28
12114.35	V	57.10	-38.13	-27	-11.13
5104.74	H	46.11	-49.12	-27	-22.12
7762.26	H	53.80	-41.43	-27	-14.43
11566.86	H	57.97	-37.26	-27	-10.26

Test mode: 802.11ac Frequency(MHz): 5280

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
5567.13	V	47.34	-47.89	-27	-20.89
7784.72	V	53.67	-41.56	-27	-14.56
12079.38	V	57.42	-37.81	-27	-10.81
5046.06	H	45.59	-49.64	-27	-22.64
7852.52	H	53.13	-42.10	-27	-15.1
12079.38	H	56.80	-38.43	-27	-11.43

Test mode: 802.11ac Frequency(MHz): 5320

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
5060.66	V	46.11	-49.12	-27	-22.12
7807.26	V	53.26	-41.97	-27	-14.97
12184.58	V	56.42	-38.81	-27	-11.81
5060.66	H	46.46	-48.77	-27	-21.77
8295.82	H	53.53	-41.7	-27	-14.7
14575.97	H	58.30	-36.93	-27	-9.93

Note: (1) All Readings are Peak Value (VBW=3MHz) and AV Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Probe Factor +Cable Loss.
 (3)EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
 d is the measurement distance in 3 meters

Frequency: 802.11ac				Frequency(MHz): 5260			
Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Margin (dB)	
		PK	AV	PK	AV	PK	AV
3347.37	V	40.76	27.20	74	54	-33.24	-26.80
5631.87	V	46.95	31.00	74	54	-27.05	-23.00
12114.35	V	57.10	37.40	74	54	-16.9	-16.60
5104.74	H	46.11	30.90	74	54	-27.89	-23.10
7762.26	H	53.80	36.10	74	54	-20.2	-17.90
11566.86	H	57.97	37.80	74	54	-16.03	-16.20

Frequency: 802.11ac				Frequency(MHz): 5280			
Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Margin (dB)	
		PK	AV	PK	AV	PK	AV
5567.13	V	47.34	32.90	74	54	-26.66	-21.10
7784.72	V	53.67	36.20	74	54	-20.33	-17.80
12079.38	V	57.42	37.60	74	54	-16.58	-16.40
5046.06	H	45.59	30.40	74	54	-28.41	-23.60
7852.52	H	53.13	36.30	74	54	-20.87	-17.70
12079.38	H	56.80	37.70	74	54	-17.2	-16.30

Frequency: 802.11ac				Frequency(MHz): 5320			
Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Margin (dB)	
		PK	AV	PK	AV	PK	AV
5060.66	V	46.11	30.70	74	54	-27.89	-23.30
7807.26	V	53.26	36.40	74	54	-20.74	-17.60
12184.58	V	56.42	37.50	74	54	-17.58	-16.50
5060.66	H	46.46	31.30	74	54	-27.54	-22.70
8295.82	H	53.53	36.70	74	54	-20.47	-17.30
14575.97	H	58.30	39.00	74	54	-15.7	-15.00

- Note:**
- (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
 - (2) Emission Level= Reading Level+Correct Factor.
 - (3) Correct Factor= Ant_F + Cab_L - Preamp
 - (4) The reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

● Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11ac Frequency(MHz): 5260

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5143.78	H	48.90	-46.33	-27	Pass
5140.58	V	49.25	-45.98	-27	Pass

Test mode: 802.11ac Frequency(MHz): 5320

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5352.09	H	50.52	-44.71	-27	Pass
5354.58	V	50.52	-44.71	-27	Pass

Note: (1) All Readings are Peak Value (VBW=3MHz) and AV Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Probe Factor +Cable Loss.
 (3) EIRP[dBm] = E[dBuV/m] + 20 log(d[meters]) - 104.77
 d is the measurement distance in 3 meters

Test mode: 802.11ac Frequency(MHz): 5260

Frequency (MHz)	Polarity	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	AV(dBuV/m) (VBW=10Hz)	Limit 3m (dBuV/m)
5143.78	H	48.90	74	33.50	54
5140.58	V	49.25	74	34.10	54

Test mode: 802.11ac Frequency(MHz): 5320

Frequency (MHz)	Polarity	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	AV(dBuV/m) (VBW=10Hz)	Limit 3m (dBuV/m)
5352.09	H	50.52	74	33.90	54
5354.58	V	50.52	74	34.30	54

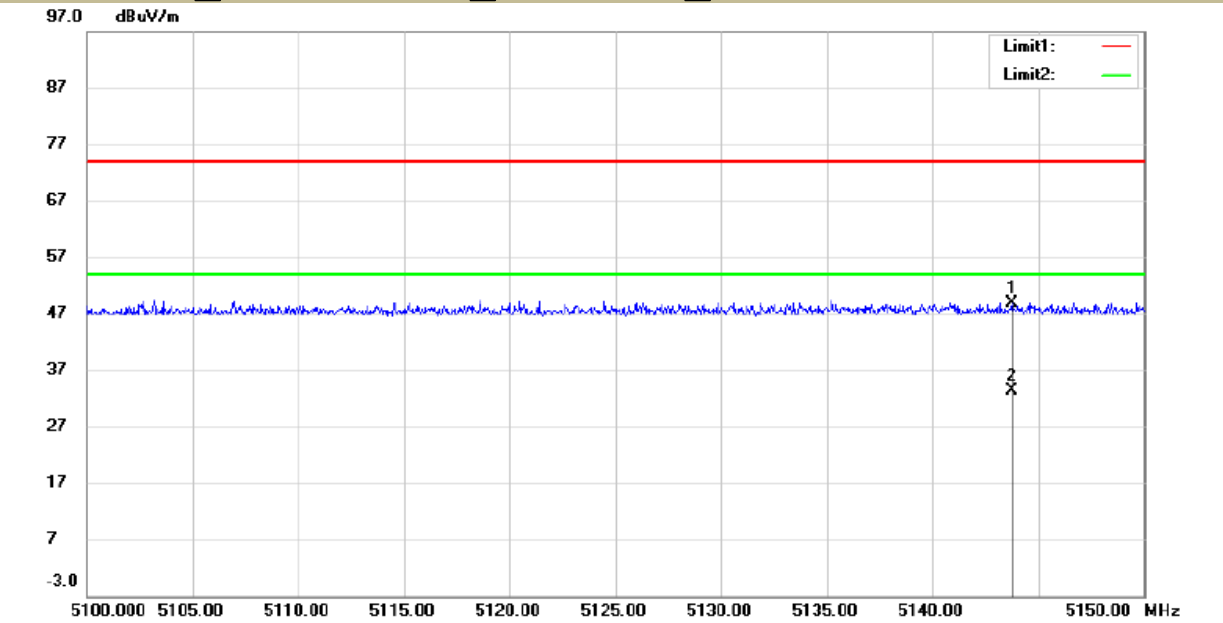
Note: (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Correct Factor.
 (3) Correct Factor= Ant_F + Cab_L - Preamp
 (4) The reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

U-NII -2A

Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)

802.11ac 802.11n(HT20) 802.11 ac (VHT20)

5260 5300 5320 Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 29.5 C

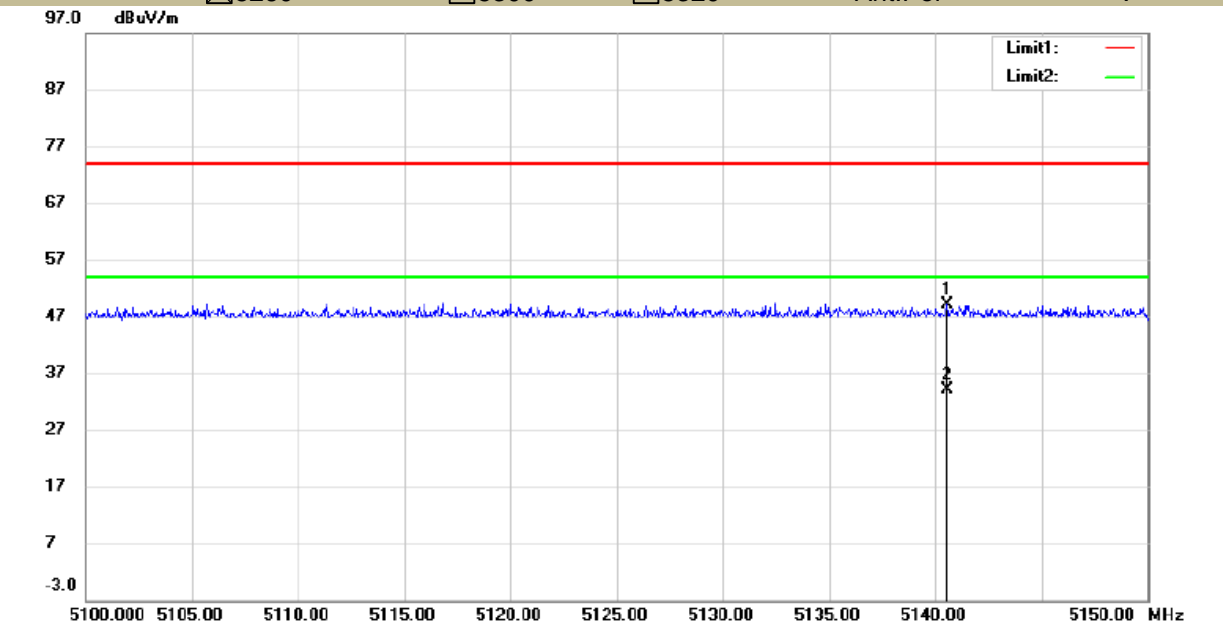
Limit: (RE)FCC PART 15 CLASS B Power: AC 30V Humidity: 48 %

