

|                                |                   |            |             |           |           |
|--------------------------------|-------------------|------------|-------------|-----------|-----------|
| Amplifier<br>(9KHz-30MHz)      | CVP 9222 C        | 00109      | SCHNARZBECK | 2024/6/18 | 2025/6/17 |
| MXG Signal<br>Analyzer         | N9020A            | 101178     | RS          | 2024/6/17 | 2025/6/16 |
| MXG Vector Signal<br>Generator | N5182A            | MY50510202 | Agilent     | 2024/6/17 | 2025/6/16 |
| MXG Analog Signal<br>Generator | N5181A            | 00374      | SCHWARZBECK | 2024/6/17 | 2025/6/16 |
| Power Sensor                   | TR1029-2          | 00473      | SCHNARZBECK | 2024/6/17 | 2025/6/16 |
| RF Swith                       | TR1029-1          | 02622      | SCHNARZBECK | 2024/6/17 | 2025/6/16 |
| Cable                          | DA800-<br>4000MM  | NA         | DA          | 2024/6/17 | 2025/6/16 |
| Cable                          | DA800-<br>11000MM | NA         | DA          | 2024/6/17 | 2025/6/16 |

## Other

| Item | Name                         | Manufacturer | Model  | Software version |
|------|------------------------------|--------------|--------|------------------|
| 1    | EMC Conduction Test System   | AUDIX        | e3     | 6.120718         |
| 2    | EMC radiation test system    | AUDIX        | e3     | 6.120718         |
| 3    | RF test system               | TACHOY       | RFTest | V1.0.0           |
| 4    | RF communication test system | TACHOY       | RFTest | V1.0.0           |

## 5.2 Measurement Uncertainty

| Parameter                          | Uncertainty              |
|------------------------------------|--------------------------|
| RF output power, conducted         | ±1.0dB                   |
| Power Spectral Density, conducted  | ±2.2dB                   |
| Radio Frequency                    | ± 1 x 10 <sup>-6</sup>   |
| Bandwidth                          | ± 1.5 x 10 <sup>-6</sup> |
| Time                               | ±2%                      |
| Duty Cycle                         | ±2%                      |
| Temperature                        | ±1°C                     |
| Humidity                           | ±5%                      |
| DC and low frequency voltages      | ±3%                      |
| Conducted Emissions (150kHz~30MHz) | ±3.64dB                  |
| Radiated Emission(30MHz~1GHz)      | ±5.03dB                  |
| Radiated Emission(1GHz~25GHz)      | ±4.74dB                  |

## 5.3 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| Item | Equipment                            | Mfr/Brand | Model/Type No.                   | Series No. | Note      |
|------|--------------------------------------|-----------|----------------------------------|------------|-----------|
| E-1  | AT-S410, AT-S024-4, AT-S024, AT-S502 | Hiwill    | A41 PRO, A41, A21, A502PRO, A502 | N/A        | EUT       |
| E-2  | Notebook                             | lenovo    | B40-80                           | MP07F6JD   | Auxiliary |
|      |                                      |           |                                  |            |           |

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.

## 6 Conducted Emission

Test Requirement: : FCC CFR 47 Part 15 Section 15.207 & RSS-Gen [8.8]  
Test Method: : ANSI C63.10:2013  
Test Result: : PASS  
Frequency Range: : 150kHz to 30MHz  
Class/Severity: : Class B  
Detector: : Peak for pre-scan (9kHz Resolution Bandwidth)

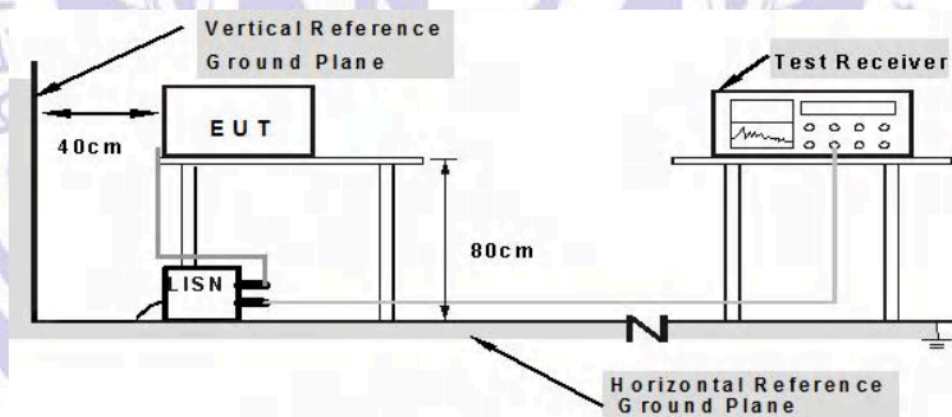
### 6.1 E.U.T. Operation

Operating Environment :

