



EMC - TEST REPORT

Report Number : **65.760.14.127.02** Date of Issue: 1 June 2015

Model : **F05L5-xxxxyySPAV, F05L5-050yyySPAV-U (xxx and yyy are variable, see Appendix A for details)**

Product Type : Switching Mode Power Adaptor

Applicant : Shenzhen Frecom Electronics Co., Ltd.

Address : Frecom Bld., Fuchuan Technology Zone,
Tongfuyu Industry Guangming Street, BaoAn District,
518107 Shenzhen, Guangdong,
:
PEOPLE'S REPUBLIC OF CHINA

Production Facility : Shenzhen Frecom Electronics Co., Ltd.

Address : Frecom Bld., Fuchuan Technology Zone,
Tongfuyu Industry Guangming Street, BaoAn District,
518107 Shenzhen, Guangdong,
:
PEOPLE'S REPUBLIC OF CHINA

Test Result : **Positive** **Negative**

Total pages including Appendices : **91**

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1 Table of Contents

| | | |
|-----|--|----|
| 1 | Table of Contents..... | 2 |
| 2 | Details about the Test Laboratory..... | 3 |
| 3 | Description of the Equipment Under Test..... | 4 |
| 4 | Summary of Test Standards..... | 5 |
| 5 | Summary of Test Results..... | 6 |
| 6 | General Remarks..... | 8 |
| 7 | Emission Test Results..... | 9 |
| 7.1 | Radiated Emission Test..... | 9 |
| 7.2 | Conducted Emission Test..... | 34 |
| 7.3 | Flicker Test..... | 59 |
| 8 | Performance Criteria..... | 64 |
| 9 | Immunity Test Results..... | 65 |
| 9.1 | Electrostatic Discharge Test..... | 65 |
| 9.2 | Radiated Immunity Test..... | 68 |
| 9.3 | Electrical Fast Transients Test..... | 70 |
| 9.4 | Surges Test..... | 72 |
| 9.5 | Conducted Immunity Test..... | 74 |
| 9.6 | Voltage Dips, Voltage Variations and Short Interruptions Test..... | 76 |
| 10 | Appendix A..... | 78 |
| | Information form(s) of EUT | |
| 11 | Appendix B..... | 79 |
| | Photographs of Test Setup | |
| 12 | Appendix C..... | 84 |
| | Photographs of EUT | |



2 Details about the Test Laboratory

Details about the Test Laboratory

Company name: TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch
Building 12&13, Zhiheng Wisdomland Business Park,
Nantou Checkpoint Road 2, Nanshan District,
518052 Shenzhen, CHINA

Telephone: 86 755 8828 6998
Fax: 86 755 8828 5299

Company name: Dongguan Anci Electronic Technology Co., Ltd.
No.A222,Building A,Shifu Hardware Plaza,Changan Town,
Dongguan City,Guangdong, P. R. China.

Telephone: 86 769 8507 5888
Fax: 86 769 8507 5898

Company name: TDK South China EMC Centre
EMC Center Huanan Factory.
Zhenan Hi-tech Industrial Park,
Dongguan City, Guangdong Province,
P. R. China.

Telephone: 86 769 8530 7366
Fax: 86 769 8564 4499

Company name: Keyway Testing Technology Co., Ltd.
Baishun Industrial Zone, Zhangmutou Town,
Dongguan, Guangdong, China

Telephone: 86 769 8718 2258
Fax: 86 769 8718 1058

3 Description of the Equipment Under Test

Description of the Equipment Under Test

| | |
|--------------------------|--|
| Product: | Switching Mode Power Adaptor |
| Model no.: | F05L5-050080SPAV, F05L5-050100SPAV, F05L5-130047SPAV |
| Trade mark: | NIL |
| Options and accessories: | NIL |
| Rated Input: | 100-240Vac or 200-240Vac, 50/60Hz, 0.2A |
| Rated Output: | 5VDC, 0.8A(for F05L5-050080SPAV) 5VDC, 1.0A(for F05L5-050100SPAV) 13VDC, 0.47A(for F05L5-130047SPAV) |
| Description of the EUT: | Class II |

4 Summary of Test Standards

| Test Standards | |
|--------------------|---|
| EN 55022: 2010 | Information technology equipment — Radio disturbance characteristics — Limits and methods of measurement |
| EN 55024: 2010 | Information technology equipment — Immunity characteristics — Limits and methods of measurement |
| EN 61000-3-2: 2014 | Electromagnetic compatibility (EMC) — Part 3-2: Limits — Limits for harmonic current emissions (equipment input current up to and including 16 A per phase) |
| EN 61000-3-3: 2013 | Electromagnetic compatibility (EMC) — Part 3-3: Limits — Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection |

5 Summary of Test Results

| Emission Tests | | | | |
|---|-------|-------------------------------------|--------------------------|-------------------------------------|
| EN 55022: 2010 | | | | |
| Test Condition | Pages | Test Result | | |
| | | Pass | Fail | N/A |
| Radiated Emission 30MHz to 1000MHz | 9 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Radiated Emission * 1GHz to 6GHz | --- | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Conducted Emission on AC 150kHz to 30MHz | 34 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| EN 61000-3-2: 2014 | | | | |
| Harmonic ** Class A | --- | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| EN 61000-3-3: 2013 | | | | |
| Flicker | 59 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Note“*”: The highest frequency of the internal sources of the EUT is less than 108MHz, so the measurement was only be made up to 1GHz.

Note “**”: This test only applicable to product has a rated power more than 75W, other than lighting equipment.

Summary of Test Results

| Immunity Tests | | | | |
|---|-------|-------------------------------------|--------------------------|-------------------------------------|
| EN 55024: 2010 | | | | |
| Test Condition | Pages | Test Result | | |
| | | Pass | Fail | N/A |
| Electrostatic Discharge (IEC 61000-4-2) ±4kV ±8kV | 65 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Radiated Immunity (IEC 61000-4-3) 80MHz to 1000MHz 3V/m (rms) | 68 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Electrical Fast Transient (IEC 61000-4-4) ±1kV | 70 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Surge (IEC 61000-4-5) ±1kV | 72 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Conducted Immunity (IEC 61000-4-6) 150KHz to 80MHz 3Vrms | 74 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Voltage Dips and Interruption (IEC 61000-4-11) 0%, 70%, 0% of U _T | 76 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Power Frequency Magnetic Field (IEC 61000-4-8) * 50Hz, 60Hz 1A/m | --- | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Remark: *: The test only applies to apparatus containing device susceptible to magnetic fields, so the item isn't applicable to the product (EN 55024: 2010 clause 10).

6 General Remarks

Remarks

This report was based on the report 65.760.14.127.01 for adding alternated transformer with model: 16015000900R for output voltage 11.0V-13.0V, so models: F05L5-130047SPAV (with LF1) and F05L5-130047SPAV (with L1+L2) were chosen as the representative model to perform EMC full tests. The previous test data for other models are still valid.

SUMMARY:

All tests according to the regulations cited on page 5 were

- Performed

- Not Performed

The Equipment Under Test

- **Fulfills** the general approval requirements.

- **Does not** fulfill the general approval requirements.

Sample Received Date: 08 February 2015 20 May2015

Testing Start Date: 08 February 2015 20 May2015

Testing End Date: 09 March 2015 25 May2015

- TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch -

Reviewed by:



Phoebe Hu
EMC Project Manager



Prepared by:

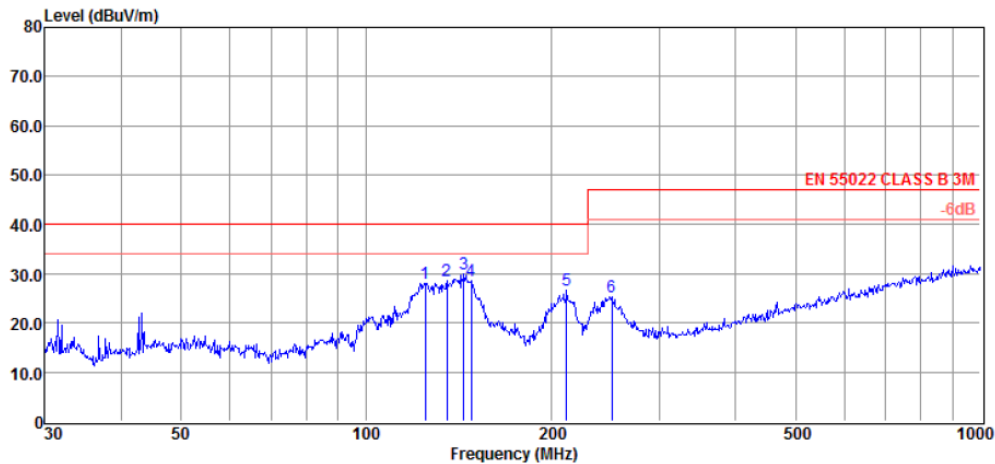


Aaron Lai
EMC Project Engineer

7 Emission Test Results

7.1 Radiated Emission Test 30MHz – 1000MHz

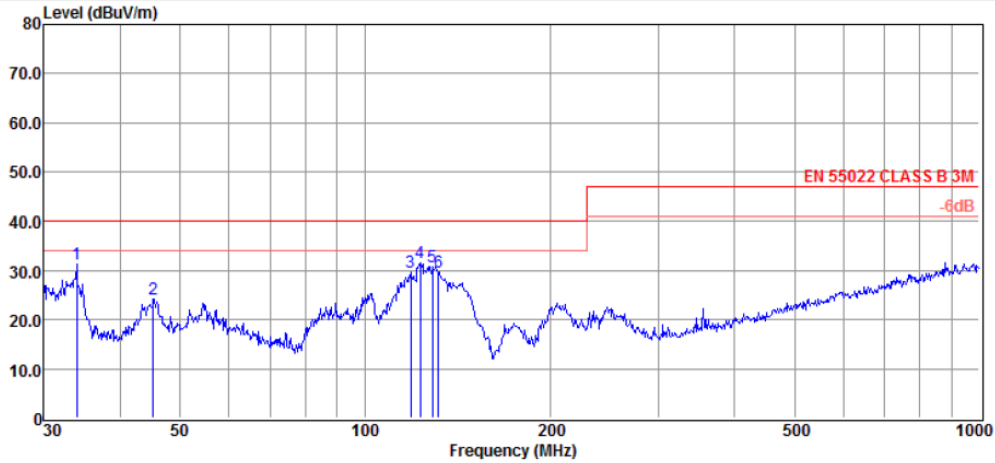
M/N : F05L5-050080SPAV(with LF1+CY1)
 Operating Condition : Full Load
 Test Specification : Horizontal
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 22 Relative Humidity (%): 50 Atmospheric Pressure(mbar) : 1008



| Item (Mark) | Freq (MHz) | Read Level (dBuV) | Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Detector | Polarization |
|-------------|------------|-------------------|-------------|----------------|---------------------|-----------------|----------|--------------|
| 1 | 125.01 | 43.14 | -15.14 | 28.00 | 40.00 | -12.00 | Peak | HORIZONTAL |
| 2 | 135.51 | 44.40 | -15.83 | 28.57 | 40.00 | -11.43 | Peak | HORIZONTAL |
| 3 | 144.34 | 45.85 | -15.96 | 29.89 | 40.00 | -10.11 | Peak | HORIZONTAL |
| 4 | 148.44 | 44.49 | -15.81 | 28.68 | 40.00 | -11.32 | Peak | HORIZONTAL |
| 5 | 212.27 | 38.90 | -12.13 | 26.77 | 40.00 | -13.23 | Peak | HORIZONTAL |
| 6 | 251.18 | 35.65 | -10.35 | 25.30 | 47.00 | -21.70 | Peak | HORIZONTAL |

Radiated Emission Test 30MHz - 1000MHz

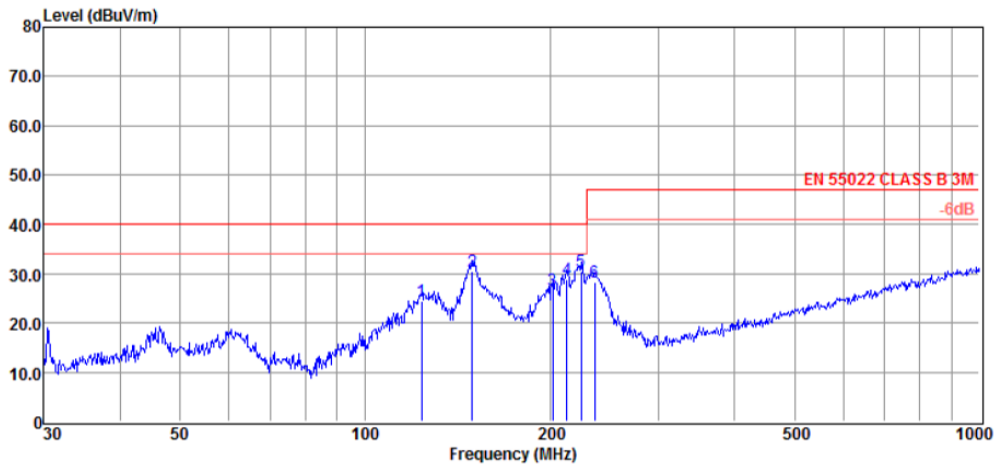
M/N : F05L5-050080SPAV(with LF1+CY1)
 Operating Condition : Full Load
 Test Specification : Vertical
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 22 Relative Humidity (%): 50 Atmospheric Pressure(mbar) : 1008



| Item (Mark) | Freq (MHz) | Read Level (dBμV) | Factor dB | Level (dBμV/m) | Limit Line (dBμV/m) | Over Limit (dB) | Detector | Polarization |
|-------------|------------|-------------------|-----------|----------------|---------------------|-----------------|----------|--------------|
| 1 | 33.92 | 44.70 | -13.32 | 31.38 | 40.00 | -8.62 | Peak | VERTICAL |
| 2 | 45.22 | 34.57 | -10.45 | 24.12 | 40.00 | -15.88 | Peak | VERTICAL |
| 3 | 118.60 | 43.46 | -13.81 | 29.65 | 40.00 | -10.35 | Peak | VERTICAL |
| 4 | 122.83 | 46.29 | -14.67 | 31.62 | 40.00 | -8.38 | Peak | VERTICAL |
| 5 | 128.56 | 46.26 | -15.43 | 30.83 | 40.00 | -9.17 | Peak | VERTICAL |
| 6 | 131.76 | 45.42 | -15.64 | 29.78 | 40.00 | -10.22 | Peak | VERTICAL |

Radiated Emission Test 30MHz – 1000MHz

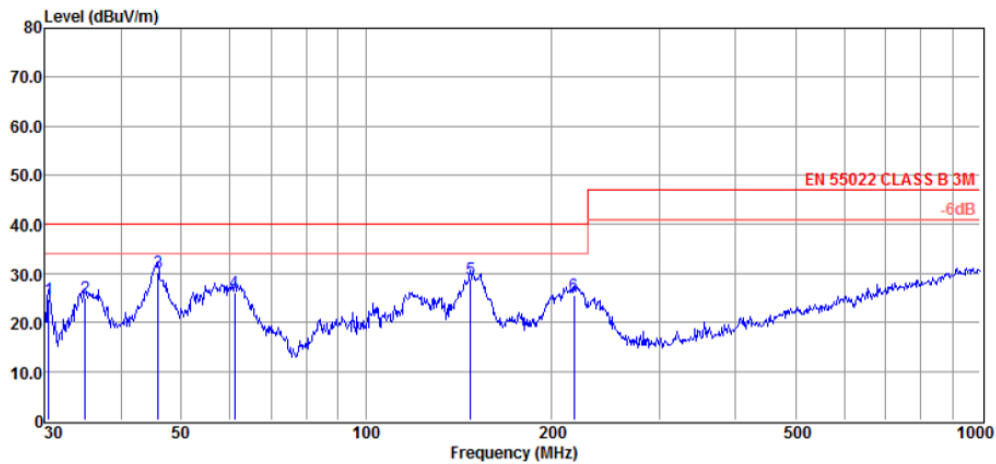
M/N : F05L5-050080SPAV(with LF1+without CY1)
 Operating Condition : Full Load
 Test Specification : Horizontal
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 22 Relative Humidity (%): 50 Atmospheric Pressure(mbar) : 1008



| Item (Mark) | Freq (MHz) | Read Level (dB μ V) | Factor dB | Level (dB μ V/m) | Limit Line (dB μ V/m) | Over Limit (dB) | Detector | Polarization |
|-------------|------------|-------------------------|-----------|----------------------|---------------------------|-----------------|----------|--------------|
| 1 | 123.70 | 39.31 | -14.85 | 24.46 | 40.00 | -15.54 | QP | HORIZONTAL |
| 2 | 149.49 | 46.35 | -15.76 | 30.59 | 40.00 | -9.41 | QP | HORIZONTAL |
| 3 | 202.10 | 38.55 | -11.98 | 26.57 | 40.00 | -13.43 | QP | HORIZONTAL |
| 4 | 213.02 | 40.88 | -12.10 | 28.78 | 40.00 | -11.22 | QP | HORIZONTAL |
| 5 | 224.52 | 41.99 | -11.44 | 30.55 | 40.00 | -9.45 | QP | HORIZONTAL |
| 6 | 236.65 | 39.16 | -10.79 | 28.37 | 47.00 | -18.63 | QP | HORIZONTAL |

Radiated Emission Test 30MHz - 1000MHz

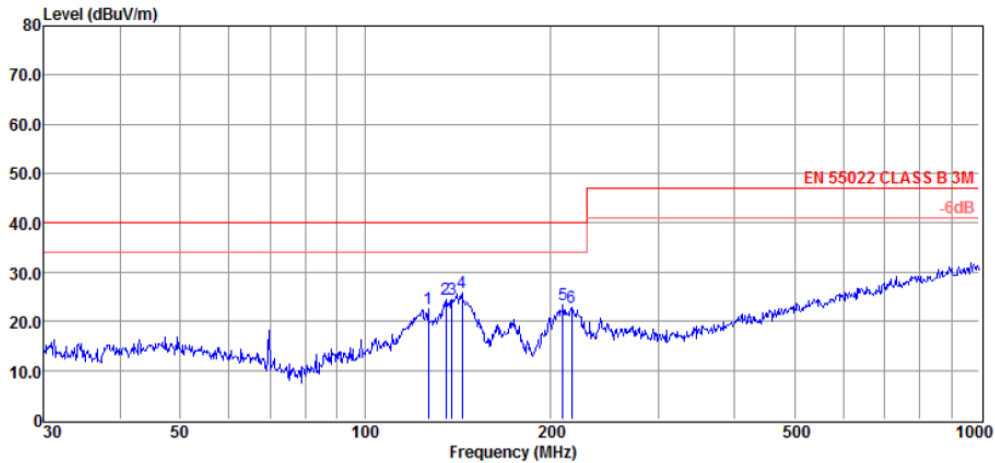
M/N : F05L5-050080SPAV(with LF1+without CY1)
 Operating Condition : Full Load
 Test Specification : Vertical
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 22 Relative Humidity (%): 50 Atmospheric Pressure(mbar) : 1008



| Item (Mark) | Freq (MHz) | Read Level (dBμV) | Factor dB | Level (dBμV/m) | Limit Line (dBμV/m) | Over Limit (dB) | Detector | Polarization |
|-------------|------------|-------------------|-----------|----------------|---------------------|-----------------|----------|--------------|
| 1 | 30.42 | 38.22 | -13.46 | 24.76 | 40.00 | -15.24 | QP | VERTICAL |
| 2 | 34.88 | 38.04 | -13.09 | 24.95 | 40.00 | -15.05 | QP | VERTICAL |
| 3 | 45.86 | 40.55 | -10.42 | 30.13 | 40.00 | -9.87 | QP | VERTICAL |
| 4 | 61.13 | 38.36 | -12.15 | 26.21 | 40.00 | -13.79 | QP | VERTICAL |
| 5 | 147.92 | 44.66 | -15.83 | 28.83 | 40.00 | -11.17 | QP | VERTICAL |
| 6 | 218.31 | 37.46 | -11.86 | 25.60 | 40.00 | -14.40 | QP | VERTICAL |

Radiated Emission Test 30MHz – 1000MHz

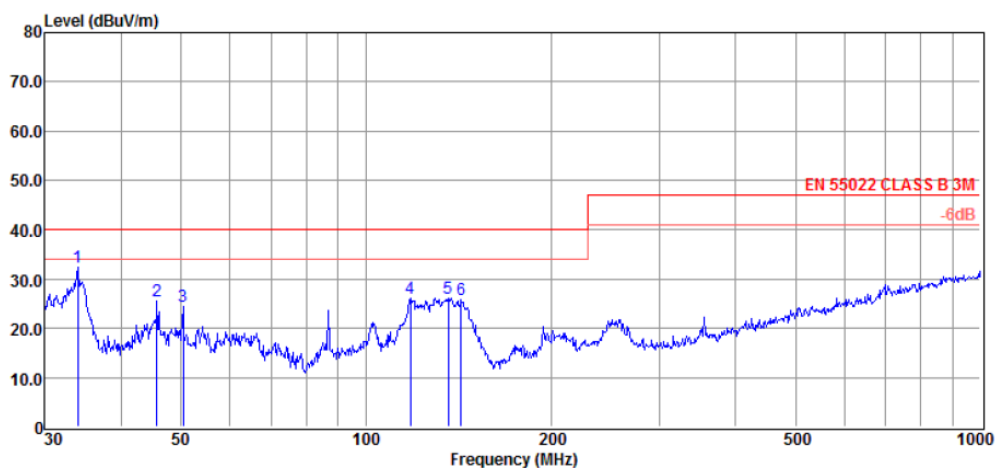
M/N : F05L5-050080SPAV(with L1+L2+CY1)
 Operating Condition : Full Load
 Test Specification : Horizontal
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 22 Relative Humidity (%): 50 Atmospheric Pressure(mbar) : 1008



| Item (Mark) | Freq (MHz) | Read Level (dBμV) | Factor (dB) | Level (dBμV/m) | Limit Line (dBμV/m) | Over Limit (dB) | Detector | Polarization |
|-------------|------------|-------------------|-------------|----------------|---------------------|-----------------|----------|--------------|
| 1 | 126.77 | 37.85 | -15.28 | 22.57 | 40.00 | -17.43 | Peak | HORIZONTAL |
| 2 | 135.51 | 40.18 | -15.83 | 24.35 | 40.00 | -15.65 | Peak | HORIZONTAL |
| 3 | 138.39 | 40.48 | -15.91 | 24.57 | 40.00 | -15.43 | Peak | HORIZONTAL |
| 4 | 143.83 | 41.83 | -15.95 | 25.88 | 40.00 | -14.12 | Peak | HORIZONTAL |
| 5 | 210.05 | 35.53 | -12.21 | 23.32 | 40.00 | -16.68 | Peak | HORIZONTAL |
| 6 | 216.78 | 34.62 | -11.94 | 22.68 | 40.00 | -17.32 | Peak | HORIZONTAL |

Radiated Emission Test 30MHz - 1000MHz

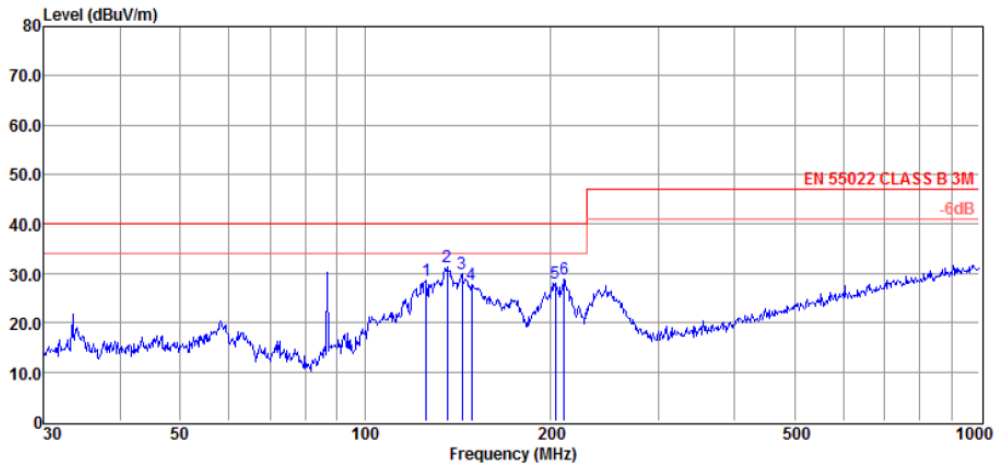
M/N : F05L5-050080SPAV(with L1+L2+CY1)
 Operating Condition : Full Load
 Test Specification : Vertical
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 22 Relative Humidity (%): 50 Atmospheric Pressure(mbar) : 1008



| Item (Mark) | Freq (MHz) | Read Level (dBμV) | Factor dB | Level (dBμV/m) | Limit Line (dBμV/m) | Over Limit (dB) | Detector | Polarization |
|-------------|------------|-------------------|-----------|----------------|---------------------|-----------------|----------|--------------|
| 1 | 33.92 | 45.83 | -13.32 | 32.51 | 40.00 | -7.49 | Peak | VERTICAL |
| 2 | 45.70 | 35.86 | -10.42 | 25.44 | 40.00 | -14.56 | Peak | VERTICAL |
| 3 | 50.41 | 34.93 | -10.44 | 24.49 | 40.00 | -15.51 | Peak | VERTICAL |
| 4 | 118.19 | 39.96 | -13.74 | 26.22 | 40.00 | -13.78 | Peak | VERTICAL |
| 5 | 135.98 | 42.08 | -15.84 | 26.24 | 40.00 | -13.76 | Peak | VERTICAL |
| 6 | 142.82 | 41.73 | -15.96 | 25.77 | 40.00 | -14.23 | Peak | VERTICAL |

Radiated Emission Test 30MHz – 1000MHz

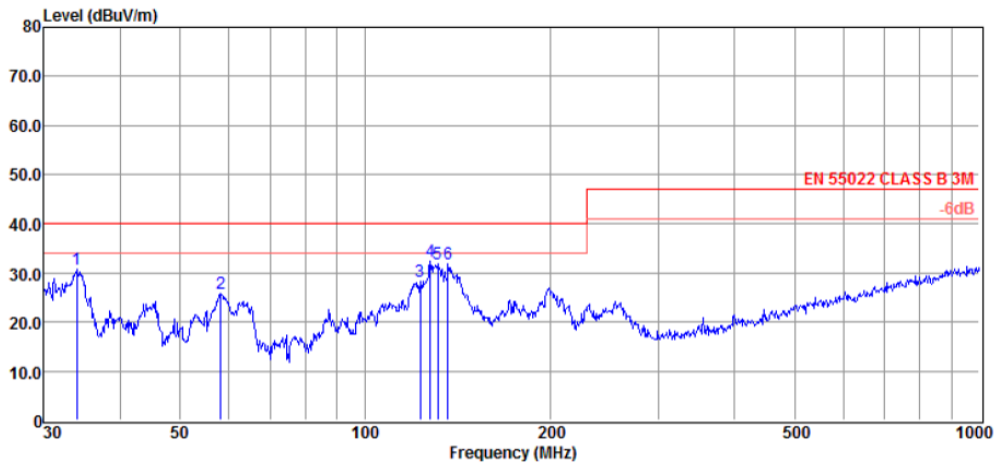
M/N : F05L5-050080SPAV(with L1+L2+without CY1)
 Operating Condition : Full Load
 Test Specification : Horizontal
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 22 Relative Humidity (%): 50 Atmospheric Pressure(mbar) : 1008



| Item (Mark) | Freq (MHz) | Read Level (dBμV) | Factor (dB) | Level (dBμV/m) | Limit Line (dBμV/m) | Over Limit (dB) | Detector | Polarization |
|-------------|------------|-------------------|-------------|----------------|---------------------|-----------------|----------|--------------|
| 1 | 125.89 | 43.70 | -15.21 | 28.49 | 40.00 | -11.51 | Peak | HORIZONTAL |
| 2 | 135.98 | 47.15 | -15.84 | 31.31 | 40.00 | -8.69 | Peak | HORIZONTAL |
| 3 | 143.83 | 45.80 | -15.95 | 29.85 | 40.00 | -10.15 | Peak | HORIZONTAL |
| 4 | 148.96 | 43.60 | -15.79 | 27.81 | 40.00 | -12.19 | Peak | HORIZONTAL |
| 5 | 204.24 | 40.19 | -12.05 | 28.14 | 40.00 | -11.86 | Peak | HORIZONTAL |
| 6 | 210.79 | 41.03 | -12.18 | 28.85 | 40.00 | -11.15 | Peak | HORIZONTAL |

Radiated Emission Test 30MHz - 1000MHz

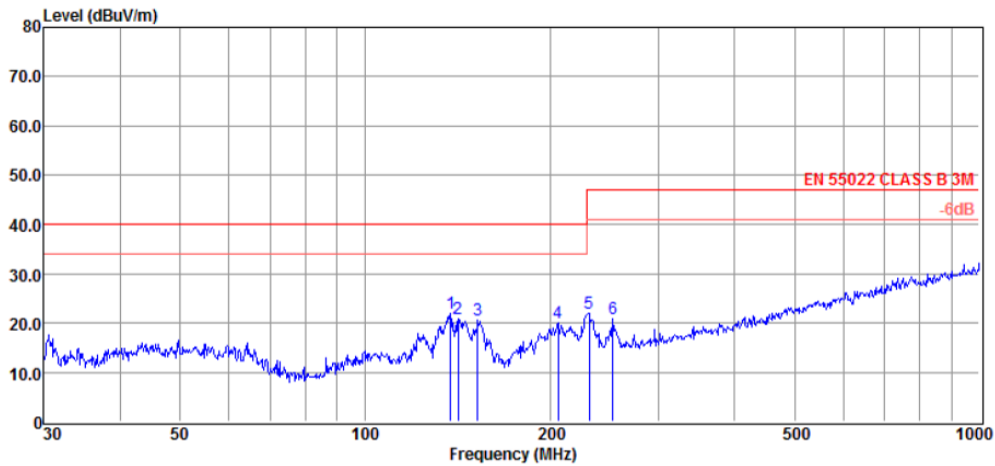
M/N : F05L5-050080SPAV(with L1+L2+without CY1)
 Operating Condition : Full Load
 Test Specification : Vertical
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 22 Relative Humidity (%): 50 Atmospheric Pressure(mbar) : 1008



| Item (Mark) | Freq (MHz) | Read Level (dBμV) | Factor dB | Level (dBμV/m) | Limit Line (dBμV/m) | Over Limit (dB) | Detector | Polarization |
|-------------|------------|-------------------|-----------|----------------|---------------------|-----------------|----------|--------------|
| 1 | 33.92 | 44.22 | -13.32 | 30.90 | 40.00 | -9.10 | Peak | VERTICAL |
| 2 | 58.20 | 37.61 | -11.69 | 25.92 | 40.00 | -14.08 | Peak | VERTICAL |
| 3 | 122.83 | 43.01 | -14.67 | 28.34 | 40.00 | -11.66 | Peak | VERTICAL |
| 4 | 127.67 | 47.70 | -15.35 | 32.35 | 40.00 | -7.65 | Peak | VERTICAL |
| 5 | 131.30 | 47.41 | -15.61 | 31.80 | 40.00 | -8.20 | Peak | VERTICAL |
| 6 | 136.46 | 47.64 | -15.85 | 31.79 | 40.00 | -8.21 | Peak | VERTICAL |

Radiated Emission Test 30MHz – 1000MHz

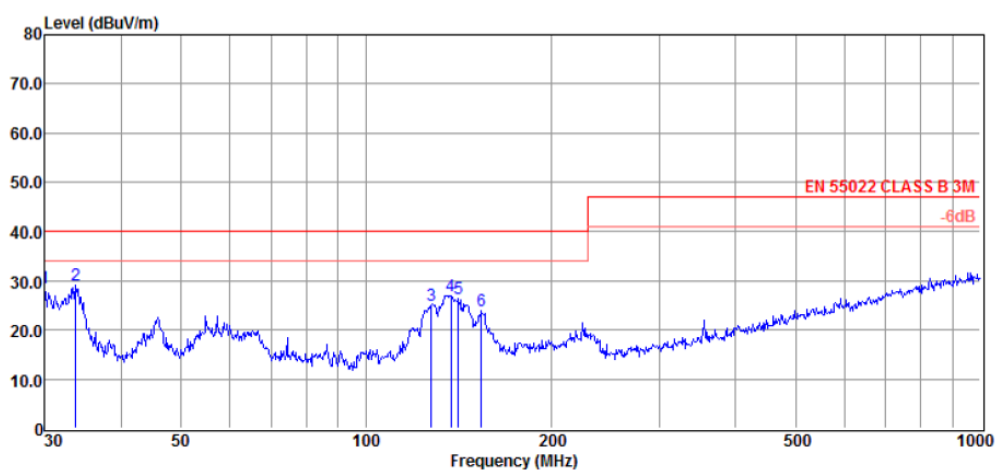
M/N : F05L5-050100SPAV(with LF1+CY1)
 Operating Condition : Full Load
 Test Specification : Horizontal
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 22 Relative Humidity (%): 50 Atmospheric Pressure(mbar) : 1008



| Item (Mark) | Freq (MHz) | Read Level (dBμV) | Factor dB | Level (dBμV/m) | Limit Line (dBμV/m) | Over Limit (dB) | Detector | Polarization |
|-------------|------------|-------------------|-----------|----------------|---------------------|-----------------|----------|--------------|
| 1 | 137.90 | 37.80 | -15.90 | 21.90 | 40.00 | -18.10 | Peak | HORIZONTAL |
| 2 | 141.83 | 36.90 | -15.95 | 20.95 | 40.00 | -19.05 | Peak | HORIZONTAL |
| 3 | 152.66 | 36.15 | -15.59 | 20.56 | 40.00 | -19.44 | Peak | HORIZONTAL |
| 4 | 206.40 | 32.29 | -12.11 | 20.18 | 40.00 | -19.82 | Peak | HORIZONTAL |
| 5 | 231.72 | 32.88 | -10.99 | 21.89 | 47.00 | -25.11 | Peak | HORIZONTAL |
| 6 | 252.95 | 31.20 | -10.29 | 20.91 | 47.00 | -26.09 | Peak | HORIZONTAL |

