

APPENDIX B – TEST DATA OF RADIATED EMISSION

Worst case(11a)

Radiated Emission Band Edge

The measurement results are obtained as described below:

Measure Level = Reading Level + Cable loss + Antenna factor Sample calculation: (90.10 dBuV/m) = (43.20 dBμV) + (12.40 dB) + (34.50 dB), the corresponding frequency is 5180MHz.

Note: The scanned graph represents the maximum of both horizontal and vertical polarizations and is not a single horizontal or vertical polarization scan.

Note: There were no emissions above 18GHz found within 20dB of the limit. Thus the test result was not reported according to §15.31 (o)

【5150-5250】

● 802.11a

Carrier Frequency (MHz): 5180

Channel No.: 36

Test Mode: 802.11a

Detector: Peak

| Frequency (MHz) | Reading Level (dBuV) | Measure Level (dBuV/m) | Over Limit (dB) | Limit (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB) |
|-----------------|----------------------|------------------------|-----------------|----------------|-----------------|---------------------|
| 5180.0 | 27.38 | 74.28 | N/A | N/A | 12.40 | 34.50 |
| 5150.0 | 0.60 | 47.50 | -26.50 | 74.00 | 12.40 | 34.50 |

Detector: Average

| Frequency (MHz) | Reading Level (dBuV) | Measure Level (dBuV/m) | Over Limit (dB) | Limit (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB) |
|-----------------|----------------------|------------------------|-----------------|----------------|-----------------|---------------------|
| 5180.0 | 17.28 | 64.18 | N/A | N/A | 12.40 | 34.50 |
| 5150.0 | -12.23 | 34.67 | -19.33 | 54.00 | 12.40 | 34.50 |

Carrier Frequency (MHz): 5240

Channel No.: 48

Test Mode: 802.11a

Detector: Peak

| Frequency (MHz) | Reading Level (dBuV) | Measure Level (dBuV/m) | Over Limit (dB) | Limit (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB) |
|-----------------|----------------------|------------------------|-----------------|----------------|-----------------|---------------------|
| 5240.0 | 24.29 | 71.19 | N/A | N/A | 12.40 | 34.50 |
| 5250.0 | 14.48 | 61.38 | -12.62 | 74.00 | 12.40 | 34.50 |

Detector: Average

| Frequency (MHz) | Reading Level (dBuV) | Measure Level (dBuV/m) | Over Limit (dB) | Limit (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB) |
|-----------------|----------------------|------------------------|-----------------|----------------|-----------------|---------------------|
| 5240.0 | 18.52 | 65.42 | N/A | N/A | 12.40 | 34.50 |
| 5250.0 | -2.21 | 44.69 | -9.31 | 54.00 | 12.40 | 34.50 |

【5250-5350】

● 802.11a

Carrier Frequency (MHz): 5260

Channel No.: 52

Test Mode: 802.11a

Detector: Peak

| Frequency (MHz) | Reading Level (dBuV) | Measure Level (dBuV/m) | Over Limit (dB) | Limit (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB) |
|-----------------|----------------------|------------------------|-----------------|----------------|-----------------|---------------------|
| 5260.0 | 27.40 | 74.30 | N/A | N/A | 12.40 | 34.50 |
| 5240.0 | 1.68 | 48.58 | -25.42 | 74.00 | 12.40 | 34.50 |

Detector: Average

| Frequency (MHz) | Reading Level (dBuV) | Measure Level (dBuV/m) | Over Limit (dB) | Limit (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB) |
|-----------------|----------------------|------------------------|-----------------|----------------|-----------------|---------------------|
| 5260.0 | 18.04 | 64.94 | N/A | N/A | 12.40 | 34.50 |
| 5240.0 | -11.07 | 35.83 | -18.17 | 54.00 | 12.40 | 34.50 |

Carrier Frequency (MHz): 5320

Channel No.: 64

Test Mode: 802.11a

Detector: Peak

| Frequency (MHz) | Reading Level (dBuV) | Measure Level (dBuV/m) | Over Limit (dB) | Limit (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB) |
|-----------------|----------------------|------------------------|-----------------|----------------|-----------------|---------------------|
| 5320.0 | 28.48 | 75.38 | N/A | N/A | 12.40 | 34.50 |
| 5340.0 | 1.07 | 47.97 | -26.03 | 74.00 | 12.40 | 34.50 |

Detector: Average

| Frequency (MHz) | Reading Level (dBuV) | Measure Level (dBuV/m) | Over Limit (dB) | Limit (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB) |
|-----------------|----------------------|------------------------|-----------------|----------------|-----------------|---------------------|
| 5320.0 | 17.90 | 64.80 | N/A | N/A | 12.40 | 34.50 |
| 5340.0 | -11.48 | 35.42 | -18.58 | 54.00 | 12.40 | 34.50 |

【5470-5725】

● 802.11a

Carrier Frequency (MHz): 5500

Channel No.: 100

Test Mode: 802.11a

Detector: Peak

| Frequency (MHz) | Reading Level (dBuV) | Measure Level (dBuV/m) | Over Limit (dB) | Limit (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB) |
|-----------------|----------------------|------------------------|-----------------|----------------|-----------------|---------------------|
| 5500.0 | 37.93 | 84.83 | N/A | N/A | 12.40 | 34.50 |
| 5480.0 | 2.55 | 49.45 | -24.55 | 74.00 | 12.40 | 34.50 |

