

# FCC TEST REPORT

For

**EMV Android Validator**

**Model Number: FX925SF-ING-VWDC-PRE, 011P;  
FX925SF-ING-VPDC-PRE, 011P; FX925SF-ING-VWDC-PRE, 010P;  
FX925SF-ING-VPDC-PRE, 010P**

**FCC ID: 2AGQIFX925F**

**Report Number : WT218003685**

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Inspection  
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## TEST REPORT DECLARATION

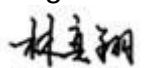
Applicant : FAMOCO SAS  
Address : 59 avenue Victor Hugo Paris, France  
Manufacturer : FAMOCO SAS  
Address : 59 avenue Victor Hugo Paris, France  
EUT Description : EMV Android Validator  
Model No. : FX925SF-ING-VWDC-PRE, 011P;  
FX925SF-ING-VPDC-PRE, 011P;  
FX925SF-ING-VWDC-PRE, 010P;  
FX925SF-ING-VPDC-PRE, 010P  
Trade mark : Famoco  
Serial Number : /  
FCC ID : 2AGQIFX925F

Test Standards:

### FCC Part 15 Subpart B (2020)

The EUT described above is tested by Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory to determine the maximum emissions from the EUT. Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory is assumed full responsibility for the accuracy of the test results.

The test report is valid for above tested sample only and shall not be reproduced in part without written approval of the laboratory.

|                   |                                                                                                          |       |                     |
|-------------------|----------------------------------------------------------------------------------------------------------|-------|---------------------|
| Project Engineer: | <br>(Zhou Fangai 周芳媛) | Date: | <u>Jan.17, 2022</u> |
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| Approved by:      | <br>(Lin Yixiang 林奕翔) | Date: | <u>Jan.17, 2022</u> |

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## 1. TEST RESULTS SUMMARY

Table 1 Test Results Summary

| Test Items         | FCC Rules | Test Results |
|--------------------|-----------|--------------|
| Conducted Emission | 15.107    | Pass         |
| Radiation Emission | 15.109    | Pass         |

Remark: "N/A" means "Not applicable."

## **2. GENERAL INFORMATION**

### **2.1. Report information**

This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that SMQ approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that SMQ in any way guarantees the later performance of the product/equipment.

The sample/s mentioned in this report is/are supplied by Applicant, SMQ therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture or any information supplied.

Additional copies of the report are available to the Applicant at an additional fee. No third part can obtain a copy of this report through SMQ, unless the applicant has authorized SMQ in writing to do so.

The lab will not be liable for any loss or damage resulting for false, inaccurate, inappropriate or incomplete product information provided by the applicant/manufacturer.

### **2.2. Laboratory Accreditation and Relationship to Customer**

The testing report were performed by the Shenzhen Academy of Metrology and quality Inspection EMC Laboratory (Guangdong EMC compliance testing center), in their facilities located at NETC Building, No.4 Tongfa Rd., Xili, Nanshan, Shenzhen, China. At the time of testing, Laboratory is accredited by the following organizations:

China National Accreditation Service for Conformity Assessment (CNAS) accredits the Laboratory for conformance to FCC standards, EMC international standards and EN standards. The Registration Number is CNAS L0579.

The Laboratory is Accredited Testing Laboratory of FCC with Designation number CN1165 and Site registration number 582918.

The Laboratory is registered to perform emission tests with Innovation, Science and Economic Development (ISED), and the registration number is 11177A.

The Laboratory is registered to perform emission tests with VCCI, and the registration number are C-20048, G20076, R-20077, R-20078 and T-20047.

The Laboratory is Accredited Testing Laboratory of American Association for Laboratory Accreditation (A2LA) and certificate number is 3292.01.

### **2.3.Measurement Uncertainty**

Conducted Emission

9 kHz~150 kHz U=3.7dB k=2

150 kHz~30MHz U=3.3dB k=2

Radiated Emission

30MHz~1000MHz U=4.3dB k=2

1GHz~6GHz U=4.6 dB k=2

6GHz~40GHz U=5.1dB k=2

### 3. PRODUCT DESCRIPTION

NOTE: The extreme test conditions for temperature and antenna gain were declared by the manufacturer.

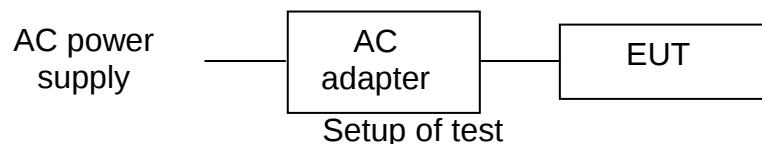
#### 3.1. EUT Description

|                   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description       | : | EMV Android Validator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Manufacturer      | : | FAMOCO SAS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Model Number      | : | FX925SF-ING-VWDC-PRE, 011P;<br>FX925SF-ING-VPDC-PRE, 011P;<br>FX925SF-ING-VWDC-PRE, 010P;<br>FX925SF-ING-VPDC-PRE, 010P                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Operating voltage | : | 10.8V (Low)/12V (Nominal)/ 13.2V (Max)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Test voltage      | : | AC 120V/60Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Software Version  | : | MOLY.LR12A.R2.MP.V44.1.P1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Hardware Version  | : | FX925F-P                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Frequency         | : | GSM850:TX 824MHz~849MHz<br>RX 869MHz~894MHz<br>PCS1900: TX 1850MHz~1910MHz<br>RX 1930MHz~1990MHz<br>WCDMA 850: TX 824MHz~849MHz<br>RX 869MHz~894MHz<br>WCDMA 1700: TX 1710MHz~1755MHz<br>RX 2110MHz~2155MHz<br>WCDMA 1900:TX 1850MHz~1910MHz<br>RX 1930MHz~1990MHz<br>LTE Band 2: TX 1850MHz~1910MHz<br>RX 1930MHz~1990MHz<br>LTE Band 5:TX 824MHz~849MHz<br>RX 869MHz~894MHz<br>LTE Band 7:TX 2500MHz~2570MHz<br>RX 2620MHz~2690MHz<br>LTE Band 12:TX 699MHz~716MHz<br>RX 729MHz~746MHz<br>LTE Band 13:TX 777MHz~787MHz<br>RX 746MHz~756MHz<br>LTE Band 17: TX 704MHz ~ 716MHz<br>RX 734MHz ~ 746MHz<br>LTE Band 38:TX 2570MHz~2620MHz<br>RX 2570MHz~2620MHz<br>LTE Band 41:TX 2555MHz~2655MHz<br>RX 2555MHz~2655MHz<br>2.4GWiFi:2412MHz~2462MHz<br>5GWiFi: U-NII 1(5180~5240 MHz) |

|                       |   |                                                                                                                                                                                                                                                   |
|-----------------------|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       |   | BT:2402MHz~2480MHz                                                                                                                                                                                                                                |
| Type(s) of Modulation | : | GSM850/PCS1900:GMSK 8PSK<br>WCDMA:QPSK<br>LTE:QPSK, 16QAM<br>DSSS (DBPSK, DQPSK, CCK) for 802.11b<br>OFDM (BPSK, QPSK, 16QAM, 64QAM) for 802.11a/g/n<br>OFDM (BPSK, QPSK, 16QAM, 64QAM,256QAM) for 802.11ac<br>Bluetooth: GFSK, pi/4-DQPSK, 8DPSK |
| Antenna Type          | : | GSM/WCDMA/LTE: PIFA ANTENNA<br>699MHz~800MHz: -0.4dBi<br>824MHz~849MHz: -0.39dBi<br>1710MHz~1780MHz: 0.45dBi<br>1850MHz~1910MHz: 0.46dBi<br>2500MHz~2570MHz: 1.17dBi<br>WiFi: PIFA ANTENNA +1.3dBi<br>BT: PIFA ANTENNA +1.3dBi                    |

Remark: This is test report is for application of FCC ID: 2AGQIFX925F, which consists of reuse data of FCC ID: 2AGQIFX205. This report updates the standard FCC Part 15 Subpart B 15.107, 15.109 (2018) to FCC Part 15 Subpart B (2020).See the APPENDIX I Product Equality Declaration for the differences between the new model(FX925SF-ING-VWDC-PRE, 011P; FX925SF-ING-VPDC-PRE, 011P; FX925SF-ING-VWDC-PRE, 010P; FX925SF-ING-VPDC-PRE, 010P) and the original model (FX925F PM, FX925F WM). Considering above changes, all test data were performed in this test report No.: WT218003685.

### 3.2. Block Diagram of EUT Configuration



### 3.3. Operating Condition of EUT

Test mode 1: AC adapter, with battery, and video recording.

Test mode 2: AC adapter, without battery, and video recording.

Test mode 3: DC powered, with battery, and video recording.

Test mode 4: DC powered, without battery, and video recording.

The test mode mentioned above is identified as worst case for this EUT and the test results for this mode are recorded in this report.

The Radiated emission measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT is rotated on three test planes to find out the worst emission (X plane).

### 3.4. Support Equipment List

**Table 2 Support Equipment List**

| Name                                        | Model No.    | S/N | Manufacturer                                  |
|---------------------------------------------|--------------|-----|-----------------------------------------------|
| Adapter for EUT                             | LST-S72U12-A | --- | ShenZhen GoldLister Power Source Co.,Ltd      |
| Rechargeable Li-ion Polymer Battery for EUT | FX205 Series | --- | Zhuhai Greaton Electronic Technology.Co., Ltd |
| DC Battery                                  | ---          | --- | ---                                           |

**Table 3 Support Equipment List**

| Name     | Model No | S/N | Manufacturer | FCC |
|----------|----------|-----|--------------|-----|
| Keyboard | SK-2015  | --  | HP           | DOC |
| Mouse    | MSU1465  | --  | HP           | DOC |

### **3.5.Test Conditions**

Date of re-test : Dec.31, 2021- Jan.04, 2021

Date of EUT Receive : Dec.10, 2021

Temperature: 22℃-24℃

Relative Humidity: 48%-50%

Date of test : Oct.29, 2019-Nov.05, 2019

Date of EUT Receive : Oct.15, 2019

Temperature: 22℃

Relative Humidity: 37%-46%

### **3.6.Modifications**

No modification was made.

