

# EMC TEST REPORT

**Report No.:** SET2018-02873

**Product:** Multifunction Digital Product (Copier/Printer/Scanner/Fax)

**Model No. :** SP 330SFN, SP 3710SF

**FCC ID:** BBP-MFSP330SFN1

**Applicant:** RICOH Co., LTD.

**Issued by:** CCIC Southern Electronic Product Testing (Shenzhen) Co., Ltd.

**Lab Location:** Building 28/29, East of Shigu Xili Industrial Zone, Nanshan District,  
Shenzhen ,Guangdong , China

**Tel:** 86 755 26627338    **Fax:** 86 755 26627238

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## Test Report

**Product** ..... Multifunction Digital Product (Copier/Printer/Scanner/Fax)

**Model No.** ..... SP 330SFN, SP 3710SF

**Applicant** ..... RICOH Co., LTD.

**Applicant Address** ..... 2-7-1 Izumi Ebina Kanagawa 243-0460 Japan

**Manufacturer** ..... RICOH Co., LTD.

**Manufacturer Address** .... 2-7-1 Izumi Ebina Kanagawa 243-0460 Japan

**Test Standards**..... FCC PART 15 Subpart B  
ANSI C63.4: 2014

**Test Result** ..... PASS

**Tested by** ..... *Zhang Peng* Apr 6,2018

\_\_\_\_\_  
Signature, Date

**Reviewed by** ..... *Zhu Qi* Apr 6,2018

\_\_\_\_\_  
Signature, Date

**Approved by**..... *Smarelli* Apr 6,2018

\_\_\_\_\_  
Signature, Date

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# 1 General Information

## 1.1 Description of EUT

**Product:** Multifunction Digital Product (Copier/Printer/Scanner/Fax)  
**Model No.:** SP 330SFN  
**Brand Name:** RICOH  
**Serial No.:** 5157ZC17005  
**I/O Ports:** LAN 、 USB、 Line  
**Accessories:** Power cable, line

### Note:

The EUT is class B information technology equipment according to FCC PART 15. For more detailed features description about the EUT, please refer to User's Manual. Perform ElectroMagnetic Interference measurement in accordance with FCC 47CFR [Codes of Federal Regulations] Part 15 and ANSI C63.4: 2014 for FCC ID. The EUT have USB port, which can be connected to the WiFi module for WiFi printing operation mode.

### Short description of the equipment under test (EUT)

Model difference:

The EUT is a multifunction digital printer with copier, scanner and fax.

All models have same construction except some below functions,

And differences functions of these models are listed as follows:

Model	SP 330SFN	SP 3710SF
Deviations		
Print function	○	○
Copy Function	○	○
Scan Function	○	○
Fax Function	○	○
Scan to USB Memory	○	○
Wifi Modular	△	△
Wired NFC	○	○
Scanner and ADF Module	×	×
Scanner and ARDF Module	○	○
Bank Module	△	△
AIO Volume(1K)	○	×
AIO Volume(7K)	×	○
Print Speed: 32PPM	○	○

X: No; O: Yes; △: option

Unless otherwise specified, the model SP 330SFN was chosen as representative model to perform all the tests.

**1.2 EUT Information**

Kind of equipment	Manufacturer	Model name	Serial number	Remarks
EUT	RICOH	SP 330SFN	5157ZC27005	

Note: The wireless routers are used to connect printers and computers to test printer's WiFi printing mode.

**1.3 Highest Frequency Generated or Used in The Device or on Which the Device Operates**

Kind of equipment	Mode name	Operates Frequency	Remark
EUT	SP 330SFN	5.32GHz	WiFi

## 2 Test Facilities and Configuration

### 2.1 Environmental Conditions

During the measurement the environmental conditions were within the listed ranges:

- Temperature: 15-35°C
- Humidity: 30-60 %
- Atmospheric pressure: 86-106 kPa

### 2.2 Measurement Uncertainty

The uncertainty is calculated using the methods suggested in the “Guide to the Expression of Uncertainty in Measurement” (GUM) published by ISO.

- Uncertainty of Conducted Emission,  $U_c = \pm 1.8\text{dB}$
- Uncertainty of Radiated Emission,  $U_c = \pm 5.0\text{dB}$

### 2.3 Associated Equipments

Kind of equipment	Manufacturer	Model name	Serial number	Remarks
Notebook 1	LENOVO	ThinkPad X250	PC090M90	For EMI
USB Memory	SanDisk	BL170525264V	—	
Key board	DELL	L100	CN0RH6566589079K0277	
Mouse	DELL	MOC5U0	H0F02OCQ	
Option (BANK)	RICOH	Paper Feed Unit PB1130	JM534Q00001	
Option (WiFi)	CC&C	WLAN 11ac/11n 1x1USB Adapter	-	WL-8211-V1 FCCID code : PANRCO330..

### 2.4 Cables Used

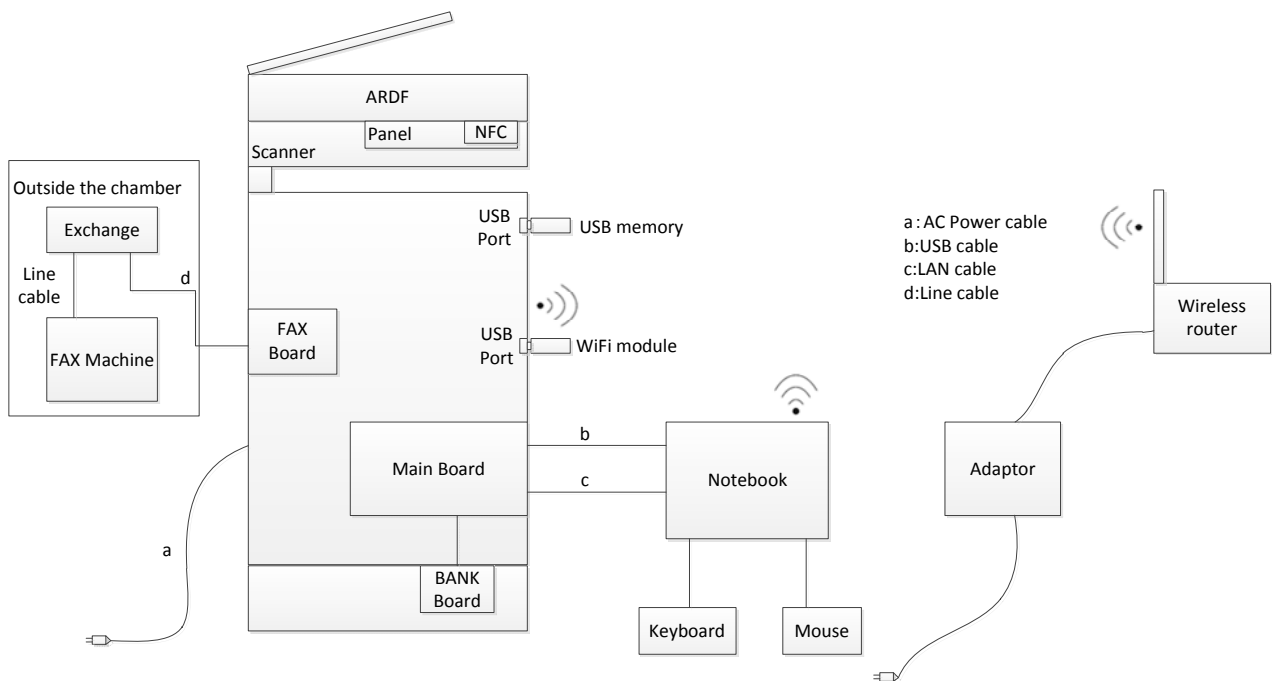
	Cable Name	Length	Shielded	Maker	Remarks
1	USB Cable	2m	YES	New Nam Lee	
2	NIC Cable	3m	No	SANWA	
3	Power Cable	1.5m	No	BizLink	
4	Modular Cable	2m	No	--	

## 2.5 Test Configure

### Operating modes:

No.	Operating modes	Remarks
1	Standby	
2	Copy +NIC Ping	
3	WIFI SCAN+USB PRINT	
4	WIFI PRINT+USB SCAN	
5	NIC Print + Scan to USB memory	
6	FX TX	
7	FX RX	
8	Copy	

### EUT Setup



## 2.6 Measurement Equipments Used

Description	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due Date
Test Receiver	ROHDE&SCHW ARZ	ESCS30	A0304260	Jun.10, 2017	Jun.10, 2018
LISN	ROHDE&SCHW ARZ	ESH2-Z5	A0304221	Jun.10, 2017	Jun.10, 2018
Shield Room	Nanbo Tech	RF-2 10.5×5×3.2 (m)	A0301188	Oct.25, 2017	Oct.25,2018
Ultra-Broadband Ant.	SCHWARZBEC K	VULB 09160	A0805560	Jun.10, 2017	Jun.10, 2018
Test Receiver	ROHDE&SCHW ARZ	ESU8	A0805559	Jun.10, 2017	Jun.10, 2018
Semi-Anechoic Chamber	Albatross	SAC-10MAC1 9.6*11.8*8.55 m	A0802520	Jun.10, 2017	Jun.10, 2018
Horn Ant.	ETS	3160-09	/	Aug.29, 2017	Aug.28, 2018
Horn Ant.	ETS	3160-10	/	Aug.29, 2017	Aug.28, 2018
Test Receiver	ROHDE&SCHW ARZ	ESIB7	A0501375	Aug.5, 2017	Aug.4, 2018
Broadband Ant.	ETC	MCTD2786	A150402239	Feb. 25, 2015	Feb.25, 2019
Band Reject Filter	Wainwright	WRCTF2402/ 2480-2400/24 83.5-35/12+9S S	H257/22721	Jun.10,2017	Jun.9,2018

**NOTE:** Equipments above have been calibrated and are in the period of validation.



### 3 Summary of Test Results

The EUT has been tested according to the following specifications:

<b>EMISSION</b>			
Test Condition	Test Requirement	Test Method	<b>Result</b>
Radiated Emissions	FCC 47CFR Part15 SubpartB	ANSI C63.4:2014	PASS
Conducted Emissions on AC, 0.15MHz to 30MHz	FCC 47CFR Part15 SubpartB	ANSI C63.4:2014	PASS

## **4 Emission Test**

### **4.1 EUT Setup and Operation**

The EUT was powered by 120V AC Mains

The EUT continuously operated during the test modes as section 2.5.

The EUT and cables, and operation modes were configured to produce the maximum level of emissions.

## 4.2 Mains Terminal Disturbance Voltage Measurement

### 4.2.1 Limits of Mains Terminal Disturbance Voltage

Frequency range (MHz)	Limits (dB $\mu$ V), Class B ITE	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5.0	56	46
5.0-30.0	60	50

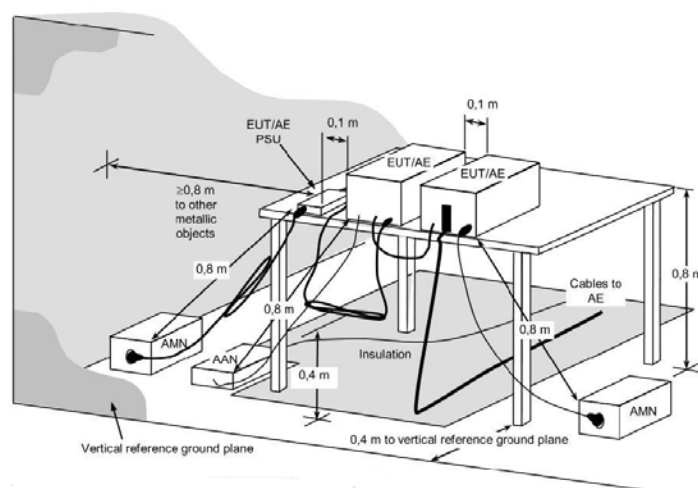
**NOTE:**

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.

### 4.2.2 Test Procedure

- a. The EUT was placed 0.4 meters from the conducting wall of shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). The LISN provide 50 $\Omega$ /50 $\mu$ H of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels over 10dB under the prescribed limits are not reported.

### 4.2.3 Test Setup



For the actual test configuration, please refer to the related item - Photographs of the Test Configuration.

#### **4.2.4 Test Result**

Environment Condition:

Temperature: 23°C; Relative Humidity: 52%; Pressure:101kPa

Test Date: 2018-04-04

Test Engineer: Cheng Weichang

Test Site: Shield Room Site 1

Test Mode: Mode 1-8

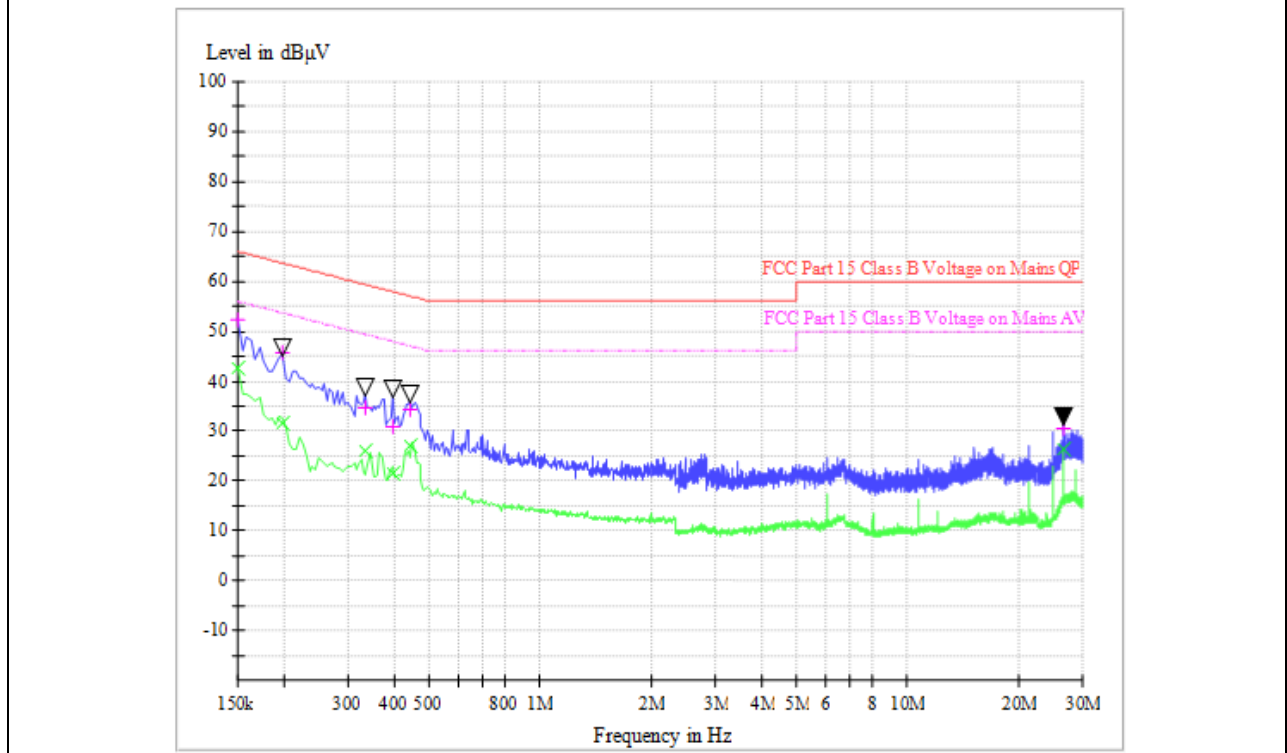
**1. Conducted Disturbance at Mains Terminals (Standby Mode)**

**Conducted Disturbance at Mains Terminals (Standby Mode)**

**L Test Data**

QP				CAV			
Frequency (MHz)	Limits (dBμV)	Measurement Value(dBμV)	Margin (dBμV)	Frequency (MHz)	Limits (dBμV)	Measurement Value(dBμV)	Margin (dBμV)
0.1500	66.0	52.32	13.68	0.1500	56.0	42.65	13.35
0.1995	63.6	45.80	17.83	0.1995	53.6	31.58	22.05
0.3345	59.3	34.80	24.54	0.3345	49.3	25.83	23.51
0.3975	57.9	30.94	26.97	0.3975	47.9	21.53	26.38
0.4425	57.0	34.27	22.74	0.4425	47.0	27.00	20.01
26.6145	60.0	30.53	29.47	26.6145	50.0	26.37	23.63

**L Test Curve**



**NOTE:**

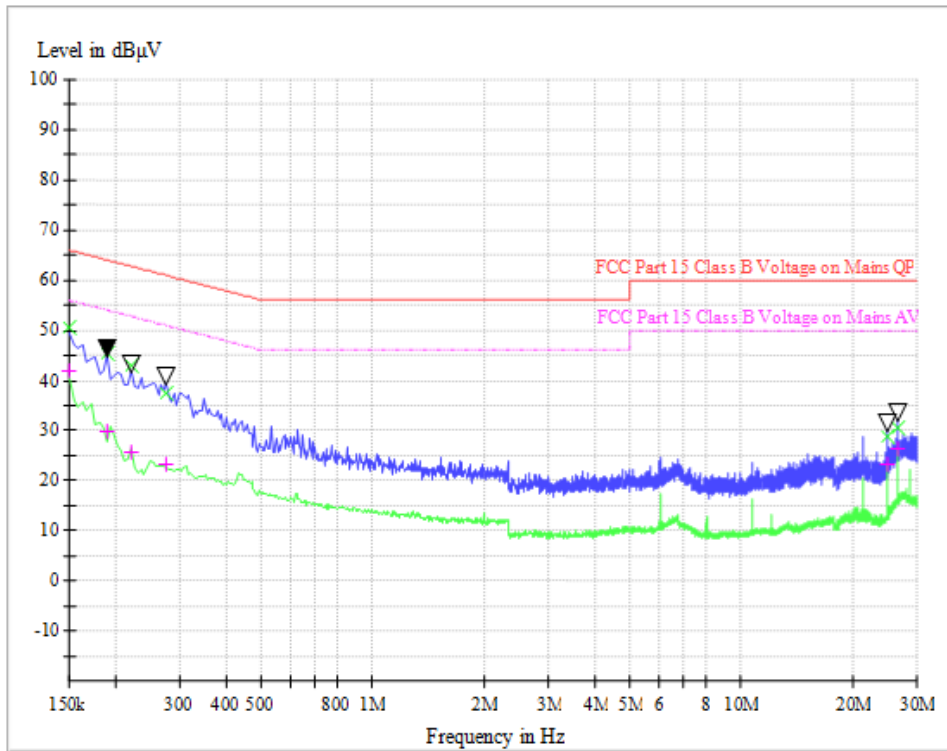
1. The lower limit shall apply at the transition frequencies.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.
3. The minimum margin value of quasi-peak and average level is over 3dB.

**Conducted Disturbance at Mains Terminals (Standby Mode)**

**N Test Data**

QP				CAV			
Frequency (MHz)	Limits (dBµV)	Measurement Value(dBµV)	Margin (dBµV)	Frequency (MHz)	Limits (dBµV)	Measurement Value(dBµV)	Margin (dBµV)
0.1500	66.0	50.52	15.48	0.1500	56.0	41.92	14.08
0.1905	64.0	45.23	18.78	0.1905	54.0	29.82	24.19
0.2220	62.7	42.80	19.94	0.2220	52.7	25.62	27.12
0.2760	60.9	37.26	23.68	0.2760	50.9	23.16	27.78
25.0575	60.0	28.86	31.14	25.0575	50.0	23.27	26.73
26.6145	60.0	30.53	29.47	26.6145	50.0	26.48	23.52

**N Test Curve**



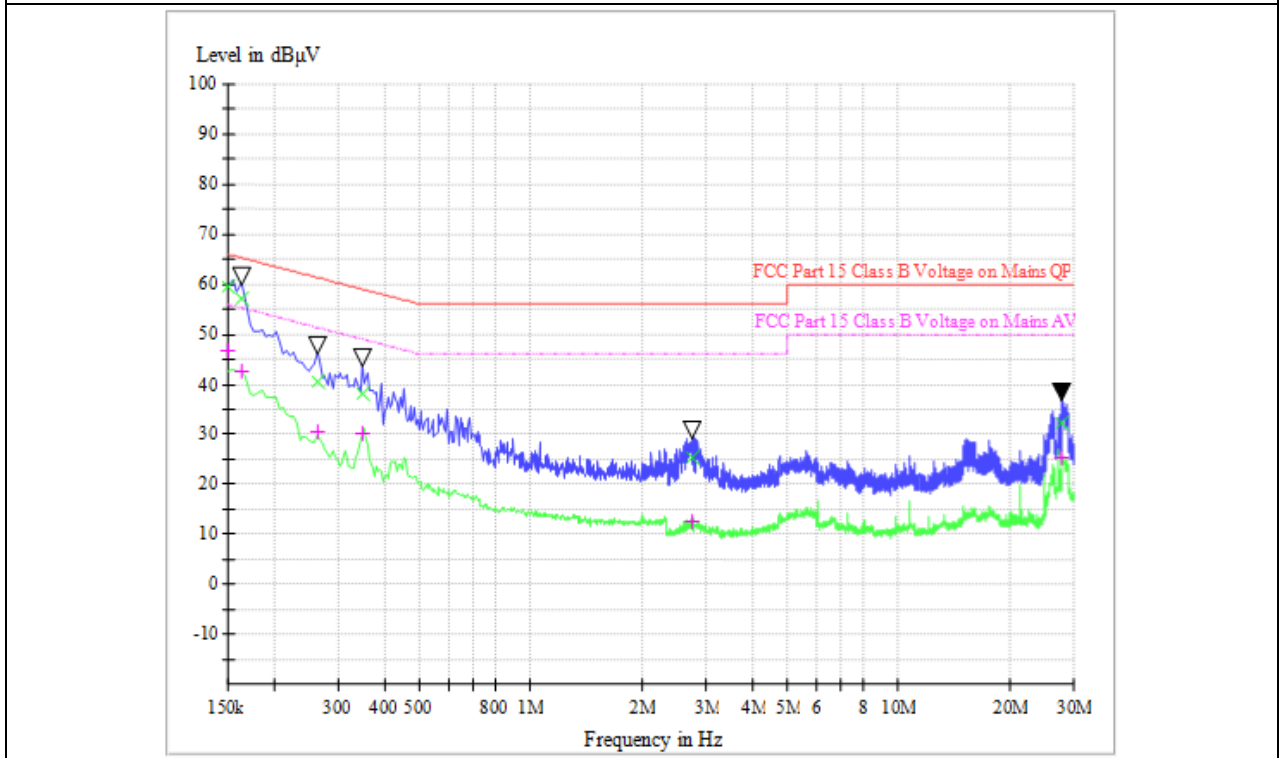
**NOTE:**

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.
3. The minimum margin value of quasi-peak and average level is over 3dB.

**2. Conducted Disturbance at Mains Terminals (Copy+NIC Ping Mode)**

Conducted Disturbance at Mains Terminals (Copy+NIC Ping Mode)							
L Test Data							
QP				CAV			
Frequency (MHz)	Limits (dBμV)	Measurement Value(dBμV)	Margin (dBμV)	Frequency (MHz)	Limits (dBμV)	Measurement Value(dBμV)	Margin (dBμV)
0.1500	66.0	59.71	6.29	0.1500	56.0	46.61	9.39
0.1635	65.3	57.14	8.14	0.1635	55.3	42.61	12.67
0.2625	61.4	40.55	20.80	0.2625	51.4	30.32	21.03
0.3480	59.0	38.09	20.92	0.3480	49.0	30.13	18.88
2.7510	56.0	25.21	30.79	2.7510	46.0	12.43	33.57
27.9195	60.0	32.36	27.64	27.9195	50.0	25.24	24.76

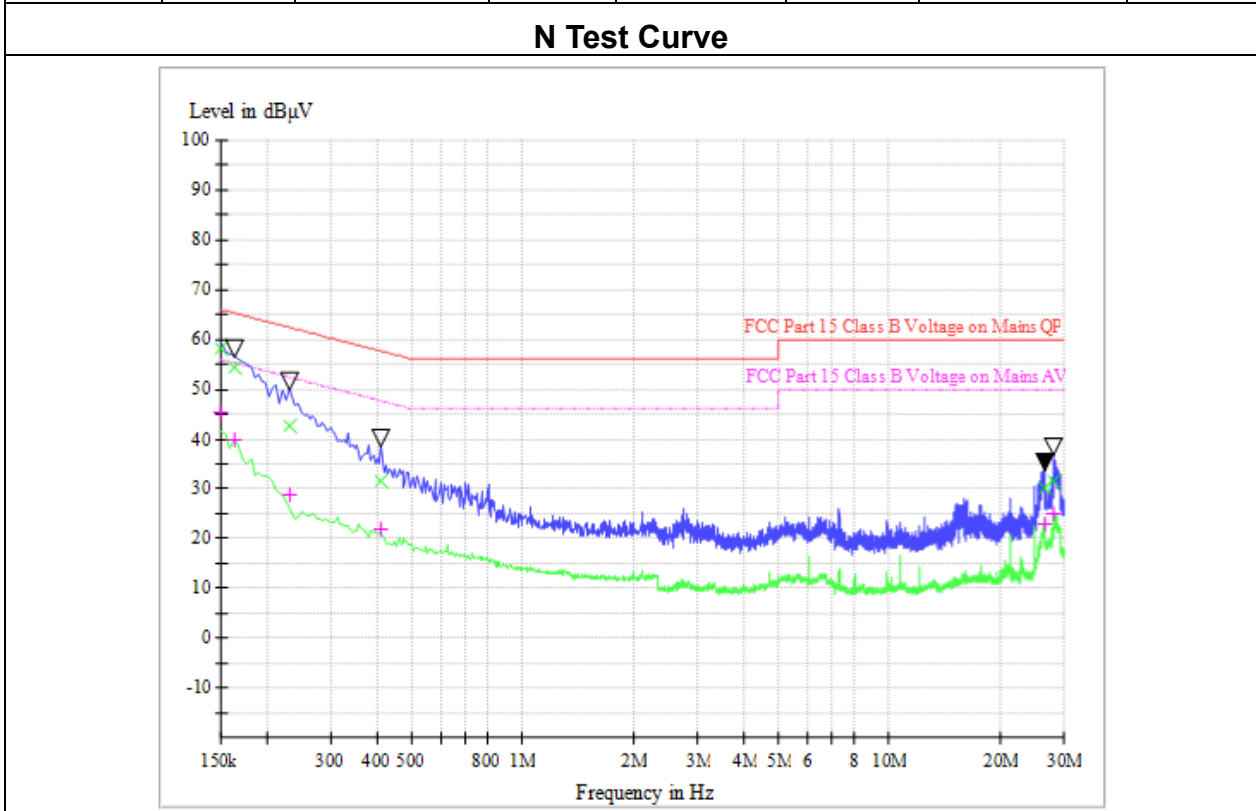
**L Test Curve**



**NOTE:**

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.
3. The minimum margin value of quasi-peak and average level is over 3dB.

Conducted Disturbance at Mains Terminals (Copy+NIC Ping Mode)							
N Test Data							
QP				CAV			
Frequency (MHz)	Limits (dBμV)	Measurement Value(dBμV)	Margin (dBμV)	Frequency (MHz)	Limits (dBμV)	Measurement Value(dBμV)	Margin (dBμV)
0.1500	66.0	58.27	7.73	0.1500	56.0	45.25	10.75
0.1635	65.3	54.23	11.05	0.1635	55.3	39.99	15.29
0.2310	62.4	42.73	19.68	0.2310	52.4	28.90	23.51
0.4110	57.6	31.40	26.23	0.4110	47.6	21.99	25.64
26.5605	60.0	30.02	29.98	26.5605	50.0	23.03	26.97
28.0230	60.0	31.63	28.37	28.0230	50.0	24.81	25.19



**NOTE:**

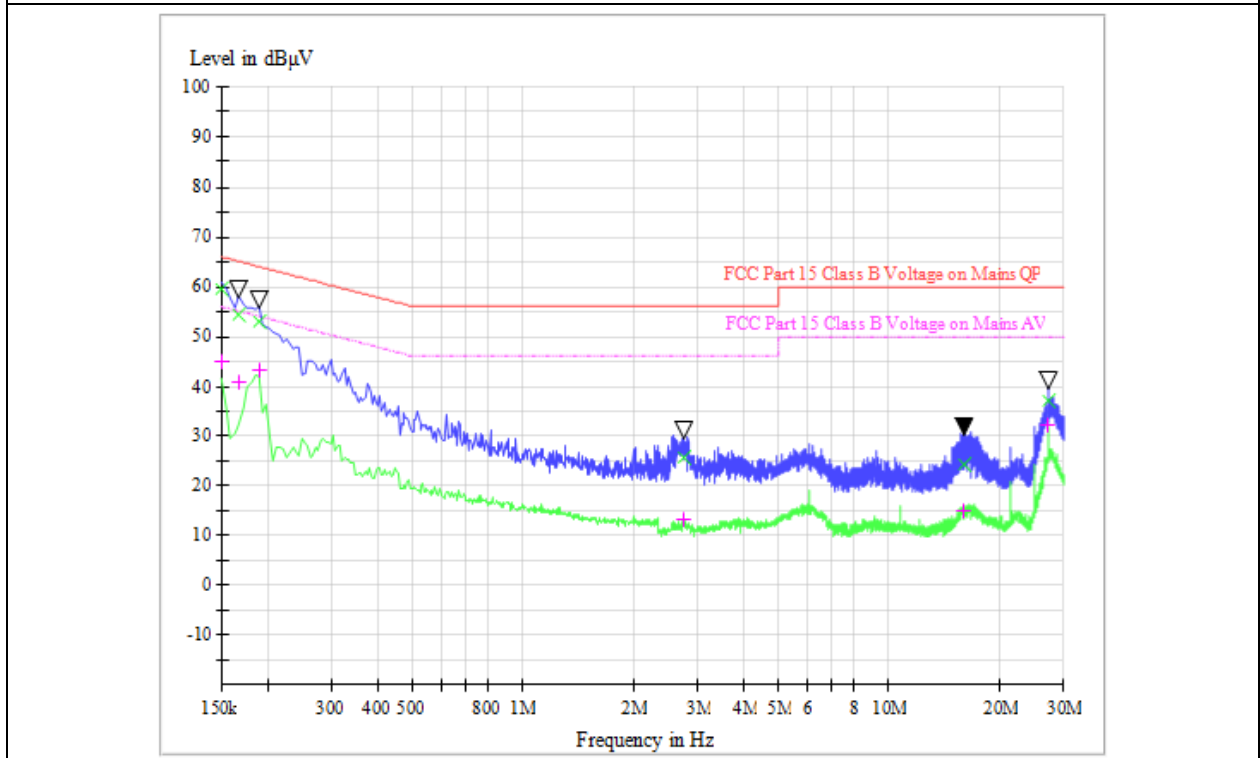
1. The lower limit shall apply at the transition frequencies.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.
3. The minimum margin value of quasi-peak and average level is over 3dB.



**3. Conducted Disturbance at Mains Terminals (WIFI SCAN+USB PRINT Mode)**

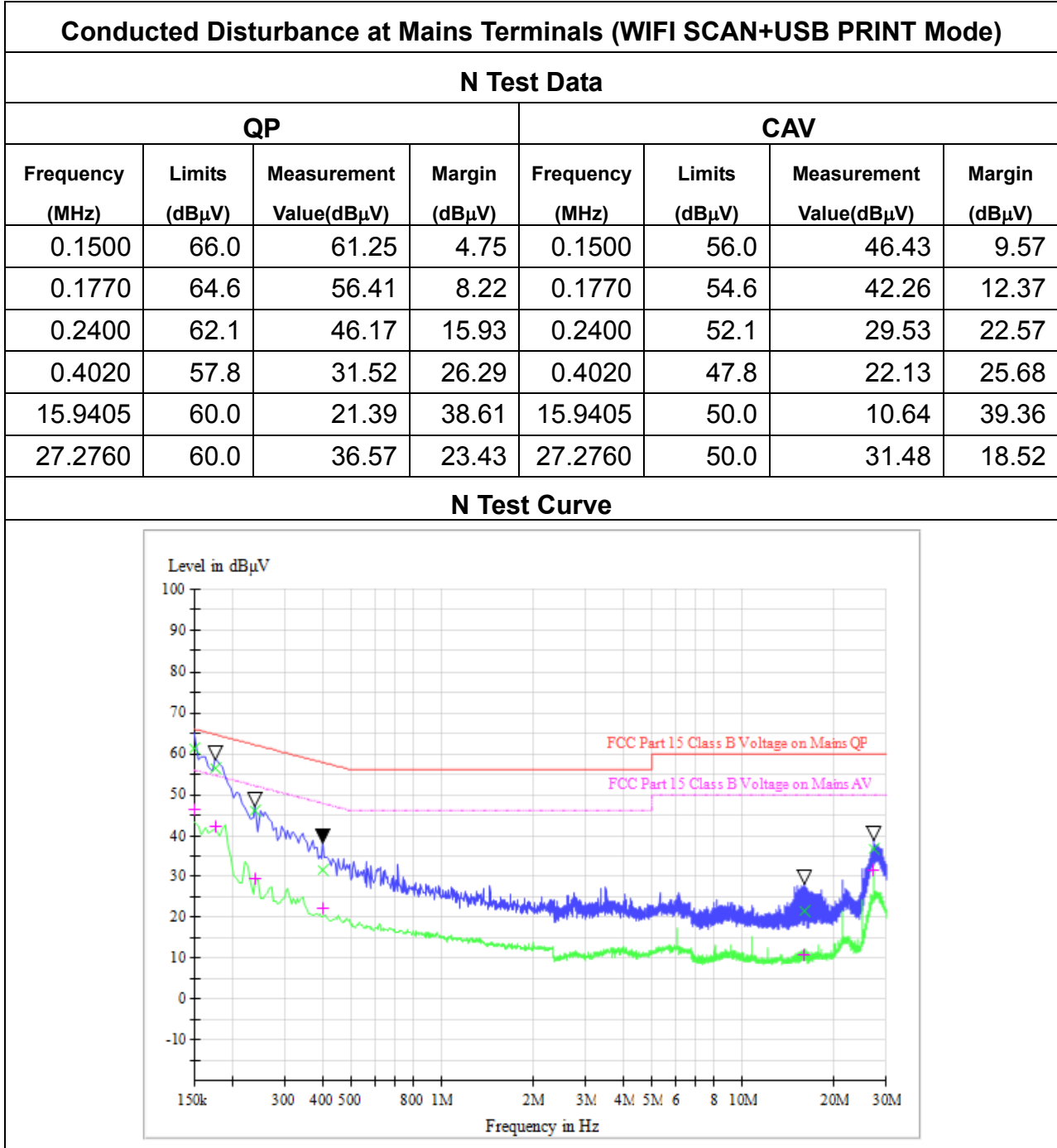
Conducted Disturbance at Mains Terminals (WIFI SCAN+USB PRINT Mode)							
L Test Data							
QP				CAV			
Frequency (MHz)	Limits (dBμV)	Measurement Value(dBμV)	Margin (dBμV)	Frequency (MHz)	Limits (dBμV)	Measurement Value(dBμV)	Margin (dBμV)
0.1500	66.0	59.63	6.37	0.1500	56.0	45.16	10.84
0.1680	65.1	54.42	10.64	0.1680	55.1	40.83	14.23
0.1905	64.0	52.81	11.20	0.1905	54.0	43.14	10.87
2.7465	56.0	25.68	30.32	2.7465	46.0	13.29	32.71
15.9765	60.0	24.38	35.62	15.9765	50.0	14.99	35.01
27.2715	60.0	37.14	22.86	27.2715	50.0	32.21	17.79

**L Test Curve**



**NOTE:**

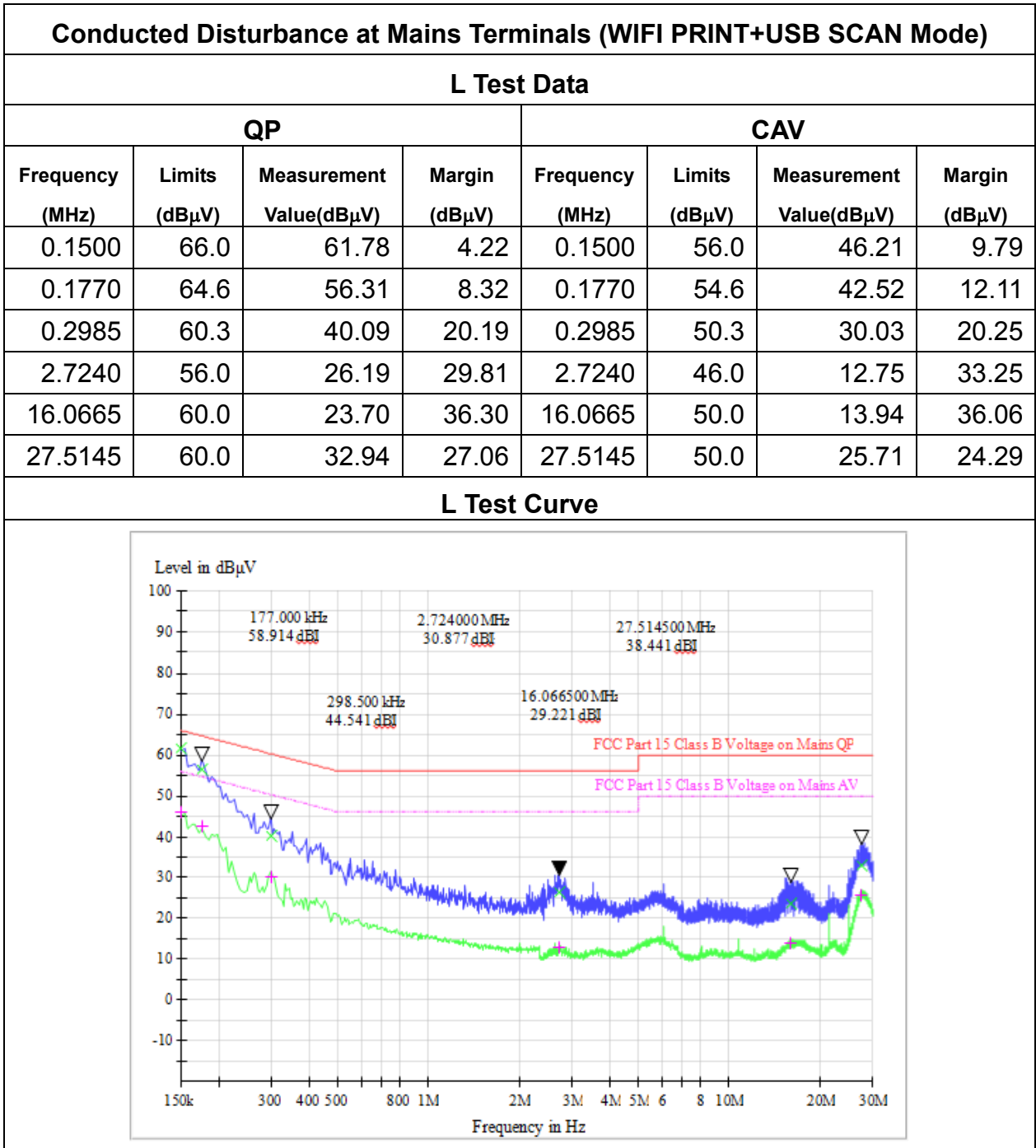
1. The lower limit shall apply at the transition frequencies.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.
3. The minimum margin value of quasi-peak and average level is over 3dB.



**NOTE:**

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.
3. The minimum margin value of quasi-peak and average level is over 3dB.

**4. Conducted Disturbance at Mains Terminals (WIFI PRINT+USB SCAN Mode)**

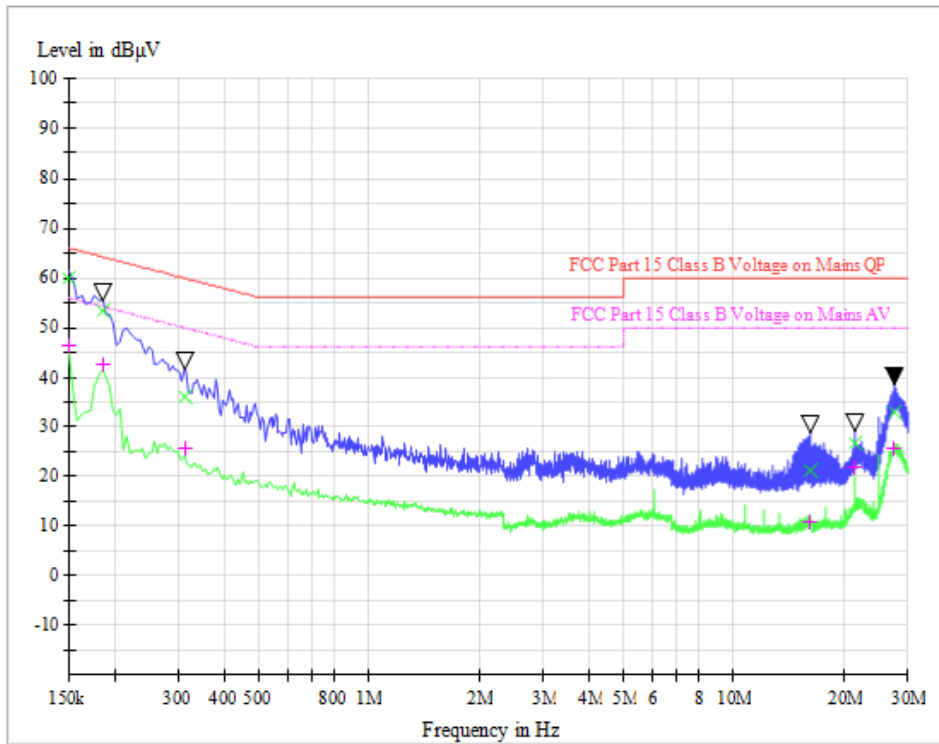


**NOTE:**

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.
3. The minimum margin value of quasi-peak and average level is over 3dB.