U-NII -2A

Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)

802.11ac 802.11n(HT20) 802.11 ac (VHT20)

5260 5300 5320 Ant.Pol V



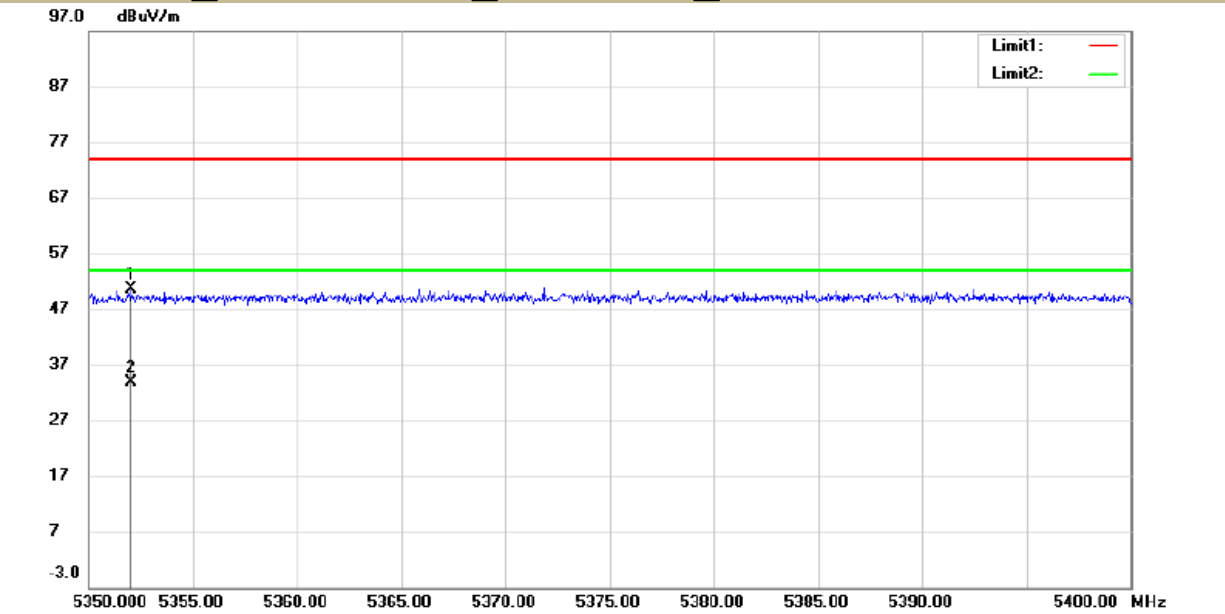
Site 3m Chamber #1 Polarization: **Vertical** Temperature: 29.5 C

Limit: (RE)FCC PART 15 CLASS B Power: AC 30V Humidity: 48 %

U-NII -2A

Test Model Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)

5260 802.11ac 802.11n(HT20) 802.11 ac (VHT20)
 5300 5320 Ant.Pol H

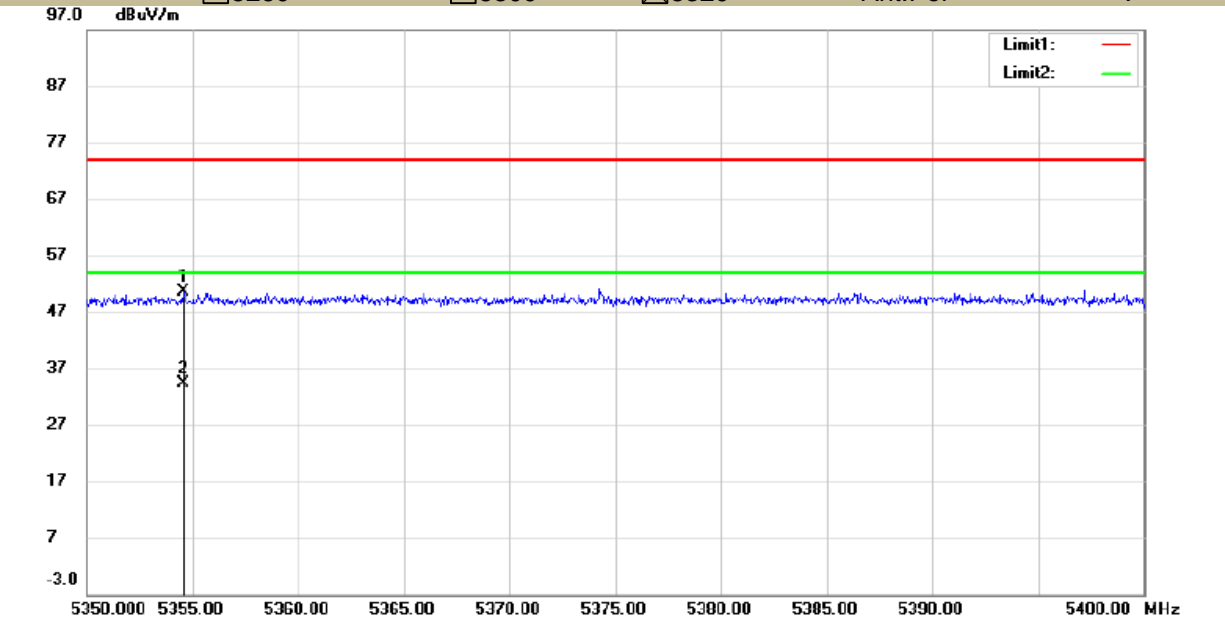


Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 29.5 C
 Limit: (RE)FCC PART 15 CLASS B Power: AC 30V Humidity: 48 %

U-NII -2A

Test Model Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)

5260 802.11ac 802.11n(HT20) 802.11 ac (VHT20)
 5300 5320 Ant.Pol V



Site 3m Chamber #1 Polarization: **Vertical** Temperature: 29.5 C
 Limit: (RE)FCC PART 15 CLASS B Power: AC 30V Humidity: 48 %

- For Undesirable radiated Spurious Emission in U-NII -2C
 - All the modes 802.11a/n/ac has been tested and the worst result antenna 1 802.11ac recorded as below:
- : Undesirable radiated Spurious Emission Above 1GHz (1GHz to 40GHz)

Test mode: 802.11ac Frequency(MHz): 5500

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
5046.06	V	46.24	-48.99	-27	-21.99
7762.26	V	53.83	-41.4	-27	-14.40
12184.58	V	57.08	-38.15	-27	-11.15
3347.37	H	42.02	-53.21	-27	-26.21
5648.17	H	47.84	-47.39	-27	-20.39
9781.60	H	54.04	-41.19	-27	-14.19

Test mode: 802.11ac Frequency(MHz): 5580

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
3396.09	V	40.98	-54.25	-27	-27.25
5615.60	V	46.87	-48.36	-27	-21.36
7807.26	V	54.14	-41.09	-27	-14.09
5046.06	H	46.13	-49.1	-27	-22.1
7807.26	H	54.14	-41.09	-27	-14.09
12044.52	H	57.02	-38.21	-27	-11.21

Test mode: 802.11ac Frequency(MHz): 5700

Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)
5104.74	V	45.48	-49.75	-27	-22.75
7784.72	V	53.76	-41.47	-27	-14.47
12044.52	V	57.31	-37.92	-27	-10.92
2830.72	H	41.03	-54.2	-27	-27.2
5583.25	H	46.86	-48.37	-27	-21.37
11566.86	H	57.41	-37.82	-27	-10.82

- Note:** (1) All Readings are Peak Value (VBW=3MHz) and AV Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Probe Factor +Cable Loss.
 (3)EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
 d is the measurement distance in 3 meters

Frequency: 802.11ac				Frequency(MHz): 5500			
Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Margin (dB)	
		PK	AV	PK	AV	PK	AV
5046.06	V	46.24	30.30	74	54	-27.76	-23.70
7762.26	V	53.83	36.10	74	54	-20.17	-17.90
12184.58	V	57.08	37.40	74	54	-16.92	-16.60
3347.37	H	42.02	27.30	74	54	-31.98	-26.70
5648.17	H	47.84	33.60	74	54	-26.16	-20.40
9781.60	H	54.04	36.10	74	54	-19.96	-17.90

Frequency: 802.11ac				Frequency(MHz): 5580			
Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Margin (dB)	
		PK	AV	PK	AV	PK	AV
3396.09	V	40.98	26.30	74	54	-33.02	-27.70
5615.60	V	46.87	30.80	74	54	-27.13	-23.20
7807.26	V	54.14	36.30	74	54	-19.86	-17.70
5046.06	H	46.13	31.10	74	54	-27.87	-22.90
7807.26	H	54.14	36.20	74	54	-19.86	-17.80
12044.52	H	57.02	36.90	74	54	-16.98	-17.10

Frequency: 802.11ac				Frequency(MHz): 5700			
Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Margin (dB)	
		PK	AV	PK	AV	PK	AV
5104.74	V	45.48	30.40	74	54	-28.52	-23.60
7784.72	V	53.76	36.70	74	54	-20.24	-17.30
12044.52	V	57.31	38.10	74	54	-16.69	-15.90
2830.72	H	41.03	26.80	74	54	-32.97	-27.20
5583.25	H	46.86	30.60	74	54	-27.14	-23.40
11566.86	H	57.41	38.00	74	54	-16.59	-16.00