#### 4. TEST EQUIPMENT USED

Table 4 Test Equipment

| No.                       | Equipment             | Manufacturer | Model No. | LAST CALIB  | Period |
|---------------------------|-----------------------|--------------|-----------|-------------|--------|
| <b>Conducted Emission</b> |                       |              |           |             |        |
| SB9058/05                 | Test Receiver         | R&S          | ESCI 3    | Sep.24,2021 | 1 Year |
| SB4357                    | AMN                   | R&S          | ENN216    | Aug.25,2021 | 1 Year |
| SB9549                    | Shielded Room         | Albatross    | SR        | Sep.24,2021 | 1 Year |
| <b>Radiated Emission</b>  |                       |              |           |             |        |
| SB17366                   | Test Receiver         | R&S          | ESR26     | Jun.25,2021 | 1 Year |
| SB3955                    | Broadband Antenna     | Schwarzbeck  | VULB9163  | Jan.05,2021 | 1 Year |
| SB13958                   | Horn Antenna          | R&S          | HF907     | Mar.23,2021 | 1 Year |
| SB9555/01                 | Semi Anechoic Chamber | Albatross    | 9×6×6(m)  | Aug.25,2021 | 1 Year |

## 5. CONDUCTED EMISSION TEST

### 5.1. Test Standard and Limit

#### 5.1.1. Test Standard

FCC Part 15: Section 15.107

#### 5.1.2. Test Limit

Table 5 Conducted Emission Test Limit (Class B)

| Frequency        | Power Port limits (dB $\mu$ V) |         |
|------------------|--------------------------------|---------|
|                  | Quasi-peak                     | Average |
| 0.15MHz ~ 0.5MHz | 66~56*                         | 56~46*  |
| 0.5MHz ~ 5 MHz   | 56                             | 46      |
| 5 MHz ~ 30MHz    | 60                             | 50      |

\* Decreasing linearly with logarithm of the frequency

### 5.2. Test Procedure

The EUT is put on a table of non-conducting material that is 80cm high. The vertical conducting wall of shielding is located 40cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI test receiver is used to test the emissions from both sides of AC line. The bandwidth of EMI test receiver is set at 9kHz.

### 5.3. Test Arrangement

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application. The detailed information refers to test picture.

### 5.4. Test Data

The emissions don't show in below are too low against the limits. Refer to the test curves.

**Table 6 Conducted Emission Test Data (mains port)**

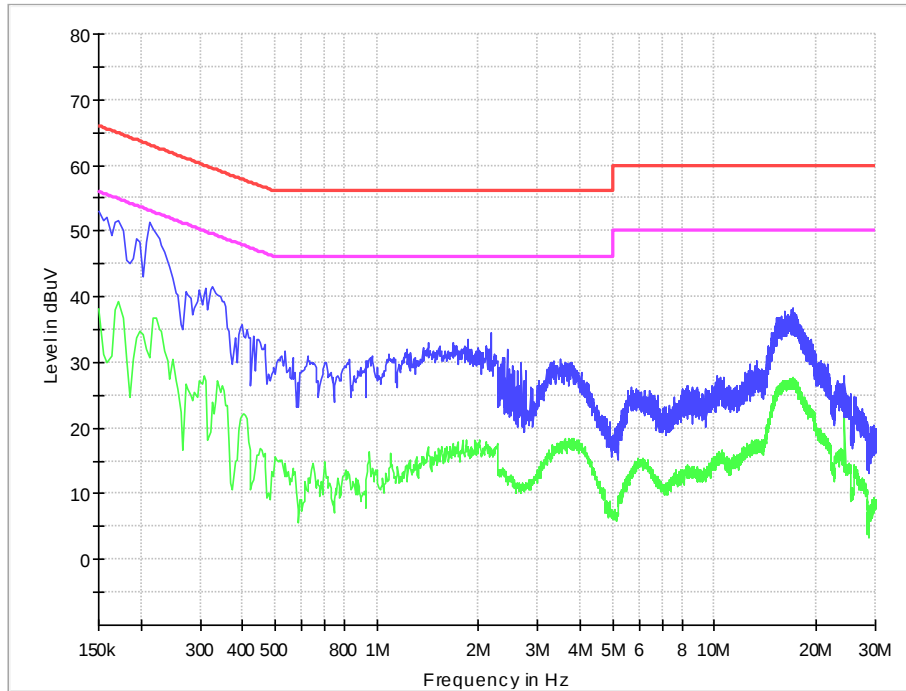
| Model No.: FX925SF-ING-VPDC-PRE, 011P |                    |                              |                         |                                   |                        |                         |                                   |                        |
|---------------------------------------|--------------------|------------------------------|-------------------------|-----------------------------------|------------------------|-------------------------|-----------------------------------|------------------------|
| Test mode: 1                          |                    |                              |                         |                                   |                        |                         |                                   |                        |
| Test Voltage: AC120V                  |                    |                              |                         |                                   |                        |                         |                                   |                        |
|                                       | Frequency<br>(MHz) | Correction<br>Factor<br>(dB) | Quasi-Peak              |                                   |                        | Average                 |                                   |                        |
|                                       |                    |                              | Reading<br>(dB $\mu$ V) | Emission<br>Level<br>(dB $\mu$ V) | Limits<br>(dB $\mu$ V) | Reading<br>(dB $\mu$ V) | Emission<br>Level<br>(dB $\mu$ V) | Limits<br>(dB $\mu$ V) |
| Line                                  | 0.150              | 9.7                          | 40.2                    | 49.9                              | 66                     | 27.9                    | 37.6                              | 56                     |
|                                       | 0.213              | 9.7                          | 38.6                    | 48.3                              | 63.1                   | 26.3                    | 36.0                              | 53.1                   |
|                                       | 0.321              | 9.7                          | 28.2                    | 37.9                              | 59.7                   | 8.8                     | 18.5                              | 49.7                   |
|                                       | 0.537              | 9.8                          | 18.2                    | 28.0                              | 56                     | 4.3                     | 14.1                              | 46                     |
|                                       | 2.184              | 9.9                          | 21.4                    | 31.3                              | 56                     | 6.9                     | 16.8                              | 46                     |
|                                       | 17.101             | 9.9                          | 25.2                    | 35.1                              | 60                     | 16.9                    | 26.8                              | 50                     |
| Neutral                               | 0.150              | 9.7                          | 39.6                    | 49.3                              | 66                     | 24.1                    | 33.8                              | 56                     |
|                                       | 0.199              | 9.7                          | 36.8                    | 46.5                              | 63.7                   | 23.5                    | 33.2                              | 53.7                   |
|                                       | 0.249              | 9.7                          | 30.5                    | 40.2                              | 61.8                   | 19.6                    | 29.3                              | 51.8                   |
|                                       | 0.348              | 9.7                          | 26.6                    | 36.3                              | 59.0                   | 15.4                    | 25.1                              | 49.0                   |
|                                       | 3.588              | 9.9                          | 19.8                    | 29.7                              | 56                     | 8.1                     | 18.0                              | 46                     |
|                                       | 16.988             | 9.9                          | 24.6                    | 34.5                              | 60                     | 17.0                    | 26.9                              | 50                     |

**Table 7 Conducted Emission Test Data (mains port)**

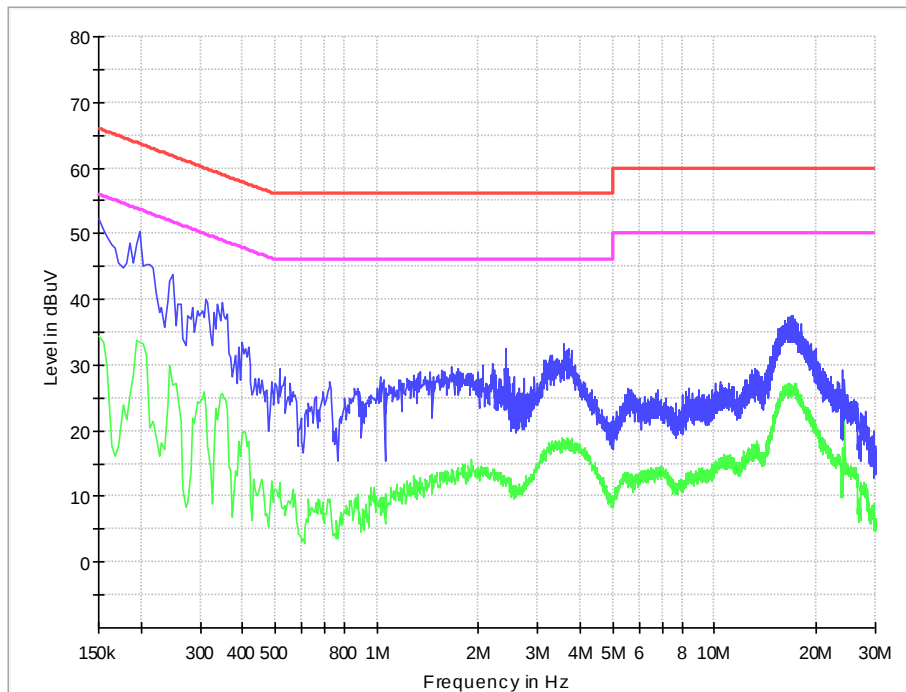
| Model No.: FX925SF-ING-VPDC-PRE, 010P |                    |                              |                         |                                   |                        |                         |                                   |                        |
|---------------------------------------|--------------------|------------------------------|-------------------------|-----------------------------------|------------------------|-------------------------|-----------------------------------|------------------------|
| Test mode: 2                          |                    |                              |                         |                                   |                        |                         |                                   |                        |
| Test Voltage: AC120V                  |                    |                              |                         |                                   |                        |                         |                                   |                        |
|                                       | Frequency<br>(MHz) | Correction<br>Factor<br>(dB) | Quasi-Peak              |                                   |                        | Average                 |                                   |                        |
|                                       |                    |                              | Reading<br>(dB $\mu$ V) | Emission<br>Level<br>(dB $\mu$ V) | Limits<br>(dB $\mu$ V) | Reading<br>(dB $\mu$ V) | Emission<br>Level<br>(dB $\mu$ V) | Limits<br>(dB $\mu$ V) |
| Line                                  | 0.150              | 9.7                          | 38.8                    | 48.5                              | 66                     | 26.5                    | 36.2                              | 56                     |
|                                       | 0.204              | 9.7                          | 34.3                    | 44.0                              | 63.4                   | 25.4                    | 35.1                              | 53.4                   |
|                                       | 0.249              | 9.7                          | 28.6                    | 38.3                              | 61.8                   | 19.6                    | 29.3                              | 51.8                   |
|                                       | 0.339              | 9.7                          | 26.0                    | 35.7                              | 59.2                   | 19.2                    | 28.9                              | 49.2                   |
|                                       | 3.682              | 9.9                          | 18.3                    | 28.2                              | 56                     | 7.6                     | 17.5                              | 46                     |
|                                       | 17.214             | 9.9                          | 24.0                    | 33.9                              | 60                     | 16.8                    | 26.7                              | 50                     |
| Neutral                               | 0.150              | 9.7                          | 35.8                    | 45.5                              | 66                     | 23.8                    | 33.5                              | 56                     |
|                                       | 0.204              | 9.7                          | 35.5                    | 45.2                              | 63.4                   | 25.6                    | 35.3                              | 53.4                   |
|                                       | 0.244              | 9.7                          | 32.3                    | 42.0                              | 62.0                   | 20.3                    | 30.0                              | 52.0                   |
|                                       | 0.303              | 9.7                          | 26.4                    | 36.1                              | 60.2                   | 15.1                    | 24.8                              | 50.2                   |
|                                       | 3.673              | 9.9                          | 20.0                    | 29.9                              | 56                     | 8.4                     | 18.3                              | 46                     |
|                                       | 17.191             | 9.9                          | 25.1                    | 35.0                              | 60                     | 16.3                    | 26.2                              | 50                     |