Temperature: : 23.2°C  
Humidity: : 51 % RH  
Atmospheric Pressure: : 101.12 kPa  
Test Voltage : AC 120V/60Hz

### 6.2 EUT Setup

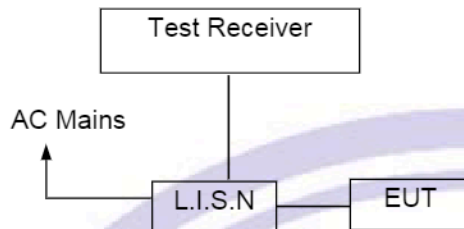
The conducted emission tests were performed using the setup accordance with the ANSI C63.10: 2013



**Note:** 1.Support units were connected to second LISN.  
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes



### 6.3 Test SET-UP (Block Diagram of Configuration)



### 6.4 Measurement Procedure:

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

### 6.5 Conducted Emission Limit

#### Conducted Emission

| Frequency(MHz) | 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.

### 6.6 Measurement Description

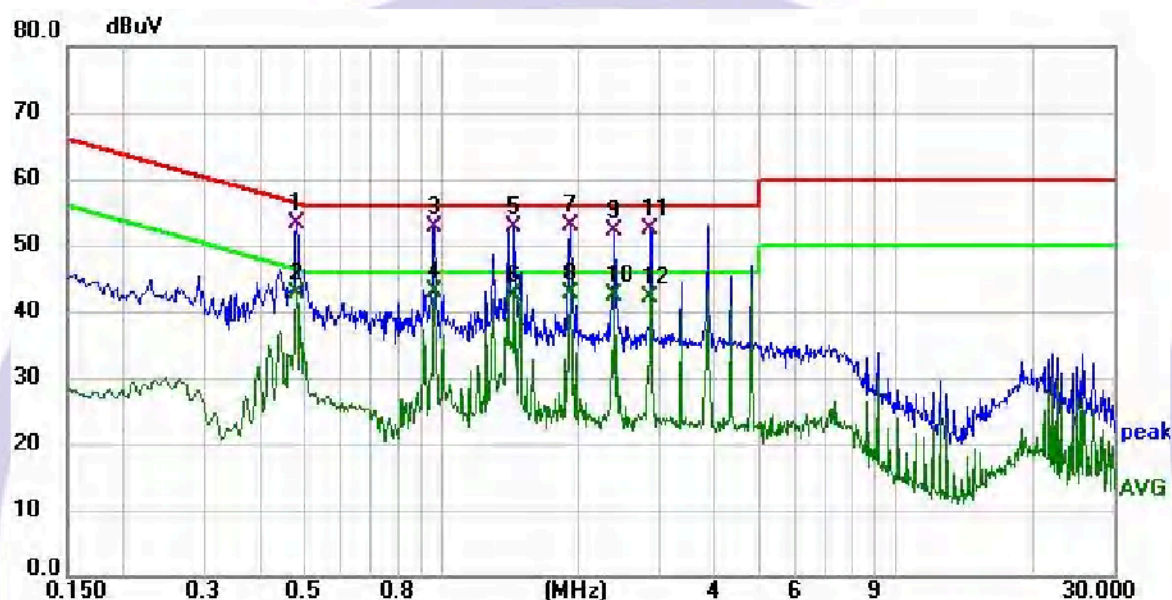
The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.