Detector: Average

| Frequency (MHz) | Reading Level (dBuV) | Measure Level (dBuV/m) | Over Limit (dB) | Limit (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB) |
|-----------------|----------------------|------------------------|-----------------|----------------|-----------------|---------------------|
| 5500.0 | 26.01 | 72.91 | N/A | N/A | 12.40 | 34.50 |
| 5480.0 | -10.76 | 36.14 | -17.86 | 54.00 | 12.40 | 34.50 |

Carrier Frequency (MHz): 5700

Channel No.: 140

Test Mode: 802.11a

Detector: Peak

| Frequency (MHz) | Reading Level (dBuV) | Measure Level (dBuV/m) | Over Limit (dB) | Limit (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB) |
|-----------------|----------------------|------------------------|-----------------|----------------|-----------------|---------------------|
| 5700.0 | 32.76 | 79.66 | N/A | N/A | 12.40 | 34.50 |
| 5720.0 | 2.93 | 49.83 | -24.17 | 74.00 | 12.40 | 34.50 |

Detector: Average

| Frequency (MHz) | Reading Level (dBuV) | Measure Level (dBuV/m) | Over Limit (dB) | Limit (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB) |
|-----------------|----------------------|------------------------|-----------------|----------------|-----------------|---------------------|
| 5700.0 | 24.84 | 71.74 | N/A | N/A | 12.40 | 34.50 |
| 5720.0 | -9.81 | 37.09 | -16.91 | 54.00 | 12.40 | 34.50 |

【5725-5850】

- 802.11a

Carrier Frequency (MHz): 5745

Channel No.: 149

Test Mode: 802.11a

Detector: Peak

| Frequency (MHz) | Reading Level (dBuV) | Measure Level (dBuV/m) | Over Limit (dB) | Limit (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB) |
|-----------------|----------------------|------------------------|-----------------|----------------|-----------------|---------------------|
| 5745.0 | 34.44 | 81.34 | N/A | N/A | 12.40 | 34.50 |
| 5725.0 | 2.98 | 49.88 | -24.12 | 74.00 | 12.40 | 34.50 |

Detector: Average

| Frequency (MHz) | Reading Level (dBuV) | Measure Level (dBuV/m) | Over Limit (dB) | Limit (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB) |
|-----------------|----------------------|------------------------|-----------------|----------------|-----------------|---------------------|
| 5745.0 | 23.94 | 70.84 | N/A | N/A | 12.40 | 34.50 |
| 5725.0 | -9.61 | 37.29 | -16.71 | 54.00 | 12.40 | 34.50 |

Carrier Frequency (MHz): 5825

Channel No.: 165

Test Mode: 802.11a

Detector: Peak

| Frequency (MHz) | Reading Level (dBuV) | Measure Level (dBuV/m) | Over Limit (dB) | Limit (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB) |
|-----------------|----------------------|------------------------|-----------------|----------------|-----------------|---------------------|
| 5825.0 | 33.96 | 80.86 | N/A | N/A | 12.40 | 34.50 |
| 5845.0 | 3.53 | 50.43 | -23.57 | 74.00 | 12.40 | 34.50 |

Detector: Average

| Frequency (MHz) | Reading Level (dBuV) | Measure Level (dBuV/m) | Over Limit (dB) | Limit (dBuV/m) | Cable Loss (dB) | Antenna Factor (dB) |
|-----------------|----------------------|------------------------|-----------------|----------------|-----------------|---------------------|
| 5825.0 | 23.53 | 70.43 | N/A | N/A | 12.40 | 34.50 |
| 5845.0 | -9.12 | 37.78 | -16.22 | 54.00 | 12.40 | 34.50 |

Sample Calculations

Determining Spurious Emissions Levels

A “reference path loss” is established and the A_{Rpl} is the attenuation of “reference path loss”, and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

The measurement results are obtained as described below:

Below 1GHz:

$$\text{QuasiPeak} = \text{Reading Value} + A_{Rpl}$$

Above 1GHz:

$$\text{MaxPeak} = \text{Reading MaxPeak} + A_{Rpl}$$

OR

$$\text{Average} = \text{Reading Average} + A_{Rpl}$$

Sample calculation: $(25.83 \text{ dB}\mu\text{V/m}) = (48.73 \text{ dB}\mu\text{V}) + (-22.90 \text{ dB/m})$, the corresponding frequency is 35.141MHz.

The worst case attitude: The mobile lay down.

Spurious Radiated Emissions below 30MHz and above 18G:

There were no emissions from 9kHz to 30MHz and above 18G found within 20dB of the limit. Thus, the test result was not reported according to §15.31 (o).

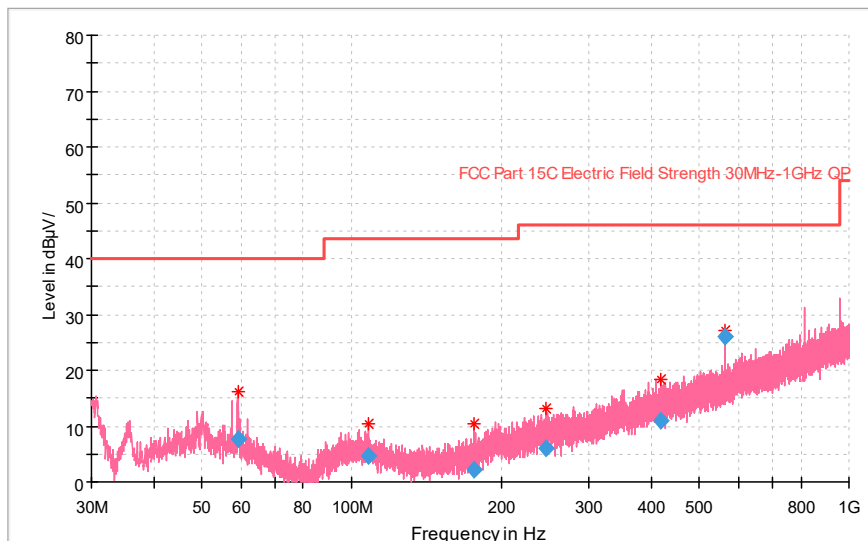
【5150~5250】

- 802.11a

Spurious Radiated Emissions from 30MHz to 1GHz:

CH Middle (No.44)

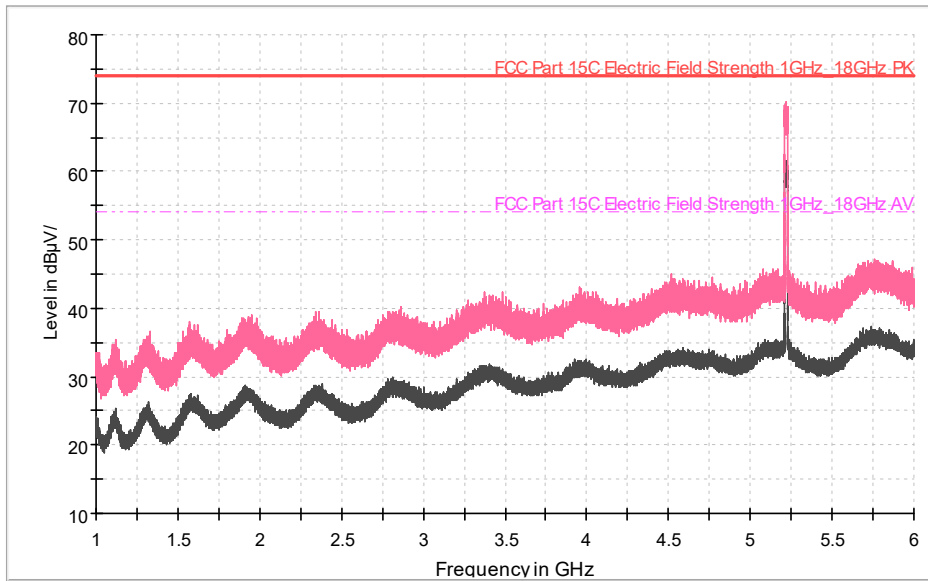
Full Spectrum



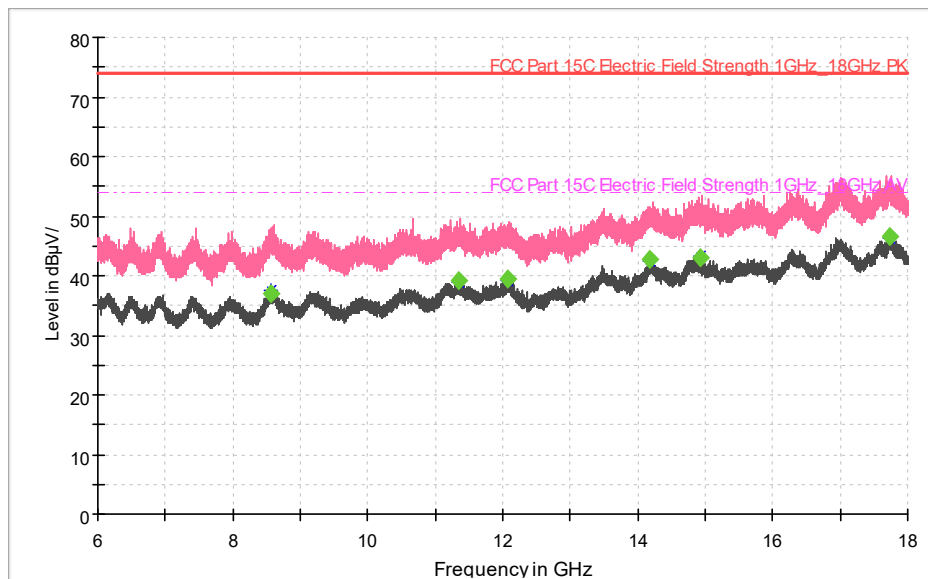
| Frequency (MHz) | Reading (dBuV) | QuasiPeak (dBuV/m) | Limit (dBuV/m) | Margin (dB) | A_{Rpl} (dB) | Polarity |
|-----------------|----------------|--------------------|----------------|-------------|----------------|----------|
| 59.0515 | 28.24 | 7.74 | 40 | 32.26 | -20.5 | Vertical |
| 108.0365 | 25.80 | 4.7 | 43.5 | 38.8 | -21.1 | Vertical |
| 175.985 | 24.82 | 2.32 | 43.5 | 41.18 | -22.5 | Vertical |
| 245.9705 | 24.20 | 6 | 46 | 40 | -18.2 | Vertical |
| 419.3095 | 24.08 | 10.98 | 46 | 35.02 | -13.1 | Vertical |
| 562.53 | 35.88 | 25.98 | 46 | 20.02 | -9.9 | Vertical |

Spurious Radiated Emissions from 1GHz to 18GHz:
CH Middle (No.44)

