



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439

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EMISSIONS TEST REPORT

FCC Rules and Regulations
Unintentional Radiators - Class A Digital Devices
Part 15, Subpart B, Sections 15.107b, 15.109b
&
FCC Rules and Regulations
Intentional Radiators
Part 15, Subpart C, Section 15.207 & 15.247

SUMMARY OF TEST RESULTS CAN BE FOUND IN SECTION 1.0 OF THIS REPORT

Equipment Under Test: Label Printer
Test Voltage: Tested at 120/240 Vac, 60 Hz
Configuration: New LCD Adapter with BLE & AC-DC Adapter
Model Number: M610
Model Tested: M610
Serial Number: EM3-02
Dates of Test: September 19 and October 6 & 7, 2022
Test Conducted for: Brady Corporation, USA
2221 West Camden Road
Glendale, WI 53209
Date of Report: June 7, 2023
Revision Level: A

NOTICE: "This test report contains test data, equipment lists, photographs and/or other information regarding only the sample provided by the client for testing."

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Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439

SIGNATURE PAGE

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General Manager



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439

TABLE OF CONTENTS

i.	Cover Page	1
ii.	Signature Page	2
iii.	Table of Contents	3
iv.	ANAB Certificate of Accreditation	5
1.0	Summary	6
2.0	Introduction	6
3.0	Test Facility	6
4.0	Test Equipment	6
5.0	Description of Test Sample	7
6.0	Modifications made to EUT for EMC Compliance	8
7.0	Photo Information and Test Set-Up	8
7.1	Photo ID Taken During Testing	9
Section 15.107 AC Line Conducted Emissions		13
1.0	Test Procedure and Setup	14
2.0	Test Results	14
3.0	Sample Calculations	14
4.0	D.L.S. Electronic Systems, Inc Measurement Uncertainty	15
Table 1 - Test Instrumentation		16
Table 2 - Test Equipment		16
5.0	Test Setup Photos	17
6.0	Test Data	20
Section 15.109 Radiated Emissions Below 1 GHz		45
1.0	Test Procedure and Setup	46
2.0	Test Results	46
3.0	Sample Calculations	46
4.0	D.L.S. Electronic Systems, Inc Measurement Uncertainty	47
Table 1 - Test Instrumentation		48
Table 2 - Test Equipment		48
5.0	Test Setup Photos	49
6.0	Test Data	52
Section 15.109 Radiated Emissions Above 1 GHz		59
1.0	Test Procedure and Setup	60
2.0	Test Results	60
3.0	Sample Calculations	60
4.0	D.L.S. Electronic Systems, Inc Measurement Uncertainty	61
Table 1 - Test Instrumentation		62
Table 2 - Test Equipment		62
5.0	Test Setup Photos	63
6.0	Test Data	66



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439

TABLE OF CONTENTS

Section 15.209 Radiated Emissions in Restricted Bands Below 1 GHz	73
1.0 Test Procedure and Setup	74
2.0 Test Results	74
3.0 Sample Calculations	74
4.0 D.L.S. Electronic Systems, Inc Measurement Uncertainty	75
Table 1 - Test Instrumentation	76
Table 2 - Test Equipment	76
 Section 15.209 Radiated Emissions in Restricted Bands Above 1 GHz	 77
1.0 Test Procedure and Setup	78
2.0 Test Results	78
3.0 Sample Calculations	78
4.0 D.L.S. Electronic Systems, Inc Measurement Uncertainty	79
Table 1 - Test Instrumentation	80
Table 2 - Test Equipment	80
5.0 Test Setup Photo.....	81
6.0 Test Data.....	83
 Appendix A: FCC Part 15.207 AC Line Conducted Emissions Test Data	 104



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

DLS Electronic Systems, Inc.
1250 Peterson Drive
Wheeling, IL 60090
(and satellite locations as shown on the scope)

Fulfills the requirements of

ISO/IEC 17025:2017

and

U.S. Federal Communication Commission (FCC) EMC and Telecommunications (EC&T)
Testing Designation Program

and

Recognition of Telecommunications Testing - Innovation, Science, and Economic Development
(ISED) Canada

and

FDA Accreditation Scheme for Conformity Assessment (ASCA) Pilot Program - Basic Safety
and Essential Performance of Medical Electrical Equipment, Medical Electrical Systems, and
Laboratory Medical Equipment

In the field of

TESTING

This certificate is valid only when accompanied by a current scope of accreditation document.

The current scope of accreditation can be verified at www.anab.org.