### 6.7 Conducted Emission Test Result

Pass

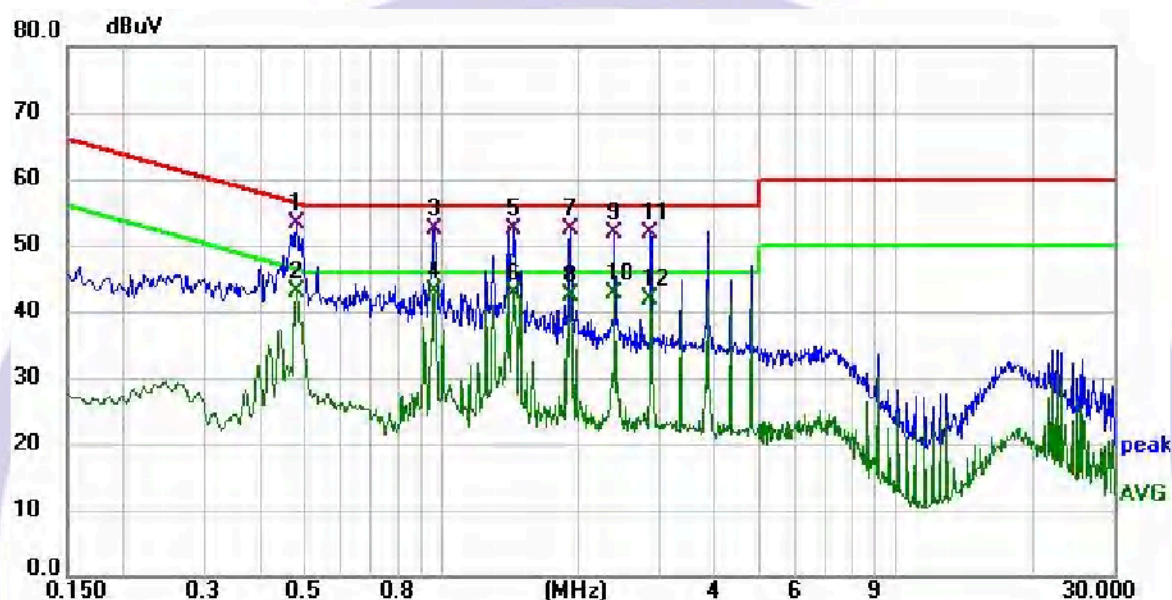
Conducted emission at both 120V & 240V is assessed, and emission at 120V represents the worst case. All the modulation modes were tested the data of the worst mode (GFSK) are recorded in the following pages and the others modulation methods do not exceed the limits.

|          |         |         |   |
|----------|---------|---------|---|
| Channel: | Low     | Phase : | L |
| Model:   | A41 PRO |         |   |



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB) | Level (dBuV) | Limit (dBuV) | Margin (dB) | Detector | P/F |
|-----|-----------------|----------------|-------------|--------------|--------------|-------------|----------|-----|
| 1   | 0.480           | 42.58          | 10.65       | 53.23        | 56.34        | -3.11       | QP       | P   |
| 2   | 0.480           | 32.20          | 10.65       | 42.85        | 46.34        | -3.49       | AVG      | P   |
| 3   | 0.964           | 41.68          | 11.06       | 52.74        | 56.00        | -3.26       | QP       | P   |
| 4 * | 0.964           | 31.90          | 11.06       | 42.96        | 46.00        | -3.04       | AVG      | P   |
| 5   | 1.441           | 41.55          | 11.08       | 52.63        | 56.00        | -3.37       | QP       | P   |
| 6   | 1.441           | 31.46          | 11.08       | 42.54        | 46.00        | -3.46       | AVG      | P   |
| 7   | 1.927           | 41.86          | 11.01       | 52.87        | 56.00        | -3.13       | QP       | P   |
| 8   | 1.927           | 31.65          | 11.01       | 42.66        | 46.00        | -3.34       | AVG      | P   |
| 9   | 2.404           | 41.14          | 11.02       | 52.16        | 56.00        | -3.84       | QP       | P   |
| 10  | 2.404           | 31.37          | 11.02       | 42.39        | 46.00        | -3.61       | AVG      | P   |
| 11  | 2.881           | 41.29          | 11.03       | 52.32        | 56.00        | -3.68       | QP       | P   |
| 12  | 2.881           | 31.13          | 11.03       | 42.16        | 46.00        | -3.84       | AVG      | P   |

|          |         |         |   |
|----------|---------|---------|---|
| Channel: | High    | Phase : | N |
| Model:   | A41 PRO |         |   |