Conducted Disturbance at Mains Terminals (WIFI PRINT+USB SCAN Mode)							
N Test Data							
QP				CAV			
Frequency (MHz)	Limits (dBμV)	Measurement Value(dBμV)	Margin (dBμV)	Frequency (MHz)	Limits (dBμV)	Measurement Value(dBμV)	Margin (dBμV)
0.1500	66.0	59.89	6.11	0.1500	56.0	46.44	9.56
0.1860	64.2	53.44	10.77	0.1860	54.2	42.46	11.75
0.3120	59.9	35.96	23.96	0.3120	49.9	25.61	24.31
16.1880	60.0	21.00	39.00	16.1880	50.0	10.90	39.10
21.4800	60.0	26.84	33.16	21.4800	50.0	22.00	28.00
27.4785	60.0	32.77	27.23	27.4785	50.0	25.59	24.41

**N Test Curve**



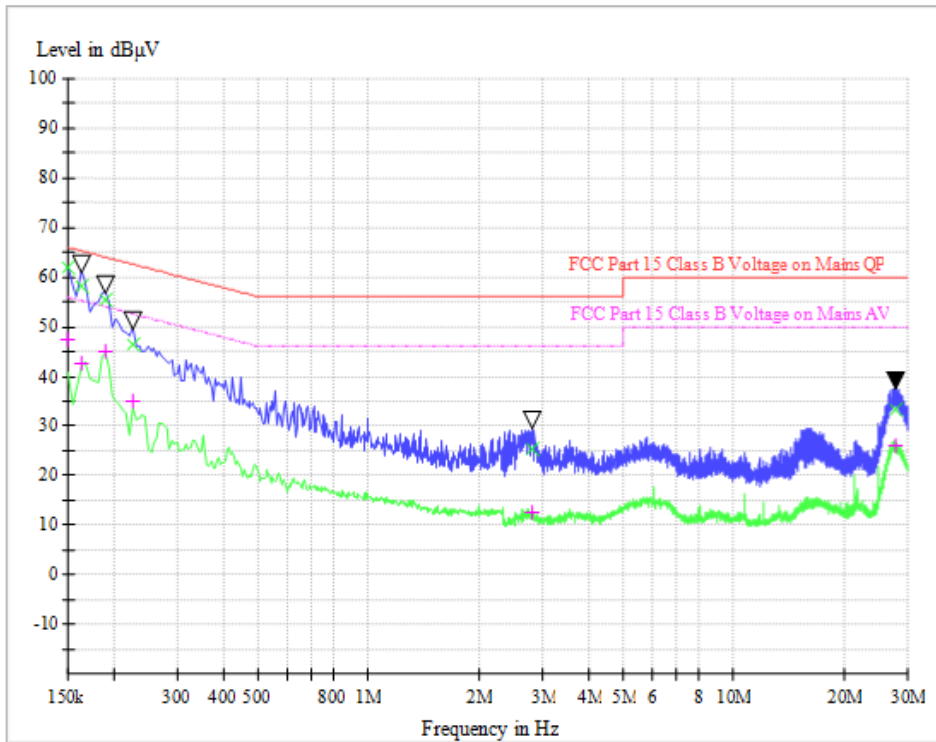
**NOTE:**

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.
3. The minimum margin value of quasi-peak and average level is over 3dB.

**5. Conducted Disturbance at Mains Terminals (NIC Print + Scan to USB memory Mode)**

Conducted Disturbance at Mains Terminals (NIC Print + Scan to USB memory Mode)							
L Test Data							
QP				CAV			
Frequency (MHz)	Limits (dBµV)	Measurement Value(dBµV)	Margin (dBµV)	Frequency (MHz)	Limits (dBµV)	Measurement Value(dBµV)	Margin (dBµV)
0.1500	66.0	62.00	4.00	0.1500	56.0	47.51	8.49
0.1635	65.3	58.12	7.18	0.1635	55.3	42.57	12.73
0.1905	64.0	55.36	8.64	0.1905	54.0	45.03	8.97
0.2265	62.6	46.43	16.17	0.2265	52.6	34.90	17.70
2.8005	56.0	25.14	30.86	2.8005	46.0	12.56	33.44
27.7080	60.0	33.27	26.73	27.7080	50.0	26.08	23.92

**L Test Curve**



**NOTE:**

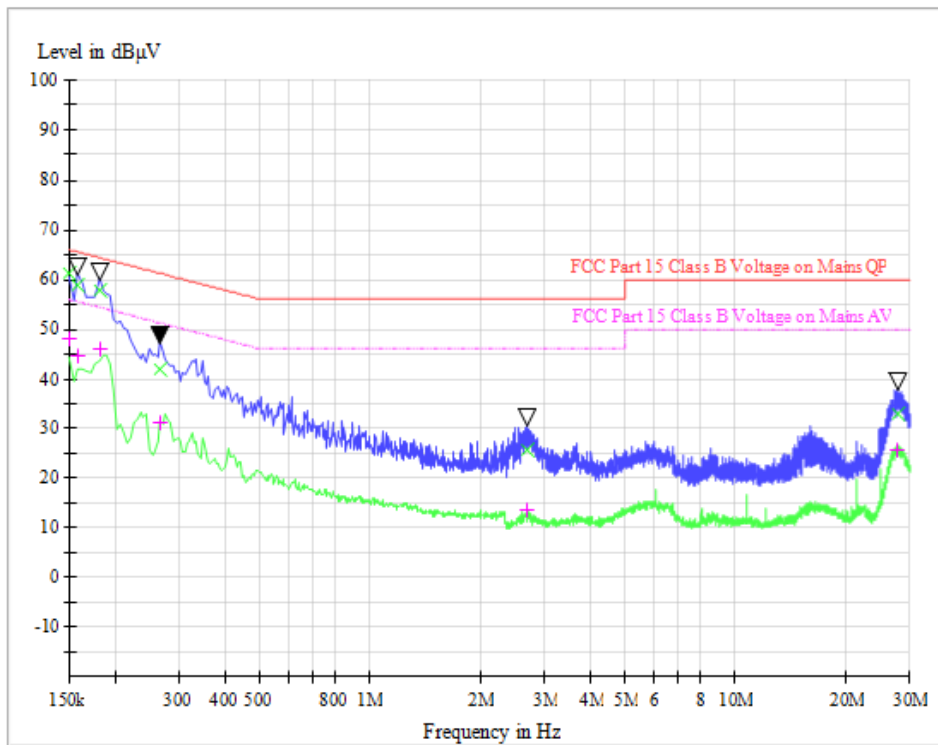
1. The lower limit shall apply at the transition frequencies.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.
3. The minimum margin value of quasi-peak and average level is over 3dB.

**Conducted Disturbance at Mains Terminals (NIC Print + Scan to USB memory Mode)**

**N Test Data**

QP				CAV			
Frequency (MHz)	Limits (dBμV)	Measurement Value(dBμV)	Margin (dBμV)	Frequency (MHz)	Limits (dBμV)	Measurement Value(dBμV)	Margin (dBμV)
0.1500	66.0	61.24	4.76	0.1500	56.0	48.17	7.83
0.1590	65.5	58.69	6.83	0.1590	55.5	44.81	10.71
0.1815	64.4	57.94	6.48	0.1815	54.4	46.16	8.26
0.2670	61.2	41.92	19.29	0.2670	51.2	31.34	19.87
2.6925	56.0	25.78	30.22	2.6925	46.0	13.50	32.50
27.7665	60.0	33.01	26.99	27.7665	50.0	25.80	24.20

**N Test Curve**



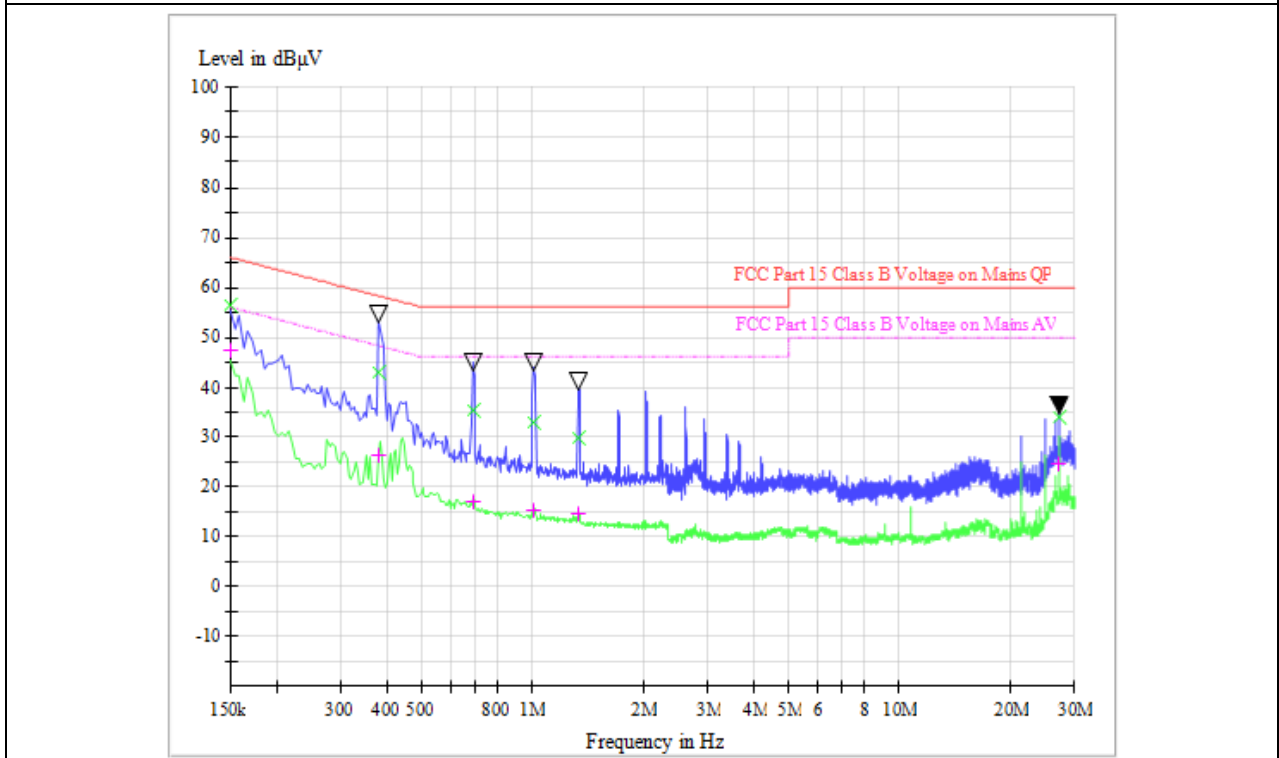
**NOTE:**

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.
3. The minimum margin value of quasi-peak and average level is over 3dB.

**6. Conducted Disturbance at Mains Terminals (FX TX Mode)**

Conducted Disturbance at Mains Terminals (FX TX Mode)							
L Test Data							
QP				CAV			
Frequency (MHz)	Limits (dBµV)	Measurement Value(dBµV)	Margin (dBµV)	Frequency (MHz)	Limits (dBµV)	Measurement Value(dBµV)	Margin (dBµV)
0.1500	66.0	56.36	9.64	0.1500	56.0	47.42	8.58
0.3795	58.3	42.97	15.32	0.3795	48.3	26.31	21.98
0.6900	56.0	35.27	20.73	0.6900	46.0	17.00	29.00
1.0095	56.0	32.89	23.11	1.0095	46.0	15.30	30.70
1.3335	56.0	29.96	26.04	1.3335	46.0	14.48	31.52
27.2715	60.0	33.84	26.16	27.2715	50.0	24.72	25.28

**L Test Curve**

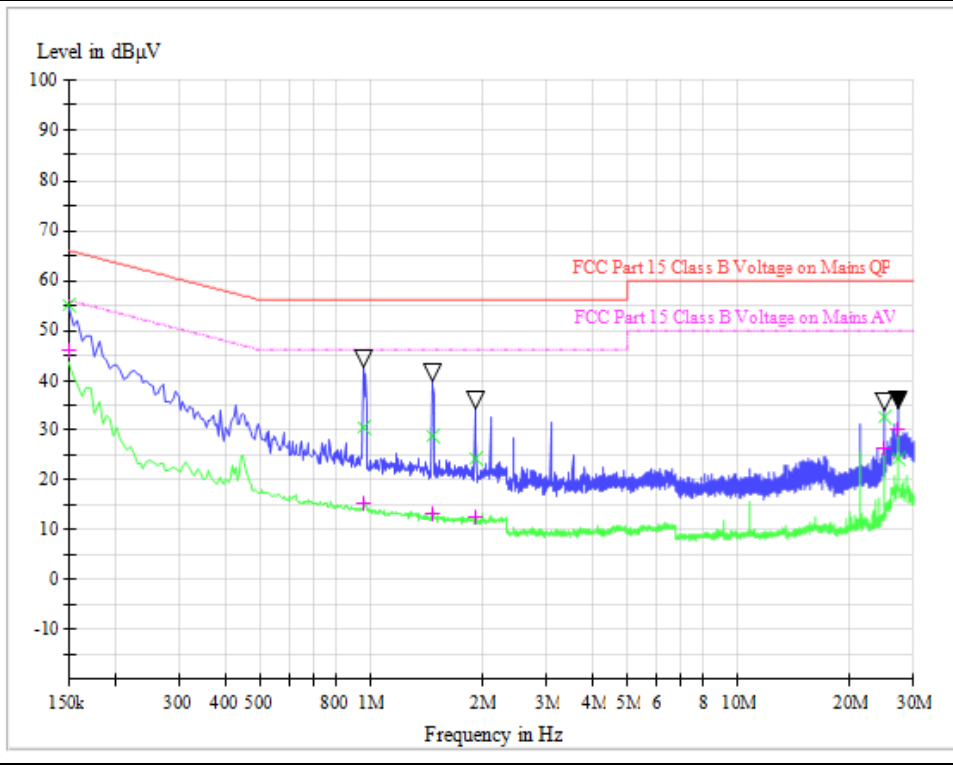


**NOTE:**

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.
3. The minimum margin value of quasi-peak and average level is over 3dB.

Conducted Disturbance at Mains Terminals (FX TX Mode)							
N Test Data							
QP				CAV			
Frequency (MHz)	Limits (dBμV)	Measurement Value(dBμV)	Margin (dBμV)	Frequency (MHz)	Limits (dBμV)	Measurement Value(dBμV)	Margin (dBμV)
0.1500	66.0	55.04	10.96	0.1500	56.0	46.19	9.81
0.9555	56.0	30.42	25.58	0.9555	46.0	15.22	30.78
1.4640	56.0	28.84	27.16	1.4640	46.0	13.30	32.70
1.9230	56.0	24.10	31.90	1.9230	46.0	12.41	33.59
25.0620	60.0	32.58	27.42	25.0620	50.0	26.29	23.71
27.2715	60.0	24.14	35.86	27.2715	50.0	30.10	19.90

**N Test Curve**



**NOTE:**

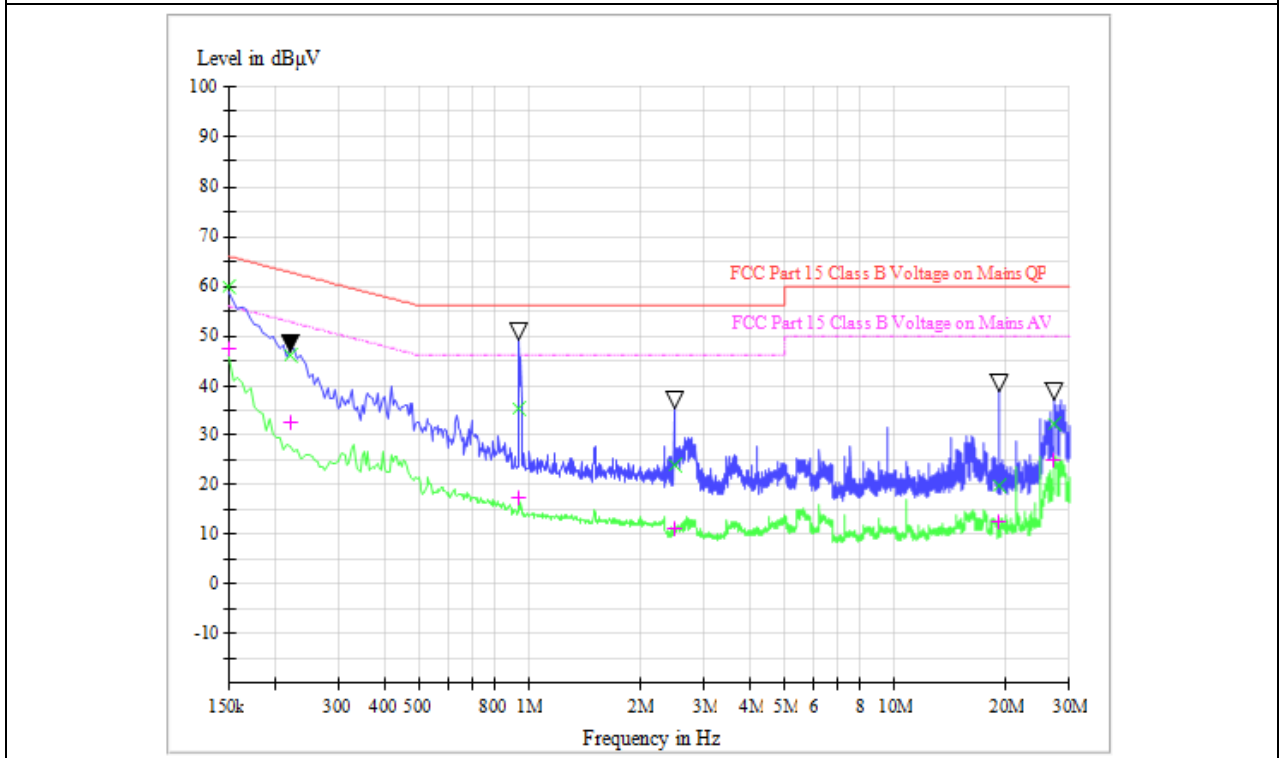
1. The lower limit shall apply at the transition frequencies.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.
3. The minimum margin value of quasi-peak and average level is over 3dB.



**7. Conducted Disturbance at Mains Terminals (FX RX Mode)**

Conducted Disturbance at Mains Terminals (FX RX Mode)							
L Test Data							
QP				CAV			
Frequency (MHz)	Limits (dBμV)	Measurement Value(dBμV)	Margin (dBμV)	Frequency (MHz)	Limits (dBμV)	Measurement Value(dBμV)	Margin (dBμV)
0.1500	66.0	59.77	6.23	0.1500	56.0	47.54	8.46
0.2220	62.7	46.08	16.66	0.2220	52.7	32.49	20.25
0.9375	56.0	35.16	20.84	0.9375	46.0	17.19	28.81
2.4855	56.0	23.96	32.04	2.4855	46.0	11.11	34.89
19.1985	60.0	19.73	40.27	19.1985	50.0	12.47	37.53
27.3390	60.0	32.38	27.62	27.3390	50.0	25.12	24.88

**L Test Curve**



**NOTE:**

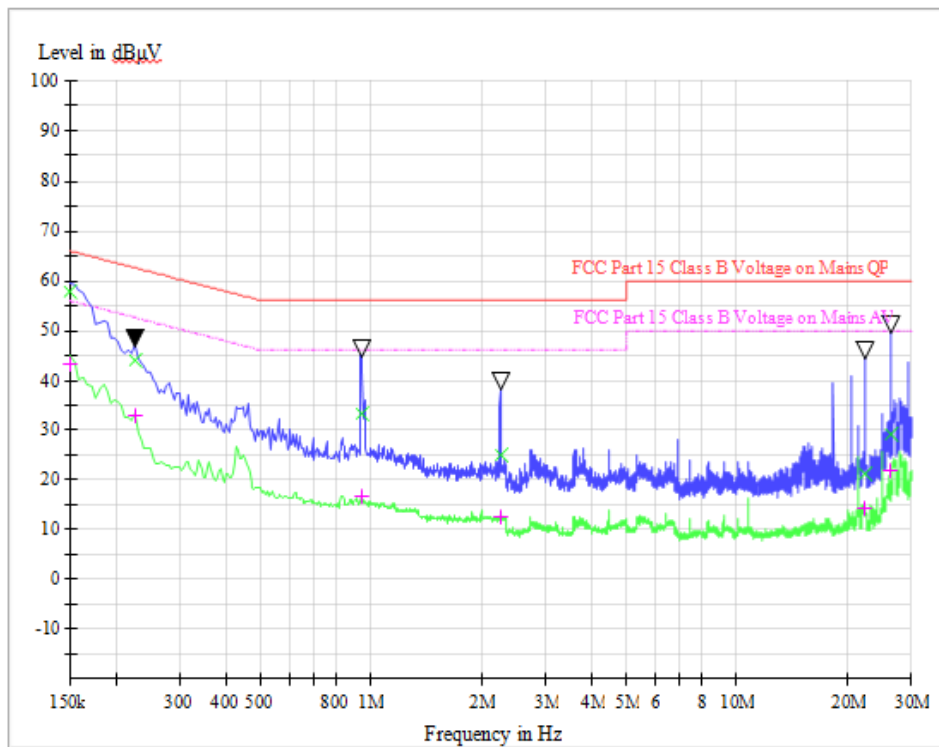
1. The lower limit shall apply at the transition frequencies.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.
3. The minimum margin value of quasi-peak and average level is over 3dB.

**Conducted Disturbance at Mains Terminals (FX RX Mode)**

**N Test Data**

QP				CAV			
Frequency (MHz)	Limits (dBμV)	Measurement Value(dBμV)	Margin (dBμV)	Frequency (MHz)	Limits (dBμV)	Measurement Value(dBμV)	Margin (dBμV)
0.1500	66.0	57.74	8.26	0.1500	56.0	43.33	12.67
0.2265	62.6	43.81	18.77	0.2265	52.6	32.84	19.74
0.9420	56.0	33.20	22.80	0.9420	46.0	16.65	29.35
2.2515	56.0	25.12	30.88	2.2515	46.0	12.65	33.35
22.5105	60.0	21.05	38.95	22.5105	50.0	14.36	35.64
26.4615	60.0	29.21	30.79	26.4615	50.0	21.91	28.09

**N Test Curve**



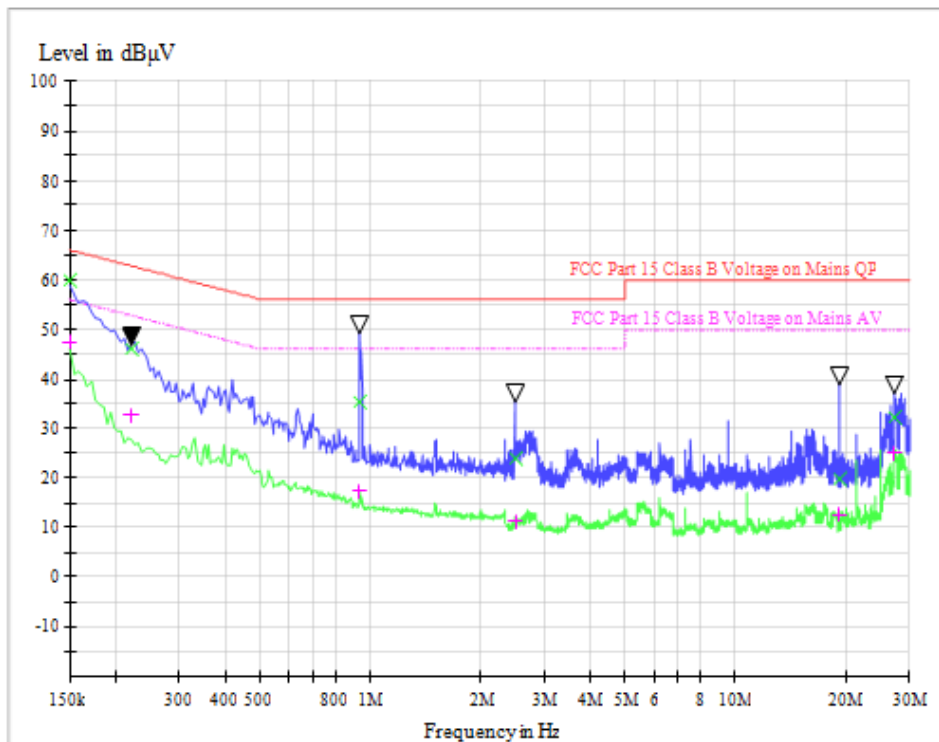
**NOTE:**

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.
3. The minimum margin value of quasi-peak and average level is over 3dB.

**8. Conducted Disturbance at Mains Terminals (Copy Mode)**

Conducted Disturbance at Mains Terminals (Copy Mode)							
L Test Data							
QP				CAV			
Frequency (MHz)	Limits (dBμV)	Measurement Value(dBμV)	Margin (dBμV)	Frequency (MHz)	Limits (dBμV)	Measurement Value(dBμV)	Margin (dBμV)
0.1500	66.0	59.77	6.23	0.1500	56.0	47.54	8.46
0.2220	62.7	46.08	16.66	0.2220	52.7	32.49	20.25
0.9375	56.0	35.16	20.84	0.9375	46.0	17.19	28.81
2.4855	56.0	23.96	32.04	2.4855	46.0	11.11	34.89
19.1985	60.0	19.73	40.27	19.1985	50.0	12.47	37.53
27.3390	60.0	32.38	27.62	27.3390	50.0	25.12	24.88

**L Test Curve**



**NOTE:**

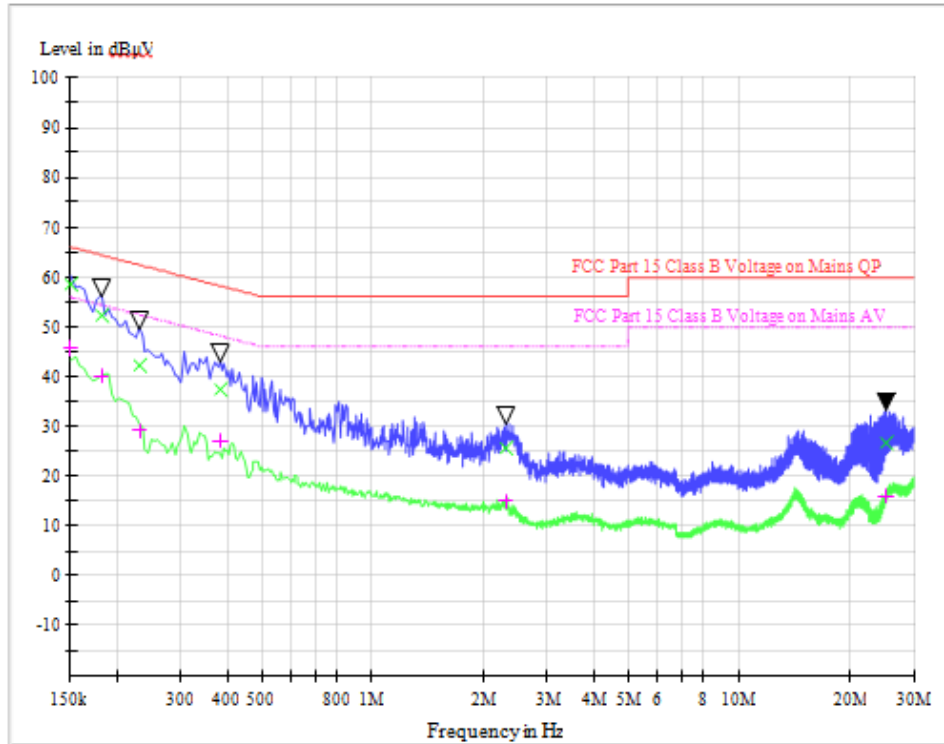
1. The lower limit shall apply at the transition frequencies.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.
3. The minimum margin value of quasi-peak and average level is over 3dB.

**Conducted Disturbance at Mains Terminals (Copy Mode)**

**N Test Data**

QP				CAV			
Frequency (MHz)	Limits (dBμV)	Measurement Value(dBμV)	Margin (dBμV)	Frequency (MHz)	Limits (dBμV)	Measurement Value(dBμV)	Margin (dBμV)
0.1500	66.0	58.41	7.59	0.1500	56.0	45.57	10.43
0.1815	64.4	52.31	12.11	0.1815	54.4	40.16	14.26
0.2310	62.4	42.29	20.12	0.2310	52.4	29.17	23.24
0.3840	58.2	37.54	20.65	0.3840	48.2	26.89	21.30
2.3145	56.0	25.68	30.32	2.3145	46.0	14.77	31.23
25.1070	60.0	26.64	33.36	25.1070	50.0	15.84	34.16

**N Test Curve**



**NOTE:**

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.
3. The minimum margin value of quasi-peak and average level is over 3dB.

## 4.3 Radiated Emission Test

### 4.3.1 Limits of Radiated Emission

The field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency of Emission (MHz)	Field Strength (dB $\mu$ V/m) at 3m
30 - 88	40(QP)
88 -216	43.5(QP)
216 - 960	46.4(QP)
960-1000	54(QP)
Above 1000MHz	54(AV)/74(PK)

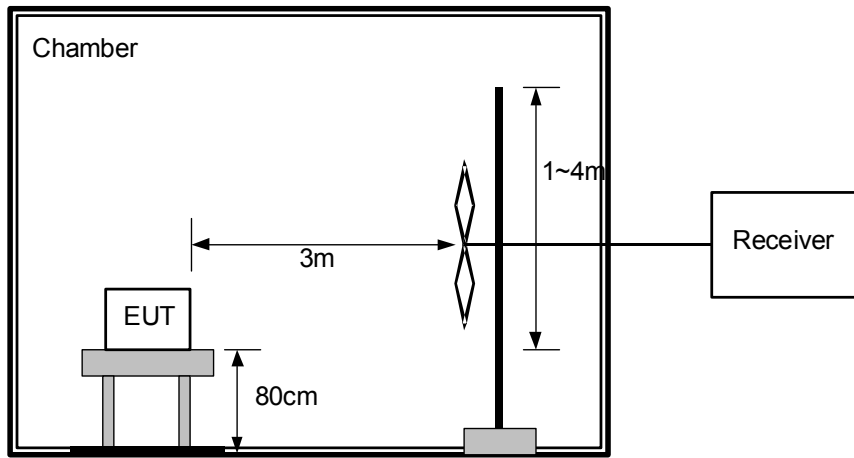
**NOTE:**

1. Field Strength (dB $\mu$ V/m)=20log Field Strength ( $\mu$ V/m).
2. In the emission tables above, the tighter limit applies at the band edges.

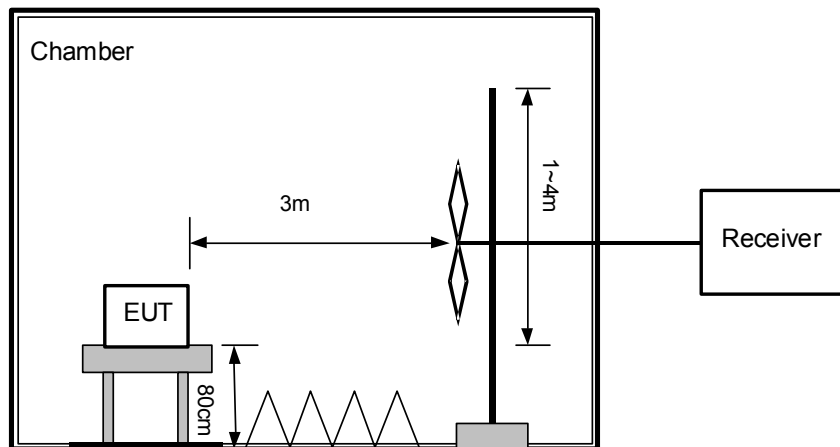
### 4.3.2 Test Procedure

- a. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- b. The antenna is a broadband antenna, and its height is varied from one meter to four meter above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- c. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to the heights from 1 to 4 meters and the ratable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- d. The test-receiver system was set to Peak Detector Function and Specified Bandwidth with Maximum Hold Mode.
- e. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emission that did not have 10 dB margins would be retested one by one using the quasi-peak method.

### 4.3.3 Test Setup



**Below 1GHz**



**Over 1GHz**

Note: The highest frequency of the internal sources of the EUT is 5320 MHz, the measurement was made up to 40 GHz.

### 4.3.4 Test Results

Environment Condition:

Temperature: 23°C; Relative Humidity: 52%; Pressure:101kPa

Test Date: 2018-04-04- 2018-04-05

Test Engineer: Chen Weixiong

Test Site: 10m Anechoic Chamber

Test Mode: Mode 1-6

**1. Radiated Emission Test data (Standby Mode)**

**-Horizontal**

Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dBµV/m)	Limit (dBµV/m)
93.52	24.5	120	400	H	0	-17	19.0	43.5
101.52	28.6	120	400	H	0	-16.5	14.9	43.5
121.20	22.6	120	400	H	0	-19	20.9	43.5
272.00	28.6	120	400	H	0	-14.7	17.4	46.0
350.84	32.8	120	400	H	0	-12.4	13.2	46.0
612.24	30.2	120	400	H	0	-6.8	15.8	46.0

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
1954.83	46.52	73.9	27.38	0.0	155.0	H
2684.63	48.22	73.9	25.68	0.0	155.0	H
6085.42	51.25	73.9	22.65	0.0	155.0	H
6984.28	52.68	73.9	21.22	0.0	155.0	H
14825.65	51.82	73.9	22.08	0.0	155.0	H
15867.54	55.41	73.9	17.49	0.0	155.0	H

Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
1954.83	26.80	54.0	27.20	0.0	155.0	H
2684.63	25.90	54.0	28.10	0.0	155.0	H
6085.42	25.80	54.0	28.20	0.0	155.0	H
6984.28	28.30	54.0	25.70	0.0	155.0	H
14825.65	30.10	54.0	23.90	0.0	155.0	H
15867.54	35.90	54.0	18.10	0.0	155.0	H

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
22125	45.0	73.9	28.9	0.0	100.0	H
23769	45.6	73.9	28.3	0.0	100.0	H
24284	45.9	73.9	28.0	0.0	100.0	H
25072	47.2	73.9	26.7	0.0	100.0	H
25996	47.3	73.9	26.6	0.0	100.0	H
26481	48.2	73.9	25.7	0.0	100.0	H

Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
22125	32.1	54.0	21.9	0.0	100.0	H
23769	32.3	54.0	21.7	0.0	100.0	H
24284	32.7	54.0	21.3	0.0	100.0	H
25072	34.7	54.0	19.3	0.0	100.0	H
25996	34.5	54.0	19.5	0.0	100.0	H
26481	36.0	54.0	18.0	0.0	100.0	H

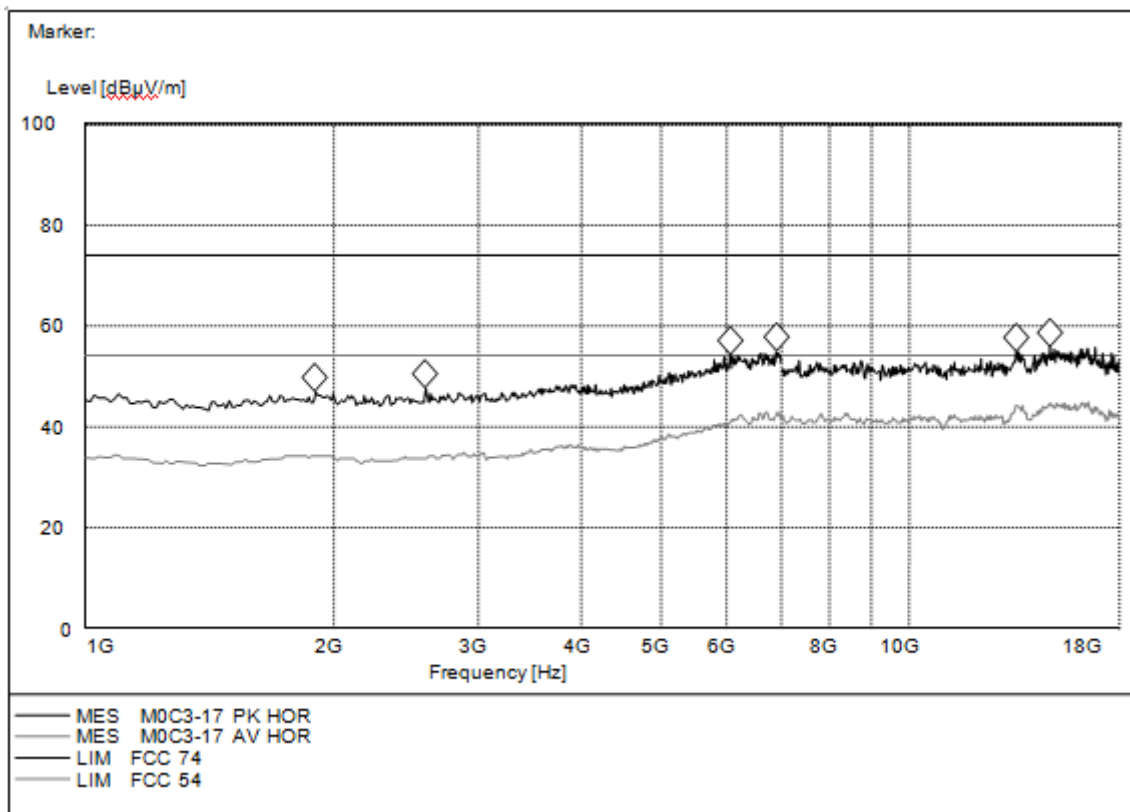
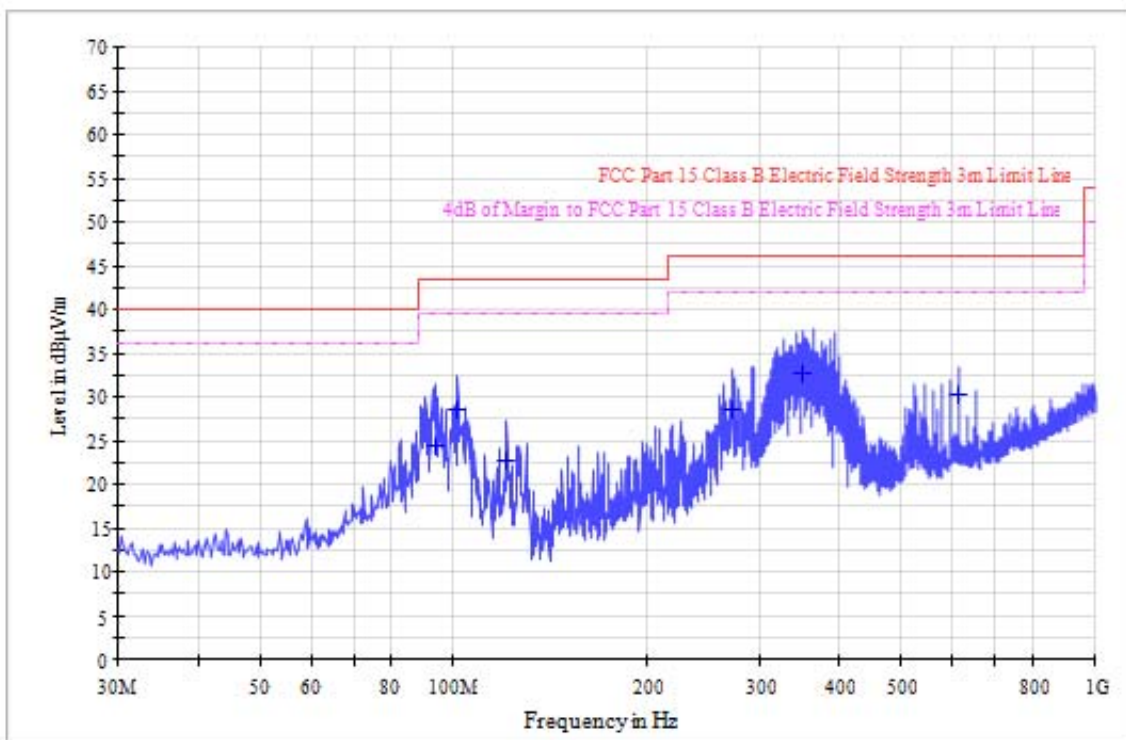
Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
33726	43.1	73.9	30.8	0.0	100.0	H
35619	43.4	73.9	30.5	0.0	100.0	H
37256	44.6	73.9	29.3	0.0	100.0	H
38036	45.5	73.9	28.4	0.0	100.0	H
38923	47.8	73.9	26.1	0.0	100.0	H
39723	48.6	73.9	25.3	0.0	100.0	H

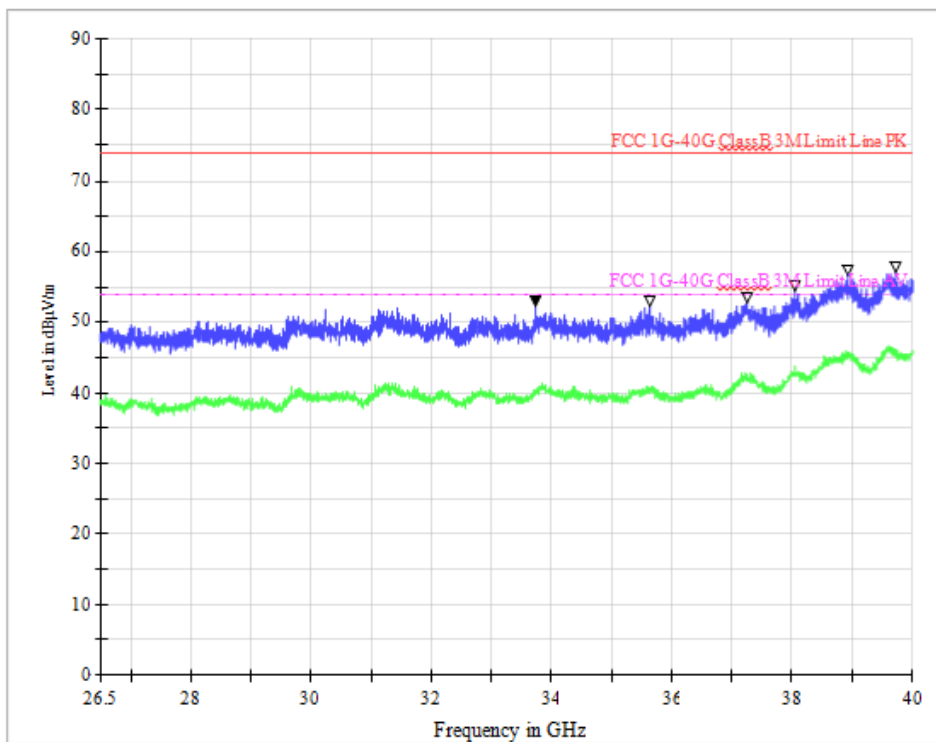
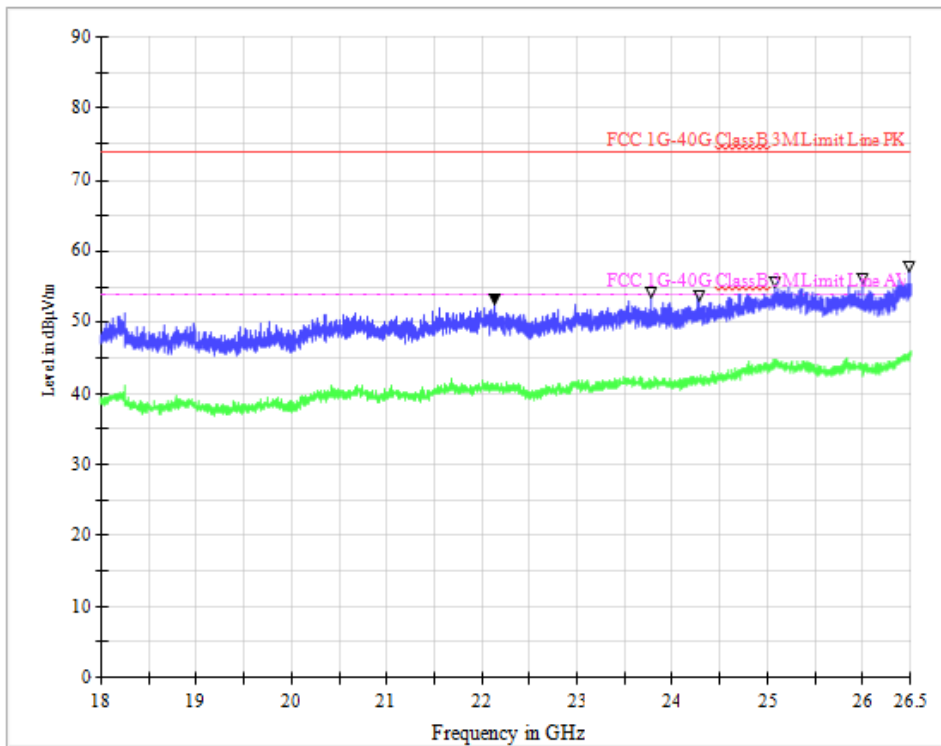


Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
33726	30.8	54.0	23.2	0.0	100.0	H
35619	31.4	54.0	22.6	0.0	100.0	H
37256	32.3	54.0	21.7	0.0	100.0	H
38036	33.1	54.0	20.9	0.0	100.0	H
38923	35.3	54.0	18.7	0.0	100.0	H
39723	35.2	54.0	18.8	0.0	100.0	H

**NOTE:**

The minimum margin value is over 4dB.