R. Douglas Leonard Jr., VP, PILLR SBU

Expiry Date: 23 April 2024

Certificate Number: AT-1859



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory
quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439

1.0 SUMMARY OF TEST RESULTS

The Label Printer, Model M610 was subjected to requirements of FCC Rules and Regulations, Part 15, Subpart B & Subpart C, with the results as described in the below table.

Test Section	Result
Section 15.107 AC Line Conducted Emissions	Meets
Section 15.207 AC Line Conducted Emissions	Meets
Section 15.109 Radiated Emissions Below 1 GHz	Meets
Section 15.109 Radiated Emissions Above 1 GHz	Meets
Section 15.209 Radiated Emissions in Restricted Bands Below 1 GHz	Meets
Section 15.209 Radiated Emissions in Restricted Bands Below 1 GHz	Meets

See the following test sections for a detailed explanation of the test results.

2.0 INTRODUCTION

On September 19 and October 6 & 7, 2022, a series of radio frequency interference measurements were performed on the Label Printer, Model M610, Serial Number EM3-02.

3.0 TEST FACILITY

D.L.S. Electronic Systems, Inc. is a full-service EMC Testing Laboratory accredited to ISO 17025. Our test facilities are located at 1250 Peterson Drive, Wheeling, IL, and 166 South Carter Street, Genoa City, WI. Our ANAB Certificate and Scope of Accreditation can be viewed at dlsemc.com/accreditations. Our facilities are recognized by the FCC, ISED, and VCCI. All emissions tests were performed by personnel of D.L.S. Electronic Systems, Inc.

4.0 TEST EQUIPMENT

A list of the test equipment used, along with identification and calibration data, is included in the Table(s) at the end of this introduction section. All primary equipment was calibrated against known reference standards with a verified traceable path to NIST.



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439

5.0 DESCRIPTION OF TEST SAMPLE

5.1. DESCRIPTION

The M610 Label Printer is a Thermal Transfer printer. The printer relies on smart-cell technology for recognizing ribbon and label media. Simple creation of a variety of label types right on the printer. Alternatively create label using Brady Workstation desktop software or the Brady Express Labels mobile app. Supports a wide variety of label supplies: die-cut, continuous, sleeves, durasleeves, tags, external bulk labels, and more. Features include, long battery life, ability to use the printer while the battery is charging, a 3.5" color display, manual label cutter and wireless model includes Bluetooth connectivity.

5.2. PHYSICAL DIMENSIONS OF EQUIPMENT UNDER TEST

Length:13" x Width: 4.3" x Height: 4.2"

5.3. INTERNALLY GENERATED FREQUENCIES

Switching Power Supply Frequencies

Brady supplied external LPS CWT KPL-065J-VI (18V); single phase AC input, single output switching power adaptor.

Digital Clock/Timing Frequencies

2.4 GHz - STM BT module (USB – 48 MHz)

800 MHz - CPU core

303 MHz - DDR interface

48 MHz - CPU (internal, USB), LCD display (SPI)

24 MHz - CPU crystal, USB crystal

12 MHz - Printhead clock (SPI)

400 kHz - I2C0

100 kHz - I2C1



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439

6.0 MODIFICATIONS MADE TO EUT FOR EMC COMPLIANCE

No modifications to the EUT were required.

7.0 PHOTO INFORMATION AND TEST SET-UP

Item 0	EUT
Item 1	Unshielded AC/DC Adaptor Cable, 1 meter long with plastic shells, Model KPL-065J-VI
Item 2	USB Drive for port termination
Item 3	Unshielded USB Cable, 1.5 long with plastic shells
Item 4	Unpowered pc for port termination