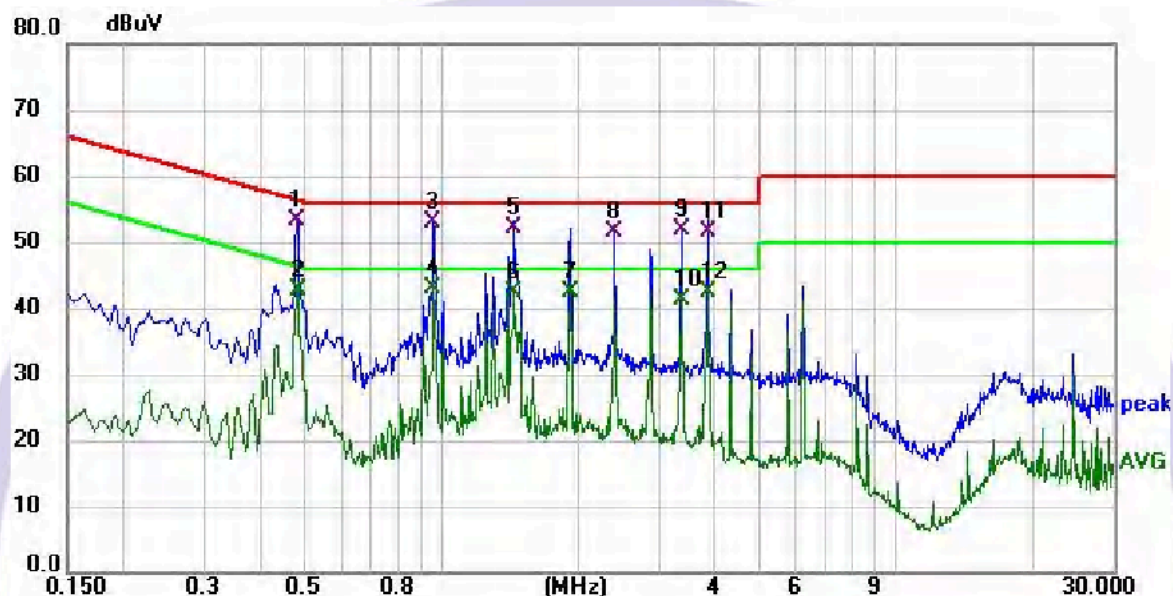
| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB) | Level (dBuV) | Limit (dBuV) | Margin (dB) | Detector | P/F |
|-----|-----------------|----------------|-------------|--------------|--------------|-------------|----------|-----|
| 1   | 0.480           | 42.58          | 10.68       | 53.26        | 56.34        | -3.08       | QP       | P   |
| 2   | 0.480           | 32.20          | 10.68       | 42.88        | 46.34        | -3.46       | AVG      | P   |
| 3   | 0.964           | 41.34          | 11.05       | 52.39        | 56.00        | -3.61       | QP       | P   |
| 4 * | 0.964           | 31.92          | 11.05       | 42.97        | 46.00        | -3.03       | AVG      | P   |
| 5   | 1.441           | 41.32          | 11.09       | 52.41        | 56.00        | -3.59       | QP       | P   |
| 6   | 1.441           | 31.54          | 11.09       | 42.63        | 46.00        | -3.37       | AVG      | P   |
| 7   | 1.927           | 41.35          | 11.03       | 52.38        | 56.00        | -3.62       | QP       | P   |
| 8   | 1.927           | 31.53          | 11.03       | 42.56        | 46.00        | -3.44       | AVG      | P   |
| 9   | 2.404           | 40.71          | 11.03       | 51.74        | 56.00        | -4.26       | QP       | P   |
| 10  | 2.404           | 31.60          | 11.03       | 42.63        | 46.00        | -3.37       | AVG      | P   |
| 11  | 2.881           | 40.73          | 11.01       | 51.74        | 56.00        | -4.26       | QP       | P   |
| 12  | 2.881           | 30.95          | 11.01       | 41.96        | 46.00        | -4.04       | AVG      | P   |

**Notes:**

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Measurement Level = Reading level + Correct Factor