Radiated Emission Test 30MHz - 1000MHz

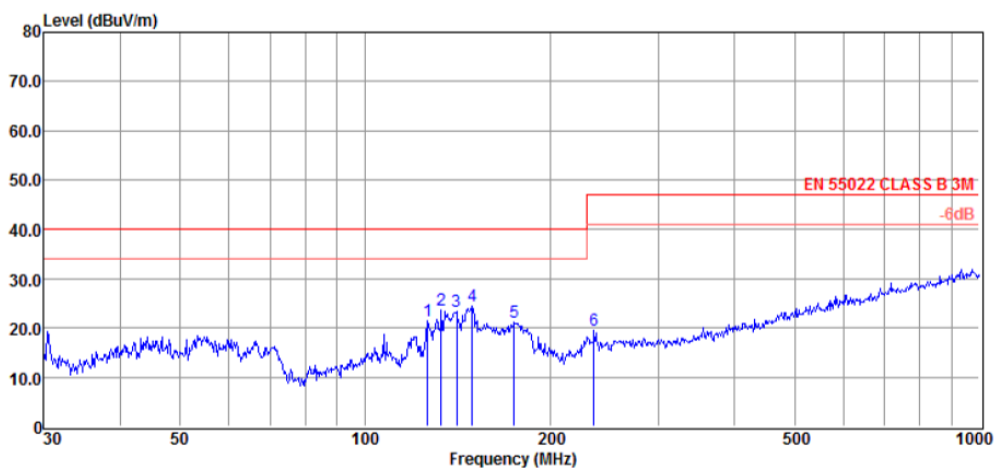
M/N : F05L5-050100SPAV (with LF1+CY1)
 Operating Condition : Full Load
 Test Specification : Vertical
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 22 Relative Humidity (%): 50 Atmospheric Pressure(mbar) : 1008



| Item (Mark) | Freq (MHz) | Read Level (dBμV) | Factor (dB) | Level (dBμV/m) | Limit Line (dBμV/m) | Over Limit (dB) | Detector | Polarization |
|-------------|------------|-------------------|-------------|----------------|---------------------|-----------------|----------|--------------|
| 1 | 30.00 | 41.95 | -13.31 | 28.64 | 40.00 | -11.36 | Peak | VERTICAL |
| 2 | 33.68 | 42.51 | -13.37 | 29.14 | 40.00 | -10.86 | Peak | VERTICAL |
| 3 | 127.67 | 40.48 | -15.35 | 25.13 | 40.00 | -14.87 | Peak | VERTICAL |
| 4 | 137.42 | 42.90 | -15.88 | 27.02 | 40.00 | -12.98 | Peak | VERTICAL |
| 5 | 141.33 | 42.45 | -15.96 | 26.49 | 40.00 | -13.51 | Peak | VERTICAL |
| 6 | 154.28 | 39.37 | -15.51 | 23.86 | 40.00 | -16.14 | Peak | VERTICAL |

Radiated Emission Test 30MHz – 1000MHz

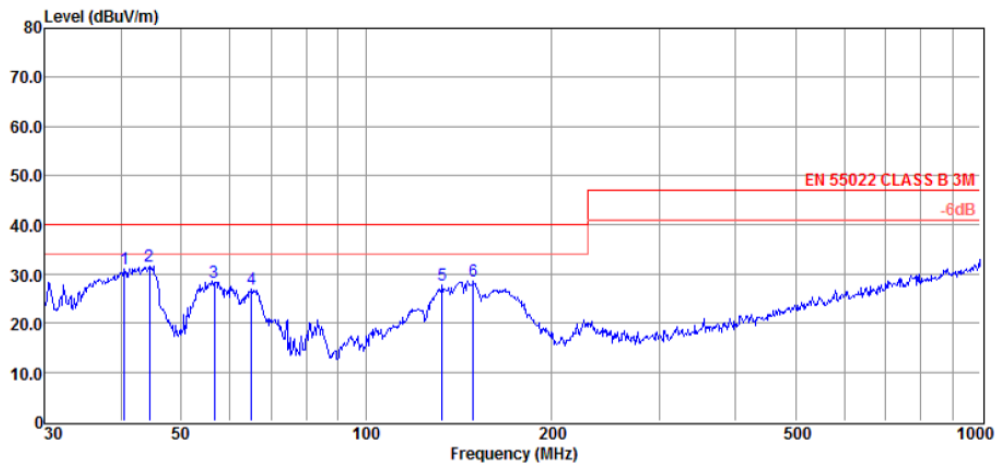
M/N : F05L5-050100SPAV (with LF1+without CY1)
 Operating Condition : Full Load
 Test Specification : Horizontal
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 22 Relative Humidity (%): 50 Atmospheric Pressure(mbar) : 1008



| Item (Mark) | Freq (MHz) | Read Level (dBμV) | Factor (dB) | Level (dBμV/m) | Limit Line (dBμV/m) | Over Limit (dB) | Detector | Polarization |
|-------------|------------|-------------------|-------------|----------------|---------------------|-----------------|----------|--------------|
| 1 | 126.33 | 36.66 | -15.24 | 21.42 | 40.00 | -18.58 | Peak | HORIZONTAL |
| 2 | 133.15 | 39.25 | -15.71 | 23.54 | 40.00 | -16.46 | Peak | HORIZONTAL |
| 3 | 140.84 | 39.29 | -15.96 | 23.33 | 40.00 | -16.67 | Peak | HORIZONTAL |
| 4 | 149.49 | 40.33 | -15.76 | 24.57 | 40.00 | -15.43 | Peak | HORIZONTAL |
| 5 | 175.04 | 35.54 | -14.40 | 21.14 | 40.00 | -18.86 | Peak | HORIZONTAL |
| 6 | 235.82 | 30.31 | -10.83 | 19.48 | 47.00 | -27.52 | Peak | HORIZONTAL |

Radiated Emission Test 30MHz - 1000MHz

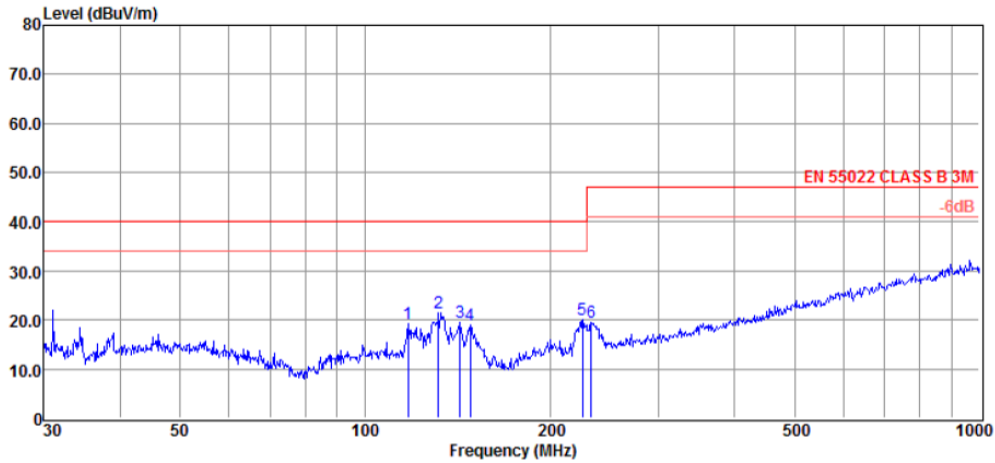
M/N : F05L5-050100SPAV (with LF1+without CY1)
 Operating Condition : Full Load
 Test Specification : Vertical
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 22 Relative Humidity (%): 50 Atmospheric Pressure(mbar) : 1008



| Item (Mark) | Freq (MHz) | Read Level (dBμV) | Factor dB | Level (dBμV/m) | Limit Line (dBμV/m) | Over Limit (dB) | Detector | Polarization |
|-------------|------------|-------------------|-----------|----------------|---------------------|-----------------|----------|--------------|
| 1 | 40.42 | 42.32 | -11.29 | 31.03 | 40.00 | -8.97 | Peak | VERTICAL |
| 2 | 44.43 | 42.26 | -10.51 | 31.75 | 40.00 | -8.25 | Peak | VERTICAL |
| 3 | 56.59 | 39.67 | -11.25 | 28.42 | 40.00 | -11.58 | Peak | VERTICAL |
| 4 | 65.11 | 39.50 | -12.65 | 26.85 | 40.00 | -13.15 | Peak | VERTICAL |
| 5 | 133.15 | 43.46 | -15.71 | 27.75 | 40.00 | -12.25 | Peak | VERTICAL |
| 6 | 149.49 | 44.30 | -15.76 | 28.54 | 40.00 | -11.46 | Peak | VERTICAL |

Radiated Emission Test 30MHz – 1000MHz

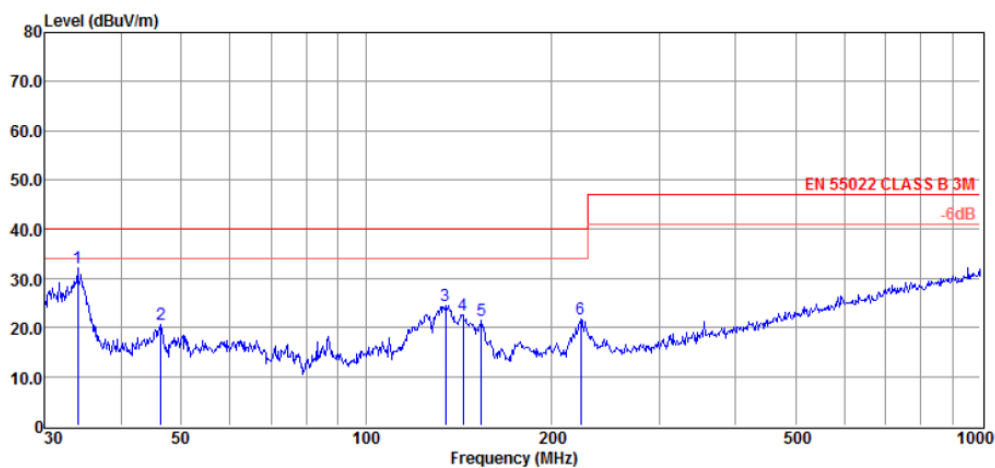
M/N : F05L5-050100SPAV (with L1+L2+CY1)
 Operating Condition : Full Load
 Test Specification : Horizontal
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 22 Relative Humidity (%): 50 Atmospheric Pressure(mbar) : 1008



| Item (Mark) | Freq (MHz) | Read Level (dBμV) | Factor (dB) | Level (dBμV/m) | Limit Line (dBμV/m) | Over Limit (dB) | Detector | Polarization |
|-------------|------------|-------------------|-------------|----------------|---------------------|-----------------|----------|--------------|
| 1 | 117.36 | 32.96 | -13.59 | 19.37 | 40.00 | -20.63 | Peak | HORIZONTAL |
| 2 | 131.76 | 36.99 | -15.64 | 21.35 | 40.00 | -18.65 | Peak | HORIZONTAL |
| 3 | 142.82 | 35.42 | -15.96 | 19.46 | 40.00 | -20.54 | Peak | HORIZONTAL |
| 4 | 148.44 | 34.67 | -15.81 | 18.86 | 40.00 | -21.14 | Peak | HORIZONTAL |
| 5 | 226.10 | 31.37 | -11.33 | 20.04 | 40.00 | -19.96 | Peak | HORIZONTAL |
| 6 | 233.35 | 30.56 | -10.92 | 19.64 | 47.00 | -27.36 | Peak | HORIZONTAL |

Radiated Emission Test 30MHz - 1000MHz

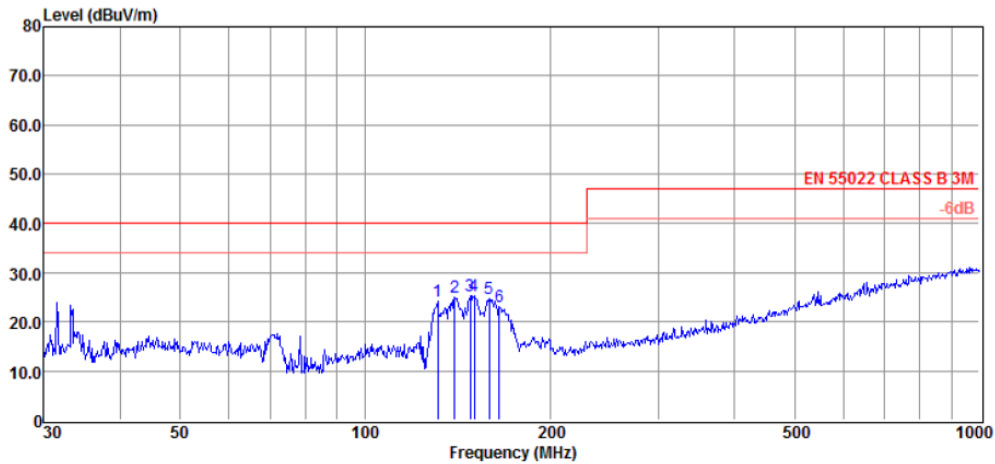
M/N : F05L5-050100SPAV (with L1+L2+CY1)
 Operating Condition : Full Load
 Test Specification : Vertical
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 22 Relative Humidity (%): 50 Atmospheric Pressure(mbar) : 1008



| Item (Mark) | Freq (MHz) | Read Level (dBμV) | Factor dB | Level (dBμV/m) | Limit Line (dBμV/m) | Over Limit (dB) | Detector | Polarization |
|-------------|------------|-------------------|-----------|----------------|---------------------|-----------------|----------|--------------|
| 1 | 33.92 | 45.50 | -13.32 | 32.18 | 40.00 | -7.82 | Peak | VERTICAL |
| 2 | 46.34 | 31.00 | -10.41 | 20.59 | 40.00 | -19.41 | Peak | VERTICAL |
| 3 | 134.56 | 40.38 | -15.78 | 24.60 | 40.00 | -15.40 | Peak | VERTICAL |
| 4 | 143.83 | 38.48 | -15.95 | 22.53 | 40.00 | -17.47 | Peak | VERTICAL |
| 5 | 154.28 | 36.95 | -15.51 | 21.44 | 40.00 | -18.56 | Peak | VERTICAL |
| 6 | 223.73 | 33.31 | -11.50 | 21.81 | 40.00 | -18.19 | Peak | VERTICAL |

Radiated Emission Test 30MHz – 1000MHz

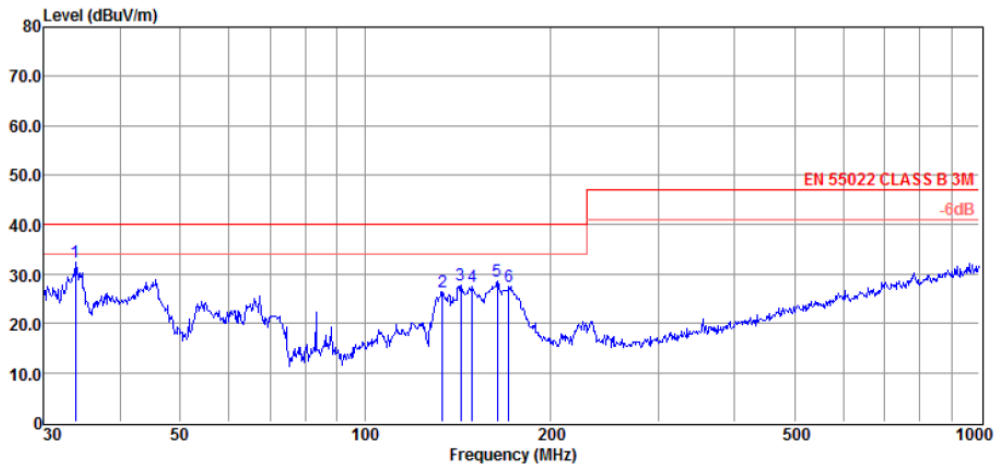
M/N : F05L5-050100SPAV (with L1+L2+without CY1)
 Operating Condition : Full Load
 Test Specification : Horizontal
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 22 Relative Humidity (%): 50 Atmospheric Pressure(mbar) : 1008



| Item (Mark) | Freq (MHz) | Read Level (dBμV) | Factor (dB) | Level (dBμV/m) | Limit Line (dBμV/m) | Over Limit (dB) | Detector | Polarization |
|-------------|------------|-------------------|-------------|----------------|---------------------|-----------------|----------|--------------|
| 1 | 131.30 | 39.87 | -15.61 | 24.26 | 40.00 | -15.74 | Peak | VERTICAL |
| 2 | 139.85 | 40.92 | -15.95 | 24.97 | 40.00 | -15.03 | Peak | VERTICAL |
| 3 | 148.44 | 41.10 | -15.81 | 25.29 | 40.00 | -14.71 | Peak | VERTICAL |
| 4 | 150.54 | 41.13 | -15.71 | 25.42 | 40.00 | -14.58 | Peak | VERTICAL |
| 5 | 159.23 | 39.97 | -15.19 | 24.78 | 40.00 | -15.22 | Peak | VERTICAL |
| 6 | 165.49 | 37.91 | -14.83 | 23.08 | 40.00 | -16.92 | Peak | VERTICAL |

Radiated Emission Test 30MHz - 1000MHz

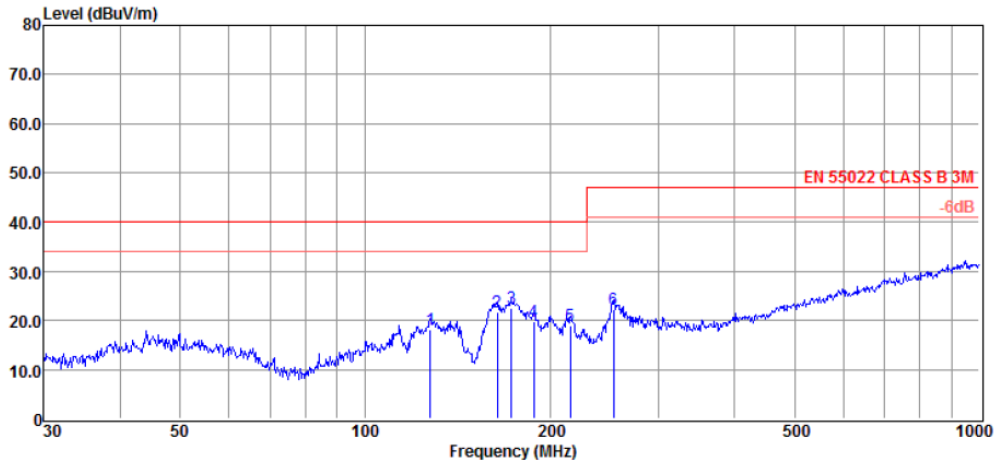
M/N : F05L5-050100SPAV (with L1+L2+without CY1)
 Operating Condition : Full Load
 Test Specification : Vertical
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 22 Relative Humidity (%): 50 Atmospheric Pressure(mbar) : 1008



| Item (Mark) | Freq (MHz) | Read Level (dBμV) | Factor (dB) | Level (dBμV/m) | Limit Line (dBμV/m) | Over Limit (dB) | Detector | Polarization |
|-------------|------------|-------------------|-------------|----------------|---------------------|-----------------|----------|--------------|
| 1 | 33.80 | 45.67 | -13.35 | 32.32 | 40.00 | -7.68 | Peak | VERTICAL |
| 2 | 133.62 | 42.14 | -15.74 | 26.40 | 40.00 | -13.60 | Peak | VERTICAL |
| 3 | 143.33 | 43.76 | -15.96 | 27.80 | 40.00 | -12.20 | Peak | VERTICAL |
| 4 | 149.49 | 43.16 | -15.76 | 27.40 | 40.00 | -12.60 | Peak | VERTICAL |
| 5 | 164.33 | 43.37 | -14.89 | 28.48 | 40.00 | -11.52 | Peak | VERTICAL |
| 6 | 171.39 | 42.11 | -14.58 | 27.53 | 40.00 | -12.47 | Peak | VERTICAL |

Radiated Emission Test 30MHz – 1000MHz

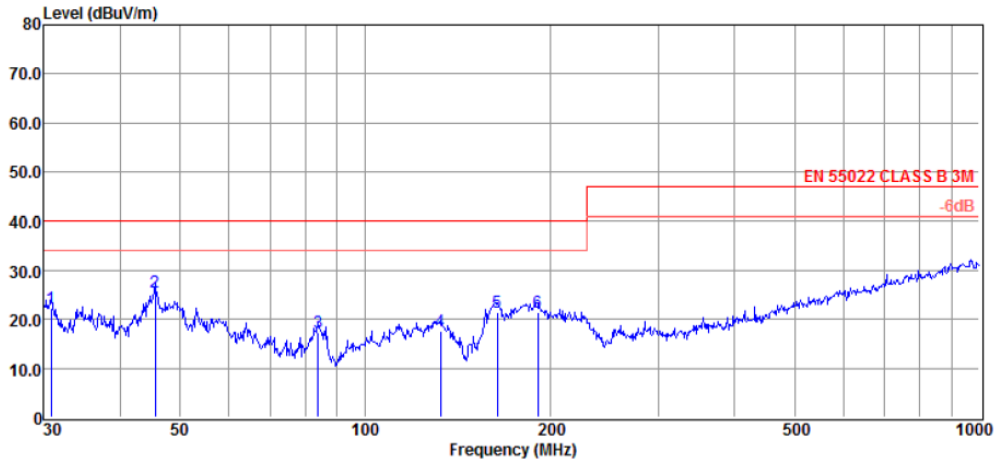
M/N : F05L5-130047SPAV (with L1+L2)
 Operating Condition : Full Load
 Test Specification : Horizontal
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 22 Relative Humidity (%): 50 Atmospheric Pressure(mbar) : 1008



| Item (Mark) | Freq (MHz) | Read Level (dBμV) | Factor dB | Level (dBμV/m) | Limit Line (dBμV/m) | Over Limit (dB) | Detector | Polarization |
|-------------|------------|-------------------|-----------|----------------|---------------------|-----------------|----------|--------------|
| 1 | 127.66 | 33.57 | -15.35 | 18.22 | 40.00 | -21.78 | QP | HORIZONTAL |
| 2 | 164.33 | 36.58 | -14.89 | 21.69 | 40.00 | -18.31 | QP | HORIZONTAL |
| 3 | 173.21 | 36.98 | -14.49 | 22.49 | 40.00 | -17.51 | QP | HORIZONTAL |
| 4 | 188.41 | 32.95 | -13.09 | 19.86 | 40.00 | -20.14 | QP | HORIZONTAL |
| 5 | 216.02 | 30.82 | -11.98 | 18.84 | 40.00 | -21.16 | QP | HORIZONTAL |
| 6 | 253.84 | 32.58 | -10.27 | 22.31 | 47.00 | -24.69 | QP | HORIZONTAL |

Radiated Emission Test 30MHz - 1000MHz

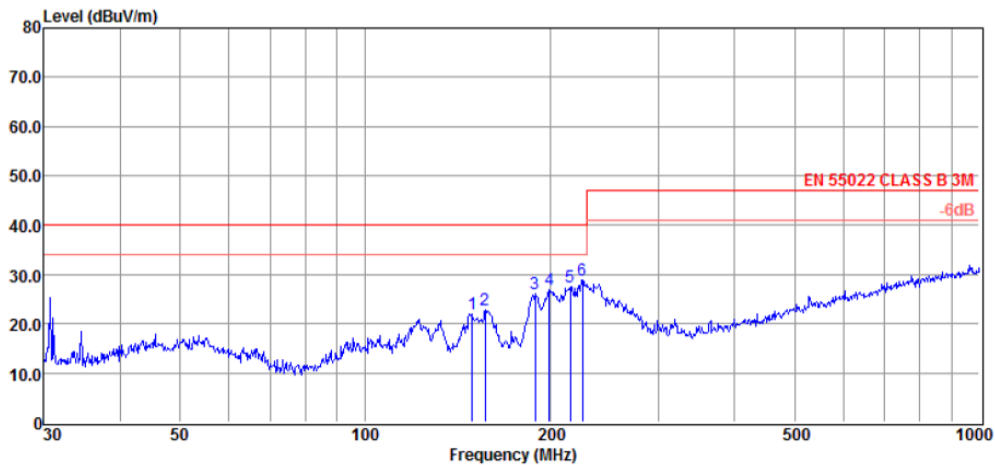
M/N : F05L5-130047SPAV (with L1+L2)
 Operating Condition : Full Load
 Test Specification : Vertical
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 22 Relative Humidity (%): 50 Atmospheric Pressure(mbar) : 1008



| Item (Mark) | Freq (MHz) | Read Level (dBμV) | Factor (dB) | Level (dBμV/m) | Limit Line (dBμV/m) | Over Limit (dB) | Detector | Polarization |
|-------------|------------|-------------------|-------------|----------------|---------------------|-----------------|----------|--------------|
| 1 | 30.85 | 35.81 | -13.62 | 22.19 | 40.00 | -17.81 | QP | VERTICAL |
| 2 | 45.54 | 35.95 | -10.43 | 25.52 | 40.00 | -14.48 | QP | VERTICAL |
| 3 | 83.82 | 32.98 | -15.69 | 17.29 | 40.00 | -22.71 | QP | VERTICAL |
| 4 | 132.69 | 33.39 | -15.68 | 17.71 | 40.00 | -22.29 | QP | VERTICAL |
| 5 | 164.33 | 36.33 | -14.89 | 21.44 | 40.00 | -18.56 | QP | VERTICAL |
| 6 | 191.07 | 34.13 | -12.76 | 21.37 | 40.00 | -18.63 | QP | VERTICAL |

Radiated Emission Test 30MHz – 1000MHz

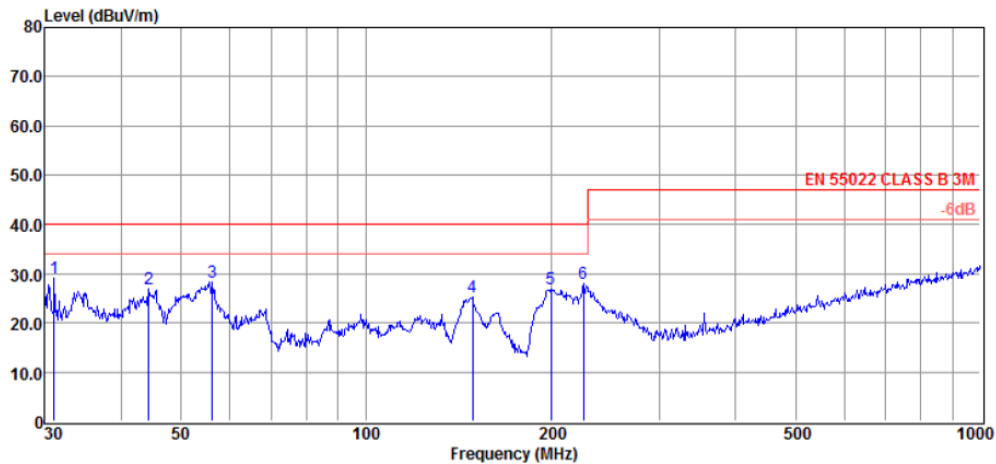
M/N : F05L5-130047SPAV (with LF1)
 Operating Condition : Full Load
 Test Specification : Horizontal
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 22 Relative Humidity (%): 50 Atmospheric Pressure(mbar) : 1008



| Item (Mark) | Freq (MHz) | Read Level (dBμV) | Factor dB | Level (dBμV/m) | Limit Line (dBμV/m) | Over Limit (dB) | Detector | Polarization |
|-------------|------------|-------------------|-----------|----------------|---------------------|-----------------|----------|--------------|
| 1 | 149.49 | 37.85 | -15.76 | 22.09 | 40.00 | -17.91 | Peak | HORIZONTAL |
| 2 | 157.01 | 38.11 | -15.33 | 22.78 | 40.00 | -17.22 | Peak | HORIZONTAL |
| 3 | 189.07 | 39.14 | -13.00 | 26.14 | 40.00 | -13.86 | Peak | HORIZONTAL |
| 4 | 199.29 | 38.79 | -11.97 | 26.82 | 40.00 | -13.18 | Peak | HORIZONTAL |
| 5 | 216.02 | 39.41 | -11.98 | 27.43 | 40.00 | -12.57 | Peak | HORIZONTAL |
| 6 | 226.10 | 40.28 | -11.33 | 28.95 | 40.00 | -11.05 | Peak | HORIZONTAL |

Radiated Emission Test 30MHz - 1000MHz

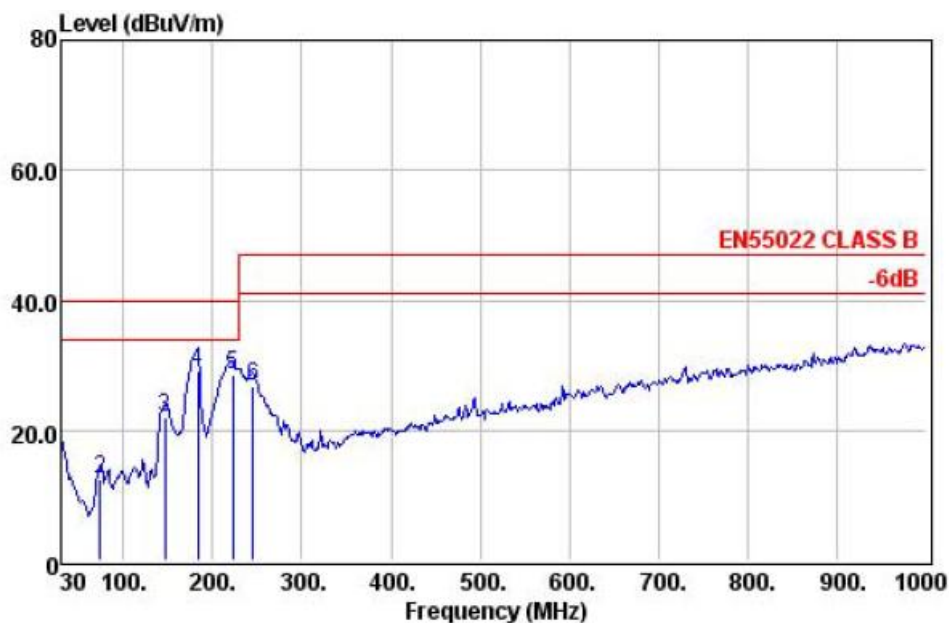
M/N : F05L5-130047SPAV (with LF1)
 Operating Condition : Full Load
 Test Specification : Vertical
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 22 Relative Humidity (%): 50 Atmospheric Pressure(mbar) : 1008



| Item (Mark) | Freq (MHz) | Read Level (dB μ V) | Factor dB | Level (dB μ V/m) | Limit Line (dB μ V/m) | Over Limit (dB) | Detector | Polarization |
|-------------|------------|-------------------------|-----------|----------------------|---------------------------|-----------------|----------|--------------|
| 1 | 31.07 | 42.91 | -13.66 | 29.25 | 40.00 | -10.75 | Peak | VERTICAL |
| 2 | 44.28 | 37.59 | -10.52 | 27.07 | 40.00 | -12.93 | Peak | VERTICAL |
| 3 | 56.20 | 39.50 | -11.14 | 28.36 | 40.00 | -11.64 | Peak | VERTICAL |
| 4 | 148.96 | 41.11 | -15.79 | 25.32 | 40.00 | -14.68 | Peak | VERTICAL |
| 5 | 199.99 | 38.78 | -11.91 | 26.87 | 40.00 | -13.13 | Peak | VERTICAL |
| 6 | 226.10 | 39.45 | -11.33 | 28.12 | 40.00 | -11.88 | Peak | VERTICAL |