**-Vertical**

Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dBµV/m)	Limit (dBµV/m)
38.72	18.6	120	100	V	25	-16.8	21.4	40.0
91.60	33.2	120	100	V	36	-17.4	10.3	43.5
94.76	31.2	120	100	V	45	-16.8	12.3	43.5
127.00	26.9	120	100	V	85	-19.7	16.6	43.5
274.92	30.2	120	100	V	110	-14.6	15.8	46.0
406.36	35.4	120	100	V	256	-11.2	10.6	46.0

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
6254.71	43.92	73.9	29.98	0.0	100.0	V
6975.41	44.24	73.9	29.66	0.0	100.0	V
7851.46	44.52	73.9	29.38	0.0	100.0	V
14803.60	46.05	73.9	27.85	0.0	100.0	V
15896.15	43.76	73.9	30.14	0.0	100.0	V
16614.80	45.34	73.9	28.56	0.0	100.0	V

Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
6254.71	27.20	54.0	26.80	0.0	100.0	V
6975.41	27.57	54.0	26.43	0.0	100.0	V
7851.46	28.25	54.0	25.75	0.0	100.0	V
14803.60	25.18	54.0	28.82	0.0	100.0	V
15896.15	22.42	54.0	31.58	0.0	100.0	V
16614.80	28.82	54.0	25.18	0.0	100.0	V

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
22335	44	73.9	29.9	0.0	100.0	V
22970	44.4	73.9	29.5	0.0	100.0	V
24135	44.9	73.9	29.0	0.0	100.0	V
25248	46.6	73.9	27.3	0.0	100.0	V
25391	46.8	73.9	27.1	0.0	100.0	V
26460	48.4	73.9	25.5	0.0	100.0	V

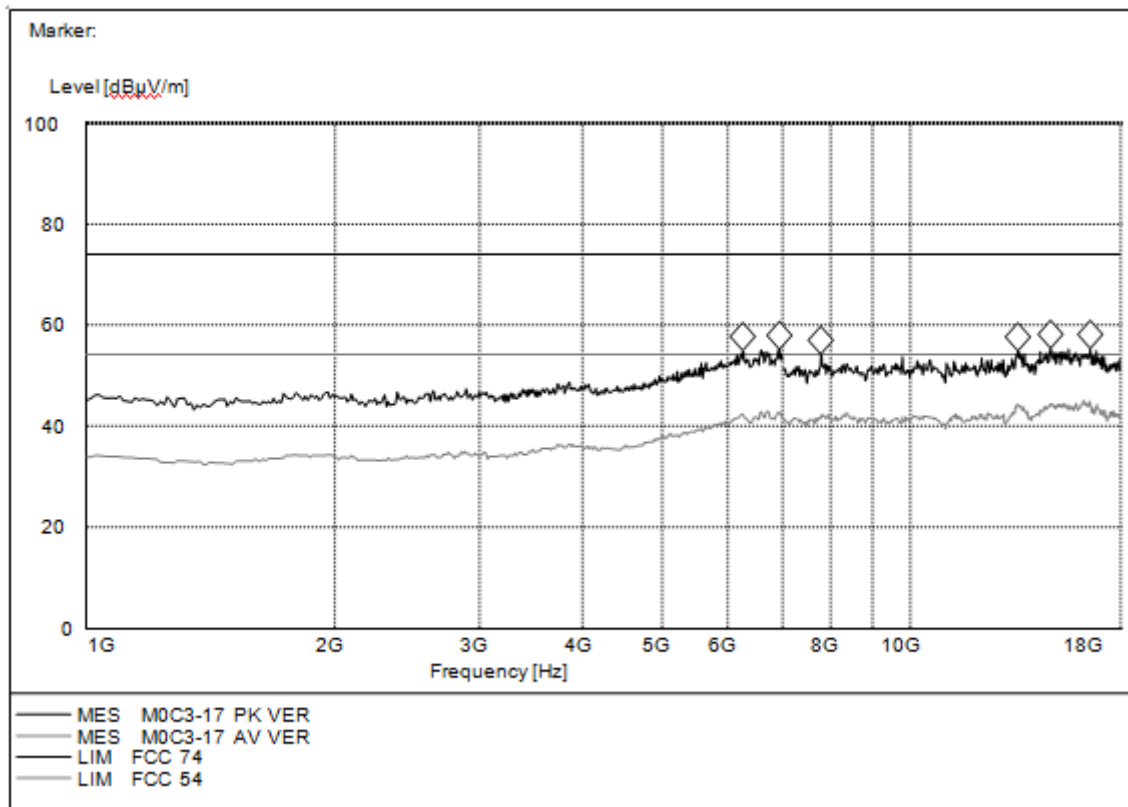
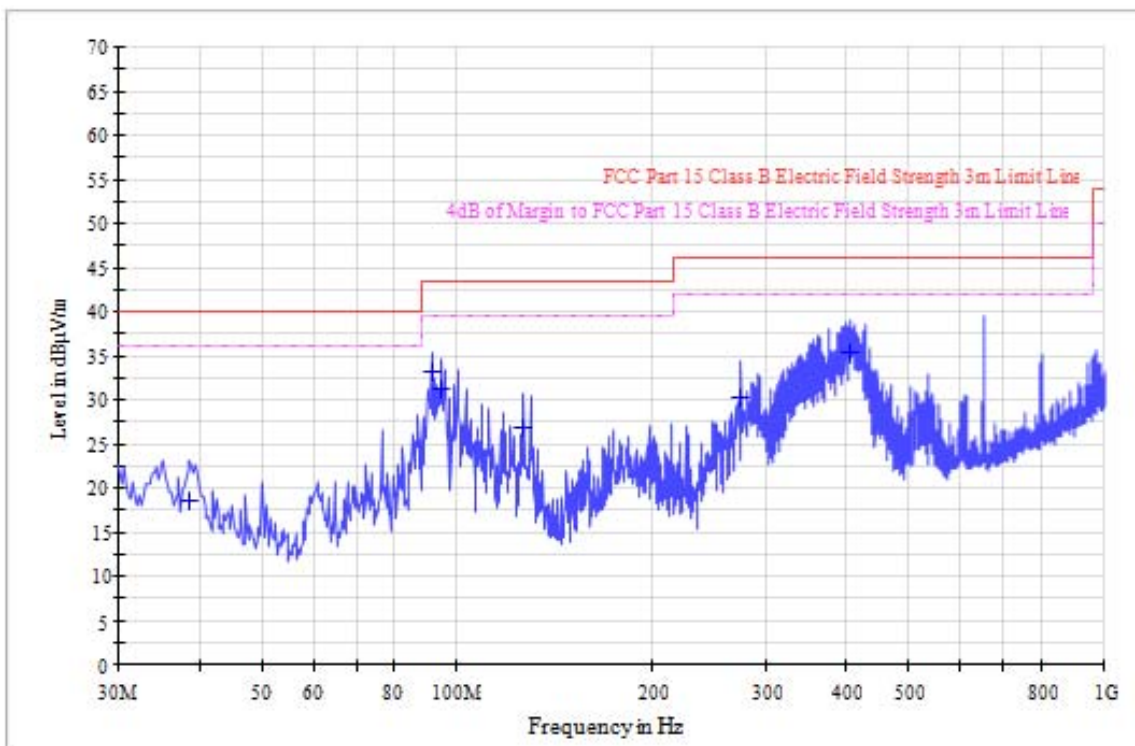
Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
22335	31.7	54.0	22.3	0.0	100.0	V
22970	32.2	54.0	21.8	0.0	100.0	V
24135	32.6	54.0	21.4	0.0	100.0	V
25248	34.4	54.0	19.6	0.0	100.0	V
25391	34.6	54.0	19.4	0.0	100.0	V
26460	35.8	54.0	18.2	0.0	100.0	V

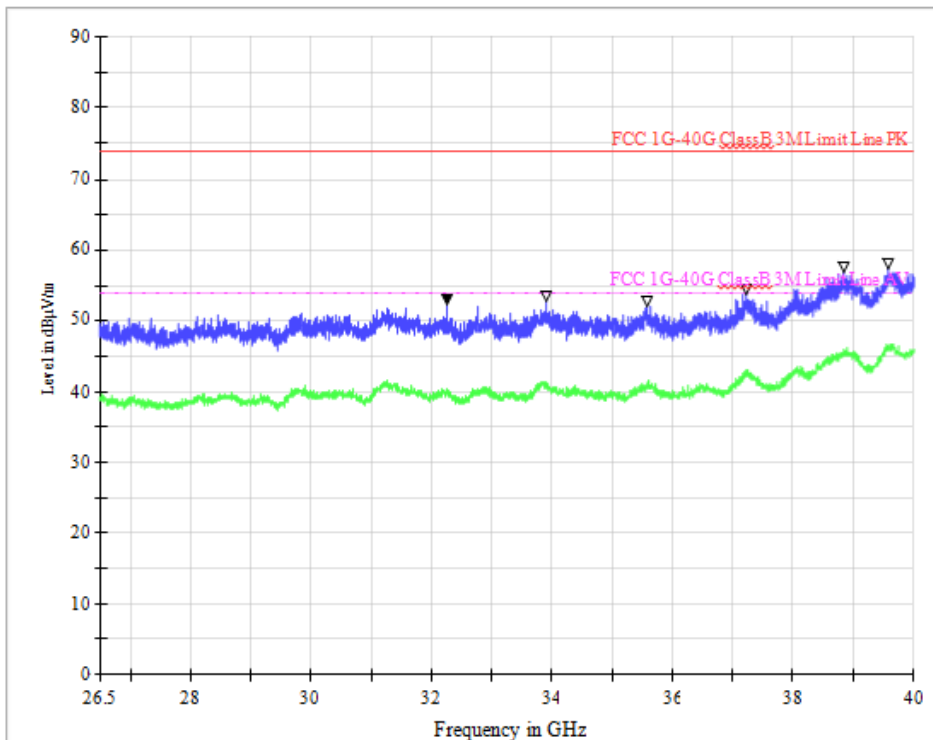
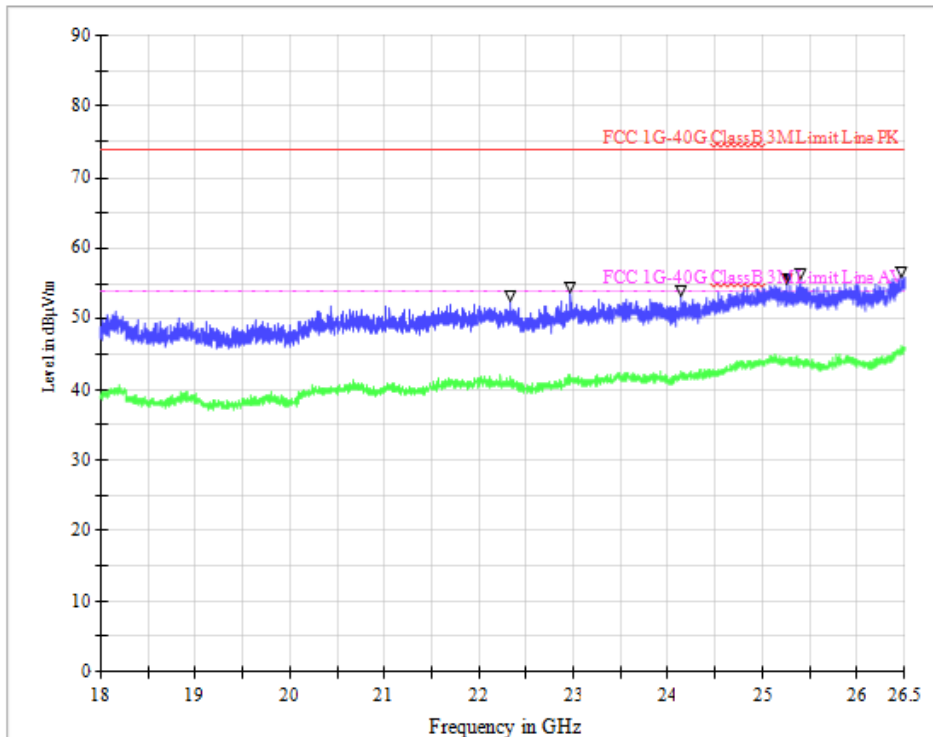
Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
32258	42.6	73.9	31.3	0.0	100.0	V
33895	43.9	73.9	30.0	0.0	100.0	V
35585	44.7	73.9	29.2	0.0	100.0	V
37219	44.7	73.9	29.2	0.0	100.0	V
38825	48	73.9	25.9	0.0	100.0	V
39565	48	73.9	25.9	0.0	100.0	V

Frequency (MHz)	Average dB $\mu$ V/m	Average limit (dB $\mu$ V/m)	Average Margin (dB $\mu$ V/m)	Turntable position (deg)	Ant. height (cm)	Polarity
32258	29.9	54.0	24.1	0.0	100.0	V
33895	31.8	54.0	22.2	0.0	100.0	V
35585	32.1	54.0	21.9	0.0	100.0	V
37219	32.4	54.0	21.6	0.0	100.0	V
38825	35.3	54.0	18.7	0.0	100.0	V
39565	35.8	54.0	18.2	0.0	100.0	V

**NOTE:**

The minimum margin value is over 4dB.







**2. Radiated Emission Test data (Copy +NIC Ping Mode)**

**-Horizontal**

Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dBµV/m)	Limit (dBµV/m)
59.84	17.2	120	300	H	112	-17.1	22.8	40.0
89.40	26.3	120	300	H	305	-17.9	17.2	43.5
98.88	27.5	120	300	H	226	-16.4	16.0	43.5
168.48	23.4	120	300	H	147	-19.4	20.1	43.5
263.28	26.5	120	300	H	263	-15.1	19.5	46.0
363.68	33.7	120	300	H	110	-12.1	12.3	46.0

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
2458.65	41.23	73.9	32.67	0.0	100.0	H
6684.71	43.25	73.9	30.65	0.0	100.0	H
10952.48	43.85	73.9	30.05	0.0	100.0	H
13684.27	43.94	73.9	29.96	0.0	100.0	H
15244.49	42.10	73.9	31.80	0.0	100.0	H
16852.70	40.85	73.9	33.05	0.0	100.0	H

Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
2458.65	30.22	54.0	23.78	0.0	100.0	H
6684.71	33.55	54.0	21.45	0.0	100.0	H
10952.48	35.82	54.0	18.18	0.0	100.0	H
13684.27	36.24	54.0	17.76	0.0	100.0	H
15244.49	36.38	54.0	17.62	0.0	100.0	H
16852.70	36.29	54.0	17.71	0.0	100.0	H

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
20962	44.1	73.9	29.8	0.0	100.0	H
21657	44.7	73.9	29.2	0.0	100.0	H
22203	44.8	73.9	29.1	0.0	100.0	H
23937	46.1	73.9	27.8	0.0	100.0	H
25074	47.1	73.9	26.8	0.0	100.0	H
25284	47.0	73.9	26.9	0.0	100.0	H

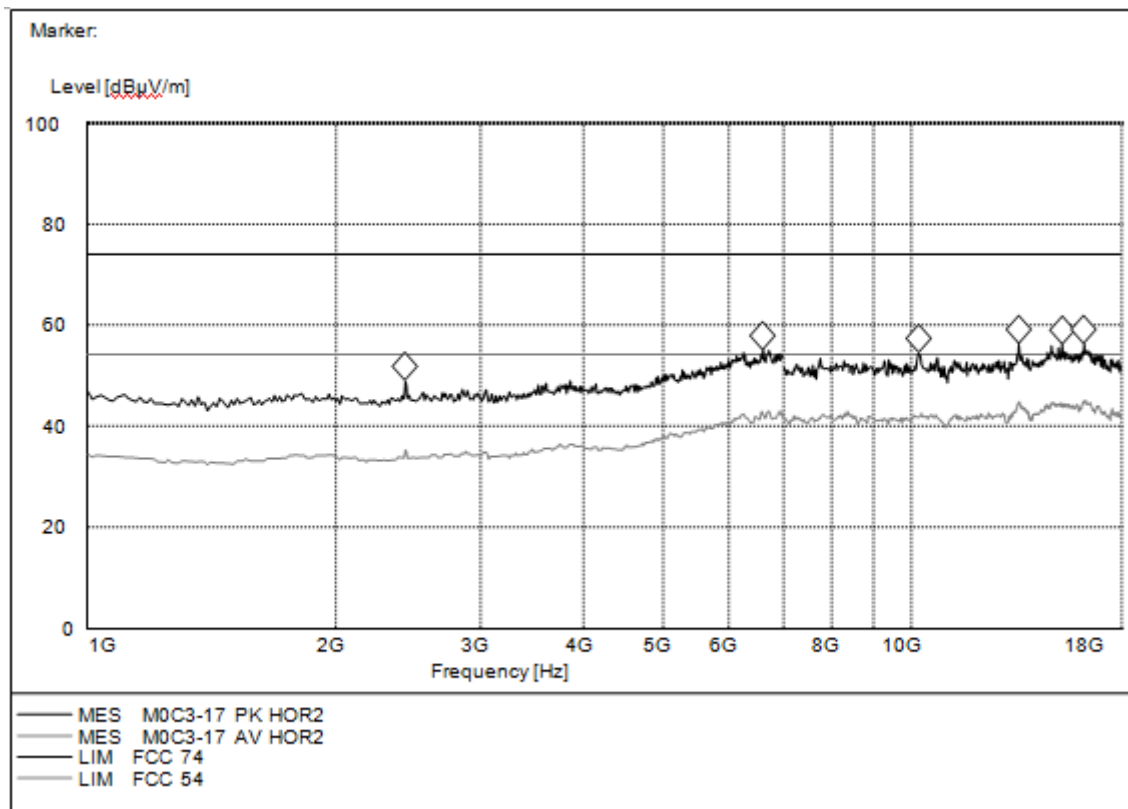
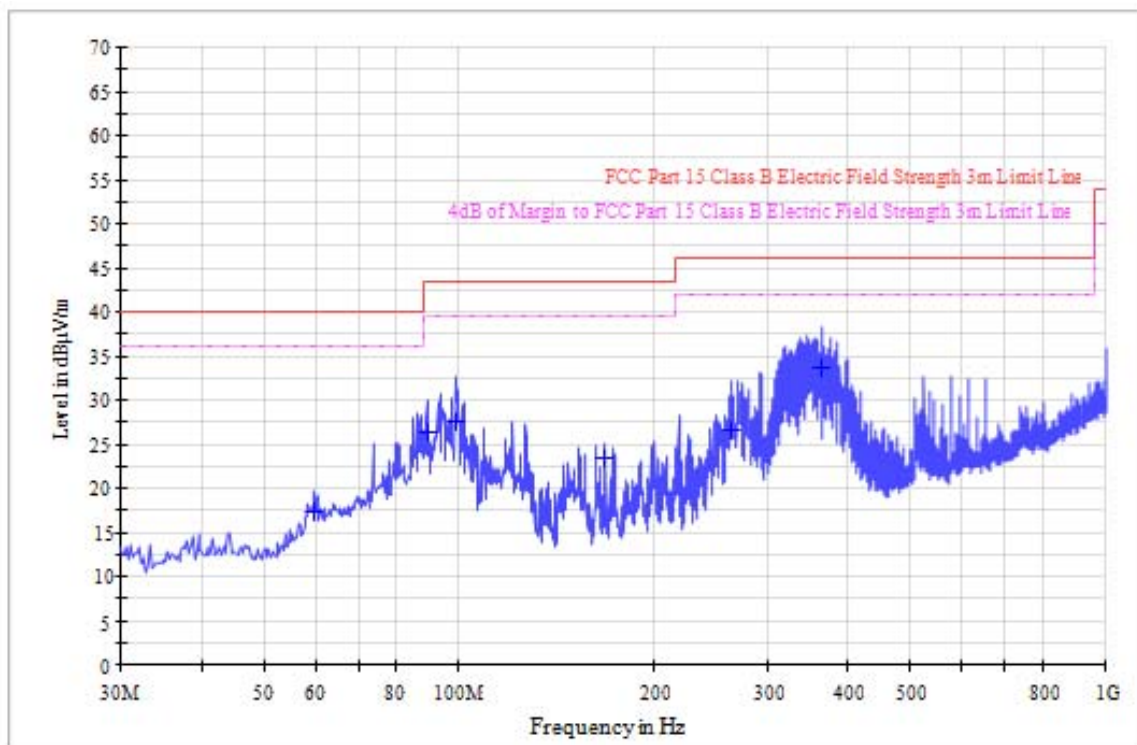
Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
20962	31.3	54.0	22.7	0.0	100.0	H
21657	32.0	54.0	22.0	0.0	100.0	H
22203	31.8	54.0	22.2	0.0	100.0	H
23937	32.5	54.0	21.5	0.0	100.0	H
25074	34.6	54.0	19.4	0.0	100.0	H
25284	34.3	54.0	19.7	0.0	100.0	H

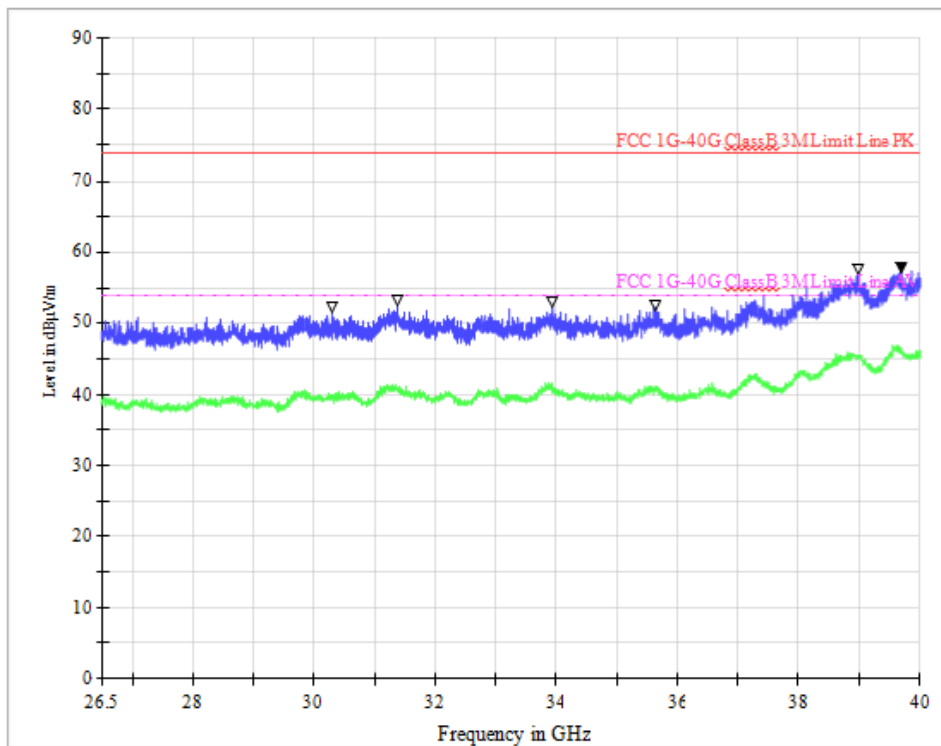
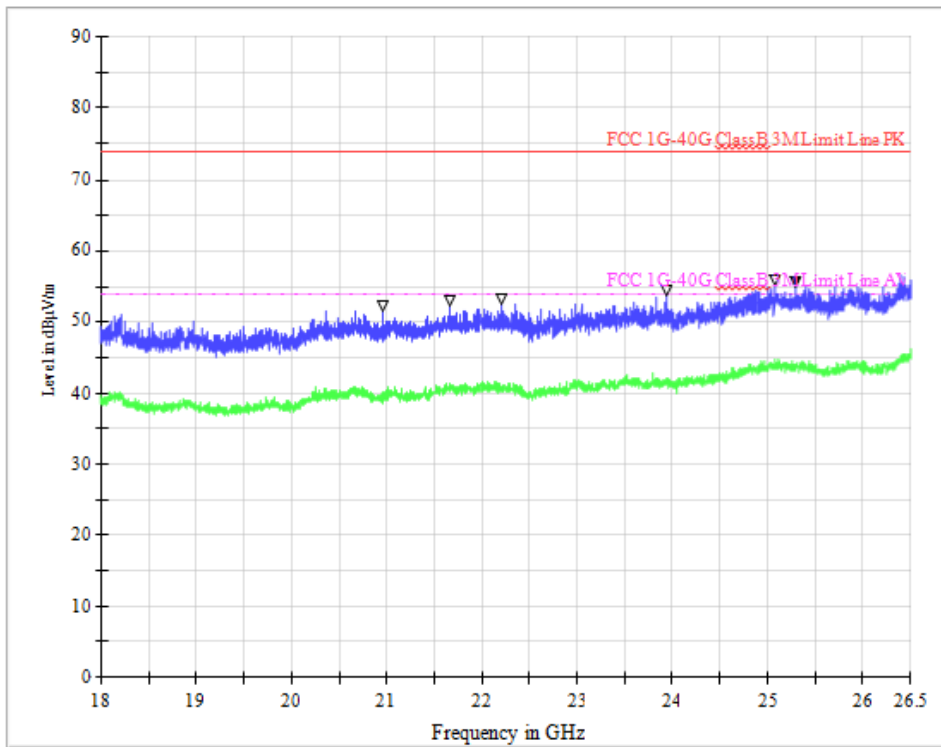
Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
30293	43.2	73.9	30.7	0.0	100.0	H
31370	44.3	73.9	29.6	0.0	100.0	H
33942	44.0	73.9	29.9	0.0	100.0	H
35646	44.3	73.9	29.6	0.0	100.0	H
38977	47.7	73.9	26.2	0.0	100.0	H
39700	47.6	73.9	26.3	0.0	100.0	H

Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
30293	30.9	54.0	23.1	0.0	100.0	H
31370	31.7	54.0	22.3	0.0	100.0	H
33942	31.4	54.0	22.6	0.0	100.0	H
35646	31.4	54.0	22.6	0.0	100.0	H
38977	35.0	54.0	19.0	0.0	100.0	H
39700	35.2	54.0	18.8	0.0	100.0	H

**NOTE:**

The minimum margin value is over 4dB.





**-Vertical**

Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dBµV/m)	Limit (dBµV/m)
39.72	20.4	120	100	V	52	-16.6	19.6	40.0
85.52	28.6	120	100	V	66	-19.2	11.4	40.0
94.52	33.2	120	100	V	88	-16.8	10.3	43.5
99.84	29.4	120	100	V	125	-16.4	14.1	43.5
253.84	33.4	120	100	V	245	-15.1	12.6	46.0
408.32	35.6	120	100	V	352	-11.2	10.4	46.0

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
2485.45	41.26	73.9	32.64	0.0	100.0	V
4056.25	42.52	73.9	31.38	0.0	100.0	V
6589.15	44.58	73.9	29.32	0.0	100.0	V
12862.15	45.21	73.9	28.69	0.0	100.0	V
16214.43	44.85	73.9	29.05	0.0	100.0	V
17135.85	46.85	73.9	27.05	0.0	100.0	V

Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
2485.45	31.34	54	22.66	0.0	100.0	V
4056.25	30.72	54	23.28	0.0	100.0	V
6589.15	32.93	54	21.07	0.0	100.0	V
12862.15	33.17	54	20.83	0.0	100.0	V
16214.43	34.21	54	19.79	0.0	100.0	V
17135.85	34.22	54	19.78	0.0	100.0	V

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
21328	43.6	73.9	30.3	0.0	100.0	V
22176	44.3	73.9	29.6	0.0	100.0	V
23774	45.0	73.9	28.9	0.0	100.0	V
25046	47.1	73.9	26.8	0.0	100.0	V
25848	47.0	73.9	26.9	0.0	100.0	V
26455	48.0	73.9	25.9	0.0	100.0	V

Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
21328	31.1	54.0	22.9	0.0	100.0	V
22176	31.8	54.0	22.2	0.0	100.0	V
23774	32.2	54.0	21.8	0.0	100.0	V
25046	34.3	54.0	19.7	0.0	100.0	V
25848	34.7	54.0	19.3	0.0	100.0	V
26455	35.8	54.0	18.2	0.0	100.0	V

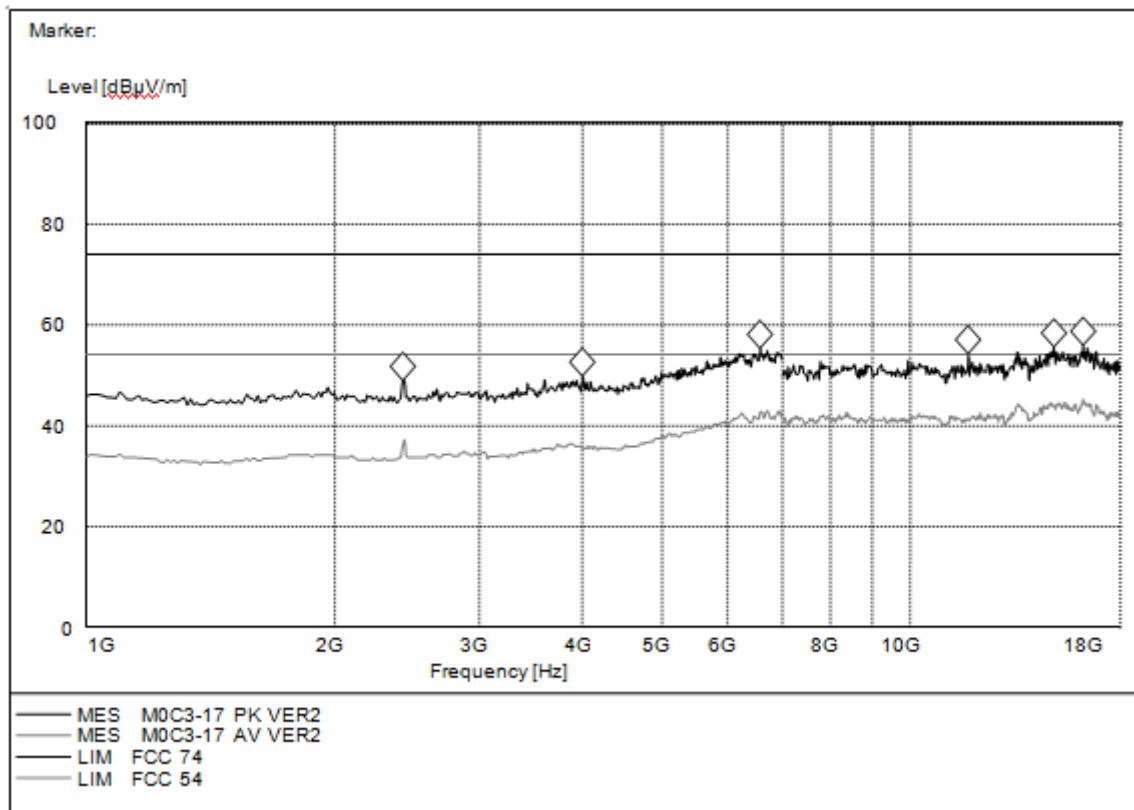
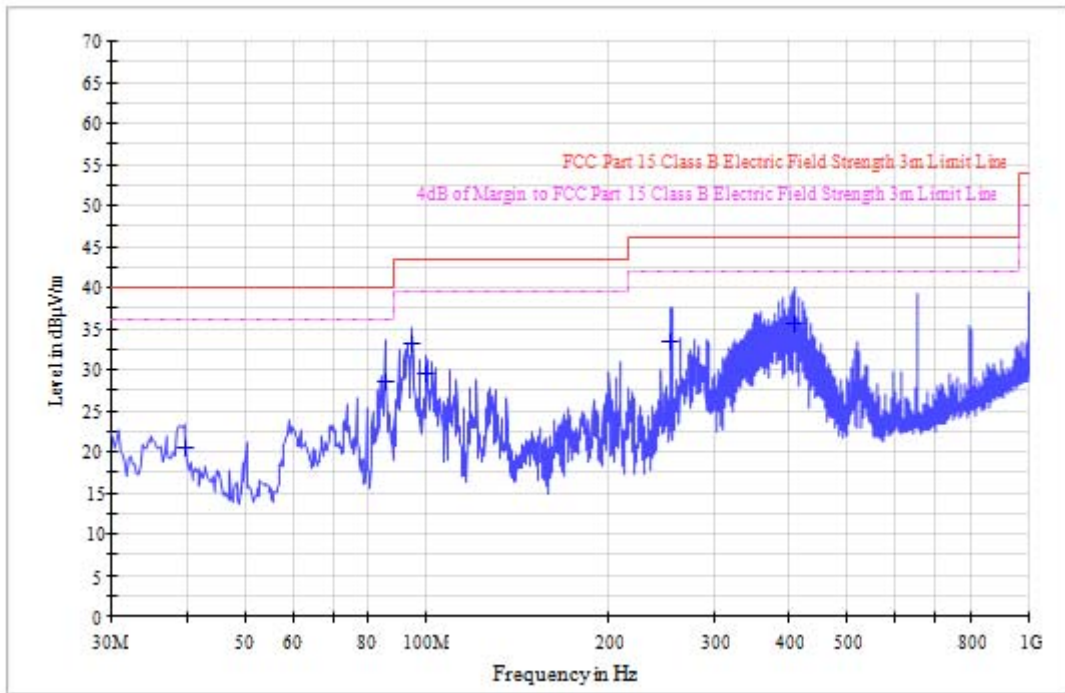
Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
31373	44.6	73.9	29.3	0.0	100.0	V
33878	44.3	73.9	29.6	0.0	100.0	V
34509	44.1	73.9	29.8	0.0	100.0	V
37263	44.9	73.9	29.0	0.0	100.0	V
38653	46.8	73.9	27.1	0.0	100.0	V
39558	48.2	73.9	25.7	0.0	100.0	V

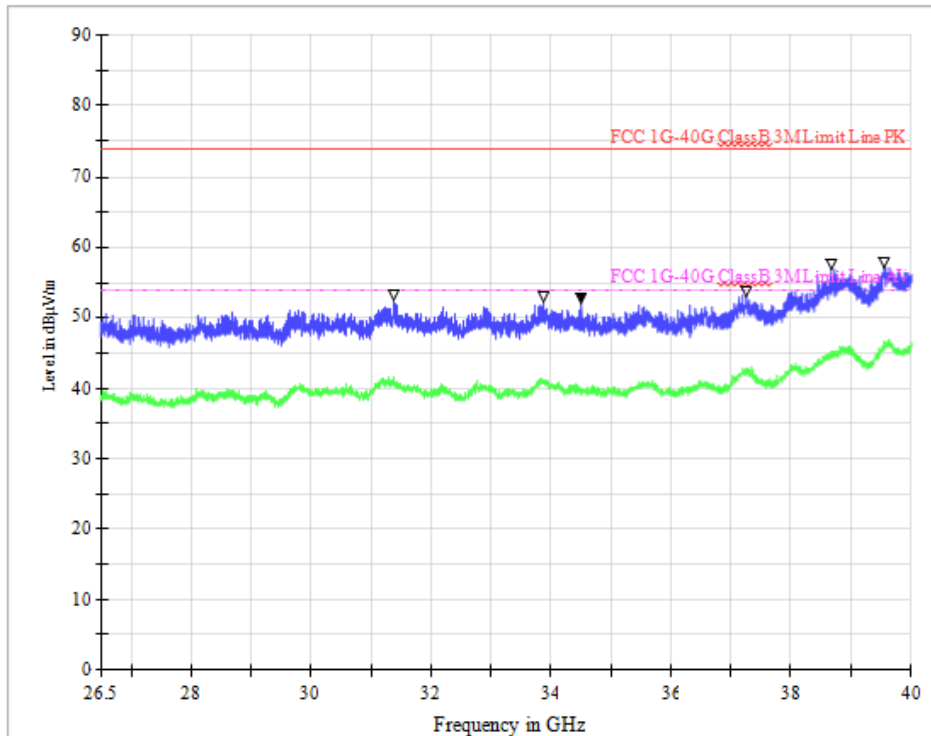
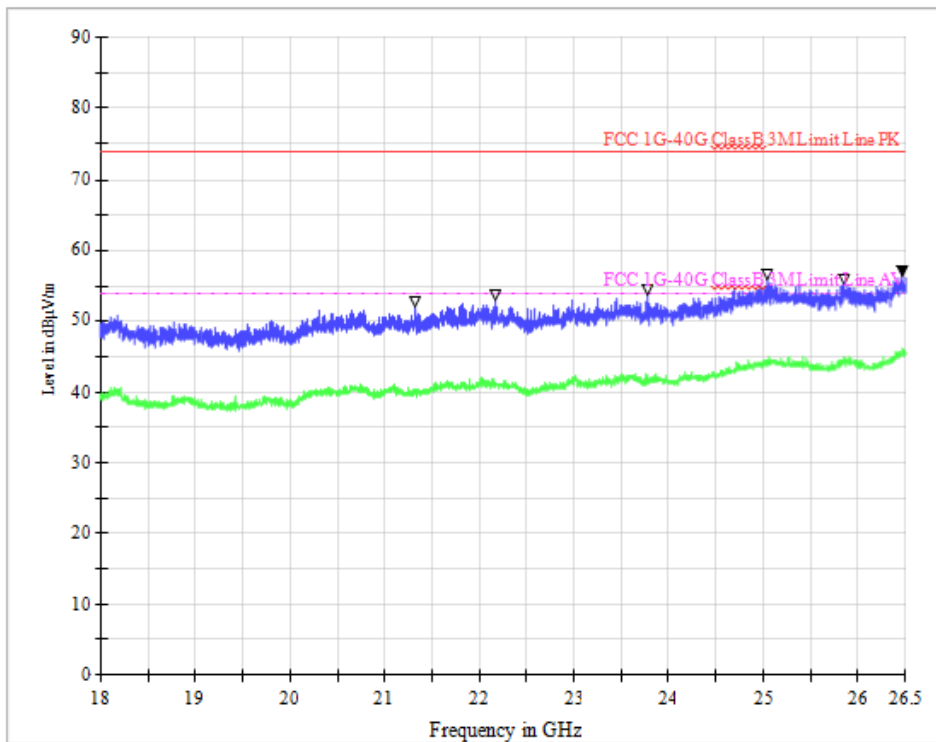
Frequency (MHz)	Average dB $\mu$ V/m	Average limit (dB $\mu$ V/m)	Average Margin (dB $\mu$ V/m)	Turntable position (deg)	Ant. height (cm)	Polarity
31373	31.7	54.0	22.3	0.0	100.0	V
33878	31.3	54.0	22.7	0.0	100.0	V
34509	30.8	54.0	23.2	0.0	100.0	V
37263	32.4	54.0	21.6	0.0	100.0	V
38653	34.6	54.0	19.4	0.0	100.0	V
39558	35.8	54.0	18.2	0.0	100.0	V

**NOTE:**

The minimum margin value is over 4dB.