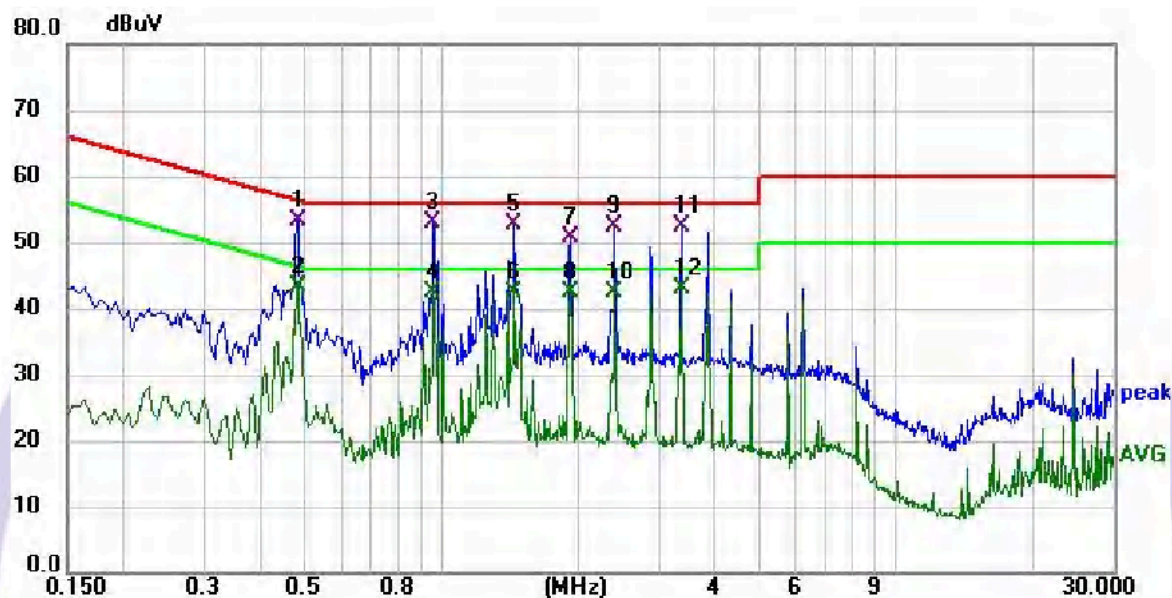


|          |     |         |   |
|----------|-----|---------|---|
| Channel: | Low | Phase : | L |
| Model:   | A41 |         |   |



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB) | Level (dBuV) | Limit (dBuV) | Margin (dB) | Detector | P/F |
|-----|-----------------|----------------|-------------|--------------|--------------|-------------|----------|-----|
| 1   | 0.478           | 43.01          | 10.20       | 53.21        | 56.37        | -3.16       | QP       | P   |
| 2   | 0.483           | 32.58          | 10.21       | 42.79        | 46.29        | -3.50       | AVG      | P   |
| 3   | 0.960           | 42.83          | 10.03       | 52.86        | 56.00        | -3.14       | QP       | P   |
| 4 * | 0.960           | 32.84          | 10.03       | 42.87        | 46.00        | -3.13       | AVG      | P   |
| 5   | 1.441           | 41.99          | 10.12       | 52.11        | 56.00        | -3.89       | QP       | P   |
| 6   | 1.441           | 32.41          | 10.12       | 42.53        | 46.00        | -3.47       | AVG      | P   |
| 7   | 1.927           | 32.18          | 10.29       | 42.47        | 46.00        | -3.53       | AVG      | P   |
| 8   | 2.404           | 41.40          | 10.29       | 51.69        | 56.00        | -4.31       | QP       | P   |
| 9   | 3.367           | 41.72          | 10.11       | 51.83        | 56.00        | -4.17       | QP       | P   |
| 10  | 3.367           | 31.18          | 10.11       | 41.29        | 46.00        | -4.71       | AVG      | P   |
| 11  | 3.844           | 41.49          | 10.14       | 51.63        | 56.00        | -4.37       | QP       | P   |
| 12  | 3.844           | 32.42          | 10.14       | 42.56        | 46.00        | -3.44       | AVG      | P   |

|          |     |         |   |
|----------|-----|---------|---|
| Channel: | Low | Phase : | N |
| Model:   | A41 |         |   |