Radiated Emission Test 30MHz – 1000MHz

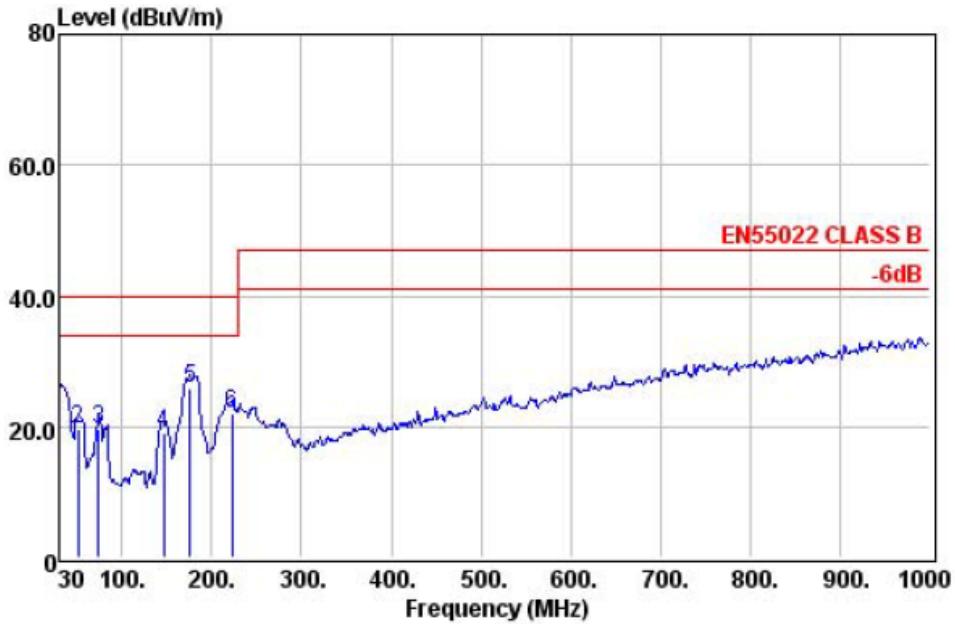
M/N : F05L5-130047SPAV (with L1+L2)
 Operating Condition : Full Load
 Test Specification : Horizontal
 Date of test : 2015-05-25
 Comment : AC 230V/50Hz
 Temperature (°C): 24.8 Relative Humidity (%): 56.0 Atmospheric Pressure(mbar) : 1015.2



| | Preamp | Read | Cable | Limit | Over | | | |
|------|--------|-------|-------|--------|--------|--------|--------|----|
| Freq | Factor | Level | Loss | Line | Limit | Remark | | |
| MHz | dB | dBuV | dB | dBuV/m | dBuV/m | dB | | |
| 1 | 30.00 | 31.41 | 31.56 | 0.56 | 19.51 | 40.00 | -20.49 | QP |
| 2 | 73.65 | 31.33 | 35.26 | 0.85 | 12.46 | 40.00 | -27.54 | QP |
| 3 | 146.40 | 31.23 | 43.38 | 1.22 | 22.15 | 40.00 | -17.85 | QP |
| 4 | 183.26 | 31.15 | 48.54 | 1.39 | 29.08 | 40.00 | -10.92 | QP |
| 5 | 222.06 | 30.96 | 45.99 | 1.53 | 28.62 | 40.00 | -11.38 | QP |
| 6 | 245.34 | 30.96 | 43.40 | 1.70 | 26.91 | 47.00 | -20.09 | QP |

Radiated Emission Test 30MHz – 1000MHz

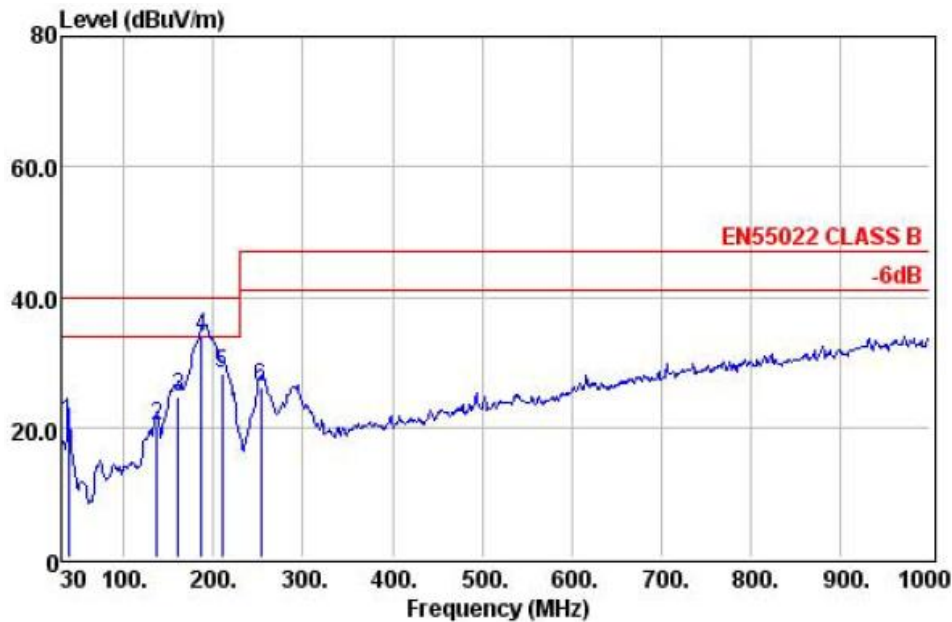
M/N : F05L5-130047SPAV (with L1+L2)
 Operating Condition : Full Load
 Test Specification : Vertical
 Date of test : 2015-05-25
 Comment : AC 230V/50Hz
 Temperature (°C): 24.8 Relative Humidity (%): 56.0 Atmospheric Pressure(mbar) : 1015.2



| | Preamp | Read | Cable | Limit | Over | | | |
|------|--------|-------|-------|--------|--------|--------|--------|----|
| Freq | Factor | Level | Loss | Line | Limit | Remark | | |
| MHz | dB | dBuV | dB | dBuV/m | dBuV/m | dB | | |
| 1 | 30.00 | 31.41 | 38.48 | 0.56 | 26.43 | 40.00 | -13.57 | QP |
| 2 | 51.34 | 31.38 | 41.75 | 0.75 | 19.72 | 40.00 | -20.28 | QP |
| 3 | 73.65 | 31.33 | 42.40 | 0.85 | 19.60 | 40.00 | -20.40 | QP |
| 4 | 146.40 | 31.23 | 40.18 | 1.22 | 18.95 | 40.00 | -21.05 | QP |
| 5 | 175.50 | 31.17 | 45.51 | 1.39 | 26.00 | 40.00 | -14.00 | QP |
| 6 | 222.06 | 30.96 | 39.47 | 1.53 | 22.10 | 40.00 | -17.90 | QP |

Radiated Emission Test 30MHz - 1000MHz

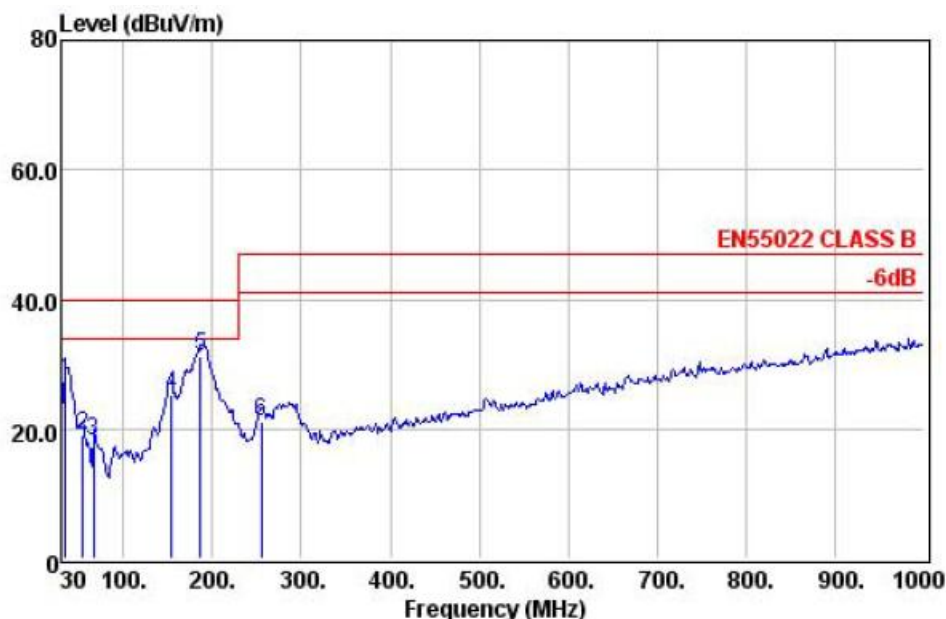
M/N : F05L5-130047SPAV (with LF1)
 Operating Condition : Full Load
 Test Specification : Horizontal
 Date of test : 2015-05-25
 Comment : AC 230V/50Hz
 Temperature (°C): 24.8 Relative Humidity (%): 56.0 Atmospheric Pressure(mbar) : 1015.2



| | Preamp | Read | Cable | Limit | Over | | | |
|------|--------|-------|-------|--------|--------|--------|--------|----|
| Freq | Factor | Level | Loss | Line | Limit | Remark | | |
| MHz | dB | dBuV | dB | dBuV/m | dBuV/m | dB | | |
| 1 | 37.76 | 31.36 | 37.52 | 0.56 | 20.94 | 40.00 | -19.06 | QP |
| 2 | 136.70 | 31.20 | 41.93 | 1.12 | 20.22 | 40.00 | -19.78 | QP |
| 3 | 160.95 | 31.22 | 45.31 | 1.30 | 24.68 | 40.00 | -15.32 | QP |
| 4 | 187.14 | 31.13 | 53.36 | 1.39 | 33.81 | 40.00 | -6.19 | QP |
| 5 | 209.45 | 31.08 | 46.22 | 1.53 | 28.12 | 40.00 | -11.88 | QP |
| 6 | 253.10 | 30.97 | 42.40 | 1.70 | 26.04 | 47.00 | -20.96 | QP |

Radiated Emission Test 30MHz - 1000MHz

M/N : F05L5-130047SPAV (with LF1)
 Operating Condition : Full Load
 Test Specification : Vertical
 Date of test : 2015-05-25
 Comment : AC 230V/50Hz
 Temperature (°C): 24.8 Relative Humidity (%): 56.0 Atmospheric Pressure(mbar) : 1015.2



| | Frequency (MHz) | | | | | | |
|---|-----------------|---------------|------------|------------|--------|--------|-----------|
| | Freq | Preamp Factor | Read Level | Cable Loss | Level | Limit | Over |
| | MHz | dB | dBuV | dB | dBuV/m | dBuV/m | dB |
| 1 | 34.85 | 31.38 | 42.35 | 0.56 | 27.47 | 40.00 | -12.53 QP |
| 2 | 54.25 | 31.37 | 41.49 | 0.75 | 19.03 | 40.00 | -20.97 QP |
| 3 | 66.86 | 31.31 | 41.02 | 0.85 | 18.00 | 40.00 | -22.00 QP |
| 4 | 154.16 | 31.25 | 46.23 | 1.22 | 25.28 | 40.00 | -14.72 QP |
| 5 | 187.14 | 31.13 | 50.66 | 1.39 | 31.11 | 40.00 | -8.89 QP |
| 6 | 255.04 | 30.97 | 37.60 | 1.70 | 21.25 | 47.00 | -25.75 QP |

Test Equipment List

Radiated Emission Test

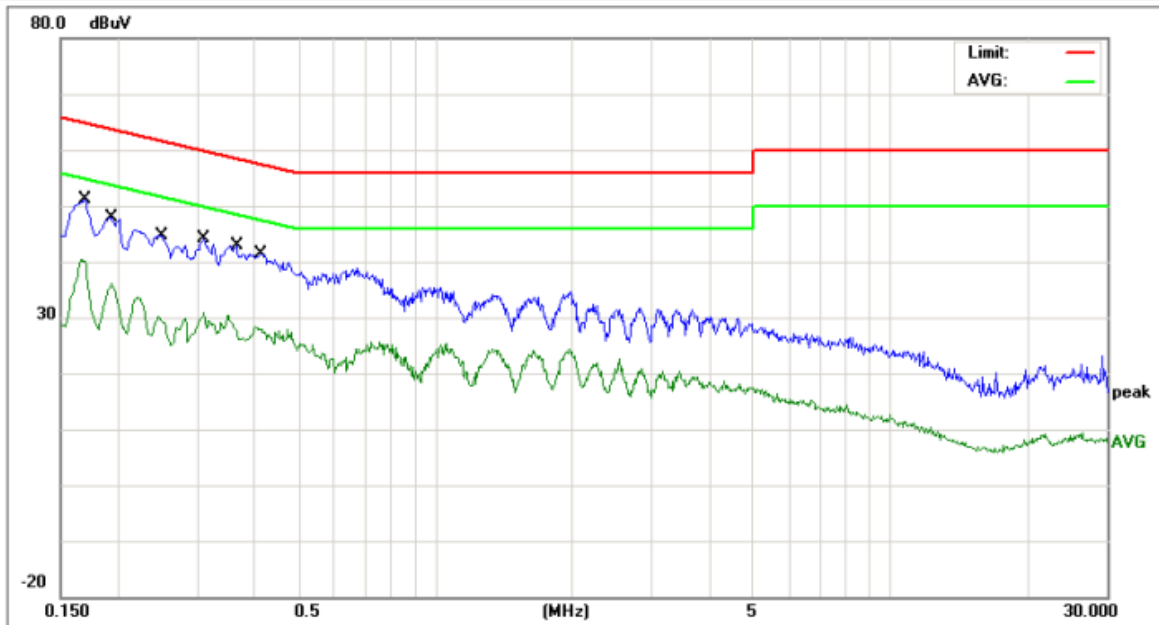
| DESCRIPTION | MANUFACTURER | MODEL NO. | SERIAL NO. | CAL. DUE DATE |
|-------------------|------------------|-----------|------------|---------------|
| Log-Bicon Antenna | SCHWARZBECK MESS | VULB 9163 | 9163-588 | 2016-02-25 |
| Test Receiver | ROHDE&SCHWARZ | ESVD | 832497/002 | 2015-11-12 |
| Spectrum Analyzer | Agilent | E4407B | US40240623 | 2015-04-02 |

Keyway

| DESCRIPTION | MANUFACTURER | MODEL NO. | SERIAL NO. | CAL. DUE DATE |
|--------------------------|---------------|-----------|--------------|---------------|
| EMI Test Receiver | Rohde&Schwarz | ESCI | 101156 | Apr 27,16 |
| Bilog Antenna | ETS-LINDGREN | 3142D | 00135452 | Apr 27,16 |
| Spectrum Analyzer | Agilent | 8593E | 3911A04271 | Apr 27,16 |
| 3m Semi-anechoic Chamber | ETS-LINDGREN | 966 | KW01 | Apr 27,16 |
| Signal Amplifier | SONOMA | 310 | 187303 | Apr 27,16 |
| RF Cable | IMRO | IMRO-400 | 966 Cable 1# | Apr 27,16 |
| MULTI-DEVICE Controller | ETS-LINDGREN | 2090 | 126913 | N/A |
| Antenna Holder | ETS-LINDGREN | 2070B | 00109601 | N/A |

7.2 Conducted Emission Test 150kHz – 30MHz

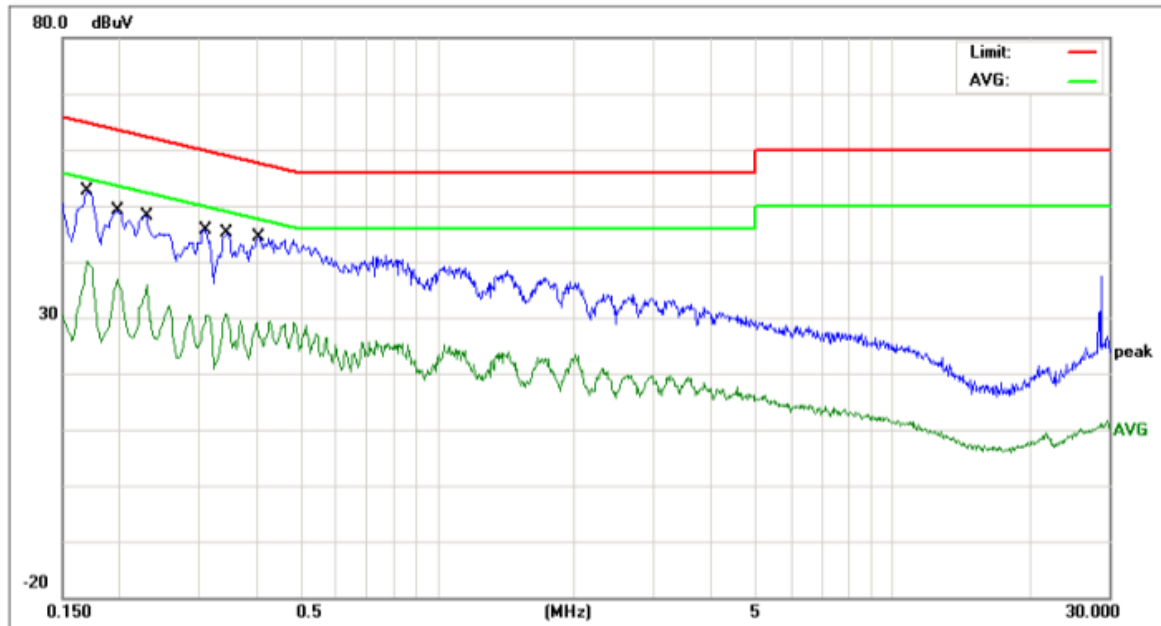
M/N : F05L5-050080SPAV (with LF1+CY1)
 Operating Condition : Full Load
 Test Specification : Power Line, Live
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 26 Relative Humidity (%): 60 Atmospheric Pressure(mbar) : 1008



| No. | Frequency (MHz) | Reading Level(dBuV) | Factor (dB) | Measurement(dBuV) | Limit (dBuV) | Over (dB) | Detector | Comment |
|-----|-----------------|---------------------|-------------|-------------------|--------------|-----------|----------|---------|
| 1 | 0.1700 | 38.57 | 10.01 | 48.58 | 64.96 | -16.38 | QP | |
| 2 * | 0.1700 | 28.89 | 10.01 | 38.90 | 54.96 | -16.06 | AVG | |
| 3 | 0.1940 | 35.69 | 10.01 | 45.70 | 63.86 | -18.16 | QP | |
| 4 | 0.1940 | 25.03 | 10.01 | 35.04 | 53.86 | -18.82 | AVG | |
| 5 | 0.2500 | 31.85 | 10.01 | 41.86 | 61.75 | -19.89 | QP | |
| 6 | 0.2500 | 19.82 | 10.01 | 29.83 | 51.75 | -21.92 | AVG | |
| 7 | 0.3100 | 31.19 | 10.01 | 41.20 | 59.97 | -18.77 | QP | |
| 8 | 0.3100 | 20.62 | 10.01 | 30.63 | 49.97 | -19.34 | AVG | |
| 9 | 0.3660 | 29.31 | 10.01 | 39.32 | 58.59 | -19.27 | QP | |
| 10 | 0.3660 | 17.85 | 10.01 | 27.86 | 48.59 | -20.73 | AVG | |
| 11 | 0.4140 | 26.92 | 10.02 | 36.94 | 57.57 | -20.63 | QP | |
| 12 | 0.4140 | 16.48 | 10.02 | 26.50 | 47.57 | -21.07 | AVG | |

Conducted Emission Test 150kHz – 30MHz

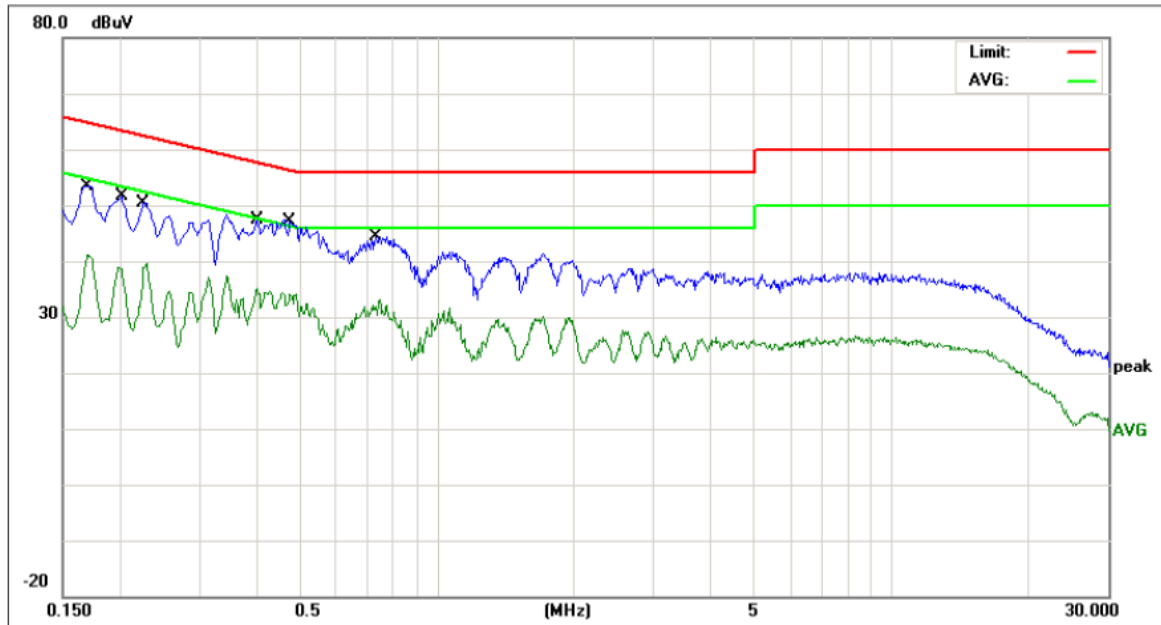
M/N : F05L5-050080SPAV (with LF1+CY1)
 Operating Condition : Full Load
 Test Specification : Power Line, Neutral
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 26 Relative Humidity (%): 60 Atmospheric Pressure(mbar) : 1008



| No. | Frequency (MHz) | Reading Level(dBuV) | Factor (dB) | Measurement(dBuV) | Limit (dBuV) | Over (dB) | Detector | Comment |
|-----|-----------------|---------------------|-------------|-------------------|--------------|-----------|----------|---------|
| 1 * | 0.1700 | 40.89 | 10.01 | 50.90 | 64.96 | -14.06 | QP | |
| 2 | 0.1700 | 29.88 | 10.01 | 39.89 | 54.96 | -15.07 | AVG | |
| 3 | 0.1986 | 37.78 | 10.01 | 47.79 | 63.66 | -15.87 | QP | |
| 4 | 0.1986 | 26.69 | 10.01 | 36.70 | 53.66 | -16.96 | AVG | |
| 5 | 0.2300 | 36.76 | 10.01 | 46.77 | 62.45 | -15.68 | QP | |
| 6 | 0.2300 | 25.64 | 10.01 | 35.65 | 52.45 | -16.80 | AVG | |
| 7 | 0.3100 | 30.52 | 10.01 | 40.53 | 59.97 | -19.44 | QP | |
| 8 | 0.3100 | 17.67 | 10.01 | 27.68 | 49.97 | -22.29 | AVG | |
| 9 | 0.3460 | 32.96 | 10.01 | 42.97 | 59.06 | -16.09 | QP | |
| 10 | 0.3460 | 21.16 | 10.01 | 31.17 | 49.06 | -17.89 | AVG | |
| 11 | 0.4060 | 29.97 | 10.02 | 39.99 | 57.73 | -17.74 | QP | |
| 12 | 0.4060 | 16.97 | 10.02 | 26.99 | 47.73 | -20.74 | AVG | |

Conducted Emission Test 150kHz – 30MHz

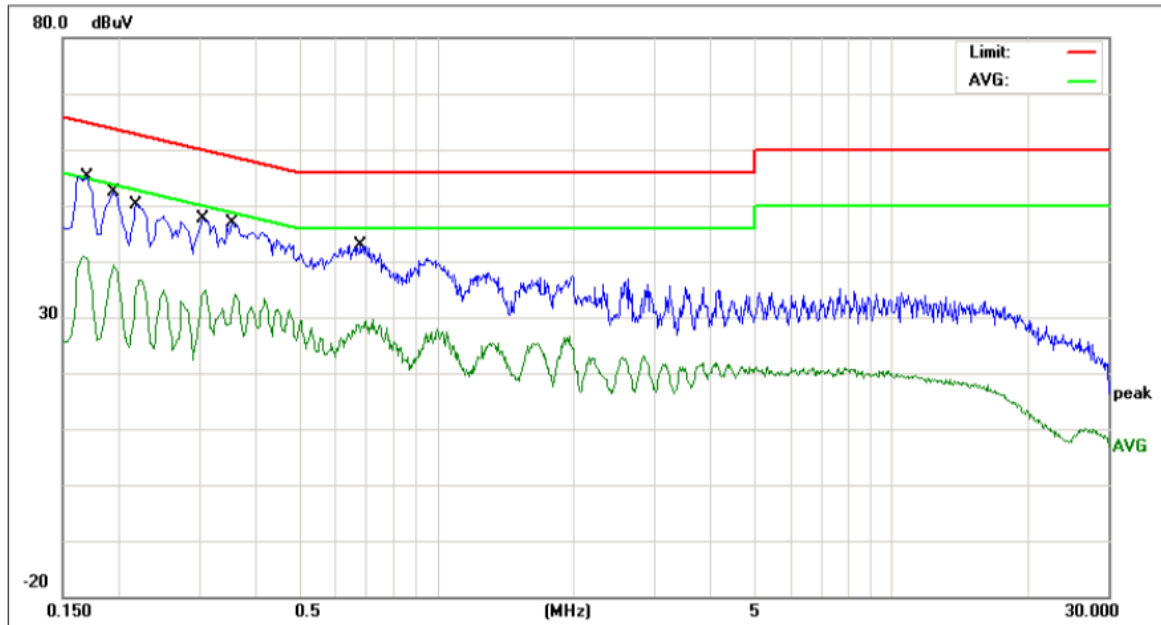
M/N : F05L5-050080SPAV (with LF1+without CY1)
 Operating Condition : Full Load
 Test Specification : Power Line, Live
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 26 Relative Humidity (%): 60 Atmospheric Pressure(mbar) : 1008



| No. | Frequency (MHz) | Reading Level(dBuV) | Factor (dB) | Measurement(dBuV) | Limit (dBuV) | Over (dB) | Detector | Comment |
|-----|-----------------|---------------------|-------------|-------------------|--------------|-----------|----------|---------|
| 1 | 0.1700 | 41.12 | 10.06 | 51.18 | 64.96 | -13.78 | QP | |
| 2 | 0.1700 | 31.03 | 10.06 | 41.09 | 54.96 | -13.87 | AVG | |
| 3 | 0.2020 | 39.65 | 10.05 | 49.70 | 63.52 | -13.82 | QP | |
| 4 | 0.2020 | 29.56 | 10.05 | 39.61 | 53.52 | -13.91 | AVG | |
| 5 | 0.2260 | 38.93 | 10.05 | 48.98 | 62.59 | -13.61 | QP | |
| 6 | 0.2260 | 26.12 | 10.05 | 36.17 | 52.59 | -16.42 | AVG | |
| 7 | 0.4020 | 35.65 | 10.05 | 45.70 | 57.81 | -12.11 | QP | |
| 8 * | 0.4020 | 25.68 | 10.05 | 35.73 | 47.81 | -12.08 | AVG | |
| 9 | 0.4740 | 34.28 | 10.06 | 44.34 | 56.44 | -12.10 | QP | |
| 10 | 0.4740 | 23.27 | 10.06 | 33.33 | 46.44 | -13.11 | AVG | |
| 11 | 0.7340 | 30.86 | 10.07 | 40.93 | 56.00 | -15.07 | QP | |
| 12 | 0.7340 | 21.38 | 10.07 | 31.45 | 46.00 | -14.55 | AVG | |

Conducted Emission Test 150kHz – 30MHz

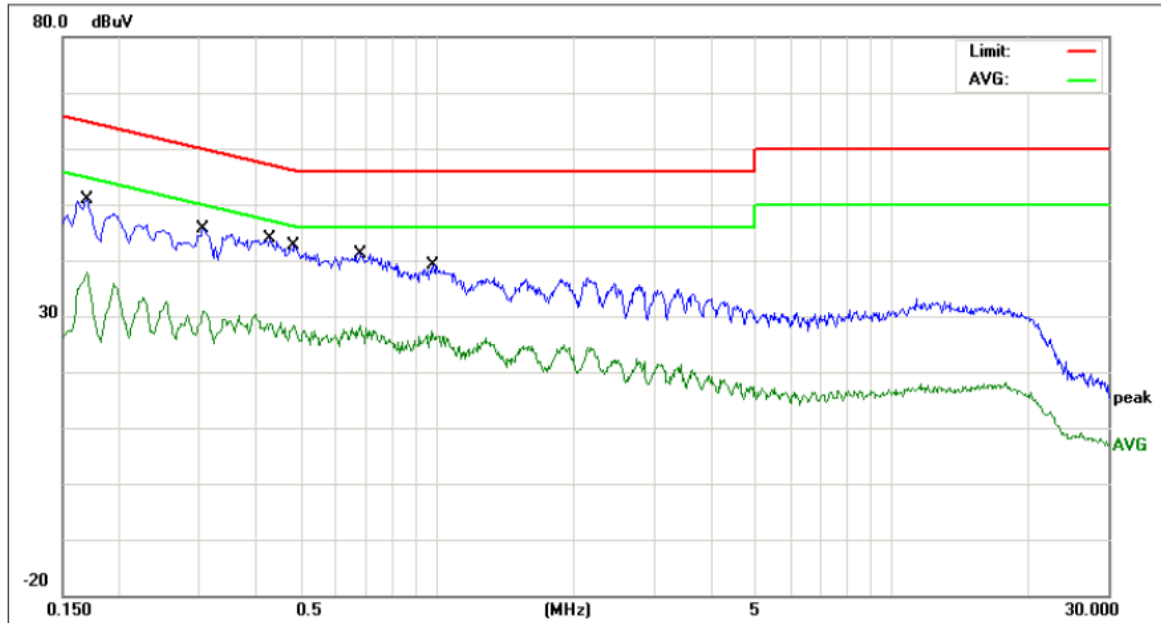
M/N : F05L5-050080SPAV (with LF1+without CY1)
 Operating Condition : Full Load
 Test Specification : Power Line, Neutral
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 26 Relative Humidity (%): 60 Atmospheric Pressure(mbar) : 1008



| No. | Frequency (MHz) | Reading Level(dBuV) | Factor (dB) | Measurement(dBuV) | Limit (dBuV) | Over (dB) | Detector | Comment |
|-----|-----------------|---------------------|-------------|-------------------|--------------|-----------|----------|---------|
| 1 * | 0.1700 | 42.65 | 10.06 | 52.71 | 64.96 | -12.25 | QP | |
| 2 | 0.1700 | 30.79 | 10.06 | 40.85 | 54.96 | -14.11 | AVG | |
| 3 | 0.1940 | 38.80 | 10.05 | 48.85 | 63.86 | -15.01 | QP | |
| 4 | 0.1940 | 26.70 | 10.05 | 36.75 | 53.86 | -17.11 | AVG | |
| 5 | 0.2180 | 34.15 | 10.05 | 44.20 | 62.89 | -18.69 | QP | |
| 6 | 0.2180 | 21.95 | 10.05 | 32.00 | 52.89 | -20.89 | AVG | |
| 7 | 0.3060 | 34.43 | 10.05 | 44.48 | 60.08 | -15.60 | QP | |
| 8 | 0.3060 | 23.28 | 10.05 | 33.33 | 50.08 | -16.75 | AVG | |
| 9 | 0.3540 | 30.37 | 10.05 | 40.42 | 58.87 | -18.45 | QP | |
| 10 | 0.3540 | 18.98 | 10.05 | 29.03 | 48.87 | -19.84 | AVG | |
| 11 | 0.6820 | 28.32 | 10.07 | 38.39 | 56.00 | -17.61 | QP | |
| 12 | 0.6820 | 17.31 | 10.07 | 27.38 | 46.00 | -18.62 | AVG | |