**3. Radiated Emission Test data (WIFI SCAN+USB PRINT Mode)**

**-Horizontal**

Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dBµV/m)	Limit (dBµV/m)
100.56	27.2	120	300	H	65	-16.4	16.3	43.5
162.64	28.6	120	300	H	56	-19.6	14.9	43.5
253.84	34.2	120	300	H	98	-15.1	11.8	46.0
292.64	33.6	120	300	H	125	-13.9	12.4	46.0
350.80	39.9	120	100	H	226	-12.4	6.1	46.0
393.76	36.4	120	100	H	34	-11.6	9.6	46.0

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
1158.72	42.10	73.9	31.80	0.0	100.0	H
1956.84	42.26	73.9	31.64	0.0	100.0	H
6480.41	48.62	73.9	25.28	0.0	100.0	H
6711.42	49.51	73.9	24.39	0.0	100.0	H
15247.63	50.12	73.9	23.78	0.0	100.0	H
17896.30	50.98	73.9	22.92	0.0	100.0	H

Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
1158.72	27.20	54	26.80	0.0	100.0	H
1956.84	26.84	54	27.16	0.0	100.0	H
6480.41	39.85	54	14.15	0.0	100.0	H
6711.42	40.26	54	13.74	0.0	100.0	H
15247.63	41.85	54	12.15	0.0	100.0	H
17896.30	40.81	54	13.19	0.0	100.0	H

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
21827	44.3	73.9	29.6	0.0	100.0	H
22093	44.2	73.9	29.7	0.0	100.0	H
23559	44.5	73.9	29.4	0.0	100.0	H
24855	46.3	73.9	27.6	0.0	100.0	H
25539	46.0	73.9	27.9	0.0	100.0	H
26477	48.1	73.9	25.8	0.0	100.0	H

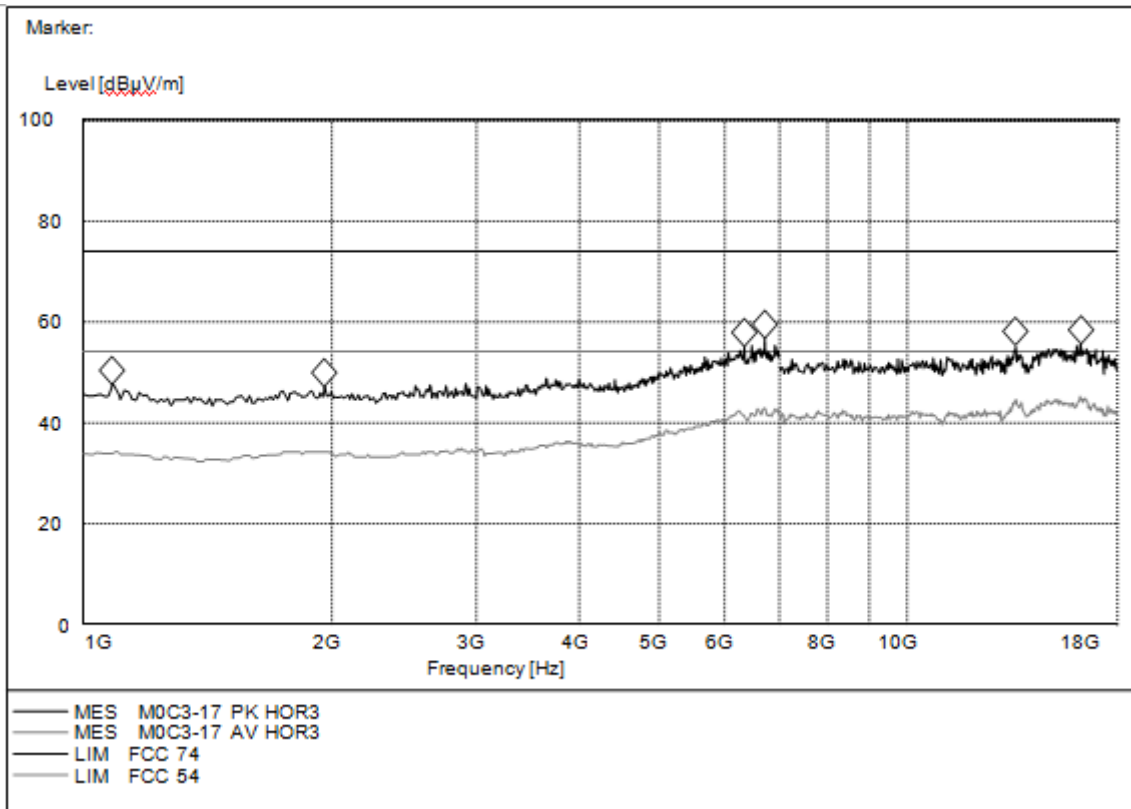
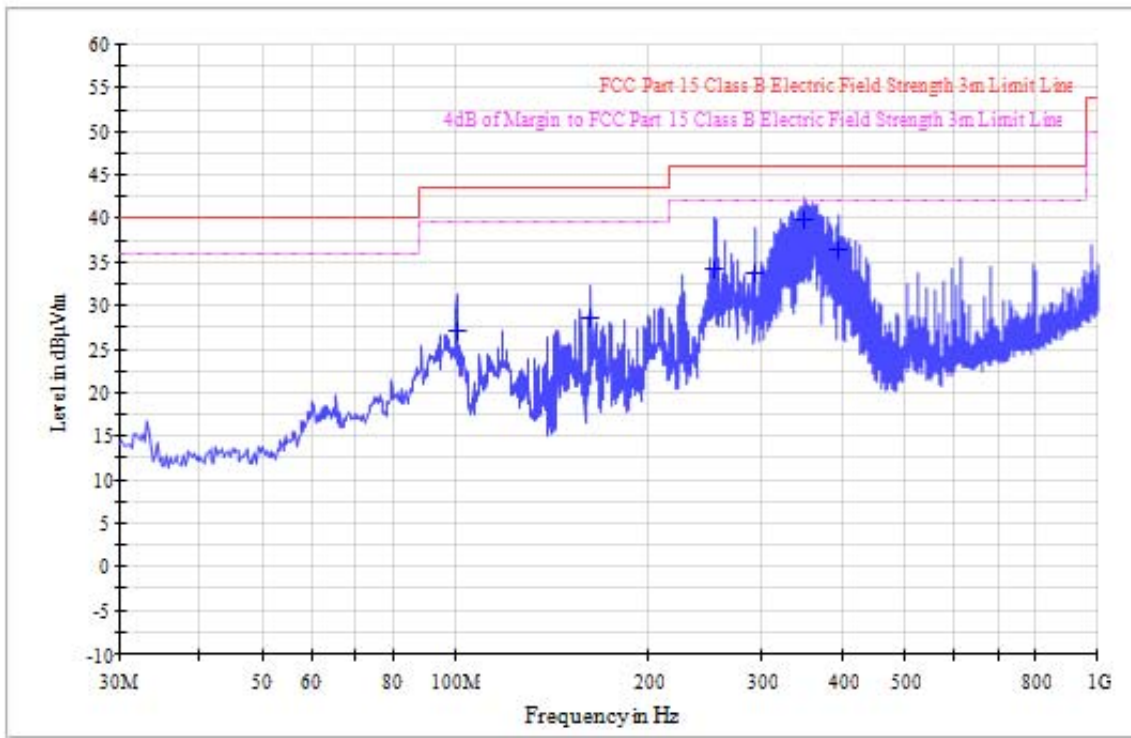
Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
21827	31.7	54.0	22.3	0.0	100.0	H
22093	32.0	54.0	22.0	0.0	100.0	H
23559	32.5	54.0	21.5	0.0	100.0	H
24855	33.8	54.0	20.2	0.0	100.0	H
25539	33.8	54.0	20.2	0.0	100.0	H
26477	35.7	54.0	18.3	0.0	100.0	H

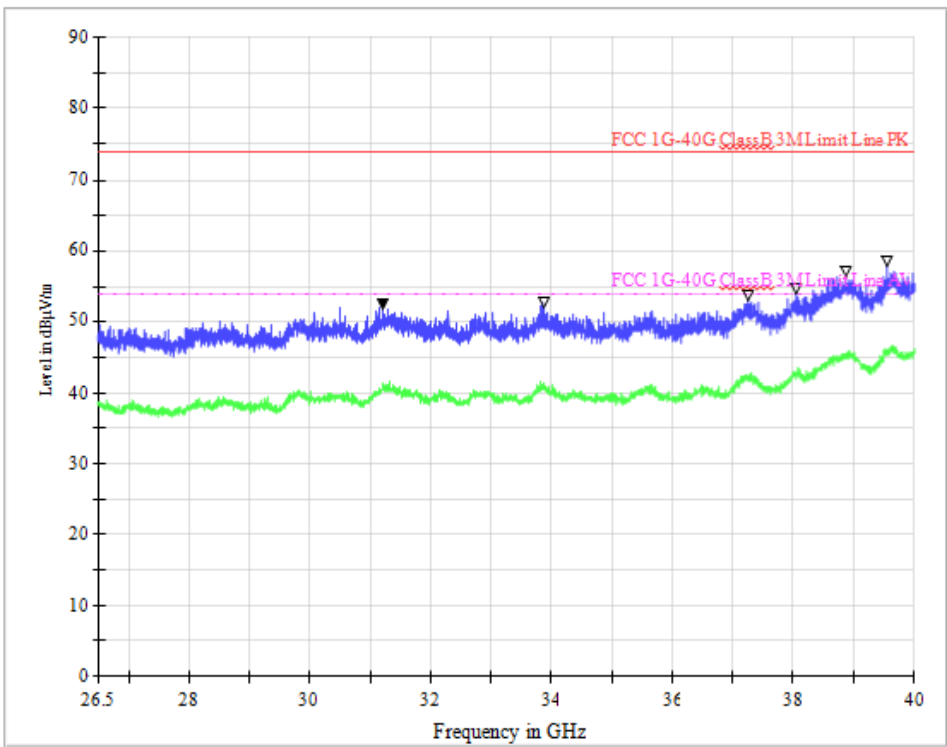
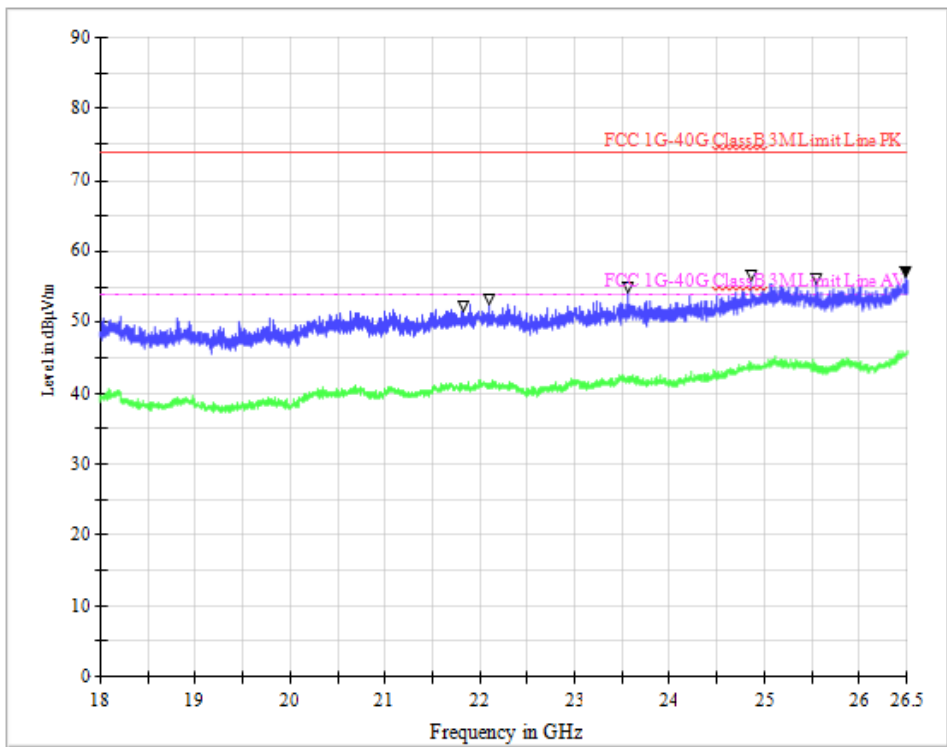
Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
31198	43.9	73.9	30.0	0.0	100.0	H
33881	44.1	73.9	29.8	0.0	100.0	H
37239	44.5	73.9	29.4	0.0	100.0	H
38042	45.5	73.9	28.4	0.0	100.0	H
38869	47.4	73.9	26.5	0.0	100.0	H
39544	48.0	73.9	25.9	0.0	100.0	H

Frequency (MHz)	Average dB $\mu$ V/m	Average limit (dB $\mu$ V/m)	Average Margin (dB $\mu$ V/m)	Turntable position (deg)	Ant. height (cm)	Polarity
31198	31.3	54.0	22.7	0.0	100.0	H
33881	31.3	54.0	22.7	0.0	100.0	H
37239	32.2	54.0	21.8	0.0	100.0	H
38042	33	54.0	21.0	0.0	100.0	H
38869	35.1	54.0	18.9	0.0	100.0	H
39544	35.5	54.0	18.5	0.0	100.0	H

**NOTE:**

The minimum margin value is over 4dB.





**-Vertical**

Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dBµV/m)	Limit (dBµV/m)
33.40	21.2	120	100	V	195	-17.9	18.8	40.0
62.00	22.4	120	100	V	225	-17.9	17.6	40.0
85.76	29.8	120	100	V	145	-19.1	10.2	40.0
94.52	32.5	120	100	V	115	-16.8	10.5	43.5
255.28	34.5	120	100	V	275	-15.2	11.5	46.0
354.00	37.5	120	100	V	72	-12.3	8.5	46.0

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
6241.48	44.82	73.9	29.08	0.0	100.0	V
6915.83	46.24	73.9	27.66	0.0	100.0	V
8862.51	47.91	73.9	25.99	0.0	100.0	V
12254.28	48.88	73.9	25.02	0.0	100.0	V
15354.81	49.25	73.9	24.65	0.0	100.0	V
16089.62	49.85	73.9	24.05	0.0	100.0	V

Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
1001.2000	28.20	54.0	25.8	0.0	100.0	V
1199.2000	28.76	54.0	25.24	0.0	100.0	V
1397.6000	29.52	54.0	24.48	0.0	100.0	V
1597.2000	29.61	54.0	24.39	0.0	100.0	V
1793.6000	30.82	54.0	23.18	0.0	100.0	V
1917.2000	31.52	54.0	22.48	0.0	100.0	V



Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
20416	44.2	73.9	29.7	0.0	100.0	V
22197	44.2	73.9	29.7	0.0	100.0	V
23289	44.5	73.9	29.4	0.0	100.0	V
25214	46.7	73.9	27.2	0.0	100.0	V
25994	46.8	73.9	27.1	0.0	100.0	V
26479	48.5	73.9	25.4	0.0	100.0	V

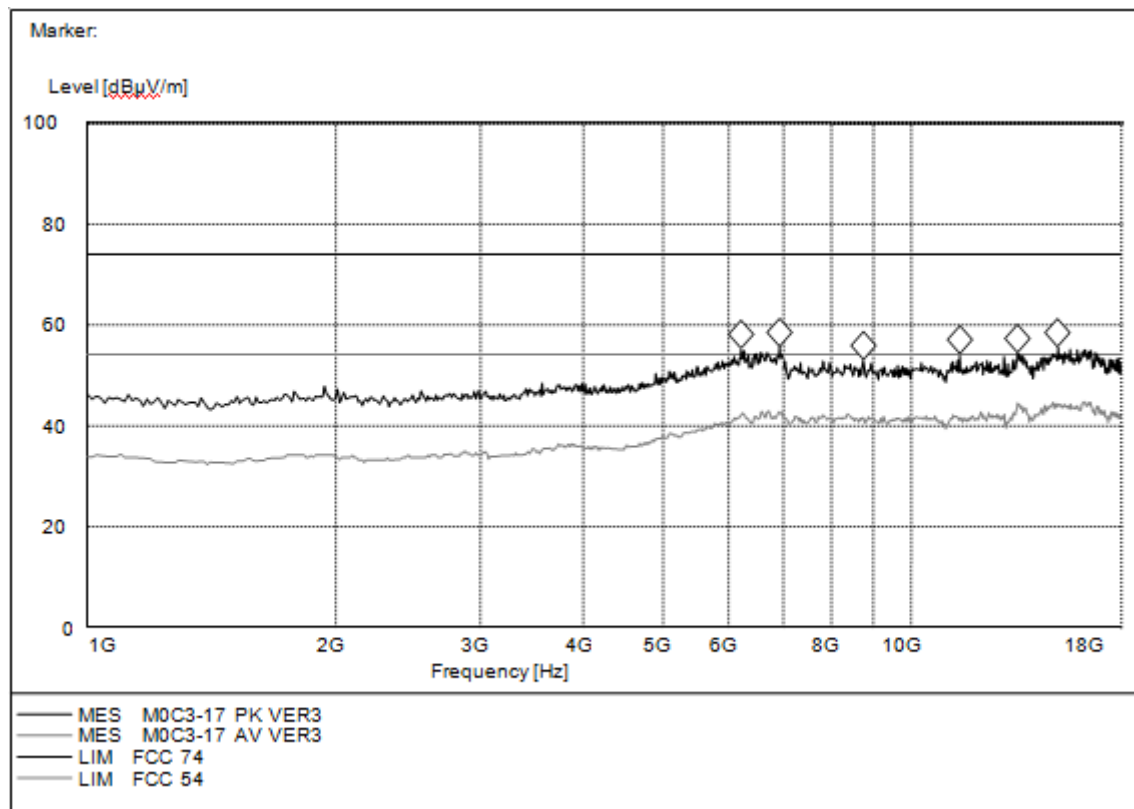
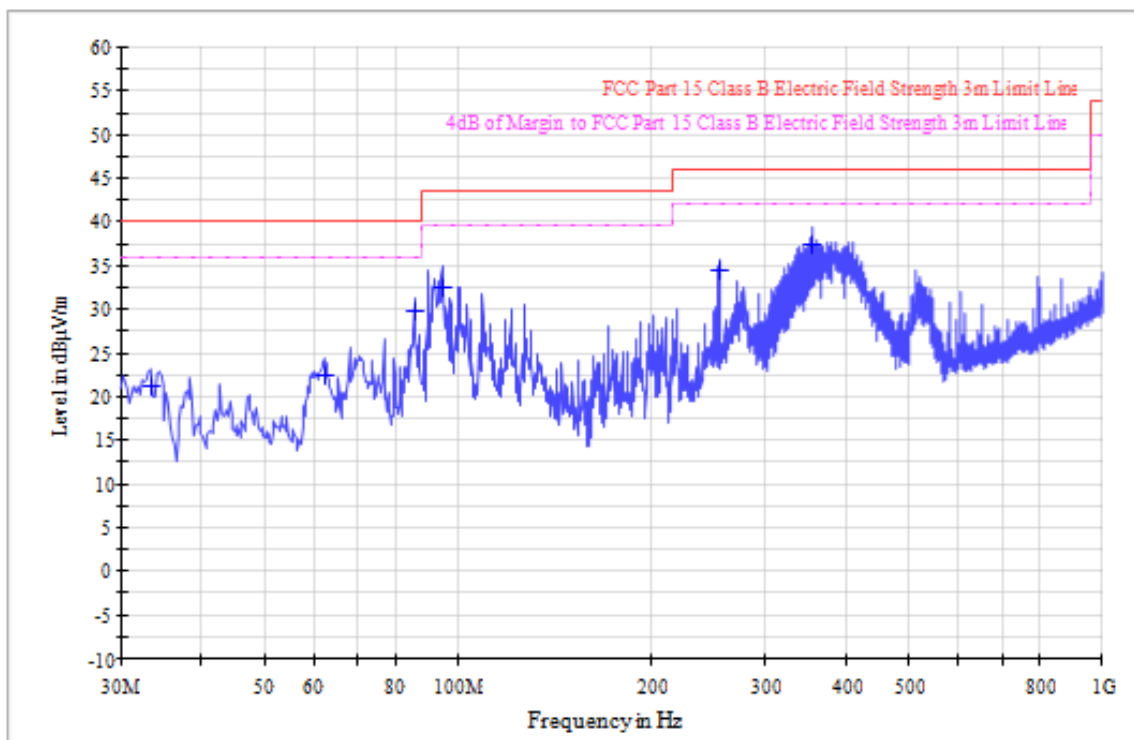
Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
20416	31.7	54.0	22.3	0.0	100.0	V
22197	31.7	54.0	22.3	0.0	100.0	V
23289	32.1	54.0	21.9	0.0	100.0	V
25214	34.5	54.0	19.5	0.0	100.0	V
25994	34.4	54.0	19.6	0.0	100.0	V
26479	36.0	54.0	18.0	0.0	100.0	V

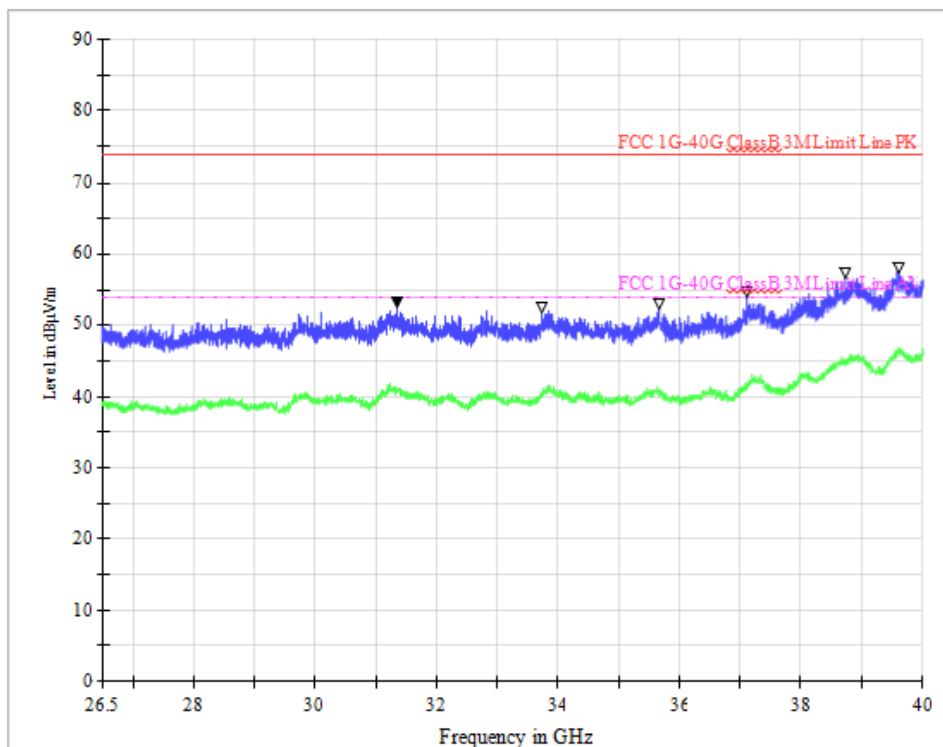
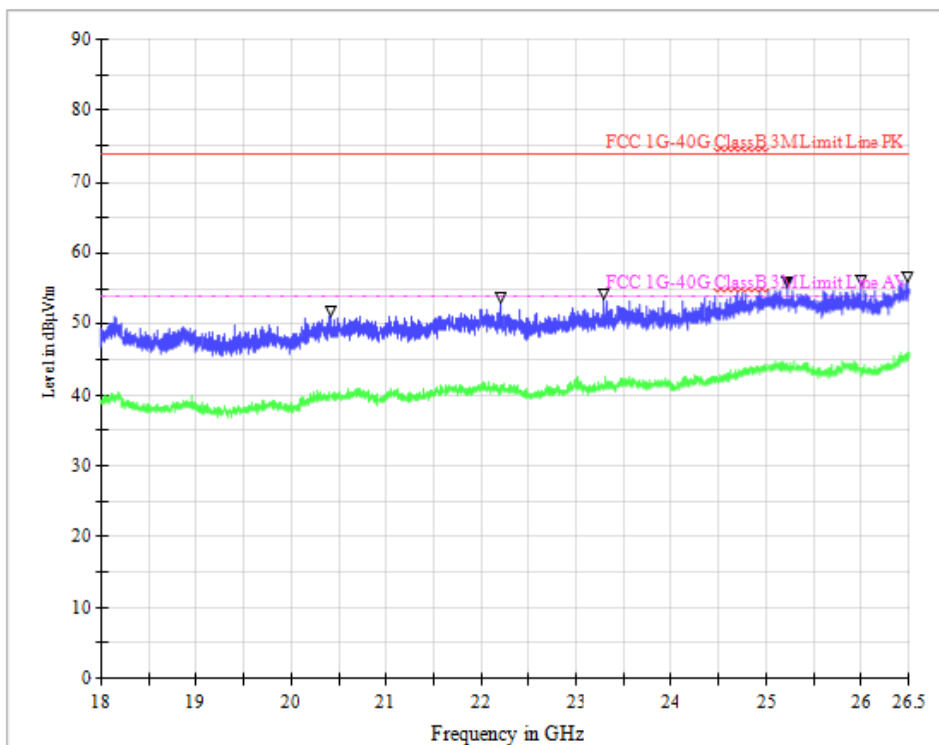
Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
31350	44.7	73.9	29.2	0.0	100.0	V
33722	43.4	73.9	30.5	0.0	100.0	V
35650	44.2	73.9	29.7	0.0	100.0	V
37108	44	73.9	29.9	0.0	100.0	V
38717	47.8	73.9	26.1	0.0	100.0	V
39615	48.2	73.9	25.7	0.0	100.0	V

Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
31350	31.7	54.0	22.3	0.0	100.0	V
33722	31.1	54.0	22.9	0.0	100.0	V
35650	31.4	54.0	22.6	0.0	100.0	V
37108	31.5	54.0	22.5	0.0	100.0	V
38717	34.8	54.0	19.2	0.0	100.0	V
39615	35.9	54.0	18.1	0.0	100.0	V

**NOTE:**

The minimum margin value is over 4dB.





**4. Radiated Emission Test data (WIFI PRINT+USB SCAN Mode)**

**-Horizontal**

Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dBµV/m)	Limit (dBµV/m)
99.84	17.8	120	400	H	29	-16.4	25.7	43.5
165.08	26.2	120	400	H	123	-16.4	17.3	43.5
207.04	26.4	120	400	H	220	-17.1	17.1	43.5
253.84	32.1	120	400	H	325	-15.1	13.9	46.0
329.72	36.4	120	400	H	270	-13.1	9.6	46.0
354.20	40.5	120	100	H	288	-12.3	5.5	46.0

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
1784.16	41.20	73.9	32.70	0.0	100.0	H
2489.62	41.28	73.9	32.62	0.0	100.0	H
7056.24	42.89	73.9	31.01	0.0	100.0	H
8658.13	43.22	73.9	30.68	0.0	100.0	H
13547.09	43.02	73.9	30.88	0.0	100.0	H
17852.74	43.59	73.9	30.31	0.0	100.0	H

Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
1784.16	26.80	54.0	27.2	0.0	100.0	H
2489.62	27.52	54.0	26.48	0.0	100.0	H
7056.24	27.96	54.0	26.04	0.0	100.0	H
8658.13	28.97	54.0	25.03	0.0	100.0	H
13547.09	32.15	54.0	21.85	0.0	100.0	H
17852.74	31.85	54.0	22.15	0.0	100.0	H

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
20739	44.0	73.9	29.9	0.0	100.0	H
21999	44.3	73.9	29.6	0.0	100.0	H
23559	45.1	73.9	28.8	0.0	100.0	H
25140	47.1	73.9	26.8	0.0	100.0	H
25979	46.5	73.9	27.4	0.0	100.0	H
26498	48.2	73.9	25.7	0.0	100.0	H

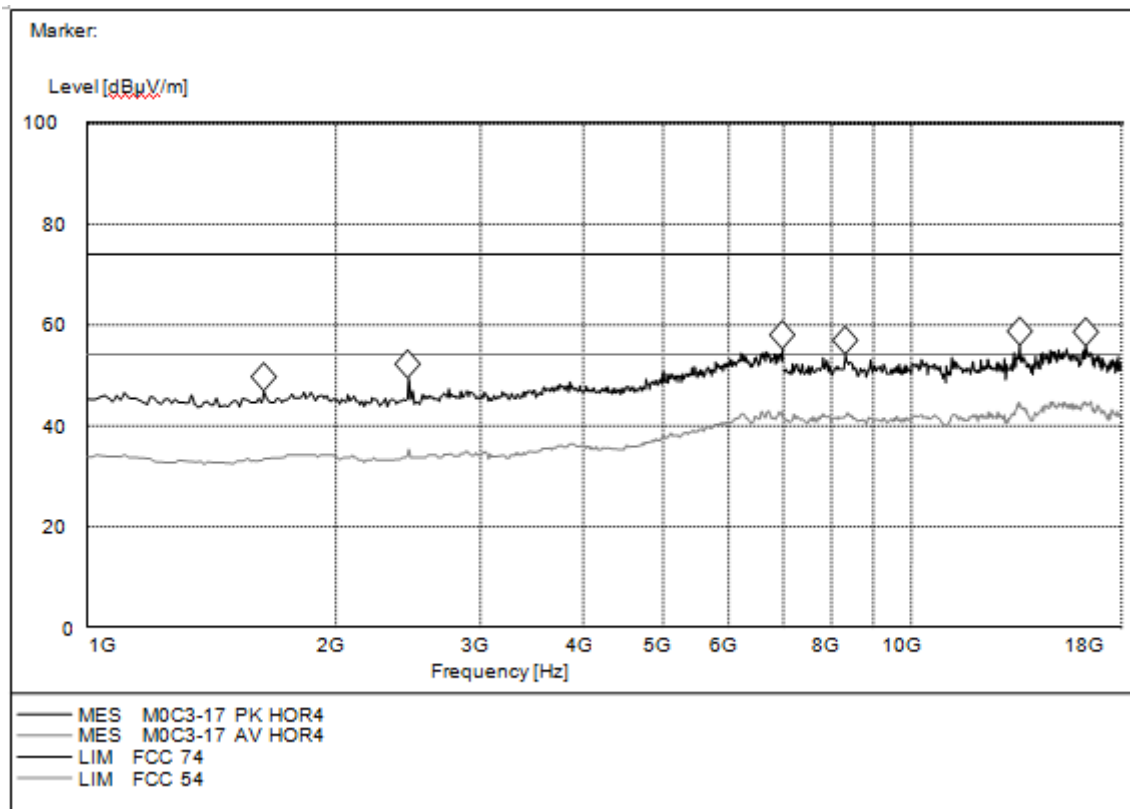
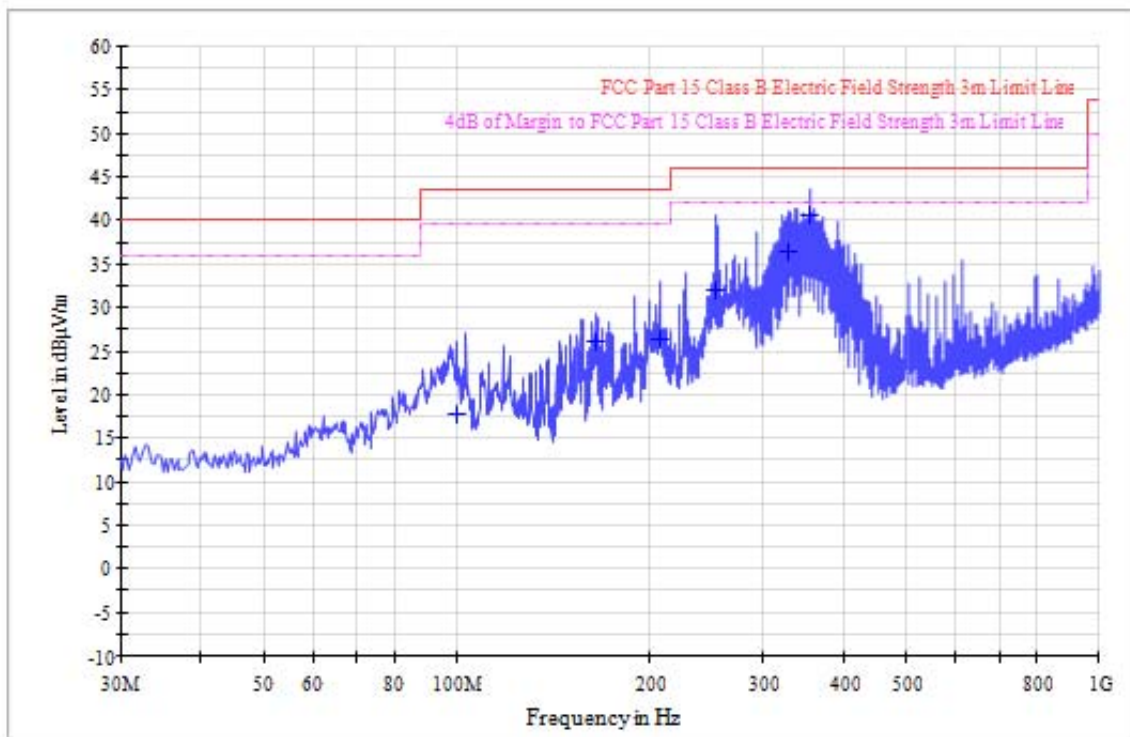
Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
20739	31.5	54.0	22.5	0.0	100.0	H
21999	32.1	54.0	21.9	0.0	100.0	H
23559	32.5	54.0	21.5	0.0	100.0	H
25140	34.6	54.0	19.4	0.0	100.0	H
25979	34.5	54.0	19.5	0.0	100.0	H
26498	35.8	54.0	18.2	0.0	100.0	H

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
31211	44.9	73.9	29.0	0.0	100.0	H
33868	44.2	73.9	29.7	0.0	100.0	H
37219	44.8	73.9	29.1	0.0	100.0	H
37961	45.1	73.9	28.8	0.0	100.0	H
38981	47.5	73.9	26.4	0.0	100.0	H
39619	48.6	73.9	25.3	0.0	100.0	H

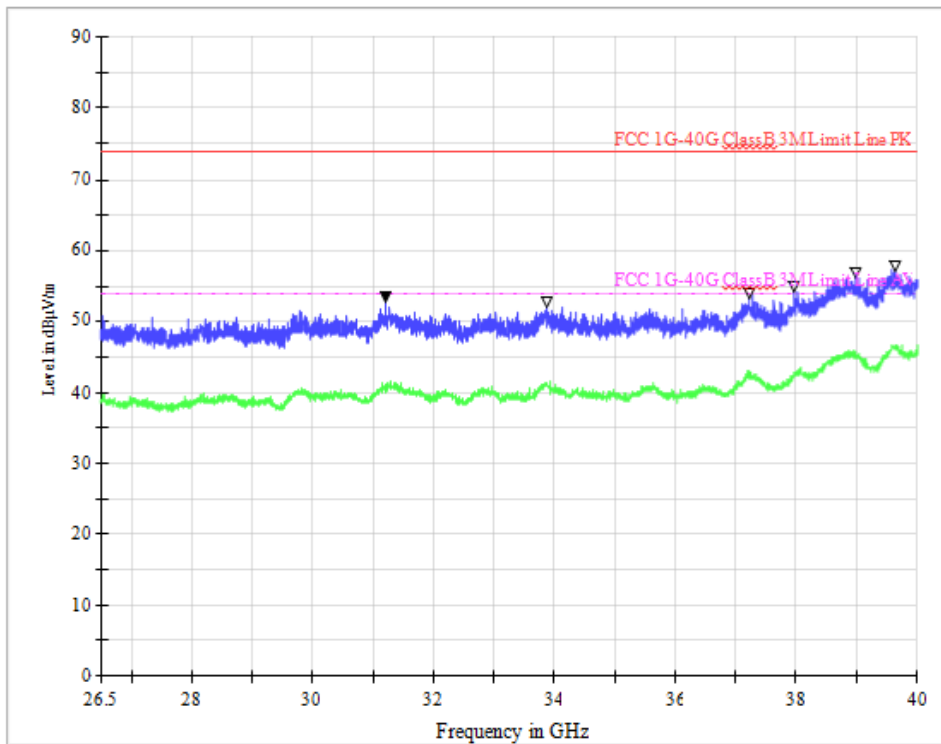
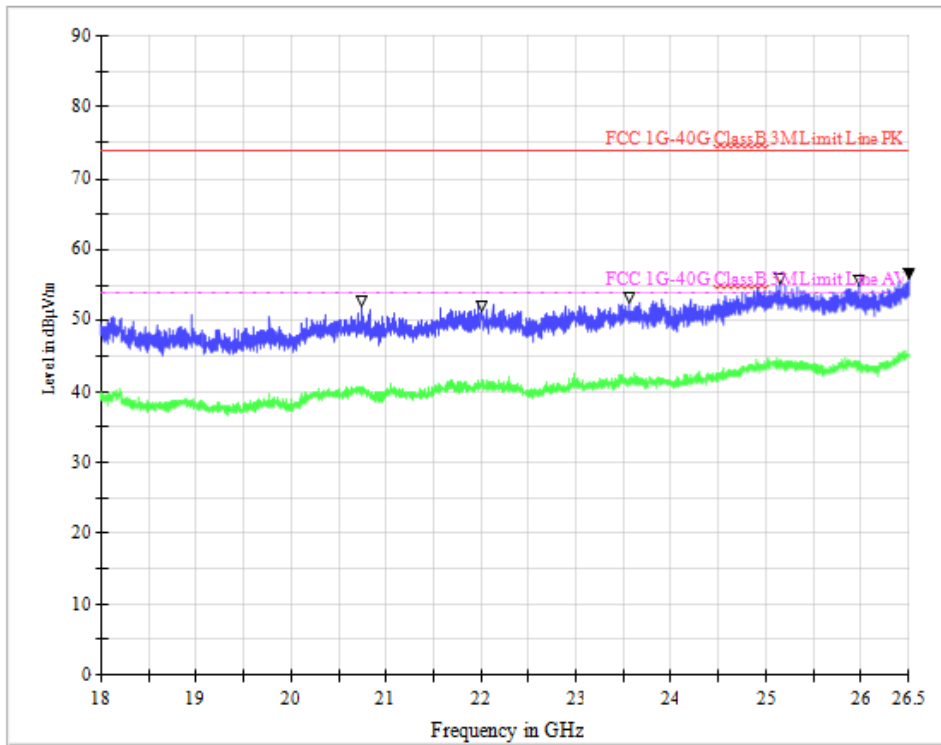
Frequency (MHz)	Average dB $\mu$ V/m	Average limit (dB $\mu$ V/m)	Average Margin (dB $\mu$ V/m)	Turntable position (deg)	Ant. height (cm)	Polarity
31211	31.5	54.0	22.5	0.0	100.0	H
33868	31.7	54.0	22.3	0.0	100.0	H
37219	32.3	54.0	21.7	0.0	100.0	H
37961	32.5	54.0	21.5	0.0	100.0	H
38981	35.1	54.0	18.9	0.0	100.0	H
39619	35.9	54.0	18.1	0.0	100.0	H

**NOTE:**

The minimum margin value is over 4dB.