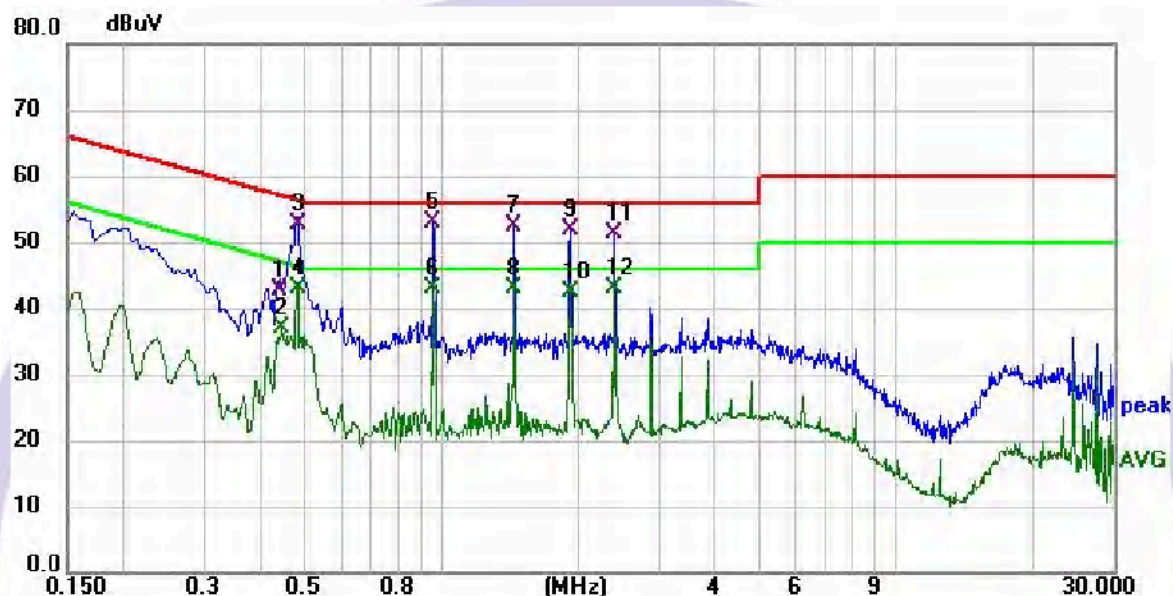
| No.  | Frequency (MHz) | Reading (dBuV) | Factor (dB) | Level (dBuV) | Limit (dBuV) | Margin (dB) | Detector | P/F |
|------|-----------------|----------------|-------------|--------------|--------------|-------------|----------|-----|
| 1    | 0.483           | 42.86          | 10.30       | 53.16        | 56.29        | -3.13       | QP       | P   |
| 2    | 0.483           | 32.86          | 10.30       | 43.16        | 46.29        | -3.13       | AVG      | P   |
| 3    | 0.960           | 42.71          | 10.22       | 52.93        | 56.00        | -3.07       | QP       | P   |
| 4    | 0.960           | 32.13          | 10.22       | 42.35        | 46.00        | -3.65       | AVG      | P   |
| 5    | 1.441           | 42.56          | 10.18       | 52.74        | 56.00        | -3.26       | QP       | P   |
| 6    | 1.441           | 32.38          | 10.18       | 42.56        | 46.00        | -3.44       | AVG      | P   |
| 7    | 1.927           | 40.36          | 10.33       | 50.69        | 56.00        | -5.31       | QP       | P   |
| 8    | 1.927           | 32.05          | 10.33       | 42.38        | 46.00        | -3.62       | AVG      | P   |
| 9    | 2.404           | 42.23          | 10.16       | 52.39        | 56.00        | -3.61       | QP       | P   |
| 10   | 2.404           | 32.37          | 10.16       | 42.53        | 46.00        | -3.47       | AVG      | P   |
| 11   | 3.367           | 42.33          | 10.08       | 52.41        | 56.00        | -3.59       | QP       | P   |
| 12 * | 3.367           | 32.86          | 10.08       | 42.94        | 46.00        | -3.06       | AVG      | P   |

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Measurement Level = Reading level + Correct Factor