7.1 PHOTO ID TAKEN DURING TESTING

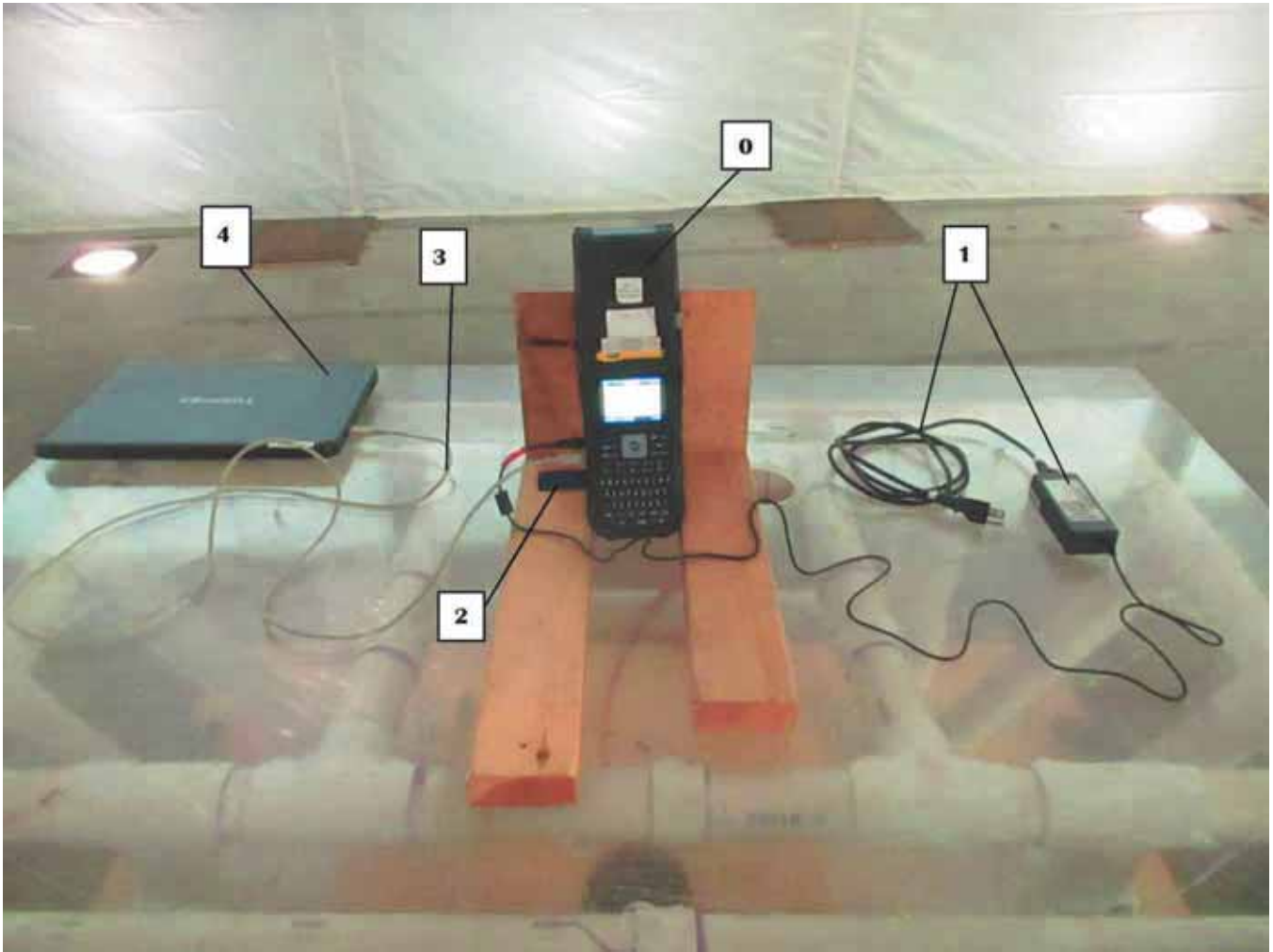


Photo ID



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439

7.1 PHOTO ID TAKEN DURING TESTING



X Orientation

7.1 PHOTO ID TAKEN DURING TESTING



Y Orientation

7.1 PHOTO ID TAKEN DURING TESTING



Z Orientation



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions

FCC PART 15, SUBPART B, CLASS A
SECTION 15.107 AC LINE CONDUCTED EMISSIONS



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions

1.0 TEST PROCEDURE AND SETUP

The Label Printer was set up according to the general testing requirements of ANSI C63.4:2014.

All test measurements were made with the following mode of operation:

Continuous printing. No cutting.

2.0 TEST RESULTS

The Label Printer Model Number: M610 **meets** the requirements of FCC Part 15, Subpart B, Class A for Section 15.107 AC Line Conducted Emissions. Plots and tabular data can be viewed at the end of this section.

Summary: No non-compliant emissions were observed.