Conducted Emission Test 150kHz – 30MHz

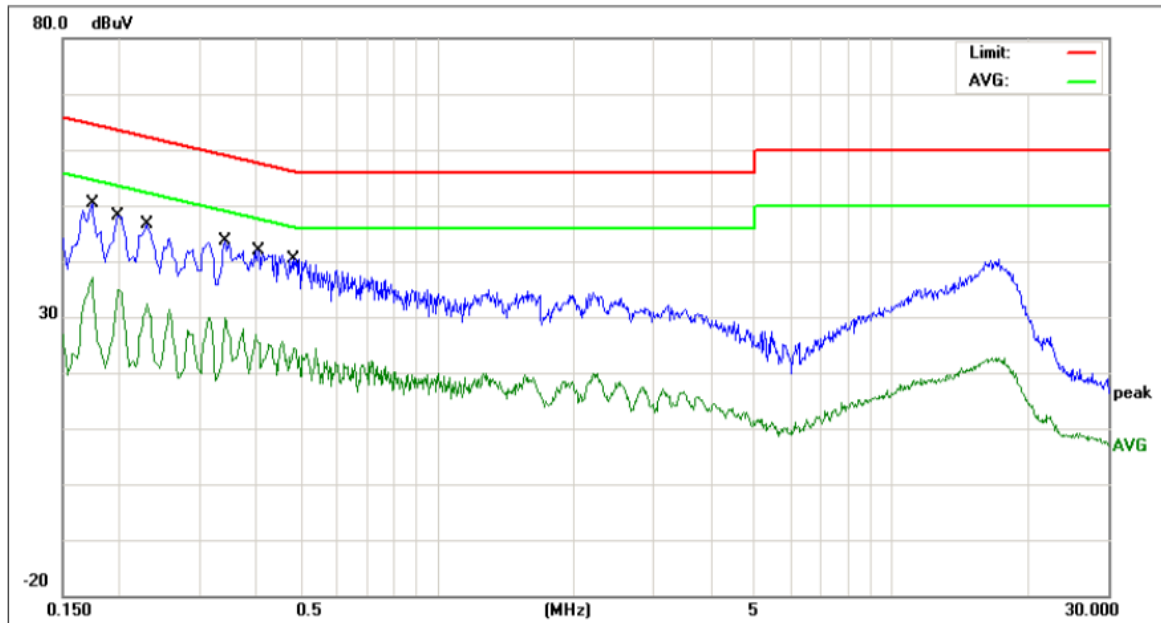
M/N : F05L5-050080SPAV (with L1+L2+CY1)
 Operating Condition : Full Load
 Test Specification : Power Line, Live
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 26 Relative Humidity (%): 60 Atmospheric Pressure(mbar) : 1008



| No. | Frequency (MHz) | Reading Level(dBuV) | Factor (dB) | Measurement(dBuV) | Limit (dBuV) | Over (dB) | Detector | Comment |
|-----|-----------------|---------------------|-------------|-------------------|--------------|-----------|----------|---------|
| 1 * | 0.1700 | 38.89 | 10.01 | 48.90 | 64.96 | -16.06 | QP | |
| 2 | 0.1700 | 27.24 | 10.01 | 37.25 | 54.96 | -17.71 | AVG | |
| 3 | 0.3060 | 31.67 | 10.01 | 41.68 | 60.08 | -18.40 | QP | |
| 4 | 0.3060 | 19.26 | 10.01 | 29.27 | 50.08 | -20.81 | AVG | |
| 5 | 0.4300 | 30.63 | 10.02 | 40.65 | 57.25 | -16.60 | QP | |
| 6 | 0.4300 | 19.16 | 10.02 | 29.18 | 47.25 | -18.07 | AVG | |
| 7 | 0.4860 | 29.69 | 10.02 | 39.71 | 56.24 | -16.53 | QP | |
| 8 | 0.4860 | 18.50 | 10.02 | 28.52 | 46.24 | -17.72 | AVG | |
| 9 | 0.6820 | 27.55 | 10.03 | 37.58 | 56.00 | -18.42 | QP | |
| 10 | 0.6820 | 17.14 | 10.03 | 27.17 | 46.00 | -18.83 | AVG | |
| 11 | 0.9820 | 25.45 | 10.03 | 35.48 | 56.00 | -20.52 | QP | |
| 12 | 0.9820 | 16.62 | 10.03 | 26.65 | 46.00 | -19.35 | AVG | |

Conducted Emission Test 150kHz – 30MHz

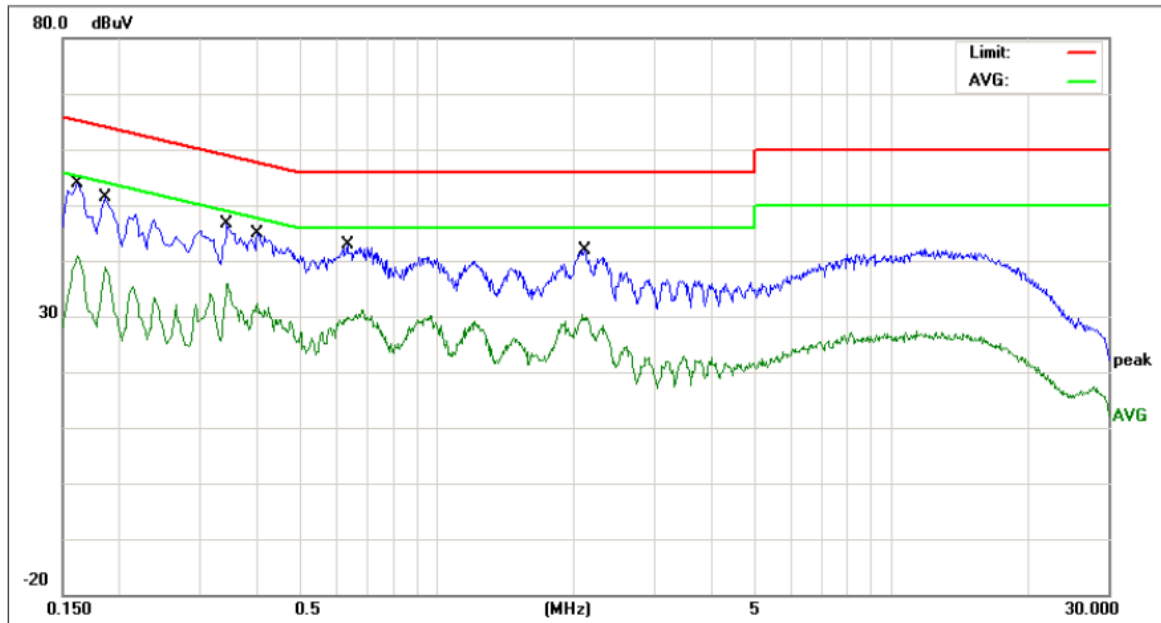
M/N : F05L5-050080SPAV (with L1+L2+CY1)
 Operating Condition : Full Load
 Test Specification : Power Line, Neutral
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 26 Relative Humidity (%): 60 Atmospheric Pressure(mbar) : 1008



| No. | Frequency (MHz) | Reading Level(dBuV) | Factor (dB) | Measurement(dBuV) | Limit (dBuV) | Over (dB) | Detector | Comment |
|-----|-----------------|---------------------|-------------|-------------------|--------------|-----------|----------|---------|
| 1 * | 0.1740 | 38.72 | 10.01 | 48.73 | 64.76 | -16.03 | QP | |
| 2 | 0.1740 | 25.78 | 10.01 | 35.79 | 54.76 | -18.97 | AVG | |
| 3 | 0.1980 | 34.26 | 10.01 | 44.27 | 63.69 | -19.42 | QP | |
| 4 | 0.1980 | 21.32 | 10.01 | 31.33 | 53.69 | -22.36 | AVG | |
| 5 | 0.2300 | 35.16 | 10.01 | 45.17 | 62.45 | -17.28 | QP | |
| 6 | 0.2300 | 22.63 | 10.01 | 32.64 | 52.45 | -19.81 | AVG | |
| 7 | 0.3420 | 29.75 | 10.01 | 39.76 | 59.15 | -19.39 | QP | |
| 8 | 0.3420 | 17.24 | 10.01 | 27.25 | 49.15 | -21.90 | AVG | |
| 9 | 0.4060 | 29.14 | 10.02 | 39.16 | 57.73 | -18.57 | QP | |
| 10 | 0.4060 | 16.24 | 10.02 | 26.26 | 47.73 | -21.47 | AVG | |
| 11 | 0.4820 | 25.39 | 10.02 | 35.41 | 56.30 | -20.89 | QP | |
| 12 | 0.4820 | 11.40 | 10.02 | 21.42 | 46.30 | -24.88 | AVG | |

Conducted Emission Test 150kHz – 30MHz

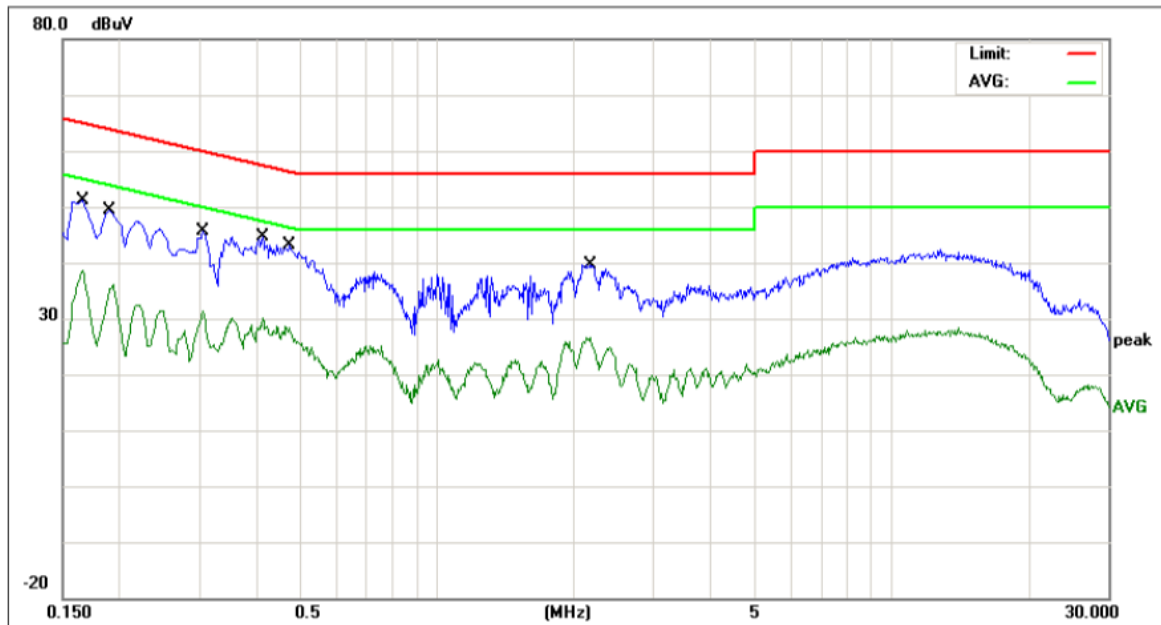
M/N : F05L5-050080SPAV (with L1+L2+without CY1)
 Operating Condition : Full Load
 Test Specification : Power Line, Live
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 26 Relative Humidity (%): 60 Atmospheric Pressure(mbar) : 1008



| No. | Frequency (MHz) | Reading Level(dBuV) | Factor (dB) | Measurement(dBuV) | Limit (dBuV) | Over (dB) | Detector | Comment |
|-----|-----------------|---------------------|-------------|-------------------|--------------|-----------|----------|---------|
| 1 * | 0.1620 | 39.78 | 10.01 | 49.79 | 65.36 | -15.57 | QP | |
| 2 | 0.1620 | 28.47 | 10.01 | 38.48 | 55.36 | -16.88 | AVG | |
| 3 | 0.1864 | 34.86 | 10.01 | 44.87 | 64.19 | -19.32 | QP | |
| 4 | 0.1864 | 22.87 | 10.01 | 32.88 | 54.19 | -21.31 | AVG | |
| 5 | 0.3460 | 30.87 | 10.01 | 40.88 | 59.06 | -18.18 | QP | |
| 6 | 0.3460 | 21.55 | 10.01 | 31.56 | 49.06 | -17.50 | AVG | |
| 7 | 0.4020 | 29.56 | 10.01 | 39.57 | 57.81 | -18.24 | QP | |
| 8 | 0.4020 | 20.05 | 10.01 | 30.06 | 47.81 | -17.75 | AVG | |
| 9 | 0.6340 | 28.20 | 10.02 | 38.22 | 56.00 | -17.78 | QP | |
| 10 | 0.6340 | 19.50 | 10.02 | 29.52 | 46.00 | -16.48 | AVG | |
| 11 | 2.1140 | 28.06 | 10.05 | 38.11 | 56.00 | -17.89 | QP | |
| 12 | 2.1140 | 19.50 | 10.05 | 29.55 | 46.00 | -16.45 | AVG | |

Conducted Emission Test 150kHz – 30MHz

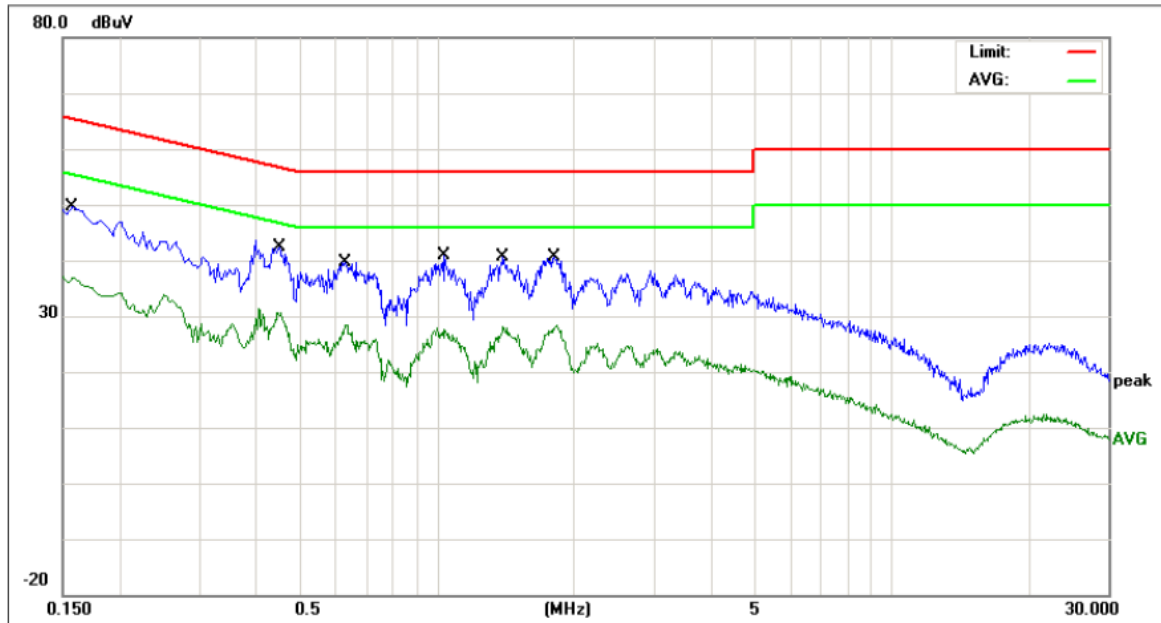
M/N : F05L5-050080SPAV (with L1+L2+without CY1)
 Operating Condition : Full Load
 Test Specification : Power Line, Neutral
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 26 Relative Humidity (%): 60 Atmospheric Pressure(mbar) : 1008



| No. | Frequency (MHz) | Reading Level(dBuV) | Factor (dB) | Measurement(dBuV) | Limit (dBuV) | Over (dB) | Detector | Comment |
|-----|-----------------|---------------------|-------------|-------------------|--------------|-----------|----------|---------|
| 1 * | 0.1660 | 39.59 | 10.01 | 49.60 | 65.15 | -15.55 | QP | |
| 2 | 0.1660 | 28.33 | 10.01 | 38.34 | 55.15 | -16.81 | AVG | |
| 3 | 0.1900 | 35.34 | 10.01 | 45.35 | 64.03 | -18.68 | QP | |
| 4 | 0.1900 | 22.50 | 10.01 | 32.51 | 54.03 | -21.52 | AVG | |
| 5 | 0.3060 | 33.44 | 10.01 | 43.45 | 60.08 | -16.63 | QP | |
| 6 | 0.3060 | 21.60 | 10.01 | 31.61 | 50.08 | -18.47 | AVG | |
| 7 | 0.4140 | 31.16 | 10.02 | 41.18 | 57.57 | -16.39 | QP | |
| 8 | 0.4140 | 19.85 | 10.02 | 29.87 | 47.57 | -17.70 | AVG | |
| 9 | 0.4740 | 30.66 | 10.02 | 40.68 | 56.44 | -15.76 | QP | |
| 10 | 0.4740 | 18.71 | 10.02 | 28.73 | 46.44 | -17.71 | AVG | |
| 11 | 2.1780 | 25.79 | 10.05 | 35.84 | 56.00 | -20.16 | QP | |
| 12 | 2.1780 | 15.88 | 10.05 | 25.93 | 46.00 | -20.07 | AVG | |

Conducted Emission Test 150kHz – 30MHz

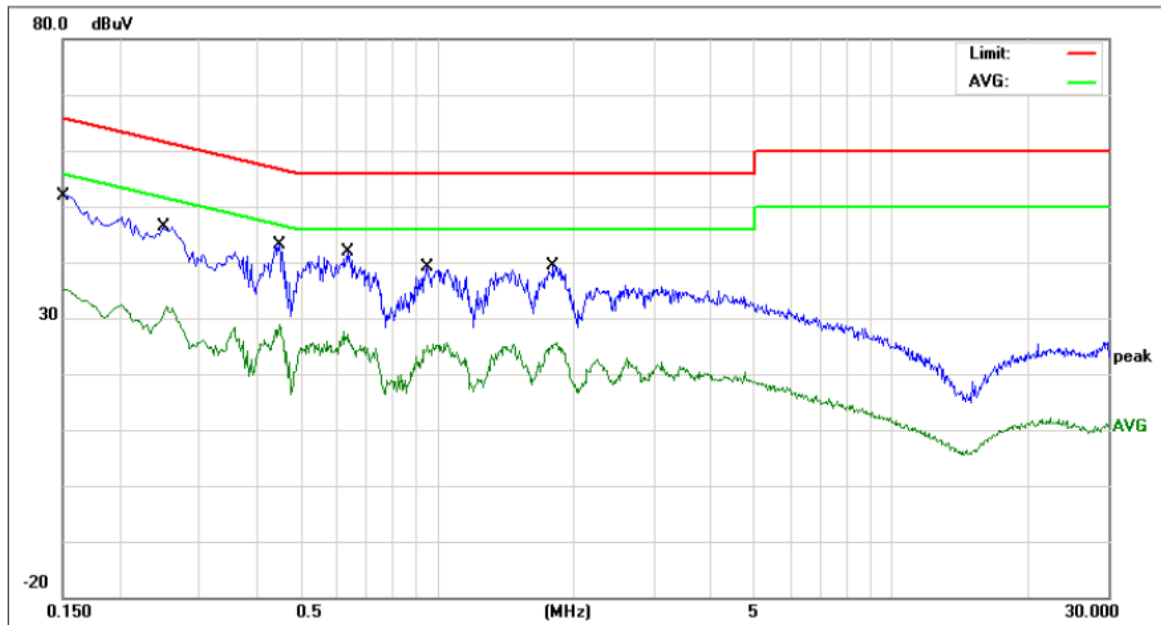
M/N : F05L5-050100SPAV (with LF1+CY1)
 Operating Condition : Full Load
 Test Specification : Power Line, Live
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 26 Relative Humidity (%): 60 Atmospheric Pressure(mbar) : 1008



| No. | Frequency (MHz) | Reading Level(dBuV) | Factor (dB) | Measurement(dBuV) | Limit (dBuV) | Over (dB) | Detector | Comment |
|-----|-----------------|---------------------|-------------|-------------------|--------------|-----------|----------|---------|
| 1 | 0.1580 | 34.18 | 10.01 | 44.19 | 65.56 | -21.37 | QP | |
| 2 | 0.1580 | 25.93 | 10.01 | 35.94 | 55.56 | -19.62 | AVG | |
| 3 | 0.4500 | 27.70 | 10.02 | 37.72 | 56.87 | -19.15 | QP | |
| 4 * | 0.4500 | 19.99 | 10.02 | 30.01 | 46.87 | -16.86 | AVG | |
| 5 | 0.6300 | 24.94 | 10.02 | 34.96 | 56.00 | -21.04 | QP | |
| 6 | 0.6300 | 16.71 | 10.02 | 26.73 | 46.00 | -19.27 | AVG | |
| 7 | 1.0380 | 25.01 | 10.03 | 35.04 | 56.00 | -20.96 | QP | |
| 8 | 1.0380 | 16.74 | 10.03 | 26.77 | 46.00 | -19.23 | AVG | |
| 9 | 1.4020 | 24.80 | 10.04 | 34.84 | 56.00 | -21.16 | QP | |
| 10 | 1.4020 | 16.41 | 10.04 | 26.45 | 46.00 | -19.55 | AVG | |
| 11 | 1.8180 | 25.60 | 10.04 | 35.64 | 56.00 | -20.36 | QP | |
| 12 | 1.8180 | 17.15 | 10.04 | 27.19 | 46.00 | -18.81 | AVG | |

Conducted Emission Test 150kHz – 30MHz

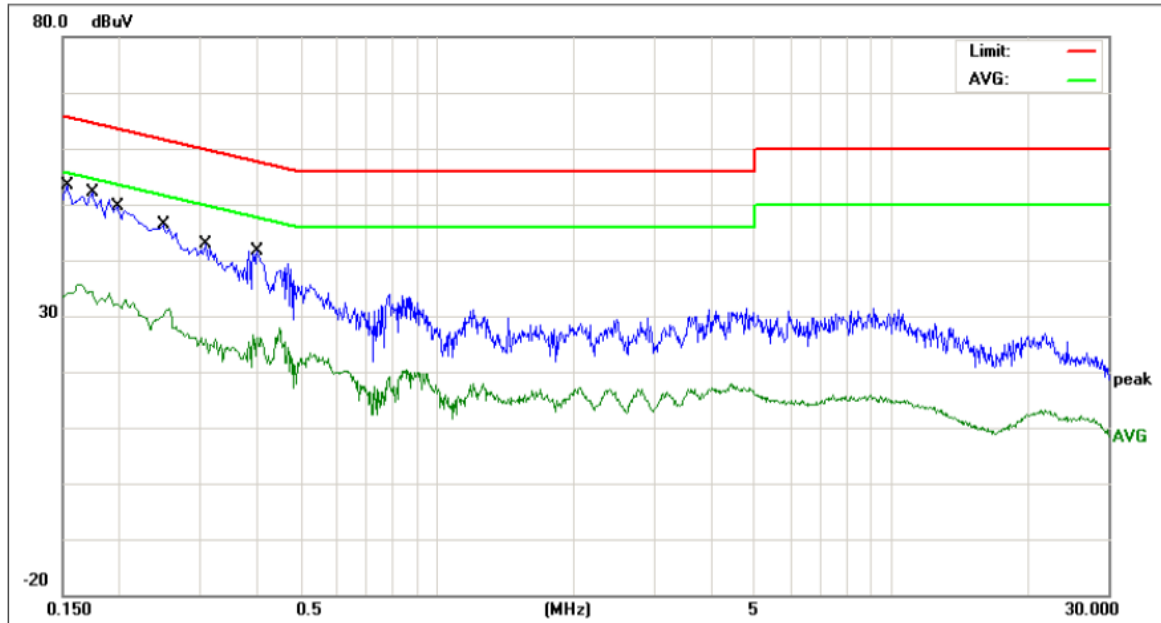
M/N : F05L5-050100SPAV (with LF1+CY1)
 Operating Condition : Full Load
 Test Specification : Power Line, Neutral
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 26 Relative Humidity (%): 60 Atmospheric Pressure(mbar) : 1008



| No. | Frequency (MHz) | Reading Level(dBuV) | Factor (dB) | Measurement(dBuV) | Limit (dBuV) | Over (dB) | Detector | Comment |
|-----|-----------------|---------------------|-------------|-------------------|--------------|-----------|----------|---------|
| 1 * | 0.1500 | 38.08 | 10.01 | 48.09 | 65.99 | -17.90 | QP | |
| 2 | 0.1500 | 25.22 | 10.01 | 35.23 | 55.99 | -20.76 | AVG | |
| 3 | 0.2500 | 31.88 | 10.01 | 41.89 | 61.75 | -19.86 | QP | |
| 4 | 0.2500 | 20.68 | 10.01 | 30.69 | 51.75 | -21.06 | AVG | |
| 5 | 0.4500 | 28.14 | 10.02 | 38.16 | 56.87 | -18.71 | QP | |
| 6 | 0.4500 | 17.66 | 10.02 | 27.68 | 46.87 | -19.19 | AVG | |
| 7 | 0.6340 | 26.33 | 10.02 | 36.35 | 56.00 | -19.65 | QP | |
| 8 | 0.6340 | 16.16 | 10.02 | 26.18 | 46.00 | -19.82 | AVG | |
| 9 | 0.9500 | 23.24 | 10.03 | 33.27 | 56.00 | -22.73 | QP | |
| 10 | 0.9500 | 13.74 | 10.03 | 23.77 | 46.00 | -22.23 | AVG | |
| 11 | 1.8020 | 23.64 | 10.04 | 33.68 | 56.00 | -22.32 | QP | |
| 12 | 1.8020 | 14.54 | 10.04 | 24.58 | 46.00 | -21.42 | AVG | |

Conducted Emission Test 150kHz – 30MHz

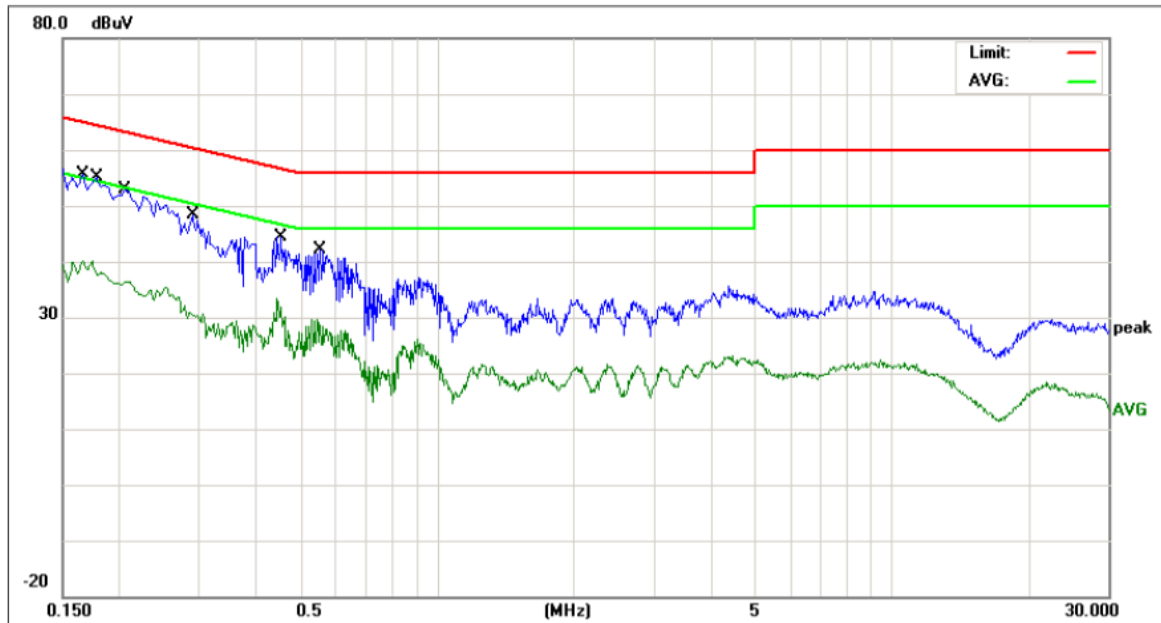
M/N : F05L5-050100SPAV (with LF1+without CY1)
 Operating Condition : Full Load
 Test Specification : Power Line, Live
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 26 Relative Humidity (%): 60 Atmospheric Pressure(mbar) : 1008



| No. | Frequency (MHz) | Reading Level(dBuV) | Factor (dB) | Measurement(dBuV) | Limit (dBuV) | Over (dB) | Detector | Comment |
|-----|-----------------|---------------------|-------------|-------------------|--------------|-----------|----------|---------|
| 1 | 0.1539 | 36.25 | 10.01 | 46.26 | 65.78 | -19.52 | QP | |
| 2 | 0.1539 | 22.63 | 10.01 | 32.64 | 55.78 | -23.14 | AVG | |
| 3 * | 0.1740 | 35.34 | 10.01 | 45.35 | 64.76 | -19.41 | QP | |
| 4 | 0.1740 | 22.87 | 10.01 | 32.88 | 54.76 | -21.88 | AVG | |
| 5 | 0.1980 | 33.15 | 10.01 | 43.16 | 63.69 | -20.53 | QP | |
| 6 | 0.1980 | 20.62 | 10.01 | 30.63 | 53.69 | -23.06 | AVG | |
| 7 | 0.2500 | 30.63 | 10.01 | 40.64 | 61.75 | -21.11 | QP | |
| 8 | 0.2500 | 19.53 | 10.01 | 29.54 | 51.75 | -22.21 | AVG | |
| 9 | 0.3100 | 26.72 | 10.01 | 36.73 | 59.97 | -23.24 | QP | |
| 10 | 0.3100 | 13.44 | 10.01 | 23.45 | 49.97 | -26.52 | AVG | |
| 11 | 0.4020 | 26.59 | 10.02 | 36.61 | 57.81 | -21.20 | QP | |
| 12 | 0.4020 | 14.45 | 10.02 | 24.47 | 47.81 | -23.34 | AVG | |

Conducted Emission Test 150kHz – 30MHz

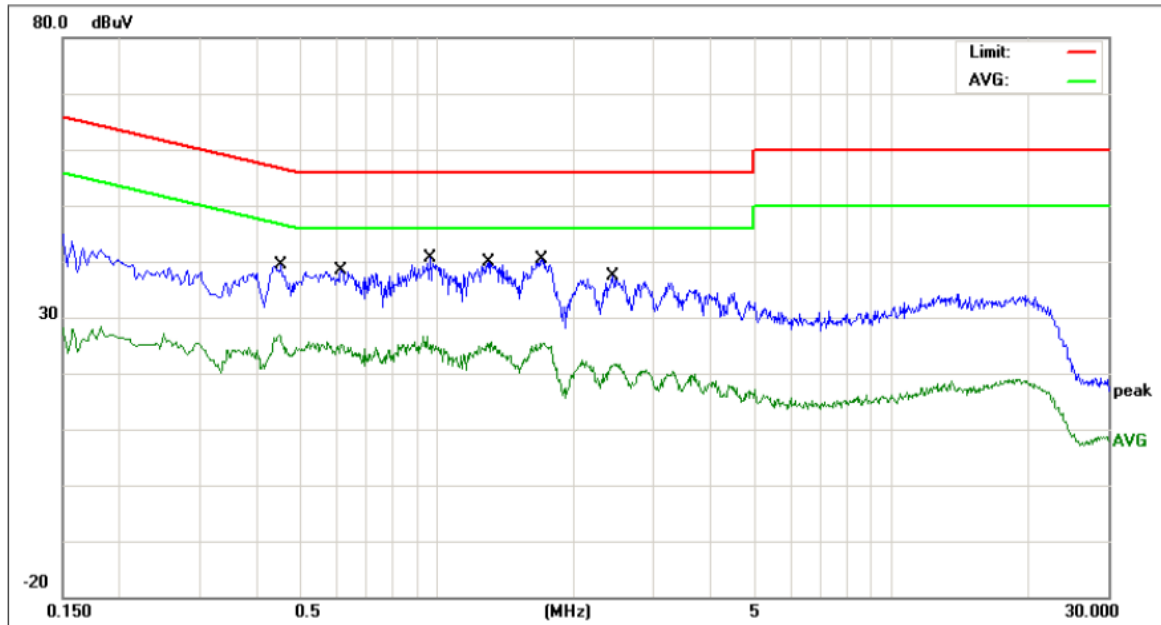
M/N : F05L5-050100SPAV (with LF1+without CY1)
 Operating Condition : Full Load
 Test Specification : Power Line, Neutral
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 26 Relative Humidity (%): 60 Atmospheric Pressure(mbar) : 1008



| No. | Frequency (MHz) | Reading Level(dBuV) | Factor (dB) | Measurement(dBuV) | Limit (dBuV) | Over (dB) | Detector | Comment |
|-----|-----------------|---------------------|-------------|-------------------|--------------|-----------|----------|---------|
| 1 * | 0.1660 | 40.31 | 10.01 | 50.32 | 65.15 | -14.83 | QP | |
| 2 | 0.1660 | 27.82 | 10.01 | 37.83 | 55.15 | -17.32 | AVG | |
| 3 | 0.1780 | 39.61 | 10.01 | 49.62 | 64.57 | -14.95 | QP | |
| 4 | 0.1780 | 26.99 | 10.01 | 37.00 | 54.57 | -17.57 | AVG | |
| 5 | 0.2060 | 37.52 | 10.01 | 47.53 | 63.36 | -15.83 | QP | |
| 6 | 0.2060 | 25.32 | 10.01 | 35.33 | 53.36 | -18.03 | AVG | |
| 7 | 0.2909 | 30.79 | 10.01 | 40.80 | 60.50 | -19.70 | QP | |
| 8 | 0.2909 | 18.59 | 10.01 | 28.60 | 50.50 | -21.90 | AVG | |
| 9 | 0.4540 | 29.38 | 10.02 | 39.40 | 56.80 | -17.40 | QP | |
| 10 | 0.4540 | 20.47 | 10.02 | 30.49 | 46.80 | -16.31 | AVG | |
| 11 | 0.5540 | 26.33 | 10.02 | 36.35 | 56.00 | -19.65 | QP | |
| 12 | 0.5540 | 17.06 | 10.02 | 27.08 | 46.00 | -18.92 | AVG | |