- Note:**
- (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
 - (2) Emission Level= Reading Level+Correct Factor.
 - (3) Correct Factor= Ant_F + Cab_L - Preamp
 - (4) The reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

● Undesirable radiated Undesirable radiated Spurious Emission in Band Edge

Test mode: 802.11ac Frequency(MHz): 5500

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5467.57	H	51.46	-43.77	-27	Pass
5466.21	V	50.13	-45.10	-27	Pass

Test mode: 802.11ac Frequency(MHz): 5700

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5727.06	H	49.98	-45.25	-27	Pass
5727.83	V	50.02	-45.21	-27	Pass

Note: (1) All Readings are Peak Value (VBW=3MHz) and AV Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Probe Factor +Cable Loss.
 (3) EIRP[dBm] = E[dBuV/m] + 20 log(d[meters]) - 104.77
 d is the measurement distance in 3 meters

Test mode: 802.11ac Frequency(MHz): 5500

Frequency (MHz)	Polarity	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	AV(dBuV/m) (VBW=10Hz)	Limit 3m (dBuV/m)
5467.57	H	51.46	74	35.20	54
5466.21	V	50.13	74	34.70	54

Test mode: 802.11ac Frequency(MHz): 5700

Frequency (MHz)	Polarity	PK(dBuV/m) (VBW=3MHz)	Limit 3m (dBuV/m)	AV(dBuV/m) (VBW=10Hz)	Limit 3m (dBuV/m)
5727.06	H	49.98	74	34.60	54
5727.83	V	50.02	74	35.10	54

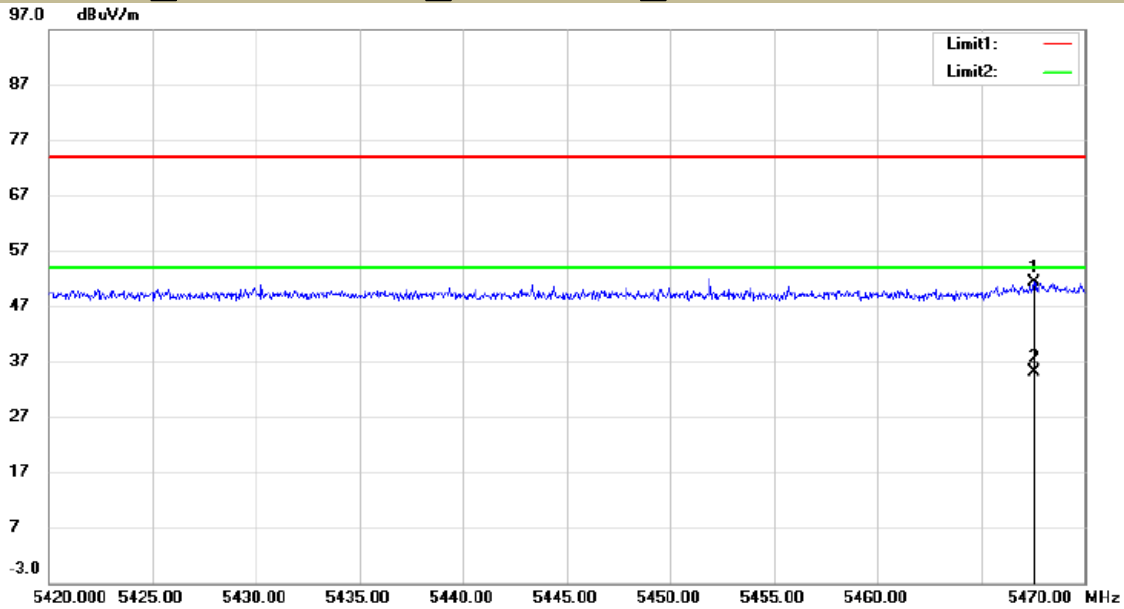
Note: (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Correct Factor.
 (3) Correct Factor= Ant_F + Cab_L - Preamp
 (4) The reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

U-NII -2C

Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)

802.11ac 802.11n(HT20) 802.11 ac (VHT20)

5500 5580 5700 Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 29.5 C

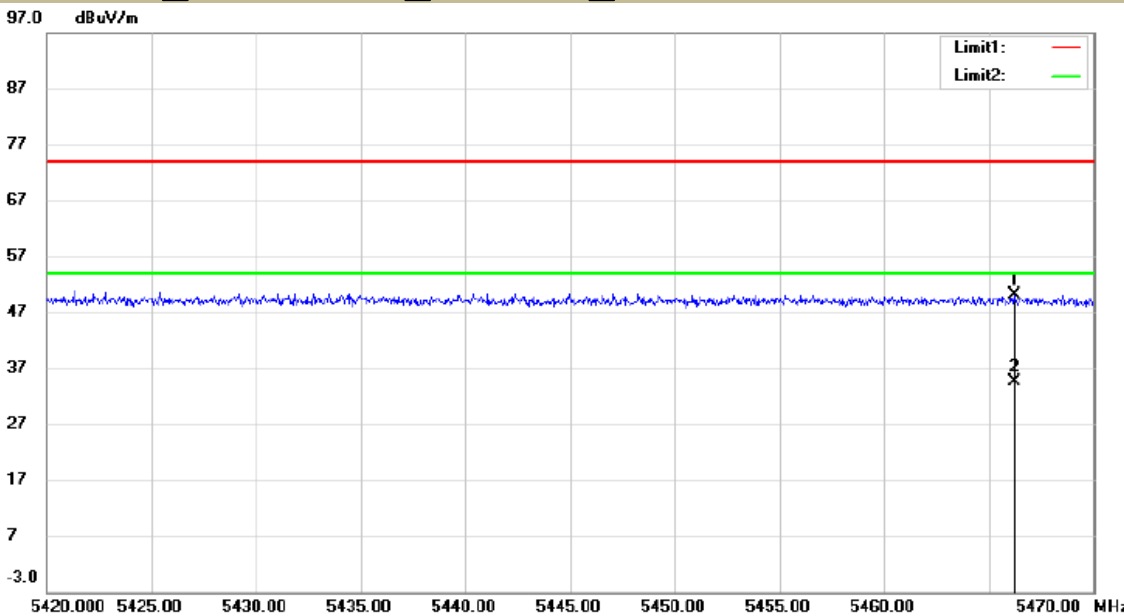
Limit: (RE)FCC PART 15 CLASS B Power: AC 30V Humidity: 48 %

U-NII -2C

Test Model Undesirable radiated Spurious Emission in Restricted Band (5100-5150MHz)

802.11ac 802.11n(HT20) 802.11 ac (VHT20)

5500 5580 5700 Ant.Pol V



Site 3m Chamber #1 Polarization: **Vertical** Temperature: 29.5 C

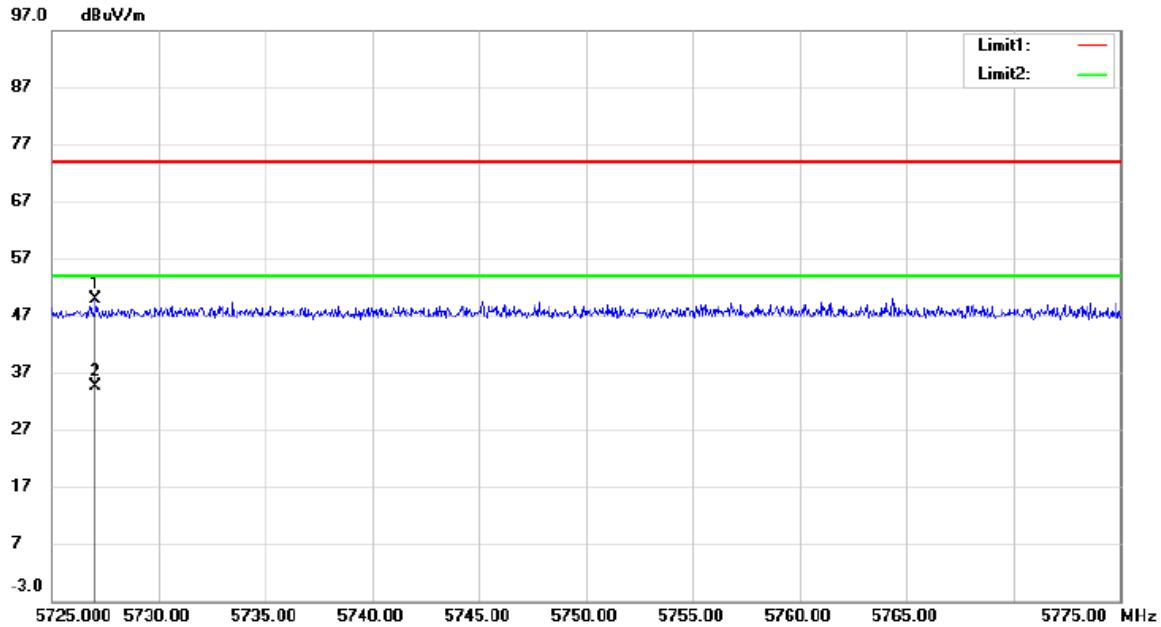
Limit: (RE)FCC PART 15 CLASS B Power: AC 30V Humidity: 48 %

U-NII -2C

Test Model Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)

