

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

Test mode: 802.11a Frequency(MHz): 5260

| Freq. (MHz) | Ant.Pol. H/V | Field Strength (dBuV/m) | E.I.R.P (dBm) | Limit (dBm) | Over(dB) |
|-------------|--------------|-------------------------|---------------|-------------|----------|
| 4067.65 | V | 45.44 | -49.76 | -27 | -22.76 |
| 10712.95 | V | 57.27 | -37.93 | -27 | -10.93 |
| 17612.40 | V | 61.72 | -33.48 | -27 | -6.48 |
| 3958.00 | H | 45.24 | -49.96 | -27 | -22.96 |
| 10481.75 | H | 56.67 | -38.53 | -27 | -11.53 |
| 17053.10 | H | 61.52 | -33.68 | -27 | -6.68 |

Test mode: 802.11a Frequency(MHz): 5280

| Freq. (MHz) | Ant.Pol. H/V | Field Strength (dBuV/m) | E.I.R.P (dBm) | Limit (dBm) | Over(dB) |
|-------------|--------------|-------------------------|---------------|-------------|----------|
| 4023.45 | V | 46.28 | -48.92 | -27 | -21.92 |
| 11041.05 | V | 57.39 | -37.81 | -27 | -10.81 |
| 17826.60 | V | 61.58 | -33.62 | -27 | -6.62 |
| 4023.45 | H | 46.28 | -48.92 | -27 | -21.92 |
| 11041.05 | H | 57.39 | -37.81 | -27 | -10.81 |
| 17826.60 | H | 61.58 | -33.62 | -27 | -6.62 |

Test mode: 802.11a Frequency(MHz): 5320

| Freq. (MHz) | Ant.Pol. H/V | Field Strength (dBuV/m) | E.I.R.P (dBm) | Limit (dBm) | Over(dB) |
|-------------|--------------|-------------------------|---------------|-------------|----------|
| 4008.15 | V | 46.13 | -49.07 | -27 | -22.07 |
| 10149.40 | V | 56.57 | -38.63 | -27 | -11.63 |
| 17690.60 | V | 61.38 | -33.82 | -27 | -6.82 |
| 4054.90 | H | 45.38 | -49.82 | -27 | -22.82 |
| 10693.40 | H | 57.07 | -38.13 | -27 | -11.13 |
| 17915.85 | H | 62.2 | -33 | -27 | -6 |

- 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
 (4)The reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

| Frequency: 802.11a | | | | 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 |
| 4067.65 | V | 45.44 | 32.57 | 74 | 54 | -28.56 | -21.43 |
| 10712.95 | V | 57.27 | 38.72 | 74 | 54 | -16.73 | -15.28 |
| 17612.40 | V | 61.72 | 42.08 | 74 | 54 | -12.28 | -11.92 |
| 3958.00 | H | 45.24 | 32.17 | 74 | 54 | -28.76 | -21.83 |
| 10481.75 | H | 56.67 | 40.02 | 74 | 54 | -17.33 | -13.98 |
| 17053.10 | H | 61.52 | 42.43 | 74 | 54 | -12.48 | -11.57 |

| Frequency: 802.11a | | | | 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 |
| 4023.45 | V | 46.28 | 33.47 | 74 | 54 | -27.72 | -20.53 |
| 11041.05 | V | 57.39 | 40.19 | 74 | 54 | -16.61 | -13.81 |
| 17826.60 | V | 61.58 | 42.63 | 74 | 54 | -12.42 | -11.37 |
| 4023.45 | H | 46.28 | 33.47 | 74 | 54 | -27.72 | -20.53 |
| 11041.05 | H | 57.39 | 40.47 | 74 | 54 | -16.61 | -13.53 |
| 17826.60 | H | 61.58 | 42.38 | 74 | 54 | -12.42 | -11.62 |

| Frequency: 802.11a | | | | 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 |
| 4008.15 | V | 46.13 | 32.67 | 74 | 54 | -27.87 | -21.33 |
| 10149.40 | V | 56.57 | 40.17 | 74 | 54 | -17.43 | -13.83 |
| 17690.60 | V | 61.38 | 42.85 | 74 | 54 | -12.62 | -11.15 |
| 4054.90 | H | 45.38 | 32.63 | 74 | 54 | -28.62 | -21.37 |
| 10693.40 | H | 57.07 | 40.17 | 74 | 54 | -16.93 | -13.83 |
| 17915.85 | H | 62.20 | 42.36 | 74 | 54 | -11.80 | -11.64 |

- Note:**
- (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 - (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 - (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: 802.11a Frequency(MHz): 5260

| Freq. (MHz) | Ant.Pol. H/V | Field Strength (RBW=100KHz) (dBuV/m) | E.I.R.P (dBm) | Limit (dBm) | Verdict |
|-------------|--------------|--------------------------------------|---------------|-------------|---------|
| 5142.105 | H | 50.61 | -44.59 | -27 | Pass |
| 5135.767 | V | 50.58 | -44.62 | -27 | Pass |

Test mode: 802.11a Frequency(MHz): 5320

| Freq. (MHz) | Ant.Pol. H/V | Field Strength (RBW=100KHz) (dBuV/m) | E.I.R.P (dBm) | Limit (dBm) | Verdict |
|-------------|--------------|--------------------------------------|---------------|-------------|---------|
| 5363.820 | H | 51.73 | -43.47 | -27 | Pass |
| 5361.525 | V | 50.91 | -44.29 | -27 | Pass |

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

Test mode: 802.11a Frequency(MHz): 5260

| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) | Over(dB) | AV(dBuV/m) (VBW=10Hz) | Limit 3m (dBuV/m) | Over(dB) |
|-----------------|----------|-----------------------|-------------------|----------|-----------------------|-------------------|----------|
| 5142.105 | H | 50.61 | 74.00 | -23.39 | 38.12 | 54.00 | -15.88 |
| 5135.767 | V | 50.58 | 74.00 | -23.42 | 38.61 | 54.00 | -15.39 |

Test mode: 802.11a Frequency(MHz): 5320

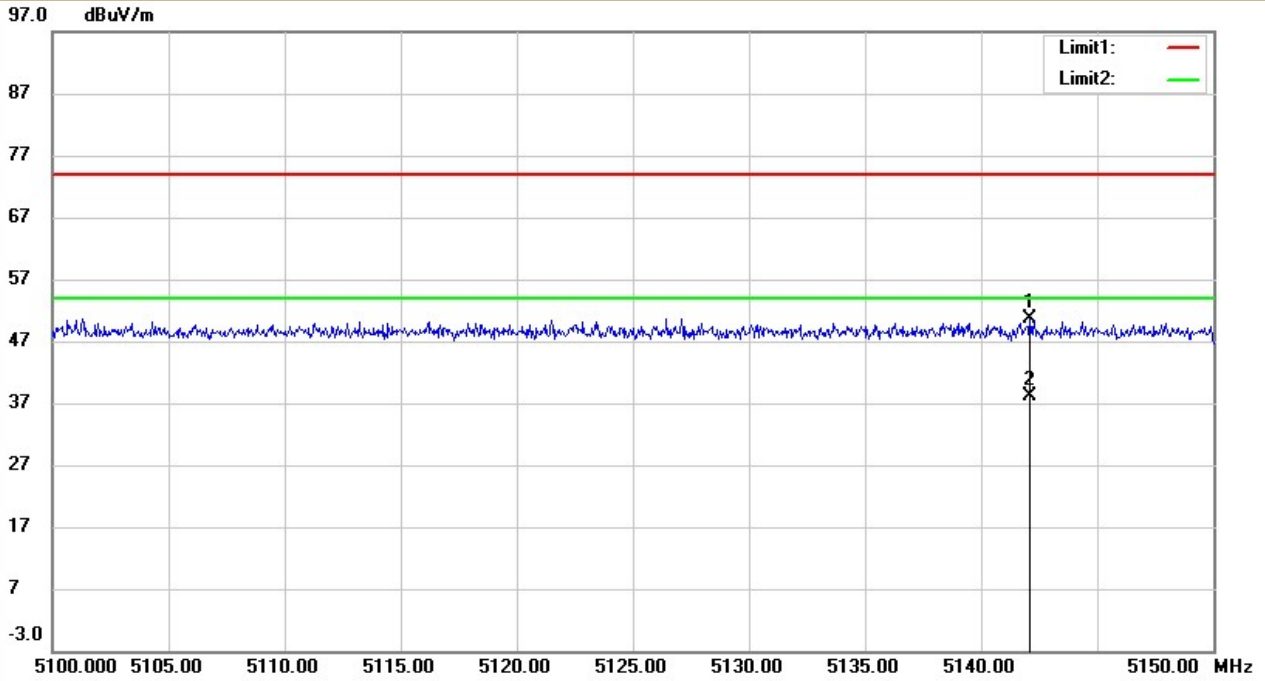
| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) | Over(dB) | AV(dBuV/m) (VBW=10Hz) | Limit 3m (dBuV/m) | Over(dB) |
|-----------------|----------|-----------------------|-------------------|----------|-----------------------|-------------------|----------|
| 5363.820 | H | 51.73 | 74.00 | -22.27 | 39.27 | 54.00 | -14.73 |
| 5361.525 | V | 50.91 | 74.00 | -23.09 | 38.64 | 54.00 | -15.36 |

- Note:** (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 (3) Correct Factor= Ant_F + Cab_L - Preamp