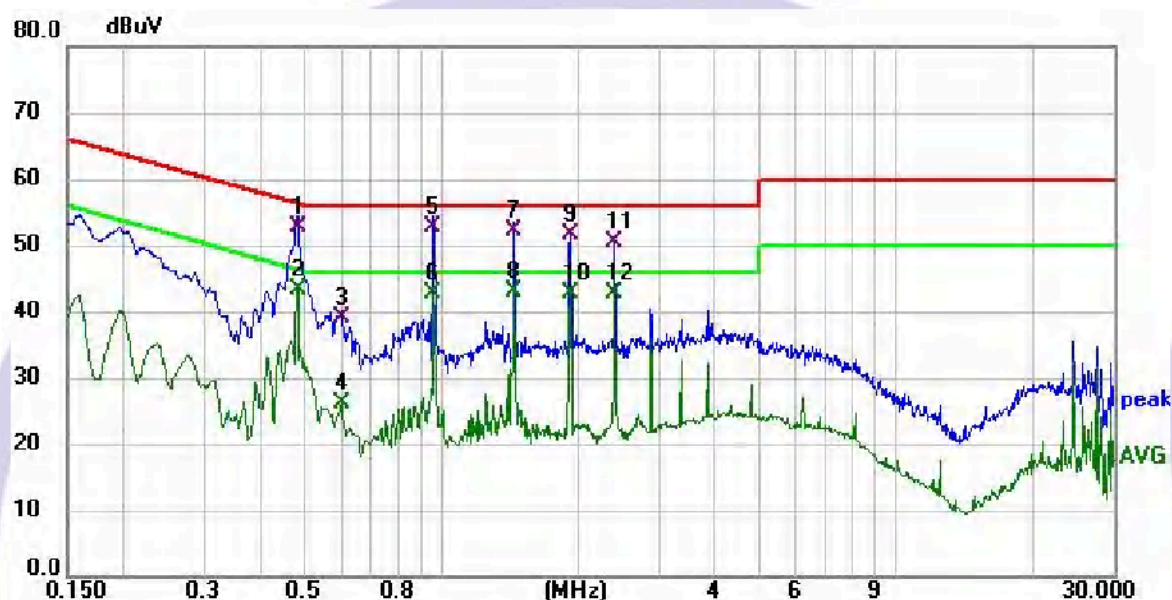


|          |     |         |   |
|----------|-----|---------|---|
| Channel: | Low | Phase : | L |
| Model:   | A21 |         |   |



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB) | Level (dBuV) | Limit (dBuV) | Margin (dB) | Detector | P/F |
|-----|-----------------|----------------|-------------|--------------|--------------|-------------|----------|-----|
| 1   | 0.438           | 32.52          | 10.11       | 42.63        | 57.10        | -14.47      | QP       | P   |
| 2   | 0.443           | 26.77          | 10.12       | 36.89        | 47.01        | -10.12      | AVG      | P   |
| 3   | 0.483           | 42.42          | 10.21       | 52.63        | 56.29        | -3.66       | QP       | P   |
| 4   | 0.483           | 32.93          | 10.21       | 43.14        | 46.29        | -3.15       | AVG      | P   |
| 5 * | 0.960           | 42.93          | 10.03       | 52.96        | 56.00        | -3.04       | QP       | P   |
| 6   | 0.960           | 32.85          | 10.03       | 42.88        | 46.00        | -3.12       | AVG      | P   |
| 7   | 1.441           | 42.20          | 10.12       | 52.32        | 56.00        | -3.68       | QP       | P   |
| 8   | 1.441           | 32.77          | 10.12       | 42.89        | 46.00        | -3.11       | AVG      | P   |
| 9   | 1.927           | 41.52          | 10.29       | 51.81        | 56.00        | -4.19       | QP       | P   |
| 10  | 1.927           | 32.28          | 10.29       | 42.57        | 46.00        | -3.43       | AVG      | P   |
| 11  | 2.404           | 40.96          | 10.29       | 51.25        | 56.00        | -4.75       | QP       | P   |
| 12  | 2.404           | 32.64          | 10.29       | 42.93        | 46.00        | -3.07       | AVG      | P   |

|          |     |         |   |
|----------|-----|---------|---|
| Channel: | Low | Phase : | N |
| Model:   | A21 |         |   |