**-Vertical**

Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dBµV/m)	Limit (dBµV/m)
32.92	17.6	120	100	V	36	-17.9	22.4	40.0
62.00	20.4	120	100	V	125	-17.9	19.6	40.0
94.52	27.5	120	100	V	86	-16.8	16.0	43.5
100.32	29.5	120	100	V	36	-16.4	14.0	43.5
253.84	31.2	120	100	V	245	-15.1	14.8	46.0
353.00	35.9	120	100	V	335	-12.3	10.1	46.0

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
3895.24	42.10	73.9	31.80	0.0	100.0	V
6658.41	43.58	73.9	30.32	0.0	100.0	V
6903.81	43.92	73.9	29.98	0.0	100.0	V
8451.59	44.82	73.9	29.08	0.0	100.0	V
14856.21	43.62	73.9	30.28	0.0	100.0	V
17268.60	45.92	73.9	27.98	0.0	100.0	V

Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
3895.24	27.12	54.0	27.12	0.0	100.0	V
6658.41	28.42	54.0	28.42	0.0	100.0	V
6903.81	28.68	54.0	28.68	0.0	100.0	V
8451.59	29.80	54.0	29.80	0.0	100.0	V
14856.21	30.28	54.0	30.28	0.0	100.0	V
17268.60	30.80	54.0	30.80	0.0	100.0	V

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
20522	43.5	73.9	30.4	0.0	100.0	V
21663	44.7	73.9	29.2	0.0	100.0	V
23544	44.9	73.9	29.0	0.0	100.0	V
24949	46.1	73.9	27.8	0.0	100.0	V
25125	47.0	73.9	26.9	0.0	100.0	V
25930	46.9	73.9	27.0	0.0	100.0	V

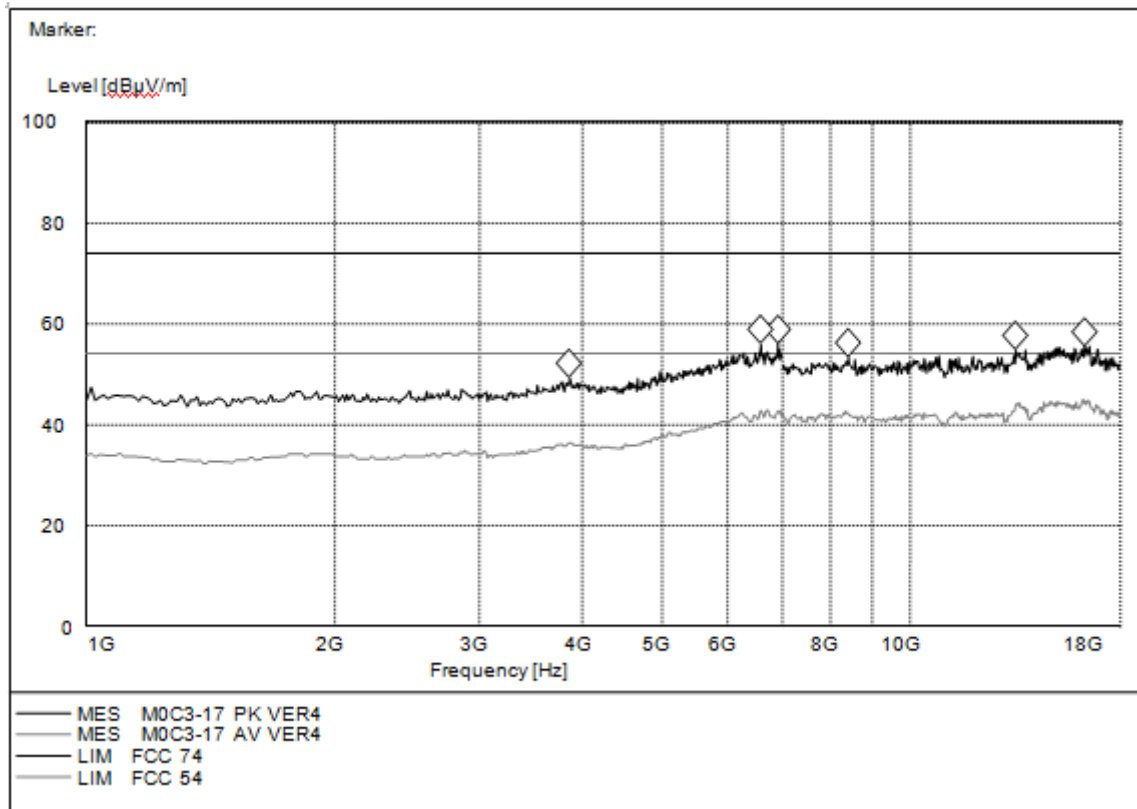
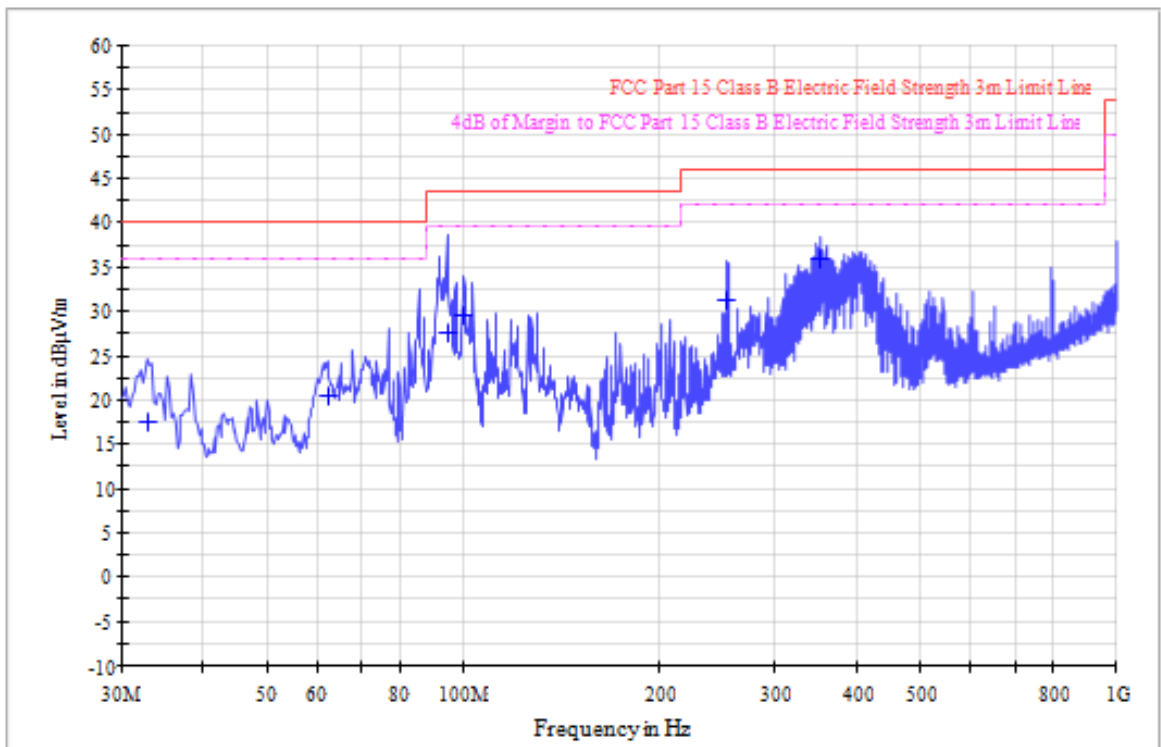
Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
20739	31.4	54.0	22.6	0.0	100.0	V
21999	31.9	54.0	22.1	0.0	100.0	V
23559	32.5	54.0	21.5	0.0	100.0	V
25140	34.1	54.0	19.9	0.0	100.0	V
25979	34.6	54.0	19.4	0.0	100.0	V
26498	34.8	54.0	19.2	0.0	100.0	V

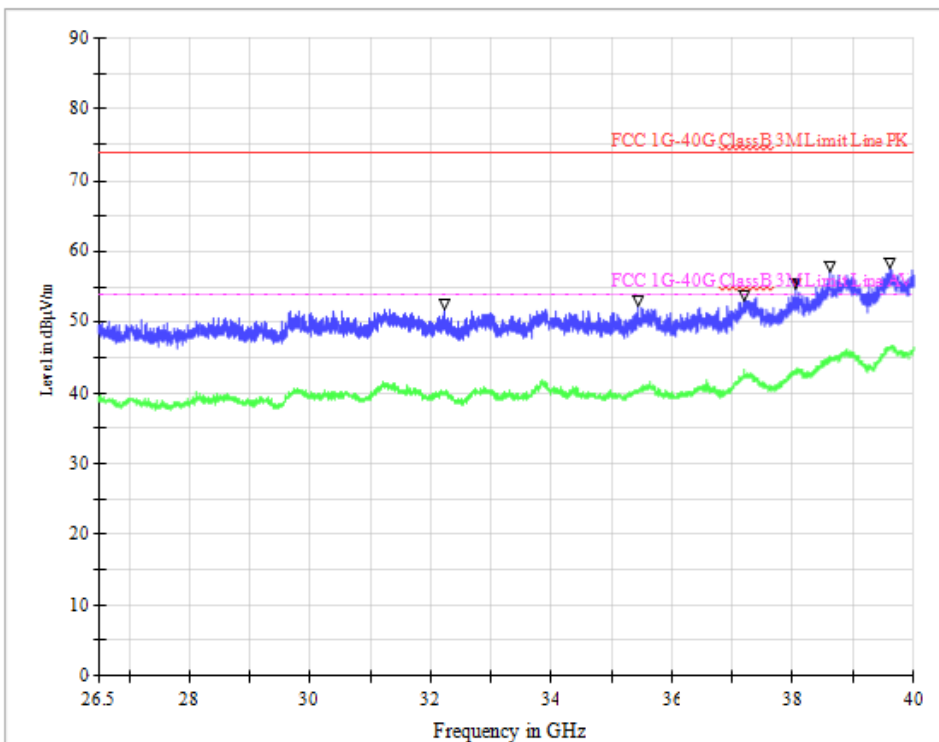
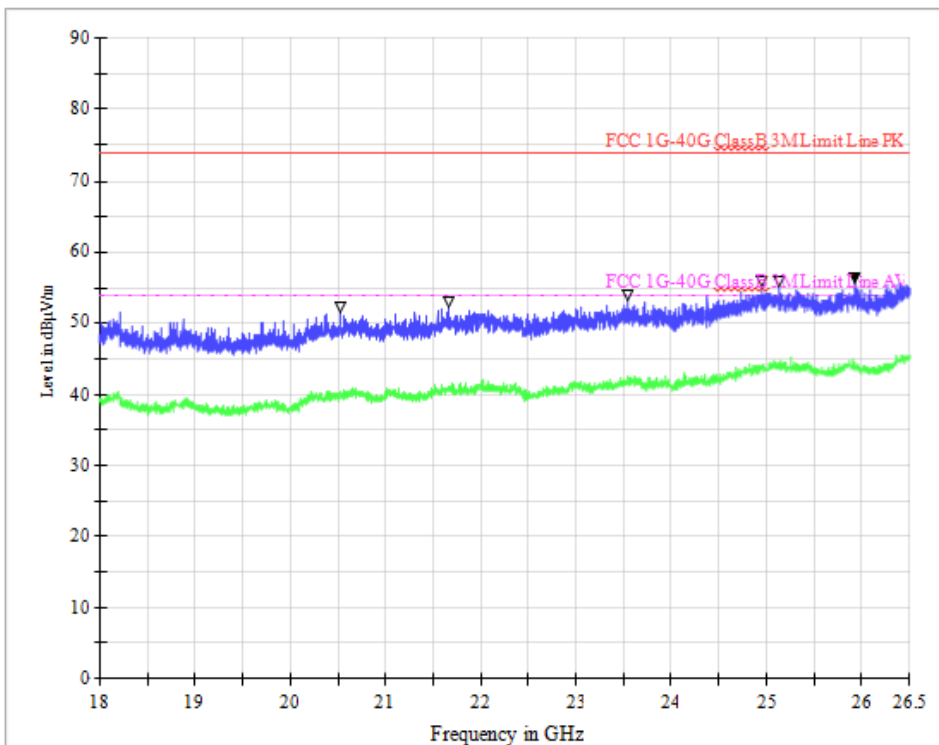
Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
32217	43.3	73.9	30.6	0.0	100.0	V
35444	44.2	73.9	29.7	0.0	100.0	V
37192	44.9	73.9	29.0	0.0	100.0	V
38042	45.8	73.9	28.1	0.0	100.0	V
38616	47.9	73.9	26.0	0.0	100.0	V
39612	48.5	73.9	25.4	0.0	100.0	V

Frequency (MHz)	Average dB $\mu$ V/m	Average limit (dB $\mu$ V/m)	Average Margin (dB $\mu$ V/m)	Turntable position (deg)	Ant. height (cm)	Polarity
32217	29.9	54.0	24.1	0.0	100.0	V
35444	31.2	54.0	22.8	0.0	100.0	V
37192	32.1	54.0	21.9	0.0	100.0	V
38042	33	54.0	21.0	0.0	100.0	V
38616	34.5	54.0	19.5	0.0	100.0	V
39612	35.8	54.0	18.2	0.0	100.0	V

**NOTE:**

The minimum margin value is over 4dB.





**5. Radiated Emission Test data (NIC Print + Scan to USB memory Mode)**

**-Horizontal**

Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dBµV/m)	Limit (dBµV/m)
89.16	24.5	120	300	H	25	-18.0	19.0	43.5
102.52	27.4	120	300	H	33	-16.5	16.1	43.5
150.04	22.1	120	300	H	48	-20.3	21.4	43.5
255.28	32.1	120	300	H	66	-15.2	13.9	46.0
272.00	34.8	120	300	H	120	-14.7	11.2	46.0
339.44	33.4	120	300	H	225	-12.5	12.6	46.0

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
6723.45	41.82	73.9	32.08	0.0	100.0	H
8484.11	40.50	73.9	33.40	0.0	100.0	H
11582.74	42.00	73.9	31.90	0.0	100.0	H
15863.24	44.65	73.9	29.25	0.0	100.0	H
16974.15	45.27	73.9	28.63	0.0	100.0	H
17278.62	46.72	73.9	27.18	0.0	100.0	H

Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
6723.45	26.70	54.0	27.30	0.0	100.0	H
8484.11	27.58	54.0	26.42	0.0	100.0	H
11582.74	28.81	54.0	25.19	0.0	100.0	H
15863.24	31.52	54.0	22.48	0.0	100.0	H
16974.15	32.52	54.0	21.48	0.0	100.0	H
17278.62	31.71	54.0	22.29	0.0	100.0	H

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
21026	44	73.9	29.9	0.0	100.0	H
21672	44.1	73.9	29.8	0.0	100.0	H
23000	44.9	73.9	29.0	0.0	100.0	H
24655	45.9	73.9	28.0	0.0	100.0	H
25168	47.2	73.9	26.7	0.0	100.0	H
25491	46.3	73.9	27.6	0.0	100.0	H

Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
21026	31.6	54.0	22.4	0.0	100.0	H
21672	31.9	54.0	22.1	0.0	100.0	H
23000	32.1	54.0	21.9	0.0	100.0	H
24655	33.4	54.0	20.6	0.0	100.0	H
25168	34.4	54.0	19.6	0.0	100.0	H
25491	33.9	54.0	20.1	0.0	100.0	H

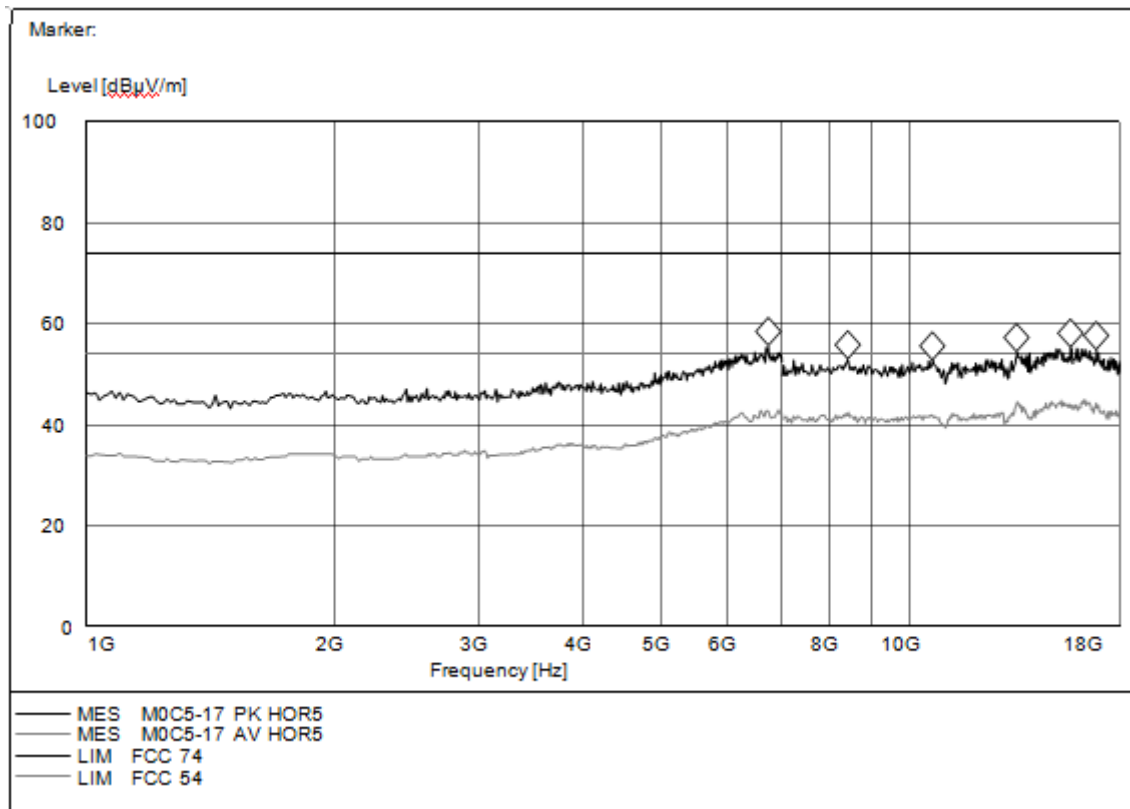
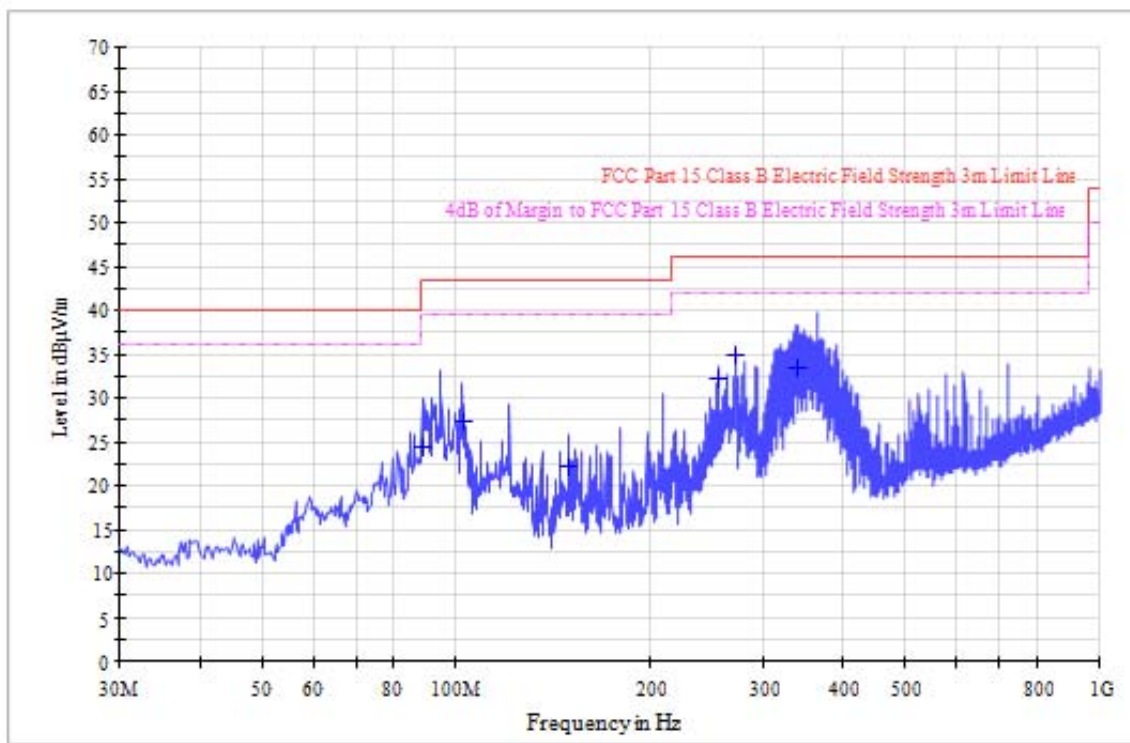
Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
31373	44.4	73.9	29.5	0.0	100.0	H
32788	42.8	73.9	31.1	0.0	100.0	H
33834	43.9	73.9	30.0	0.0	100.0	H
37182	44.3	73.9	29.6	0.0	100.0	H
38849	47.6	73.9	26.3	0.0	100.0	H
39588	48.7	73.9	25.2	0.0	100.0	H

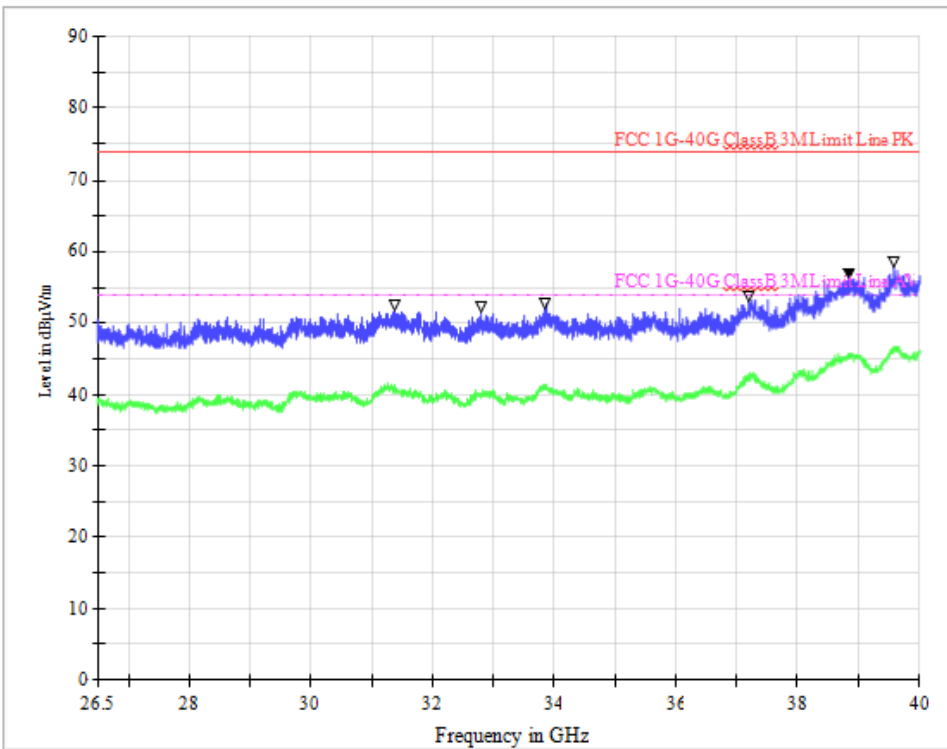
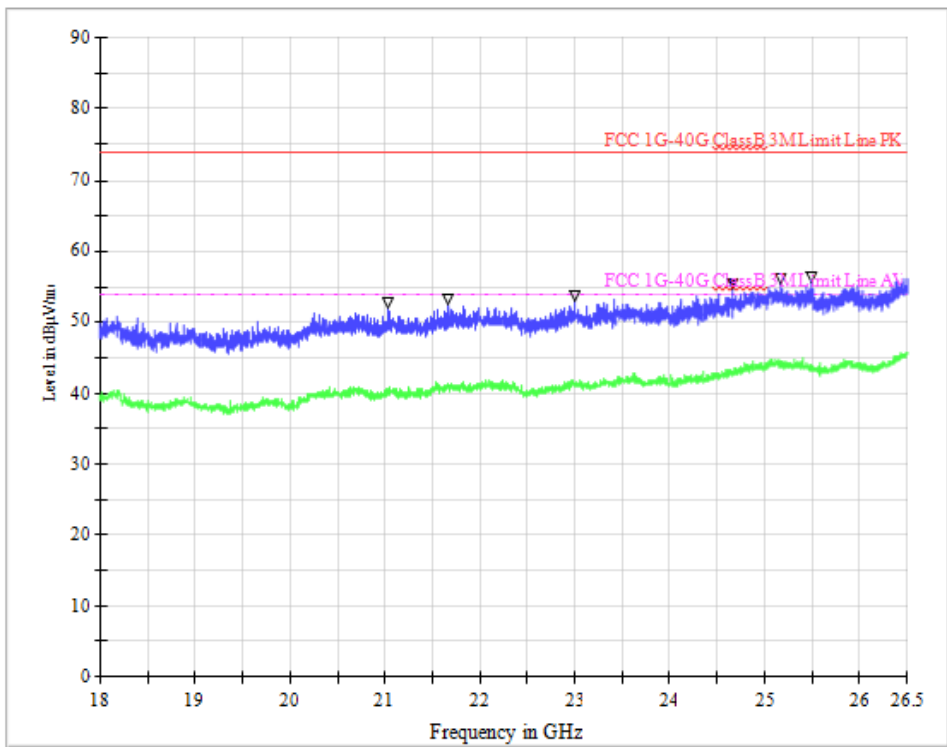


Frequency (MHz)	Average dB $\mu$ V/m	Average limit (dB $\mu$ V/m)	Average Margin (dB $\mu$ V/m)	Turntable position (deg)	Ant. height (cm)	Polarity
31373	31.7	54.0	22.3	0.0	100.0	H
32788	30.2	54.0	23.8	0.0	100.0	H
33834	31.3	54.0	22.7	0.0	100.0	H
37182	32.1	54.0	21.9	0.0	100.0	H
38849	35.3	54.0	18.7	0.0	100.0	H
39588	35.8	54.0	18.2	0.0	100.0	H

**NOTE:**

The minimum margin value is over 4dB.





**-Vertical**

Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dBµV/m)	Limit (dBµV/m)
76.80	22.6	120	200	V	112	-21.6	17.4	40.0
91.60	29.4	120	200	V	253	-17.4	14.1	43.5
100.56	26.8	120	200	V	65	-16.4	16.7	43.5
209.92	29.4	120	200	V	88	-17.1	14.1	43.5
253.84	37.5	120	200	V	96	-15.1	8.5	46.0
389.40	35.3	120	200	V	221	-11.8	10.7	46.0

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
6254.85	43.30	73.9	30.6	0.0	100.0	V
7358.41	42.10	73.9	31.8	0.0	100.0	V
8451.41	44.82	73.9	29.08	0.0	100.0	V
11308.24	43.28	73.9	30.62	0.0	100.0	V
15575.15	44.93	73.9	28.97	0.0	100.0	V
16286.21	45.90	73.9	28.0	0.0	100.0	V

Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
6254.85	29.50	54.0	24.50	0.0	100.0	V
7358.41	29.42	54.0	24.58	0.0	100.0	V
8451.41	29.82	54.0	24.18	0.0	100.0	V
11308.24	30.11	54.0	23.89	0.0	100.0	V
15575.15	32.52	54.0	21.48	0.0	100.0	V
16286.21	30.50	54.0	23.50	0.0	100.0	V

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
20745	44.1	73.9	29.8	0.0	100.0	V
21687	44.7	73.9	29.2	0.0	100.0	V
22231	44.2	73.9	29.7	0.0	100.0	V
24883	46.8	73.9	27.1	0.0	100.0	V
25293	46.2	73.9	27.7	0.0	100.0	V
26419	48.6	73.9	25.3	0.0	100.0	V

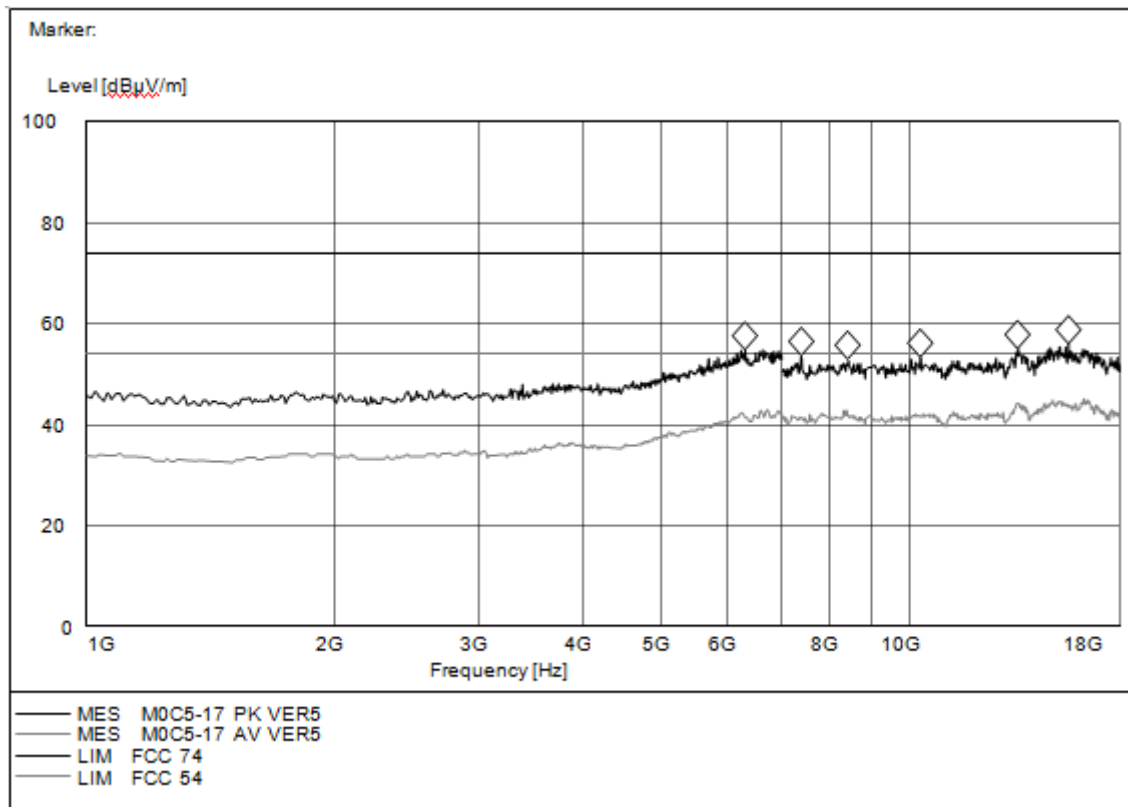
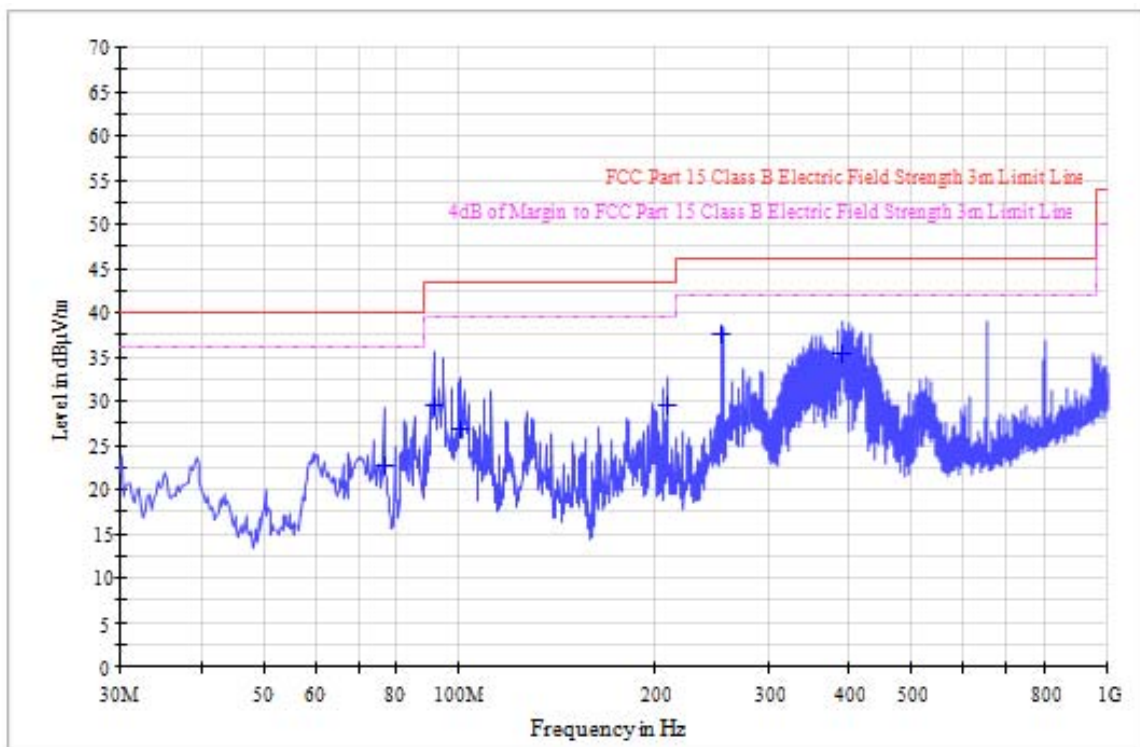
Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
20745	31.6	54.0	22.4	0.0	100.0	V
21687	32.1	54.0	21.9	0.0	100.0	V
22231	31.6	54.0	22.4	0.0	100.0	V
24883	34.0	54.0	20.0	0.0	100.0	V
25293	34.3	54.0	19.7	0.0	100.0	V
26419	35.8	54.0	18.2	0.0	100.0	V

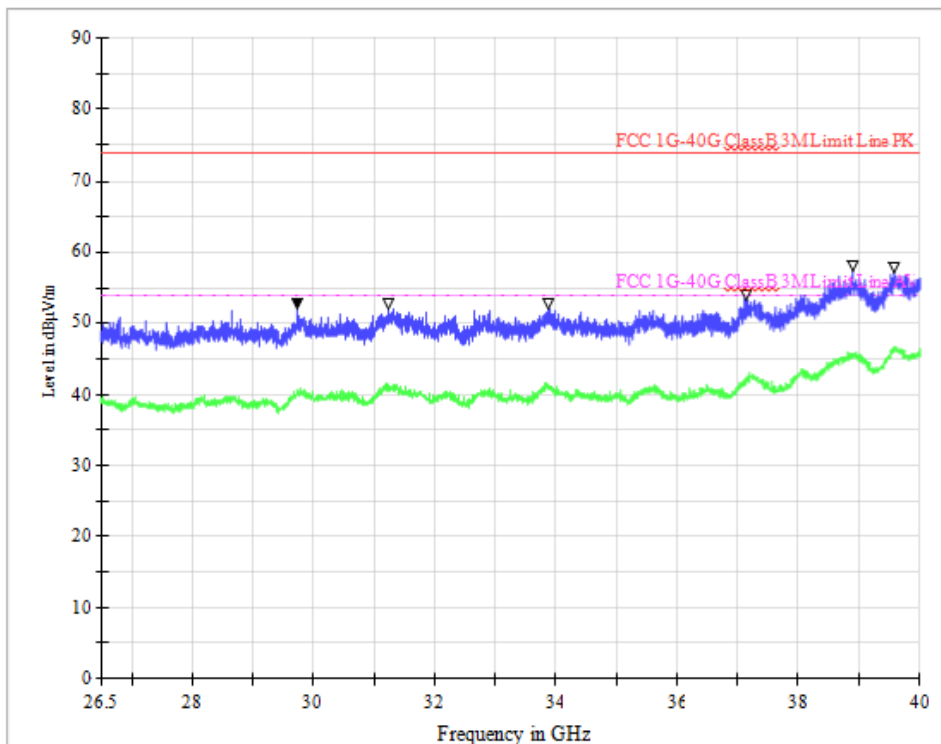
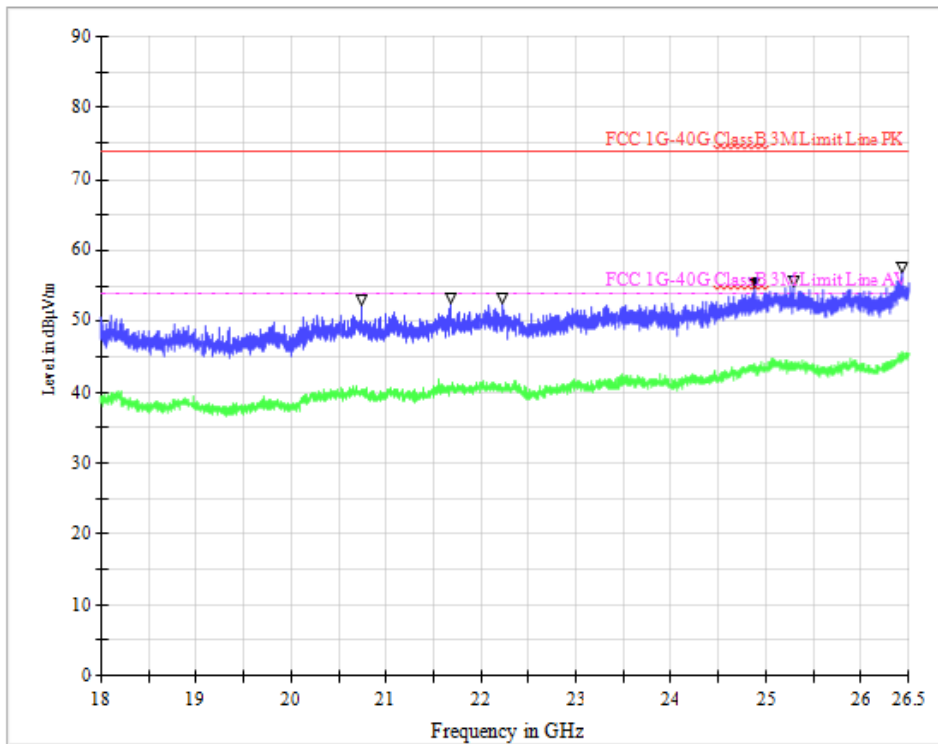
Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
29737	44.2	73.9	29.7	0.0	100.0	V
31242	44.0	73.9	29.9	0.0	100.0	V
33874	44.8	73.9	29.1	0.0	100.0	V
37128	44.4	73.9	29.5	0.0	100.0	V
38883	47.8	73.9	26.1	0.0	100.0	V
39585	49.1	73.9	24.8	0.0	100.0	V

Frequency (MHz)	Average dB $\mu$ V/m	Average limit (dB $\mu$ V/m)	Average Margin (dB $\mu$ V/m)	Turntable position (deg)	Ant. height (cm)	Polarity
29737	31.8	54.0	22.2	0.0	100.0	V
31242	31.8	54.0	22.2	0.0	100.0	V
33874	31.9	54.0	22.1	0.0	100.0	V
37128	31.6	54.0	22.4	0.0	100.0	V
38883	35.3	54.0	18.7	0.0	100.0	V
39585	35.9	54.0	18.1	0.0	100.0	V

**NOTE:**

The minimum margin value is over 4dB.