## Test Mode 1

### Line

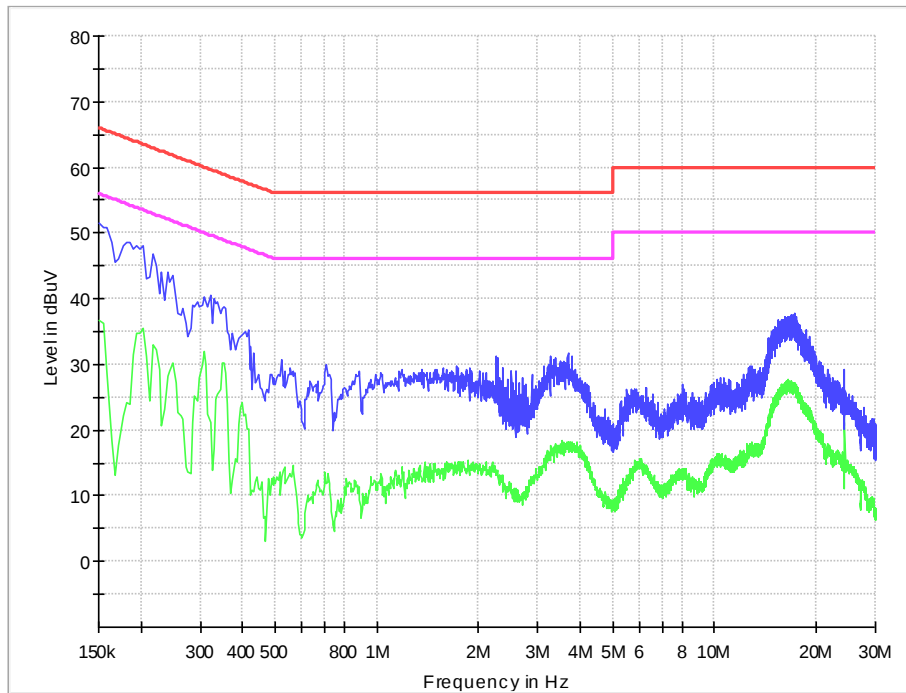


### Neutral

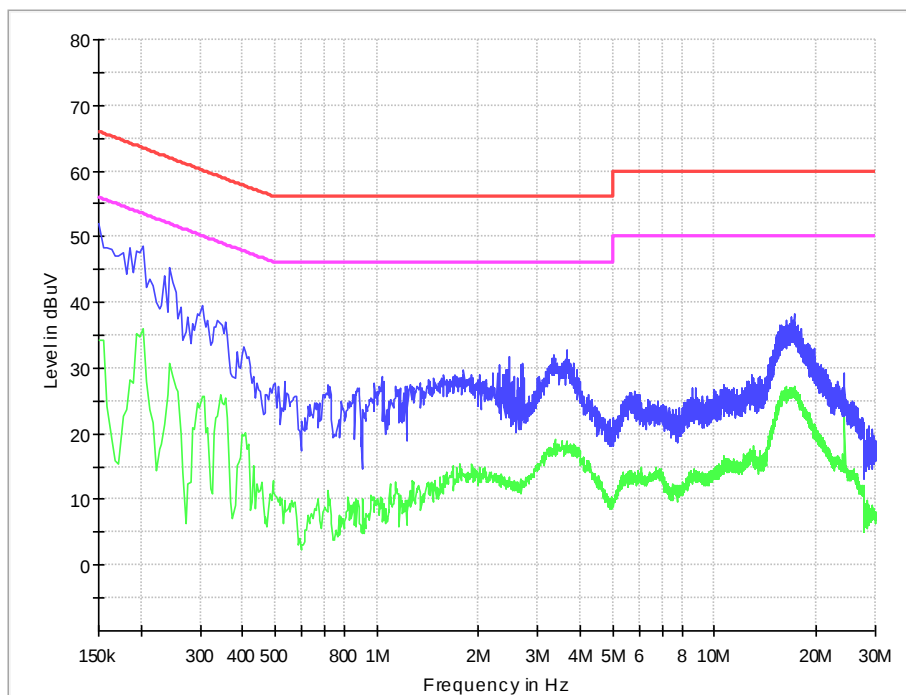


## Test Mode 2

### Line



### Neutral



## 6. RADIATION EMISSION TEST

### 6.1. Test Standard and Limit

#### 6.1.1. Test Standard

FCC Part 15: Section 15.109

#### 6.1.2. Test Limit

Table 8 Radiation Emission Test Limit for FCC (Class B)

| Frequency                                                                                               | Test distance | Limit dB( $\mu$ V/m)                                                 |         |      |
|---------------------------------------------------------------------------------------------------------|---------------|----------------------------------------------------------------------|---------|------|
|                                                                                                         |               | Quasi-peak                                                           | Average | Peak |
| 30MHz~88MHz                                                                                             | <b>3m</b>     | 40                                                                   |         |      |
| 88MHz~216MHz                                                                                            | <b>3m</b>     | 43.5                                                                 |         |      |
| 216MHz~960MHz                                                                                           | <b>3m</b>     | 46                                                                   |         |      |
| 960MHz~1000MHz                                                                                          | <b>3m</b>     | 54                                                                   |         |      |
| >1000MHz                                                                                                | <b>3m</b>     |                                                                      | 54      | 74   |
| <b>Conditional testing procedure for above 1 GHz :</b>                                                  |               |                                                                      |         |      |
| <b>Highest frequency generated or used in the device or on which the device operates or tunes (MHz)</b> |               | <b>Upper frequency of measurement range (MHz)</b>                    |         |      |
| Below 1.705                                                                                             |               | 30                                                                   |         |      |
| 1.705~108                                                                                               |               | 1000                                                                 |         |      |
| 108~500                                                                                                 |               | 2000                                                                 |         |      |
| 500~1000                                                                                                |               | 5000                                                                 |         |      |
| Above 1000                                                                                              |               | 5th harmonic of the highest frequency or 40 GHz, whichever is lower. |         |      |

\* The lower limit shall apply at the transition frequency.

\* The test distance is 3m.

### 6.2. Test Procedure

The EUT is placed on a turntable, which is 0.8 meter above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set **3 meters** away from the receiving antenna, which is mounted on an antenna tower. The antenna can move up and down between 1 to 4 meters to find out the maximum emission level. Broadband antenna is used as a receiving antenna. Both horizontal and vertical polarization of the antenna is set on test.

RBW = 100 kHz (less than or equal to 1 GHz); 1 MHz (above 1 GHz)

VBW  $\geq$  3 x RBW

Detector = Peak & Quasi-Peak (frequency range 30 MHz to 1 GHz);

Peak & Average (frequency range above 1 GHz);

Changing VBW to 10 Hz for average measurement

The use of a higher-than-specified video bandwidth produces a conservative measurement result.

### 6.3. Test Arrangement

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application. The detailed information refers to test picture.

### 6.4. Test Data

The emissions don't show in below are too low against the limits. Refer to the test curves.