3.0 SAMPLE CALCULATIONS

Line Conducted emissions: Emissions measurements include all system transducers and are compared against the appropriate limit requirement. See sample calculation below.

$$\begin{array}{l} \text{Equations: } \frac{\text{Level(dB}\mu\text{V)}}{\text{Sample:}} = \frac{\text{Raw Level(dB}\mu\text{V)}}{30.14} + \frac{\text{System Loss(dB)}}{= 18.44} + \frac{\text{LISN Factor(dB)}}{+ 11.24} + 0.46 \end{array}$$

$$\frac{\text{Margin(dB)}}{15.86} = \frac{\text{Limit(dB}\mu\text{V)}}{= 46} - \frac{\text{Level(dB}\mu\text{V)}}{- 30.14}$$



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions

4.0 D.L.S. ELECTRONIC SYSTEMS, INC. MEASUREMENT UNCERTAINTY

Compliance with the limits in this standard are based on the results of the compliance measurement. Our calculated measurement uncertainty including the measurement instrumentation, associated connections between the various instruments in the measurement chain, and other contributions, are provided in this section of the test report.

	Power Line Conducted	Uncertainty ($\pm$ dB)
Contribution	Probability Distribution	150 kHz - 30 MHz
Combined Standard Uncertainty	Normal	1.05
Expanded Uncertainty	Normal (k=2)	2.10



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions

Registration Number: 90531

TABLE 1 / TEST INSTRUMENTATION

Description	Manufacturer	Model Number	Serial Number	Range	Firmware/ Software Version	Cal On	Cal Due Dates
Beldin 9914; N-N; 15 Meter; Line Conducted	Beldin	9914	CBL-043	9 kHz - 30 MHz	N/A	4/27/2022	4/27/2023
Cable, 6ft, BNC-BNC, RG223/U	Pasternack Enterprises	PE3087- 72	CBL-112	9 kHz - 1 GHz	N/A	4/15/2022	4/15/2023
Filter, High pass	Solar Electronics	7930- 120	090702	120k- 30Mhz	N/A	10/5/2022	10/5/2023
Limiter, Transient, RF, w/ CBL- 035	Electro- Metrics	EM- 7600	705	9kHz - 100MHz	N/A	10/5/2022	10/5/2023
LISN, 20 Amp, 2-Line	Com-Power	LI-220A	192036	9 kHz to 30 MHz	N/A	8/24/2022	8/24/2023
Narda PMM EMI Receiver	Narda	9010F	020WW40102	10 Hz - 50 MHz	Rev 2.02:6/23/2016	3/30/2022	3/30/2023

All primary equipment is calibrated against known reference standards with a verified traceable path to NIST.

TABLE 2 / TEST EQUIPMENT

Description	Manufacturer	Model Number	Firmware/ Software Version
PMM Emission Suite	Narda	N/A	2.4.0:6/23/2016
Test Software	Narda	Emission Suite	N/A

The test equipment above is verified with calibrated equipment.



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions

FCC PART 15, SUBPART B, CLASS A
SECTION 15.107 AC LINE CONDUCTED EMISSIONS

TEST SETUP PHOTOS



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions



AC Line Conducted Emissions - Front



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions



AC Line Conducted Emissions - Back



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions

FCC PART 15, SUBPART B, CLASS A
SECTION 15.107 AC LINE CONDUCTED EMISSIONS

TEST DATA



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions

PMM NARDA REPORT: 12439a 120V 60Hz L1_000

Report issuing date : 10-06-2022

Standard : FCC Part 15.107 Class A
Test Type : Voltage Mains Test
Test Site : DLS OATS Screen Room
Temperature : 73 °F
Humidity : 41 %
Test Specs :
Operator : J. Schneider
DLS Project # : 12439
Result : Pass

EUT

Manufacturer : Brady Corporation
Model : M610 (EM3-02)
Product : Hand Held/Table Top Printer
Notes : 120 V 60 Hz
Comments : EUT Printing, BLE/Row LCD Display/AC DC Adapter

Testing Company : DLS Electronic Systems
Tel./Fax : 262-279-0210
Web site : <http://www.dlsemc.com>