5500 802.11ac 5580 802.11n(HT20) 802.11 ac (VHT20)

Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 29.5 C

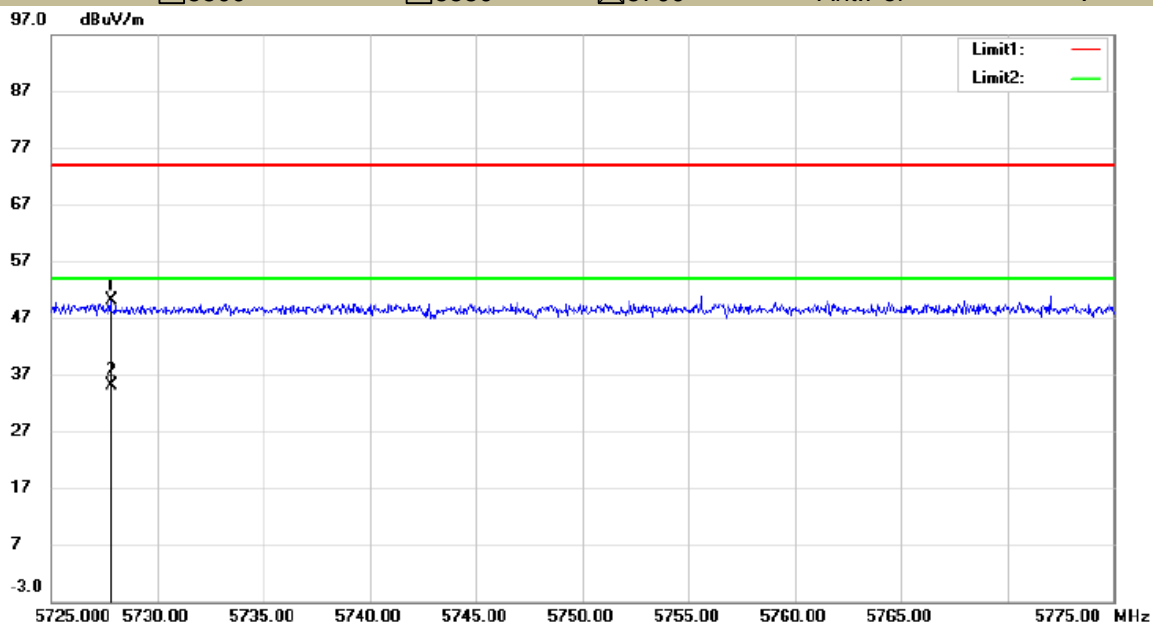
Limit: (RE)FCC PART 15 CLASS B Power: AC 30V Humidity: 48 %

U-NII -2C

Test Model Undesirable radiated Spurious Emission in Restricted Band (5350-5400MHz)

5500 802.11ac 5580 802.11n(HT20) 802.11 ac (VHT20)

Ant.Pol V



Site 3m Chamber #1 Polarization: **Vertical** Temperature: 29.5 C

Limit: (RE)FCC PART 15 CLASS B Power: AC 30V Humidity: 48 %

- For Undesirable radiated Spurious Emission in U-NII -3
- All the modes 802.11a/n/ac has been tested and the worst result antenna 1 802.11ac recorded as below:
- Undesirable radiated Spurious Emission Above 1GHz (1GHz to 40GHz)

Test mode:		802.11ac		Frequency(MHz):		5745	
Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)		
3935.49	V	41.84	-53.39	-27	-26.39		
7875.25	V	53.85	-41.38	-27	-14.38		
11975.09	V	57.35	-37.88	-27	-10.88		
39.5.49	H	42.28	-52.95	-27	-25.95		
5551.06	H	47.30	-47.93	-27	-20.93		
12079.38	H	57.71	-37.52	-27	-10.52		

Test mode:		802.11ac		Frequency(MHz):		5785	
Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)		
5060.66	V	45.77	-49.46	-27	-22.46		
7762.25	V	53.78	-41.45	-27	-14.45		
14408.42	V	58.07	-37.16	-27	-10.16		
3415.78	H	41.60	-53.63	-27	-26.63		
7829.86	H	53.44	-41.79	-27	-14.79		
12114.35	H	57.22	-38.01	-27	-11.01		

Test mode:		802.11ac		Frequency(MHz):		5825	
Freq. (MHz)	Ant.Pol. H/V	Field Strength (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Over(dB)		
5599.41	V	46.26	-48.97	-27	-21.97		
7807.26	V	53.41	-41.82	-27	-14.82		
11500.19	V	57.09	-38.14	-27	-11.14		
3901.51	H	42.32	-52.91	-27	-25.91		
7829.86	H	53.34	-41.89	-27	-14.89		
12079.38	H	57.44	-37.79	-27	-10.79		

Note: (1) All Readings are Peak Value (VBW=3MHz) and AV Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Probe Factor +Cable Loss.
 (3) EIRP[dBm] = E[dBμV/m] + 20 log(d[meters]) - 104.77
 d is the measurement distance in 3 meters

Frequency: 802.11ac				Frequency(MHz): 5745			
Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Margin (dB)	
		PK	AV	PK	AV	PK	AV
3935.49	V	41.84	26.70	74	54	-32.16	-27.30
7875.25	V	53.85	35.90	74	54	-20.15	-18.10
11975.09	V	57.35	36.80	74	54	-16.65	-17.20
39.5.49	H	42.28	27.40	74	54	-31.72	-26.60
5551.06	H	47.30	33.20	74	54	-26.7	-20.80
12079.38	H	57.71	38.30	74	54	-16.29	-15.70

Frequency: 802.11ac				Frequency(MHz): 5785			
Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Margin (dB)	
		PK	AV	PK	AV	PK	AV
5060.66	V	45.77	31.20	74	54	-28.23	-22.80
7762.25	V	53.78	36.40	74	54	-20.22	-17.60
14408.42	V	58.07	37.60	74	54	-15.93	-16.40
3415.78	H	41.60	26.40	74	54	-32.4	-27.60
7829.86	H	53.44	36.20	74	54	-20.56	-17.80
12114.35	H	57.22	37.50	74	54	-16.78	-16.50

Frequency: 802.11ac				Frequency(MHz): 5825			
Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Margin (dB)	
		PK	AV	PK	AV	PK	AV
5599.41	V	46.26	30.70	74	54	-27.74	-23.30
7807.26	V	53.41	36.40	74	54	-20.59	-17.60
11500.19	V	57.09	38.30	74	54	-16.91	-15.70
3901.51	H	42.32	27.30	74	54	-31.68	-26.70
7829.86	H	53.34	36.40	74	54	-20.66	-17.60
12079.38	H	57.44	38.60	74	54	-16.56	-15.40

- Note:**
- (1) All Readings are Peak Value (VBW=3MHz) and Average Value (VBW=10Hz).
 - (2) Emission Level= Reading Level+Correct Factor.
 - (3) Correct Factor= Ant_F + Cab_L - Preamp
 - (4) The reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

● Undesirable radiated Spurious Emission in band edge

Test mode: 802.11ac Frequency: 5745

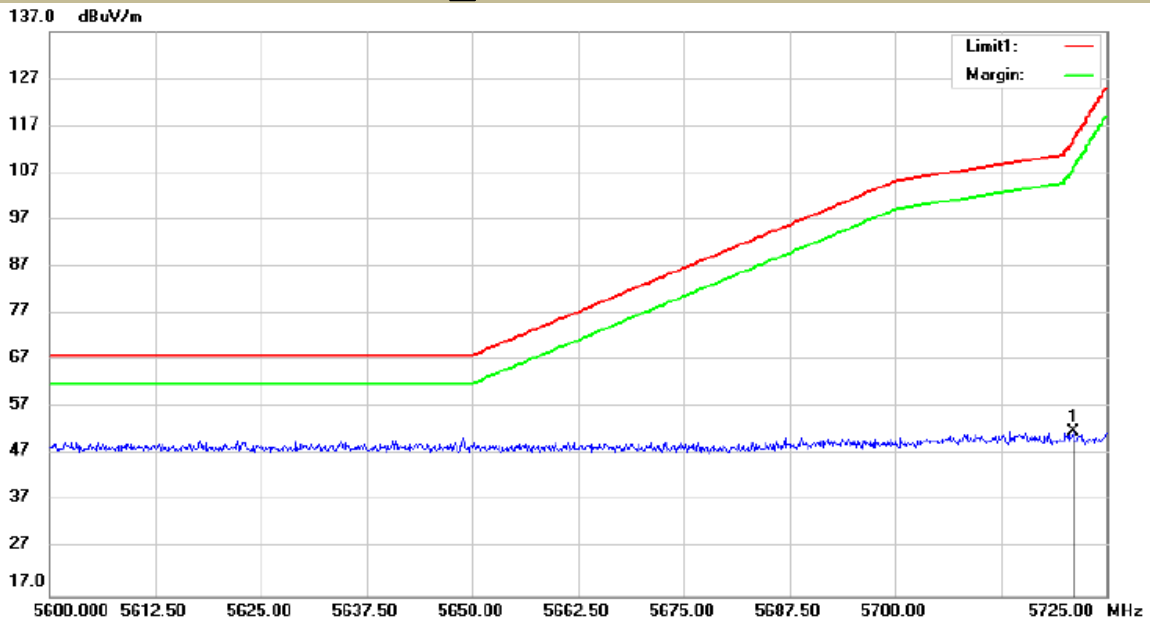
Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5721.11	H	51.96	-43.27	27	PASS
5722.63	V	52.31	-42.92	27	PASS