Conducted Emission Test 150kHz – 30MHz

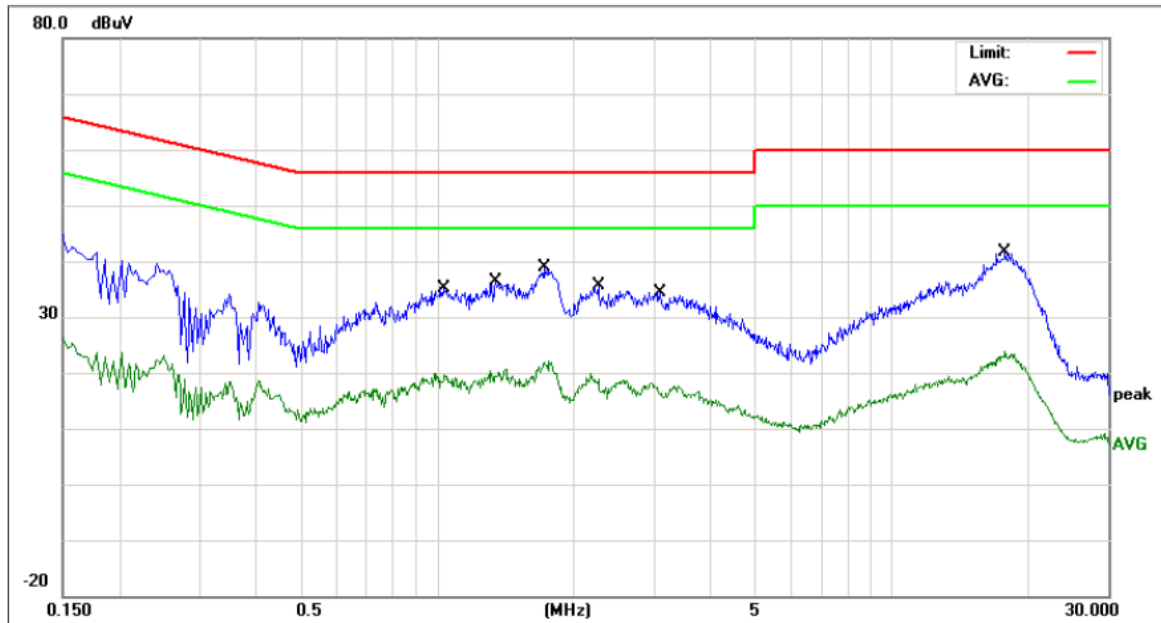
M/N : F05L5-050100SPAV (with L1+L2+CY1)
 Operating Condition : Full Load
 Test Specification : Power Line, Live
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 26 Relative Humidity (%): 60 Atmospheric Pressure(mbar) : 1008



| No. | Frequency (MHz) | Reading Level(dBuV) | Factor (dB) | Measurement(dBuV) | Limit (dBuV) | Over (dB) | Detector | Comment |
|-----|-----------------|---------------------|-------------|-------------------|--------------|-----------|----------|---------|
| 1 | 0.4540 | 24.40 | 10.02 | 34.42 | 56.80 | -22.38 | QP | |
| 2 | 0.4540 | 15.02 | 10.02 | 25.04 | 46.80 | -21.76 | AVG | |
| 3 | 0.6140 | 23.68 | 10.02 | 33.70 | 56.00 | -22.30 | QP | |
| 4 | 0.6140 | 14.25 | 10.02 | 24.27 | 46.00 | -21.73 | AVG | |
| 5 | 0.9660 | 24.47 | 10.03 | 34.50 | 56.00 | -21.50 | QP | |
| 6 | 0.9660 | 14.08 | 10.03 | 24.11 | 46.00 | -21.89 | AVG | |
| 7 | 1.2980 | 24.30 | 10.03 | 34.33 | 56.00 | -21.67 | QP | |
| 8 | 1.2980 | 14.11 | 10.03 | 24.14 | 46.00 | -21.86 | AVG | |
| 9 * | 1.7060 | 25.19 | 10.04 | 35.23 | 56.00 | -20.77 | QP | |
| 10 | 1.7060 | 14.56 | 10.04 | 24.60 | 46.00 | -21.40 | AVG | |
| 11 | 2.4420 | 21.97 | 10.05 | 32.02 | 56.00 | -23.98 | QP | |
| 12 | 2.4420 | 10.36 | 10.05 | 20.41 | 46.00 | -25.59 | AVG | |

Conducted Emission Test 150kHz – 30MHz

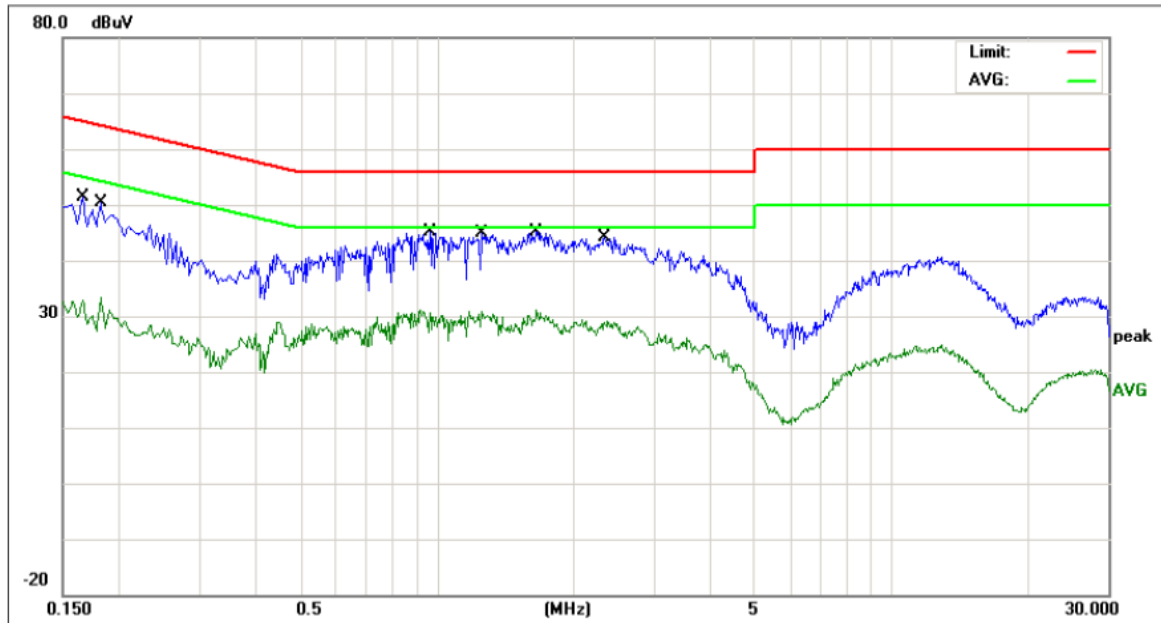
M/N : F05L5-050100SPAV (with L1+L2+CY1)
 Operating Condition : Full Load
 Test Specification : Power Line, Neutral
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 26 Relative Humidity (%): 60 Atmospheric Pressure(mbar) : 1008



| No. | Frequency (MHz) | Reading Level(dBuV) | Factor (dB) | Measurement(dBuV) | Limit (dBuV) | Over (dB) | Detector | Comment |
|-----|-----------------|---------------------|-------------|-------------------|--------------|-----------|----------|---------|
| 1 | 1.0339 | 19.84 | 10.03 | 29.87 | 56.00 | -26.13 | QP | |
| 2 | 1.0339 | 8.18 | 10.03 | 18.21 | 46.00 | -27.79 | AVG | |
| 3 | 1.3460 | 20.20 | 10.03 | 30.23 | 56.00 | -25.77 | QP | |
| 4 | 1.3460 | 8.68 | 10.03 | 18.71 | 46.00 | -27.29 | AVG | |
| 5 * | 1.7220 | 22.97 | 10.04 | 33.01 | 56.00 | -22.99 | QP | |
| 6 | 1.7220 | 10.66 | 10.04 | 20.70 | 46.00 | -25.30 | AVG | |
| 7 | 2.2620 | 19.40 | 10.05 | 29.45 | 56.00 | -26.55 | QP | |
| 8 | 2.2620 | 7.02 | 10.05 | 17.07 | 46.00 | -28.93 | AVG | |
| 9 | 3.1020 | 17.40 | 10.06 | 27.46 | 56.00 | -28.54 | QP | |
| 10 | 3.1020 | 5.34 | 10.06 | 15.40 | 46.00 | -30.60 | AVG | |
| 11 | 17.8380 | 24.86 | 10.16 | 35.02 | 60.00 | -24.98 | QP | |
| 12 | 17.8380 | 11.44 | 10.16 | 21.60 | 50.00 | -28.40 | AVG | |

Conducted Emission Test 150kHz – 30MHz

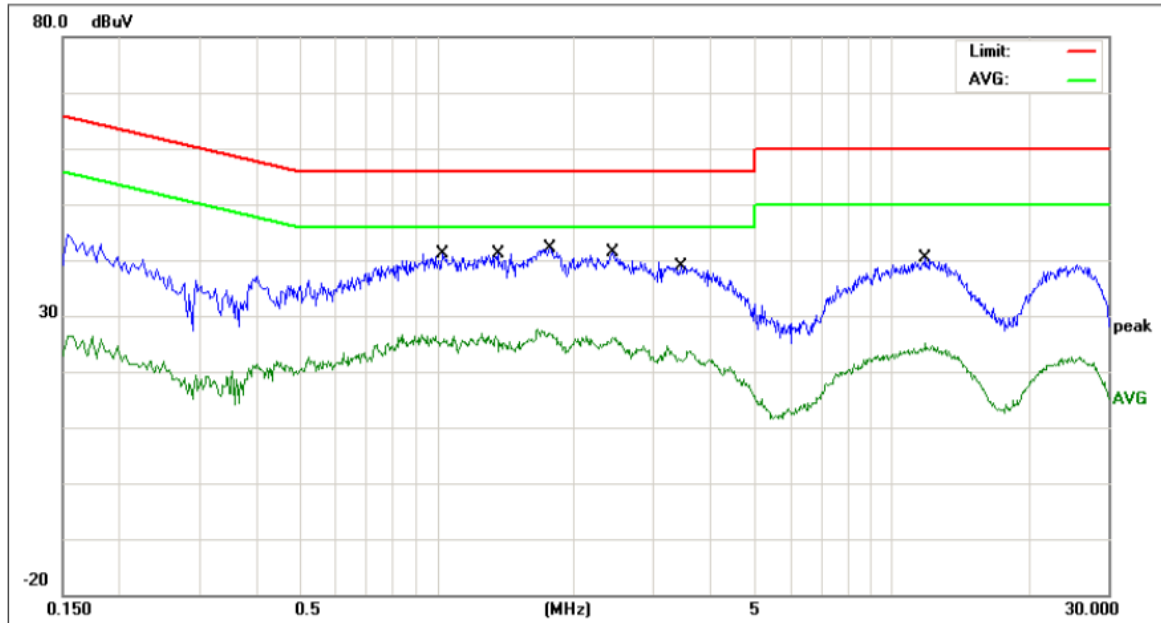
M/N : F05L5-050100SPAV (with L1+L2+without CY1)
 Operating Condition : Full Load
 Test Specification : Power Line, Live
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 26 Relative Humidity (%): 60 Atmospheric Pressure(mbar) : 1008



| No. | Frequency (MHz) | Reading Level(dBuV) | Factor (dB) | Measurement(dBuV) | Limit (dBuV) | Over (dB) | Detector | Comment |
|-----|-----------------|---------------------|-------------|-------------------|--------------|-----------|----------|---------|
| 1 | 0.1660 | 30.69 | 10.01 | 40.70 | 65.15 | -24.45 | QP | |
| 2 | 0.1660 | 15.87 | 10.01 | 25.88 | 55.15 | -29.27 | AVG | |
| 3 | 0.1819 | 31.08 | 10.01 | 41.09 | 64.39 | -23.30 | QP | |
| 4 | 0.1819 | 16.62 | 10.01 | 26.63 | 54.39 | -27.76 | AVG | |
| 5 | 0.9660 | 29.17 | 10.03 | 39.20 | 56.00 | -16.80 | QP | |
| 6 | 0.9660 | 18.87 | 10.03 | 28.90 | 46.00 | -17.10 | AVG | |
| 7 | 1.2579 | 29.16 | 10.03 | 39.19 | 56.00 | -16.81 | QP | |
| 8 | 1.2579 | 18.92 | 10.03 | 28.95 | 46.00 | -17.05 | AVG | |
| 9 * | 1.6620 | 30.00 | 10.04 | 40.04 | 56.00 | -15.96 | QP | |
| 10 | 1.6620 | 19.01 | 10.04 | 29.05 | 46.00 | -16.95 | AVG | |
| 11 | 2.3380 | 28.62 | 10.05 | 38.67 | 56.00 | -17.33 | QP | |
| 12 | 2.3380 | 16.90 | 10.05 | 26.95 | 46.00 | -19.05 | AVG | |

Conducted Emission Test 150kHz – 30MHz

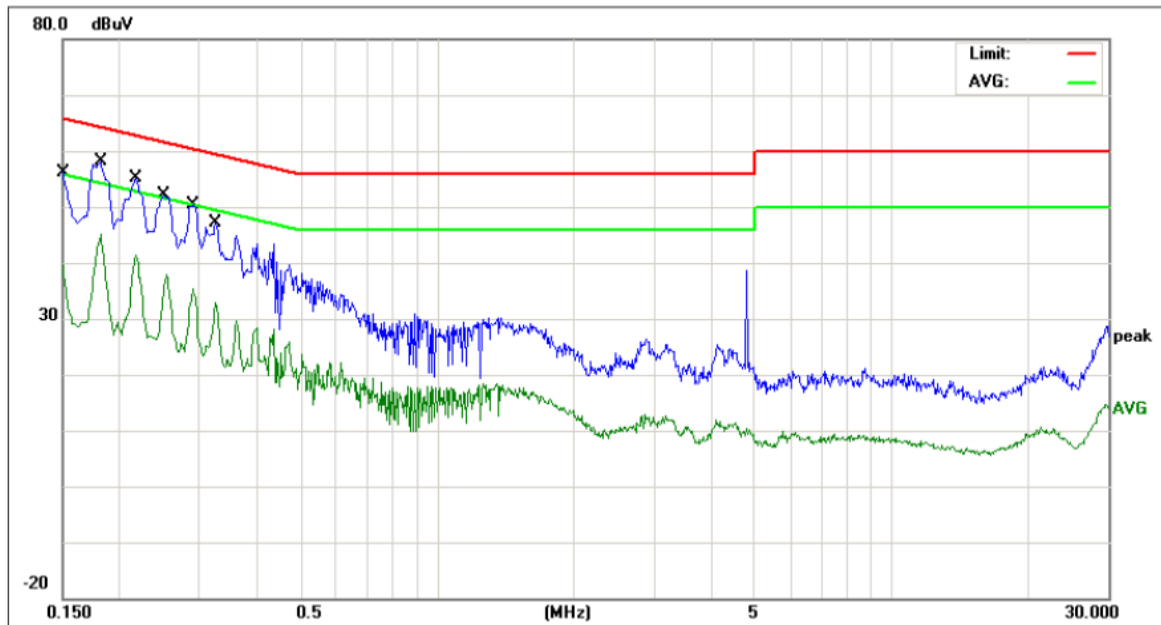
M/N : F05L5-050100SPAV (with L1+L2+without CY1)
 Operating Condition : Full Load
 Test Specification : Power Line, Neutral
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 26 Relative Humidity (%): 60 Atmospheric Pressure(mbar) : 1008



| No. | Frequency (MHz) | Reading Level(dBuV) | Factor (dB) | Measurement(dBuV) | Limit (dBuV) | Over (dB) | Detector | Comment |
|-----|-----------------|---------------------|-------------|-------------------|--------------|-----------|----------|---------|
| 1 | 1.0300 | 25.46 | 10.03 | 35.49 | 56.00 | -20.51 | QP | |
| 2 | 1.0300 | 14.83 | 10.03 | 24.86 | 46.00 | -21.14 | AVG | |
| 3 | 1.3619 | 25.91 | 10.04 | 35.95 | 56.00 | -20.05 | QP | |
| 4 | 1.3619 | 15.03 | 10.04 | 25.07 | 46.00 | -20.93 | AVG | |
| 5 * | 1.7780 | 27.62 | 10.04 | 37.66 | 56.00 | -18.34 | QP | |
| 6 | 1.7780 | 16.53 | 10.04 | 26.57 | 46.00 | -19.43 | AVG | |
| 7 | 2.4420 | 25.82 | 10.05 | 35.87 | 56.00 | -20.13 | QP | |
| 8 | 2.4420 | 15.05 | 10.05 | 25.10 | 46.00 | -20.90 | AVG | |
| 9 | 3.4460 | 22.16 | 10.06 | 32.22 | 56.00 | -23.78 | QP | |
| 10 | 3.4460 | 11.27 | 10.06 | 21.33 | 46.00 | -24.67 | AVG | |
| 11 | 11.9180 | 23.84 | 10.13 | 33.97 | 60.00 | -26.03 | QP | |
| 12 | 11.9180 | 12.78 | 10.13 | 22.91 | 50.00 | -27.09 | AVG | |

Conducted Emission Test 150kHz – 30MHz

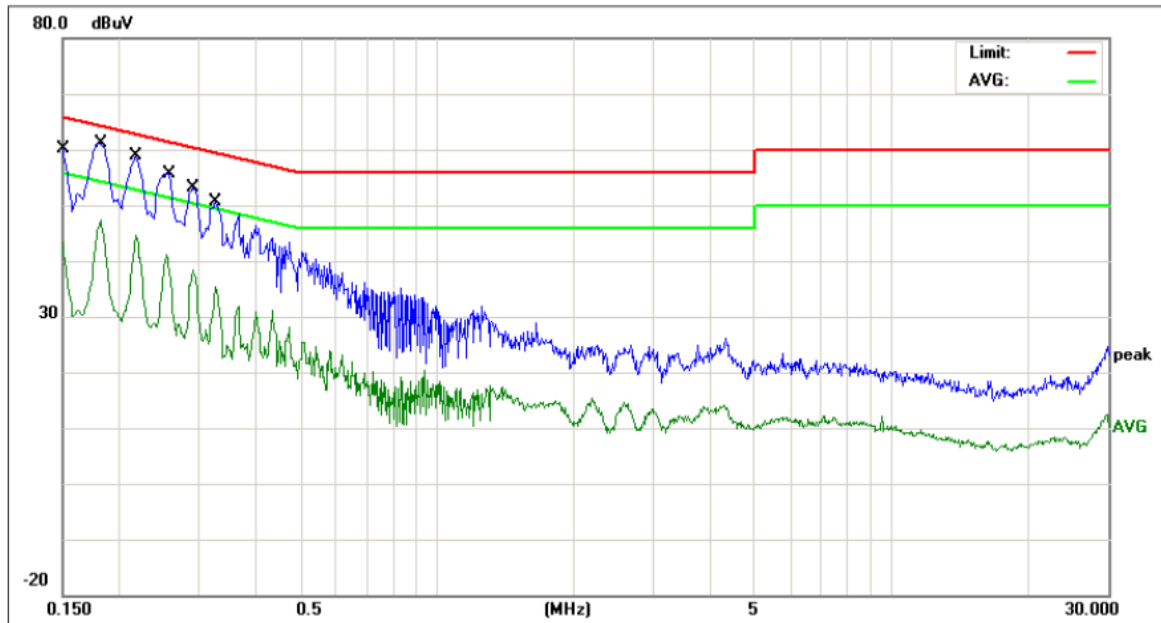
M/N : F05L5-130047SPAV (with L1+L2)
 Operating Condition : Full Load
 Test Specification : Power Line, Live
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 26 Relative Humidity (%): 60 Atmospheric Pressure(mbar) : 1008



| No. | Frequency (MHz) | Reading Level(dBuV) | Factor (dB) | Measurement(dBuV) | Limit (dBuV) | Over (dB) | Detector | Comment |
|-----|-----------------|---------------------|-------------|-------------------|--------------|-----------|----------|---------|
| 1 | 0.1500 | 42.40 | 10.07 | 52.47 | 65.99 | -13.52 | QP | |
| 2 | 0.1500 | 28.30 | 10.07 | 38.37 | 55.99 | -17.62 | AVG | |
| 3 * | 0.1819 | 44.78 | 10.06 | 54.84 | 64.39 | -9.55 | QP | |
| 4 | 0.1819 | 32.80 | 10.06 | 42.86 | 54.39 | -11.53 | AVG | |
| 5 | 0.2180 | 41.57 | 10.05 | 51.62 | 62.89 | -11.27 | QP | |
| 6 | 0.2180 | 29.44 | 10.05 | 39.49 | 52.89 | -13.40 | AVG | |
| 7 | 0.2500 | 37.53 | 10.05 | 47.58 | 61.75 | -14.17 | QP | |
| 8 | 0.2500 | 23.84 | 10.05 | 33.89 | 51.75 | -17.86 | AVG | |
| 9 | 0.2900 | 36.19 | 10.05 | 46.24 | 60.52 | -14.28 | QP | |
| 10 | 0.2900 | 23.66 | 10.05 | 33.71 | 50.52 | -16.81 | AVG | |
| 11 | 0.3260 | 32.80 | 10.05 | 42.85 | 59.55 | -16.70 | QP | |
| 12 | 0.3260 | 20.39 | 10.05 | 30.44 | 49.55 | -19.11 | AVG | |

Conducted Emission Test 150kHz – 30MHz

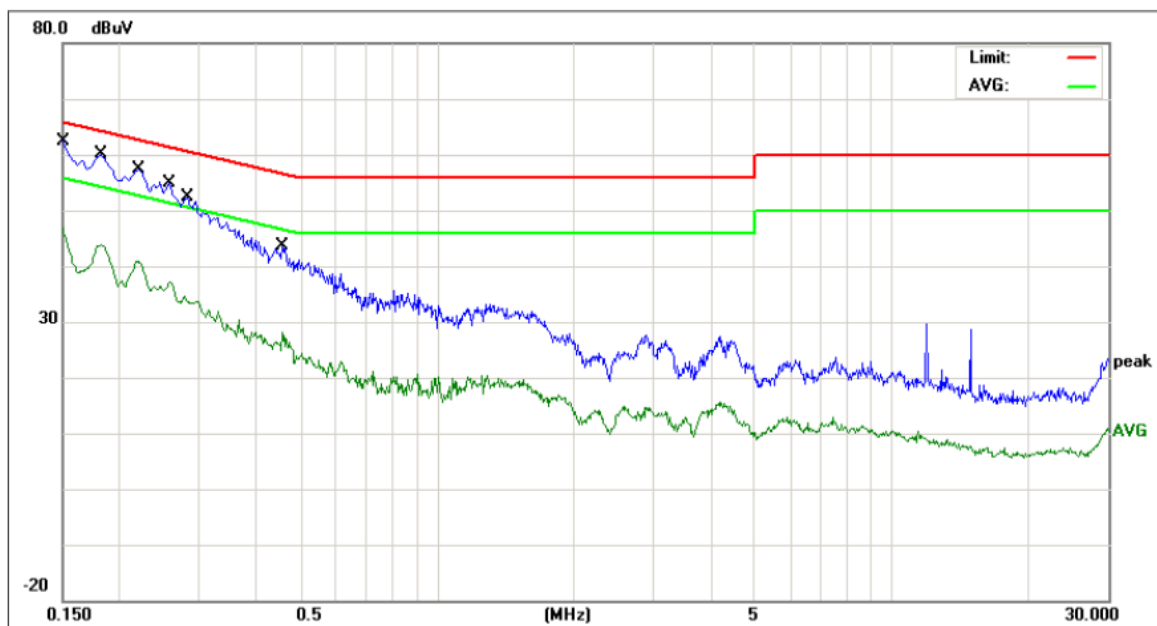
M/N : F05L5-130047SPAV (with L1+L2)
 Operating Condition : Full Load
 Test Specification : Power Line, Neutral
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 26 Relative Humidity (%): 60 Atmospheric Pressure(mbar) : 1008



| No. | Frequency (MHz) | Reading Level(dBuV) | Factor (dB) | Measurement(dBuV) | Limit (dBuV) | Over (dB) | Detector | Comment |
|-----|-----------------|---------------------|-------------|-------------------|--------------|-----------|----------|---------|
| 1 | 0.1500 | 45.61 | 10.07 | 55.68 | 65.99 | -10.31 | QP | |
| 2 | 0.1500 | 31.03 | 10.07 | 41.10 | 55.99 | -14.89 | AVG | |
| 3 * | 0.1819 | 47.91 | 10.06 | 57.97 | 64.39 | -6.42 | QP | |
| 4 | 0.1819 | 35.21 | 10.06 | 45.27 | 54.39 | -9.12 | AVG | |
| 5 | 0.2180 | 44.93 | 10.05 | 54.98 | 62.89 | -7.91 | QP | |
| 6 | 0.2180 | 32.13 | 10.05 | 42.18 | 52.89 | -10.71 | AVG | |
| 7 | 0.2580 | 39.86 | 10.05 | 49.91 | 61.49 | -11.58 | QP | |
| 8 | 0.2580 | 25.27 | 10.05 | 35.32 | 51.49 | -16.17 | AVG | |
| 9 | 0.2900 | 39.01 | 10.05 | 49.06 | 60.52 | -11.46 | QP | |
| 10 | 0.2900 | 26.33 | 10.05 | 36.38 | 50.52 | -14.14 | AVG | |
| 11 | 0.3260 | 36.05 | 10.05 | 46.10 | 59.55 | -13.45 | QP | |
| 12 | 0.3260 | 22.89 | 10.05 | 32.94 | 49.55 | -16.61 | AVG | |

Conducted Emission Test 150kHz – 30MHz

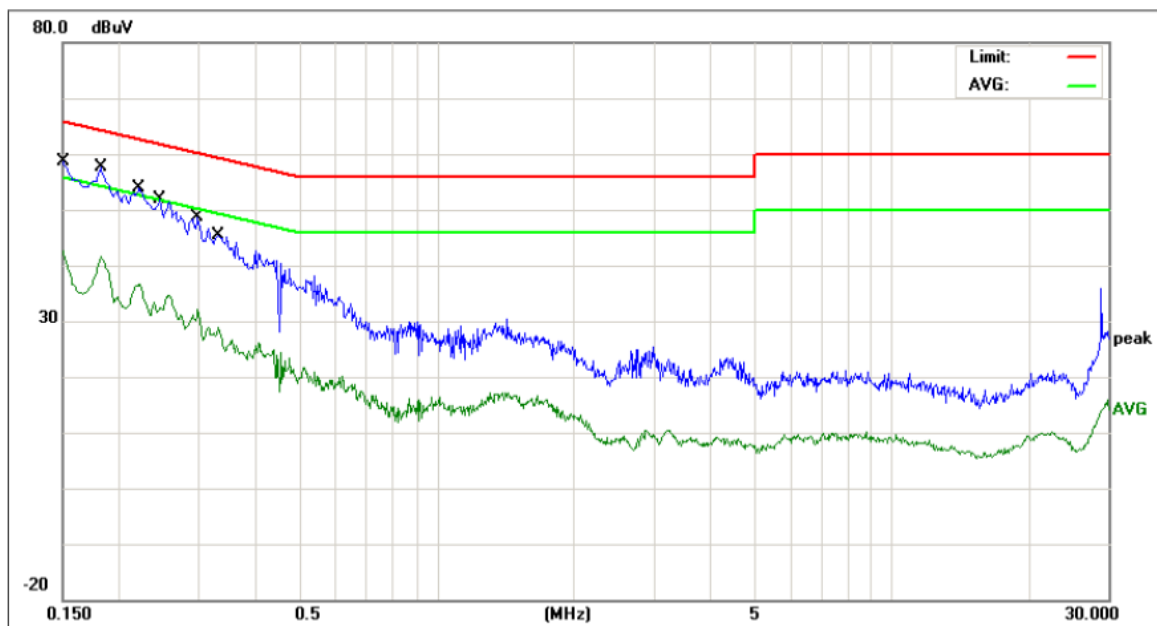
M/N : F05L5-130047SPAV (with LF1)
 Operating Condition : Full Load
 Test Specification : Power Line, Live
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 26 Relative Humidity (%): 60 Atmospheric Pressure(mbar) : 1008



| No. | Frequency (MHz) | Reading Level(dBuV) | Factor (dB) | Measurement(dBuV) | Limit (dBuV) | Over (dB) | Detector | Comment |
|-----|-----------------|---------------------|-------------|-------------------|--------------|-----------|----------|---------|
| 1 | 0.1500 | 47.24 | 10.01 | 57.25 | 65.99 | -8.74 | QP | |
| 2 | 0.1500 | 34.25 | 10.01 | 44.26 | 55.99 | -11.73 | AVG | |
| 3 * | 0.1819 | 45.69 | 10.01 | 55.70 | 64.39 | -8.69 | QP | |
| 4 | 0.1819 | 32.54 | 10.01 | 42.55 | 54.39 | -11.84 | AVG | |
| 5 | 0.2220 | 42.14 | 10.01 | 52.15 | 62.74 | -10.59 | QP | |
| 6 | 0.2220 | 28.10 | 10.01 | 38.11 | 52.74 | -14.63 | AVG | |
| 7 | 0.2580 | 39.14 | 10.01 | 49.15 | 61.49 | -12.34 | QP | |
| 8 | 0.2580 | 24.58 | 10.01 | 34.59 | 51.49 | -16.90 | AVG | |
| 9 | 0.2819 | 35.09 | 10.01 | 45.10 | 60.76 | -15.66 | QP | |
| 10 | 0.2819 | 20.94 | 10.01 | 30.95 | 50.76 | -19.81 | AVG | |
| 11 | 0.4580 | 26.65 | 10.02 | 36.67 | 56.73 | -20.06 | QP | |
| 12 | 0.4580 | 13.38 | 10.02 | 23.40 | 46.73 | -23.33 | AVG | |

Conducted Emission Test 150kHz – 30MHz

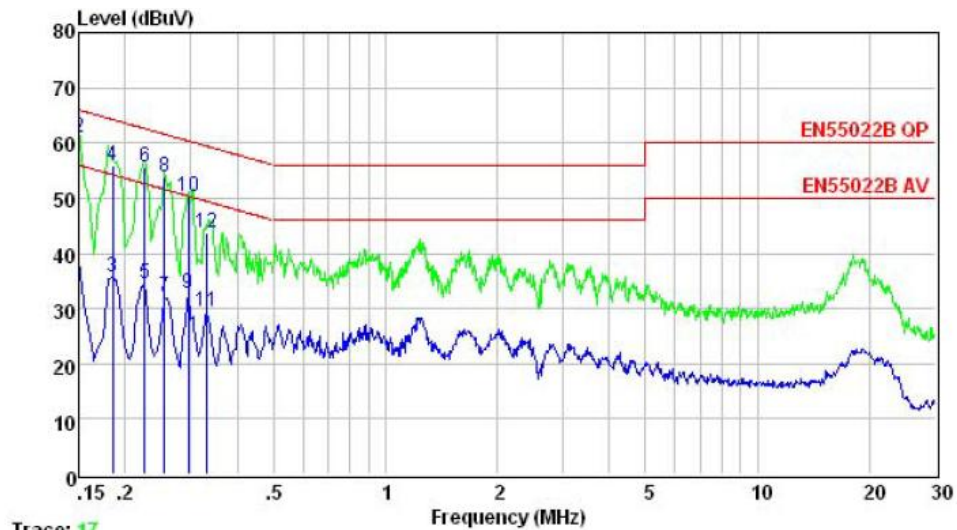
M/N : F05L5-130047SPAV (with LF1)
 Operating Condition : Full Load
 Test Specification : Power Line, Neutral
 Date of test : 2015-03-04
 Comment : AC 230V/50Hz
 Temperature (°C): 26 Relative Humidity (%): 60 Atmospheric Pressure(mbar) : 1008



| No. | Frequency (MHz) | Reading Level(dBuV) | Factor (dB) | Measurement(dBuV) | Limit (dBuV) | Over (dB) | Detector | Comment |
|-----|-----------------|---------------------|-------------|-------------------|--------------|-----------|----------|---------|
| 1 | 0.1500 | 44.13 | 10.01 | 54.14 | 65.99 | -11.85 | QP | |
| 2 | 0.1500 | 30.92 | 10.01 | 40.93 | 55.99 | -15.06 | AVG | |
| 3 * | 0.1819 | 42.54 | 10.01 | 52.55 | 64.39 | -11.84 | QP | |
| 4 | 0.1819 | 28.75 | 10.01 | 38.76 | 54.39 | -15.63 | AVG | |
| 5 | 0.2220 | 39.08 | 10.01 | 49.09 | 62.74 | -13.65 | QP | |
| 6 | 0.2220 | 24.55 | 10.01 | 34.56 | 52.74 | -18.18 | AVG | |
| 7 | 0.2460 | 34.24 | 10.01 | 44.25 | 61.89 | -17.64 | QP | |
| 8 | 0.2460 | 19.61 | 10.01 | 29.62 | 51.89 | -22.27 | AVG | |
| 9 | 0.2980 | 31.78 | 10.01 | 41.79 | 60.30 | -18.51 | QP | |
| 10 | 0.2980 | 18.02 | 10.01 | 28.03 | 50.30 | -22.27 | AVG | |
| 11 | 0.3300 | 29.71 | 10.01 | 39.72 | 59.45 | -19.73 | QP | |
| 12 | 0.3300 | 15.67 | 10.01 | 25.68 | 49.45 | -23.77 | AVG | |