U-NII -2A

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

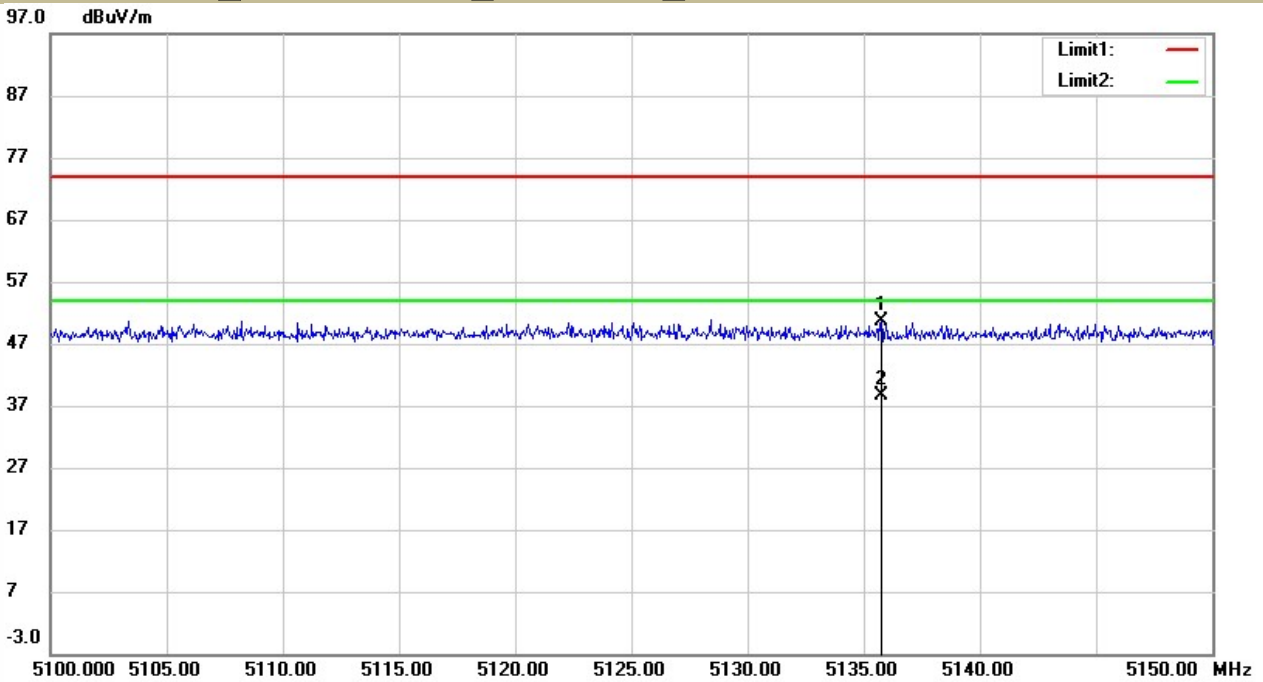
802.11a 802.11n(HT20) 802.11 ac (VHT20)
 5260 5300 5320 Ant.Pol H



U-NII -2A

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

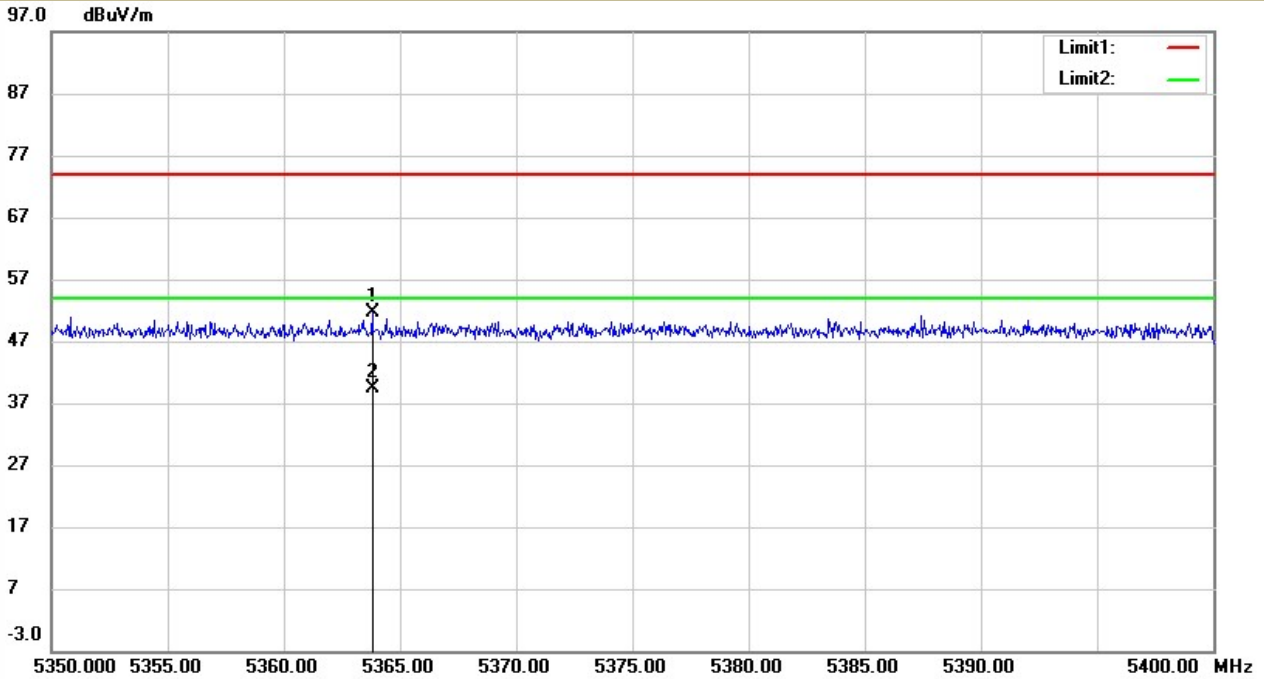
802.11a 802.11n(HT20) 802.11 ac (VHT20)
 5260 5300 5320 Ant.Pol V



U-NII -2A

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

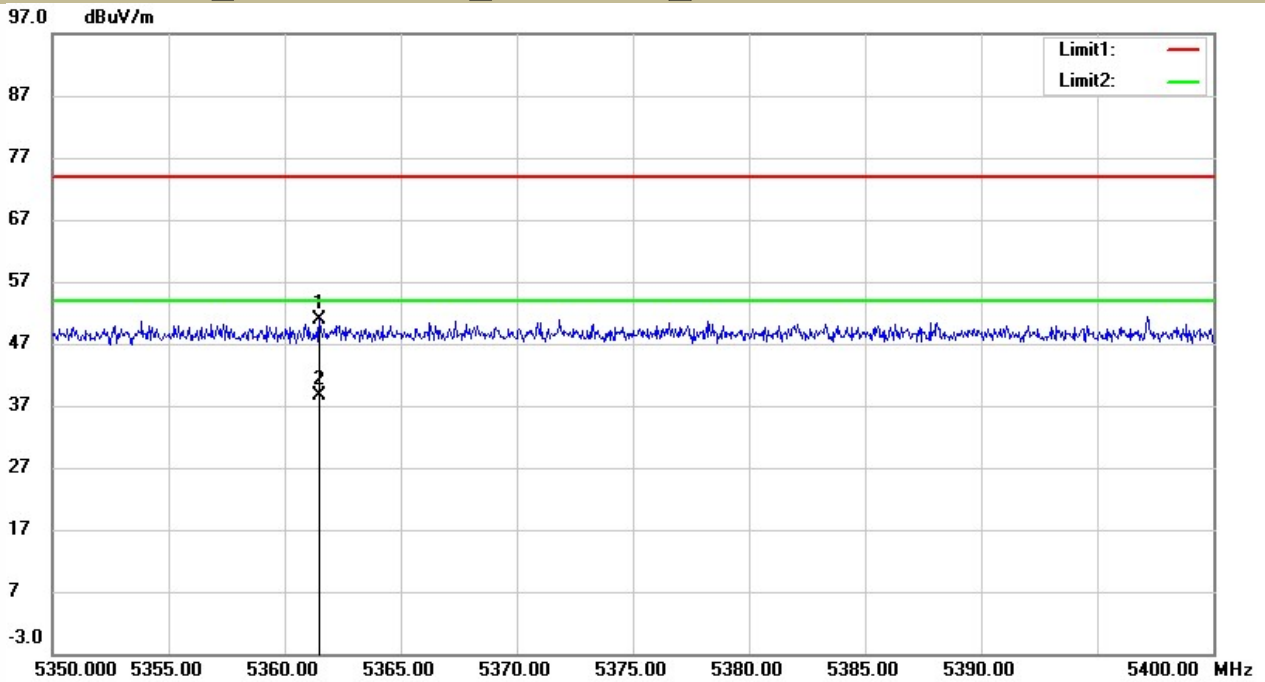
802.11a 802.11n(HT20) 802.11 ac (VHT20)
 5260 5300 5320 Ant.Pol H



U-NII -2A

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

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



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

| Test mode: | | 802.11a | | Frequency(MHz): | | 5500 | |
|-------------|--------------|-------------------------|---------------|-----------------|----------|------|--|
| Freq. (MHz) | Ant.Pol. H/V | Field Strength (dBuV/m) | E.I.R.P (dBm) | Limit (dBm) | Over(dB) | | |
| 3994.55 | V | 45.59 | -49.61 | -27 | -22.61 | | |
| 10979.00 | V | 57.06 | -38.14 | -27 | -11.14 | | |
| 17701.65 | V | 61.66 | -33.54 | -27 | -6.54 | | |
| 3952.05 | H | 45.59 | -49.61 | -27 | -22.61 | | |
| 11086.95 | H | 56.56 | -38.64 | -27 | -11.64 | | |
| 17815.55 | H | 61.58 | -33.62 | -27 | -6.62 | | |

| Test mode: | | 802.11a | | Frequency(MHz): | | 5600 | |
|-------------|--------------|-------------------------|---------------|-----------------|----------|------|--|
| Freq. (MHz) | Ant.Pol. H/V | Field Strength (dBuV/m) | E.I.R.P (dBm) | Limit (dBm) | Over(dB) | | |
| 3946.10 | V | 45.25 | -49.95 | -27 | -22.95 | | |
| 12118.85 | V | 57.94 | -37.26 | -27 | -10.26 | | |
| 17231.60 | V | 61.4 | -33.8 | -27 | -6.8 | | |
| 3898.50 | H | 46.32 | -48.88 | -27 | -21.88 | | |
| 11007.90 | H | 56.66 | -38.54 | -27 | -11.54 | | |
| 17993.20 | H | 61.17 | -34.03 | -27 | -7.03 | | |

| Test mode: | | 802.11a | | Frequency(MHz): | | 5700 | |
|-------------|--------------|-------------------------|---------------|-----------------|----------|------|--|
| Freq. (MHz) | Ant.Pol. H/V | Field Strength (dBuV/m) | E.I.R.P (dBm) | Limit (dBm) | Over(dB) | | |
| 3992.85 | V | 46.41 | -48.79 | -27 | -21.79 | | |
| 11119.25 | V | 57.1 | -38.1 | -27 | -11.1 | | |
| 17621.75 | V | 61.7 | -33.5 | -27 | -6.5 | | |
| 3967.35 | H | 45.69 | -49.51 | -27 | -22.51 | | |
| 12063.60 | H | 58.6 | -36.6 | -27 | -9.6 | | |
| 17528.25 | H | 61.66 | -33.54 | -27 | -6.54 | | |