Receiver Details

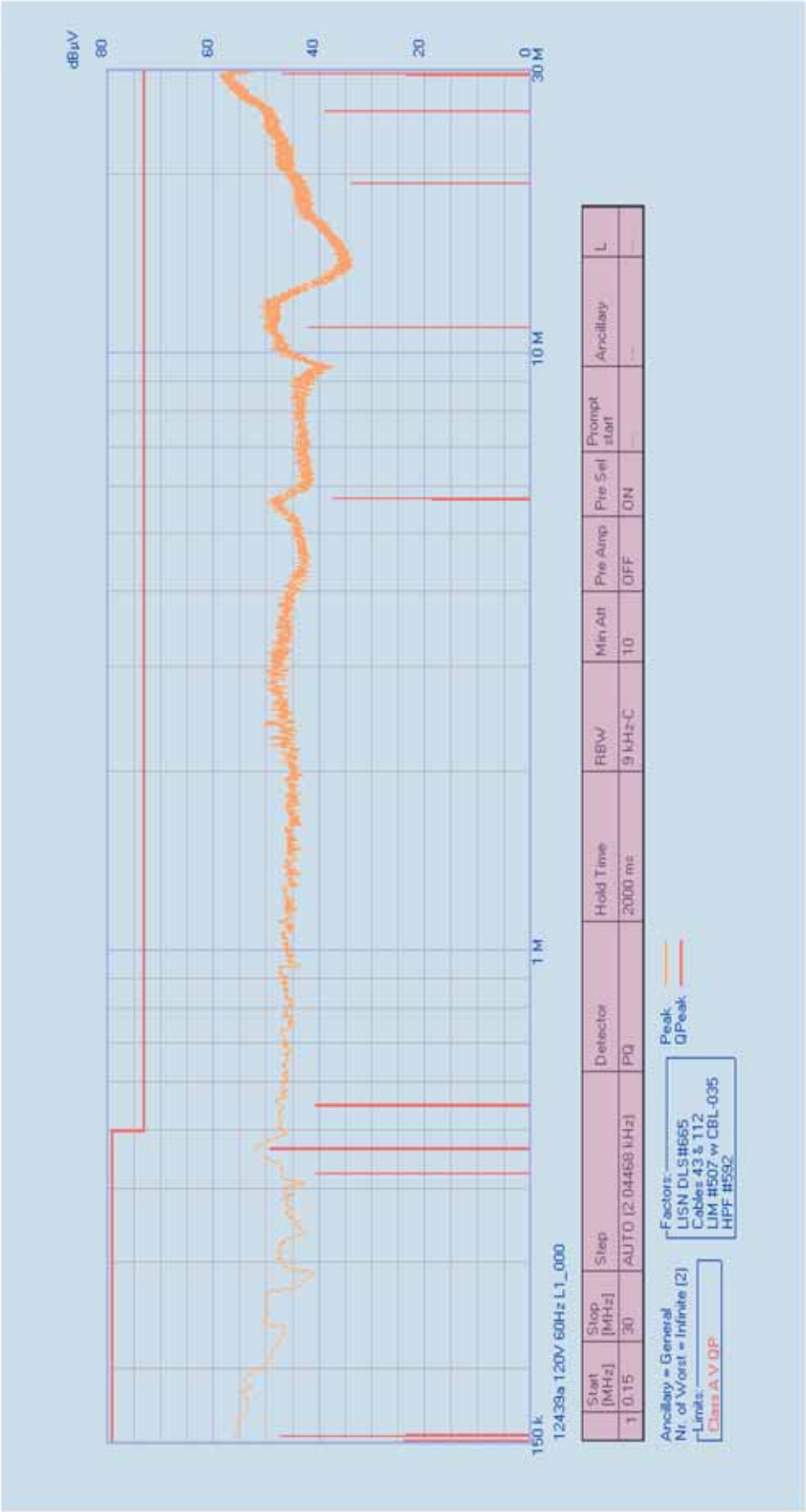
Model : PMM 9010F
Brand : Narda
S/N : 020MW40102
Last Calibration : 03/30/2022

NOTE: The column in the table that is labeled "delta" shows the margin in dB with respect to the limit. A negative number indicates the level of the emission is under the limit by the given value, while a positive number indicates the emission level is above the limit by the given value.





Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions





Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions



12439a 120V 60Hz L1_000 06/10/2022 15:15:22									
Rel. SW 2.40 (January 2021)									
Rel. FW 2.02 21/04/21									
Margin: 100 dB									
Frequency [MHz]	QPeak [dBµV]	Limit Class A V.. [dBµV]	Delta [dB]	Factor LISN DLS#.. [dB]	Factor Cables 43.. [dB]	Factor LIM #507.. [dB]	Factor HPF #592 [dB]		
1 0.15	48.12	79.00	-30.88	0.15	0.03	9.71	2.33		
2 0.15408936	47.32	79.00	-31.68	0.15	0.04	9.70	2.28		
3 0.42398712	40.48	79.00	-38.52	0.14	0.08	9.69	1.01		
4 0.46488072	49.16	79.00	-29.84	0.14	0.09	9.70	0.92		
5 0.55075728	40.61	73.00	-32.39	0.14	0.10	9.69	0.78		
6 5.68699344	37.39	73.00	-35.61	0.16	0.47	9.69	0.19		
7 11.05223376	41.98	73.00	-31.02	0.18	0.60	9.76	0.22		
8 19.17983676	33.78	73.00	-39.22	0.14	0.77	9.77	0.31		
9 25.33227888	38.82	73.00	-34.18	0.09	0.87	9.78	0.37		
10 29.18650060	46.85	73.00	-26.15	0.06	0.95	9.89	0.45		