Conducted Emission Test 150kHz – 30MHz

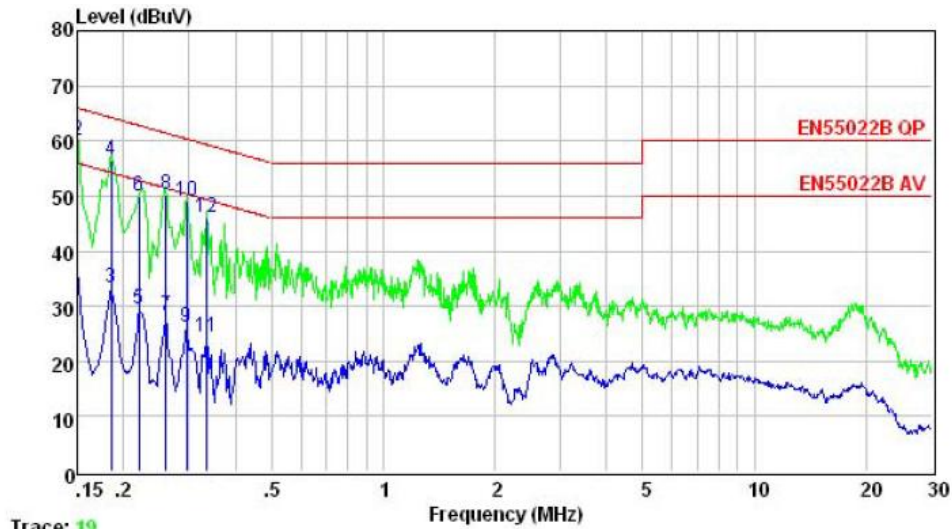
M/N : F05L5-130047SPAV (with L1+L2)
 Operating Condition : Full Load
 Test Specification : Power Line, Live
 Date of test : 2015-05-25
 Comment : AC 230V/50Hz
 Temperature (°C): 26 Relative Humidity (%): 60 Atmospheric Pressure(mbar) : 1008



| | Limit | Over | | |
|------|-------|-------|-------|----------------|
| Freq | Level | Line | Limit | Remark |
| MHz | dBuV | dBuV | dB | |
| 1 | 0.150 | 38.22 | 56.00 | -17.78 Average |
| 2 | 0.150 | 61.01 | 66.00 | -4.99 QP |
| 3 | 0.185 | 35.77 | 54.24 | -18.47 Average |
| 4 | 0.185 | 55.98 | 64.24 | -8.26 QP |
| 5 | 0.226 | 34.39 | 52.61 | -18.22 Average |
| 6 | 0.226 | 55.74 | 62.61 | -6.87 QP |
| 7 | 0.255 | 32.07 | 51.60 | -19.53 Average |
| 8 | 0.255 | 53.80 | 61.60 | -7.80 QP |
| 9 | 0.296 | 32.64 | 50.37 | -17.73 Average |
| 10 | 0.296 | 50.30 | 60.37 | -10.07 QP |
| 11 | 0.330 | 29.34 | 49.44 | -20.10 Average |
| 12 | 0.330 | 43.60 | 59.44 | -15.84 QP |

Conducted Emission Test 150kHz – 30MHz

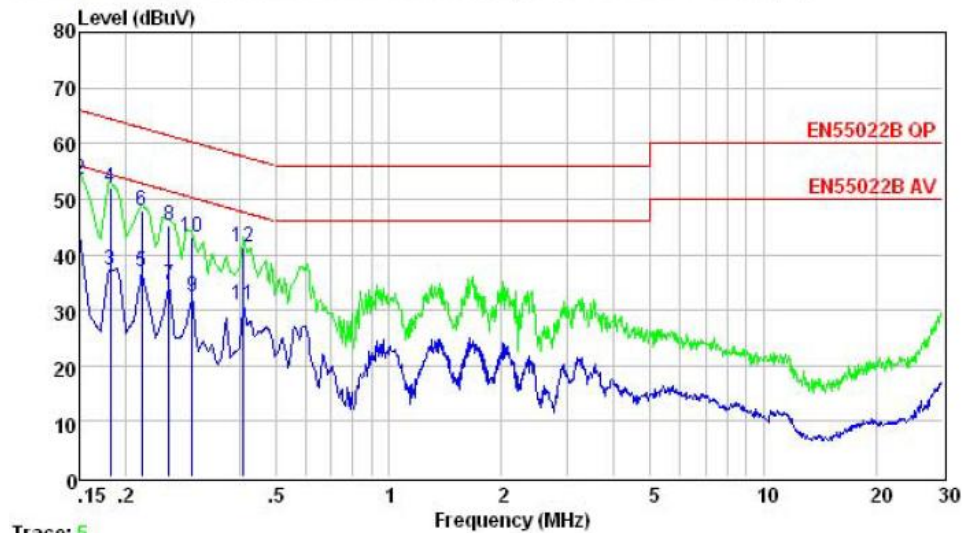
M/N : F05L5-130047SPAV (with L1+L2)
 Operating Condition : Full Load
 Test Specification : Power Line, Neutral
 Date of test : 2015-05-25
 Comment : AC 230V/50Hz
 Temperature (°C): 26 Relative Humidity (%): 60 Atmospheric Pressure(mbar) : 1008



| | Freq | Level | Limit | Over | Remark |
|----|-------|-------|-------|--------|---------|
| | MHz | dBuV | dBuV | dB | |
| 1 | 0.150 | 36.26 | 56.00 | -19.74 | Average |
| 2 | 0.150 | 60.20 | 66.00 | -5.80 | QP |
| 3 | 0.185 | 33.28 | 54.24 | -20.96 | Average |
| 4 | 0.185 | 56.60 | 64.24 | -7.64 | QP |
| 5 | 0.220 | 29.46 | 52.83 | -23.37 | Average |
| 6 | 0.220 | 50.00 | 62.83 | -12.83 | QP |
| 7 | 0.260 | 28.24 | 51.42 | -23.18 | Average |
| 8 | 0.260 | 50.32 | 61.42 | -11.10 | QP |
| 9 | 0.296 | 26.06 | 50.37 | -24.31 | Average |
| 10 | 0.296 | 49.00 | 60.37 | -11.37 | QP |
| 11 | 0.336 | 24.35 | 49.31 | -24.96 | Average |
| 12 | 0.336 | 45.98 | 59.31 | -13.33 | QP |

Conducted Emission Test 150kHz – 30MHz

M/N : F05L5-130047SPAV (with LF1)
 Operating Condition : Full Load
 Test Specification : Power Line, Live
 Date of test : 2015-02-25
 Comment : AC 230V/50Hz
 Temperature (°C): 26 Relative Humidity (%): 60 Atmospheric Pressure(mbar) : 1008

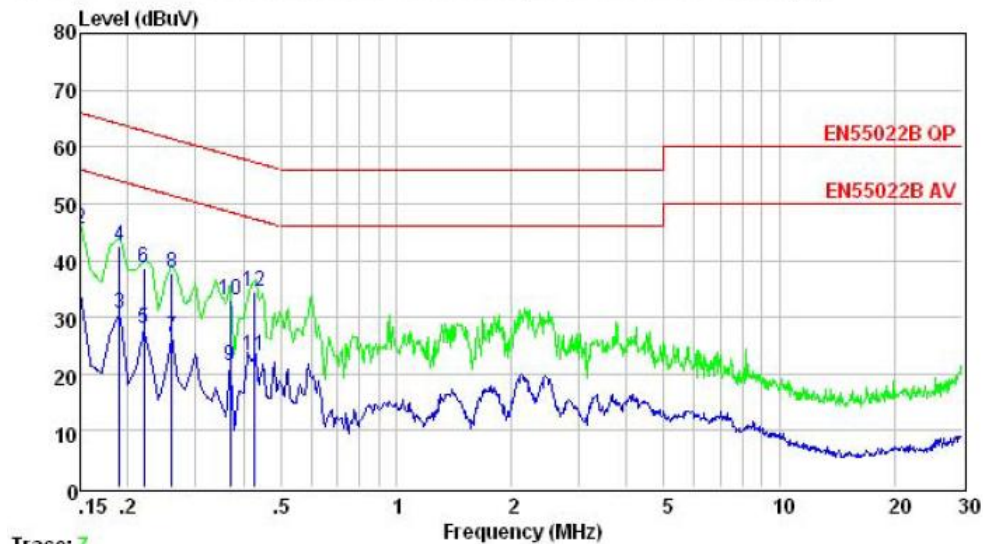


Trace: 5

| | Freq | Level | Limit | Over | Remark |
|----|-------|-------|-------|--------|---------|
| | MHz | dBuV | dBuV | dB | |
| 1 | 0.150 | 43.46 | 56.00 | -12.54 | Average |
| 2 | 0.150 | 53.40 | 66.00 | -12.60 | QP |
| 3 | 0.182 | 37.21 | 54.42 | -17.21 | Average |
| 4 | 0.182 | 52.14 | 64.42 | -12.28 | QP |
| 5 | 0.220 | 36.83 | 52.83 | -16.00 | Average |
| 6 | 0.220 | 47.80 | 62.83 | -15.03 | QP |
| 7 | 0.260 | 34.64 | 51.42 | -16.78 | Average |
| 8 | 0.260 | 45.21 | 61.42 | -16.21 | QP |
| 9 | 0.300 | 32.51 | 50.24 | -17.73 | Average |
| 10 | 0.300 | 43.20 | 60.24 | -17.04 | QP |
| 11 | 0.410 | 30.99 | 47.64 | -16.65 | Average |
| 12 | 0.410 | 41.20 | 57.64 | -16.44 | QP |

Conducted Emission Test 150kHz – 30MHz

M/N : F05L5-130047SPAV (with LF1)
 Operating Condition : Full Load
 Test Specification : Power Line, Live
 Date of test : 2015-02-25
 Comment : AC 230V/50Hz
 Temperature (°C): 26 Relative Humidity (%): 60 Atmospheric Pressure(mbar) : 1008



Trace: 7

| | Limit | Over | | | |
|------|-------|-------|-------|--------|---------|
| Freq | Level | Line | Limit | Remark | |
| MHz | dBuV | dBuV | dB | | |
| 1 | 0.150 | 34.20 | 56.00 | -21.80 | Average |
| 2 | 0.150 | 45.60 | 66.00 | -20.40 | QP |
| 3 | 0.190 | 30.64 | 54.02 | -23.38 | Average |
| 4 | 0.190 | 42.60 | 64.02 | -21.42 | QP |
| 5 | 0.220 | 27.85 | 52.83 | -24.98 | Average |
| 6 | 0.220 | 38.65 | 62.83 | -24.18 | QP |
| 7 | 0.260 | 26.59 | 51.42 | -24.83 | Average |
| 8 | 0.260 | 37.90 | 61.42 | -23.52 | QP |
| 9 | 0.369 | 21.49 | 48.52 | -27.03 | Average |
| 10 | 0.369 | 33.15 | 58.52 | -25.37 | QP |
| 11 | 0.428 | 23.21 | 47.29 | -24.08 | Average |
| 12 | 0.428 | 34.60 | 57.29 | -22.69 | QP |

Test Equipment List

Conducted Emission Test

| DESCRIPTION | MANUFACTURER | MODEL NO. | SERIAL NO. | CAL. DUE DATE |
|-------------------|--------------------------------|-----------|------------|---------------|
| LISN | SCHWARZBECK MESS-ELEKTRONIK | NSLK 8127 | 8127-669 | 2016-02-25 |
| Pulse Limiter | ROHDE&SCHWARZ | ESH3-Z2 | 101661 | 2015-12-14 |
| EMI Test Receiver | ROHDE&SCHWARZ | ESCI | 101358 | 2015-03-06 |

Keyway

| DESCRIPTION | MANUFACTURER | MODEL NO. | SERIAL NO. | CAL. DUE DATE |
|-----------------------------------|---------------|-----------|------------|---------------|
| EMI Test Receiver | Rohde&Schwarz | ESCI | 101156 | Apr 27,16 |
| Artificial Mains Network | Rohde&Schwarz | ENV216 | 101315 | Apr 27,16 |
| Artificial Mains Network (AUX) | Rohde&Schwarz | ENV216 | 101314 | Apr 27,16 |
| RF Cable | FUJIKURA | 3D-2W | 944 Cable | Apr 27,16 |
| Voltage Probe | PHX | A130302 | KWE-053 | Apr 27,16 |
| Coupling/Decoupling Network | FRANKONIA | A3011081 | KWE-054 | Apr 27,16 |

7.3 Flicker Test

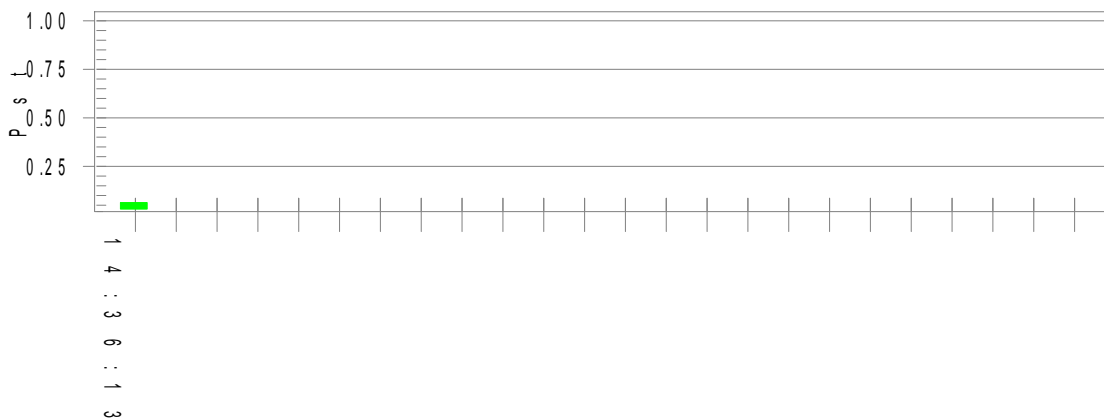
EUT: Switching Mode Power Adaptor M/N:F05L5-050100SPAC(L1+L2 without CY1)
 Test category: dt,dmax,dc and Pst (European limits) Test Margin: 100
 Test date: 2/9/2015 Start time: 2:25:53 PM End time: 2:36:14 PM
 Test duration (min): 10 Data file name: F-001615.cts_data
 Comment: AC 230V/50Hz Tested by: Allen Yang
 Customer: Shenzhen Frecom Electronics Co., Ltd.

Test Result: Pass

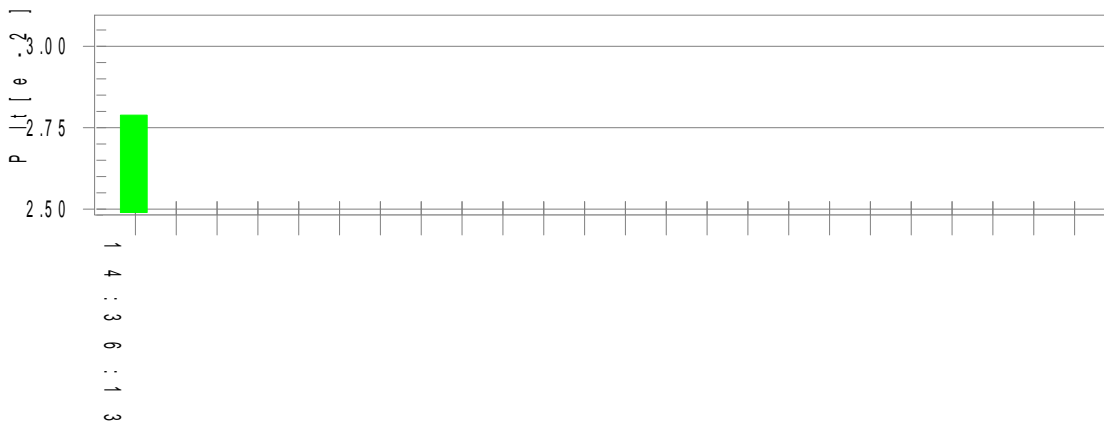
Status: Test Completed

Pst_i and limit line

European Limits



Plt and limit line



Parameter values recorded during the test:

| | | | |
|---------------------------------|--------|------------------|------------|
| Vrms at the end of test (Volt): | 229.79 | | |
| Highest dt (%): | 0.00 | Test limit (%): | 3.30 Pass |
| Time(mS) > dt: | 0.0 | Test limit (mS): | 500.0 Pass |
| Highest dc (%): | 0.00 | Test limit (%): | 3.30 Pass |
| Highest dmax (%): | 0.00 | Test limit (%): | 4.00 Pass |
| Highest Pst (10 min. period): | 0.064 | Test limit: | 1.000 Pass |



Flicker Test

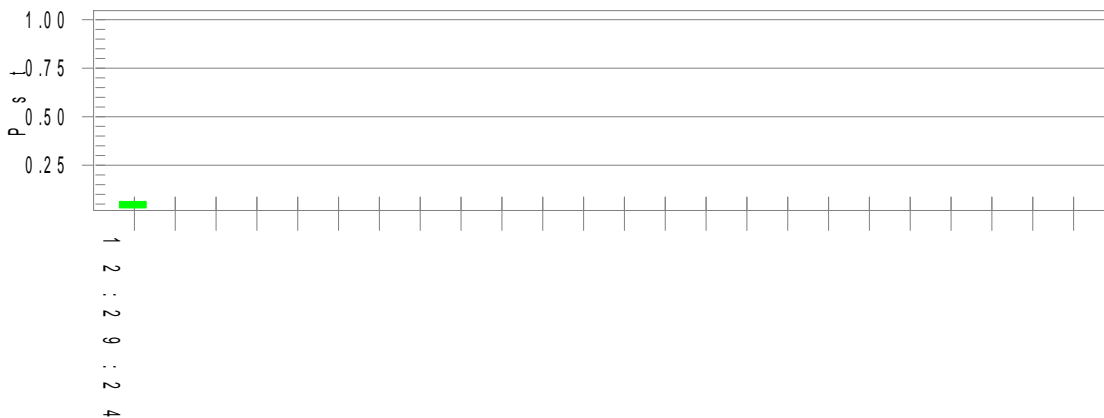
EUT: Switching Mode Power Adaptor M/N:F05L5-050100SPAC(with LF1+ without CY1)
 Test category: dt,dmax,dc and Pst (European limits) Test Margin: 100
 Test date: 2/9/2015 Start time: 12:19:04 PM End time: 12:29:25 PM
 Test duration (min): 10 Data file name: F-001560.cts_data
 Comment: AC 230V/50Hz Tested by: Allen Yang
 Customer: Shenzhen Frecom Electronics Co., Ltd.

Test Result: Pass

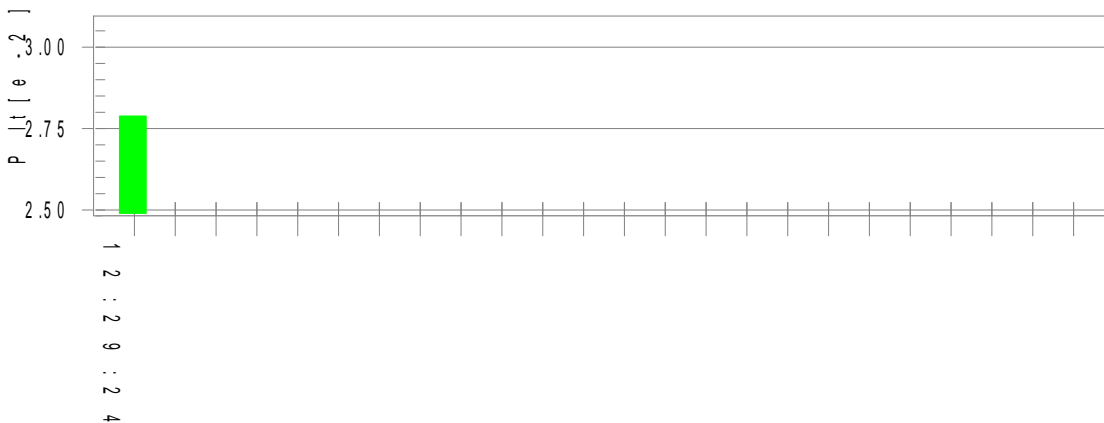
Status: Test Completed

Pst_i and limit line

European Limits



Plt and limit line



Parameter values recorded during the test:

| | | | |
|---------------------------------|--------|------------------|------------|
| Vrms at the end of test (Volt): | 229.78 | | |
| Highest dt (%): | 0.00 | Test limit (%): | 3.30 Pass |
| Time(mS) > dt: | 0.0 | Test limit (mS): | 500.0 Pass |
| Highest dc (%): | 0.00 | Test limit (%): | 3.30 Pass |
| Highest dmax (%): | 0.00 | Test limit (%): | 4.00 Pass |
| Highest Pst (10 min. period): | 0.064 | Test limit: | 1.000 Pass |

Flicker Test

Flicker Test Summary per EN/IEC61000-3-3 (Run time)

EUT: Switching Mode Power Adaptor M/N: F05L5-130047SPAV LF1 Tested by: Alan
 Test category: All parameters (European limits) Test Margin: 100
 Test date: 2015-5-19 Start time: 9:51:38 End time: 10:01:59
 Test duration (min): 10 Data file name: F-000599.cts_data
 Comment: Full Load Temp:24.8';Humi:55%;Press:101.48kPa
 Customer: 15KW051501PHY

Test Result: Pass

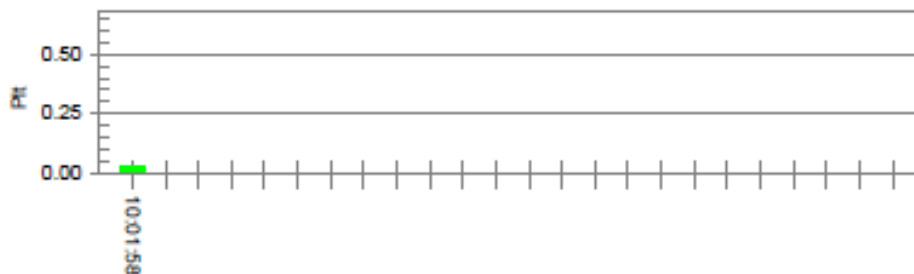
Status: Test Completed

Pst and limit line

European Limits



Plt and limit line



Parameter values recorded during the test:

| | | | |
|---------------------------------|--------|------------------|------------|
| Vrms at the end of test (Volt): | 231.53 | | |
| Highest dt (%): | 0.00 | Test limit (%): | 3.30 Pass |
| Time(mS) > dt: | 0.0 | Test limit (mS): | 500.0 Pass |
| Highest dc (%): | 0.00 | Test limit (%): | 3.30 Pass |
| Highest dmax (%): | 0.00 | Test limit (%): | 4.00 Pass |
| Highest Pst (10 min. period): | 0.064 | Test limit: | 1.000 Pass |
| Highest Plt (2 hr. period): | 0.028 | Test limit: | 0.650 Pass |

Flicker Test

Flicker Test Summary per EN/IEC61000-3-3 (Run time)

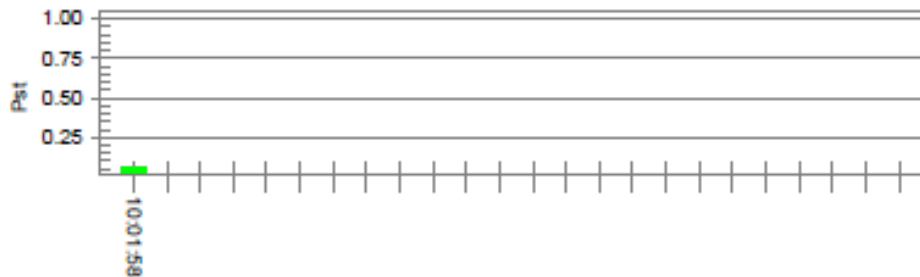
EUT: Switching Mode Power Adaptor M/N: F05L5-130047SPAV L1 and L2 Tested by: Alan
 Test category: All parameters (European limits) Test Margin: 100
 Test date: 2015-5-25 Start time: 9:51:38 End time: 10:01:59
 Test duration (min): 10 Data file name: F-000599.cts_data
 Comment: Full Load Temp:24.8';Humi:55%;Press:101.48kPa
 Customer: 15KW051501PHY

Test Result: Pass

Status: Test Completed

Pst and limit line

European Limits



Plt and limit line



Parameter values recorded during the test:

| | | | |
|---------------------------------|--------|------------------|------------|
| Vrms at the end of test (Volt): | 231.51 | | |
| Highest dt (%): | 0.00 | Test limit (%): | 3.30 Pass |
| Time(mS) > dt: | 0.0 | Test limit (mS): | 500.0 Pass |
| Highest dc (%): | 0.00 | Test limit (%): | 3.30 Pass |
| Highest dmax (%): | 0.00 | Test limit (%): | 4.00 Pass |
| Highest Pst (10 min. period): | 0.064 | Test limit: | 1.000 Pass |
| Highest Plt (2 hr. period): | 0.028 | Test limit: | 0.650 Pass |

Test Equipment List

Flicker Test

| DESCRIPTION | MANUFACTURER | MODEL NO. | SERIAL NO. | CAL. DUE DATE |
|--------------------------|--------------|-----------|------------|---------------|
| 5kV AC Power Source | TESEQ | NSG1007 | 57492 | 2015-04-07 |
| Signal Conditioning Unit | TESEQ | CCN1000-1 | 72497 | 2015-04-07 |

Keyway

| DESCRIPTION | MANUFACTURER | MODEL NO. | SERIAL NO. | CAL. DUE DATE |
|------------------------------|------------------------|----------------|------------|---------------|
| 5kVA AC Power Source | California Instruments | 5001iX-CTS-400 | 60138 | Apr 27,16 |
| Harmonic/Flicker Test System | California Instruments | PACS-1 | 72847 | Apr 27,16 |

8 Performance Criteria

| | |
|---|--|
| A | The apparatus shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer when the equipment is used as intended. The Performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the apparatus if used as intended. |
| B | <p>After the test, the equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed, after the application of the phenomena below a performance level specified by the manufacturer, when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance.</p> <p>During the test, degradation of performance is allowed, however, no change of operating state or stored data is allowed to persist after the test.</p> <p>If the minimum performance level (or the permissible performance loss) is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the apparatus if used as intended.</p> |
| C | <p>Loss of functions is allowed, provided the function is self-recoverable, or can be restored by the operation of the user in accordance with the manufacturer's instructions.</p> <p>Functions, and/or information stored in non-volatile memory, or protected by a battery backup, shall not be lost.</p> |



9 Immunity Test Results

9.1 Electrostatic Discharge Test

Applicant : Shenzhen Frecom Electronics Co., Ltd.
 Project no. : 65.760.14.127.02
 Model : F05L5-050100SPAV(with L1+L2+without CY1), F05L5-050100SPAV(with LF1+without CY1), F05L5-130047SPAV (with LF1) and F05L5-130047SPAV (with L1+L2)
 Description : Switching Mode Power Adaptor Serial No. : NIL
 Operating Mode : Full Load Table Top Floor Stand

Ambient Temperature (°C) : 24 Relative Humidity (%): 56 Atmospheric Pressure(mbar) : 1013

Test regulation : EN 61000-6-1 EN 50082-2 EN 55014-2
EN 55024 IEC 1000-4-2 IEC 801-2
EN 61547 IEC 61000-4-2 EN 55020

Indirect discharge : Draw points in the appendix

| Point | Contact kV | | | Number and Polarity at each voltage level | |
|-------------------|---|--|--|---|---|
| 1: VCP-Front Side | <input checked="" type="checkbox"/> .2 <input type="checkbox"/> .6 | <input type="checkbox"/> .3 <input type="checkbox"/> .8 | <input checked="" type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .25 pos <input checked="" type="checkbox"/> .10 pos | <input type="checkbox"/> .25 neg <input checked="" type="checkbox"/> .10 neg |
| 2: VCP-Right Side | <input checked="" type="checkbox"/> .2 <input type="checkbox"/> .6 | <input type="checkbox"/> .3 <input type="checkbox"/> .8 | <input checked="" type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .25 pos <input checked="" type="checkbox"/> .10 pos | <input type="checkbox"/> .25 neg <input checked="" type="checkbox"/> .10 neg |
| 3: VCP-Rear Side | <input checked="" type="checkbox"/> .2 <input type="checkbox"/> .6 | <input type="checkbox"/> .3 <input type="checkbox"/> .8 | <input checked="" type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .25 pos <input checked="" type="checkbox"/> .10 pos | <input type="checkbox"/> .25 neg <input checked="" type="checkbox"/> .10 neg |
| 4: VCP-Left Side | <input checked="" type="checkbox"/> .2 <input type="checkbox"/> .6 | <input type="checkbox"/> .3 <input type="checkbox"/> .8 | <input checked="" type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .25 pos <input checked="" type="checkbox"/> .10 pos | <input type="checkbox"/> .25 neg <input checked="" type="checkbox"/> .10 neg |
| 5: HCP-Front Side | <input checked="" type="checkbox"/> .2 <input type="checkbox"/> .6 | <input type="checkbox"/> .3 <input type="checkbox"/> .8 | <input checked="" type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .25 pos <input checked="" type="checkbox"/> .10 pos | <input type="checkbox"/> .25 neg <input checked="" type="checkbox"/> .10 neg |
| 6: HCP-Right Side | <input checked="" type="checkbox"/> .2 <input type="checkbox"/> .6 | <input type="checkbox"/> .3 <input type="checkbox"/> .8 | <input checked="" type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .25 pos <input checked="" type="checkbox"/> .10 pos | <input type="checkbox"/> .25 neg <input checked="" type="checkbox"/> .10 neg |
| 7: HCP-Rear Side | <input checked="" type="checkbox"/> .2 <input type="checkbox"/> .6 | <input type="checkbox"/> .3 <input type="checkbox"/> .8 | <input checked="" type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .25 pos <input checked="" type="checkbox"/> .10 pos | <input type="checkbox"/> .25 neg <input checked="" type="checkbox"/> .10 neg |
| 8: HCP-Left Side | <input checked="" type="checkbox"/> .2 <input type="checkbox"/> .6 | <input type="checkbox"/> .3 <input type="checkbox"/> .8 | <input checked="" type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .25 pos <input checked="" type="checkbox"/> .10 pos | <input type="checkbox"/> .25 neg <input checked="" type="checkbox"/> .10 neg |
| 9: _____ | <input type="checkbox"/> .2 <input type="checkbox"/> .6 | <input type="checkbox"/> .3 <input type="checkbox"/> .8 | <input type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .25 pos <input type="checkbox"/> .10 pos | <input type="checkbox"/> .25 neg <input type="checkbox"/> .10 neg |

Remarks: VCP = Vertical Coupling Plane; HCP = Horizontal Coupling Plane.