Table 9 Radiated Emission Test Data

| Model No.: FX925SF-ING-VPDC-PRE, 011P |                         |                     |                        |                      |                |                      |             |      |
|---------------------------------------|-------------------------|---------------------|------------------------|----------------------|----------------|----------------------|-------------|------|
| Test mode: 1                          |                         |                     |                        |                      |                |                      |             |      |
| Test Voltage: AC120V                  |                         |                     |                        |                      |                |                      |             |      |
| Frequency (MHz)                       | Cable Loss +preamp (dB) | Antenna Factor (dB) | Reading (dB $\mu$ V/m) | Level (dB $\mu$ V/m) | Polarity (H/V) | Limit (dB $\mu$ V/m) | Margin (dB) | Note |
| 240.102                               | 1.9                     | 12.1                | 24.8                   | 38.8                 | Vertical       | 46                   | 7.2         | QP   |
| 479.983                               | 2.6                     | 15.6                | 15.4                   | 33.6                 | Vertical       | 46                   | 12.4        | QP   |
| 960.036                               | 3.9                     | 21.1                | 10.1                   | 35.1                 | Vertical       | 54                   | 18.9        | QP   |
| 120.016                               | 1.3                     | 10.5                | 19.9                   | 31.7                 | Horizontal     | 43.5                 | 11.8        | QP   |
| 240.102                               | 1.9                     | 12.1                | 21.2                   | 35.2                 | Horizontal     | 46                   | 10.8        | QP   |
| 360.091                               | 2.3                     | 14.3                | 15.0                   | 31.6                 | Horizontal     | 46                   | 14.4        | QP   |
| 720.349                               | 3.4                     | 18.8                | 14.5                   | 36.7                 | Horizontal     | 46                   | 9.3         | QP   |
| 960.036                               | 3.9                     | 21.1                | 13.5                   | 38.5                 | Horizontal     | 54                   | 15.5        | QP   |
| 1324.700                              | -40.8                   | 24.3                | 50.8                   | 34.3                 | Horizontal     | 74                   | 39.7        | PK   |
| 1438.600                              | -40.8                   | 25.1                | 55.2                   | 39.5                 | Horizontal     | 74                   | 34.5        | PK   |
| 17517.200                             | -32.5                   | 42.9                | 50.9                   | 61.3                 | Horizontal     | 74                   | 12.7        | PK   |
| 1438.600                              | -40.8                   | 25.1                | 54.0                   | 38.3                 | Vertical       | 74                   | 35.7        | PK   |
| 1919.700                              | -40.4                   | 26.9                | 53.1                   | 39.6                 | Vertical       | 74                   | 34.4        | PK   |
| 17751.800                             | -31.4                   | 43.1                | 50.1                   | 61.8                 | Vertical       | 74                   | 12.2        | AV   |
| 1324.700                              | -40.8                   | 24.3                | 41.7                   | 25.2                 | Horizontal     | 54                   | 28.8        | AV   |
| 1438.600                              | -40.8                   | 25.1                | 43.8                   | 28.1                 | Horizontal     | 54                   | 25.9        | AV   |
| 17517.200                             | -32.5                   | 42.9                | 38.1                   | 48.5                 | Horizontal     | 54                   | 5.5         | AV   |
| 1438.600                              | -40.8                   | 25.1                | 45.8                   | 30.1                 | Vertical       | 54                   | 23.9        | AV   |
| 1919.700                              | -40.4                   | 26.9                | 44.8                   | 31.3                 | Vertical       | 54                   | 22.7        | AV   |
| 17751.800                             | -31.4                   | 43.1                | 36.9                   | 48.6                 | Vertical       | 54                   | 5.4         | AV   |

Table 10 Radiated Emission Test Data

| Model No.: FX925SF-ING-VPDC-PRE, 010P |                         |                     |                        |                      |                |                      |             |      |
|---------------------------------------|-------------------------|---------------------|------------------------|----------------------|----------------|----------------------|-------------|------|
| Test mode: 2                          |                         |                     |                        |                      |                |                      |             |      |
| Test Voltage: AC120V                  |                         |                     |                        |                      |                |                      |             |      |
| Frequency (MHz)                       | Cable Loss +preamp (dB) | Antenna Factor (dB) | Reading (dB $\mu$ V/m) | Level (dB $\mu$ V/m) | Polarity (H/V) | Limit (dB $\mu$ V/m) | Margin (dB) | Note |
| 240.102                               | 1.9                     | 12.1                | 29.5                   | 43.5                 | Horizontal     | 46                   | 2.5         | QP   |

|           |       |      |      |      |            |      |      |    |
|-----------|-------|------|------|------|------------|------|------|----|
| 720.349   | 3.4   | 18.8 | 11.4 | 33.6 | Horizontal | 46   | 12.4 | QP |
| 960.036   | 3.9   | 21.1 | 11.7 | 36.7 | Horizontal | 54   | 17.3 | QP |
| 120.016   | 1.3   | 10.5 | 16.6 | 28.4 | Horizontal | 43.5 | 15.1 | QP |
| 215.949   | 1.7   | 10.6 | 18.4 | 30.7 | Horizontal | 46   | 12.8 | QP |
| 240.102   | 1.9   | 12.1 | 23.5 | 37.5 | Vertical   | 46   | 8.5  | QP |
| 479.983   | 2.6   | 15.6 | 13.9 | 32.1 | Vertical   | 46   | 13.9 | QP |
| 960.036   | 3.9   | 21.1 | 11.6 | 36.6 | Vertical   | 54   | 17.4 | QP |
| 1438.600  | -40.8 | 25.1 | 52.6 | 36.9 | Vertical   | 74   | 37.1 | PK |
| 1919.700  | -40.4 | 26.9 | 52.2 | 38.7 | Vertical   | 74   | 35.3 | PK |
| 16922.200 | -32.3 | 42.2 | 51.8 | 61.7 | Vertical   | 74   | 12.3 | PK |
| 1438.600  | -40.8 | 25.1 | 49.4 | 33.7 | Horizontal | 74   | 40.3 | PK |
| 1919.700  | -40.4 | 26.9 | 52.4 | 38.9 | Horizontal | 74   | 35.1 | PK |
| 17527.400 | -32.7 | 42.9 | 49.9 | 60.1 | Horizontal | 74   | 13.9 | PK |
| 1438.600  | -40.8 | 25.1 | 40.8 | 25.1 | Vertical   | 54   | 28.9 | AV |
| 1919.700  | -40.4 | 26.9 | 42.4 | 28.9 | Vertical   | 54   | 25.1 | AV |
| 16922.200 | -32.3 | 42.2 | 38.3 | 48.2 | Vertical   | 54   | 5.8  | AV |
| 1438.600  | -40.8 | 25.1 | 42.6 | 26.9 | Horizontal | 54   | 27.1 | AV |
| 1919.700  | -40.4 | 26.9 | 42.8 | 29.3 | Horizontal | 54   | 24.7 | AV |
| 17527.400 | -32.7 | 42.9 | 39.4 | 49.6 | Horizontal | 54   | 4.4  | AV |

Table 11 Radiated Emission Test Data

| Model No.: FX925SF-ING-VPDC-PRE, 011P |                         |                     |                  |                |                |                |             |      |
|---------------------------------------|-------------------------|---------------------|------------------|----------------|----------------|----------------|-------------|------|
| Test mode: 3                          |                         |                     |                  |                |                |                |             |      |
| Test Voltage: DC12V                   |                         |                     |                  |                |                |                |             |      |
| Frequency (MHz)                       | Cable Loss +preamp (dB) | Antenna Factor (dB) | Reading (dBµV/m) | Level (dBµV/m) | Polarity (H/V) | Limit (dBµV/m) | Margin (dB) | Note |
| 240.102                               | 1.9                     | 12.1                | 27.9             | 41.9           | Horizontal     | 46             | 4.1         | QP   |
| 360.091                               | 2.3                     | 14.3                | 16.7             | 33.3           | Horizontal     | 46             | 12.7        | QP   |
| 720.309                               | 3.4                     | 18.8                | 9.9              | 32.1           | Horizontal     | 46             | 13.9        | QP   |
| 960.036                               | 3.9                     | 21.1                | 9.6              | 34.6           | Horizontal     | 54             | 19.4        | QP   |
| 120.016                               | 1.3                     | 10.5                | 17.3             | 29.1           | Vertical       | 43.5           | 14.4        | QP   |
| 240.102                               | 1.9                     | 12.1                | 24.5             | 38.5           | Vertical       | 46             | 7.5         | QP   |
| 479.983                               | 2.6                     | 15.6                | 13.6             | 31.8           | Vertical       | 46             | 14.2        | QP   |
| 960.036                               | 3.9                     | 21.1                | 8.9              | 33.9           | Vertical       | 54             | 20.1        | QP   |
| 1438.600                              | -40.8                   | 25.1                | 53.5             | 37.8           | Vertical       | 74             | 36.2        | PK   |
| 1919.700                              | -40.4                   | 26.9                | 52.4             | 38.9           | Vertical       | 74             | 35.1        | PK   |
| 17292.800                             | -32.1                   | 42.5                | 50.9             | 61.3           | Vertical       | 74             | 12.7        | PK   |
| 1324.700                              | -40.8                   | 24.3                | 50.4             | 33.9           | Horizontal     | 74             | 40.1        | PK   |
| 1438.600                              | -40.8                   | 25.1                | 53.2             | 37.5           | Horizontal     | 74             | 36.5        | PK   |
| 17794.300                             | -31.2                   | 43.1                | 48.5             | 60.4           | Horizontal     | 74             | 13.6        | PK   |
| 1438.600                              | -40.8                   | 25.1                | 38.8             | 23.1           | Vertical       | 54             | 30.9        | AV   |
| 1919.700                              | -40.4                   | 26.9                | 37.7             | 24.2           | Vertical       | 54             | 29.8        | AV   |

|           |       |      |      |      |            |    |      |    |
|-----------|-------|------|------|------|------------|----|------|----|
| 17292.800 | -32.1 | 42.5 | 39.3 | 49.7 | Vertical   | 54 | 4.3  | AV |
| 1324.700  | -40.8 | 24.3 | 42.1 | 25.6 | Horizontal | 54 | 28.4 | AV |
| 1438.600  | -40.8 | 25.1 | 43.5 | 27.8 | Horizontal | 54 | 26.2 | AV |
| 17794.300 | -31.2 | 43.1 | 36.0 | 47.9 | Horizontal | 54 | 6.1  | AV |