- 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
 (4)The reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

| Frequency: 802.11a | | | 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 |
| 3994.55 | V | 45.59 | 32.54 | 74 | 54 | -28.41 | -21.46 |
| 10979.00 | V | 57.06 | 39.61 | 74 | 54 | -16.94 | -14.39 |
| 17701.65 | V | 61.66 | 42.07 | 74 | 54 | -12.34 | -11.93 |
| 3952.05 | H | 45.59 | 32.60 | 74 | 54 | -28.41 | -21.40 |
| 11086.95 | H | 56.56 | 40.36 | 74 | 54 | -17.44 | -13.64 |
| 17815.55 | H | 61.58 | 42.17 | 74 | 54 | -12.42 | -11.83 |

| Frequency: 802.11a | | | Frequency(MHz): 5600 | | | | |
|--------------------|--------------|------------------------|----------------------|------------------|----|-------------|--------|
| Freq. (MHz) | Ant.Pol. H/V | Emission Level(dBuV/m) | | Limit 3m(dBuV/m) | | Margin (dB) | |
| | | PK | AV | PK | AV | PK | AV |
| 3946.10 | V | 45.25 | 32.47 | 74 | 54 | -28.75 | -21.53 |
| 12118.85 | V | 57.94 | 40.10 | 74 | 54 | -16.06 | -13.90 |
| 17231.60 | V | 61.40 | 42.67 | 74 | 54 | -12.60 | -11.33 |
| 3898.50 | H | 46.32 | 33.47 | 74 | 54 | -27.68 | -20.53 |
| 11007.90 | H | 56.66 | 40.01 | 74 | 54 | -17.34 | -13.99 |
| 17993.20 | H | 61.17 | 42.67 | 74 | 54 | -12.83 | -11.33 |

| Frequency: 802.11a | | | 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 |
| 3992.85 | V | 46.41 | 33.41 | 74 | 54 | -27.59 | -20.59 |
| 11119.25 | V | 57.10 | 40.35 | 74 | 54 | -16.90 | -13.65 |
| 17621.75 | V | 61.70 | 42.74 | 74 | 54 | -12.30 | -11.26 |
| 3967.35 | H | 45.69 | 32.07 | 74 | 54 | -28.31 | -21.93 |
| 12063.60 | H | 58.60 | 40.62 | 74 | 54 | -15.40 | -13.38 |
| 17528.25 | H | 61.66 | 42.17 | 74 | 54 | -12.34 | -11.83 |

- Note:**
- (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 - (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 - (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: 802.11a Frequency(MHz): 5500

| Freq. (MHz) | Ant.Pol. H/V | Field Strength (RBW=100KHz) (dBuV/m) | E.I.R.P (dBm) | Limit (dBm) | Verdict |
|-------------|--------------|--------------------------------------|---------------|-------------|---------|
| 5452.217 | H | 50.25 | -44.95 | -27 | Pass |
| 5453.432 | V | 50.72 | -44.48 | -27 | Pass |

Test mode: 802.11a Frequency(MHz): 5700

| Freq. (MHz) | Ant.Pol. H/V | Field Strength (RBW=100KHz) (dBuV/m) | E.I.R.P (dBm) | Limit (dBm) | Verdict |
|-------------|--------------|--------------------------------------|---------------|-------------|---------|
| 5732.305 | H | 50.22 | -44.98 | -27 | Pass |
| 5731.052 | V | 50.18 | -45.02 | -27 | Pass |

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

Test mode: 802.11a Frequency(MHz): 5500

| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) | Over(dB) | AV(dBuV/m) (VBW=10Hz) | Limit 3m (dBuV/m) | Over(dB) |
|-----------------|----------|-----------------------|-------------------|----------|-----------------------|-------------------|----------|
| 5452.217 | H | 50.25 | 74.00 | -23.75 | 38.29 | 54.00 | -15.71 |
| 5453.432 | V | 50.72 | 74.00 | -23.28 | 38.10 | 54.00 | -15.90 |

Test mode: 802.11a Frequency(MHz): 5700

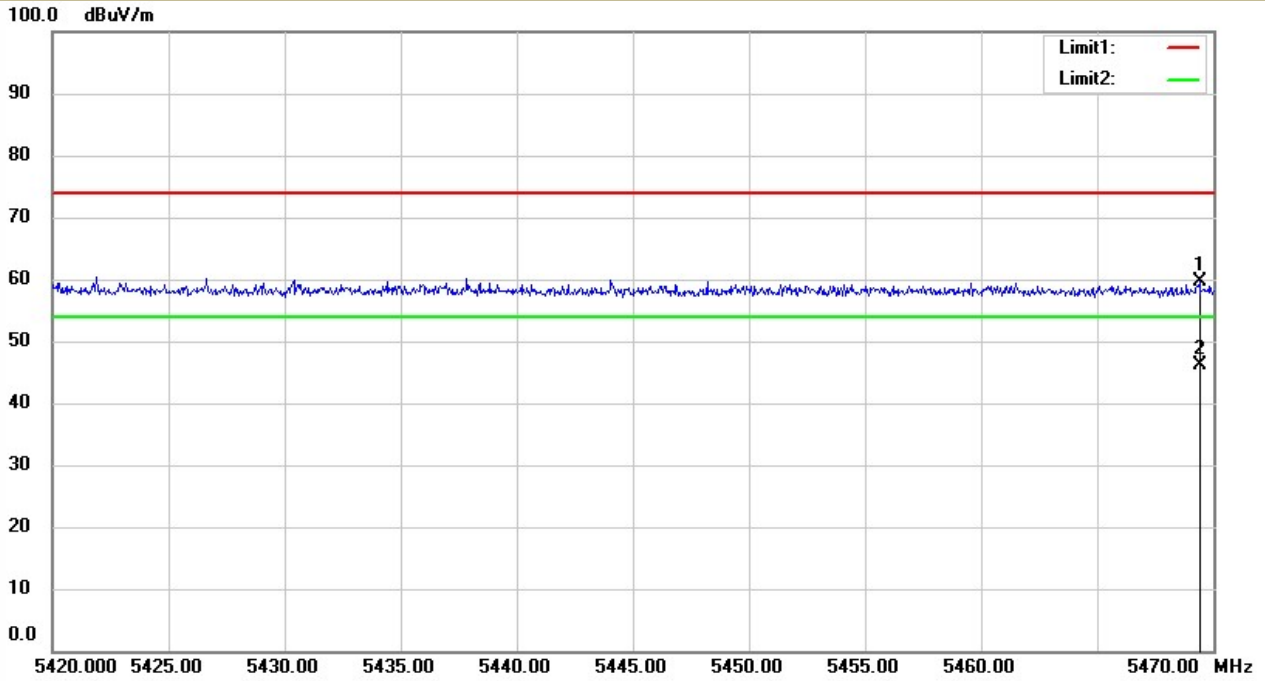
| Frequency (MHz) | Polarity | PK(dBuV/m) (VBW=3MHz) | Limit 3m (dBuV/m) | Over(dB) | AV(dBuV/m) (VBW=10Hz) | Limit 3m (dBuV/m) | Over(dB) |
|-----------------|----------|-----------------------|-------------------|----------|-----------------------|-------------------|----------|
| 5732.305 | H | 50.22 | 74.00 | -23.78 | 39.08 | 54.00 | -14.92 |
| 5731.052 | V | 50.18 | 74.00 | -23.82 | 38.09 | 54.00 | -15.91 |

- Note:** (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 (3) Correct Factor= Ant_F + Cab_L - Preamp

U-NII -2C

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

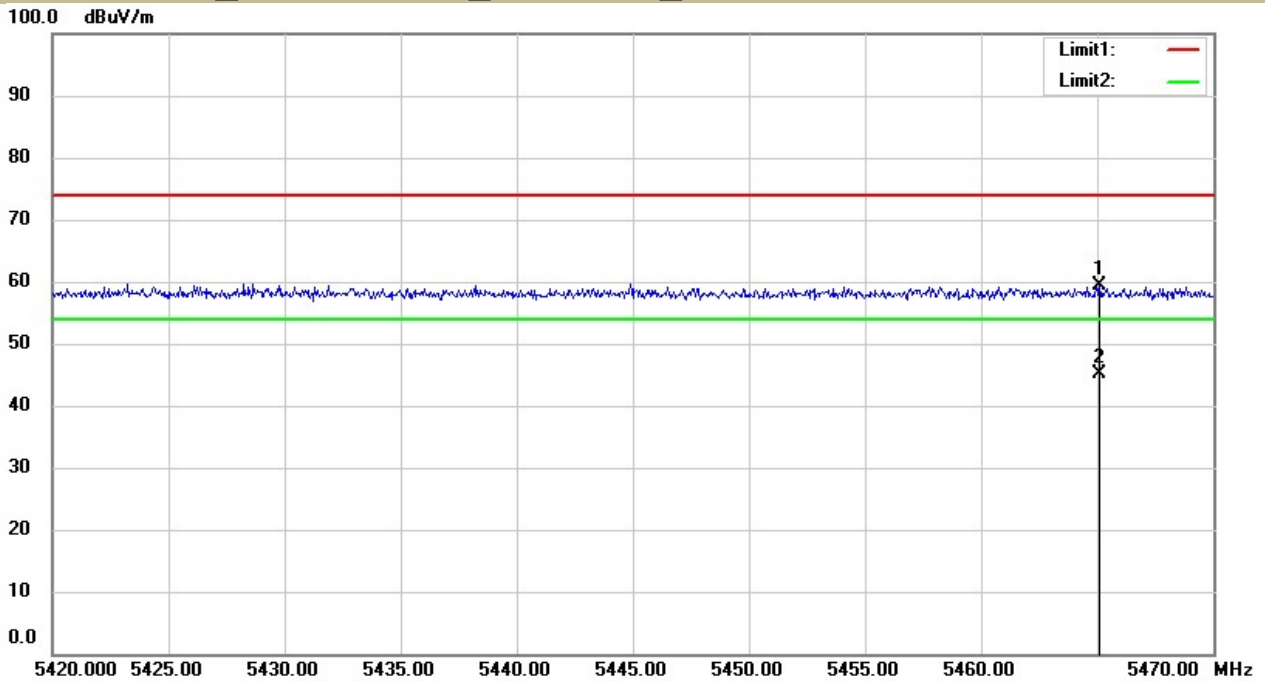
802.11a 802.11n(HT20) 802.11 ac (VHT20)
 5500 5600 5700 Ant.Pol H