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions



PMM NARDA REPORT: 12439a 120V 60Hz L1_001

Report issuing date : 10-06-2022

Standard : FCC Part 15.107 Class A
Test Type : Voltage Mains Test
Test Site : DLS OATS Screen Room
Temperature : 73 °F
Humidity : 41 %
Test Specs :
Operator : J. Schneider
DLS Project # : 12439
Result : Pass

EUT

Manufacturer : Brady Corporation
Model : M610 (EM3-02)
Product : Hand Held/Table Top Printer
Notes : 120 V 60 Hz
Comments : EUT Printing, BLE/Row LCD Display/AC DC Adapter

Testing Company : DLS Electronic Systems
Tel./Fax : 262-279-0210
Web site : http://www.dlsemc.com

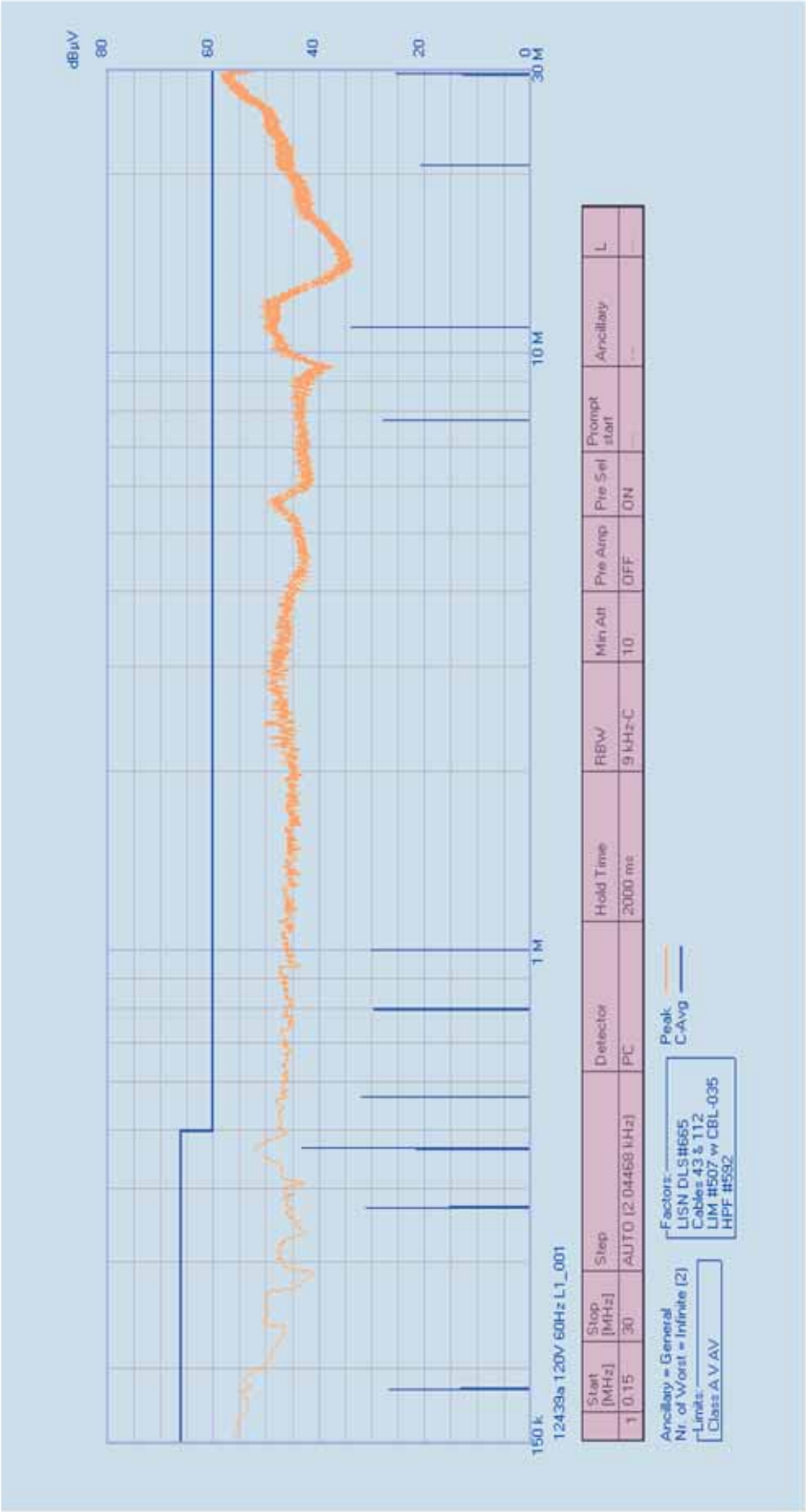
Receiver Details

Model : PMM 9010F
Brand : Narda
S/N : 020MW40102
Last Calibration : 03/30/2022

NOTE: The column in the table that is labeled "delta" shows the margin in dB with respect to the limit. A negative number indicates the level of the emission is under the limit by the given value, while a positive number indicates the emission level is above the limit by the given value.



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions





Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions



12439a 120V 60Hz L1_001_06/10/2022 15:18:14

Ref. SW 2.40 (January 2021)

Ref. FW 2.02 21/04/21

Margin: 100 dB