Table 12 Radiated Emission Test Data

| Model No.: FX925SF-ING-VPDC-PRE, 010P |                         |                     |                  |                |                |                |             |      |
|---------------------------------------|-------------------------|---------------------|------------------|----------------|----------------|----------------|-------------|------|
| Test mode: 4                          |                         |                     |                  |                |                |                |             |      |
| Test Voltage: DC12V                   |                         |                     |                  |                |                |                |             |      |
| Frequency (MHz)                       | Cable Loss +preamp (dB) | Antenna Factor (dB) | Reading (dBμV/m) | Level (dBμV/m) | Polarity (H/V) | Limit (dBμV/m) | Margin (dB) | Note |
| 240.102                               | 1.9                     | 12.1                | 22.8             | 36.8           | Vertical       | 46             | 9.2         | QP   |
| 479.983                               | 2.6                     | 15.6                | 13.6             | 31.8           | Vertical       | 46             | 14.2        | QP   |
| 960.036                               | 3.9                     | 21.1                | 9.2              | 34.2           | Vertical       | 54             | 19.8        | QP   |
| 120.016                               | 1.3                     | 10.5                | 17.6             | 29.4           | Horizontal     | 43.5           | 14.1        | QP   |
| 215.949                               | 1.7                     | 10.6                | 17.8             | 30.1           | Horizontal     | 43.5           | 13.4        | QP   |
| 240.102                               | 1.9                     | 12.1                | 26.8             | 40.8           | Horizontal     | 46             | 5.2         | QP   |
| 720.349                               | 3.4                     | 18.8                | 15.5             | 37.7           | Horizontal     | 46             | 8.3         | QP   |
| 960.036                               | 3.9                     | 21.1                | 12.9             | 37.9           | Horizontal     | 54             | 16.1        | QP   |
| 1198.900                              | -41.0                   | 24.4                | 51.9             | 35.3           | Vertical       | 74             | 38.7        | PK   |
| 1324.700                              | -40.8                   | 24.3                | 53.1             | 36.6           | Vertical       | 74             | 37.4        | PK   |
| 1438.600                              | -40.8                   | 25.1                | 51.0             | 35.3           | Vertical       | 74             | 38.7        | PK   |
| 17529.100                             | -32.7                   | 42.9                | 51.7             | 61.9           | Horizontal     | 74             | 12.1        | PK   |
| 1198.900                              | -41.0                   | 24.4                | 49.8             | 33.2           | Horizontal     | 74             | 40.8        | PK   |
| 1438.600                              | -40.8                   | 25.1                | 53.4             | 37.7           | Horizontal     | 74             | 36.3        | PK   |
| 17580.100                             | -33.2                   | 42.9                | 51.2             | 60.9           | Horizontal     | 74             | 13.1        | PK   |
| 1198.900                              | -41.0                   | 24.4                | 37.1             | 20.5           | Vertical       | 54             | 33.5        | AV   |
| 1324.700                              | -40.8                   | 24.3                | 37.9             | 21.4           | Vertical       | 54             | 32.6        | AV   |
| 1438.600                              | -40.8                   | 25.1                | 37.9             | 22.2           | Vertical       | 54             | 31.8        | AV   |
| 17529.100                             | -32.7                   | 42.9                | 37.9             | 48.1           | Horizontal     | 54             | 5.9         | AV   |
| 1198.900                              | -41.0                   | 24.4                | 37.9             | 21.3           | Horizontal     | 54             | 32.7        | AV   |
| 1438.600                              | -40.8                   | 25.1                | 38.9             | 23.2           | Horizontal     | 54             | 30.8        | AV   |
| 17580.100                             | -33.2                   | 42.9                | 39.6             | 49.3           | Horizontal     | 54             | 4.7         | AV   |

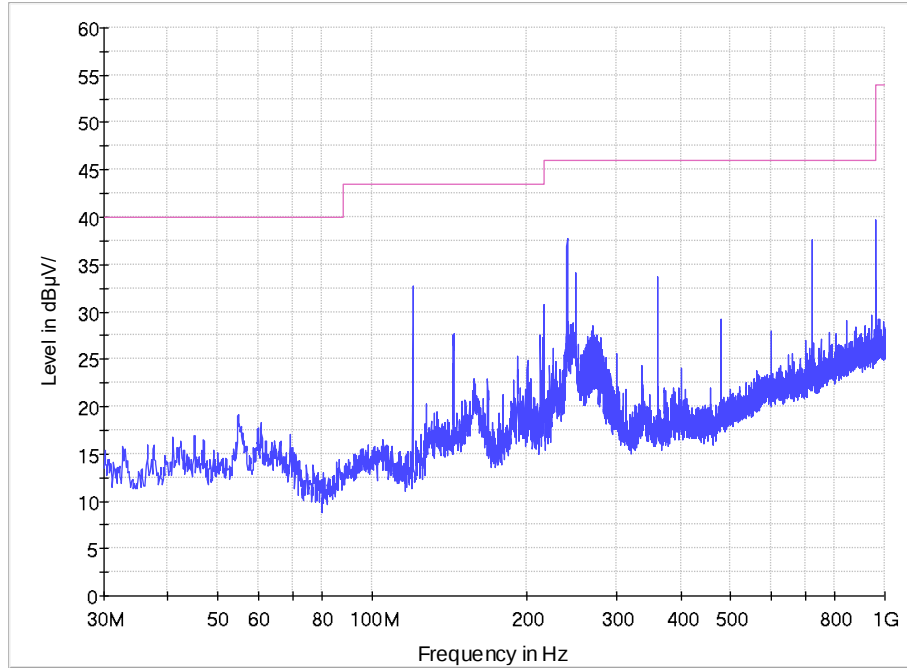
Remark: Emission level (dBuV) =Read Value (dBuV/m) + Antenna Factor (dB) + Cable Loss +preamp (dB)