U-NII -2C

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

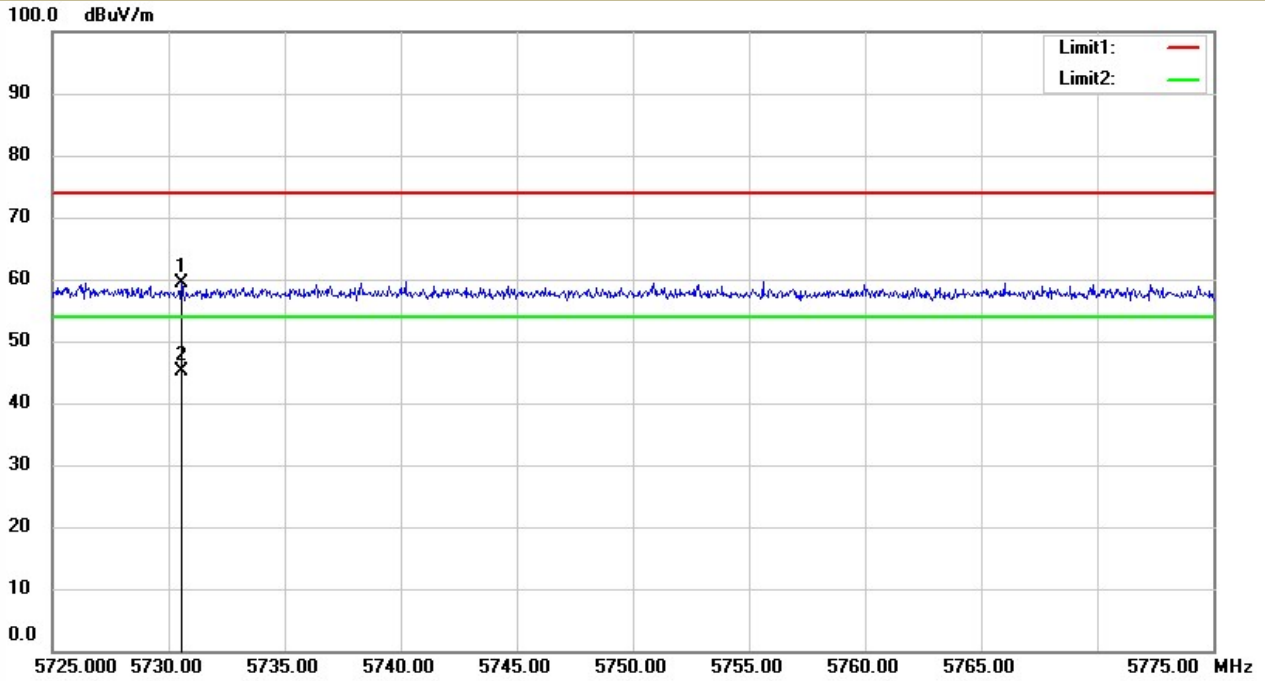
802.11a 802.11n(HT20) 802.11 ac (VHT20)
 5500 5600 5700 Ant.Pol V



U-NII -2C

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

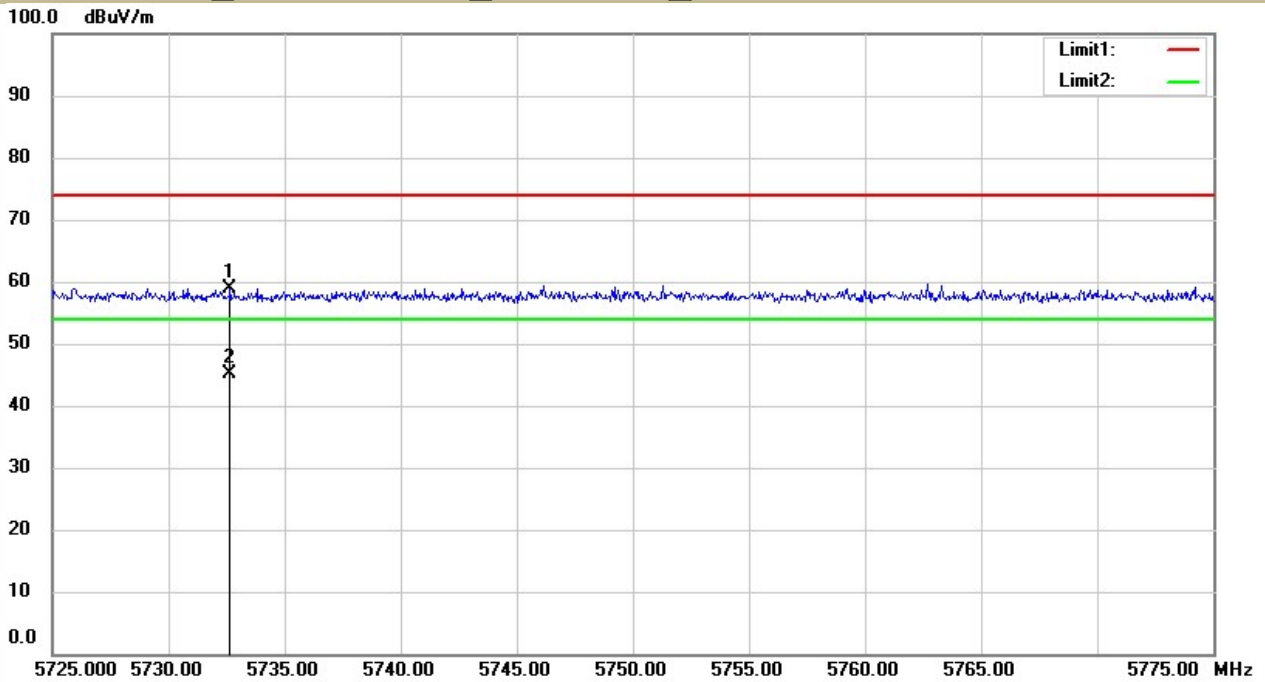
802.11a 802.11n(HT20) 802.11 ac (VHT20)
 5500 5600 5700 Ant.Pol H



U-NII -2C

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

802.11a 802.11n(HT20) 802.11 ac (VHT20)
 5500 5600 5700 Ant.Pol V



■ For Undesirable radiated Spurious Emission in U-NII -3

All the modes 802.11a/n/ac has been tested and the worst result 802.11a recorded as below:

● Undesirable radiated Spurious Emission Above 1GHz (1GHz to 40GHz)

| Test mode: | | 802.11a | | Frequency(MHz): 5745 | |
|-------------|--------------|-------------------------|---------------|----------------------|----------|
| Freq. (MHz) | Ant.Pol. H/V | Field Strength (dBuV/m) | E.I.R.P (dBm) | Limit (dBm) | Over(dB) |
| 3959.70 | V | 46.83 | -48.37 | -27 | -21.37 |
| 12333.05 | V | 58.75 | -36.45 | -27 | -9.45 |
| 17593.70 | V | 61.81 | -33.39 | -27 | -6.39 |
| 3934.20 | H | 45.75 | -49.45 | -27 | -22.45 |
| 12008.35 | H | 58.23 | -36.97 | -27 | -9.97 |
| 17580.95 | H | 61.33 | -33.87 | -27 | -6.87 |

| Test mode: | | 802.11a | | Frequency(MHz): 5785 | |
|-------------|--------------|-------------------------|---------------|----------------------|----------|
| Freq. (MHz) | Ant.Pol. H/V | Field Strength (dBuV/m) | E.I.R.P (dBm) | Limit (dBm) | Over(dB) |
| 3943.55 | V | 45.54 | -49.66 | -27 | -22.66 |
| 12148.60 | V | 57.91 | -37.29 | -27 | -10.29 |
| 17863.15 | V | 61.12 | -34.08 | -27 | -7.08 |
| 4029.40 | H | 45.59 | -49.61 | -27 | -22.61 |
| 11107.35 | H | 56.9 | -38.3 | -27 | -11.3 |
| 17826.60 | H | 61.72 | -33.48 | -27 | -6.48 |

| Test mode: | | 802.11a | | Frequency(MHz): 5825 | |
|-------------|--------------|-------------------------|---------------|----------------------|----------|
| Freq. (MHz) | Ant.Pol. H/V | Field Strength (dBuV/m) | E.I.R.P (dBm) | Limit (dBm) | Over(dB) |
| 3949.50 | V | 45.65 | -49.55 | -27 | -22.55 |
| 11868.10 | V | 58.84 | -36.36 | -27 | -9.36 |
| 17396.50 | V | 61.18 | -34.02 | -27 | -7.02 |
| 4019.20 | H | 46.21 | -48.99 | -27 | -21.99 |
| 11947.15 | H | 59.22 | -35.98 | -27 | -8.98 |
| 17928.60 | H | 62.45 | -32.75 | -27 | -5.75 |

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

(4) The reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

| Frequency: 802.11a | | | | 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 |
| 3959.70 | V | 46.83 | 33.74 | 74 | 54 | -27.17 | -20.26 |
| 12333.05 | V | 58.75 | 39.63 | 74 | 54 | -15.25 | -14.37 |
| 17593.70 | V | 61.81 | 42.07 | 74 | 54 | -12.19 | -11.93 |
| 3934.20 | H | 45.75 | 32.61 | 74 | 54 | -28.25 | -21.39 |
| 12008.35 | H | 58.23 | 39.58 | 74 | 54 | -15.77 | -14.42 |
| 17580.95 | H | 61.33 | 42.17 | 74 | 54 | -12.67 | -11.83 |

| Frequency: 802.11a | | | | 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 |
| 3943.55 | V | 45.54 | 32.07 | 74 | 54 | -28.46 | -21.93 |
| 12148.60 | V | 57.91 | 38.64 | 74 | 54 | -16.09 | -15.36 |
| 17863.15 | V | 61.12 | 42.27 | 74 | 54 | -12.88 | -11.73 |
| 4029.40 | H | 45.59 | 33.01 | 74 | 54 | -28.41 | -20.99 |
| 11107.35 | H | 56.90 | 38.41 | 74 | 54 | -17.10 | -15.59 |
| 17826.60 | H | 61.72 | 42.00 | 74 | 54 | -12.28 | -12.00 |

| Frequency: 802.11a | | | | 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 |
| 3949.50 | V | 45.65 | 32.74 | 74 | 54 | -28.35 | -21.26 |
| 11868.10 | V | 58.84 | 39.61 | 74 | 54 | -15.16 | -14.39 |
| 17396.50 | V | 61.18 | 42.22 | 74 | 54 | -12.82 | -11.78 |
| 4019.20 | H | 46.21 | 33.43 | 74 | 54 | -27.79 | -20.57 |
| 11947.15 | H | 59.22 | 40.36 | 74 | 54 | -14.78 | -13.64 |
| 17928.60 | H | 62.45 | 42.17 | 74 | 54 | -11.55 | -11.83 |

- Note:**
- (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 - (2) Emission Level= Reading Level+Correct Factor +Cable Loss.
 - (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: 802.11a Frequency: 5745

| Freq. (MHz) | Ant.Pol. H/V | Field Strength (RBW=100KHz) (dBuV/m) | E.I.R.P (dBm) | Limit (dBm) | Verdict |
|-------------|--------------|--------------------------------------|---------------|-------------|---------|
| 5623.725 | H | 50.52 | -44.68 | 26.31 | PASS |
| 5605.094 | V | 50.5 | -44.7 | 29.87 | PASS |