**6. Radiated Emission Test data (FX TX Mode)**

**-Horizontal**

Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dBµV/m)	Limit (dBµV/m)
100.56	26.4	120	100	H	65	-16.4	17.1	43.5
165.56	25.1	120	100	H	95	-19.5	18.4	43.5
225.68	27.9	120	100	H	269	-16	18.1	46.0
253.88	37.1	120	200	H	253	-15.1	8.9	46.0
255.24	41.9	120	100	H	319	-15.2	4.1	46.0
340.64	31.3	120	100	H	320	-12.5	14.7	46.0

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
5185.24	42.86	73.9	31.04	0.0	100.0	H
6142.56	44.56	73.9	29.34	0.0	100.0	H
6954.85	44.21	73.9	29.69	0.0	100.0	H
8096.25	43.25	73.9	30.65	0.0	100.0	H
16853.71	44.98	73.9	28.92	0.0	100.0	H
17532.49	45.62	73.9	28.28	0.0	100.0	H

Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
5185.24	28.32	54.0	25.68	0.0	100.0	H
6142.56	29.62	54.0	24.38	0.0	100.0	H
6954.85	29.25	54.0	24.75	0.0	100.0	H
8096.25	29.10	54.0	24.9	0.0	100.0	H
16853.71	30.00	54.0	24.0	0.0	100.0	H
17532.49	31.20	54.0	22.8	0.0	100.0	H

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
21661	44.7	73.9	29.2	0.0	100.0	H
22303	44.5	73.9	29.4	0.0	100.0	H
23557	45.2	73.9	28.7	0.0	100.0	H
24730	47.1	73.9	26.8	0.0	100.0	H
25055	46.6	73.9	27.3	0.0	100.0	H
25461	47.0	73.9	26.9	0.0	100.0	H

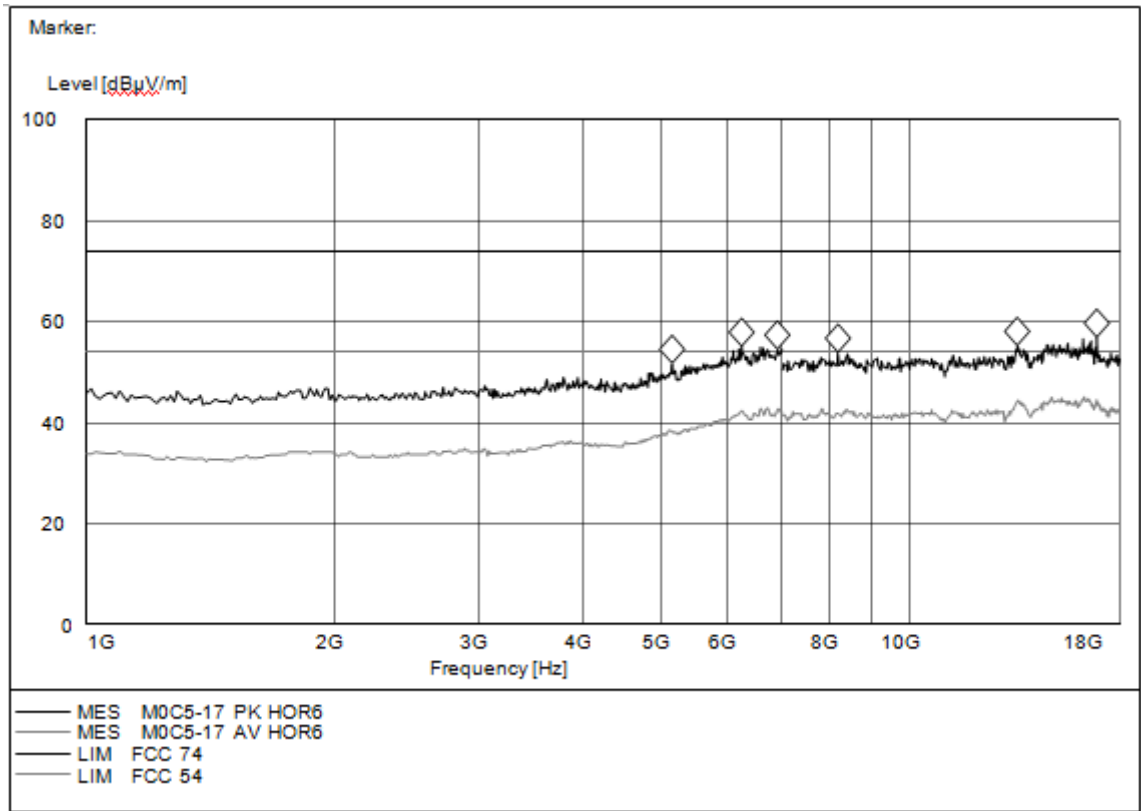
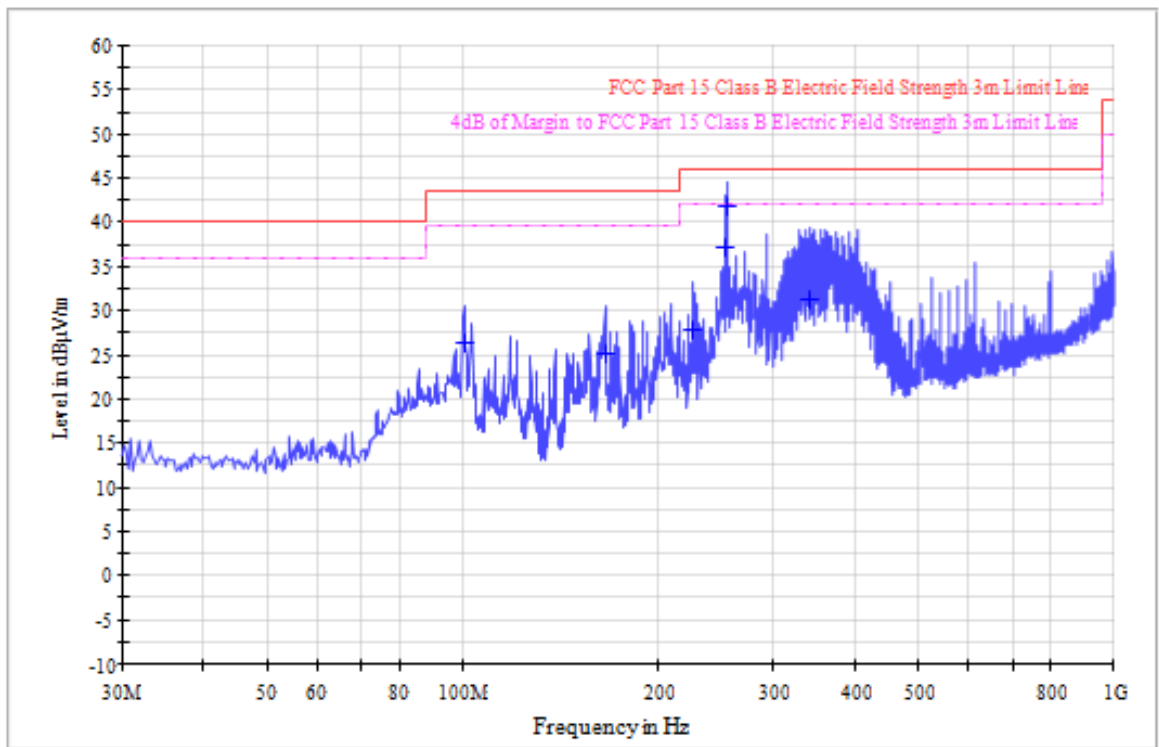
Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
21661	32.1	54.0	21.9	0.0	100.0	H
22303	31.6	54.0	22.4	0.0	100.0	H
23557	32.4	54.0	21.6	0.0	100.0	H
24730	33.7	54.0	20.3	0.0	100.0	H
25055	34.4	54.0	19.6	0.0	100.0	H
25461	34.0	54.0	20.0	0.0	100.0	H

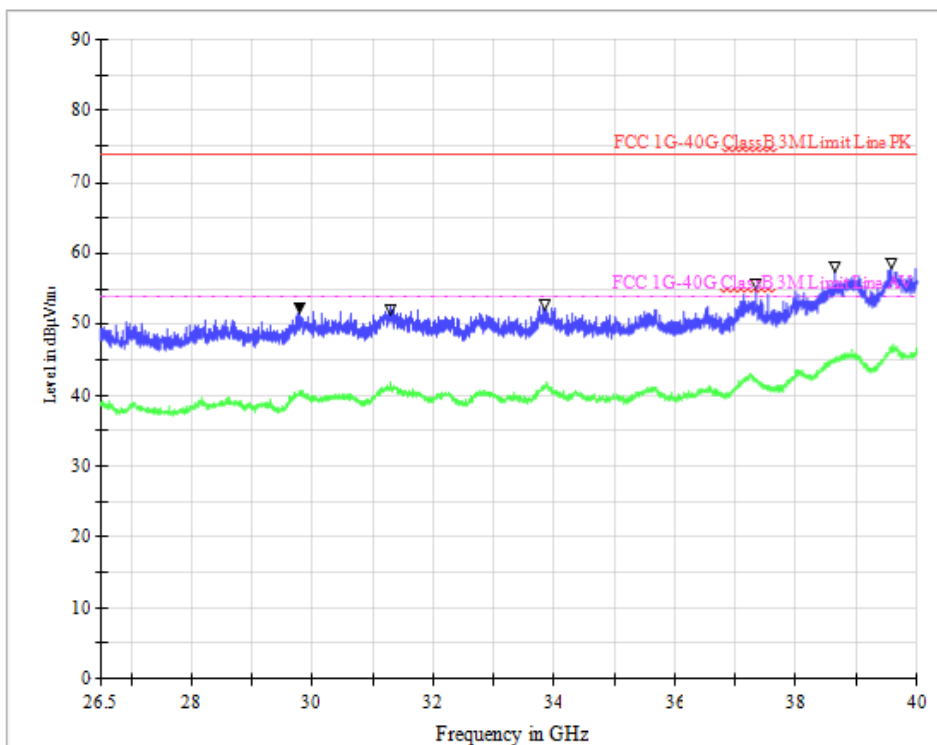
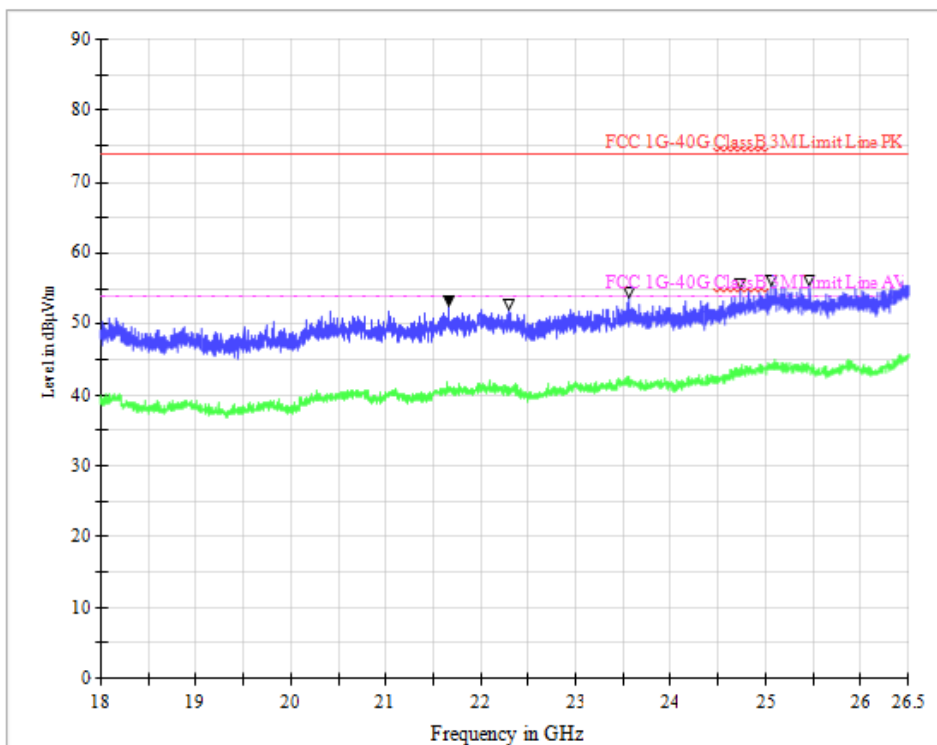
Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
29784	42.3	73.9	31.6	0.0	100.0	H
31299	42.8	73.9	31.1	0.0	100.0	H
33851	44.1	73.9	29.8	0.0	100.0	H
37330	43.7	73.9	30.2	0.0	100.0	H
38636	46.6	73.9	27.3	0.0	100.0	H
39565	47.7	73.9	26.2	0.0	100.0	H

Frequency (MHz)	Average dB $\mu$ V/m	Average limit (dB $\mu$ V/m)	Average Margin (dB $\mu$ V/m)	Turntable position (deg)	Ant. height (cm)	Polarity
29784	29.5	54.0	24.5	0.0	100.0	H
31299	30.3	54.0	23.7	0.0	100.0	H
33851	30.5	54.0	23.5	0.0	100.0	H
37330	31.5	54.0	22.5	0.0	100.0	H
38636	34.3	54.0	19.7	0.0	100.0	H
39565	35.7	54.0	18.3	0.0	100.0	H

**NOTE:**

The minimum margin value is over 4dB.





**-Vertical**

Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dBµV/m)	Limit (dBµV/m)
35.84	26.4	120	100	V	125	-17.6	13.6	40.0
82.64	30.3	120	100	V	225	-20.2	9.7	40.0
92.08	27.6	120	100	V	324	-17.3	15.9	43.5
181.80	26.8	120	100	V	102	-18.2	16.7	43.5
254.56	41.6	120	200	V	56	-15.1	4.4	46.0
400.8	33.5	120	200	V	221	-11.2	12.5	46.0

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
3051.46	41.32	73.9	32.58	0.0	100.0	V
6251.02	45.00	73.9	28.90	0.0	100.0	V
6984.22	45.12	73.9	28.78	0.0	100.0	V
9015.63	46.17	73.9	27.73	0.0	100.0	V
14258.46	45.56	73.9	28.34	0.0	100.0	V
16324.65	46.21	73.9	27.69	0.0	100.0	V

Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
3051.46	27.21	54.0	26.79	0.0	100.0	V
6251.02	28.52	54.0	25.48	0.0	100.0	V
6984.22	29.25	54.0	24.75	0.0	100.0	V
9015.63	29.40	54.0	24.6	0.0	100.0	V
14258.46	30.75	54.0	23.25	0.0	100.0	V
16324.65	31.50	54.0	22.5	0.0	100.0	V

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
21523	44.8	73.9	29.1	0.0	100.0	V
22938	44.3	73.9	29.6	0.0	100.0	V
23502	45.8	73.9	28.1	0.0	100.0	V
24849	46.4	73.9	27.5	0.0	100.0	V
25389	46.5	73.9	27.4	0.0	100.0	V
25911	47.4	73.9	26.5	0.0	100.0	V

Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
21523	31.8	54.0	22.2	0.0	100.0	V
22938	31.8	54.0	22.2	0.0	100.0	V
23502	32.4	54.0	21.6	0.0	100.0	V
24849	33.9	54.0	20.1	0.0	100.0	V
25389	34.2	54.0	19.8	0.0	100.0	V
25911	34.7	54.0	19.3	0.0	100.0	V

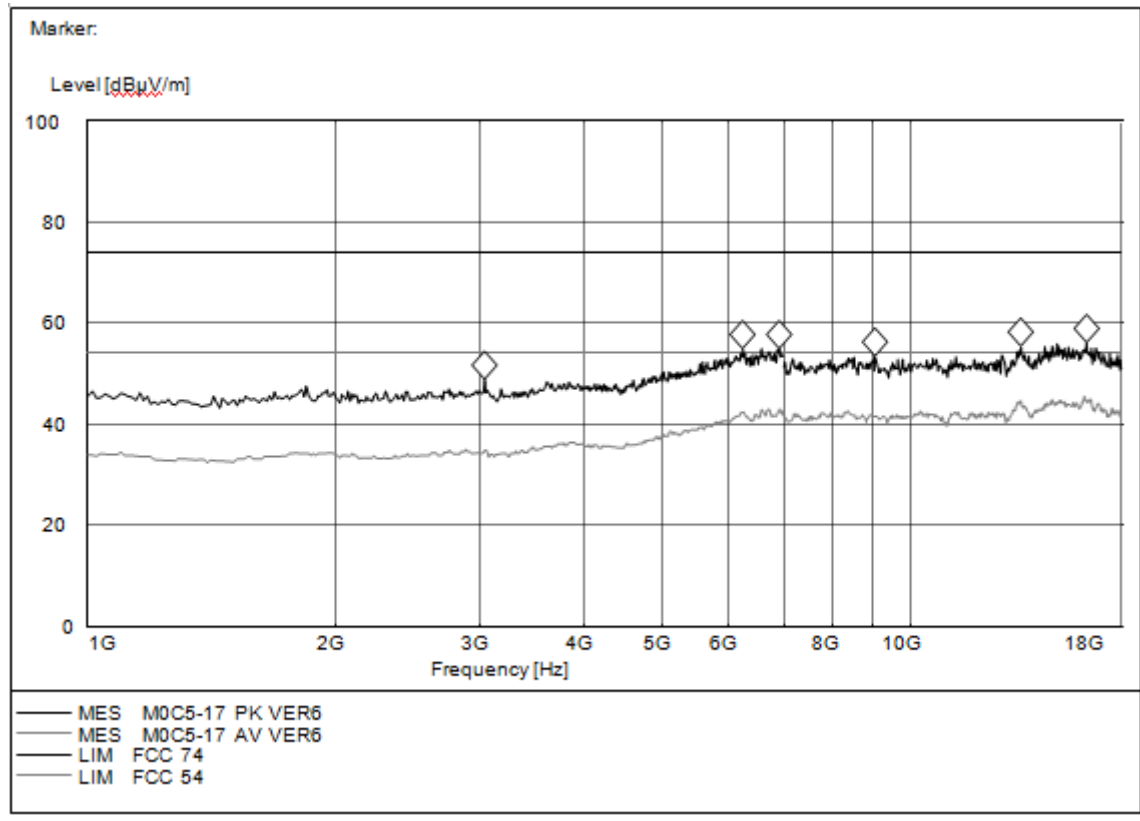
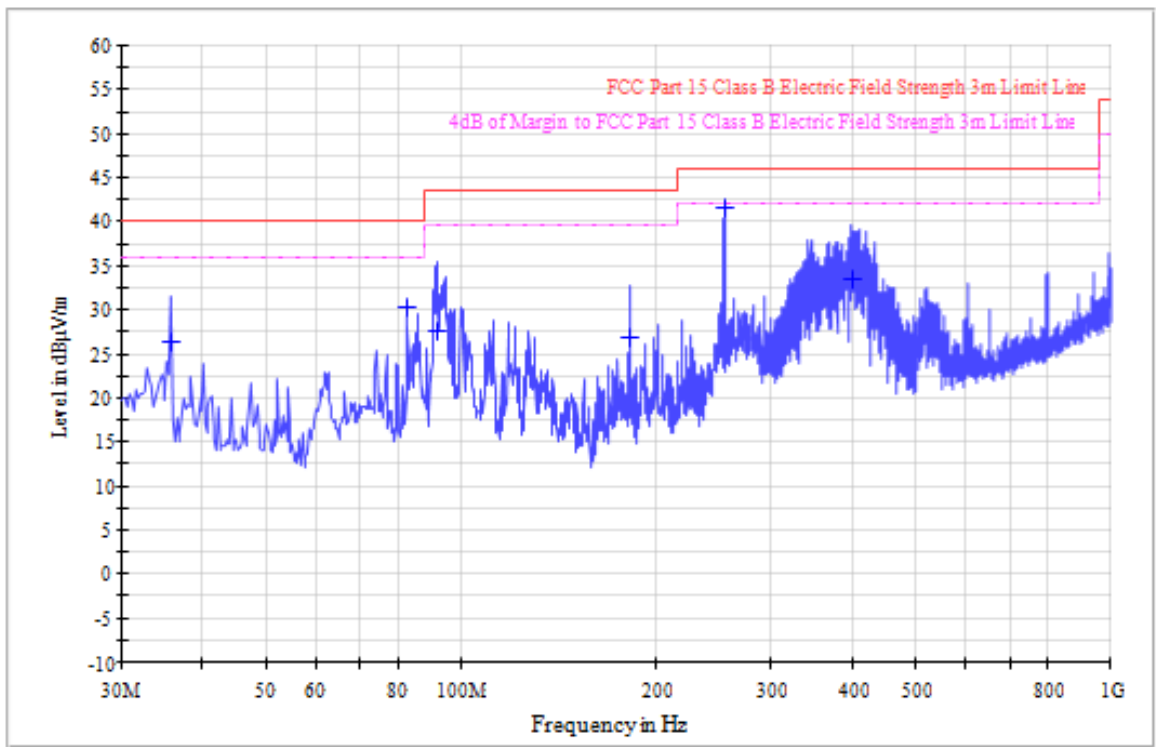
Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
31222	42.6	73.9	31.3	0.0	100.0	V
33864	44.1	73.9	29.8	0.0	100.0	V
35501	42.7	73.9	31.2	0.0	100.0	V
37202	45.2	73.9	28.7	0.0	100.0	V
38822	47.7	73.9	26.2	0.0	100.0	V
39581	47.9	73.9	26.0	0.0	100.0	V

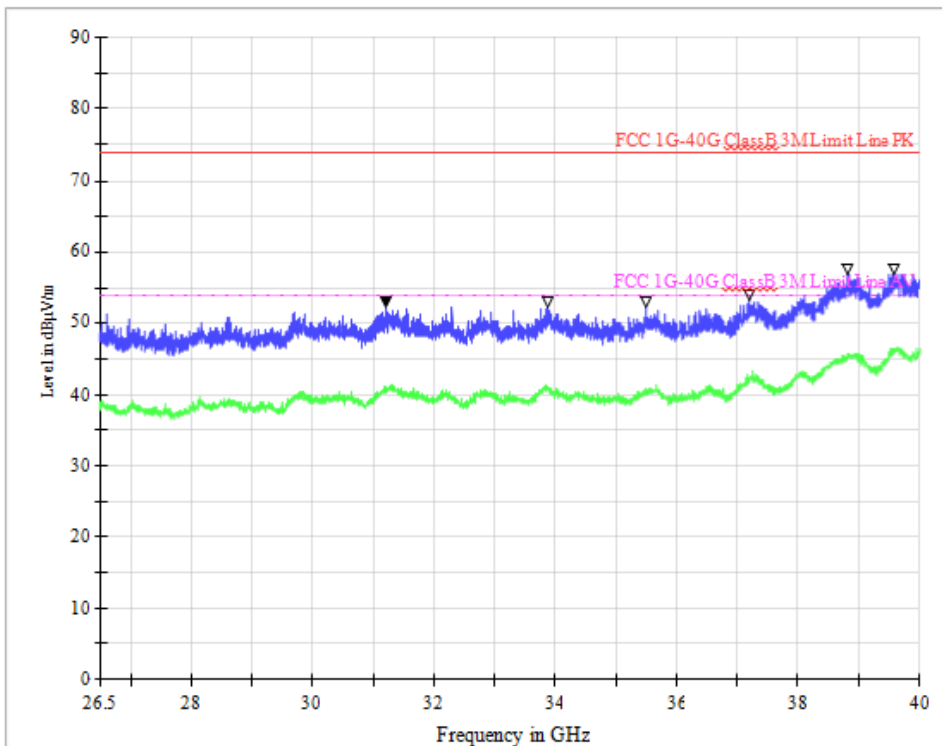
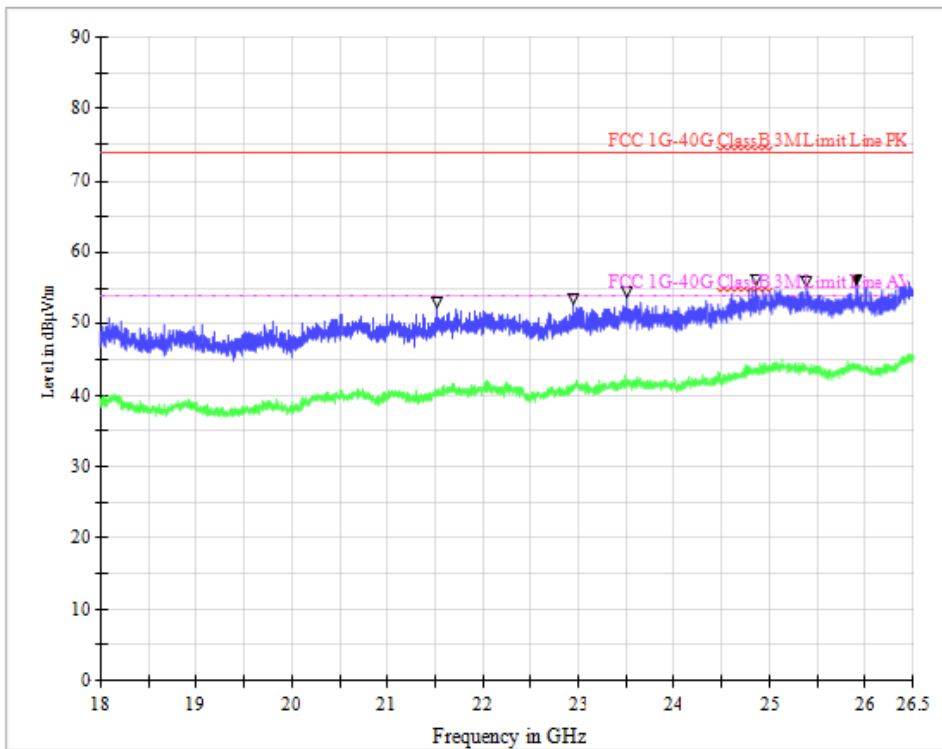
Frequency (MHz)	Average dB $\mu$ V/m	Average limit (dB $\mu$ V/m)	Average Margin (dB $\mu$ V/m)	Turntable position (deg)	Ant. height (cm)	Polarity
31222	30.2	54.0	23.8	0.0	100.0	V
33864	30.6	54.0	23.4	0.0	100.0	V
35501	29.8	54.0	24.2	0.0	100.0	V
37202	31.8	54.0	22.2	0.0	100.0	V
38822	35.0	54.0	19.0	0.0	100.0	V
39581	35.8	54.0	18.2	0.0	100.0	V

**NOTE:**

The minimum margin value is over 4dB.







**7. Radiated Emission Test data (RX TX Mode)**

**-Horizontal**

Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dBµV/m)	Limit (dBµV/m)
100.56	24.2	120	100	H	65	-16.4	19.3	43.5
161.35	24.1	120	100	H	95	-19.5	19.4	43.5
220.78	25.9	120	100	H	269	-16	20.1	46.0
254.56	44.5	120	200	H	253	-15.1	1.5	46.0
256.24	33.5	120	100	H	319	-15.2	12.5	46.0
360.57	33.2	120	100	H	320	-12.5	12.8	46.0

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
4586.35	42.82	73.9	31.08	0.0	100.0	H
6903.81	46.12	73.9	27.78	0.0	100.0	H
8354.51	42.82	73.9	31.08	0.0	100.0	H
11580.54	45.60	73.9	28.30	0.0	100.0	H
15254.75	46.68	73.9	27.22	0.0	100.0	H
16845.62	45.42	73.9	28.48	0.0	100.0	H

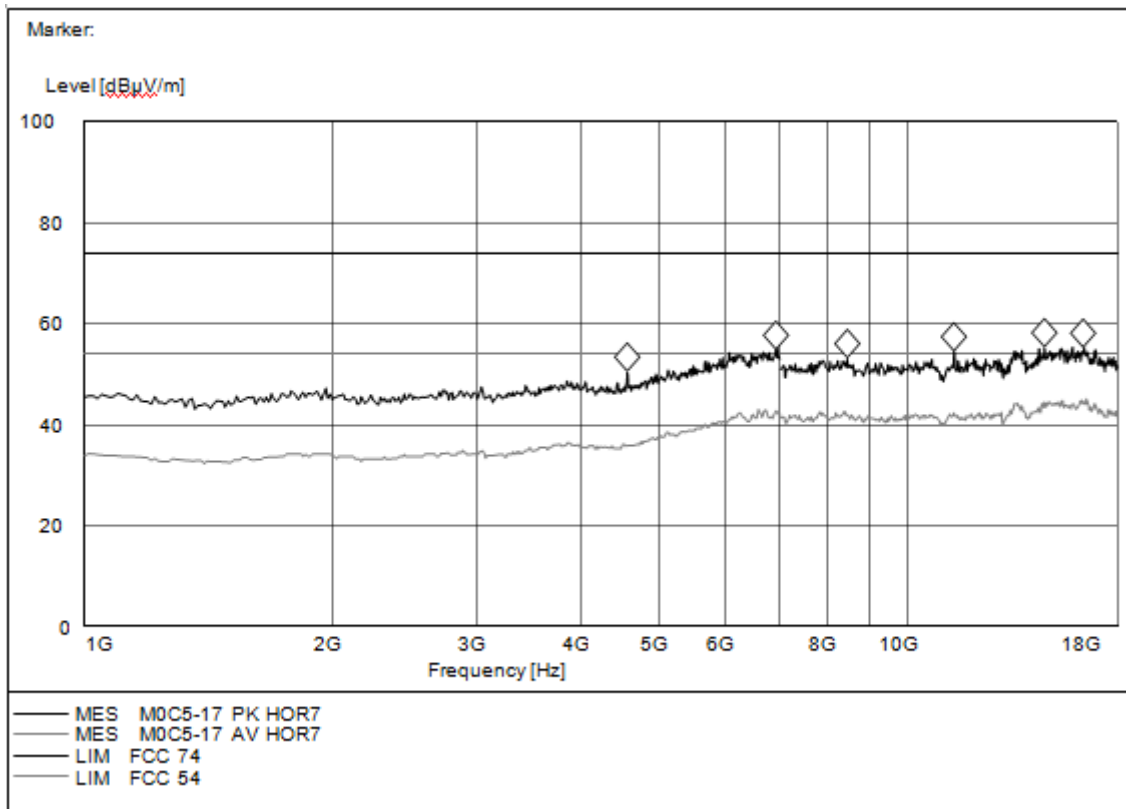
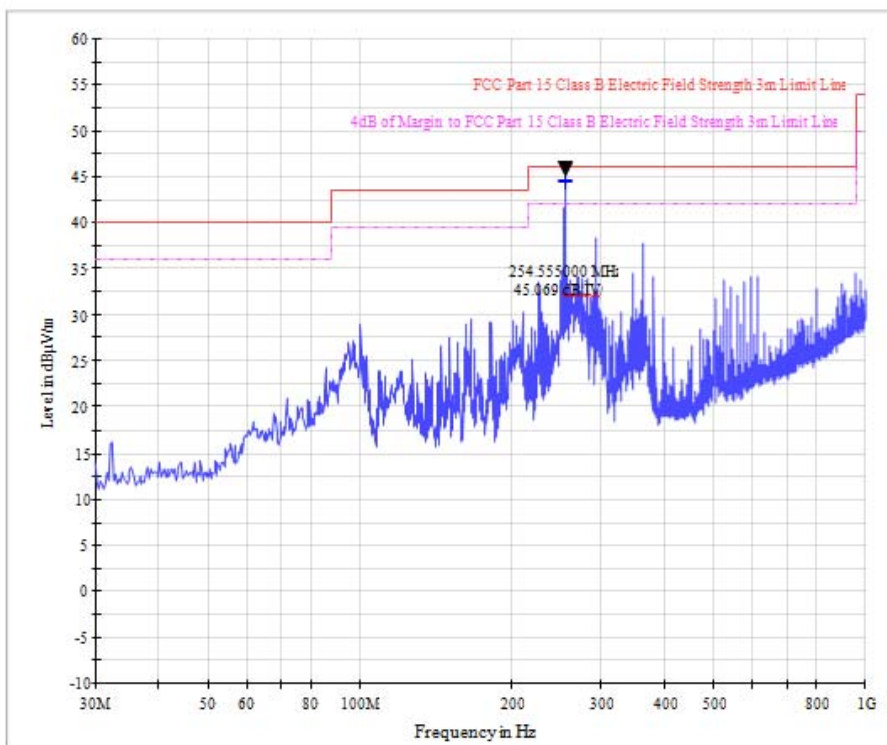
Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
4586.35	28.30	54.0	25.70	0.0	100.0	H
6903.81	30.10	54.0	23.90	0.0	100.0	H
8354.51	28.20	54.0	25.80	0.0	100.0	H
11580.54	31.12	54.0	22.88	0.0	100.0	H
15254.75	32.25	54.0	21.75	0.0	100.0	H
16845.62	29.80	54.0	24.20	0.0	100.0	H

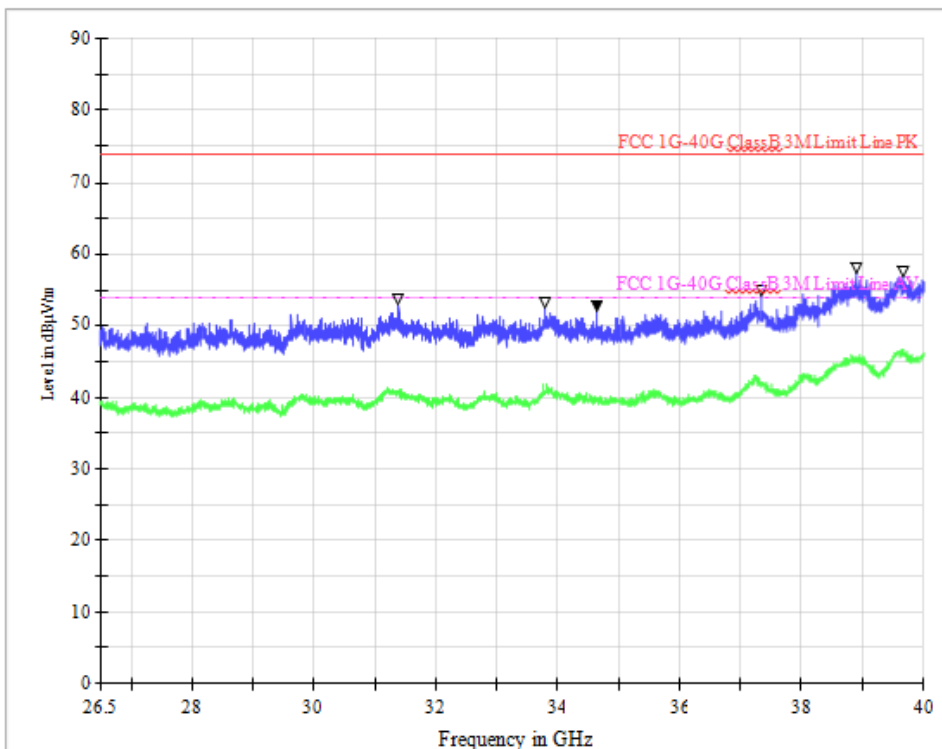
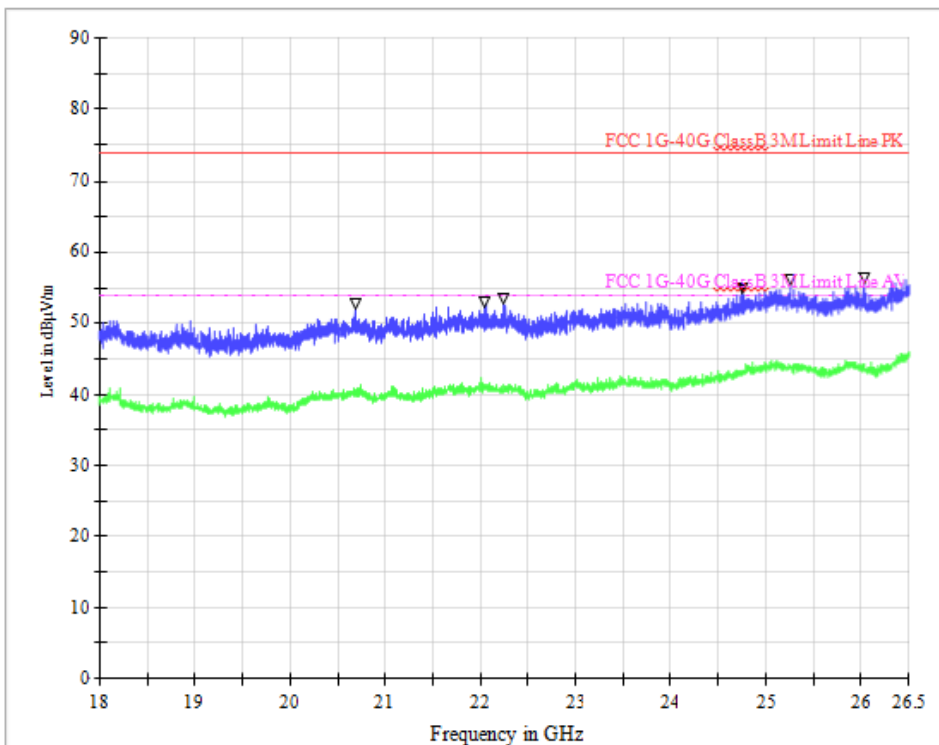
Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
20682	43.8	73.9	30.1	0.0	100.0	H
22048	44.4	73.9	29.5	0.0	100.0	H
22237	43.9	73.9	30.0	0.0	100.0	H
24740	46.0	73.9	27.9	0.0	100.0	H
25253	46.6	73.9	27.3	0.0	100.0	H
26022	46.9	73.9	27.0	0.0	100.0	H

Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
20682	31.5	54.0	22.5	0.0	100.0	H
22048	32.0	54.0	22.0	0.0	100.0	H
22237	31.7	54.0	22.3	0.0	100.0	H
24740	33.7	54.0	20.3	0.0	100.0	H
25253	34.2	54.0	19.8	0.0	100.0	H
26022	34.4	54.0	19.6	0.0	100.0	H

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
31390	44	73.9	29.9	0.0	100.0	H
33793	44.4	73.9	29.5	0.0	100.0	H
34630	44.5	73.9	29.4	0.0	100.0	H
37337	44.3	73.9	29.6	0.0	100.0	H
38883	47.7	73.9	26.2	0.0	100.0	H
39646	48.5	73.9	25.4	0.0	100.0	H

Frequency (MHz)	Average dB $\mu$ V/m	Average limit (dB $\mu$ V/m)	Average Margin (dB $\mu$ V/m)	Turntable position (deg)	Ant. height (cm)	Polarity
31390	31.6	54.0	22.4	0.0	100.0	H
33793	31.6	54.0	22.4	0.0	100.0	H
34630	32.1	54.0	21.9	0.0	100.0	H
37337	32.1	54.0	21.9	0.0	100.0	H
38883	35.2	54.0	18.8	0.0	100.0	H
39646	35.9	54.0	18.1	0.0	100.0	H





**-Vertical**

Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dBµV/m)	Limit (dBµV/m)
35.32	20.1	120	100	V	85	-17.8	19.9	40.0
61.52	23.5	120	100	V	53	-17.8	16.5	40.0
94.52	33.2	120	100	V	26	-16.8	10.3	43.5
255.28	34.2	120	100	V	112	-15.2	11.8	46.0
349.12	32.4	120	100	V	220	-12.5	13.6	46.0
404.68	36.9	120	100	V	345	-11.2	9.1	46.0

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
2458.62	41.11	73.9	32.79	0.0	100.0	V
6912.52	45.05	73.9	28.85	0.0	100.0	V
10862.41	44.12	73.9	29.78	0.0	100.0	V
12258.15	44.88	73.9	29.02	0.0	100.0	V
14821.08	45.52	73.9	28.38	0.0	100.0	V
16214.43	45.88	73.9	28.02	0.0	100.0	V

Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
2458.62	28.58	54.0	25.42	0.0	100.0	V
6912.52	31.52	54.0	22.48	0.0	100.0	V
10862.41	31.82	54.0	22.18	0.0	100.0	V
12258.15	31.45	54.0	22.55	0.0	100.0	V
14821.08	30.70	54.0	23.30	0.0	100.0	V
16214.43	33.51	54.0	20.49	0.0	100.0	V



Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
22286	44.1	73.9	29.8	0.0	100.0	V
23491	44.9	73.9	29.0	0.0	100.0	V
24460	45.2	73.9	28.7	0.0	100.0	V
25093	47.2	73.9	26.7	0.0	100.0	V
25854	47.8	73.9	26.1	0.0	100.0	V
26491	48.4	73.9	25.5	0.0	100.0	V

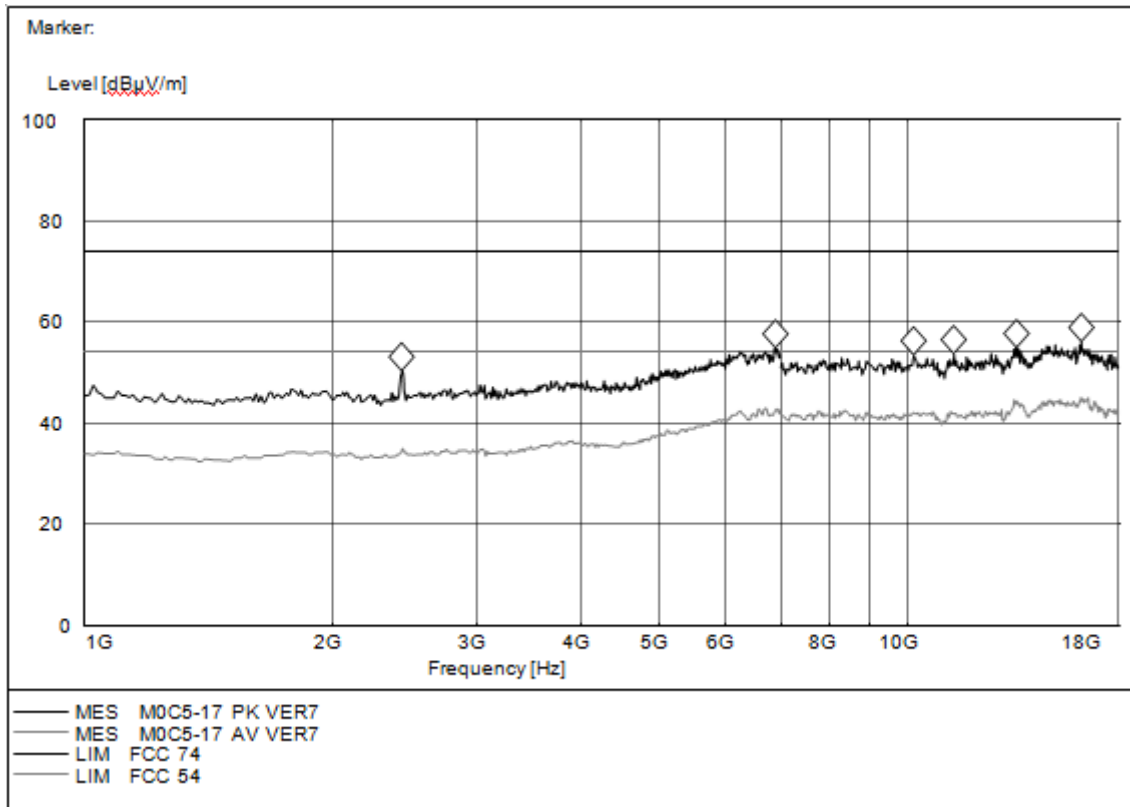
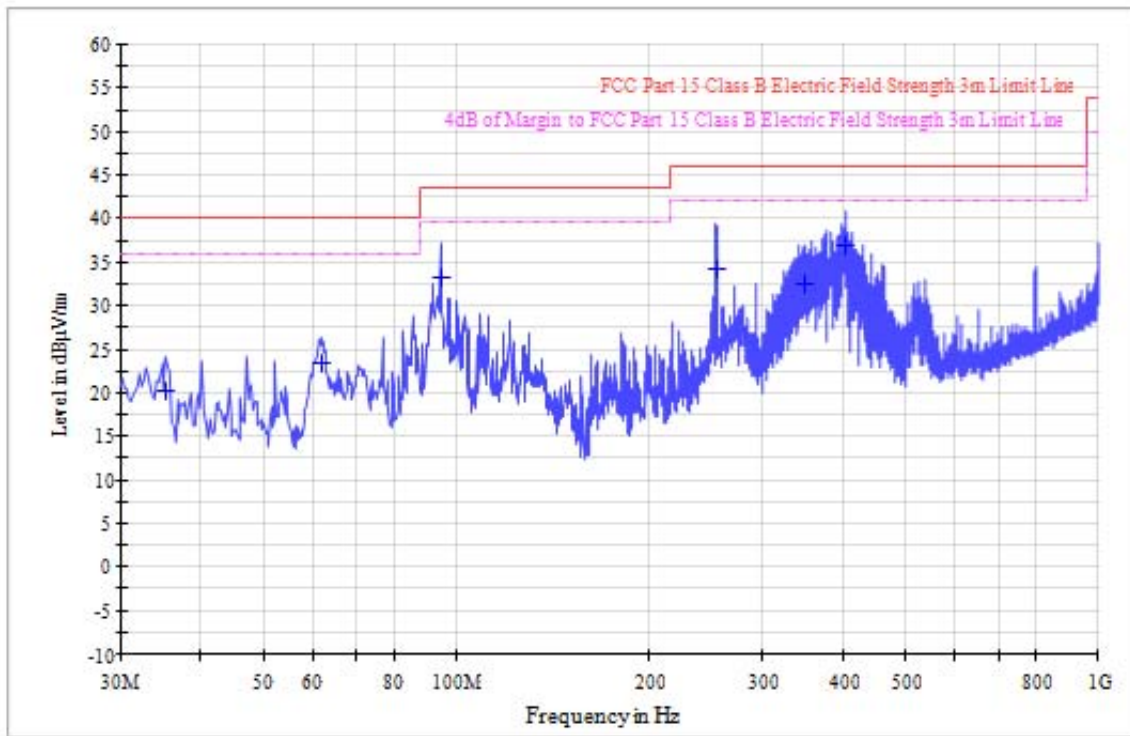
Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
22286	31.7	54.0	22.3	0.0	100.0	V
23491	32.4	54.0	21.6	0.0	100.0	V
24460	33.1	54.0	20.9	0.0	100.0	V
25093	34.6	54.0	19.4	0.0	100.0	V
25854	34.8	54.0	19.2	0.0	100.0	V
26491	35.8	54.0	18.2	0.0	100.0	V

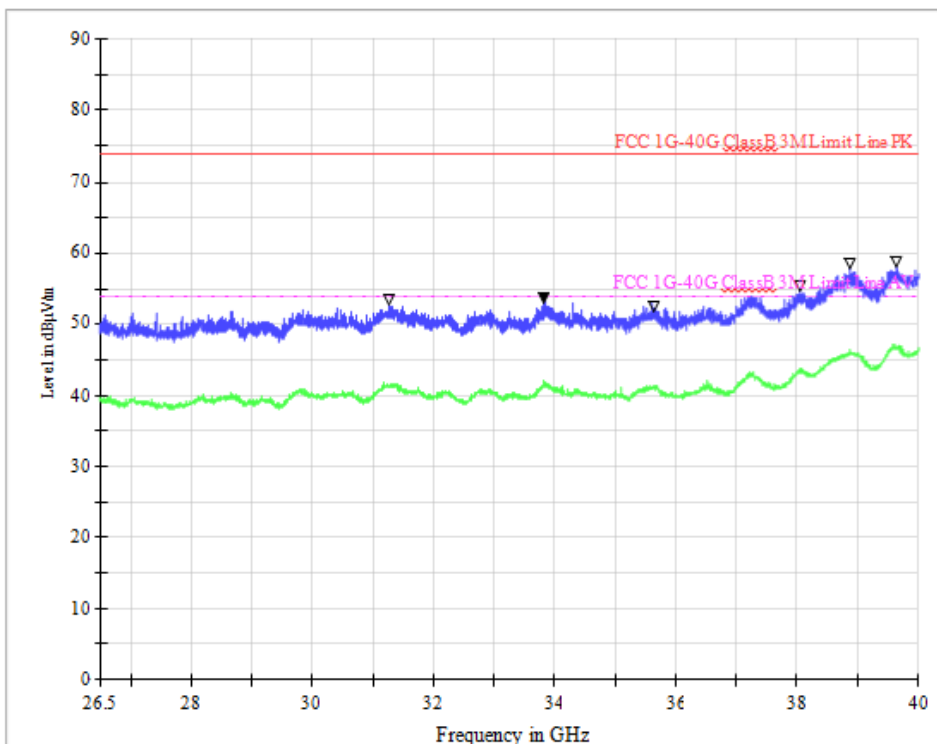
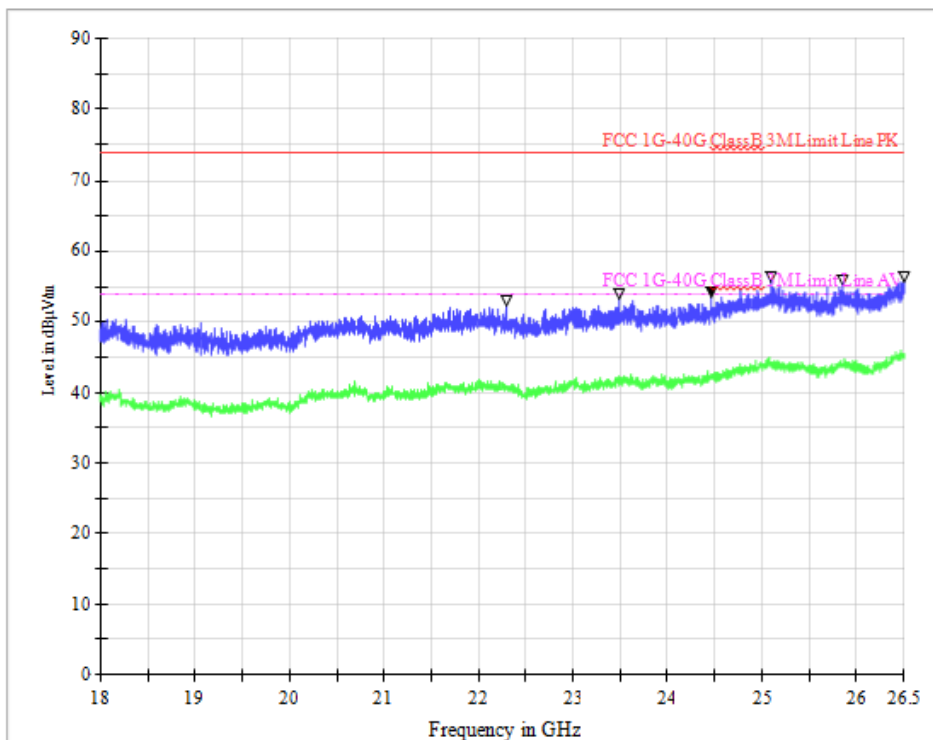
Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
31272	43.6	73.9	30.3	0.0	100.0	V
33827	45.4	73.9	28.5	0.0	100.0	V
35643	43.8	73.9	30.1	0.0	100.0	V
38032	46.1	73.9	27.8	0.0	100.0	V
38863	47.9	73.9	26	0.0	100.0	V
39642	48.0	73.9	25.9	0.0	100.0	V

Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
31272	31.6	54.0	22.4	0.0	100.0	V
33827	31.7	54.0	22.3	0.0	100.0	V
35643	31.6	54.0	22.4	0.0	100.0	V
38032	32.9	54.0	21.1	0.0	100.0	V
38863	35.4	54.0	18.6	0.0	100.0	V
39642	35.8	54.0	18.2	0.0	100.0	V

**NOTE:**

The minimum margin value is over 4dB.