Test Mode 1

30MHz-1GHz

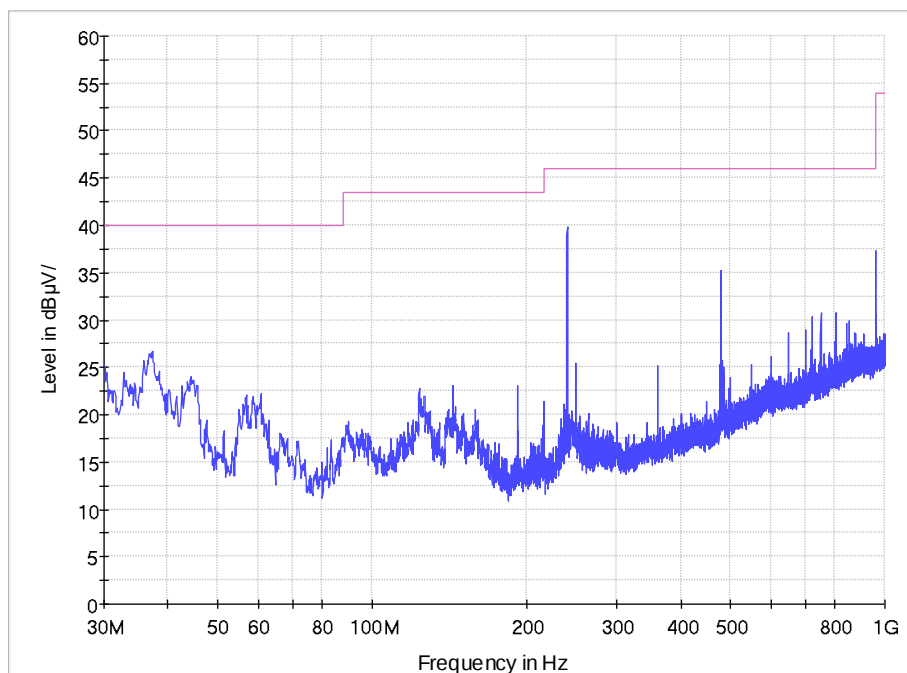
Horizontal

ESR26 Field strength 30M-1GHz



Vertical

ESR26 Field strength 30M-1GHz

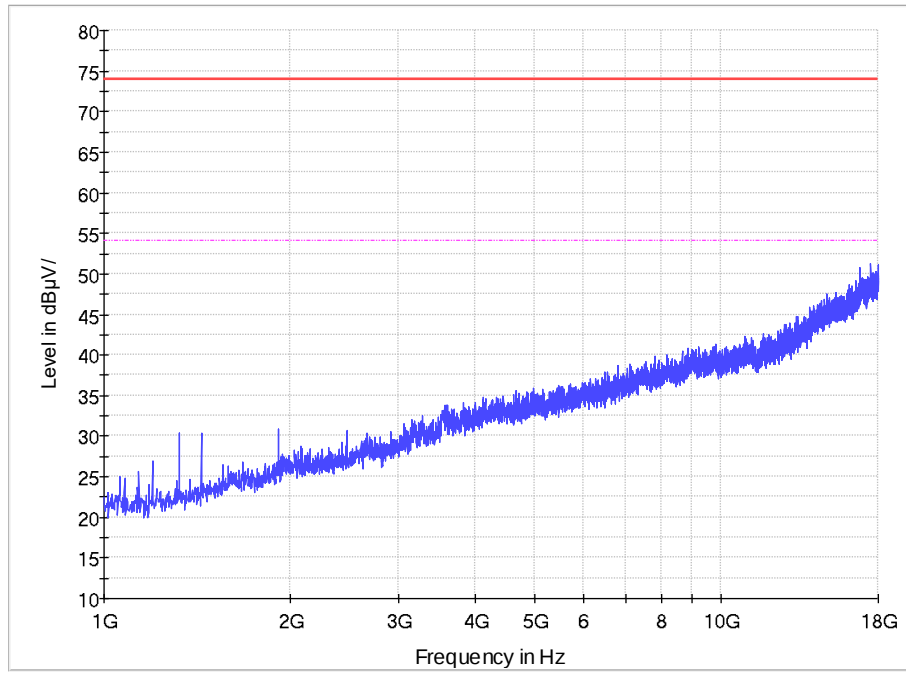


## Test Mode 1

1GHz-18GHz

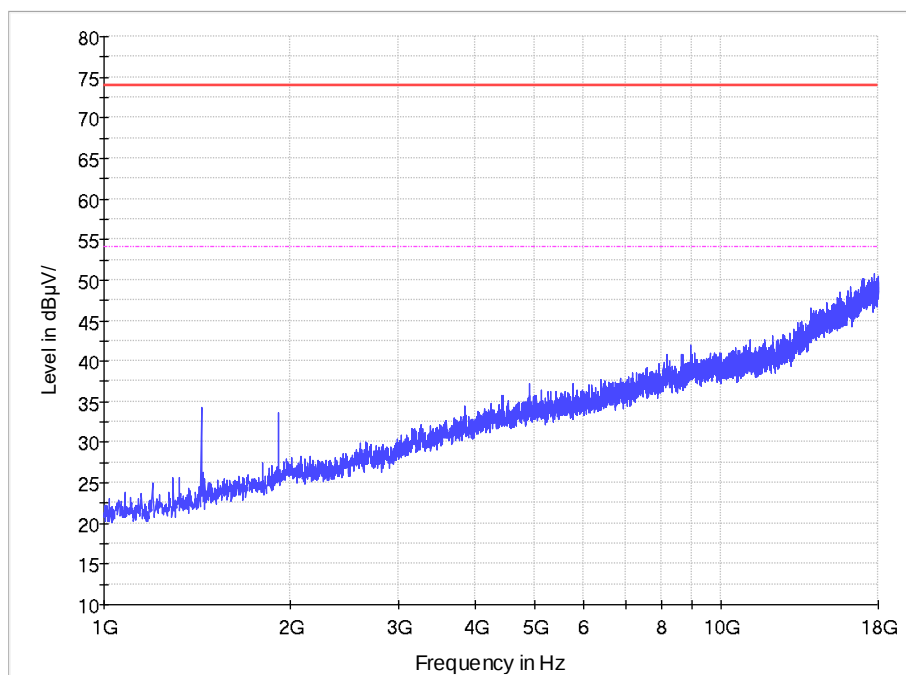
Horizontal

ESR26 Field strength 1-18GHz



Vertical

ESR26 Field strength 1-18GHz

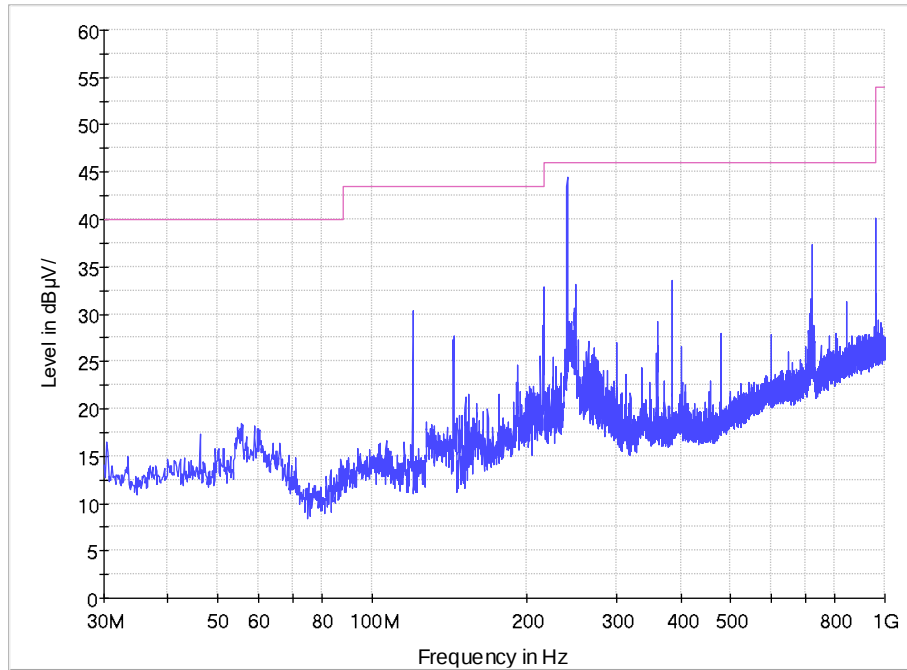


Test Mode 2

30MHz-1GHz

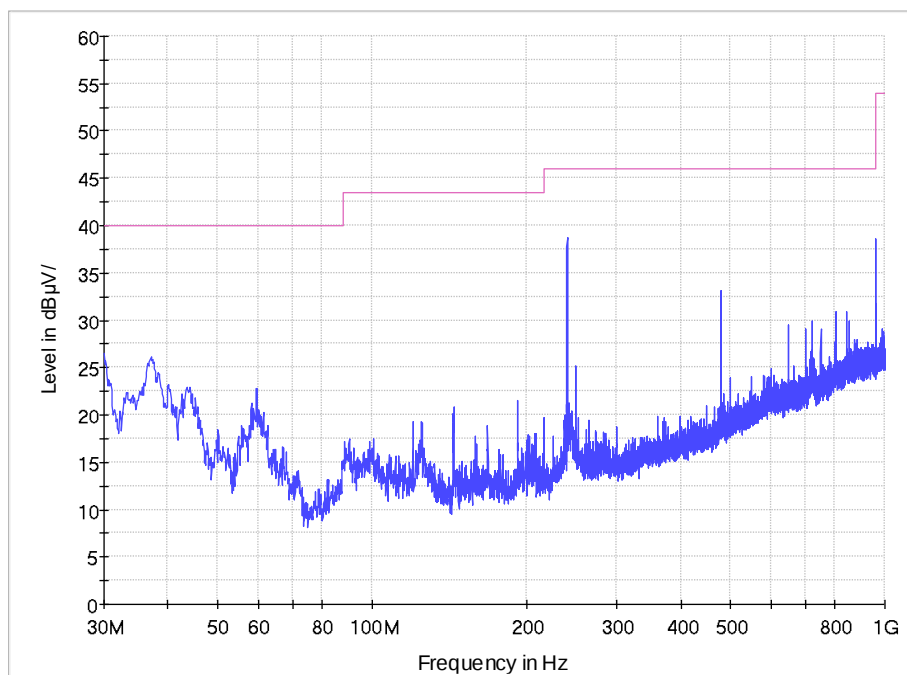
Horizontal

ESR26 Field strength 30M-1GHz



Vertical

ESR26 Field strength 30M-1GHz

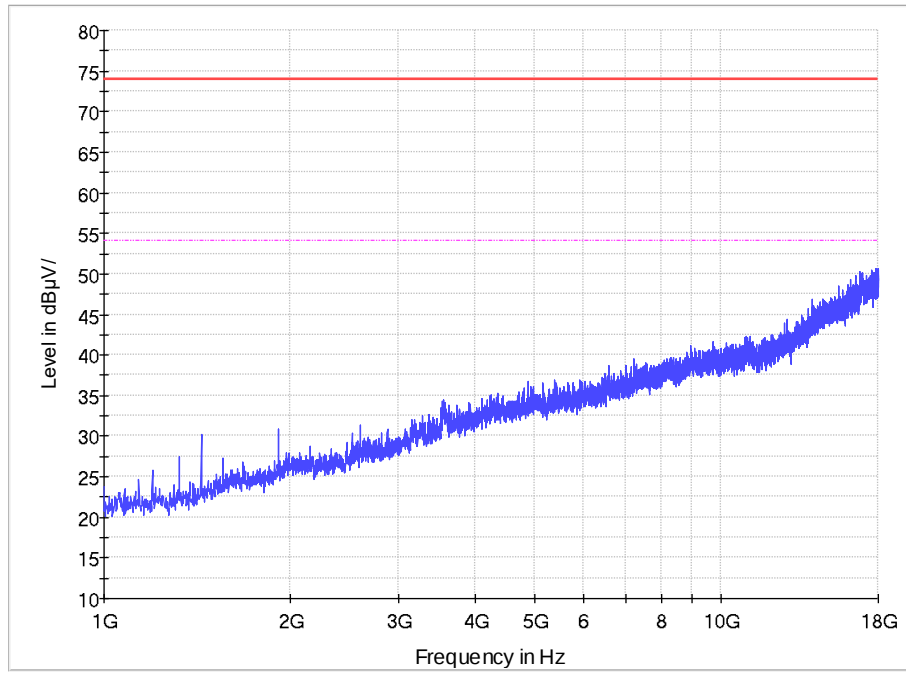


## Test Mode 2

1GHz-18GHz

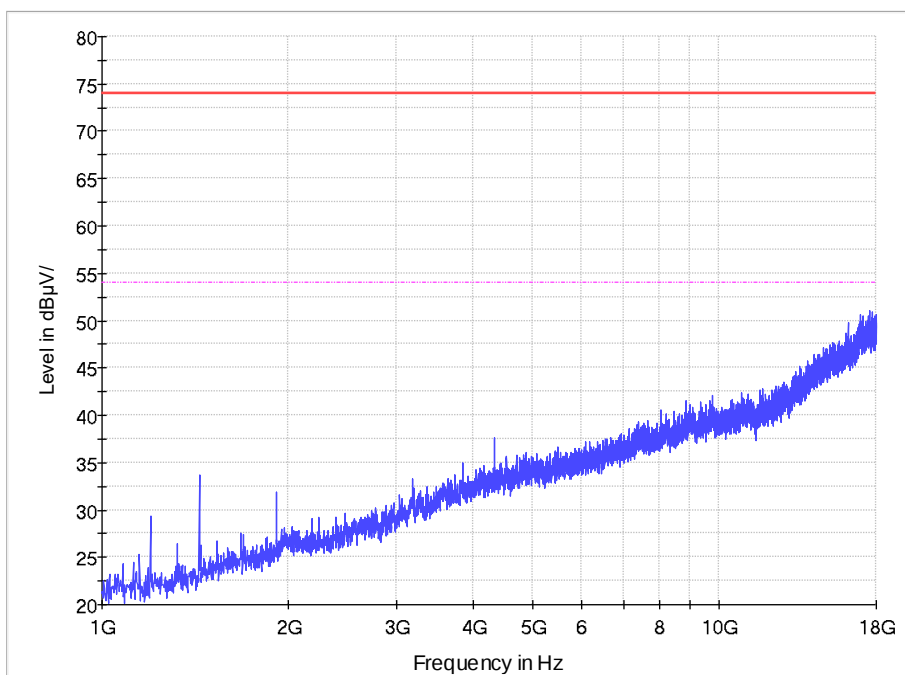
Horizontal

ESR26 Field strength 1-18GHz



Vertical

ESR26 Field strength 1-18GHz

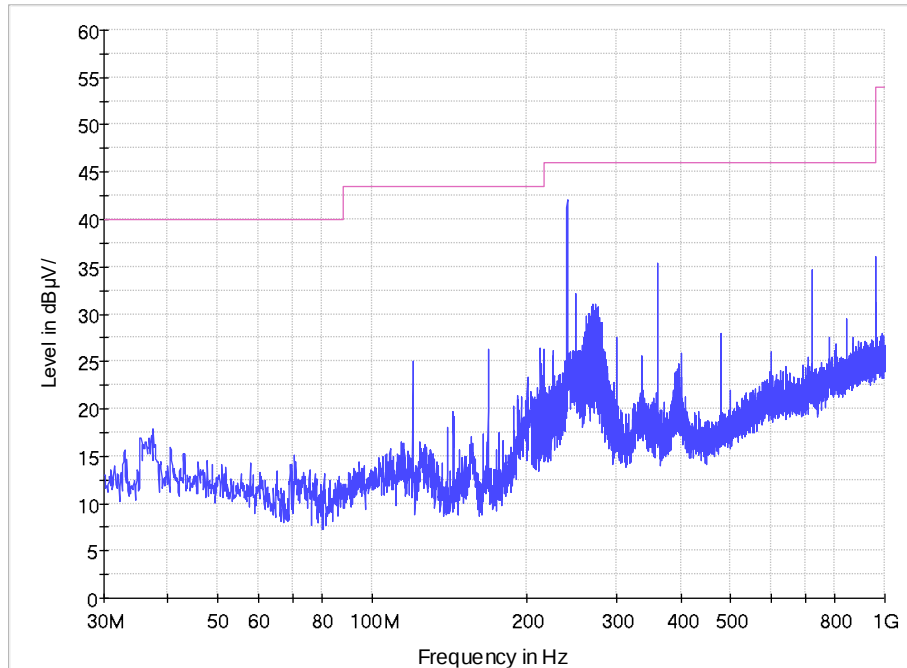


Test Mode 3

30MHz-1GHz

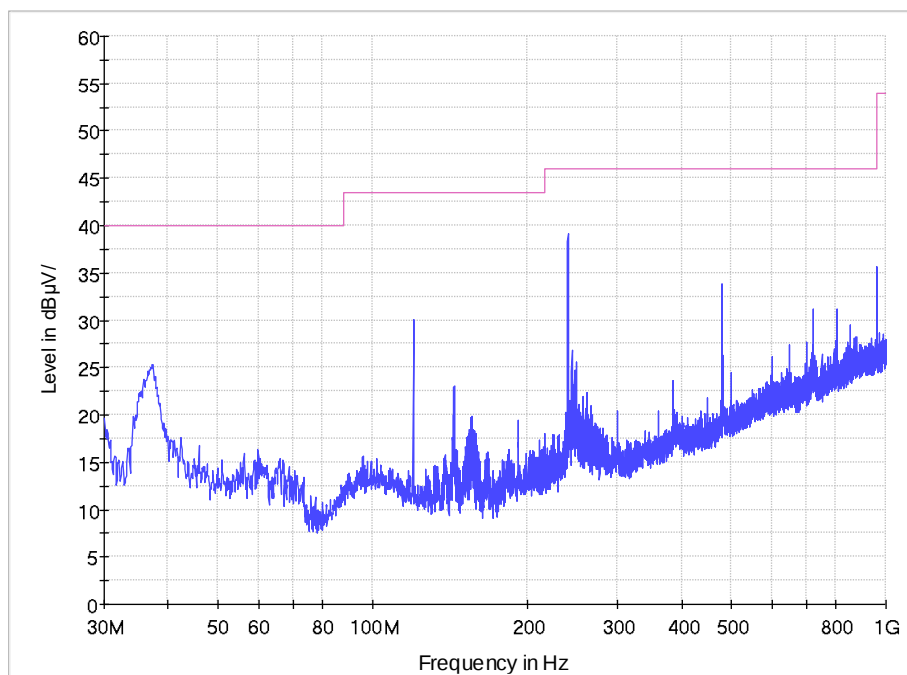
Horizontal

ESR26 Field strength 30M-1GHz



Vertical

ESR26 Field strength 30M-1GHz

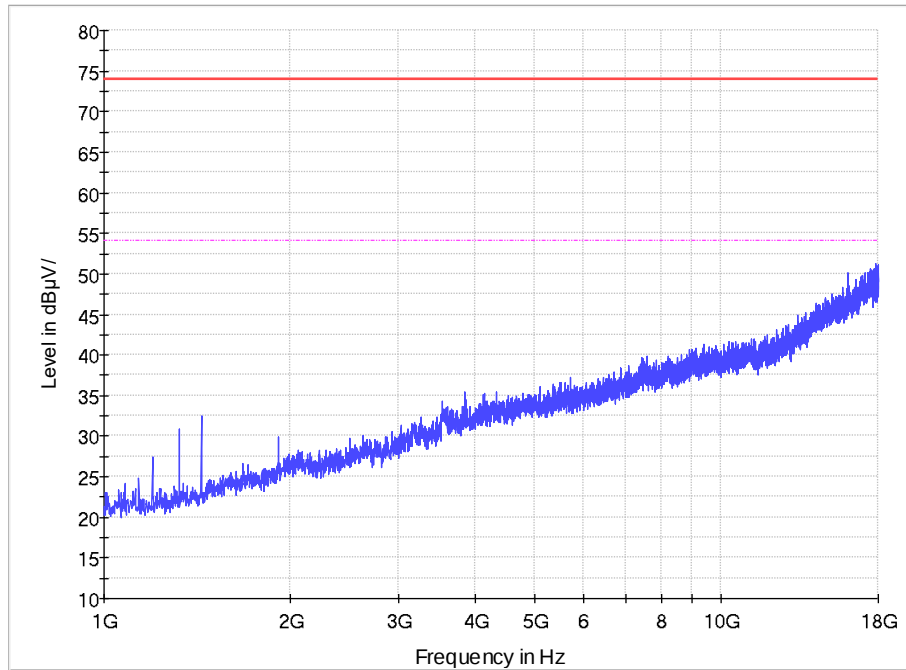


## Test Mode 3

1GHz-18GHz

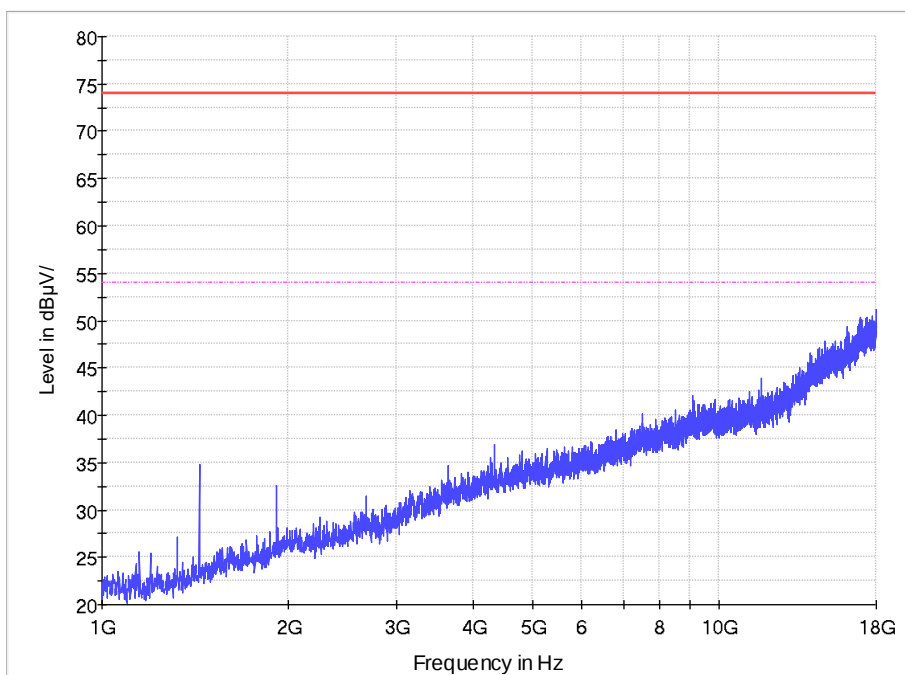
Horizontal

ESR26 Field strength 1-18GHz



Vertical

ESR26 Field strength 1-18GHz

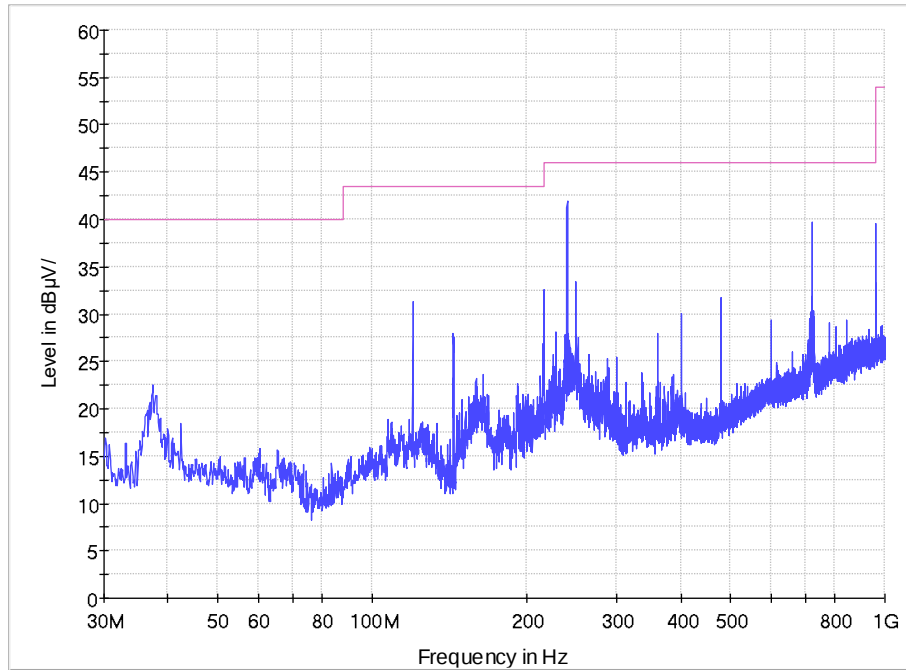


Test Mode 4

30MHz-1GHz

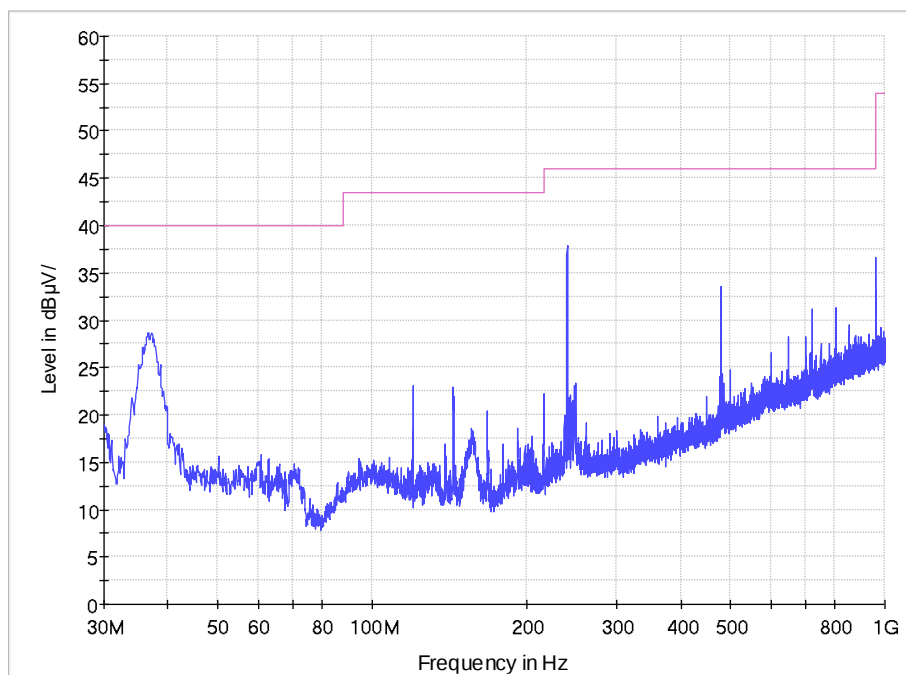
Horizontal

ESR26 Field strength 30M-1GHz



Vertical

ESR26 Field strength 30M-1GHz

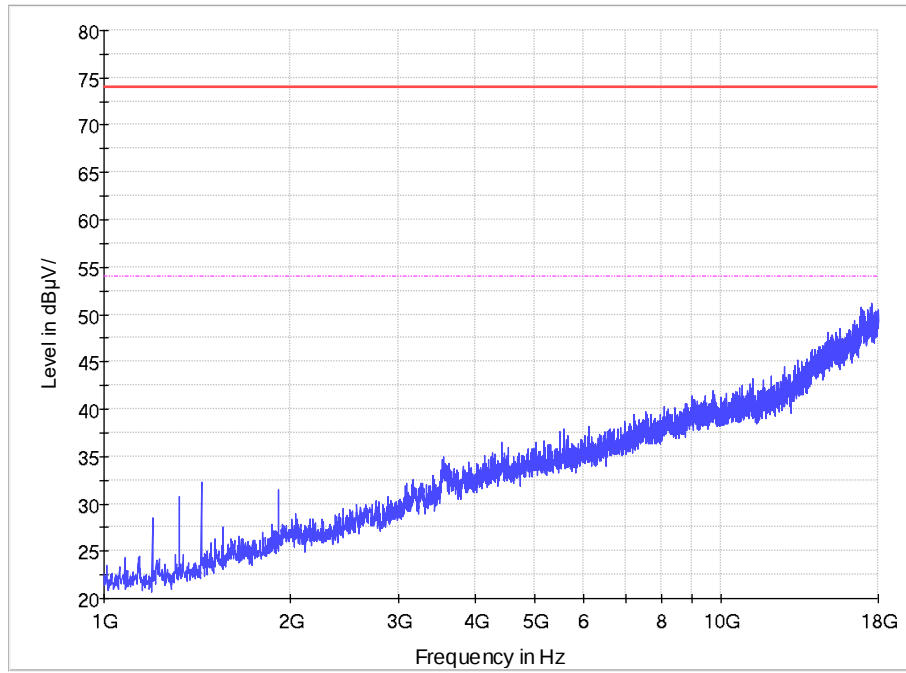


Test Mode 4

1GHz-18GHz

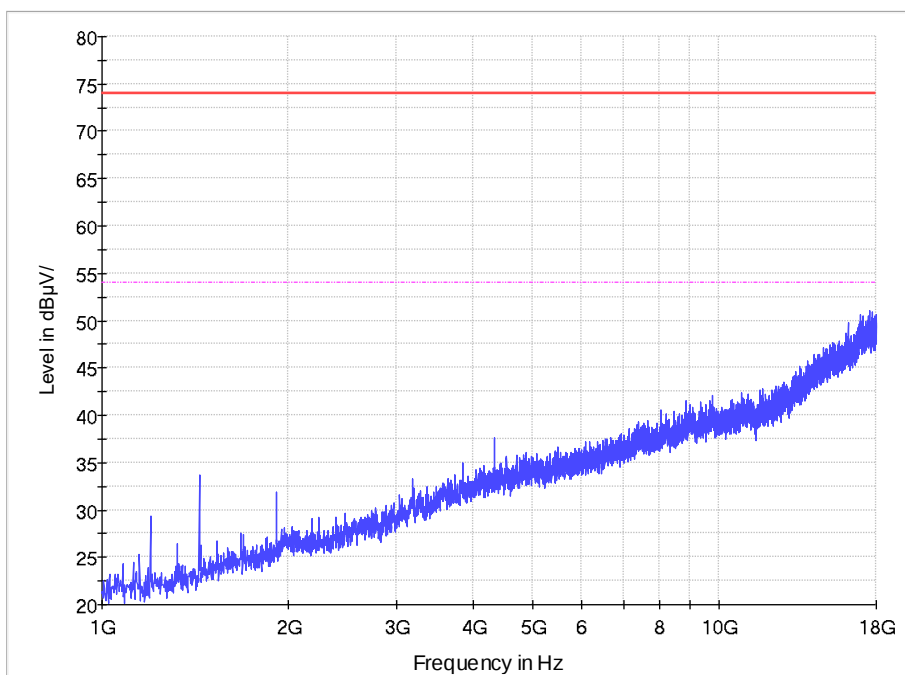
Horizontal

ESR26 Field strength 1-18GHz



Vertical

ESR26 Field strength 1-18GHz



## 7. APPENDIX I PRODUCT EQUALITY DECLARATION

### Product Equality Declaration

We: FAMOCO SAS, declare on our sole responsibility the differences between the hardware revision of **NFC Android Validator** products.

The new models of **NFC Android Validator** are:

- FX925SF-ING-VWDC-PRE,011P
- FX925SF-ING-VPDC-PRE,011P