Result: Complies Does not comply Photo done

Criterion Required : B Criterion Met : A

Date : 04-March-2015 Test Engineer : Allen Yang
25-May-2015 Aaron Lai



Electrostatic Discharge Test

Applicant : Shenzhen Frecom Electronics Co., Ltd.
 Project no. : 65.760.14.127.02
 Model : F05L5-050100SPAV(with L1+L2+without CY1), F05L5-050100SPAV(with LF1+without CY1), F05L5-130047SPAV (with LF1) and F05L5-130047SPAV (with L1+L2)
 Description : Switching Mode Power Adaptor Serial No. : NIL
 Operating Mode : Full Load Table Top Floor Stand

Ambient Temperature (°C) : 24 Relative Humidity (%): 56 Atmospheric Pressure(mbar) : 1013

Test regulation : EN 61000-6-1 EN 50082-2 EN 55014-2
EN 55024 IEC 1000-4-2 IEC 801-2
EN 61547 IEC 61000-4-2 EN 55020

Indirect discharge : Draw points in the appendix

| Point | Contact kV | | | Air kV | | Number and Polarity at each voltage level | |
|--|--|--|--|---|---|---|---|
| 1. Each nonconductive location touchable by hand | <input type="checkbox"/> .2 <input type="checkbox"/> .6 | <input type="checkbox"/> .3 <input type="checkbox"/> .8 | <input type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .2 <input checked="" type="checkbox"/> .8 | <input type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .25 pos <input checked="" type="checkbox"/> .10 pos | <input type="checkbox"/> .25 neg <input checked="" type="checkbox"/> .10 neg |
| 2.Gaps | <input type="checkbox"/> .2 <input type="checkbox"/> .6 | <input type="checkbox"/> .3 <input type="checkbox"/> .8 | <input type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .2 <input checked="" type="checkbox"/> .8 | <input type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .25 pos <input checked="" type="checkbox"/> .10 pos | <input type="checkbox"/> .25 neg <input checked="" type="checkbox"/> .10 neg |
| 3. DC port | <input type="checkbox"/> .2 <input type="checkbox"/> .6 | <input type="checkbox"/> .3 <input type="checkbox"/> .8 | <input checked="" type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .2 <input type="checkbox"/> .8 | <input type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .25 pos <input checked="" type="checkbox"/> .10 pos | <input type="checkbox"/> .25 neg <input checked="" type="checkbox"/> .10 neg |
| 4. | <input type="checkbox"/> .2 <input type="checkbox"/> .6 | <input type="checkbox"/> .3 <input type="checkbox"/> .8 | <input type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .2 <input type="checkbox"/> .8 | <input type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .25 pos <input type="checkbox"/> .10 pos | <input type="checkbox"/> .25 neg <input type="checkbox"/> .10 neg |
| 5. | <input type="checkbox"/> .2 <input type="checkbox"/> .6 | <input type="checkbox"/> .3 <input type="checkbox"/> .8 | <input type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .2 <input type="checkbox"/> .8 | <input type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .25 pos <input type="checkbox"/> .10 pos | <input type="checkbox"/> .25 neg <input type="checkbox"/> .10 neg |
| 6. | <input type="checkbox"/> .2 <input type="checkbox"/> .6 | <input type="checkbox"/> .3 <input type="checkbox"/> .8 | <input type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .2 <input type="checkbox"/> .8 | <input type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .25 pos <input type="checkbox"/> .10 pos | <input type="checkbox"/> .25 neg <input type="checkbox"/> .10 neg |
| 7. | <input type="checkbox"/> .2 <input type="checkbox"/> .6 | <input type="checkbox"/> .3 <input type="checkbox"/> .8 | <input type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .2 <input type="checkbox"/> .8 | <input type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .25 pos <input type="checkbox"/> .10 pos | <input type="checkbox"/> .25 neg <input type="checkbox"/> .10 neg |
| 8. | <input type="checkbox"/> .2 <input type="checkbox"/> .6 | <input type="checkbox"/> .3 <input type="checkbox"/> .8 | <input type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .2 <input type="checkbox"/> .8 | <input type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .25 pos <input type="checkbox"/> .10 pos | <input type="checkbox"/> .25 neg <input type="checkbox"/> .10 neg |
| 9. | <input type="checkbox"/> .2 <input type="checkbox"/> .6 | <input type="checkbox"/> .3 <input type="checkbox"/> .8 | <input type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .2 <input type="checkbox"/> .8 | <input type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .25 pos <input type="checkbox"/> .10 pos | <input type="checkbox"/> .25 neg <input type="checkbox"/> .10 neg |
| 10. | <input type="checkbox"/> .2 <input type="checkbox"/> .6 | <input type="checkbox"/> .3 <input type="checkbox"/> .8 | <input type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .2 <input type="checkbox"/> .8 | <input type="checkbox"/> .4 <input type="checkbox"/> | <input type="checkbox"/> .25 pos <input type="checkbox"/> .10 pos | <input type="checkbox"/> .25 neg <input type="checkbox"/> .10 neg |

Remarks: NIL

Result: Complies Does not comply Photo done

Criterion Required : B Criterion Met : A

Date : 04-March-2015 Test Engineer : Allen Yang
25-May-2015 Aaron Lai

Test Equipment List

Electrostatic Discharge Test

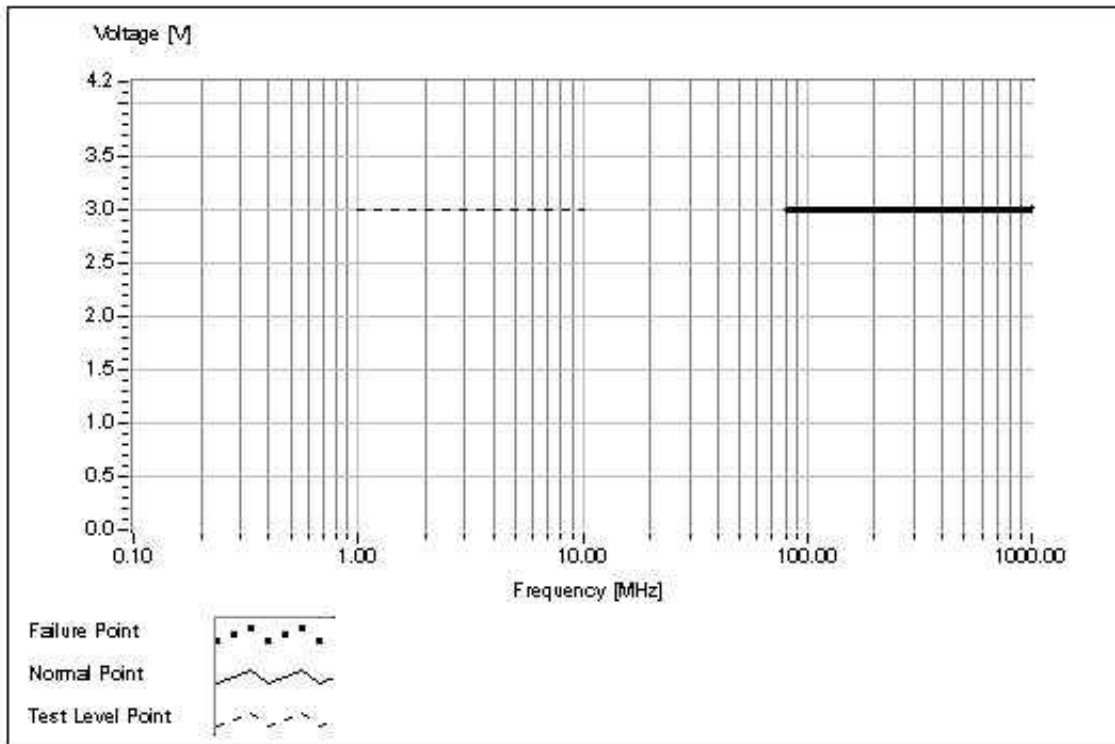
| DESCRIPTION | MANUFACTURER | MODEL NO. | SERIAL NO. | CAL. DUE DATE |
|---------------|--------------|-----------|------------|---------------|
| ESD Simulator | Prima | ESD61002B | PR13012530 | 2015-04-02 |

Keyway

| DESCRIPTION | MANUFACTURER | MODEL NO. | SERIAL NO. | CAL. DUE DATE |
|---------------|--------------|-----------|------------|---------------|
| ESD Generator | TESEQ | NSG437 | 433 | Apr 28,16 |

9.2 Radiated Immunity Test

Applicant : Shenzhen Frecom Electronics Co., Ltd.
 Project no. : 65.760.14.127.02
 Model : F05L5-050100SPAV(with L1+L2+without CY1), F05L5-050100SPAV(with LF1+without CY1), F05L5-130047SPAV (with LF1) and F05L5-130047SPAV (with L1+L2)
 Description : Switching Mode Power Adaptor Serial No. : NIL
 Operating Mode : Full Load Table Top Floor Stand
 Ambient Temperature (°C) : 24 Relative Humidity (%) : 56 Atmospheric Pressure(mbar) : 1013
 Test regulation : EN 61000-6-1 EN 50082-2 EN 55014-2
EN 55024 IEC 1000-4-3 IEC 801-2
EN 61547 IEC 61000-4-3 EN 55020



Report number:

Remarks:

Result:

Complies

Does not comply

Photo done

Criterion Required :

A

Criterion Met :

A

Date :

04-March-2015
25-May-2015

Test Engineer :

Allen Yang
Aaron Lai

Test Equipment List

Radiated Immunity Test

| DESCRIPTION | MANUFACTURER | MODEL NO. | SERIAL NO. | CAL. DUE DATE |
|-----------------------------|--------------------|------------|------------|---------------|
| Switch Unit | TDK | RSM-02 | 7005 | N/A |
| System Interface | TDK | SI-300 | | N/A |
| Signal Generator | Agilent | 8648C | 3847M00920 | 2015-04-07 |
| Amplifier | Amplifier Research | 150W1000M3 | 309410 | N/A |
| Amplifier | Amplifier Research | 60S1G3 | 309433 | N/A |
| AR Directional Coupler | AR | DC6180A | 307499 | N/A |
| AR Directional Coupler | AR | DC7144A | 309399 | N/A |
| Hybrid Log-Periodic Antenna | TDK | LPDA-0803 | | N/A |
| Power Sensor | Agilent | E9304A | MY41496201 | N/A |
| Power Sensor | Agilent | E9304A | MY41496013 | N/A |
| Power Meter | Agilent | E4419B | GB43311841 | N/A |
| Field Monitor | Holladay | HI-6005 | 35629 | 2016-01-22 |

Keyway

| DESCRIPTION | MANUFACTURER | MODEL NO. | SERIAL NO. | CAL. DUE DATE |
|-------------------|-----------------|------------------|--------------------------|---------------|
| BiConiLog Antenna | ETS | 3142C | 00060445 | Nov.28,15 |
| Amplifier | BONN ELEKTRONIK | BLWA0840-50/30D | 066454B | Nov.28,15 |
| Amplifier | BONN ELEKTRONIK | BLWA0840-50/100D | 066454A | Nov.28,15 |
| Signal Generator | Rohde&Schwarz | SML03 | 102947 | Nov.28,15 |
| Signal Generator | Rohde&Schwarz | SMB100A | 1406600K02 -104532-DF | Nov.28,15 |
| Power Meter | Rohde&Schwarz | NRVD | 102051 | Nov.28,15 |



9.3 Electrical Fast Transient Test

Applicant : Shenzhen Frecom Electronics Co., Ltd.
 Project no. : 65.760.14.127.02
 Model : F05L5-050100SPAV(with L1+L2+without CY1), F05L5-050100SPAV(with LF1+without CY1), F05L5-130047SPAV (with LF1) and F05L5-130047SPAV (with L1+L2)
 Description : Switching Mode Power Adaptor Serial No. : NIL
 Operating Mode : Full Load Table Top Floor Stand

Ambient Temperature (°C) : 24 Relative Humidity (%) : 56 Atmospheric Pressure(mbar) : 1013

Test regulation : EN 61000-6-1 EN 50082-2 EN 55014-2
EN 55024 IEC 1000-4-4 IEC 801-2
EN 61547 IEC 61000-4-4 EN 55020

Coupling: Network Clamp

Repetition Rate: 5 kHz __ kHz Coupling Time: 1 minute 2 minutes

| Point | Test Voltage (kV) | | | | | Criteria | | |
|--------------------------|-------------------------------|--|-----------------------------|-----------------------------|------------------------------|-----------------------------|--|-----------------------------|
| L1 (pos) to Ref Gnd | <input type="checkbox"/> .0.5 | <input checked="" type="checkbox"/> .1 | <input type="checkbox"/> .2 | <input type="checkbox"/> .4 | <input type="checkbox"/> .__ | <input type="checkbox"/> .A | <input checked="" type="checkbox"/> .B | <input type="checkbox"/> .C |
| L1 (neg) to Ref Gnd | <input type="checkbox"/> .0.5 | <input checked="" type="checkbox"/> .1 | <input type="checkbox"/> .2 | <input type="checkbox"/> .4 | <input type="checkbox"/> .__ | <input type="checkbox"/> .A | <input checked="" type="checkbox"/> .B | <input type="checkbox"/> .C |
| N (pos) to Ref Gnd | <input type="checkbox"/> .0.5 | <input checked="" type="checkbox"/> .1 | <input type="checkbox"/> .2 | <input type="checkbox"/> .4 | <input type="checkbox"/> .__ | <input type="checkbox"/> .A | <input checked="" type="checkbox"/> .B | <input type="checkbox"/> .C |
| N (neg) to Ref Gnd | <input type="checkbox"/> .0.5 | <input checked="" type="checkbox"/> .1 | <input type="checkbox"/> .2 | <input type="checkbox"/> .4 | <input type="checkbox"/> .__ | <input type="checkbox"/> .A | <input checked="" type="checkbox"/> .B | <input type="checkbox"/> .C |
| PE (pos) to Ref Gnd | <input type="checkbox"/> .0.5 | <input type="checkbox"/> .1 | <input type="checkbox"/> .2 | <input type="checkbox"/> .4 | <input type="checkbox"/> .__ | <input type="checkbox"/> .A | <input type="checkbox"/> .B | <input type="checkbox"/> .C |
| PE (neg) to Ref Gnd | <input type="checkbox"/> .0.5 | <input type="checkbox"/> .1 | <input type="checkbox"/> .2 | <input type="checkbox"/> .4 | <input type="checkbox"/> .__ | <input type="checkbox"/> .A | <input type="checkbox"/> .B | <input type="checkbox"/> .C |
| L1+N (pos) to Ref Gnd | <input type="checkbox"/> .0.5 | <input checked="" type="checkbox"/> .1 | <input type="checkbox"/> .2 | <input type="checkbox"/> .4 | <input type="checkbox"/> .__ | <input type="checkbox"/> .A | <input checked="" type="checkbox"/> .B | <input type="checkbox"/> .C |
| L1+N (neg) to Ref Gnd | <input type="checkbox"/> .0.5 | <input checked="" type="checkbox"/> .1 | <input type="checkbox"/> .2 | <input type="checkbox"/> .4 | <input type="checkbox"/> .__ | <input type="checkbox"/> .A | <input checked="" type="checkbox"/> .B | <input type="checkbox"/> .C |
| L1+N+PE (pos) to Ref Gnd | <input type="checkbox"/> .0.5 | <input type="checkbox"/> .1 | <input type="checkbox"/> .2 | <input type="checkbox"/> .4 | <input type="checkbox"/> .__ | <input type="checkbox"/> .A | <input type="checkbox"/> .B | <input type="checkbox"/> .C |
| L1+N+PE (neg) to Ref Gnd | <input type="checkbox"/> .0.5 | <input type="checkbox"/> .1 | <input type="checkbox"/> .2 | <input type="checkbox"/> .4 | <input type="checkbox"/> .__ | <input type="checkbox"/> .A | <input type="checkbox"/> .B | <input type="checkbox"/> .C |

Remarks: _____

Result: Complies Does not comply Photo done

Criterion Required : B Criterion Met : A

Date : 04-March-2015 Test Engineer : Allen Yang
25-May-2015 Aaron Lai

Test Equipment List

Electrical Fast Transients Test

| DESCRIPTION | MANUFACTURER | MODEL NO. | SERIAL NO. | CAL. DUE DATE |
|--|--------------|--------------|------------|---------------|
| Electrical Intelligent Transient Generator | TESEQ | Modula 6150 | 34554 | 2016-01-16 |
| Variable Transformer | TESEQ | VAR 6502-CIB | 107 | 2016-01-16 |

Keyway

| DESCRIPTION | MANUFACTURER | MODEL NO. | SERIAL NO. | CAL. DUE DATE |
|--------------------|--------------|-----------|-------------|---------------|
| EFT Tester | EMtest | EFT500N5 | V1105108698 | Apr 27,16 |
| EFT Coupling Clamp | EMtest | HFK | 0211-168 | Apr 27,16 |

Test Equipment List

Surges Test

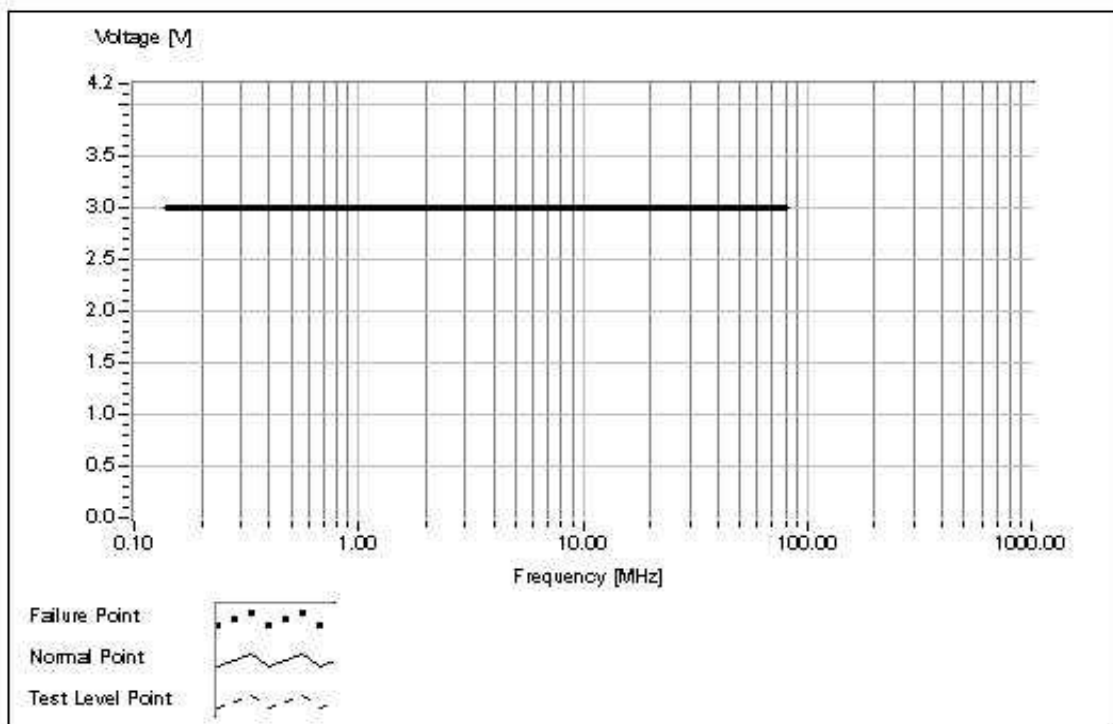
| DESCRIPTION | MANUFACTURER | MODEL NO. | SERIAL NO. | CAL. DUE DATE |
|--------------------------|--------------|------------|------------|---------------|
| EMC Immunity Test System | Prima | SUG61005CX | PR12055457 | 2015-06-29 |

Keyway

| DESCRIPTION | MANUFACTURER | MODEL NO. | SERIAL NO. | CAL. DUE DATE |
|---------------------------------|--------------|---------------|-------------|---------------|
| Surge Tester | EMtest | UCS500N7 | V1105108699 | Apr 27,16 |
| EMS Multifunctional test system | SCHAFFNER | 6100Series | 34326 | Apr 27,16 |
| Transient Immunity test system | EMC-PARTNER | TRANSIENT2000 | 845 | Apr 27,16 |

9.5 Conducted Immunity Test

Applicant : Shenzhen Frecom Electronics Co., Ltd.
 Project no. : 65.760.14.127.02
 Model : F05L5-050100SPAV(with L1+L2+without CY1), F05L5-050100SPAV(with LF1+without CY1), F05L5-130047SPAV (with LF1) and F05L5-130047SPAV (with L1+L2)
 Description : Switching Mode Power Adaptor Serial No. : NIL
 Operating Mode : Full Load Table Top Floor Stand
 Ambient Temperature (°C) : 24 Relative Humidity (%) : 56 Atmospheric Pressure(mbar) : 1013
 Test regulation : EN 61000-6-1 EN 50082-2 EN 55014-2
 EN 55024 IEC 1000-4-6 IEC 801-2
 EN 61547 IEC 61000-4-6 EN 55020



Remarks: NIL

Result: Complies Does not comply Photo done

Criterion Required : A Criterion Met : A

Date : 04-March-2015 Test Engineer : Allen Yang
25-May-2015 Aaron Lai

Test Equipment List

Conducted Immunity Test

| DESCRIPTION | MANUFACTURER | MODEL NO. | SERIAL NO. | CAL. DUE DATE |
|--------------|--------------|------------|------------|---------------|
| RF-Generator | TESEQ | NSG4070-75 | 24429 | 2016-01-16 |
| CDN M016 | TESEQ | CDN M016 | 24064 | 2016-01-16 |
| Attenuator | TESEQ | ATT 6075 | 23136 | 2016-01-16 |

Keyway

| DESCRIPTION | MANUFACTURER | MODEL NO. | SERIAL NO. | CAL. DUE DATE |
|---------------------------------|--------------|-------------|------------|---------------|
| C/S Test System | FRANKONIA | CIT-10 | 126B1164 | Apr 27, 16 |
| CDN | Luthi | L-801 M2/M3 | 2789 | Apr 27, 16 |
| Electromagnetic Injection Clamp | Luthi | EM101 | 36041 | Apr 28, 16 |



9.6 Voltage Dips, Voltage Variations and Short Interruptions Test

Applicant : Shenzhen Frecom Electronics Co., Ltd.
 Project no. : 65.760.14.127.02
 Model : F05L5-050100SPAV(with L1+L2+without CY1), F05L5-050100SPAV(with LF1+without CY1), F05L5-130047SPAV (with LF1) and F05L5-130047SPAV (with L1+L2)
 Description : Switching Mode Power Adaptor Serial No. : NIL
 Operating Mode : Full Load Table Top Floor Stand

Ambient Temperature (°C) : 24 Relative Humidity (%): 56 Atmospheric Pressure(mbar) : 1013

Test regulation : EN 61000-6-1 EN 50082-2 EN 55014-2
EN 55024 IEC 1000-4-11 IEC 801-2
EN 61547 IEC 61000-4-11 EN 55020

U_T : 100Vac/220Vac/240Vac

| Test Level %U _T | Dips & Interruptions %U _T | Duration (in period) / s | Criterion | Criterion meet |
|-------------------------------|---|-----------------------------|-----------|-------------------|
| 70 | 30 | 25 / 500 ms | C | A |
| 0 | 100 | 0.5 / 10 ms | B | A |
| 0 | 100 | 250 / 5 s | C | B |

Remarks: Temporary degradation of performance during test.

Result: Complies Does not comply Photo done

Date : 04-March-2015 25-May-2015 Test Engineer : Allen Yang Aaron Lai



Test Equipment List

Voltage Dips and Interruptions Test

| DESCRIPTION | MANUFACTURER | MODEL NO. | SERIAL NO. | CAL. DUE DATE |
|----------------------|--------------|--------------|------------|---------------|
| Modula 6150 | TESEQ | Modula 6150 | 34554 | 2016-01-16 |
| Variable Transformer | TESEQ | VAR 6502-CIB | 107 | 2016-01-16 |

Keyway

| DESCRIPTION | MANUFACTURER | MODEL NO. | SERIAL NO. | CAL. DUE DATE |
|-------------|--------------|--------------|-----------------------|---------------|
| Dips Tester | EVERFINE | EMS61000-11K | YG100319N11 040005 | Apr 27, 16 |

10 Appendix A- Product Information Form

Model list: F05L5-xxxxyyySPAz, F05L5-050yyySPAz-U

| Model Name | Output voltage (VDC) | Output current (A) | Max. output power (W) | Transformer |
|--|----------------------|--------------------|-----------------------|---|
| F05L5-xxxxyyySPAV F05L5-050yyySPA-V-U (xxx=040-070, yyy=001-100) | 4.0-7.0 | 0.01-1.0 | 5.0 | F05L5-050100-T1 EE-13 |
| F05L5-xxxxyyySPAV F05L5-050yyySPA-V-U (xxx=050-080, yyy=001-080) | 5.0-8.0 | 0.01-0.8 | 4.0 | F05L5-060060-T1 EE-13 |
| F05L5-xxxxyyySPAV (xxx=110-130, yyy=001-050) | 11.0-13.0 | 0.01-0.5 | 6.11 | F05L5-120050-T1 EE-13 or 16015000900R |

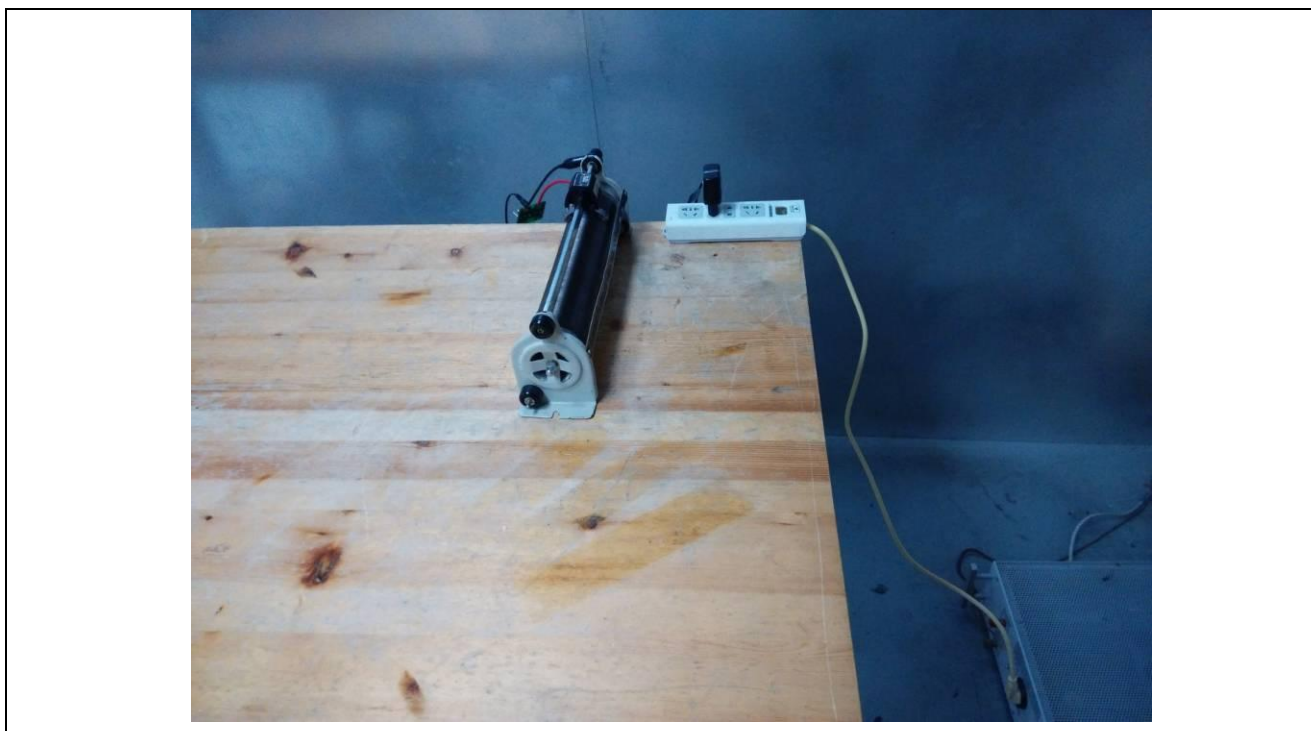
- xxx=040-130 stands for output voltage from 4.0VDC to 13.0VDC.
- yyy=001-100 stands for output current from 0.01A to 1.0A.
- All models in F05L5-xxxxyyySPAV series are identical to each other except the output rating, output connection, transformer secondary winding, ratings of some secondary components and model name.
- The models F05L5-050yyySPA-V-U is identical to models F05L5-050yyySPAV except output connection.
- The models F05L5-xxxxyyySPAV assembling with output DC wire, and models F05L5-050yyySPA-V-U assembling with USB port.
- The components MOV1, LF1, L1, L2, L3, C3 and C5 are optional. Either LF1 or L1, R14 and L2 must be used. The component CY1 is optional for output voltage from 4.0V to 8.0V

11 Appendix B – Photographs of Test Setup

Radiated Emission Test.....

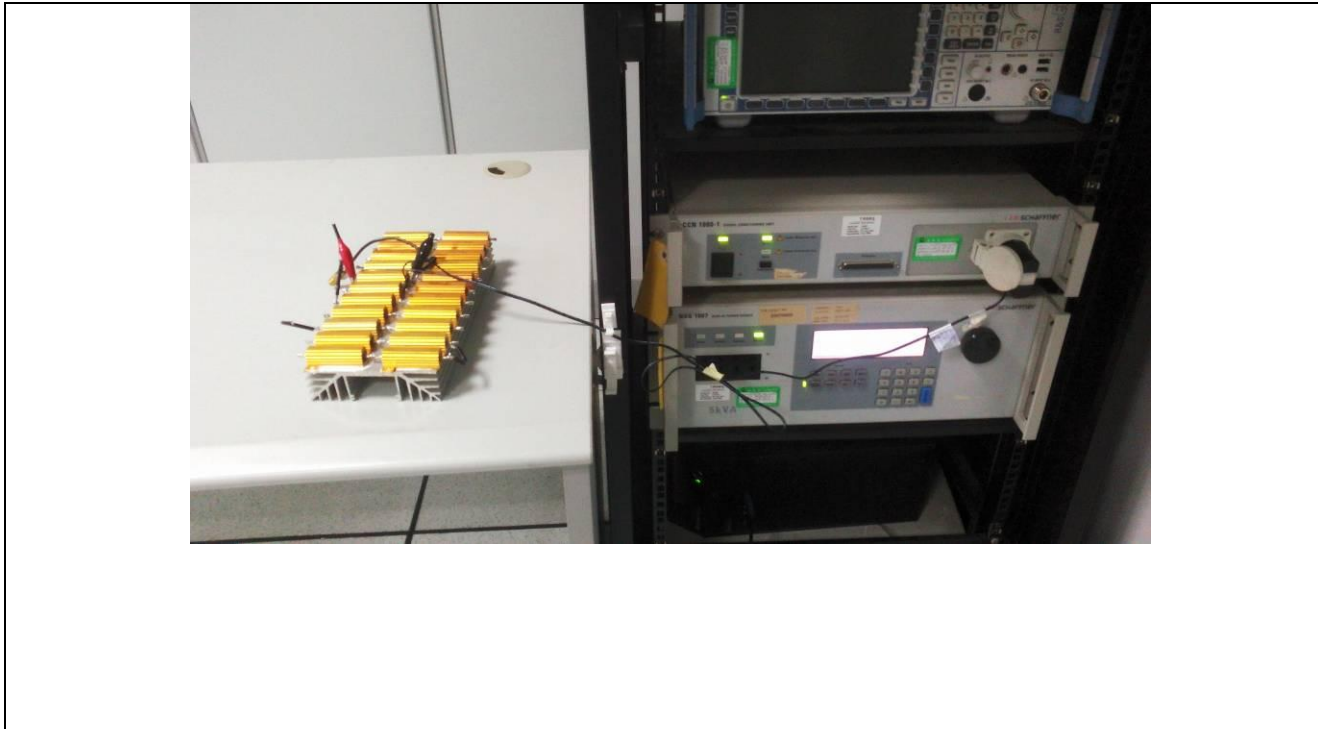


Conducted Emission Test.....