Test mode: 802.11ac Frequency: 5825

Freq. (MHz)	Ant.Pol. H/V	Field Strength (RBW=100KHz) (dBuV/m)	E.I.R.P (dBm)	Limit (dBm)	Verdict
5855.25	V	53.02	-42.21	27	PASS
5854.60	H	51.92	-43.31	27	PASS

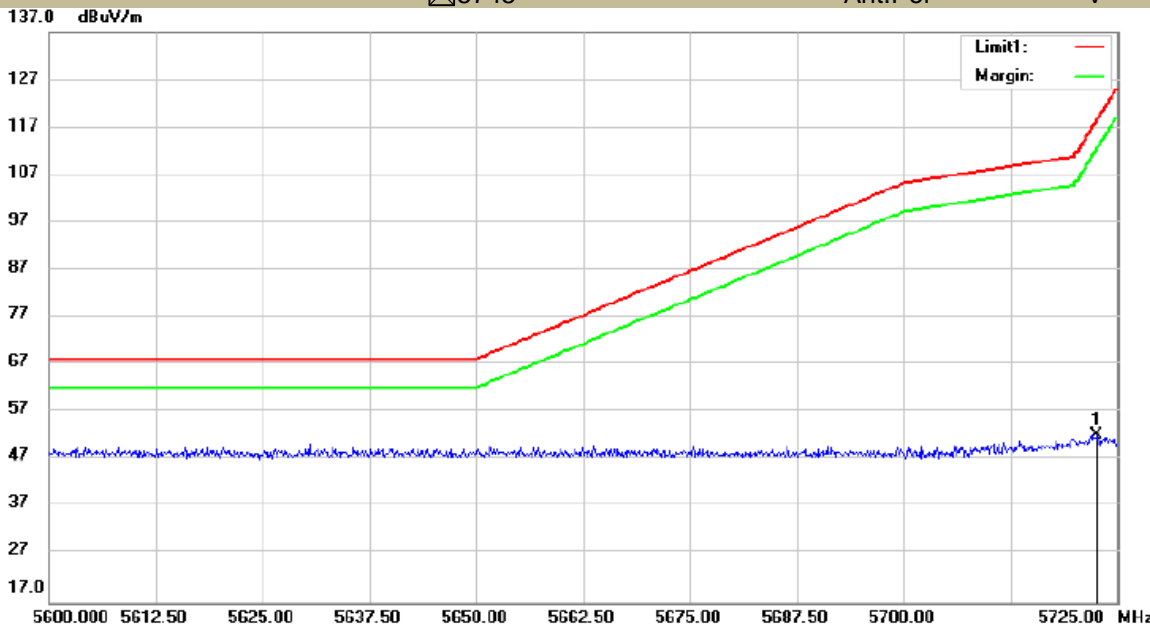
Note: (1) All Readings are Peak Value (VBW=3MHz) and AV Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Probe Factor +Cable Loss.
 (3) $EIRP[dBm] = E[dB\mu V/m] + 20 \log(d[meters]) - 104.77$
 d is the measurement distance in 3 meters

U-NII -3
Test Model Undesirable radiated Spurious Emission in Band Edge
802.11ac 802.11n(HT20) 802.11n(HT40)
5745 Ant. Pol H



Site 3m Chamber #1 Polarization: Horizontal Temperature: 29.5 C
Limit: (RE)FCC PART 15C B4 (5G Bandedge) Peak Power: AC 30V Humidity: 48 %

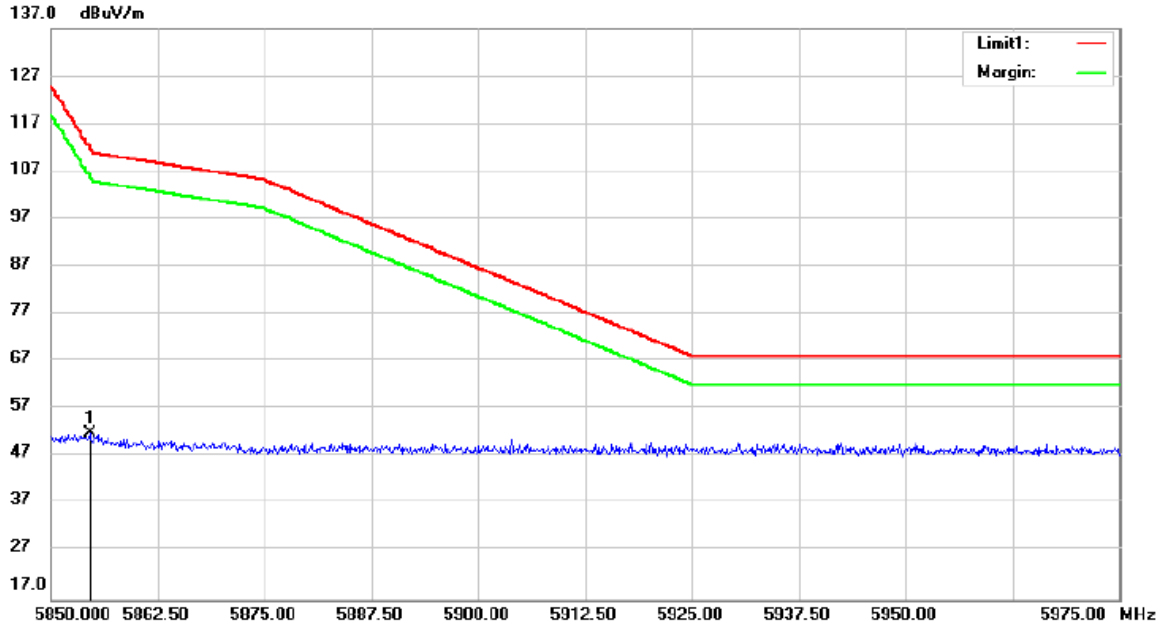
U-NII -3
Test Model Undesirable radiated Spurious Emission in Band Edge
802.11ac 802.11n(HT20) 802.11n(HT40)
5745 Ant. Pol V



Site 3m Chamber #1 Polarization: Vertical Temperature: 29.5 C
Limit: (RE)FCC PART 15C B4 (5G Bandedge) Peak Power: AC 30V Humidity: 48 %

U-NII -3

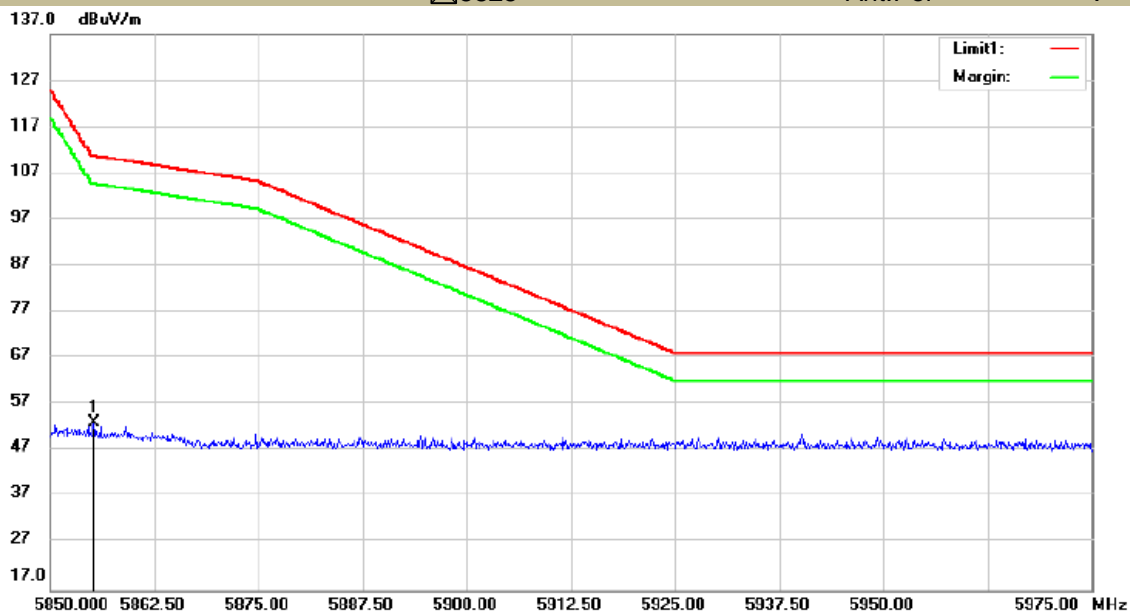
Test Model	Undesirable radiated <input checked="" type="checkbox"/> 802.11ac	Undesirable radiated <input checked="" type="checkbox"/> 5825	Spurious Emission in Band Edge <input type="checkbox"/> 802.11n(HT20)
			<input type="checkbox"/> 802.11n(HT40)
			Ant.Pol H



Site 3m Chamber #1 Polarization: **Horizontal** Temperature: 29.5 C
 Limit: (RE)FCC PART 15C B4 (5G Bandedge) Peak Power: AC 30V Humidity: 48 %