- FX925SF-ING-VWDC-PRE,010P
- FX925SF-ING-VPDC-PRE,010P

All parts of hardware revision: FX925F-P.

**NFC Android Validator** models are made of two parts, a Front Casing, and a Back Casing. The composition of each model is described below.

| Models                    | Front Casing Models     | Back Casing Models |
|---------------------------|-------------------------|--------------------|
| FX925SF-ING-VWDC-PRE,011P | FC-FX925SF-ING-PRE,0112 | BC-VWDC-P366C,4    |
| FX925SF-ING-VPDC-PRE,011P | FC-FX925SF-ING-PRE,0112 | BC-VPDC-P366C,4    |
| FX925SF-ING-VWDC-PRE,010P | FC-FX925SF-ING-PRE,0102 | BC-VWDC-P366C,4    |
| FX925SF-ING-VPDC-PRE,010P | FC-FX925SF-ING-PRE,0102 | BC-VPDC-P366C,4    |

The original models of **NFC Android Validator** are:

- FX925F PM
- FX925F WM

All parts of hardware revision: FX925F,1

They are also made of two parts, a Front Casing and a Back Casing. The composition of each model is described below.

| Models    | Front Casing Models     | Back Casing Models |
|-----------|-------------------------|--------------------|
| FX925F WM | FC-FX925SF-ING-PRE,0112 | BC-VWDC-P366C,2    |
| FX925F PM | FC-FX925SF-ING-PRE,0112 | BC-VPDC-P366C,2    |

Differences between **NFC Android Validator** hardware revisions FX925F,1 and FX925F-P are listed below.

To identify product pieces described below products exploded views are at the end of this document.

*Table 1: List of differences between the two Front Casing versions of NFC Android Validators FC-FX925SF-ING-PRE,0112 and FC-FX925SF-ING-PRE,0102:*

| #  | Differences | FC-FX925SF-ING-PRE,0112 | FC-FX925SF-ING-PRE,0102 |
|----|-------------|-------------------------|-------------------------|
| #1 | Battery     | • 1 Smartphone battery  | • No smartphone battery |

*Table 2: List of differences between the two Back Casing versions of NFC Android Validators BC-VWDC-P447C,4 and BC-VPDC-P447C,4:*