**8. Radiated Emission Test data (Copy Mode)**

**-Horizontal**

Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dBµV/m)	Limit (dBµV/m)
82.88	17.4	120	400	H	125	-20.1	22.6	40.0
100.32	22.6	120	400	H	45	-16.4	20.9	43.5
171.36	26.7	120	400	H	86	-19.2	16.8	43.5
225.68	26.9	120	400	H	125	-16.0	19.1	46.0
255.28	39.0	120	100	H	230	-15.2	7.0	46.0
343.40	41.0	120	100	H	265	-12.5	5.0	46.0

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
1756.35	38.51	73.9	35.39	0.0	100.0	H
4410.39	39.24	73.9	34.66	0.0	100.0	H
7952.67	43.22	73.9	30.68	0.0	100.0	H
9436.63	42.10	73.9	31.80	0.0	100.0	H
10854.68	43.88	73.9	30.02	0.0	100.0	H
15645.81	44.42	73.9	29.42	0.0	100.0	H

Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
1756.35	28.61	54.0	25.39	0.0	100.0	H
4410.39	28.98	54.0	25.02	0.0	100.0	H
7952.67	31.58	54.0	22.42	0.0	100.0	H
9436.63	31.02	54.0	22.98	0.0	100.0	H
10854.68	32.17	54.0	21.83	0.0	100.0	H
15645.81	33.74	54.0	20.26	0.0	100.0	H

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
20435	42.6	73.9	31.3	0.0	100.0	H
21616	42.9	73.9	31.0	0.0	100.0	H
23548	43.3	73.9	30.6	0.0	100.0	H
24778	45.8	73.9	28.1	0.0	100.0	H
25042	46.1	73.9	27.8	0.0	100.0	H
25481	46.8	73.9	27.1	0.0	100.0	H

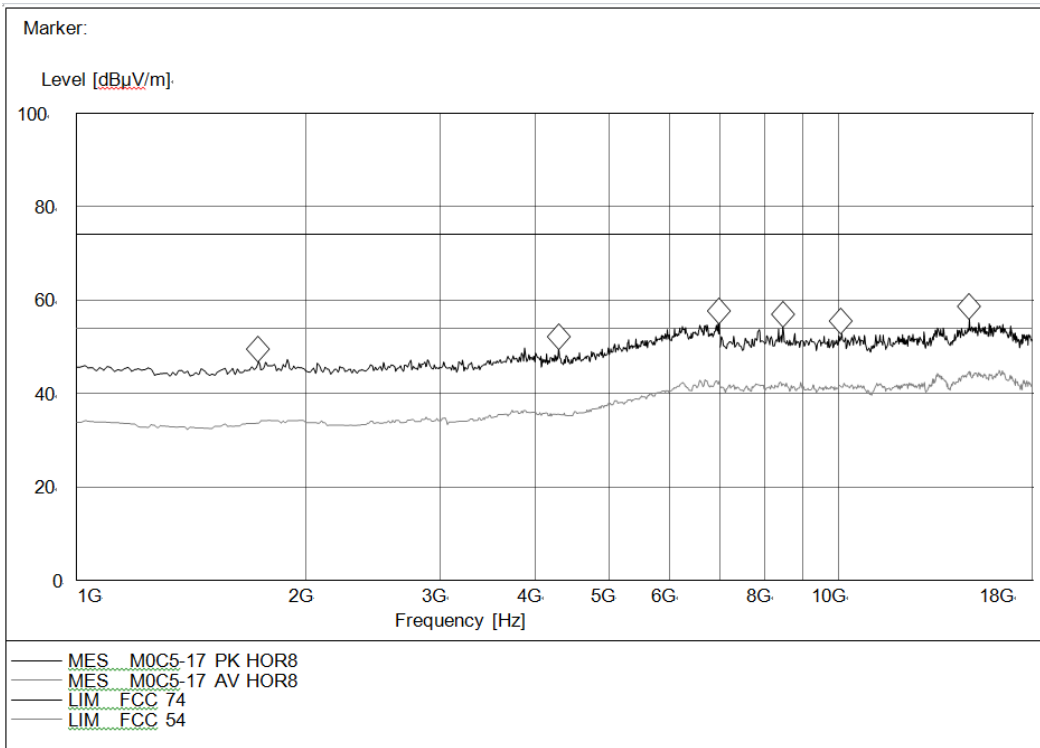
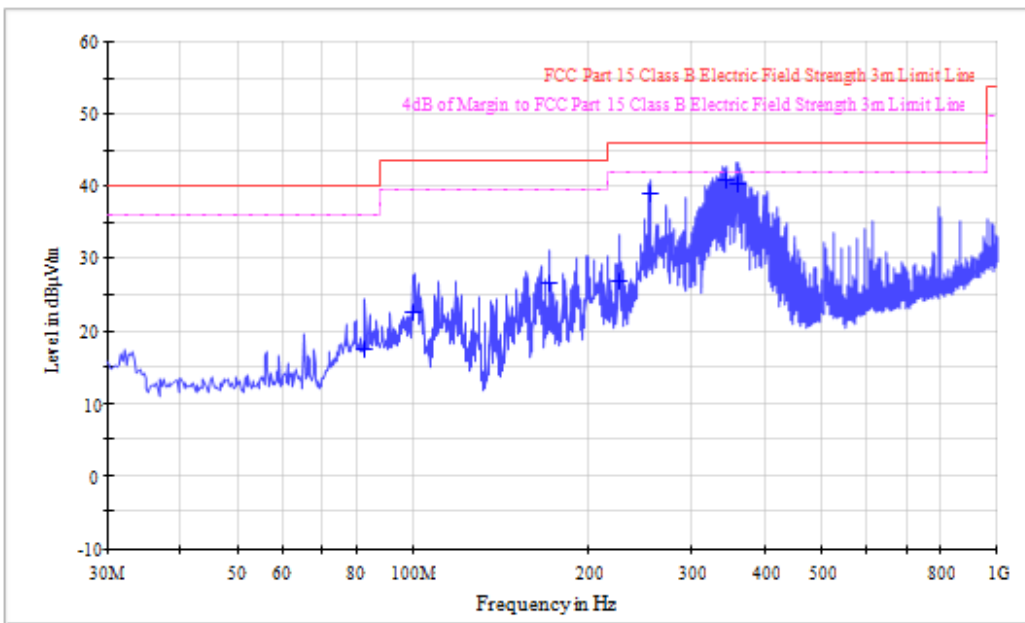
Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
20435	32.1	54.0	21.9	0.0	100.0	H
21616	32.0	54.0	22.0	0.0	100.0	H
23548	32.6	54.0	21.4	0.0	100.0	H
24778	34.0	54.0	20.0	0.0	100.0	H
25042	34.1	54.0	19.9	0.0	100.0	H
25481	34.9	54.0	19.1	0.0	100.0	H

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
31369	44.9	73.9	29.0	0.0	100.0	H
33794	44.2	73.9	29.7	0.0	100.0	H
37295	44.8	73.9	29.1	0.0	100.0	H
37956	45.1	73.9	28.8	0.0	100.0	H
38513	47.5	73.9	26.4	0.0	100.0	H
39632	48.6	73.9	25.3	0.0	100.0	H

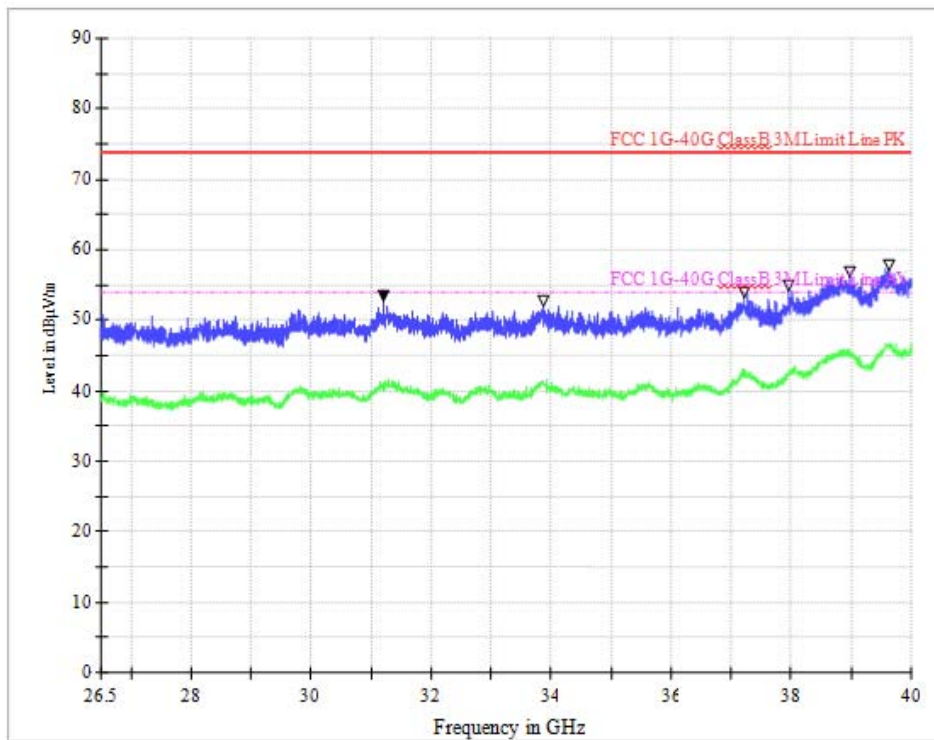
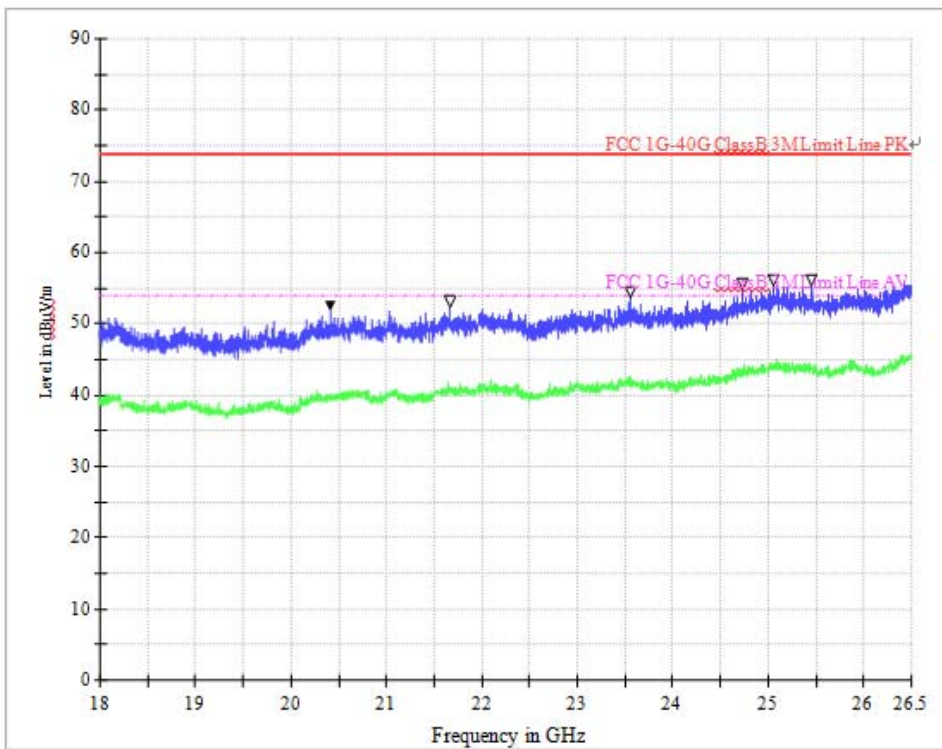
Frequency (MHz)	Average dB $\mu$ V/m	Average limit (dB $\mu$ V/m)	Average Margin (dB $\mu$ V/m)	Turntable position (deg)	Ant. height (cm)	Polarity
31369	31.5	54	22.5	0.0	100.0	H
33794	31.7	54	22.3	0.0	100.0	H
37295	32.3	54	21.7	0.0	100.0	H
37956	32.5	54	21.5	0.0	100.0	H
38513	35.1	54	18.9	0.0	100.0	H
39632	35.9	54	18.1	0.0	100.0	H

**NOTE:**

The minimum margin value is over 4dB.







**-Vertical**

Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Antenna height (cm)	Polarity	Turntable position (deg)	Corr. (dB)	Margin (dBµV/m)	Limit (dBµV/m)
33.16	20.7	120	100	V	120	-17.9	19.3	40.0
75.36	26.4	120	100	V	115	-21.9	13.6	40.0
93.12	31.4	120	100	V	136	-17.1	12.1	43.5
102.04	32.1	120	100	V	156	-16.5	11.4	43.5
121.20	32.1	120	100	V	123	-19	11.4	43.5
255.28	29.8	120	100	V	321	-15.2	16.2	46.0

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
21061.21	38.63	73.9	35.27	0.0	100.0	V
58631.81	43.85	73.9	30.05	0.0	100.0	V
64252.60	46.08	73.9	27.82	0.0	100.0	V
83320.08	44.47	73.9	29.43	0.0	100.0	V
14728.28	45.81	73.9	28.09	0.0	100.0	V
16884.68	46.05	73.9	27.85	0.0	100.0	V

Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
21061.21	28.69	54.0	25.3	0.0	100.0	V
58631.81	33.22	54.0	20.8	0.0	100.0	V
64252.60	34.52	54.0	19.5	0.0	100.0	V
83320.08	34.45	54.0	19.6	0.0	100.0	V
14728.28	35.62	54.0	18.4	0.0	100.0	V
16884.68	34.81	54.0	19.2	0.0	100.0	V

Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
21785	42.8	73.9	31.1	0.0	100.0	V
22941	43.1	73.9	30.8	0.0	100.0	V
23592	44.8	73.9	29.1	0.0	100.0	V
24853	45.9	73.9	28	0.0	100.0	V
25311	46.2	73.9	27.7	0.0	100.0	V
25932	46.7	73.9	27.2	0.0	100.0	V

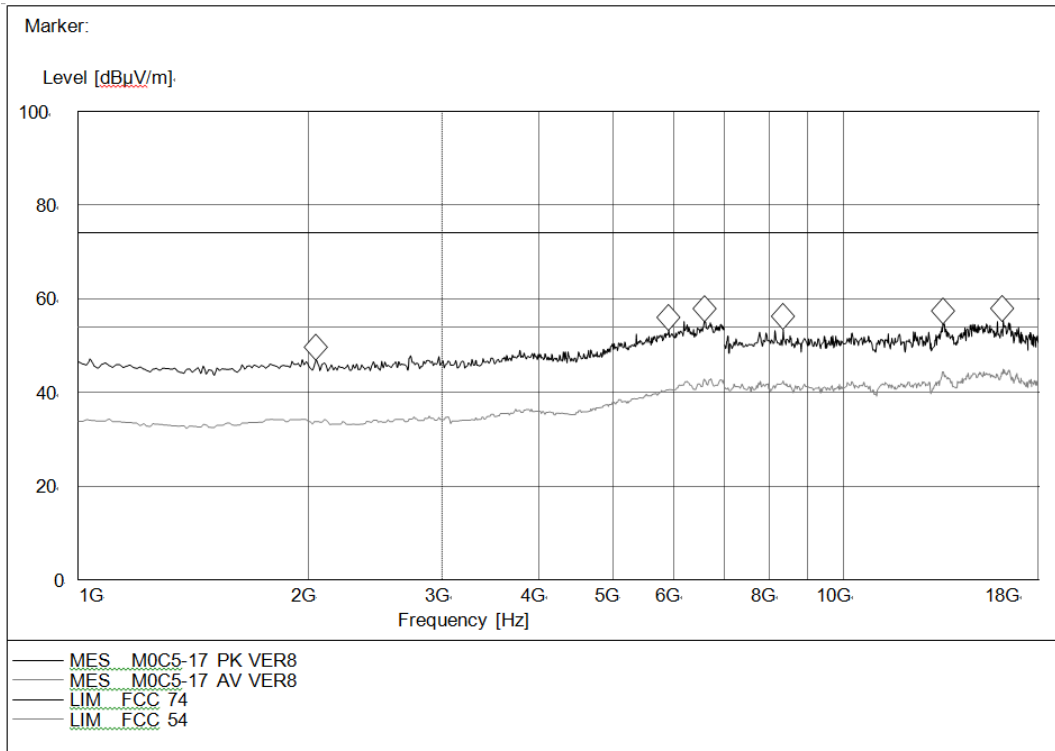
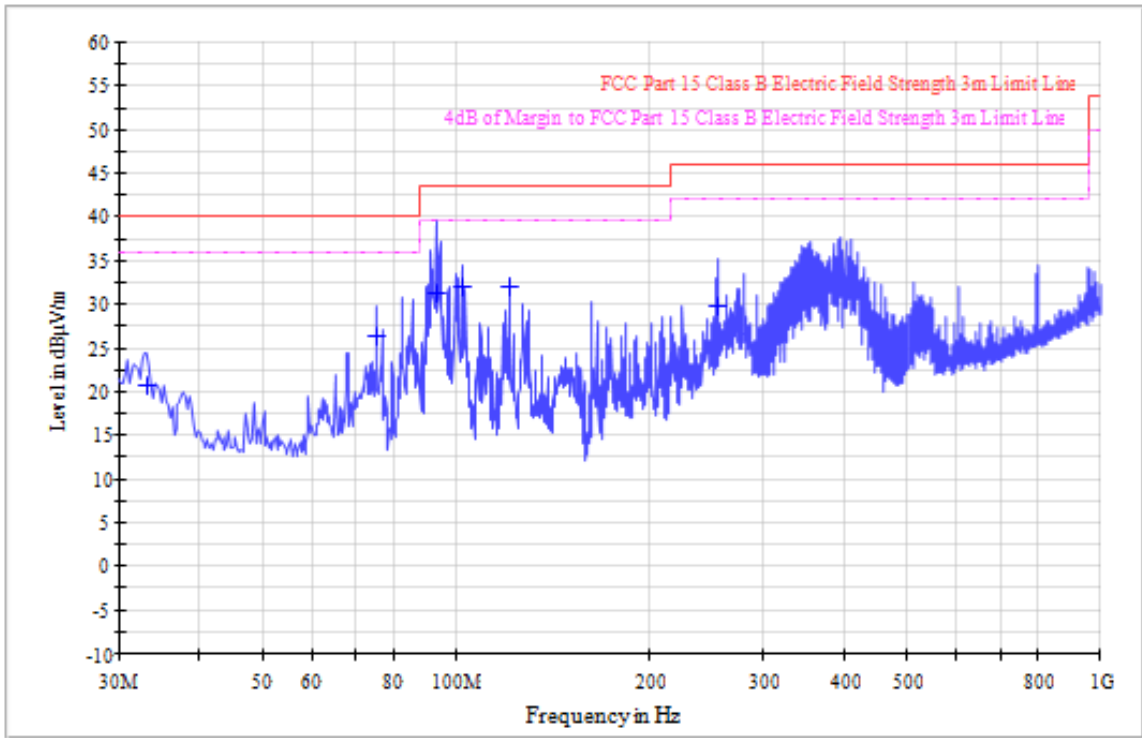
Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
21785	32.1	54.0	21.9	0.0	100.0	V
22941	32.8	54.0	21.2	0.0	100.0	V
23592	34.0	54.0	20.0	0.0	100.0	V
24853	34.2	54.0	19.8	0.0	100.0	V
25311	35.6	54.0	18.4	0.0	100.0	V
25932	35.7	54.0	18.3	0.0	100.0	V

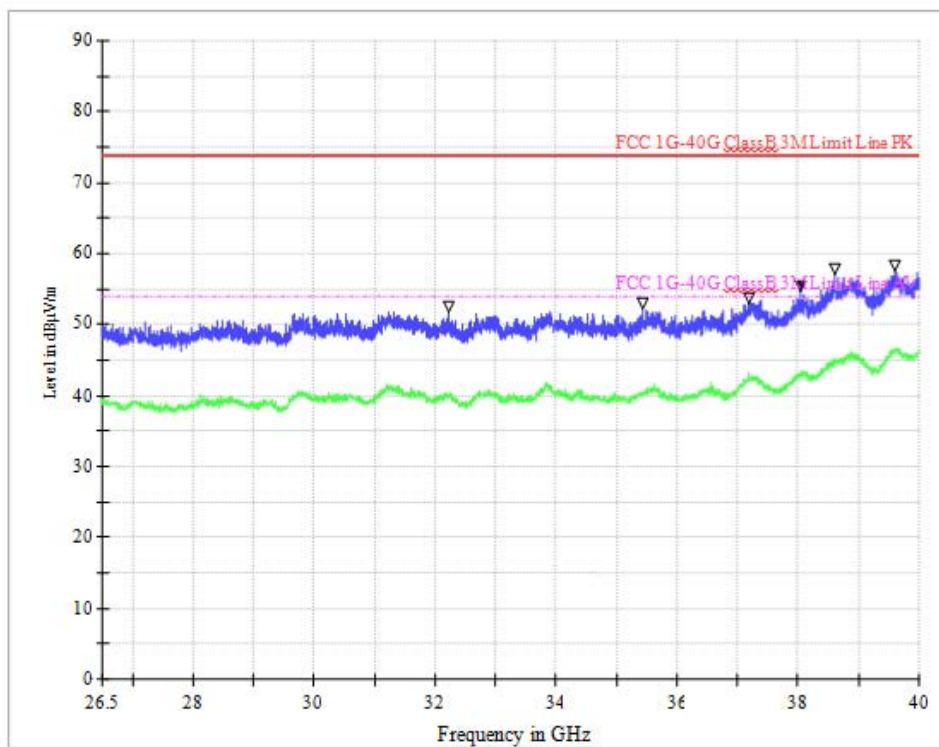
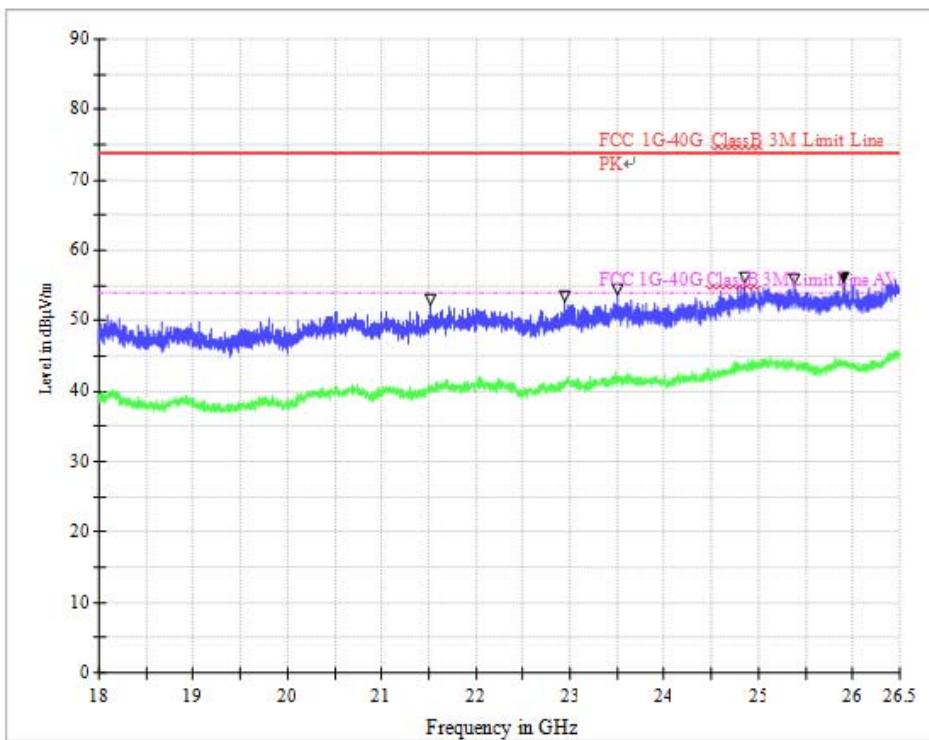
Frequency (MHz)	Peak (dBµV/m)	Peak limit (dBµV/m)	Peak Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
32199	43.3	73.9	30.6	0.0	100.0	V
35424	44.2	73.9	29.7	0.0	100.0	V
37202	44.9	73.9	29.0	0.0	100.0	V
38456	45.8	73.9	28.1	0.0	100.0	V
38252	47.9	73.9	26.0	0.0	100.0	V
39635	48.5	73.9	25.4	0.0	100.0	V

Frequency (MHz)	Average dBµV/m	Average limit (dBµV/m)	Average Margin (dBµV/m)	Turntable position (deg)	Ant. height (cm)	Polarity
32199	29.9	54	24.1	0.0	100.0	V
35424	31.2	54	22.8	0.0	100.0	V
37202	32.1	54	21.9	0.0	100.0	V
38456	33.0	54	21.0	0.0	100.0	V
38252	34.5	54	19.5	0.0	100.0	V
39635	35.8	54	18.2	0.0	100.0	V

**NOTE:**

The minimum margin value is over 4dB.





## Appendix I: Photographs of the EUT

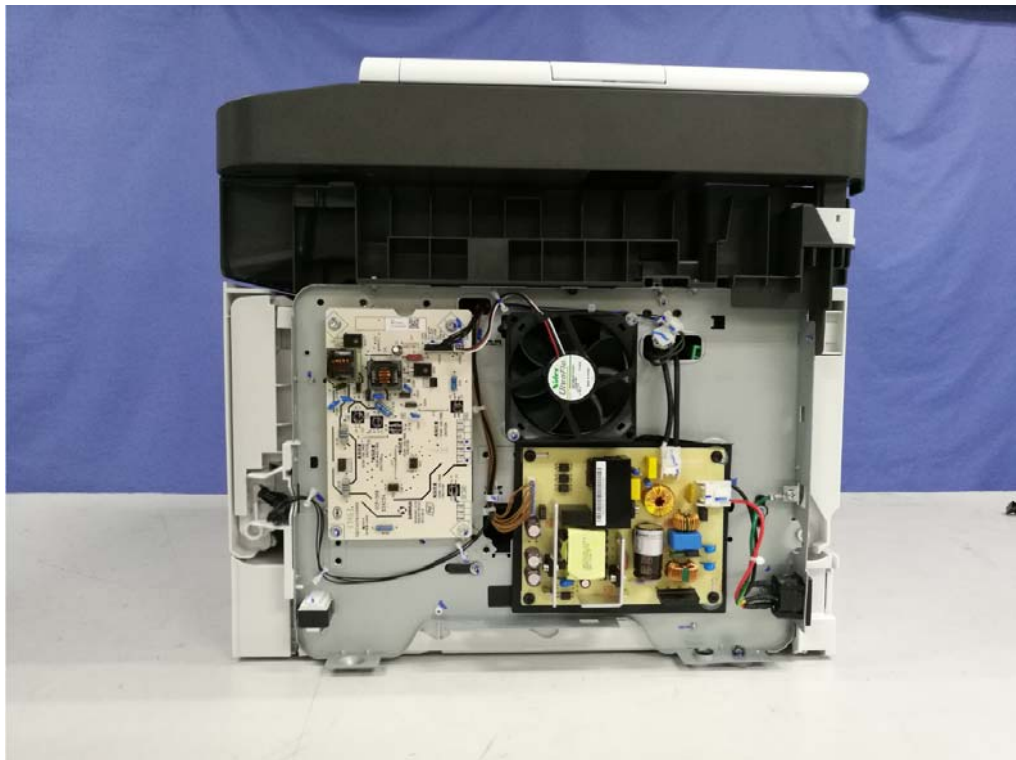
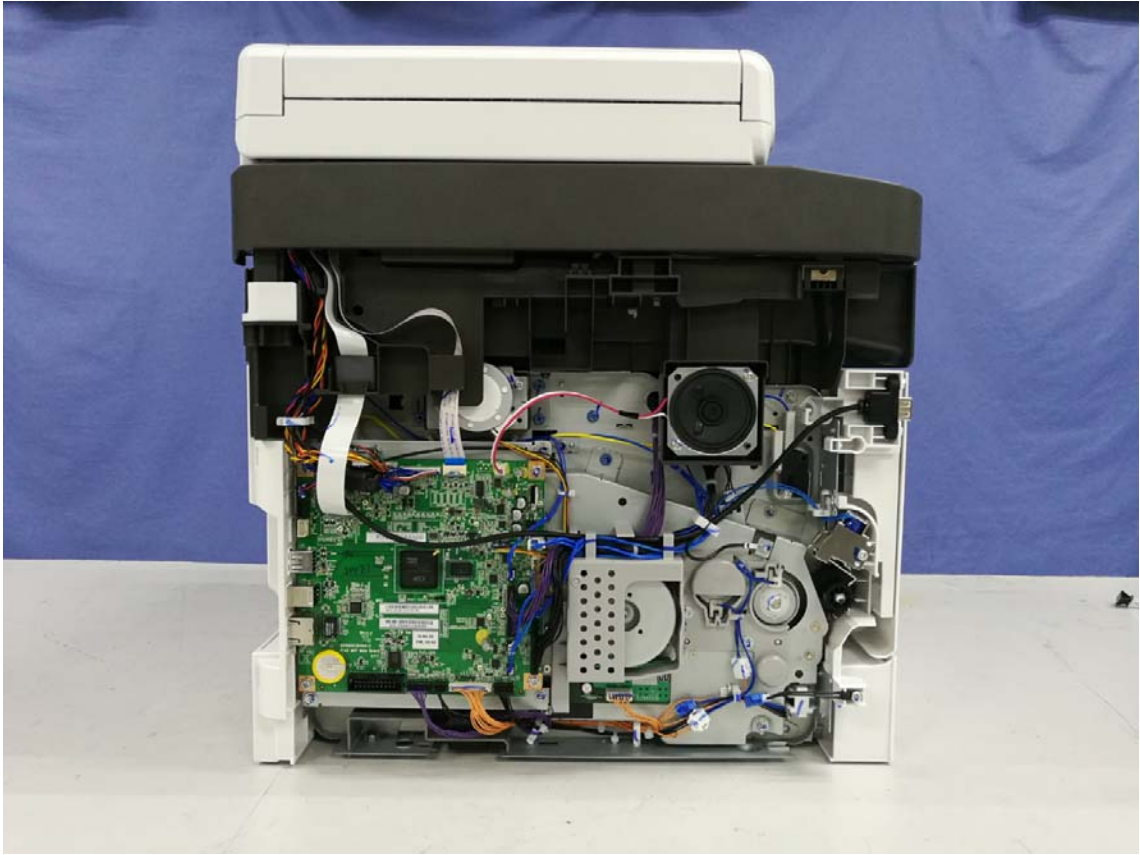
### 1. Appearance

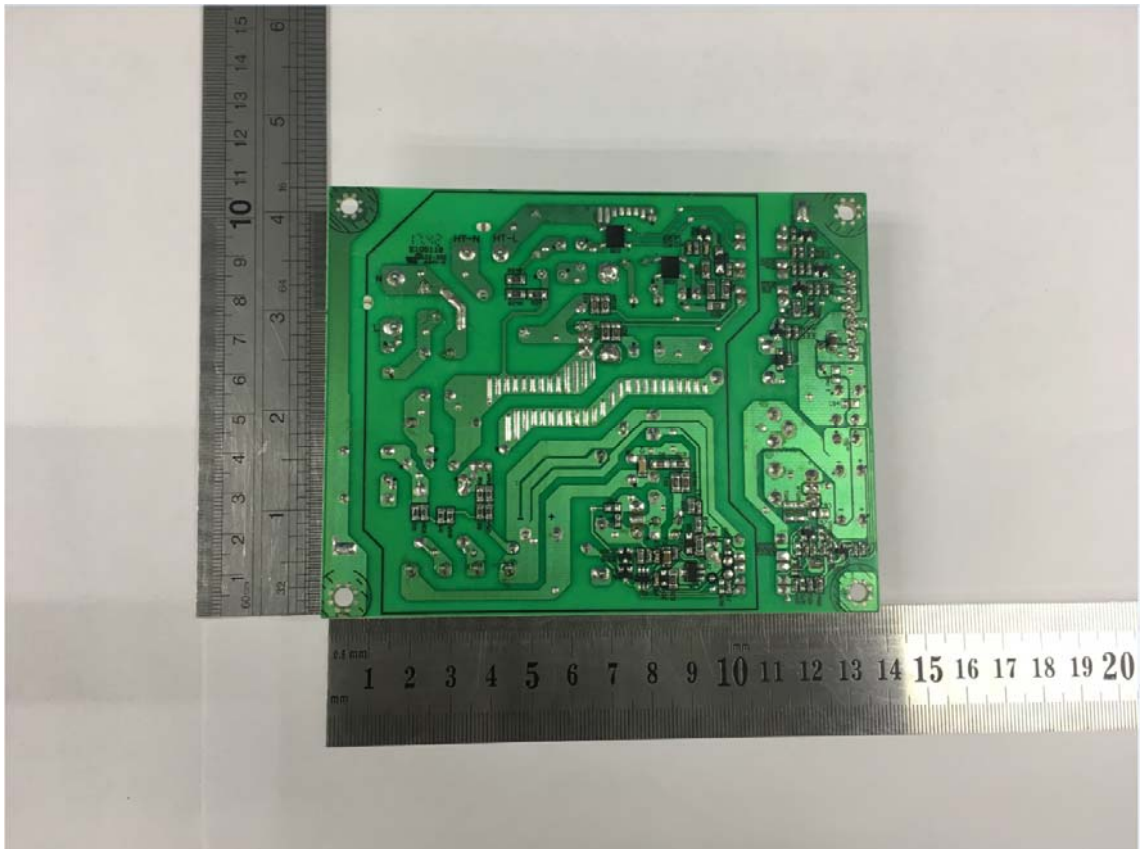
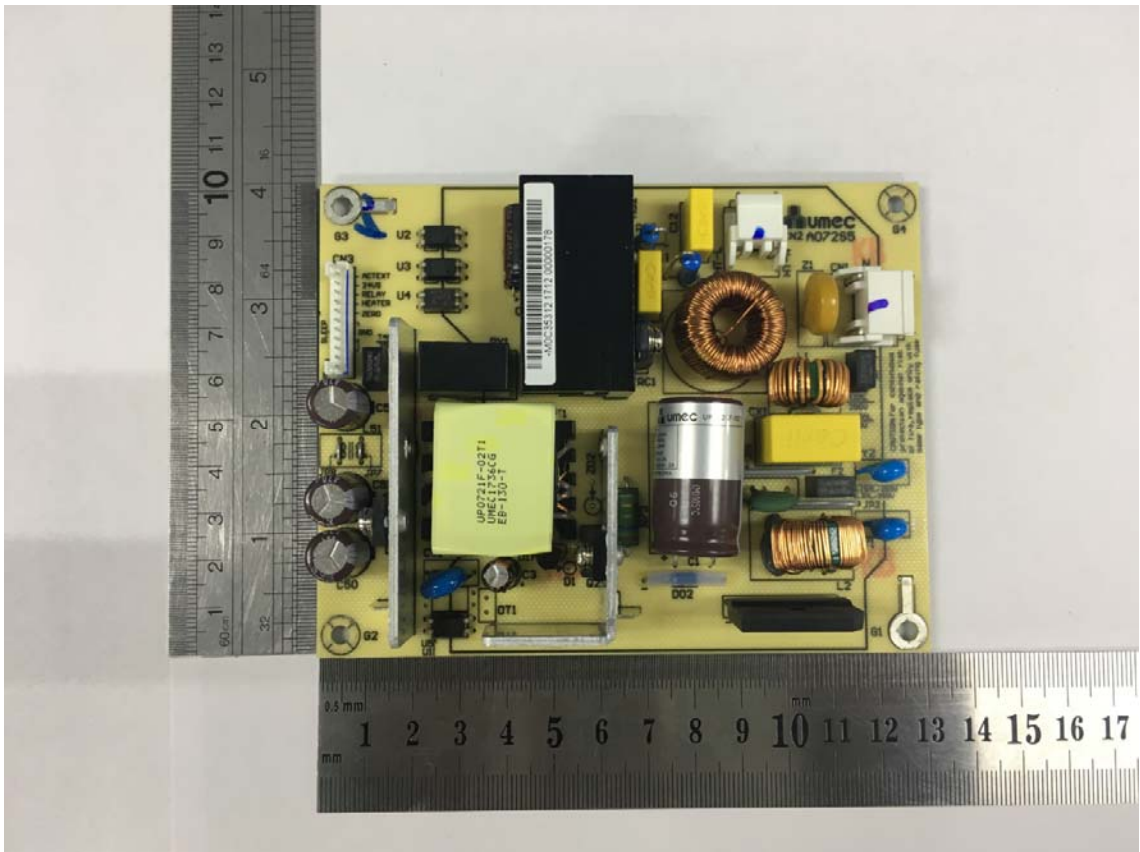