Full Spectrum



Full Spectrum



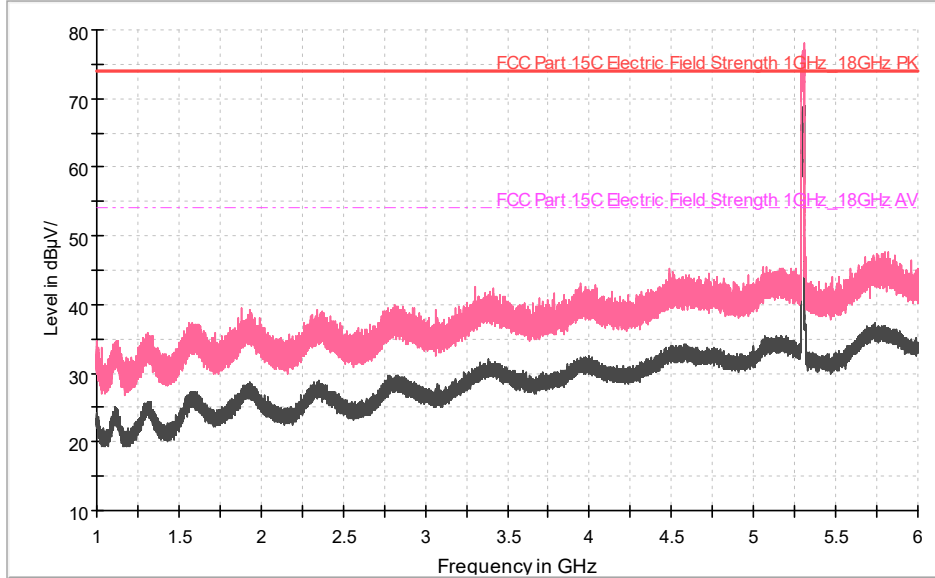
| Frequency (MHz) | Reading MaxPeak (dBuV) | Reading Average (dBuV) | MaxPeak (dBuV/m) | Average (dBuV/m) | Limit (dBuV/m) | Margin (dB) | A _{Rpl} (dB) | Polarity |
|-----------------|------------------------|------------------------|------------------|------------------|----------------|-------------|-----------------------|----------|
| 8558.4 | --- | 57.41 | --- | 37.01 | 54 | 16.99 | -20.4 | Vertical |
| 11335.2 | --- | 56.60 | --- | 39.3 | 54 | 14.7 | -17.3 | Vertical |
| 12084.4 | --- | 56.50 | --- | 39.4 | 54 | 14.6 | -17.1 | Vertical |
| 14169.6 | --- | 57.07 | --- | 42.87 | 54 | 11.13 | -14.2 | Vertical |
| 14925.6 | --- | 56.92 | --- | 43.02 | 54 | 10.98 | -13.9 | Vertical |
| 17742.8 | --- | 58.14 | --- | 46.64 | 54 | 7.36 | -11.5 | Vertical |

【5250~5350】

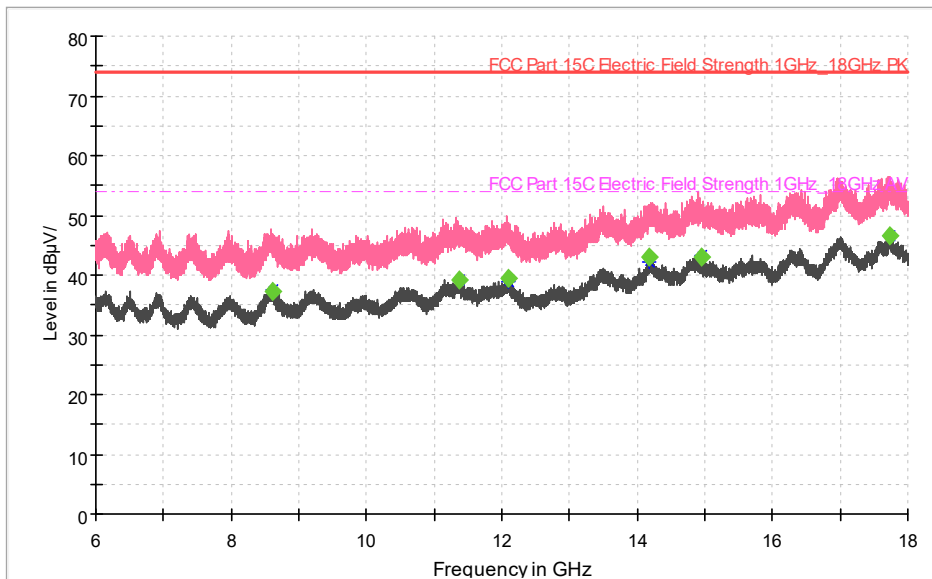
- 802.11a

Spurious Radiated Emissions from 1GHz to 18GHz:
CH Middle (No.60)