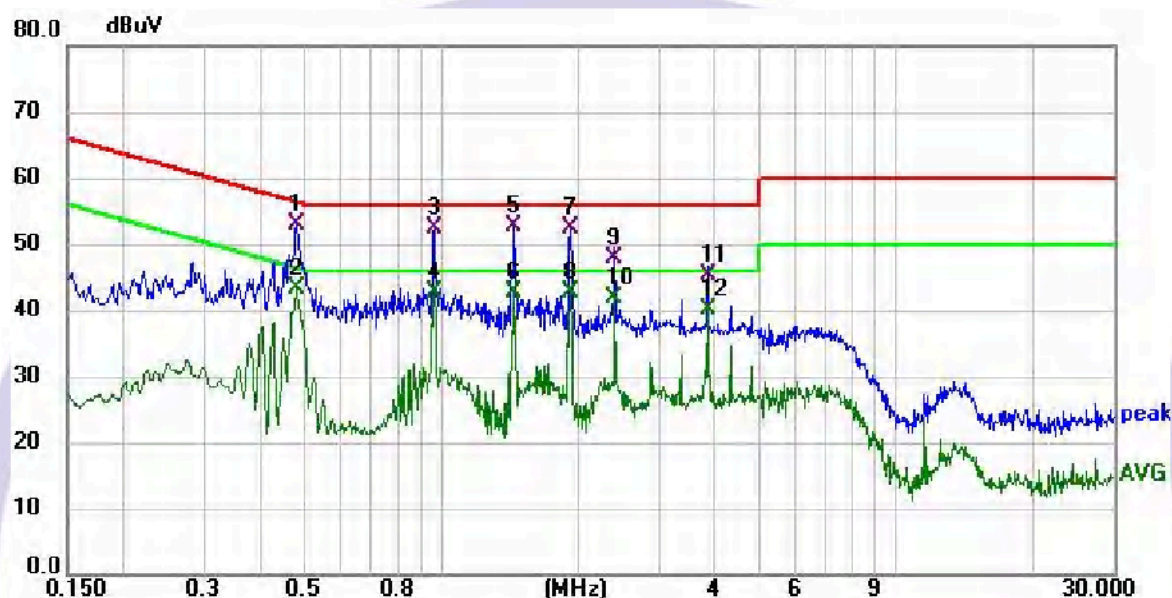


| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB) | Level (dBuV) | Limit (dBuV) | Margin (dB) | Detector | P/F |
|-----|-----------------|----------------|-------------|--------------|--------------|-------------|----------|-----|
| 1   | 0.483           | 42.33          | 10.30       | 52.63        | 56.29        | -3.66       | QP       | P   |
| 2   | 0.483           | 32.96          | 10.30       | 43.26        | 46.29        | -3.03       | AVG      | P   |
| 3   | 0.600           | 28.91          | 10.05       | 38.96        | 56.00        | -17.04      | QP       | P   |
| 4   | 0.600           | 16.00          | 10.05       | 26.05        | 46.00        | -19.95      | AVG      | P   |
| 5   | 0.960           | 42.52          | 10.22       | 52.74        | 56.00        | -3.26       | QP       | P   |
| 6   | 0.960           | 32.37          | 10.22       | 42.59        | 46.00        | -3.41       | AVG      | P   |
| 7   | 1.441           | 41.85          | 10.18       | 52.03        | 56.00        | -3.97       | QP       | P   |
| 8 * | 1.441           | 32.80          | 10.18       | 42.98        | 46.00        | -3.02       | AVG      | P   |
| 9   | 1.927           | 41.32          | 10.33       | 51.65        | 56.00        | -4.35       | QP       | P   |
| 10  | 1.927           | 32.52          | 10.33       | 42.85        | 46.00        | -3.15       | AVG      | P   |
| 11  | 2.404           | 40.20          | 10.16       | 50.36        | 56.00        | -5.64       | QP       | P   |
| 12  | 2.404           | 32.47          | 10.16       | 42.63        | 46.00        | -3.37       | AVG      | P   |

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Measurement Level = Reading level + Correct Factor

|          |         |         |   |
|----------|---------|---------|---|
| Channel: | Low     | Phase : | L |
| Model:   | A502PRO |         |   |



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB) | Level (dBuV) | Limit (dBuV) | Margin (dB) | Detector | P/F |
|-----|-----------------|----------------|-------------|--------------|--------------|-------------|----------|-----|
| 1   | 0.480           | 42.21          | 10.65       | 52.86        | 56.34        | -3.48       | QP       | P   |
| 2   | 0.480           | 32.50          | 10.65       | 43.15        | 46.34        | -3.19       | AVG      | P   |
| 3   | 0.964           | 41.30          | 11.06       | 52.36        | 56.00        | -3.64       | QP       | P   |
| 4   | 0.964           | 31.57          | 11.06       | 42.63        | 46.00        | -3.37       | AVG      | P   |
| 5   | 1.441           | 41.66          | 11.08       | 52.74        | 56.00        | -3.26       | QP       | P   |
| 6   | 1.441           | 31.57          | 11.08       | 42.65        | 46.00        | -3.35       | AVG      | P   |
| 7   | 1.927           | 41.35          | 11.01       | 52.36        | 56.00        | -3.64       | QP       | P   |
| 8 * | 1.927           | 31.84          | 11.01       | 42.85        | 46.00        | -3.15       | AVG      | P   |
| 9   | 2.404           | 36.96          | 11.02       | 47.98        | 56.00        | -8.02       | QP       | P   |
| 10  | 2.404           | 30.93          | 11.02       | 41.95        | 46.00        | -4.05       | AVG      | P   |
| 11  | 3.844           | 34.19          | 11.07       | 45.26        | 56.00        | -10.74      | QP       | P   |
| 12  | 3.844           | 29.16          | 11.07       | 40.23        | 46.00        | -5.77       | AVG      | P   |