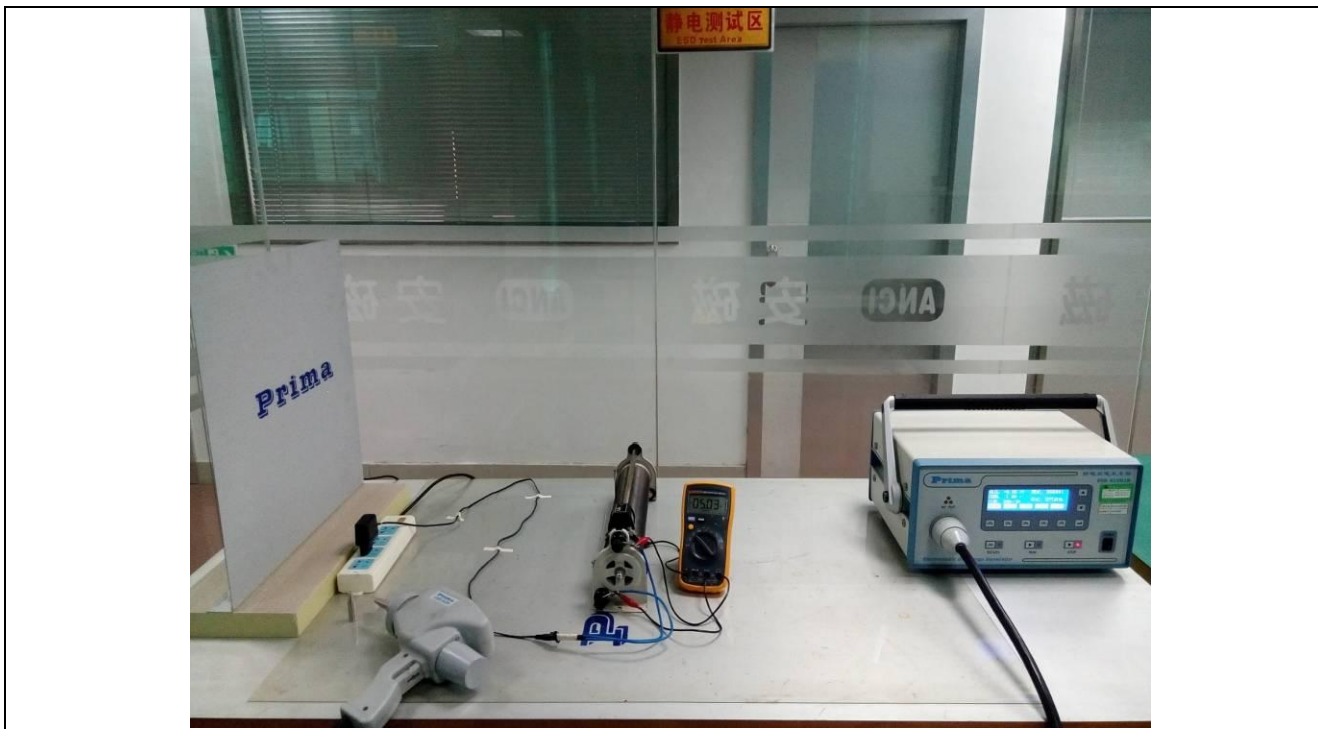


Appendix B

Flicker Test.....

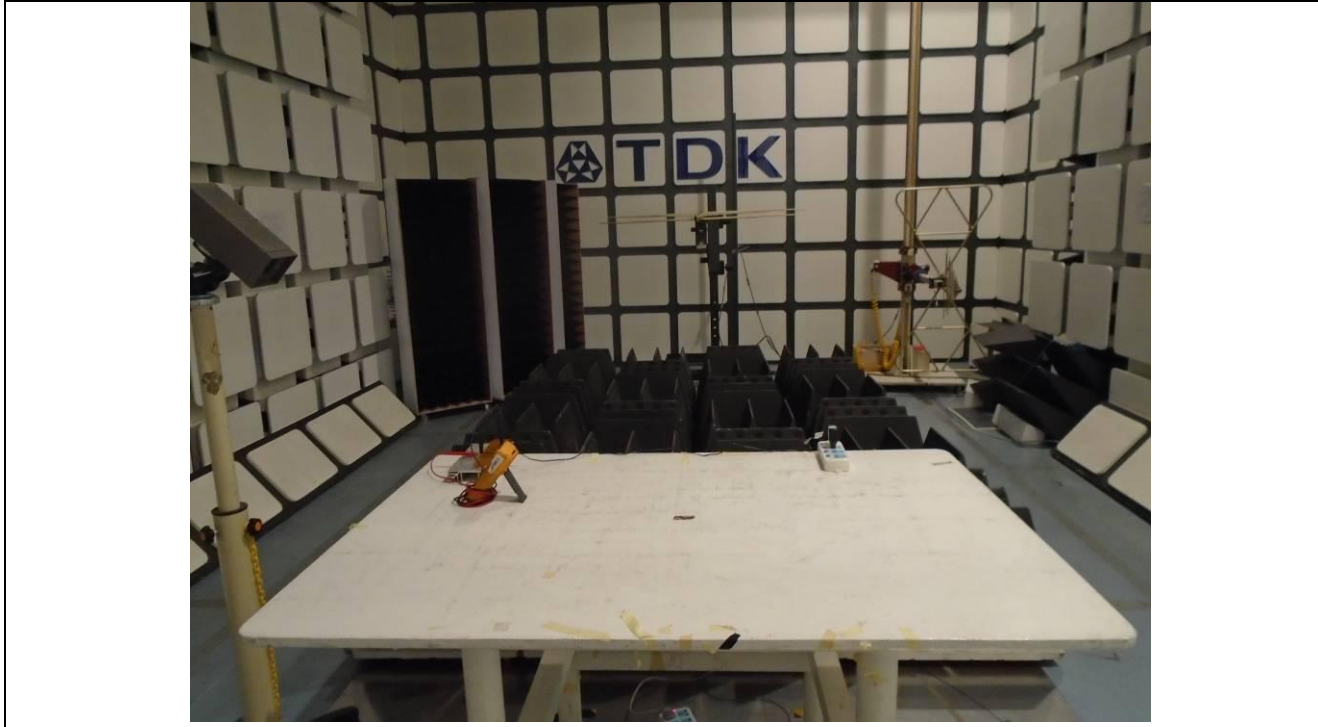


Electrostatic Discharge Test.....

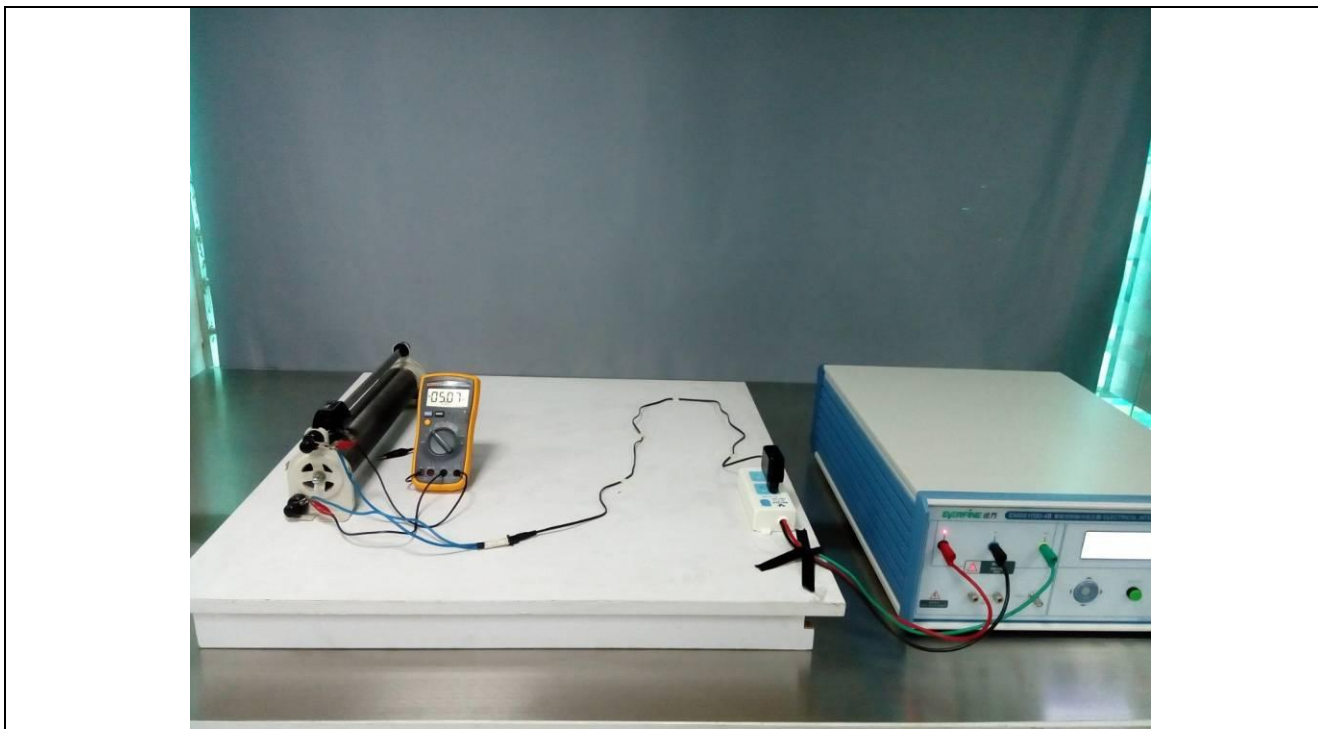


Appendix B

Radiated Immunity Test.....



Electrical Fast Transients Test.....

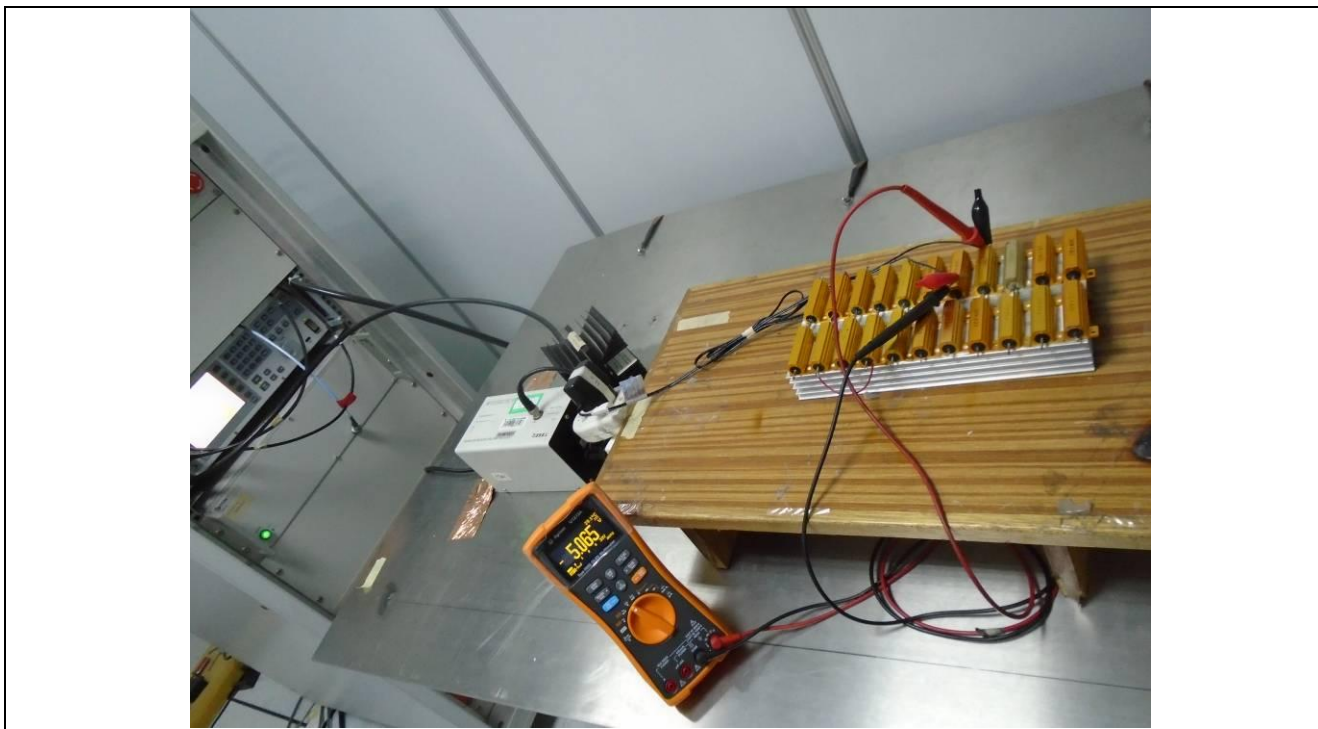


Appendix B

Surges Test.....

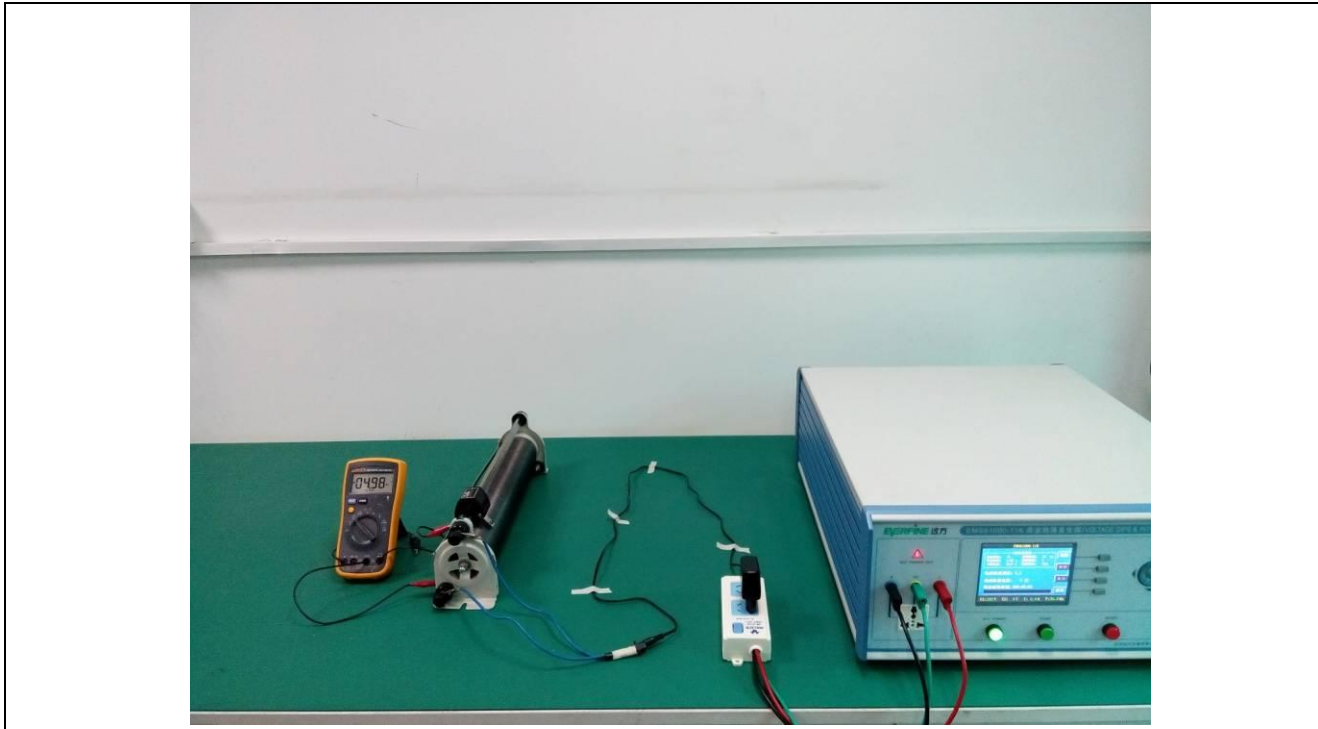


Conducted Immunity Test.....



Appendix B

Voltage Dips, Voltage Variations and Short Interruptions Test.....



12 Appendix C – Photographs of EUT

Details of: Overall view 1, DC cord (for Europe plug)



Details of: Overall view 2, DC cord (for Europe plug)

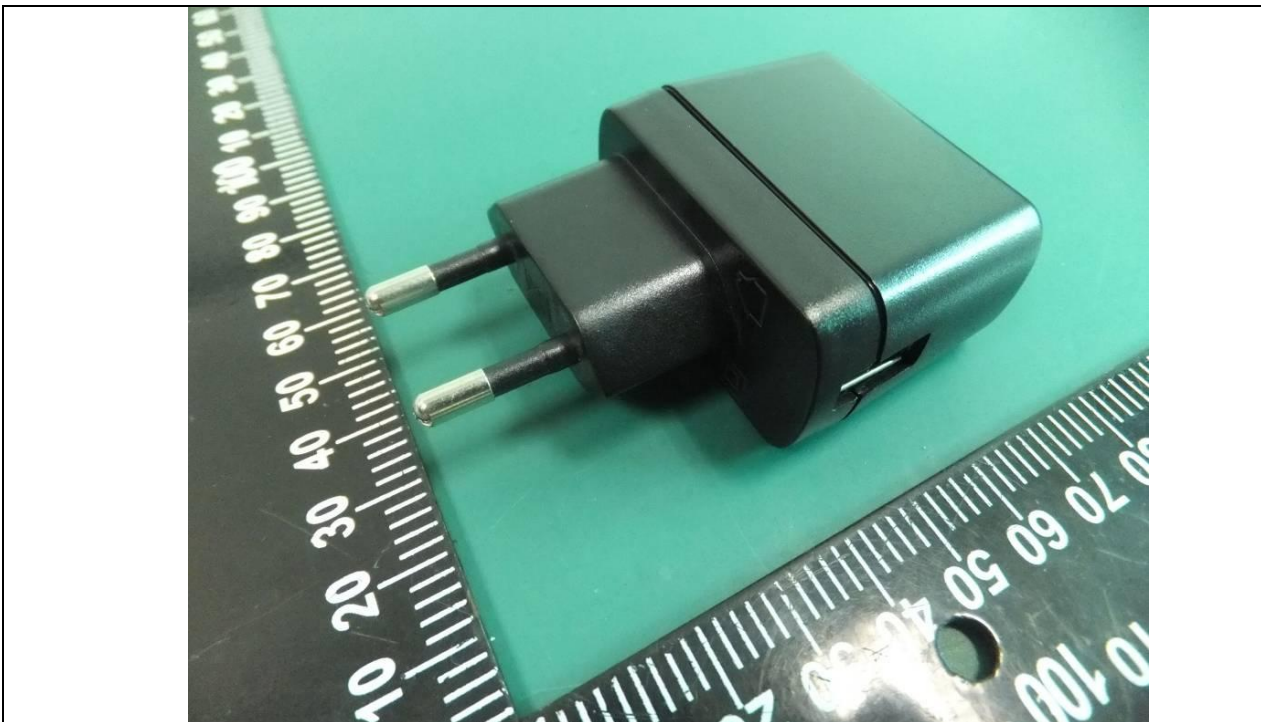


Appendix C – Photographs of EUT

Details of: Overall view 3, DC cord (for Europe plug)



Details of: Overall view 4, USB port (for Europe plug)



Appendix C – Photographs of EUT

Details of: Overall view 5, USB port (for Europe plug)



Details of: Overall view 8, DC cord (for UK plug with ISOD)



Appendix C – Photographs of EUT

Details of: Overall view 9, USB port (for UK plug with ISOD)

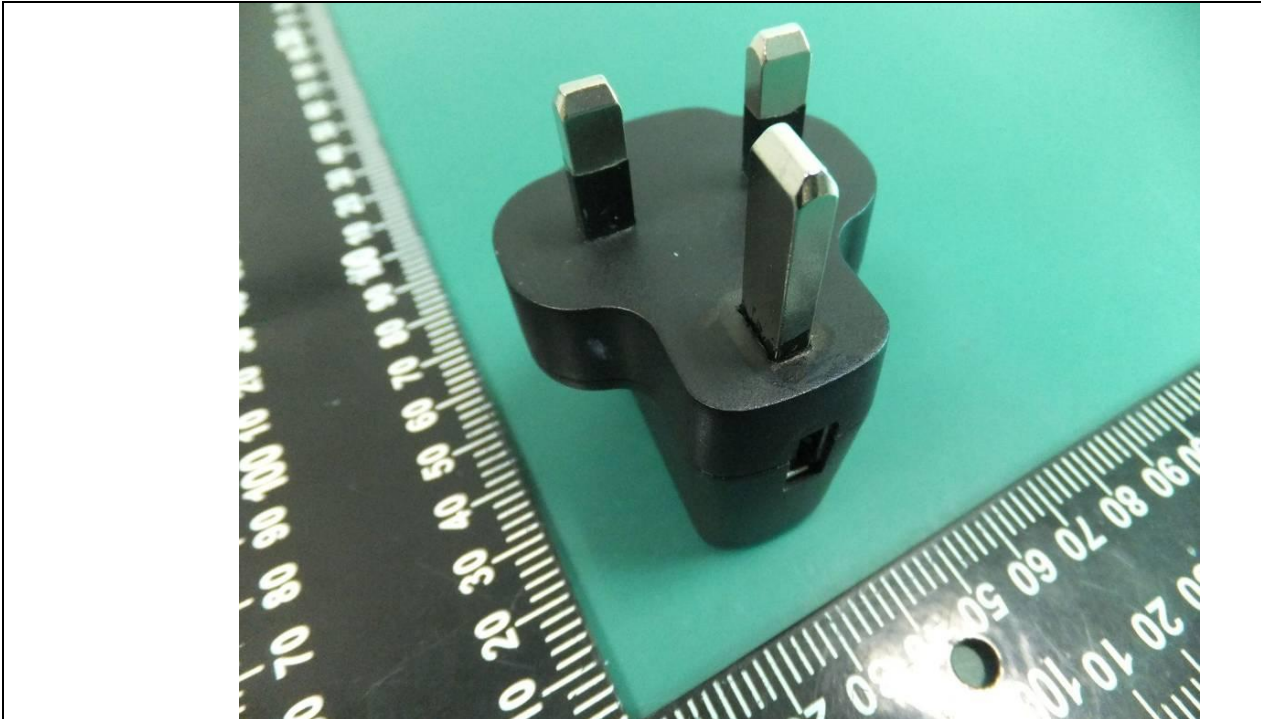


Details of: Overall view 10, DC cord (for UK plug with a brass earth pin)



Appendix C – Photographs of EUT

Details of: Overall view 11, USB port (for UK plug with a brass earth pin)

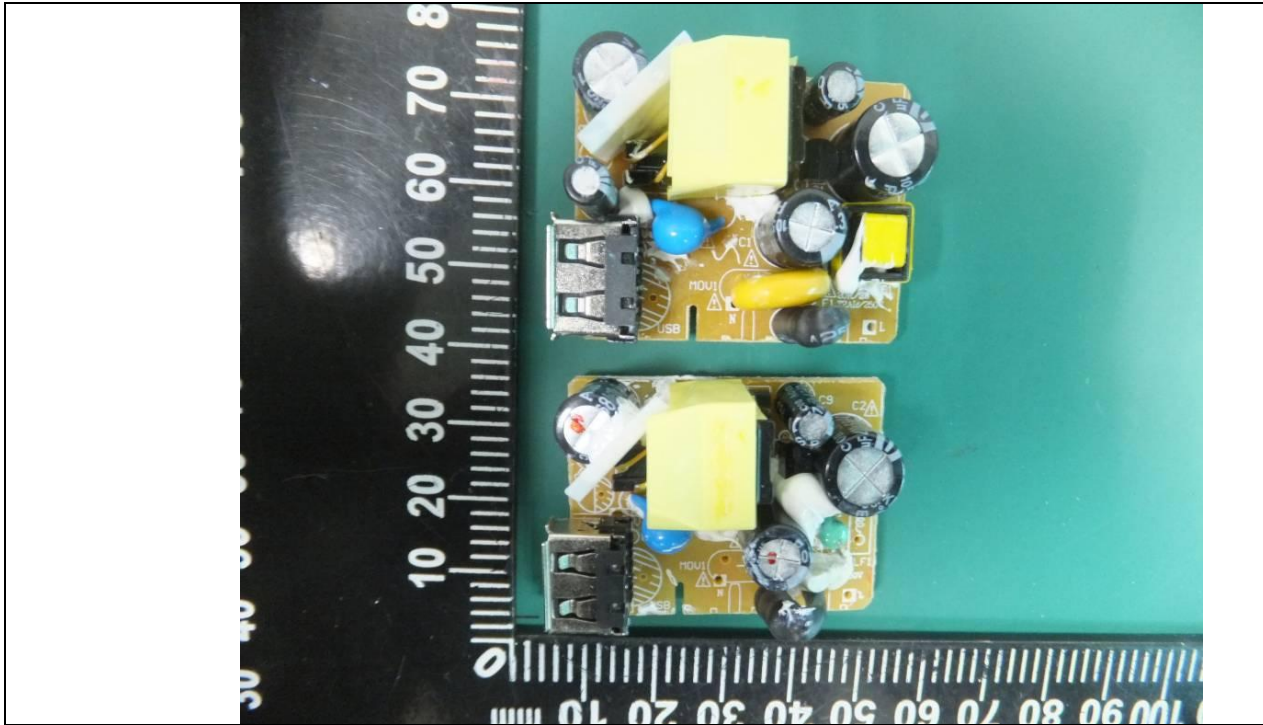


Details of: Components view (DC cord)

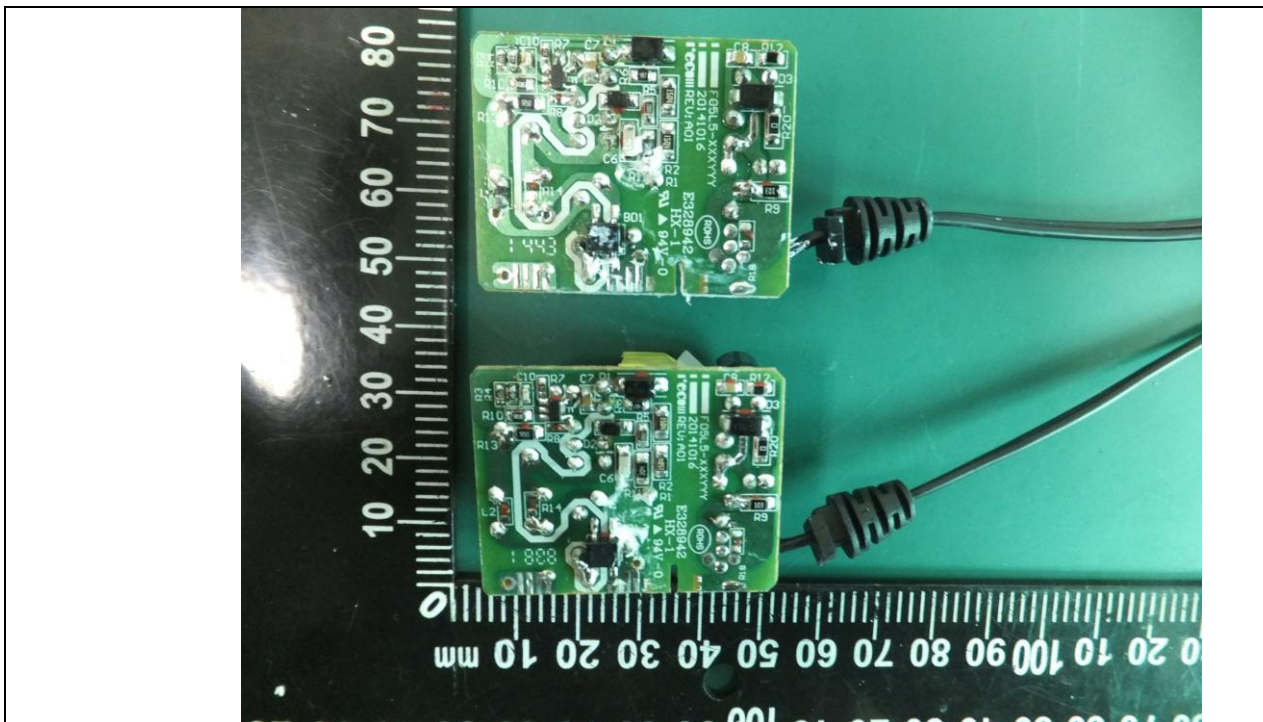


Appendix C – Photographs of EUT

Details of: Components view (USB port)

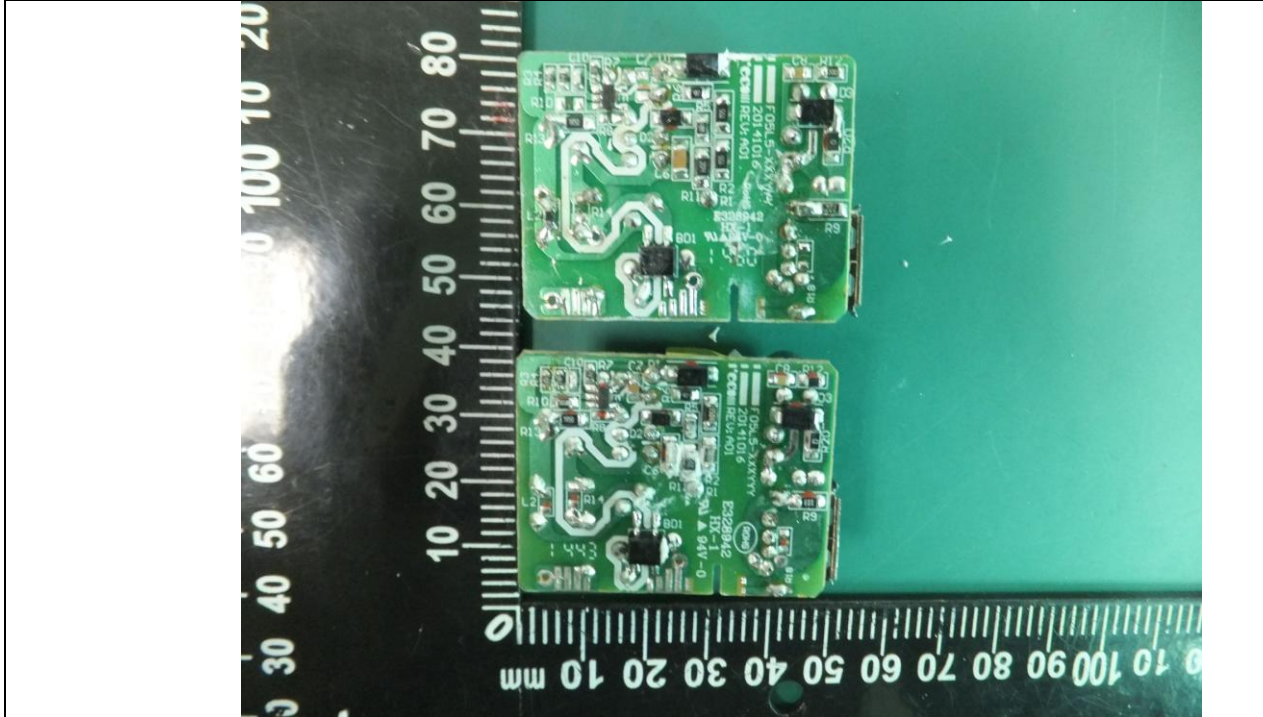


Details of: PCB trace view (DC cord)

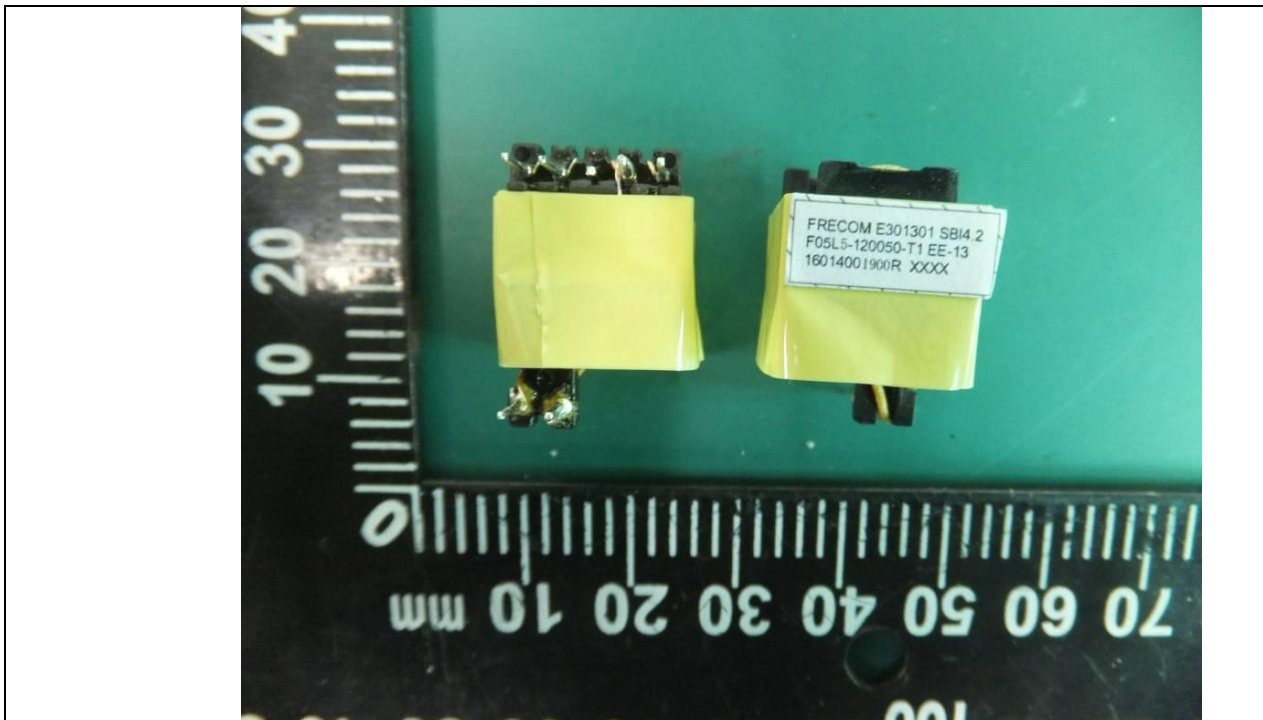


Appendix C – Photographs of EUT

Details of: PCB trace view (USB port)



Details of: Overall view of T1



Appendix C – Photographs of EUT

Details of: Overall view of T1