Full Spectrum



Full Spectrum



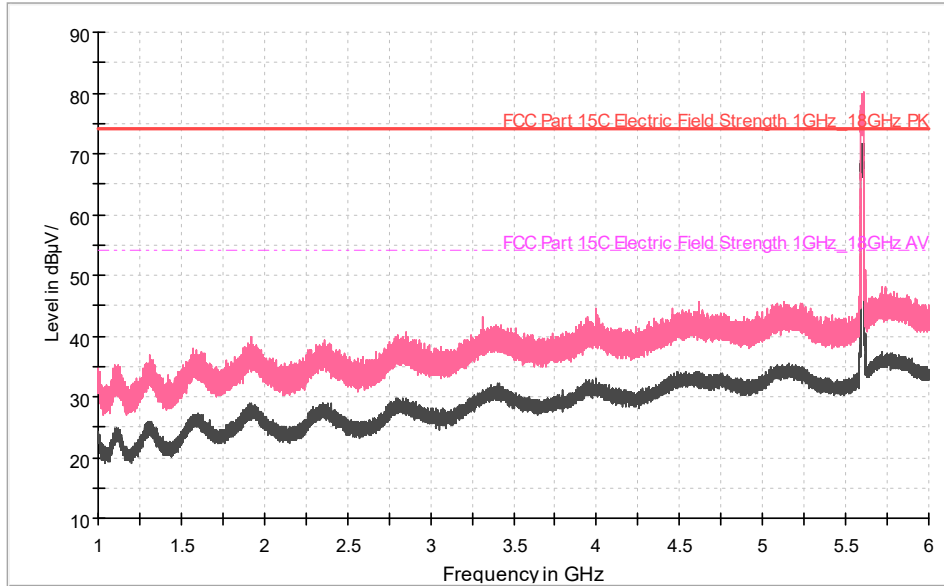
| Frequency (MHz) | Reading MaxPeak (dBuV) | Reading Average (dBuV) | MaxPeak (dBuV/m) | Average (dBuV/m) | Limit (dBuV/m) | Margin (dB) | A _{Rpl} (dB) | Polarity |
|-----------------|------------------------|------------------------|------------------|------------------|----------------|-------------|-----------------------|----------|
| 8611.2 | --- | 57.53 | --- | 37.13 | 54 | 16.87 | -20.4 | Vertical |
| 11364 | --- | 56.45 | --- | 39.25 | 54 | 14.75 | -17.2 | Vertical |
| 12090.8 | --- | 56.63 | --- | 39.43 | 54 | 14.57 | -17.2 | Vertical |
| 14167.2 | --- | 57.13 | --- | 42.93 | 54 | 11.07 | -14.2 | Vertical |
| 14961.6 | --- | 56.89 | --- | 42.99 | 54 | 11.01 | -13.9 | Vertical |
| 17732 | --- | 58.20 | --- | 46.7 | 54 | 7.3 | -11.5 | Vertical |

【5470~5725】

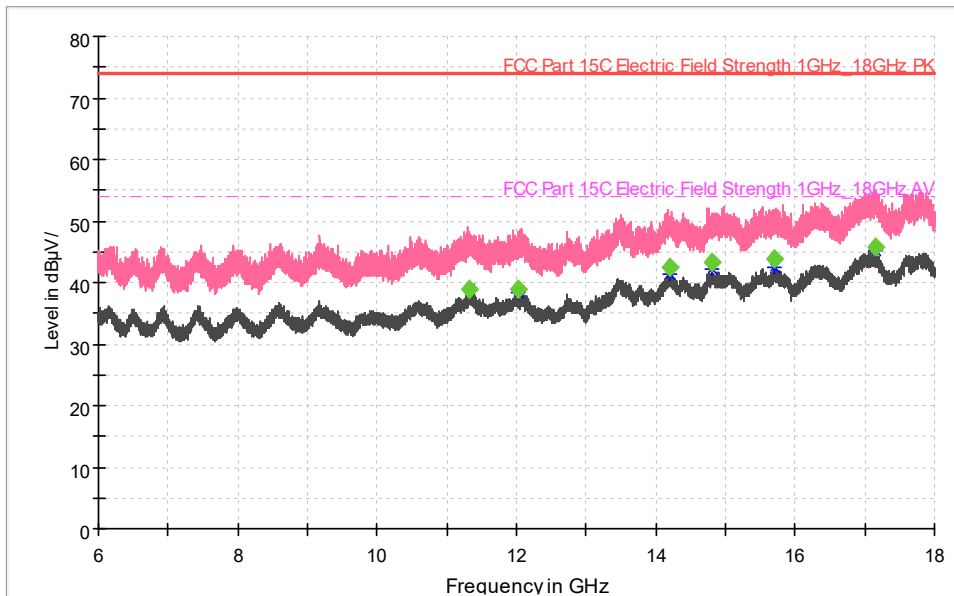
- 802.11a

Spurious Radiated Emissions from 1GHz to 18GHz:
CH Middle (No.120)