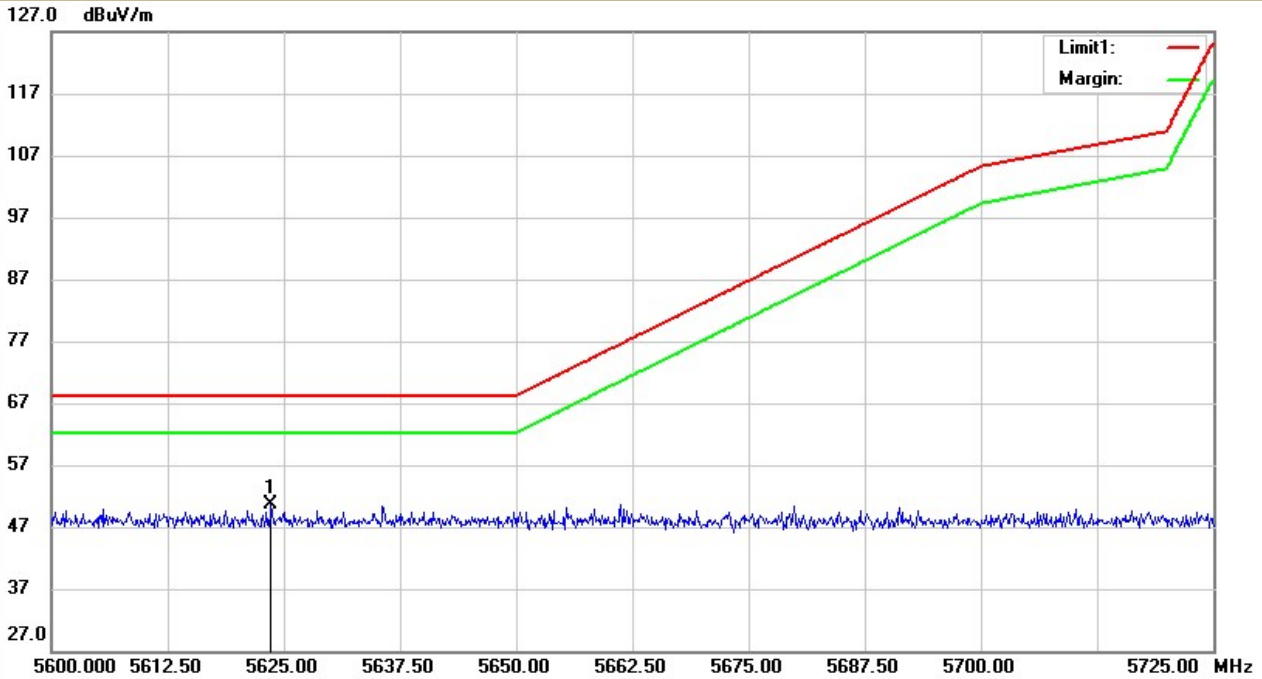
Test mode: 802.11a Frequency: 5825

| Freq. (MHz) | Ant.Pol. H/V | Field Strength (RBW=100KHz) (dBuV/m) | E.I.R.P (dBm) | Limit (dBm) | Verdict |
|-------------|--------------|--------------------------------------|---------------|-------------|---------|
| 5939.281 | H | 50.27 | -44.93 | 27.57 | PASS |
| 5955.331 | V | 59.71 | -35.49 | 28.47 | PASS |

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

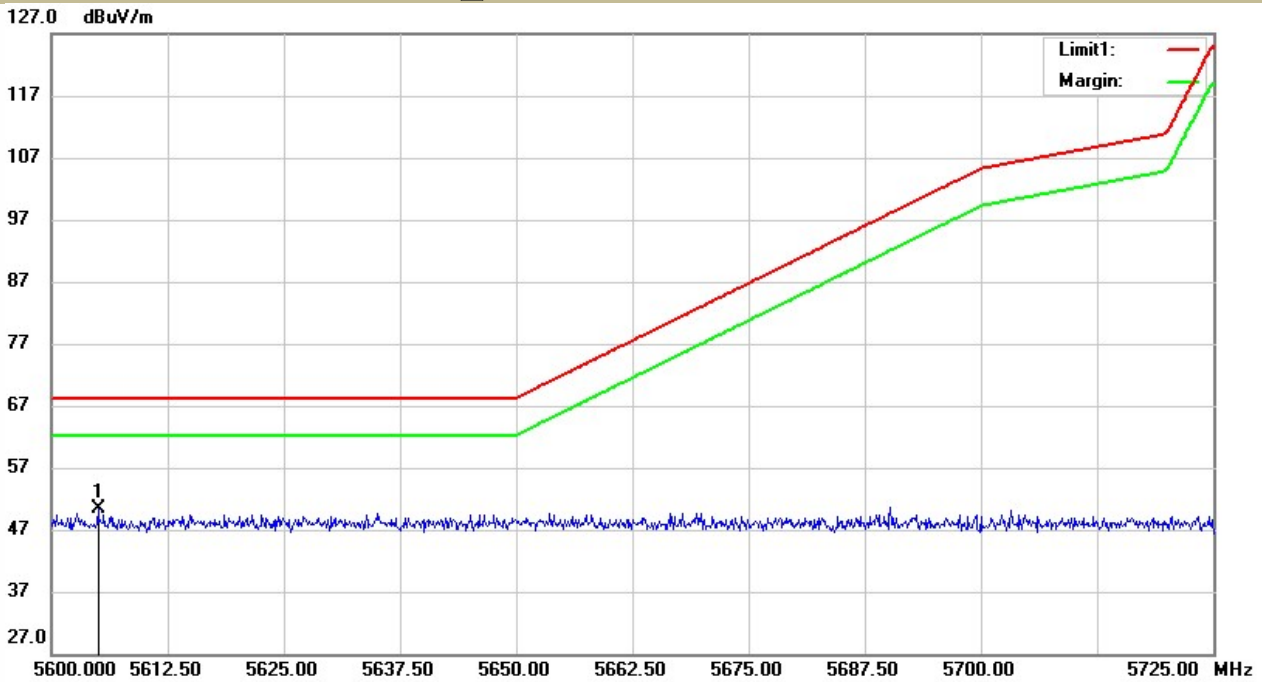
U-NII -3

| | | | |
|------------|--|---|---|
| Test Model | Undesirable radiated <input checked="" type="checkbox"/> 802.11a | Undesirable radiated <input type="checkbox"/> 802.11n(HT20) | Spurious Emission in Band Edge <input type="checkbox"/> 802.11n(HT40) |
| | <input checked="" type="checkbox"/> 5745 | | Ant. Pol H |



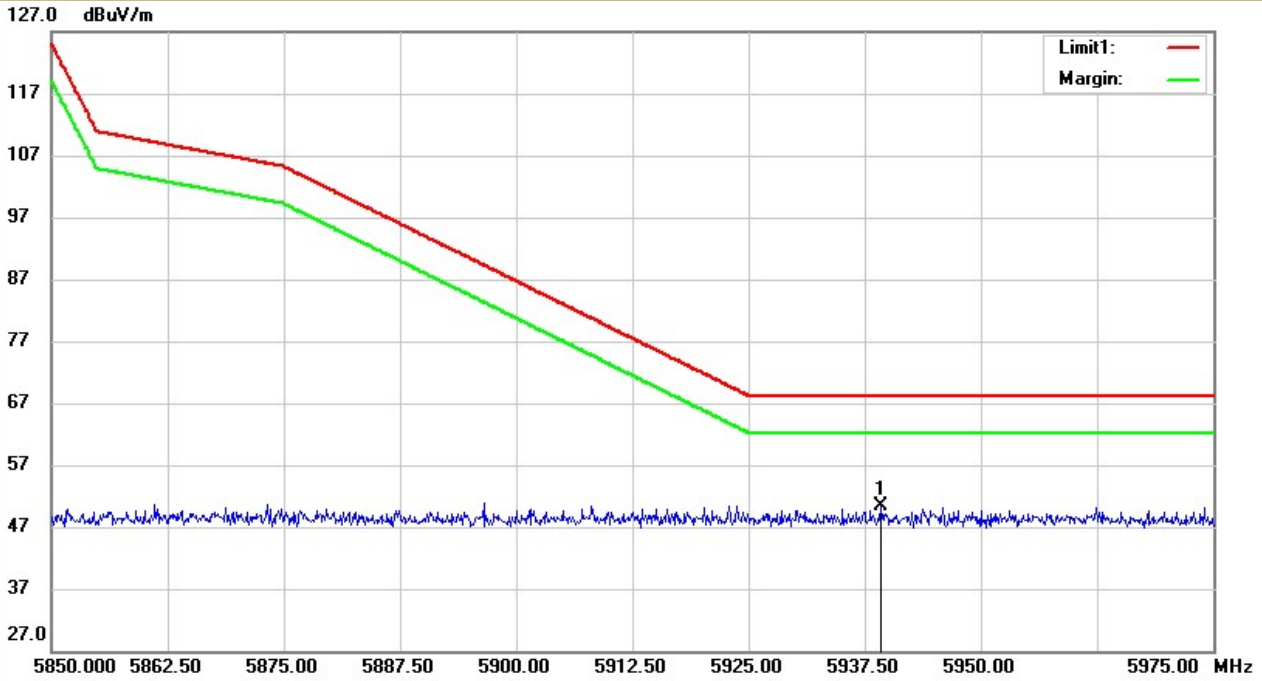
U-NII -3

| | | | |
|------------|--|---|---|
| Test Model | Undesirable radiated <input checked="" type="checkbox"/> 802.11a | Undesirable radiated <input type="checkbox"/> 802.11n(HT20) | Spurious Emission in Band Edge <input type="checkbox"/> 802.11n(HT40) |
| | <input checked="" type="checkbox"/> 5745 | | Ant. Pol V |