Frequency [MHz]	C-Avg [dBµV]	Limit Class A V.. [dBµV]	Delta [dB]	Factor LISN DLS#.. [dB]	Factor Cables 43.. [dB]	Factor LIM #507.. [dB]	Factor HPF #592 [dB]
1 0.15	27.37	66.00	-38.63	0.15	0.03	9.71	2.33
2 0.18475956	26.72	66.00	-39.28	0.15	0.08	9.67	1.97
3 0.37082544	31.16	66.00	-34.84	0.14	0.06	9.66	1.20
4 0.4669254	43.21	66.00	-22.79	0.14	0.09	9.70	0.92
5 0.5691594	31.95	60.00	-28.05	0.14	0.10	9.69	0.75
6 0.79611888	29.53	60.00	-30.47	0.15	0.14	9.66	0.55
7 1.00058688	29.94	60.00	-30.06	0.15	0.15	9.66	0.48
8 7.69282452	27.88	60.00	-32.12	0.18	0.53	9.72	0.19
9 11.04609972	33.95	60.00	-26.05	0.18	0.60	9.76	0.22
10 20.59475532	20.70	60.00	-39.30	0.14	0.78	9.76	0.32
11 29.21308152	25.41	60.00	-34.59	0.06	0.95	9.89	0.45



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions



PMM NARDA REPORT: 12439a 120V 60Hz L2_000_001

Report issuing date : 10-06-2022

Standard : FCC Part 15.107 Class A
Test Type : Voltage Mains Test
Test Site : DLS OATS Screen Room
Temperature : 73 °F
Humidity : 41 %
Test Specs :
Operator : J. Schneider
DLS Project # : 12439
Result : Pass

EUT

Manufacturer : Brady Corporation
Model : M610 (EM3-02)
Product : Hand Held/Table Top Printer
Notes : 120 V 60 Hz
Comments : EUT Printing, BLE/Row LCD Display/AC DC Adapter

Testing Company : DLS Electronic Systems
Tel./Fax : 262-279-0210
Web site : <http://www.dlsemc.com>