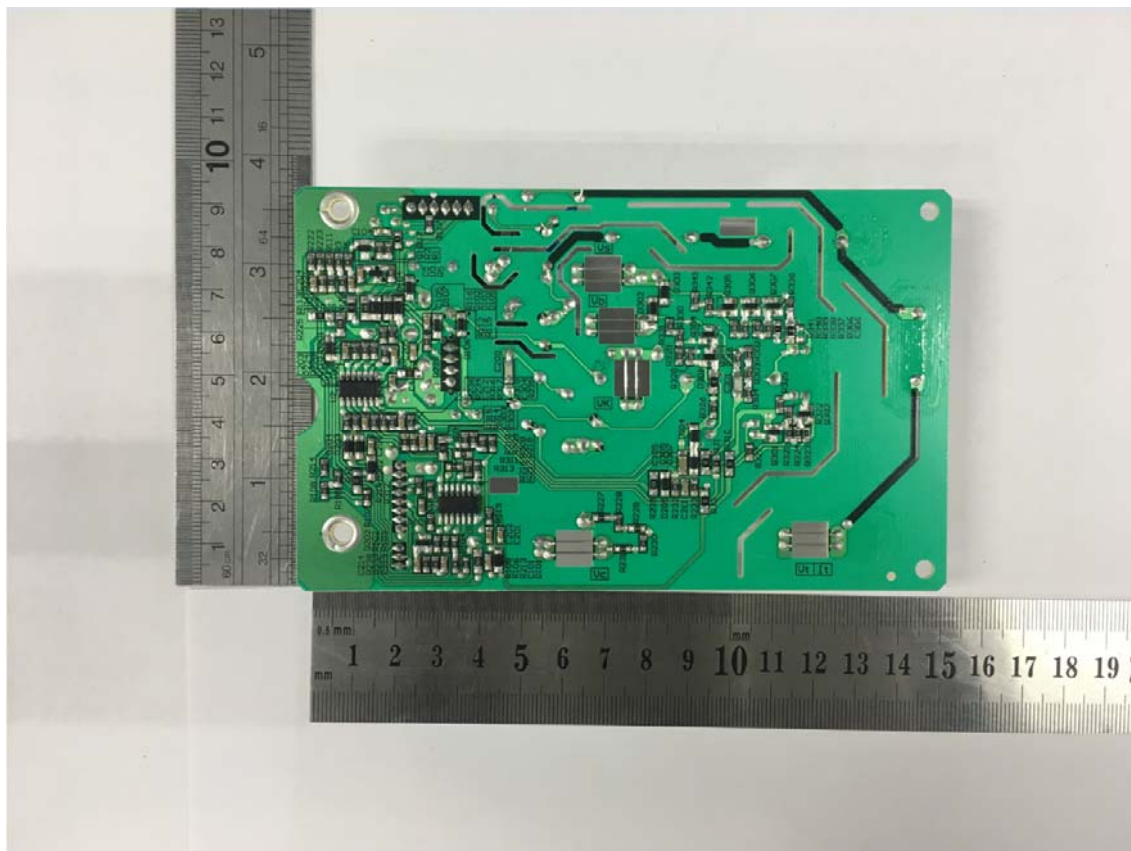
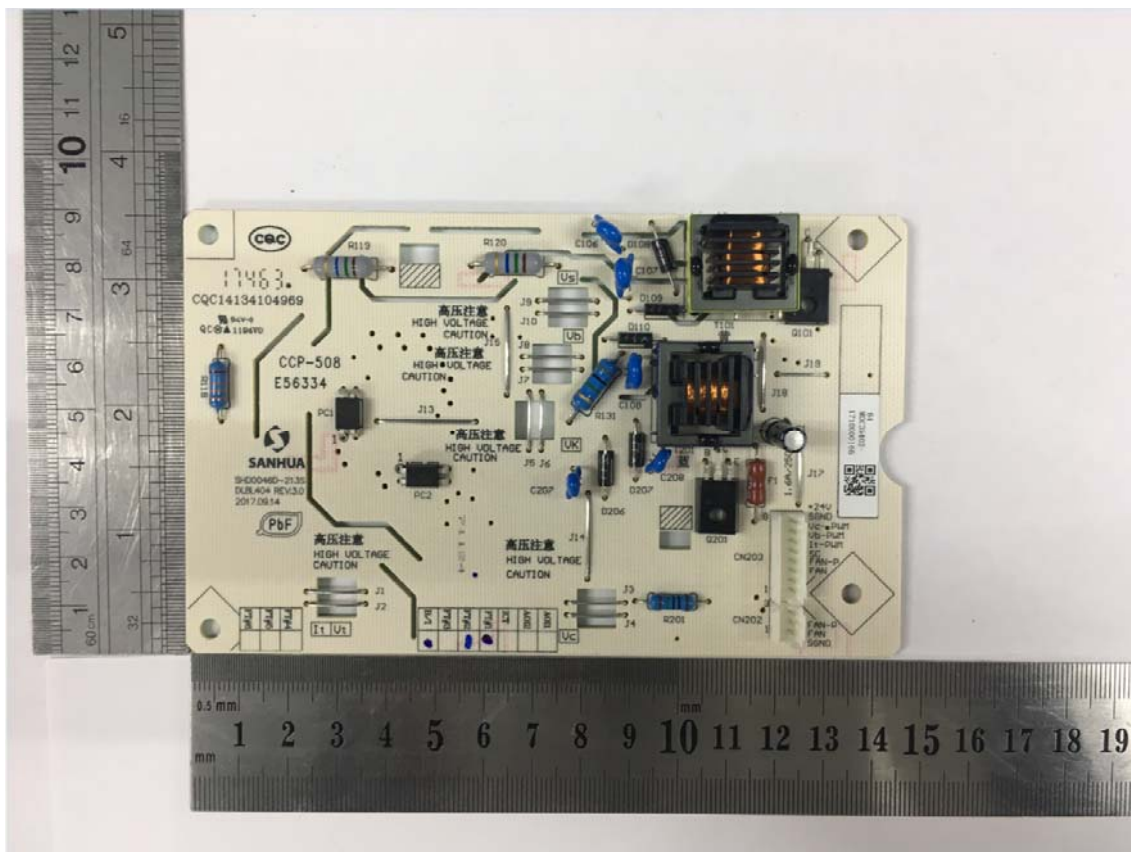


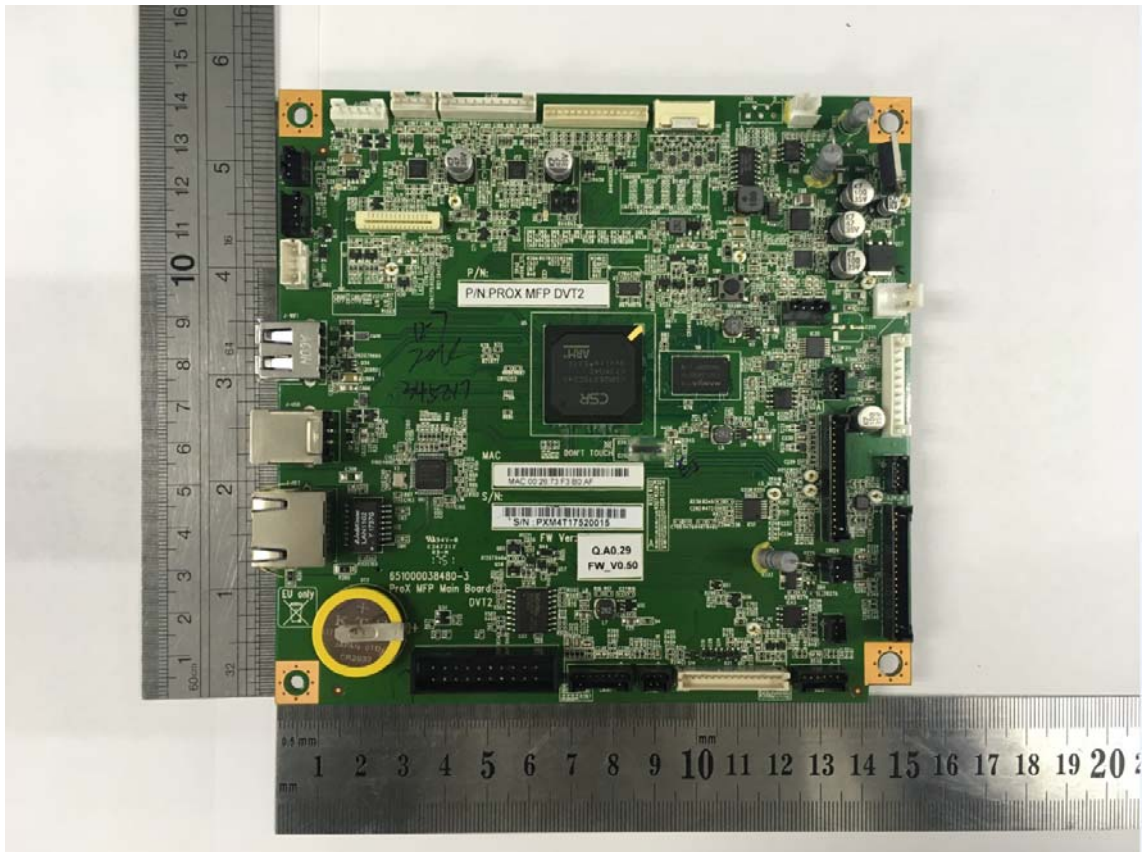


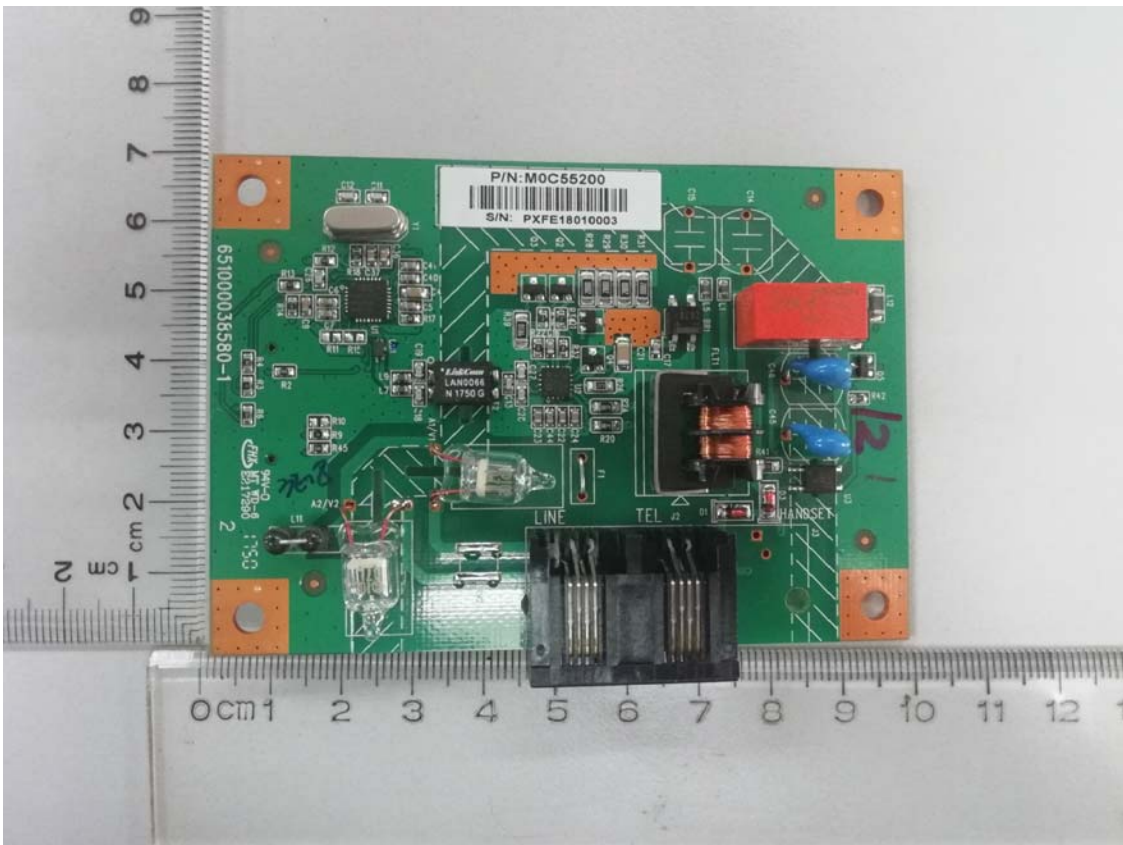
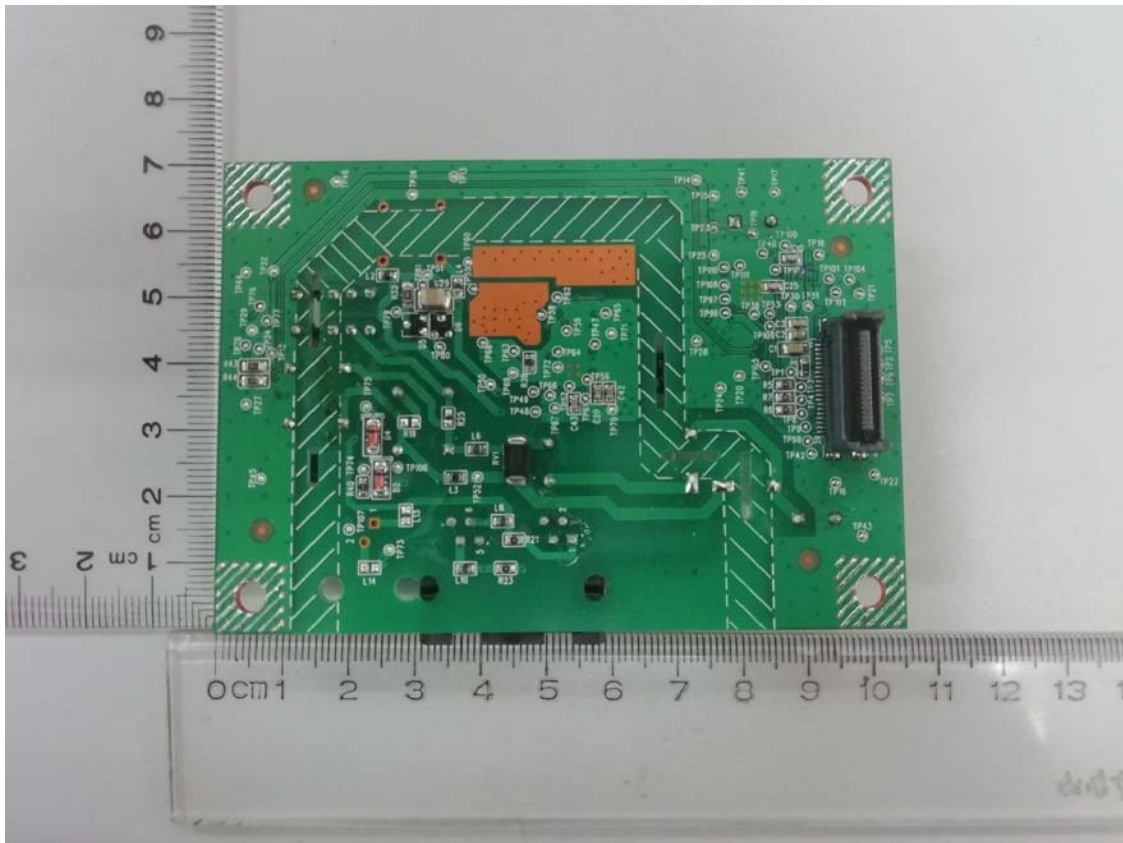
**2. Inside**

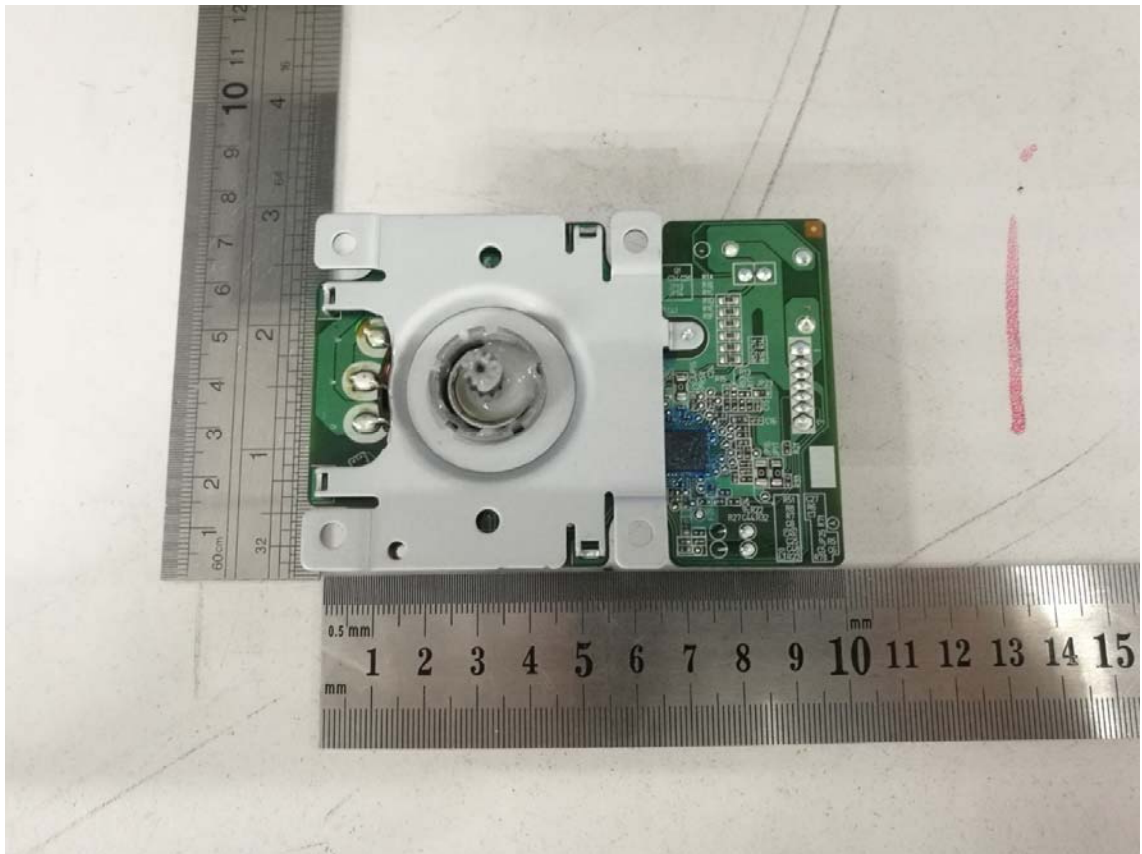


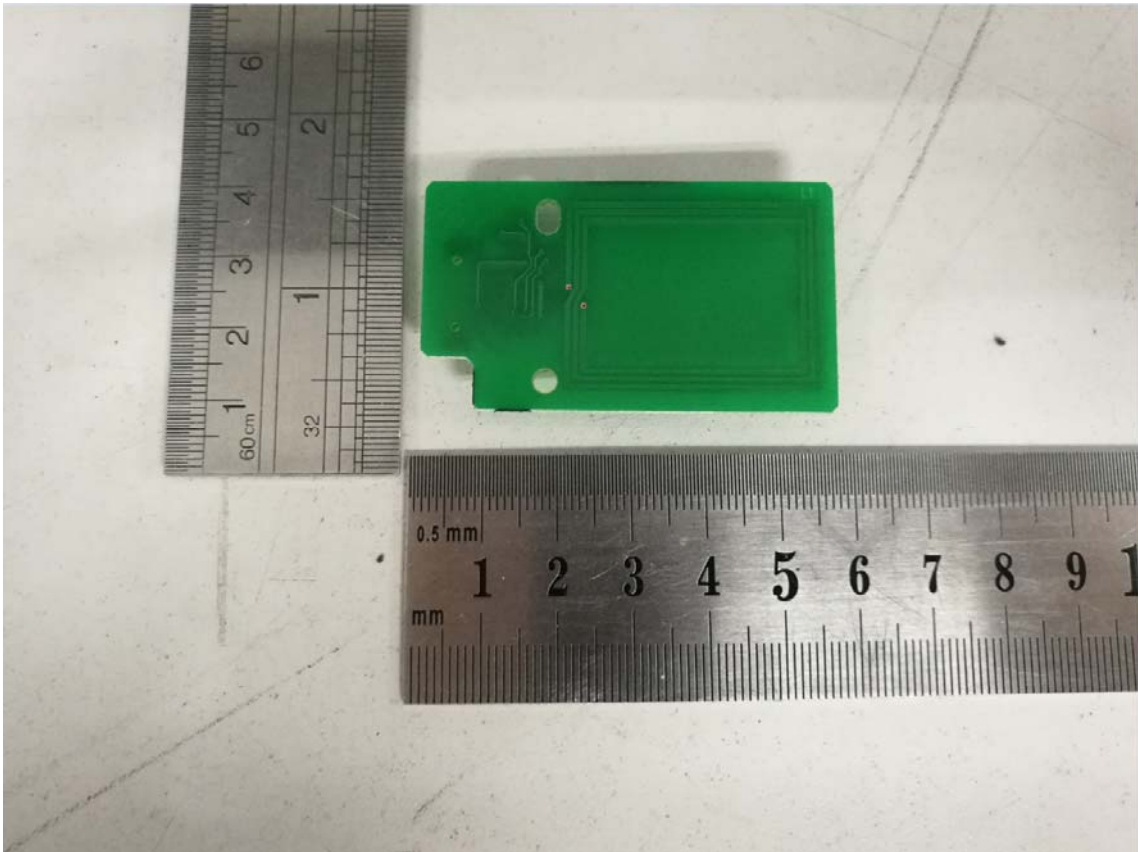


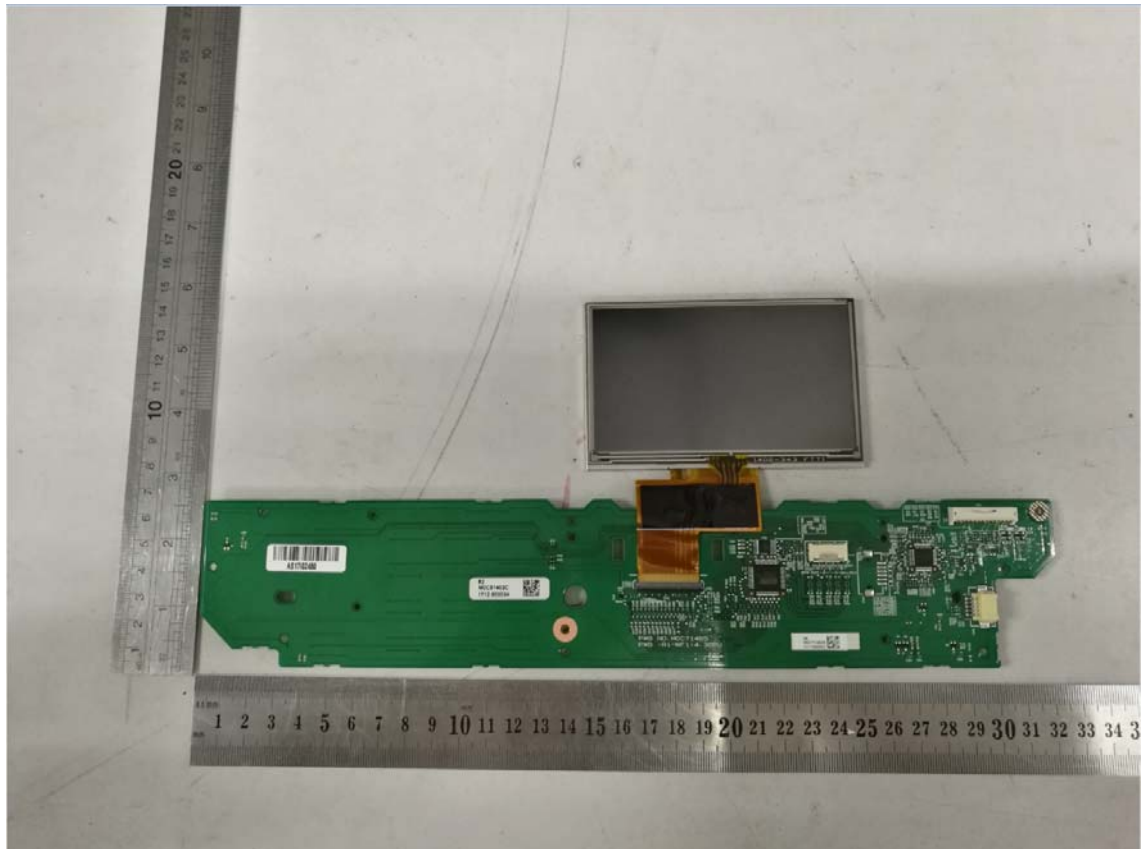
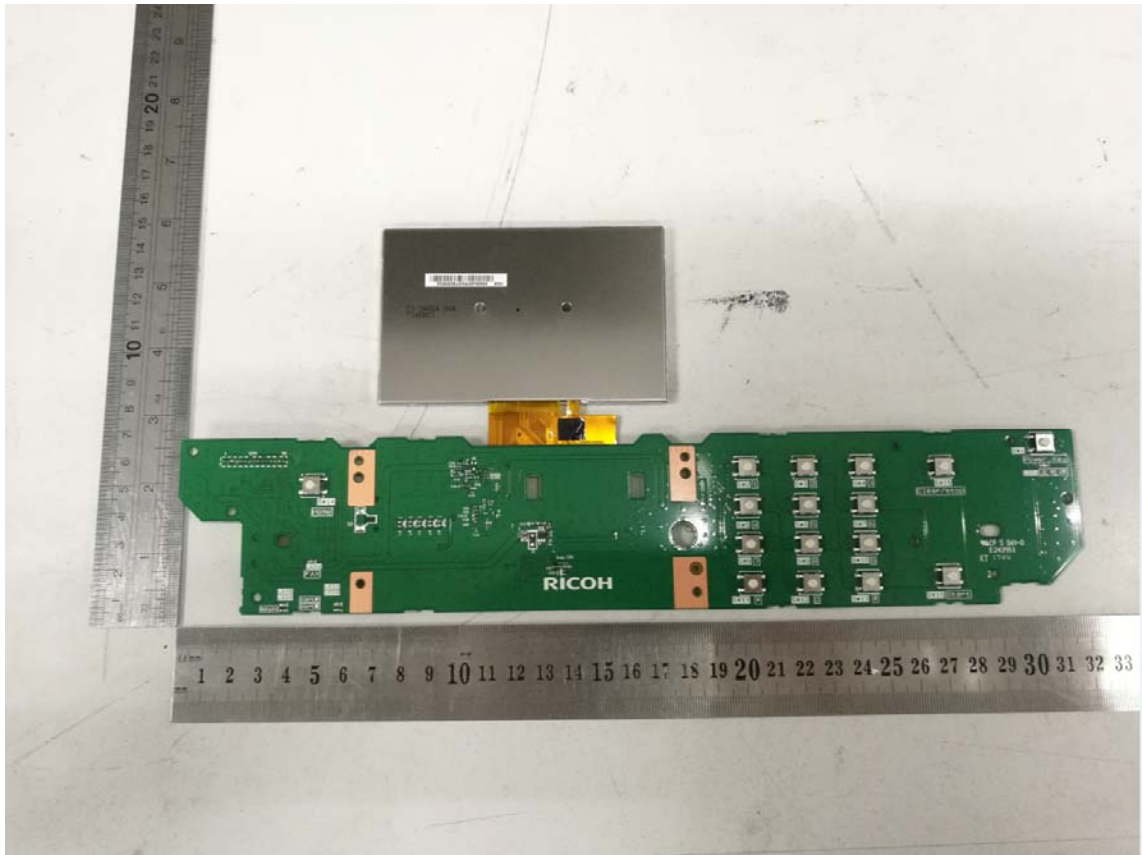




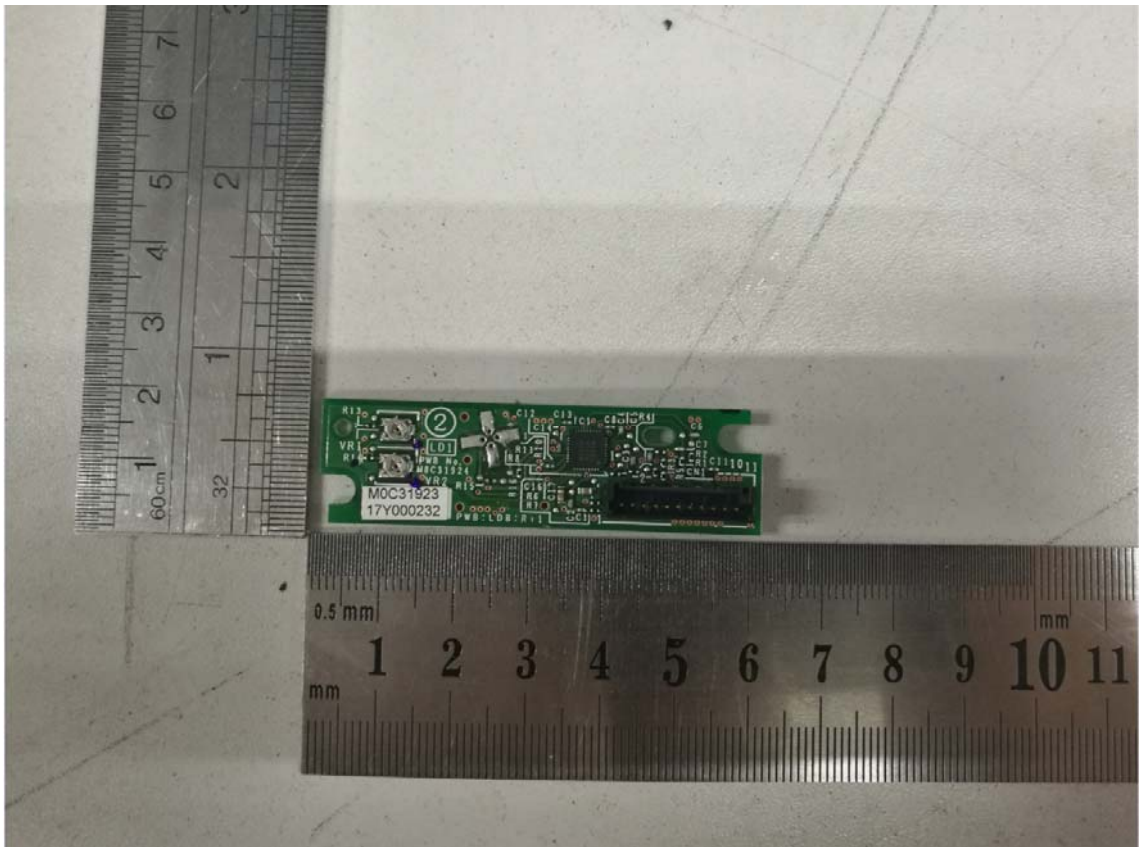


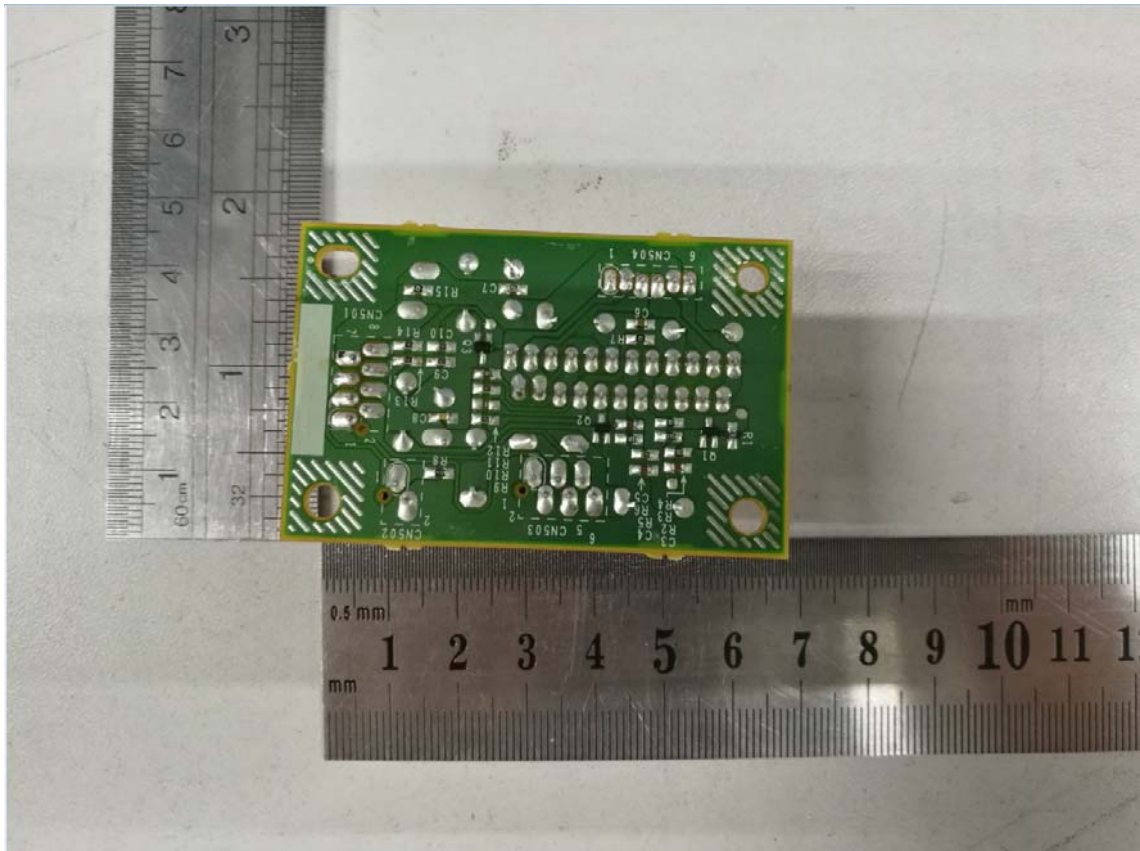
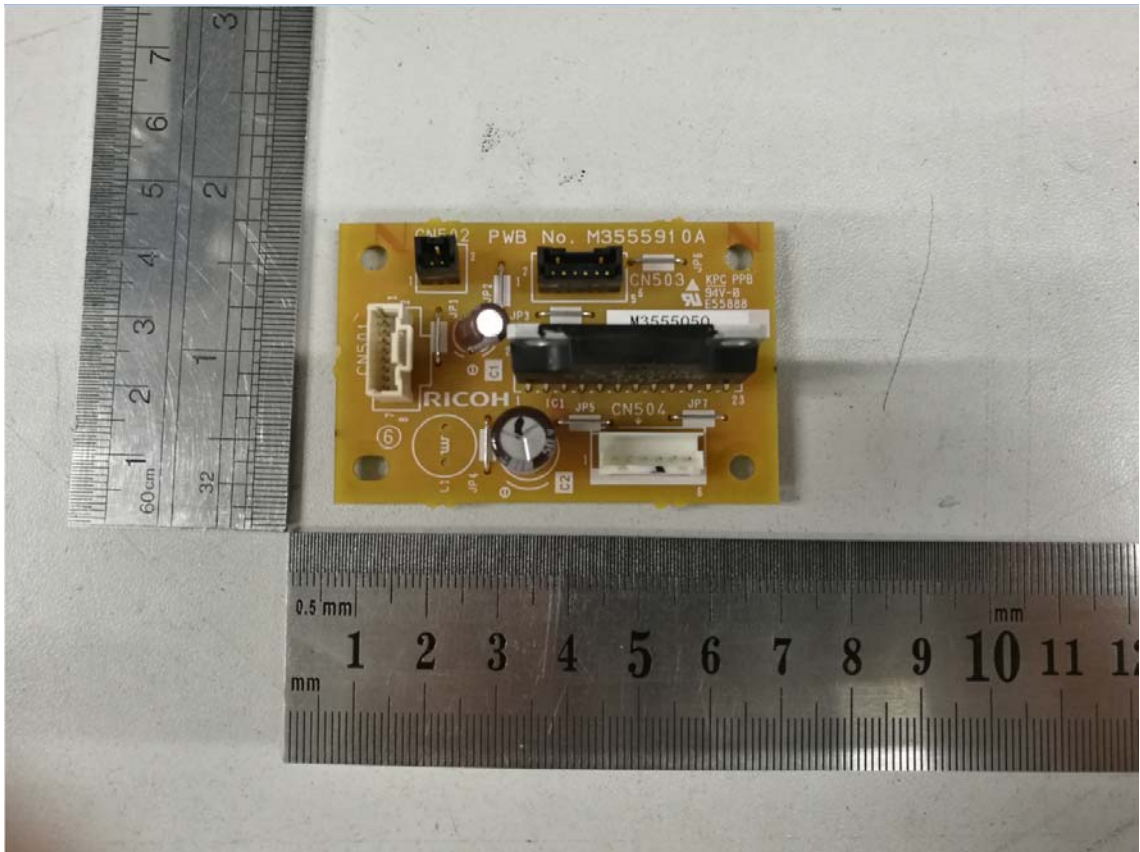










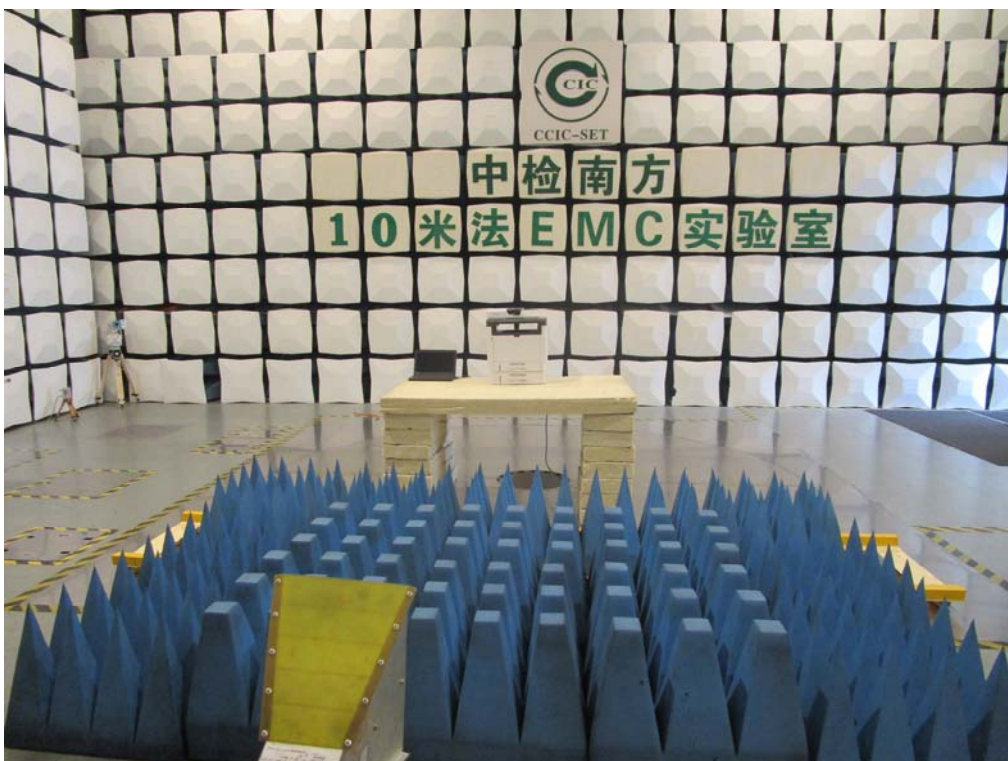


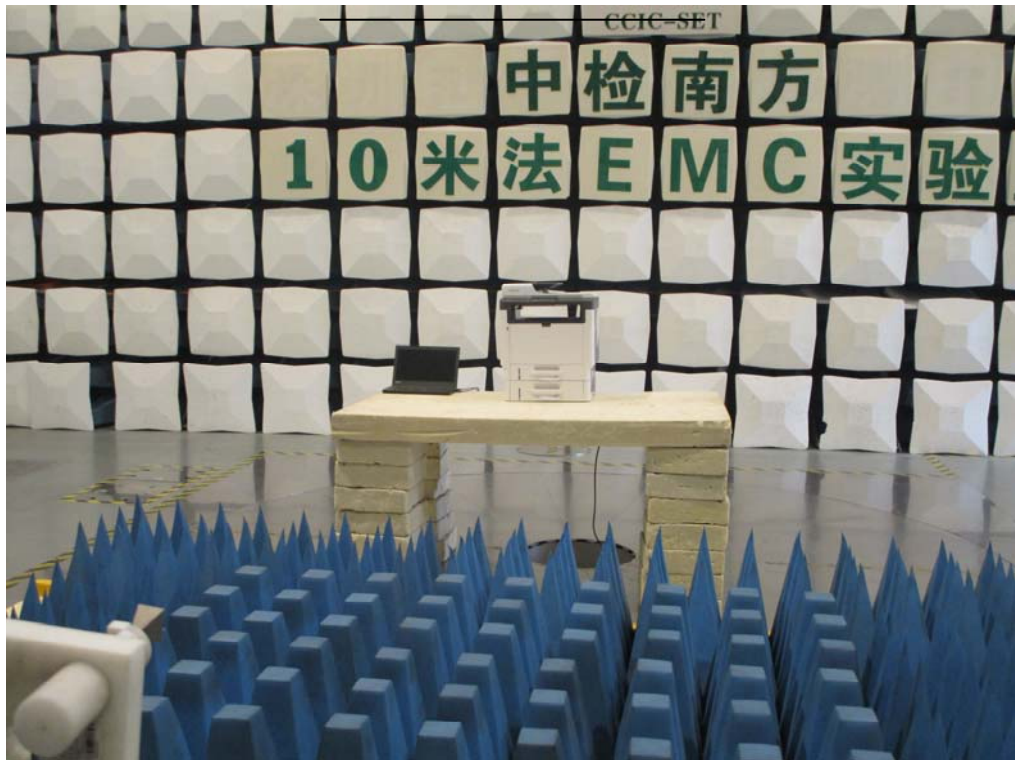
## Appendix II: Photographs of EMC Test Configuration

### 1. Mains Terminal Disturbance Voltage Measurement



## 2. Radiated Field Strength Measurement





End of Report