| #  | Differences      | BC-VWDC-P366C,4 | BC-VPDC-P366C,4 |
|----|------------------|-----------------|-----------------|
| #1 | Mechanical parts | • Wall mount    | • Pole mount    |

*Table 3: List of differences between the NFC Android Validator Back Casings Wall BC-VWDC-P366C,2 and BC-VWDC-P366C,4:*

| #  | Differences | NFC Android Validator BC-VWDC-P366C,2  | NFC Android Validator BC-VWDC-P366C,4 |
|----|-------------|----------------------------------------|---------------------------------------|
| #1 | PCBA POWER  | • PCBA PWR V18 with ferrites on cables | • PCBA PWR V07                        |

*Table 4: List of differences between the NFC Android Validator Back Casing Pole BC-VPDC-P366C,4 and BC-VPDC-P366C,4:*

| #  | Differences | NFC Android Validator BC-VPDC-P366C,2  | NFC Android Validator BC-VPDC-P366C,4 |
|----|-------------|----------------------------------------|---------------------------------------|
| #1 | PCBA PWR    | • PCBA PWR V18 with ferrites on cables | • PCBA PWR V07                        |

*Table 5: List of differences between the FX925SF-ING-VWDC-PRE,011P,FX925SF-ING-VWDC-PRE,010P,FX925SF-ING-VPDC-PRE,011P,FX925SF-ING-VPDC-PRE,010P, and FX925F WM,FX925F PM*

| Models                                                                                                     | Software version          |
|------------------------------------------------------------------------------------------------------------|---------------------------|
| FX925SF-ING-VWDC-PRE,011P,FX925SF-ING-VWDC-PRE,010P<br>FX925SF-ING-VPDC-PRE,011P,FX925SF-ING-VPDC-PRE,010P | MOLY.LR12A.R2.MP.V44.1.P1 |
| FX925F WM,FX925F PM                                                                                        | MOLY.LR12A.R2.MP.V44.1    |

-----End of Report -----