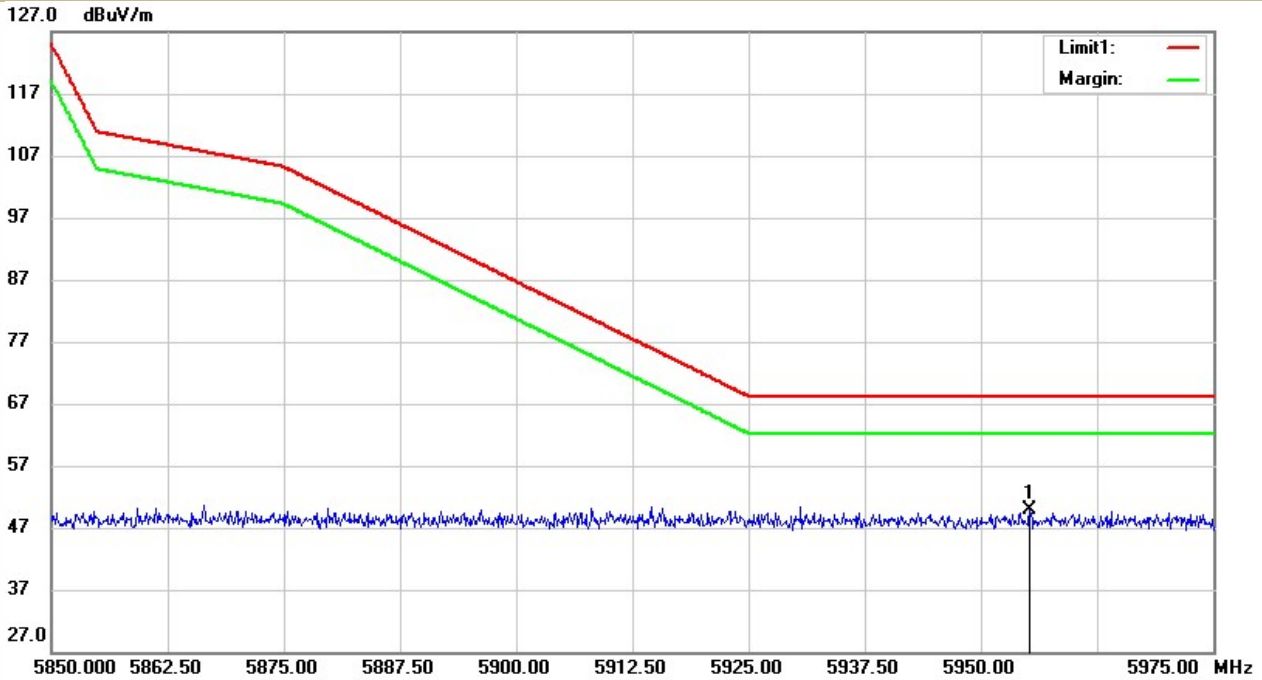
U-NII -3

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

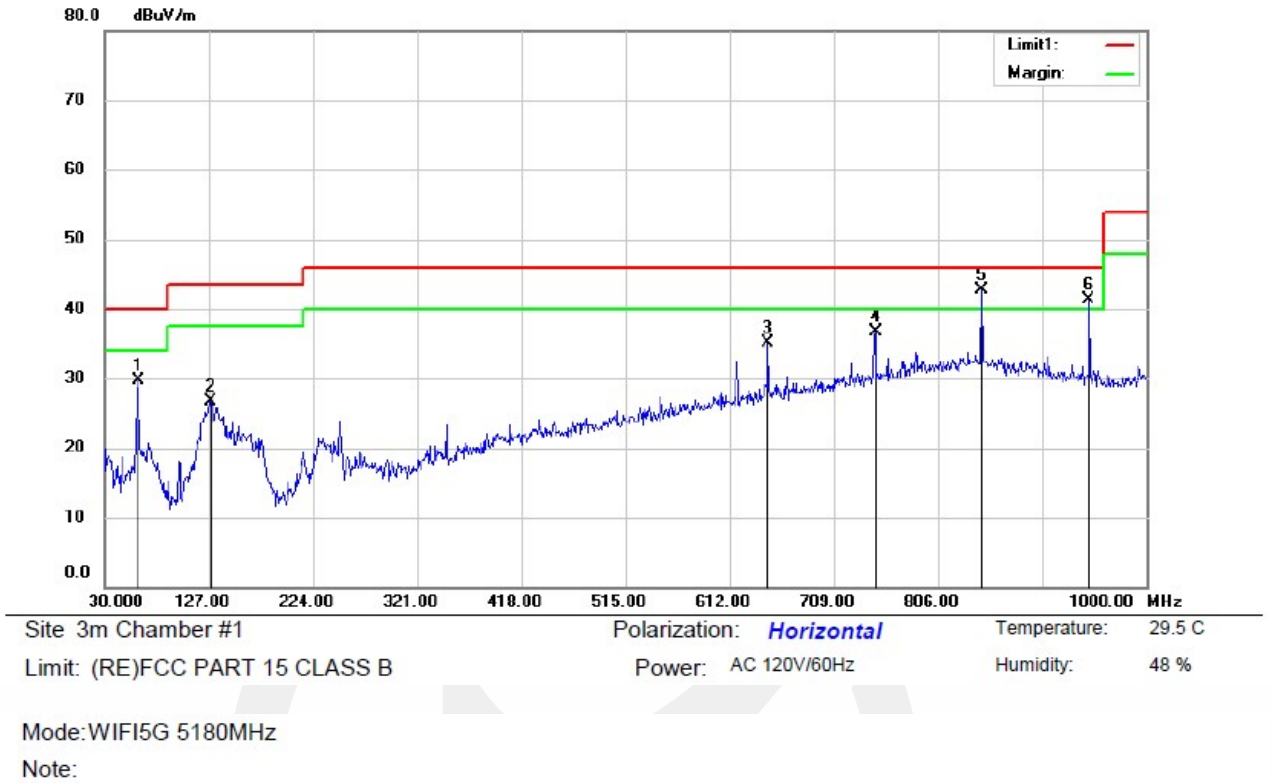


U-NII -3

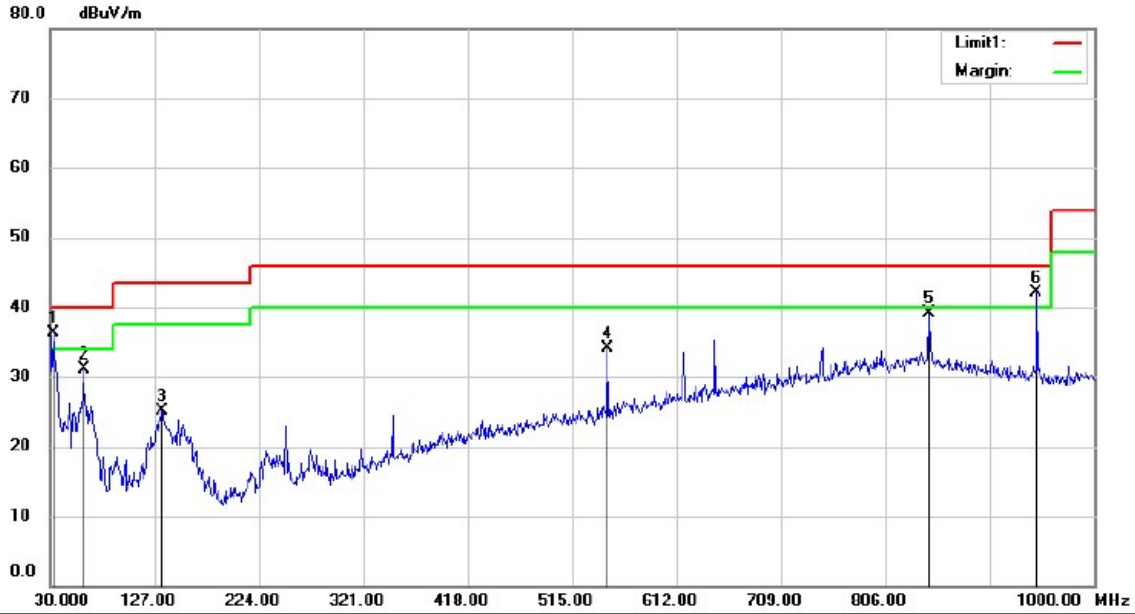
| | | | |
|------------|---|--|--|
| Test Model | Undesirable radiated | Undesirable radiated | Spurious Emission in Band Edge |
| | <input checked="" type="checkbox"/> 802.11a | <input type="checkbox"/> 802.11n(HT20) | <input type="checkbox"/> 802.11n(HT40) |
| | <input checked="" type="checkbox"/>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



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



| No. | Mk. | Freq. MHz | Reading Level dBuV | Correct Factor dB | Measure- ment dBuV/m | Limit dBuV/m | Over dB | Antenna Height cm | Table Degree degree | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|-------------------------|---------------------------|---------|
| 1 | | 61.8887 | 41.60 | -11.80 | 29.80 | 40.00 | -10.20 | QP | | |
| 2 | | 129.5462 | 40.86 | -14.09 | 26.77 | 43.50 | -16.73 | QP | | |
| 3 | | 648.0112 | 34.96 | 0.20 | 35.16 | 46.00 | -10.84 | QP | | |
| 4 | | 747.8000 | 34.42 | 2.22 | 36.64 | 46.00 | -9.36 | QP | | |
| 5 | * | 847.4674 | 37.82 | 4.93 | 42.75 | 46.00 | -3.25 | QP | | |
| 6 | ! | 947.2562 | 39.31 | 2.08 | 41.39 | 46.00 | -4.61 | QP | | |