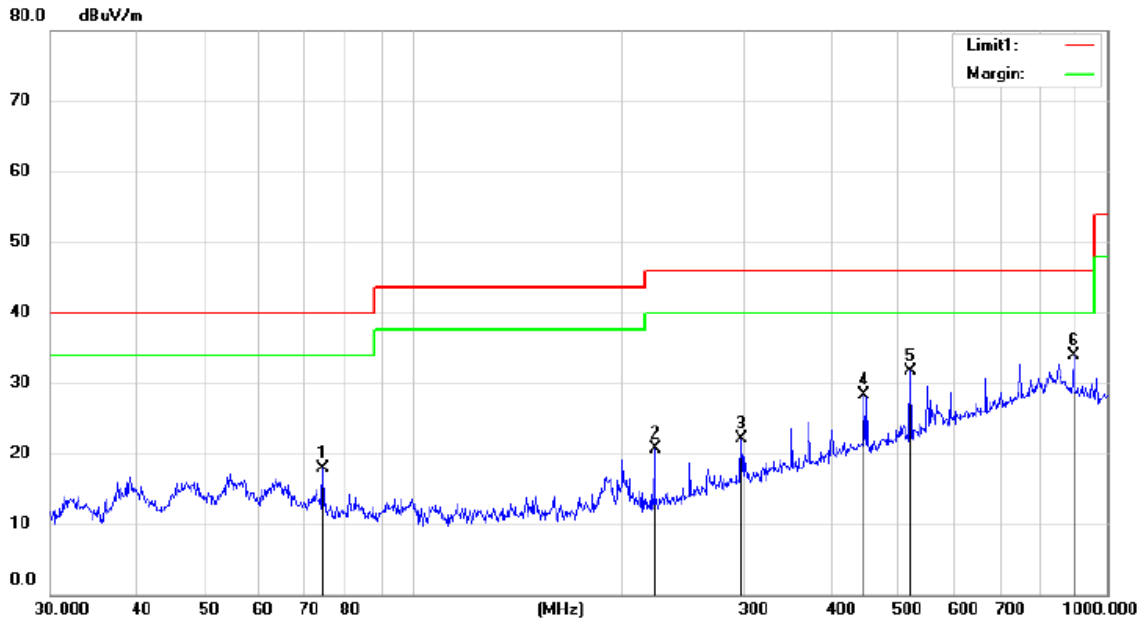
U-NII -3

Test Model	Undesirable radiated <input checked="" type="checkbox"/> 802.11ac	Undesirable radiated <input checked="" type="checkbox"/> 5825	Spurious Emission in Band Edge <input type="checkbox"/> 802.11n(HT20)
			<input type="checkbox"/> 802.11n(HT40)
			Ant.Pol V



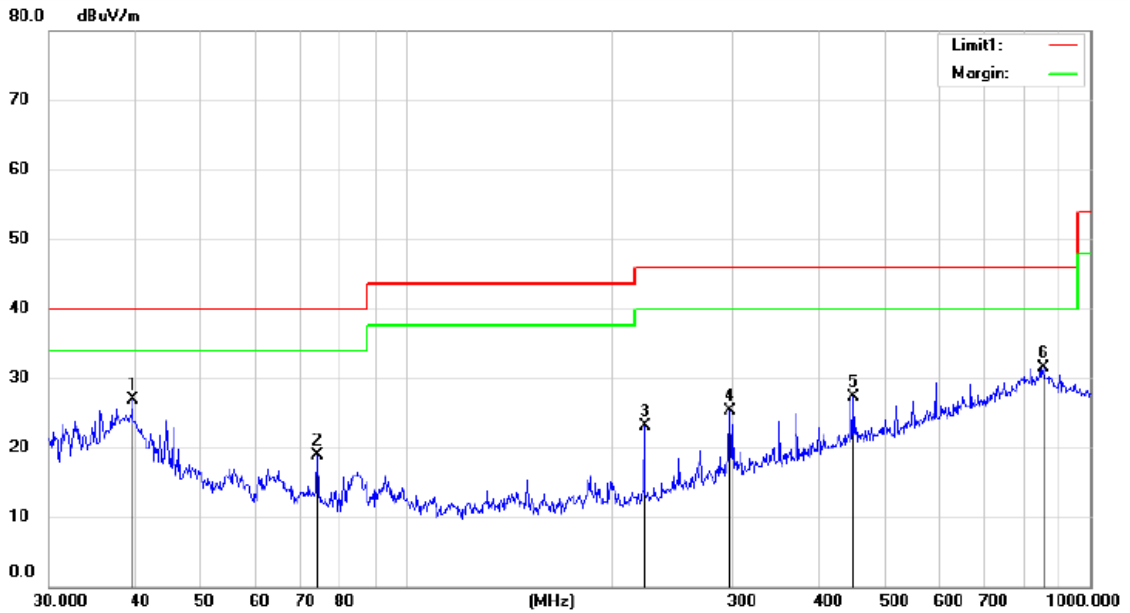
Site 3m Chamber #1 Polarization: **Vertical** Temperature: 29.5 C
 Limit: (RE)FCC PART 15C B4 (5G Bandedge) Peak Power: AC 30V Humidity: 48 %

- Undesirable radiated Spurious Emission below 1GHz (30MHz to 1GHz)
All the modes 802.11a/n/ac has been tested and the worst result 802.11ac recorded as below:



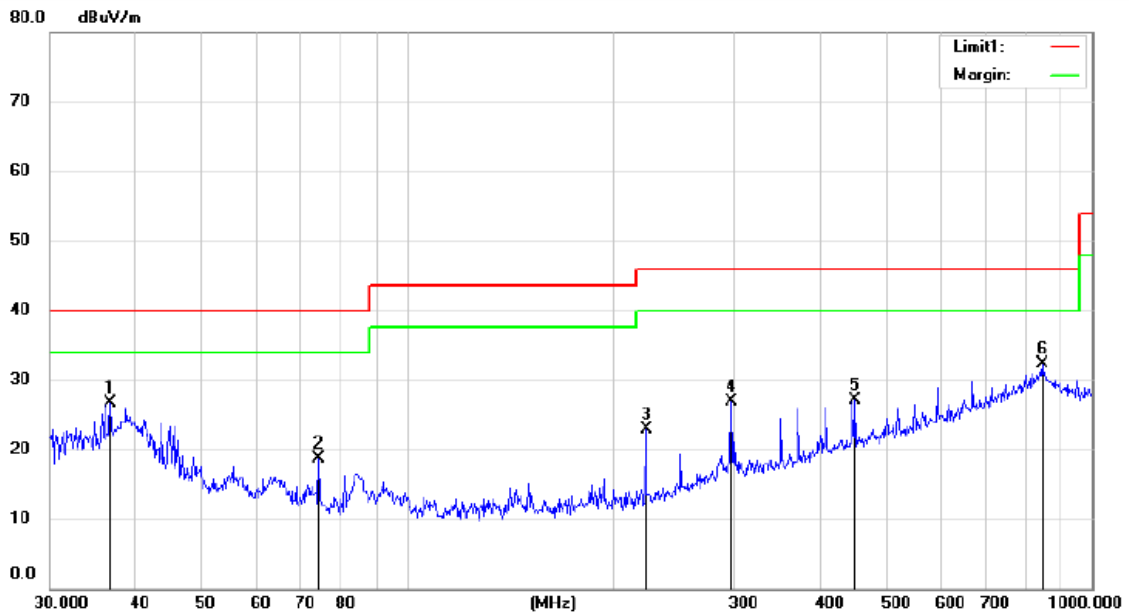
Site: 3m Chamber #3 Polarization: **Horizontal** Temperature: 22.5 C
 Limit: (RE)FCC PART 15 CLASS B Power: AC 30V Humidity: 45 %
 Mode: WIFI 5G 5180MHZ
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree	Detector	Comment
1		74.1351	33.91	-15.99	17.92	40.00	-22.08			QP	
2		222.9502	36.15	-15.40	20.75	46.00	-25.25			QP	
3		297.2241	33.84	-11.82	22.02	46.00	-23.98			QP	
4		446.4141	35.31	-7.04	28.27	46.00	-17.73			QP	
5		520.8882	37.41	-5.63	31.78	46.00	-14.22			QP	
6	*	893.8567	32.76	1.15	33.91	46.00	-12.09			QP	



Site: 3m Chamber #3 Polarization: **Vertical** Temperature: 22.5 C
 Limit: (RE)FCC PART 15 CLASS B Power: AC 30V Humidity: 45 %
 Mode: WIFI 5G 5180MHZ
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree	Comment
1	*	39.7146	42.02	-15.03	26.99	40.00	-13.01	QP		
2		74.1351	34.96	-15.99	18.97	40.00	-21.03	QP		
3		222.9502	38.41	-15.40	23.01	46.00	-22.99	QP		
4		297.2240	37.22	-11.82	25.40	46.00	-20.60	QP		
5		451.1350	34.24	-6.95	27.29	46.00	-18.71	QP		
6		854.0247	28.98	2.57	31.55	46.00	-14.45	QP		