Full Spectrum



Full Spectrum



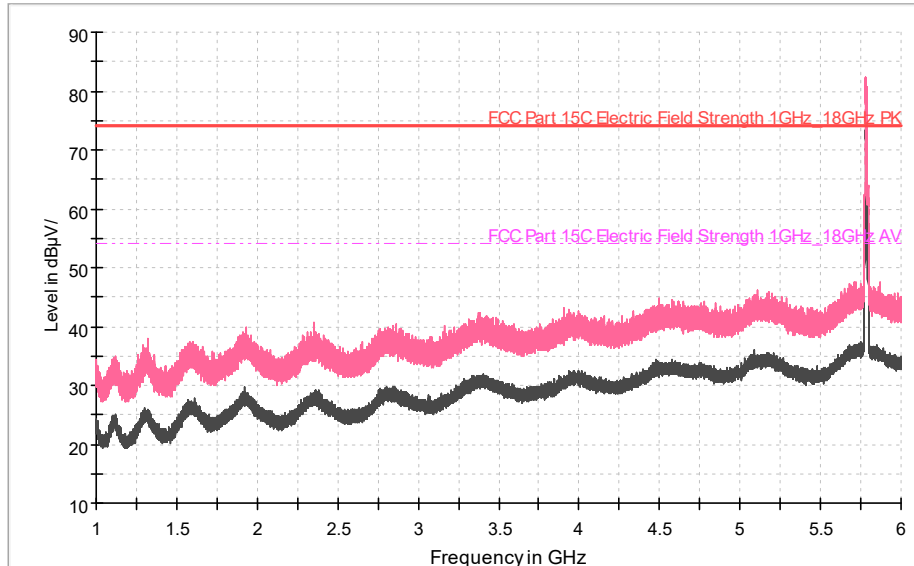
| Frequency (MHz) | Reading MaxPeak (dBuV) | Reading Average (dBuV) | MaxPeak (dBuV/m) | Average (dBuV/m) | Limit (dBuV/m) | Margin (dB) | A _{Rpl} (dB) | Polarity |
|-----------------|------------------------|------------------------|------------------|------------------|----------------|-------------|-----------------------|----------|
| 11327.2 | --- | 56.33 | --- | 39.03 | 54 | 14.97 | -17.3 | Vertical |
| 12027.2 | --- | 55.90 | --- | 39 | 54 | 15 | -16.9 | Vertical |
| 14197.6 | --- | 56.66 | --- | 42.46 | 54 | 11.54 | -14.2 | Vertical |
| 14800.4 | --- | 57.16 | --- | 43.26 | 54 | 10.74 | -13.9 | Vertical |
| 15704.8 | --- | 58.02 | --- | 43.72 | 54 | 10.28 | -14.3 | Vertical |
| 17159.6 | --- | 58.12 | --- | 45.72 | 54 | 8.28 | -12.4 | Vertical |

【5725~5850】

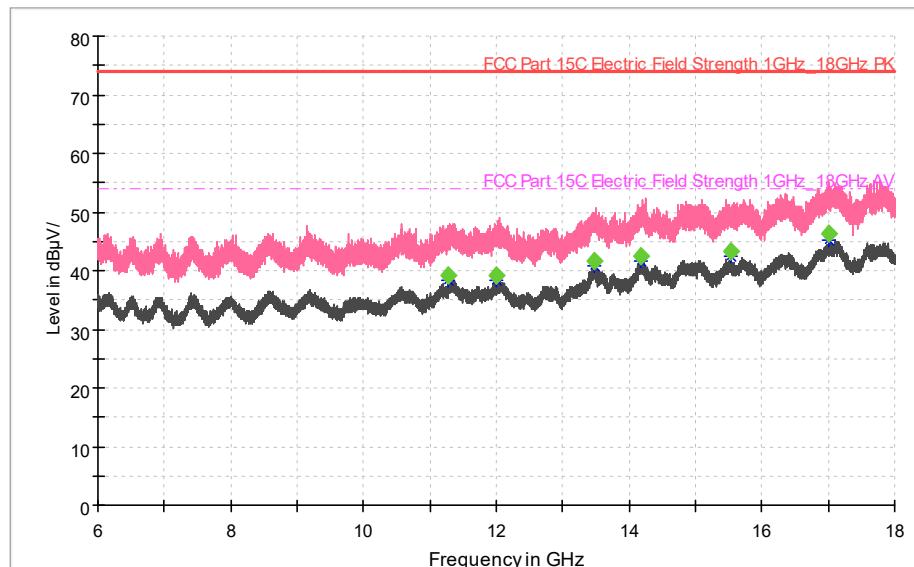
- 802.11a

Spurious Radiated Emissions from 1GHz to 18GHz:
CH Middle (No.157)