Site 3m Chamber #1

Polarization: **Vertical**

Temperature: 29.5 C

Limit: (RE)FCC PART 15 CLASS B

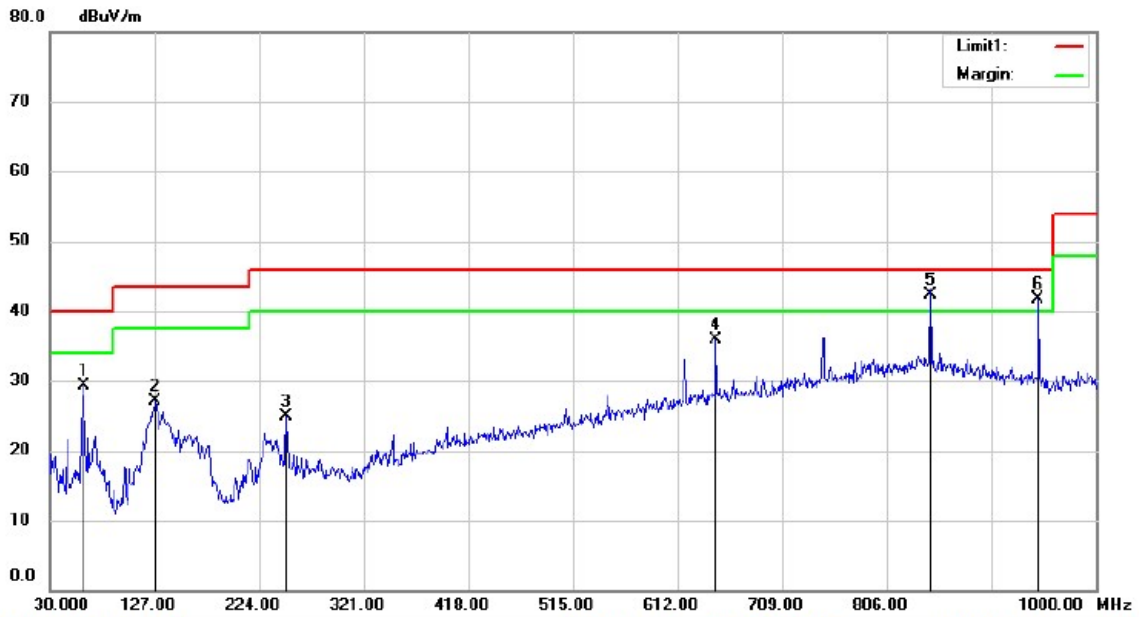
Power: AC 120V/60Hz

Humidity: 48 %

Mode: WIFI5G 5180MHz

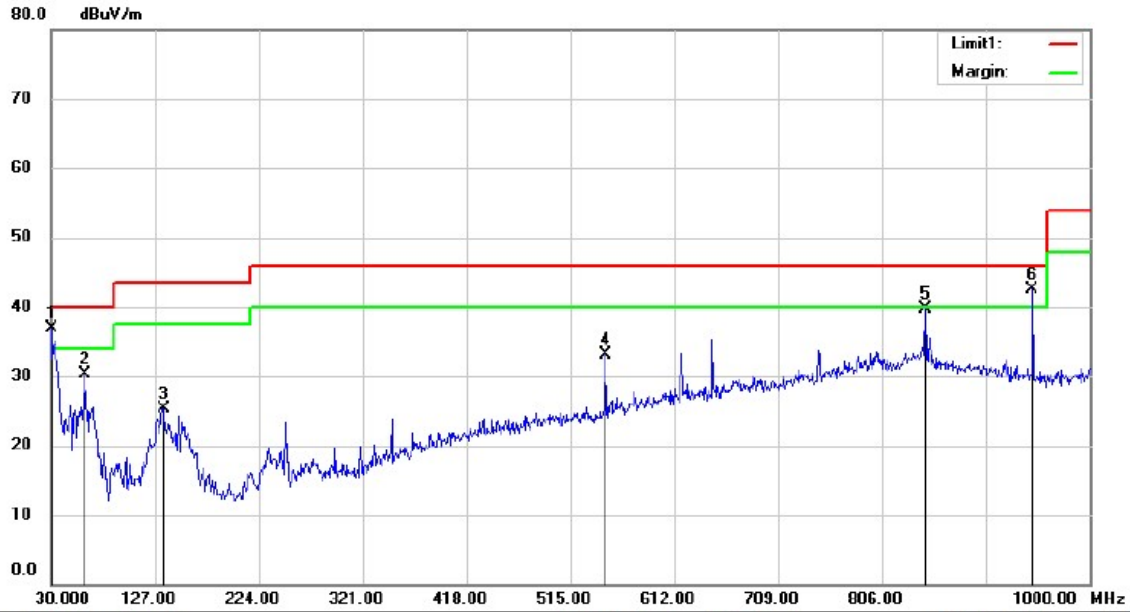
Note:

| No. | Mk. | Freq. MHz | Reading Level dBuV | Correct Factor dB | Measure- ment dBuV/m | Limit dBuV/m | Over dB | Antenna Height cm | Table Degree degree | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|-------------------------|---------------------------|---------|
| 1 | * | 33.1525 | 50.16 | -13.88 | 36.28 | 40.00 | -3.72 | QP | | |
| 2 | | 61.8887 | 42.95 | -11.80 | 31.15 | 40.00 | -8.85 | QP | | |
| 3 | | 134.2750 | 39.07 | -14.04 | 25.03 | 43.50 | -18.47 | QP | | |
| 4 | | 548.3437 | 36.59 | -2.55 | 34.04 | 46.00 | -11.96 | QP | | |
| 5 | | 847.4674 | 34.08 | 4.93 | 39.01 | 46.00 | -6.99 | QP | | |
| 6 | ! | 947.2562 | 40.12 | 2.08 | 42.20 | 46.00 | -3.80 | QP | | |



Site: 3m Chamber #1 Polarization: **Horizontal** Temperature: 29.5 C
 Limit: (RE)FCC PART 15 CLASS B Power: AC 120V/60Hz Humidity: 48 %
 Mode: WIFI5G 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 | | 61.8887 | 41.09 | -11.80 | 29.29 | 40.00 | -10.71 | | | QP |
| 2 | | 128.4550 | 41.25 | -14.12 | 27.13 | 43.50 | -16.37 | | | QP |
| 3 | | 249.2200 | 36.95 | -12.12 | 24.83 | 46.00 | -21.17 | | | QP |
| 4 | | 648.0112 | 35.69 | 0.20 | 35.89 | 46.00 | -10.11 | | | QP |
| 5 | * | 847.4674 | 37.47 | 4.93 | 42.40 | 46.00 | -3.60 | | | QP |
| 6 | ! | 947.2562 | 39.70 | 2.08 | 41.78 | 46.00 | -4.22 | | | QP |

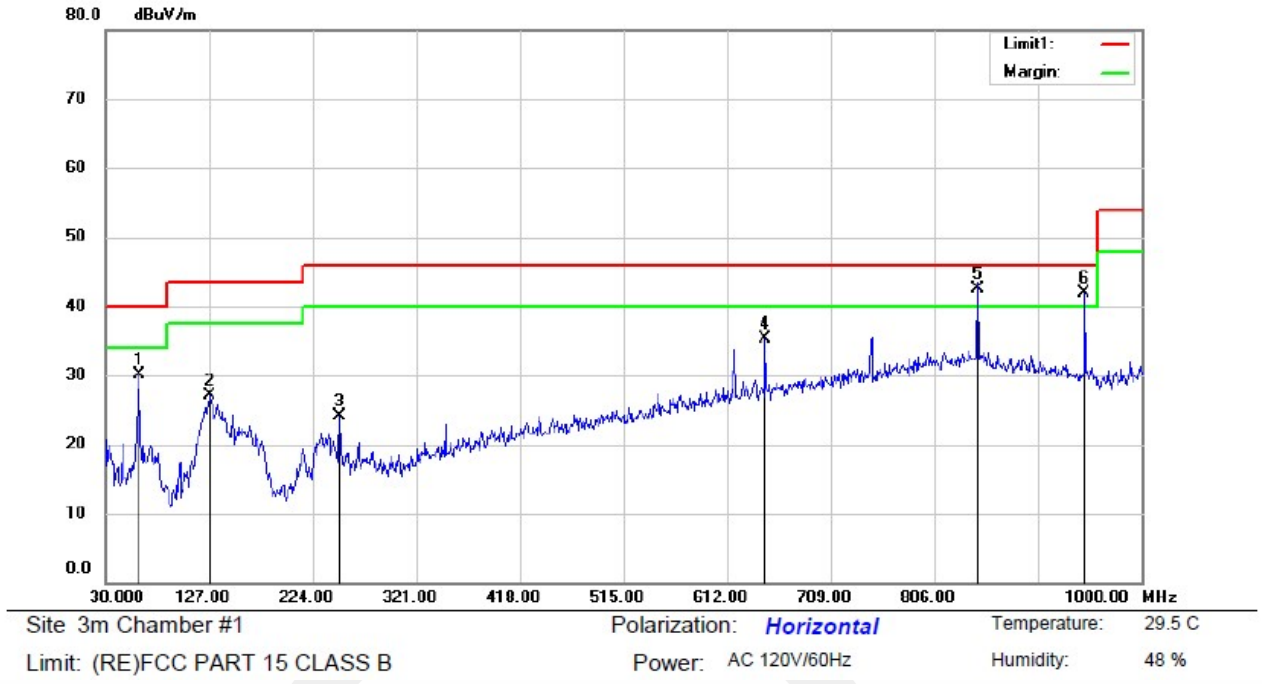


Site 3m Chamber #1 Polarization: **Vertical** Temperature: 29.5 C
 Limit: (RE)FCC PART 15 CLASS B Power: AC 120V/60Hz Humidity: 48 %

Mode:WIFI5G 5200MHz

Note:

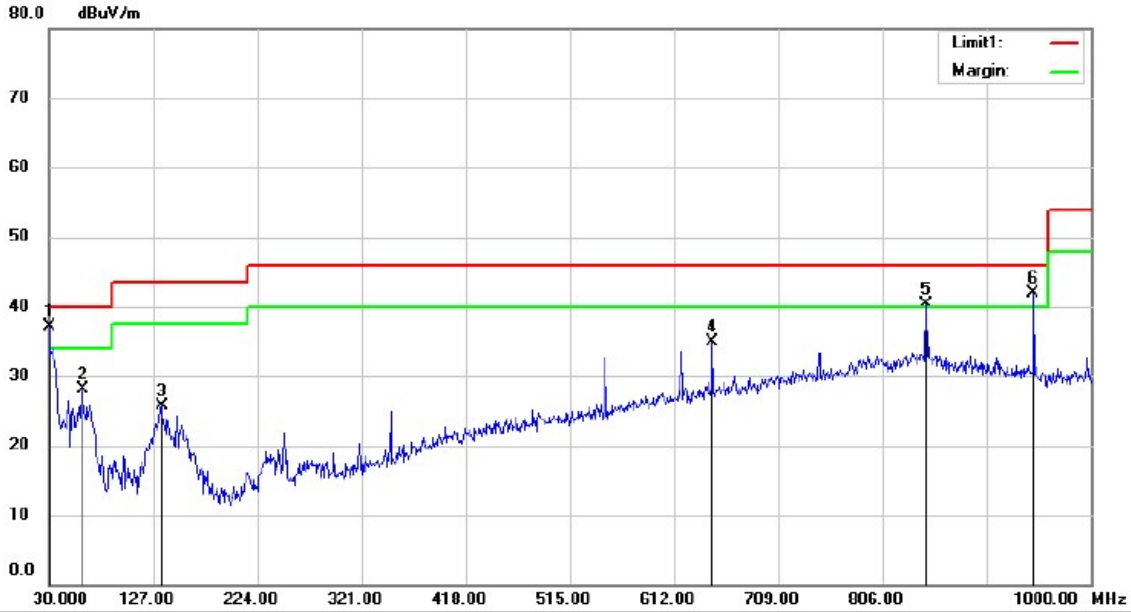
| No. | Mk. | Freq. MHz | Reading Level dBuV | Correct Factor dB | Measure- ment dBuV/m | Limit dBuV/m | Over dB | Antenna Height cm | Table Degree degree | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|-------------------------|---------------------------|----------|---------|
| 1 | * | 30.2424 | 51.03 | -14.14 | 36.89 | 40.00 | -3.11 | | | QP | |
| 2 | | 62.3737 | 42.08 | -11.80 | 30.28 | 40.00 | -9.72 | | | QP | |
| 3 | | 135.4875 | 39.44 | -14.06 | 25.38 | 43.50 | -18.12 | | | QP | |
| 4 | | 548.3437 | 35.75 | -2.55 | 33.20 | 46.00 | -12.80 | | | QP | |
| 5 | | 847.4674 | 34.76 | 4.93 | 39.69 | 46.00 | -6.31 | | | QP | |
| 6 | ! | 947.1350 | 40.35 | 2.09 | 42.44 | 46.00 | -3.56 | | | QP | |