Site 3m Chamber #3

Polarization: **Vertical**

Temperature: 22.5 C

Limit: (RE)FCC PART 15 CLASS B

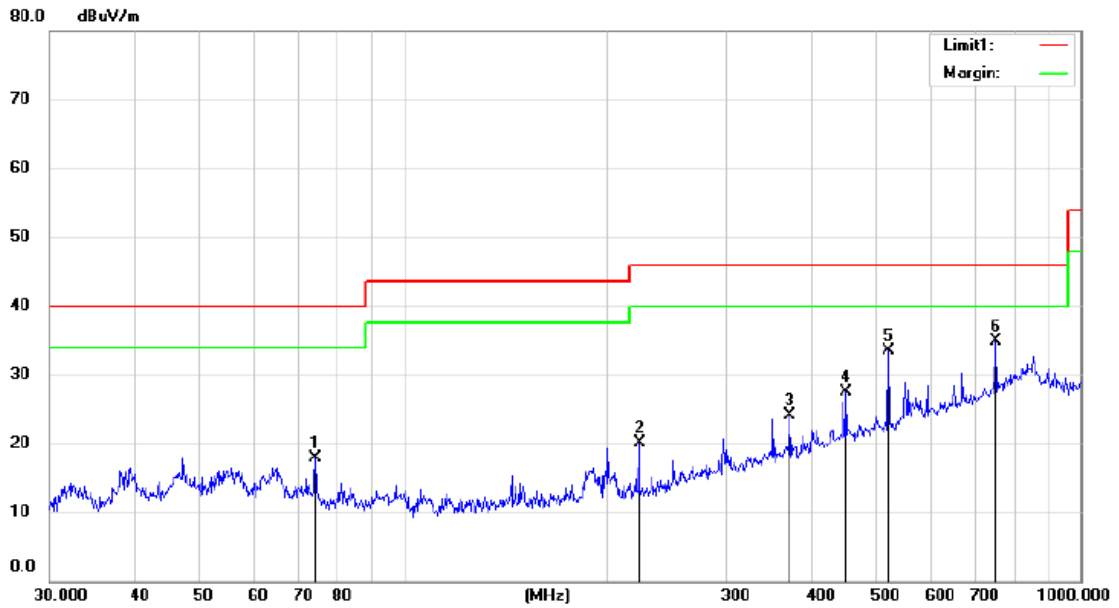
Power: AC 30V

Humidity: 45 %

Mode:WIFI 5G 5200MHZ

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		cm	degree	
1	*	36.7662	42.26	-15.53	26.73	40.00	-13.27	QP			
2		74.1351	34.72	-15.99	18.73	40.00	-21.27	QP			
3		222.9502	38.25	-15.40	22.85	46.00	-23.15	QP			
4		297.2241	38.80	-11.82	26.98	46.00	-19.02	QP			
5		451.1350	34.14	-6.95	27.19	46.00	-18.81	QP			
6		845.0878	29.40	2.87	32.27	46.00	-13.73	QP			



Site: 3m Chamber #3

Polarization: **Horizontal**

Temperature: 22.5 C

Limit: (RE)FCC PART 15 CLASS B

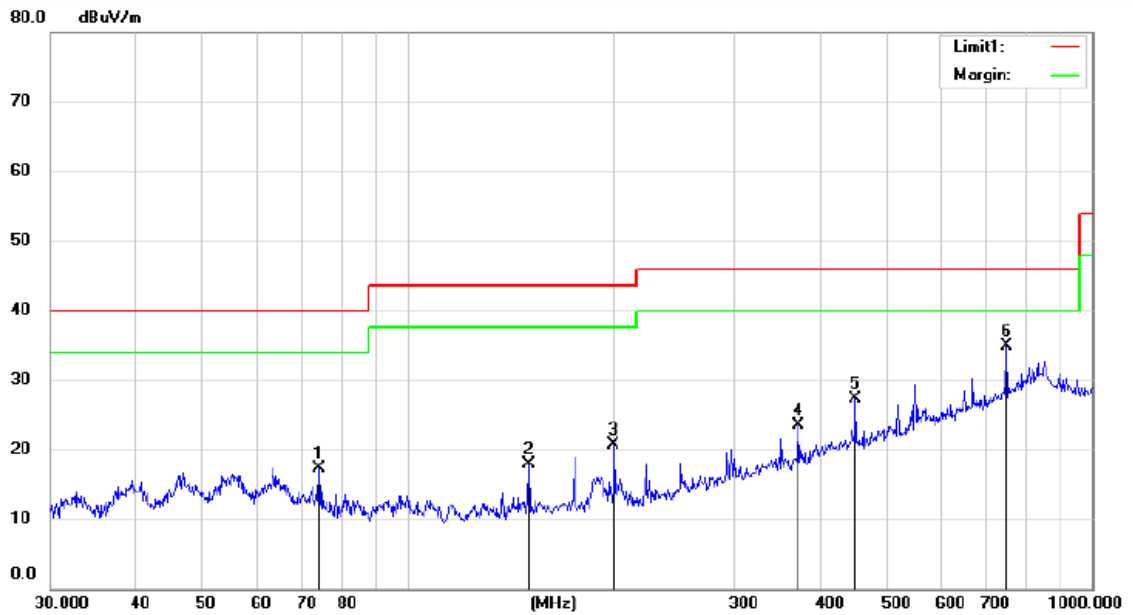
Power: AC 30V

Humidity: 45 %

Mode: WIFI 5G 5200MHZ

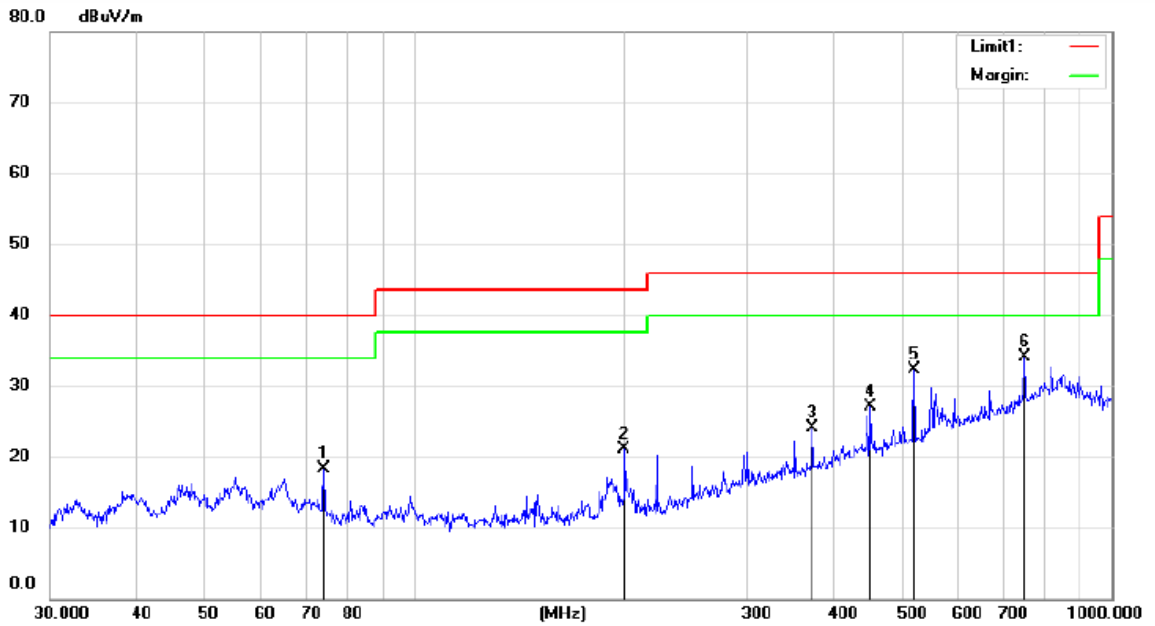
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		74.1351	33.81	-15.99	17.82	40.00	-22.18	QP		
2		222.9502	35.42	-15.40	20.02	46.00	-25.98	QP		
3		372.0045	33.43	-9.23	24.20	46.00	-21.80	QP		
4		451.1350	34.53	-6.95	27.58	46.00	-18.42	QP		
5		520.8882	39.06	-5.63	33.43	46.00	-12.57	QP		
6	*	750.1083	34.86	-0.03	34.83	46.00	-11.17	QP		



Site: 3m Chamber #3 Polarization: **Horizontal** Temperature: 22.5 C
 Limit: (RE)FCC PART 15 CLASS B Power: AC 30V Humidity: 45 %
 Mode: WIFI 5G 5240MHZ
 Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		74.1351	33.30	-15.99	17.31	40.00	-22.69	QP		
2		150.0108	34.17	-16.26	17.91	43.50	-25.59	QP		
3		199.9856	36.69	-16.04	20.65	43.50	-22.85	QP		
4		372.0045	32.69	-9.23	23.46	46.00	-22.54	QP		
5		451.1350	34.28	-6.95	27.33	46.00	-18.67	QP		
6	*	750.1083	34.86	-0.03	34.83	46.00	-11.17	QP		



Site: 3m Chamber #3 Polarization: **Vertical** Temperature: 22.5 C
 Limit: (RE)FCC PART 15 CLASS B Power: AC 30V Humidity: 45 %
 Mode: WIFI 5G 5240MHZ
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree	Detector	Comment
1		74.1351	34.20	-15.99	18.21	40.00	-21.79			QP	
2		199.9856	37.09	-16.04	21.05	43.50	-22.45			QP	
3		372.0045	33.40	-9.23	24.17	46.00	-21.83			QP	
4		451.1350	34.03	-6.95	27.08	46.00	-18.92			QP	
5		520.8882	37.92	-5.63	32.29	46.00	-13.71			QP	
6	*	750.1083	34.08	-0.03	34.05	46.00	-11.95			QP	

8.6 POWER LINE CONDUCTED EMISSIONS

8.6.1 Applicable Standard

According to FCC Part 15.207(a)