Full Spectrum

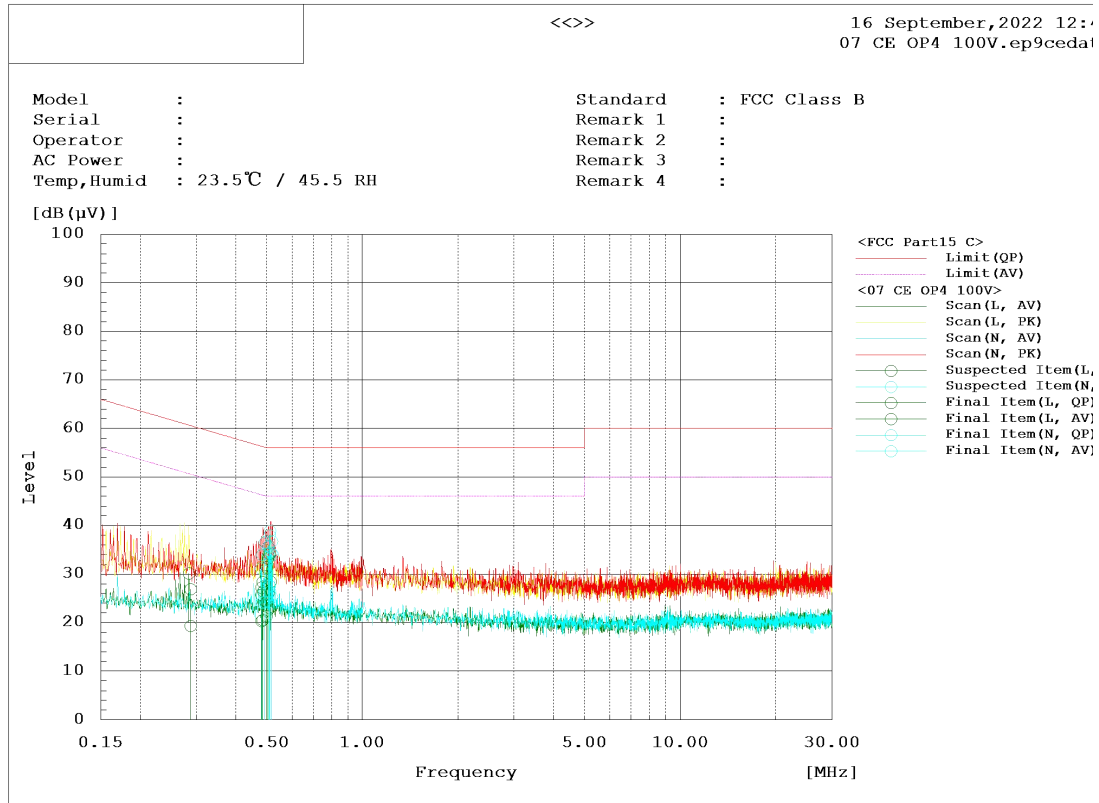


Full Spectrum



| Frequency (MHz) | Reading MaxPeak (dBuV) | Reading Average (dBuV) | MaxPeak (dBuV/m) | Average (dBuV/m) | Limit (dBuV/m) | Margin (dB) | A _{Rpl} (dB) | Polarity |
|-----------------|------------------------|------------------------|------------------|------------------|----------------|-------------|-----------------------|----------|
| 11278 | --- | 56.48 | --- | 39.08 | 54 | 14.92 | -17.4 | Vertical |
| 11994.4 | --- | 56.00 | --- | 39.1 | 54 | 14.9 | -16.9 | Vertical |
| 13469.2 | --- | 56.75 | --- | 41.65 | 54 | 12.35 | -15.1 | Vertical |
| 14186 | --- | 56.71 | --- | 42.51 | 54 | 11.49 | -14.2 | Vertical |
| 15524 | --- | 57.55 | --- | 43.35 | 54 | 10.65 | -14.2 | Vertical |
| 17011.6 | --- | 58.92 | --- | 46.22 | 54 | 7.78 | -12.7 | Vertical |

AC Power line Conducted Emission 100V

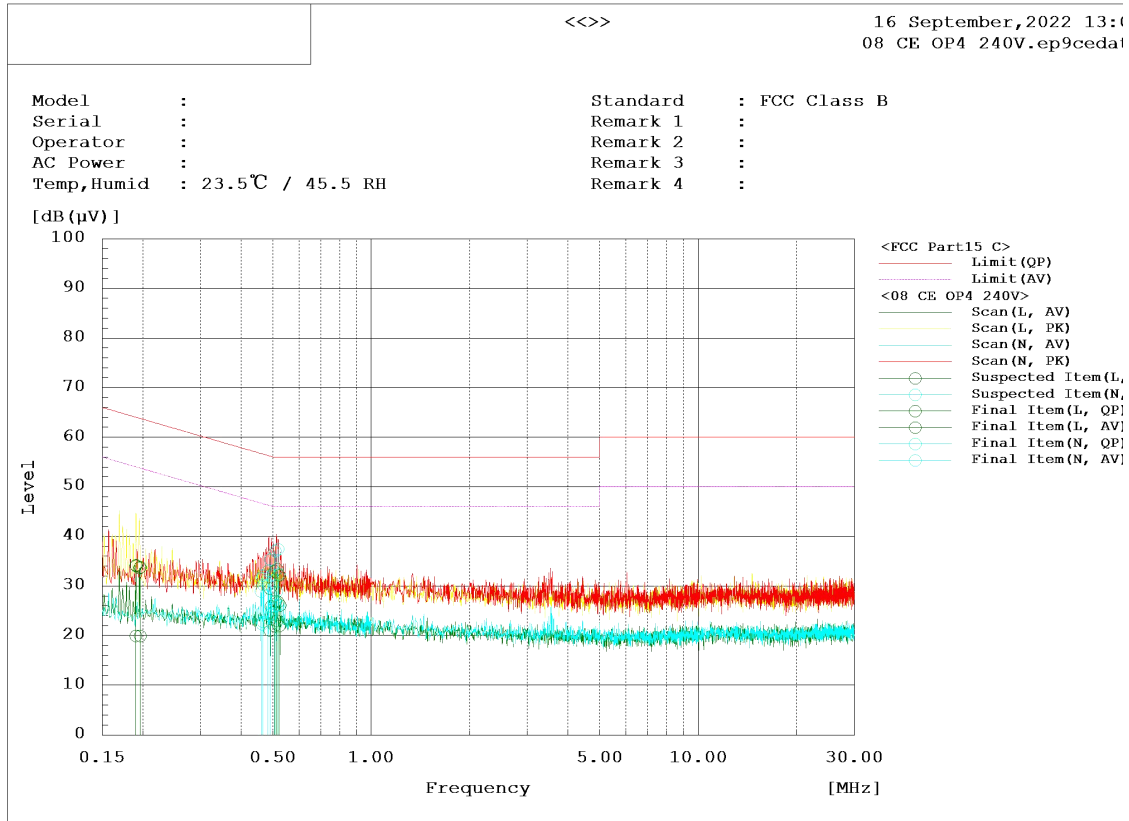


L+N Line

MEASUREMENT RESULT:

| Range | Frequency MHz | Line | Reading | | | Factor dB | Level | | | Limit dB(µV) | Limit | | | Margin | | | Pass/Fail |
|-------|------------------|------|---------|------|----|--------------|--------|------|----|-----------------|--------|----|------|--------|----|------|-----------|
| | | | dB(µV) | | | | dB(µV) | | | | dB(µV) | | | dB | | | |
| | | | QP | AV | PK | | QP | AV | PK | | QP | AV | PK | QP | AV | PK | |
| Band1 | 0.48 | N | 14.4 | 4.5 | | 19.6 | 34 | 24.1 | | 56.3 | 46.3 | | 22.3 | 22.2 | | Pass | |
| Band1 | 0.49 | N | 16.9 | 4.7 | | 19.6 | 36.5 | 24.3 | | 56.1 | 46.1 | | 19.6 | 21.8 | | Pass | |
| Band1 | 0.51 | N | 16.1 | 4.7 | | 19.6 | 35.7 | 24.3 | | 56 | 46 | | 20.3 | 21.7 | | Pass | |
| Band1 | 0.51 | N | 19.3 | 6.7 | | 19.6 | 38.9 | 26.3 | | 56 | 46 | | 17.1 | 19.7 | | Pass | |
| Band1 | 0.51 | N | 18.4 | 8 | | 19.6 | 38 | 27.6 | | 56 | 46 | | 18 | 18.4 | | Pass | |
| Band1 | 0.52 | N | 17.1 | 5.7 | | 19.6 | 36.7 | 25.3 | | 56 | 46 | | 19.3 | 20.7 | | Pass | |
| Band1 | 0.29 | L | 7.2 | -0.3 | | 19.7 | 26.9 | 19.4 | | 60.6 | 50.6 | | 33.7 | 31.2 | | Pass | |
| Band1 | 0.48 | L | 7.6 | 0.7 | | 19.6 | 27.2 | 20.3 | | 56.3 | 46.3 | | 29.1 | 26 | | Pass | |
| Band1 | 0.49 | L | 8.8 | 1 | | 19.6 | 28.4 | 20.6 | | 56.3 | 46.3 | | 27.9 | 25.7 | | Pass | |
| Band1 | 0.5 | L | 11.8 | 1.8 | | 19.6 | 31.4 | 21.4 | | 56 | 46 | | 24.6 | 24.6 | | Pass | |
| Band1 | 0.5 | L | 13.6 | 3 | | 19.6 | 33.2 | 22.6 | | 56 | 46 | | 22.8 | 23.4 | | Pass | |
| Band1 | 0.51 | L | 14.6 | 3.4 | | 19.6 | 34.2 | 23 | | 56 | 46 | | 21.8 | 23 | | Pass | |

240V



MEASUREMENT RESULT:

| Range | Frequency MHz | Line | Reading | | | Factor | Level | | | Limit | | | Margin | | | Pass/Fail | |
|-------|------------------|------|---------|-----|----|--------|-------|--------|----|-------|--------|----|--------|------|----|-----------|----|
| | | | dB(μV) | | | | dB | dB(μV) | | | dB(μV) | | | dB | | | |
| | | | QP | AV | PK | | | QP | AV | PK | QP | AV | PK | QP | AV | | PK |
| Band1 | 0.19 | L | 14.4 | 0.2 | | 19.8 | 34.2 | 20 | | 64 | 54 | | 29.8 | 34 | | Pass | |
| Band1 | 0.2 | L | 14 | 0.1 | | 19.8 | 33.8 | 19.9 | | 63.8 | 53.8 | | 30 | 33.9 | | Pass | |
| Band1 | 0.49 | L | 9.9 | 1.5 | | 19.6 | 29.5 | 21.1 | | 56.2 | 46.2 | | 26.7 | 25.1 | | Pass | |
| Band1 | 0.51 | L | 13.4 | 2.4 | | 19.6 | 33 | 22 | | 56 | 46 | | 23 | 24 | | Pass | |
| Band1 | 0.51 | L | 13.8 | 3.4 | | 19.6 | 33.4 | 23 | | 56 | 46 | | 22.6 | 23 | | Pass | |
| Band1 | 0.52 | L | 12.6 | 2.3 | | 19.6 | 32.2 | 21.9 | | 56 | 46 | | 23.8 | 24.1 | | Pass | |
| Band1 | 0.46 | N | 12 | 2.7 | | 19.6 | 31.6 | 22.3 | | 56.6 | 46.6 | | 25 | 24.3 | | Pass | |
| Band1 | 0.47 | N | 12.5 | 3.2 | | 19.6 | 32.1 | 22.8 | | 56.6 | 46.6 | | 24.5 | 23.8 | | Pass | |
| Band1 | 0.48 | N | 13.4 | 4 | | 19.6 | 33 | 23.6 | | 56.3 | 46.3 | | 23.3 | 22.7 | | Pass | |
| Band1 | 0.49 | N | 15.7 | 4.7 | | 19.6 | 35.3 | 24.3 | | 56.2 | 46.2 | | 20.9 | 21.9 | | Pass | |
| Band1 | 0.51 | N | 17.4 | 6.4 | | 19.6 | 37 | 26 | | 56 | 46 | | 19 | 20 | | Pass | |
| Band1 | 0.52 | N | 17.8 | 6.6 | | 19.6 | 37.4 | 26.2 | | 56 | 46 | | 18.6 | 19.8 | | Pass | |

---The end of the test report---