Mode: WIFI5G 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 degree | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|-------------------------|---------------------------|---------|
| 1 | | 61.8887 | 41.81 | -11.80 | 30.01 | 40.00 | -9.99 | QP | | |
| 2 | | 127.9700 | 41.23 | -14.13 | 27.10 | 43.50 | -16.40 | QP | | |
| 3 | | 249.2200 | 36.17 | -12.12 | 24.05 | 46.00 | -21.95 | QP | | |
| 4 | | 648.0112 | 35.04 | 0.20 | 35.24 | 46.00 | -10.76 | QP | | |
| 5 | * | 847.4674 | 37.67 | 4.93 | 42.60 | 46.00 | -3.40 | QP | | |
| 6 | ! | 947.2562 | 39.78 | 2.08 | 41.86 | 46.00 | -4.14 | QP | | |



Site 3m Chamber #1

Polarization: **Vertical**

Temperature: 29.5 C

Limit: (RE)FCC PART 15 CLASS B

Power: AC 120V/60Hz

Humidity: 48 %

Mode: WIFI5G 5240MHz

Note:

| No. | Mk. | Freq. MHz | Reading Level dBuV | Correct Factor dB | Measure- ment dBuV/m | Limit dBuV/m | Over dB | Detector | Antenna Height cm | Table Degree degree | Comment |
|-----|-----|--------------|--------------------------|-------------------------|----------------------------|-----------------|------------|----------|-------------------------|---------------------------|---------|
| 1 | * | 30.2424 | 51.28 | -14.14 | 37.14 | 40.00 | -2.86 | QP | | | |
| 2 | | 61.5250 | 39.79 | -11.78 | 28.01 | 40.00 | -11.99 | QP | | | |
| 3 | | 135.1237 | 39.83 | -14.04 | 25.79 | 43.50 | -17.71 | QP | | | |
| 4 | | 648.0112 | 34.75 | 0.20 | 34.95 | 46.00 | -11.05 | QP | | | |
| 5 | ! | 847.4674 | 35.30 | 4.93 | 40.23 | 46.00 | -5.77 | QP | | | |
| 6 | ! | 947.2562 | 39.76 | 2.08 | 41.84 | 46.00 | -4.16 | 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

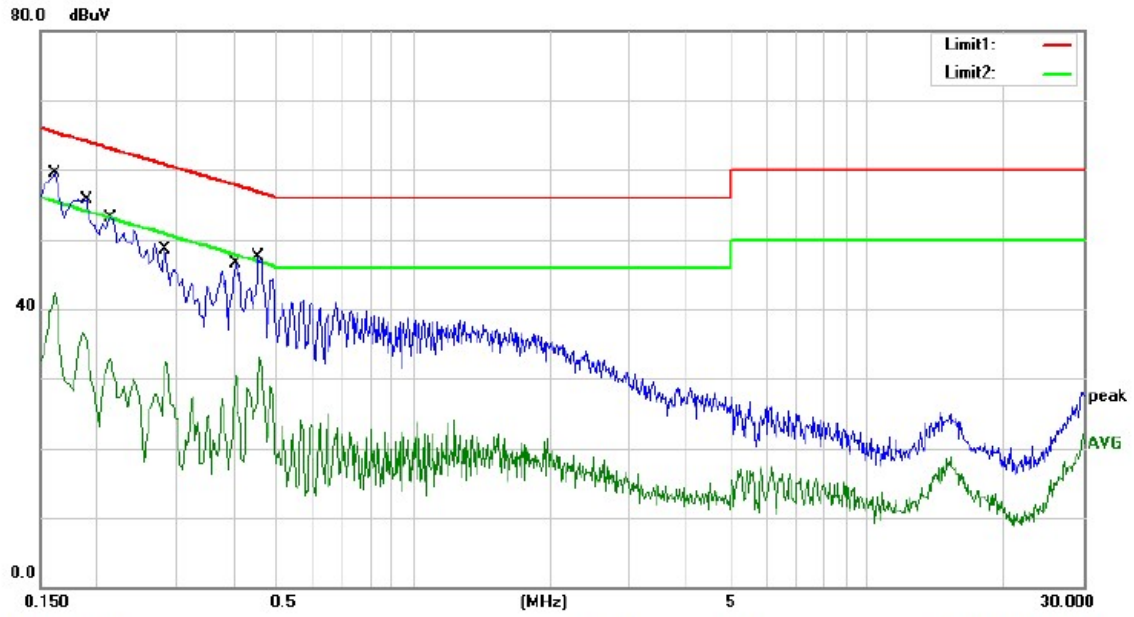
8.6.4 Test Procedure

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

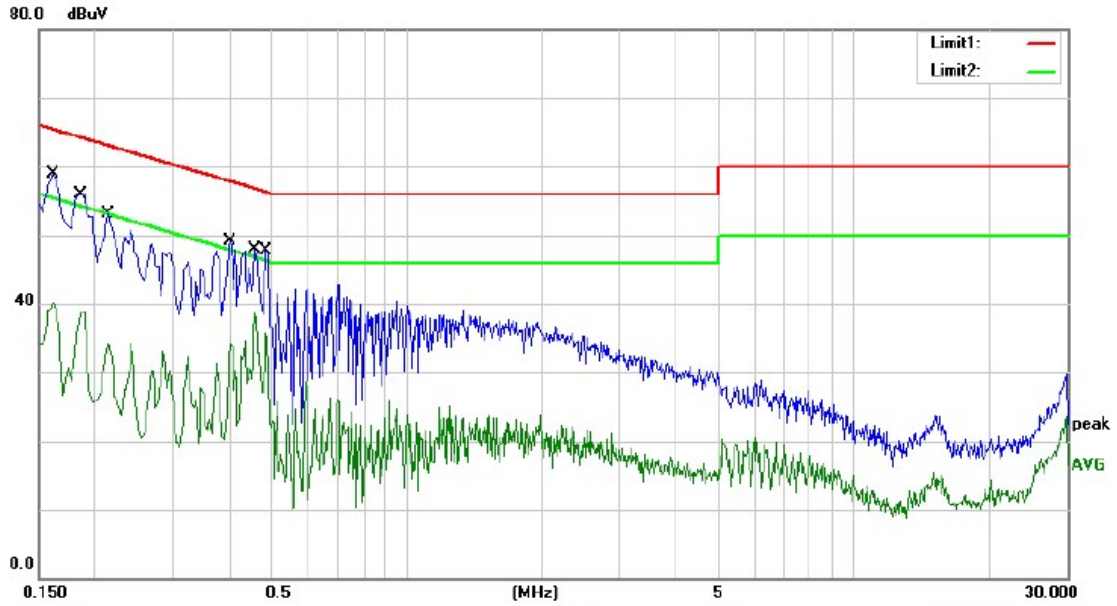
Pass

The 120V &240V voltage have been tested, and the worst result recorded was report as below:



Site Conduction #2 Phase: **N** Temperature: 25.0
 Limit: (CE)FCC PART 15 class B_QP Power: AC 120V/60Hz Humidity: 49 %
 Mode: WIFI(5G)
 Note:

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measurement | Limit | Over | Detector | Comment |
|-----|-----|--------|---------------|----------------|-------------|-------|--------|----------|---------|
| | | MHz | dBuV | dB | dBuV | dBuV | dB | | |
| 1 | * | 0.1620 | 48.10 | 9.90 | 58.00 | 65.36 | -7.36 | QP | |
| 2 | | 0.1620 | 32.48 | 9.90 | 42.38 | 55.36 | -12.98 | AVG | |
| 3 | | 0.1900 | 45.71 | 9.90 | 55.61 | 64.04 | -8.43 | QP | |
| 4 | | 0.1900 | 26.80 | 9.90 | 36.70 | 54.04 | -17.34 | AVG | |
| 5 | | 0.2140 | 43.19 | 9.90 | 53.09 | 63.05 | -9.96 | QP | |
| 6 | | 0.2140 | 23.08 | 9.90 | 32.98 | 53.05 | -20.07 | AVG | |
| 7 | | 0.2820 | 38.50 | 9.91 | 48.41 | 60.76 | -12.35 | QP | |
| 8 | | 0.2820 | 22.65 | 9.91 | 32.56 | 50.76 | -18.20 | AVG | |
| 9 | | 0.4060 | 36.54 | 9.92 | 46.46 | 57.73 | -11.27 | QP | |
| 10 | | 0.4060 | 20.53 | 9.92 | 30.45 | 47.73 | -17.28 | AVG | |
| 11 | | 0.4540 | 37.58 | 9.92 | 47.50 | 56.80 | -9.30 | QP | |
| 12 | | 0.4540 | 23.08 | 9.92 | 33.00 | 46.80 | -13.80 | AVG | |



Site Conduction #2 Phase: **L1** Temperature: 25.0
 Limit: (CE)FCC PART 15 class B_QP Power: AC 120V/60Hz Humidity: 49 %

Mode: WIFI(5G)

Note:

| No. | Mk. | Freq. MHz | Reading Level dBuV | Correct Factor dB | Measure- ment dBuV | Limit dBuV | Over dB | Detector | Comment |
|-----|-----|--------------|--------------------------|-------------------------|--------------------------|---------------|------------|----------|---------|
| 1 | * | 0.1620 | 49.00 | 9.90 | 58.90 | 65.36 | -6.46 | QP | |
| 2 | | 0.1620 | 30.23 | 9.90 | 40.13 | 55.36 | -15.23 | AVG | |
| 3 | | 0.1860 | 46.07 | 9.90 | 55.97 | 64.21 | -8.24 | QP | |
| 4 | | 0.1860 | 28.98 | 9.90 | 38.88 | 54.21 | -15.33 | AVG | |
| 5 | | 0.2140 | 43.29 | 9.90 | 53.19 | 63.05 | -9.86 | QP | |
| 6 | | 0.2140 | 24.25 | 9.90 | 34.15 | 53.05 | -18.90 | AVG | |
| 7 | | 0.4020 | 39.17 | 9.92 | 49.09 | 57.81 | -8.72 | QP | |
| 8 | | 0.4020 | 24.87 | 9.92 | 34.79 | 47.81 | -13.02 | AVG | |
| 9 | | 0.4580 | 37.90 | 9.92 | 47.82 | 56.73 | -8.91 | QP | |
| 10 | | 0.4580 | 28.76 | 9.92 | 38.68 | 46.73 | -8.05 | AVG | |
| 11 | | 0.4860 | 37.82 | 9.92 | 47.74 | 56.24 | -8.50 | QP | |
| 12 | | 0.4860 | 25.72 | 9.92 | 35.64 | 46.24 | -10.60 | 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 1 antenna: a External Bar antenna for WIFI 5G, the gain is 3 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 |