8.6.2 Conformance Limit

Frequency(MHz)	Conducted Emission Limit	
	Quasi-peak	Average
0.15-0.5	66-56	56-46
0.5-5.0	56	46
5.0-30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

8.6.3 Test Configuration

Test according to clause 6.3 conducted emission test setup

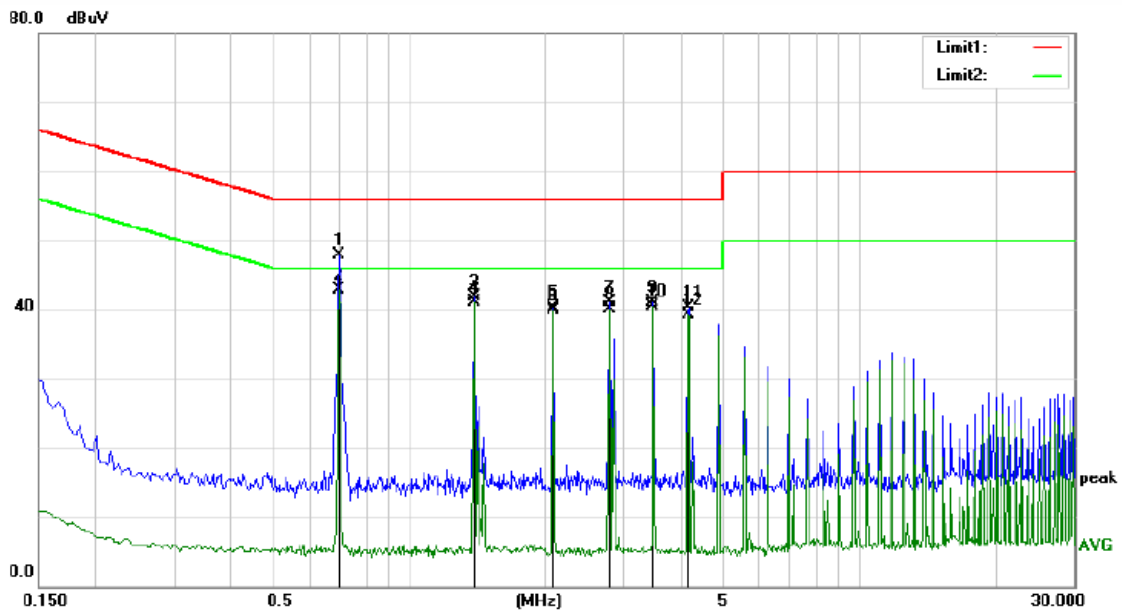
8.6.4 Test Procedure

The EUT was placed on a table which is 0.8m above ground plane.
 Maximum procedure was performed on the highest emissions to ensure EUT compliance.
 Repeat above procedures until all frequency measured were complete.

8.6.5 Test Results

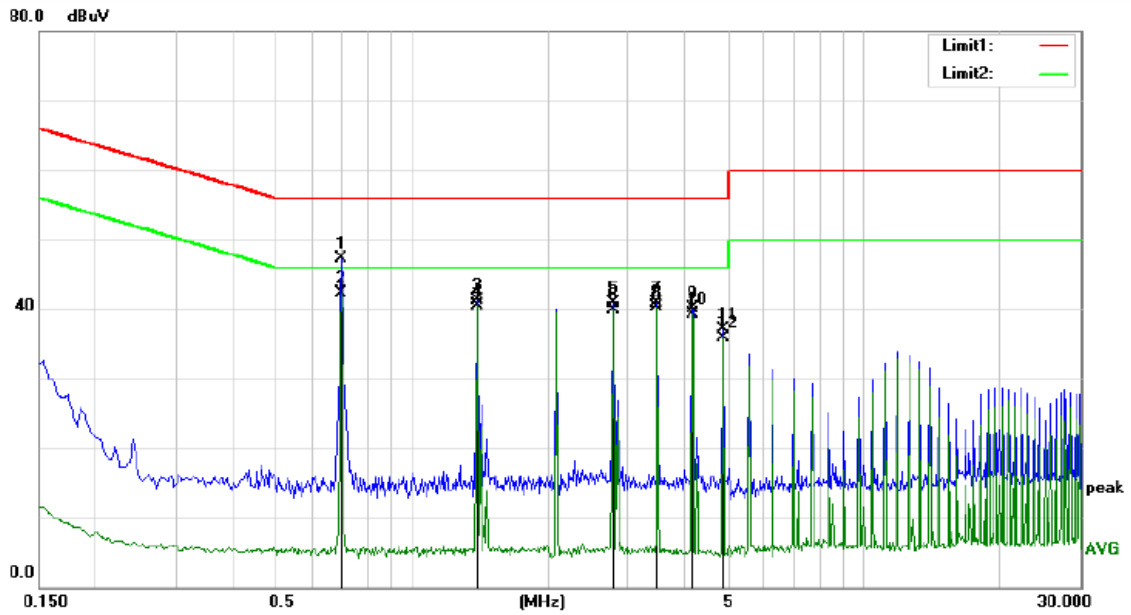
Pass

The AC10V &30V voltage have been tested, and the worst result recorded was report as below:



Site Conduction #1 Phase: *N* Temperature: 24.7
 Limit: (CE)FCC PART 15 class B_QP Power: AC 30V Humidity: 38 %
 Mode: Normal
 Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1		0.6980	38.56	9.28	47.84	56.00	-8.16	QP	
2	*	0.6980	33.69	9.28	42.97	46.00	-3.03	AVG	
3		1.3940	32.03	9.92	41.95	56.00	-14.05	QP	
4		1.3940	31.16	9.92	41.08	46.00	-4.92	AVG	
5		2.0900	30.37	9.94	40.31	56.00	-15.69	QP	
6		2.0900	29.93	9.94	39.87	46.00	-6.13	AVG	
7		2.7860	31.16	9.95	41.11	56.00	-14.89	QP	
8		2.7860	30.13	9.95	40.08	46.00	-5.92	AVG	
9		3.4820	31.22	9.94	41.16	56.00	-14.84	QP	
10		3.4820	30.53	9.94	40.47	46.00	-5.53	AVG	
11		4.1780	30.33	9.92	40.25	56.00	-15.75	QP	
12		4.1780	29.33	9.92	39.25	46.00	-6.75	AVG	



Site Conduction #1 Phase: **L1** Temperature: 24.7
 Limit: (CE)FCC PART 15 class B_QP Power: AC 30V Humidity: 38 %
 Mode: Normal
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.6980	38.09	9.28	47.37	56.00	-8.63	QP	
2	*	0.6980	32.96	9.28	42.24	46.00	-3.76	AVG	
3		1.3940	31.33	9.92	41.25	56.00	-14.75	QP	
4		1.3940	30.56	9.92	40.48	46.00	-5.52	AVG	
5		2.7860	30.95	9.95	40.90	56.00	-15.10	QP	
6		2.7860	29.97	9.95	39.92	46.00	-6.08	AVG	
7		3.4820	31.02	9.94	40.96	56.00	-15.04	QP	
8		3.4820	30.37	9.94	40.31	46.00	-5.69	AVG	
9		4.1780	30.09	9.92	40.01	56.00	-15.99	QP	
10		4.1780	29.33	9.92	39.25	46.00	-6.75	AVG	
11		4.8740	27.17	9.91	37.08	56.00	-18.92	QP	
12		4.8740	26.06	9.91	35.97	46.00	-10.03	AVG	

8.7 ANTENNA APPLICATION

8.7.1 Antenna Requirement

Standard	Requirement
FCC CRF Part 15.203	An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.407 (a), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

8.7.2 Result

PASS.

- The EUT has 2 antennas: two FPC Antenna for WIFI 5G, the antenna1 gain is 1.0 dBi, antenna2 gain is 0.2 dBi;

Note: Antennas use a permanently attached antenna which is not replaceable.
 Not using a standard antenna jack or electrical connector for antenna replacement
 The antenna has to be professionally installed (please provide method of installation)

Which in accordance to section 15.203, please refer to the internal photos.

Detail of factor for radiated emission

Frequency(MHz)	Ant_F(dB)	Cab_L(dB)	Preamp(dB)	Correct Factor(dB)
0.009	20.6	0.03	\	20.63
0.15	20.7	0.1	\	20.8
1	20.9	0.15	\	21.05
10	20.1	0.28	\	20.38
30	18.8	0.45	\	19.25
30	11.7	0.62	27.9	-15.58
100	12.5	1.02	27.8	-14.28
300	12.9	1.91	27.5	-12.69
600	19.2	2.92	27	-4.88
800	21.1	3.54	26.6	-1.96
1000	22.3	4.17	26.2	0.27
1000	25.6	1.76	41.4	-14.04
3000	28.9	3.27	43.2	-11.03
5000	31.1	4.2	44.6	-9.3
8000	36.2	5.95	44.7	-2.55
10000	38.4	6.3	43.9	0.8
12000	38.5	7.14	42.3	3.34
15000	40.2	8.15	41.4	6.95
18000	45.4	9.02	41.3	13.12
18000	37.9	1.81	47.9	-8.19
21000	37.9	1.95	48.7	-8.85
25000	39.3	2.01	42.8	-1.49
28000	39.6	2.16	46.0	-4.24
31000	41.2	2.24	44.5	-1.06
34000	41.5	2.29	46.6	-2.81
37000	43.8	2.30	46.4	-0.3
40000	43.2	2.50	42.2	3.5

----- END OF REPORT -----