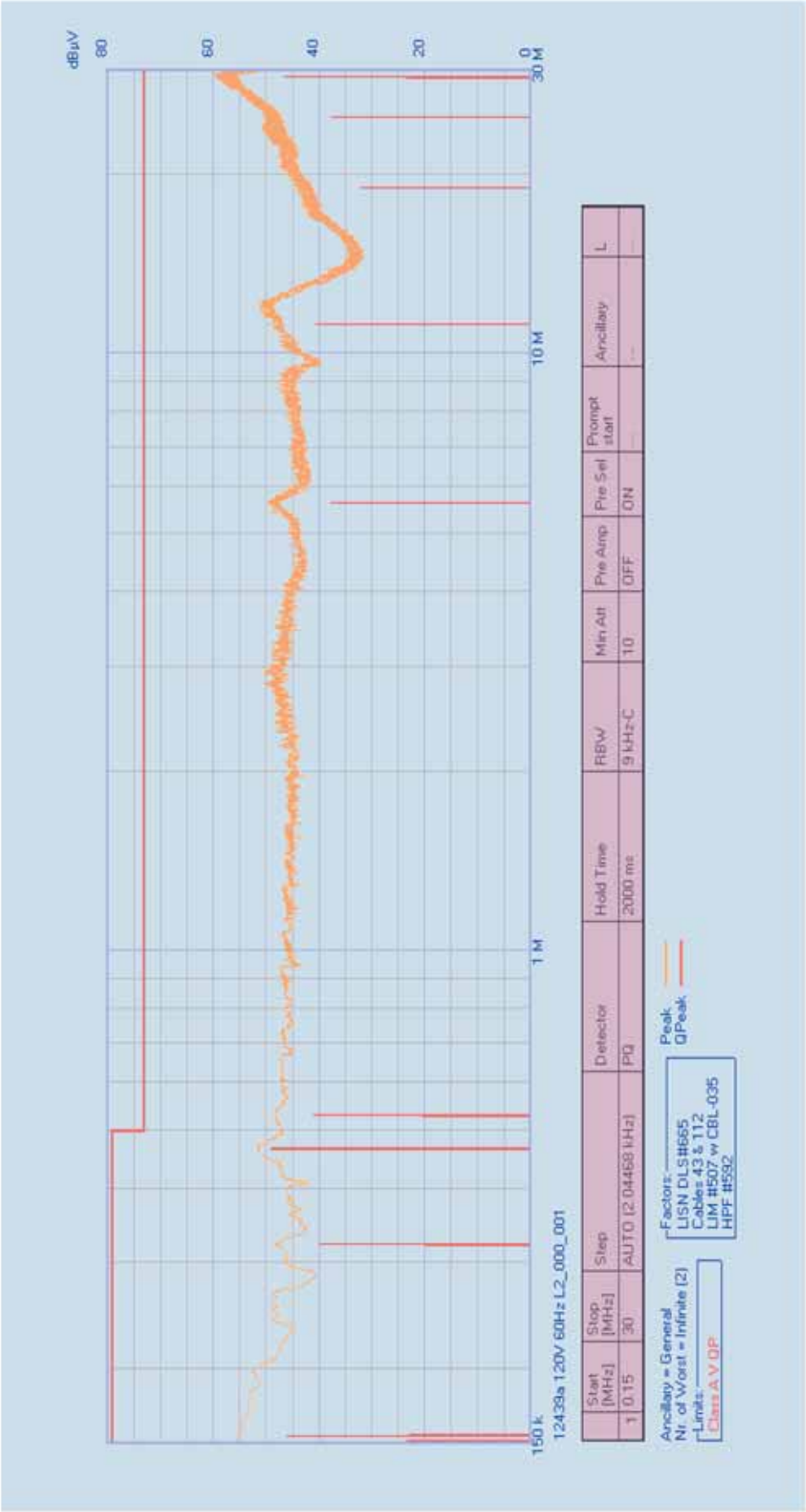
Receiver Details

Model : PMM 9010F
Brand : Narda
S/N : 020MW40102
Last Calibration : 03/30/2022

NOTE: The column in the table that is labeled "delta" shows the margin in dB with respect to the limit. A negative number indicates the level of the emission is under the limit by the given value, while a positive number indicates the emission level is above the limit by the given value.



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions





Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions



12439a 120V 60Hz L2_000_001 06/10/2022 15:21:44
Ref. SW 2.40 (January 2021)
Ref. FW 2.02 21/04/21
Margin: 100 dB

Frequency [MHz]	CPeak [dBµV]	Limit Class A V.. [dBµV]	Delta [dB]	Factor LISN DLS#.. [dB]	Factor Cables 43.. [dB]	Factor LIM #507.. [dB]	Factor HPF #592 [dB]
1 0.15	46.84	79.00	-32.16	0.15	0.03	9.71	2.33
2 0.15408936	46.18	79.00	-32.82	0.15	0.04	9.70	2.28
3 0.32175312	39.65	79.00	-39.35	0.14	0.08	9.64	1.36
4 0.46488072	48.94	79.00	-30.06	0.14	0.09	9.70	0.92
5 0.5282658	40.91	73.00	-32.09	0.14	0.10	9.69	0.82
6 5.59498284	37.76	73.00	-35.24	0.16	0.46	9.69	0.20
7 11.14628904	40.49	73.00	-32.51	0.17	0.61	9.76	0.22
8 16.94469856	32.12	73.00	-40.88	0.14	0.77	9.77	0.31
9 24.73932168	37.56	73.00	-35.44	0.10	0.86	9.77	0.36
10 28.97180928	46.55	73.00	-26.45	0.06	0.94	9.88	0.45



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions

PMM NARDA REPORT: 12439a 120V 60Hz L2_000_000

Report issuing date : 10-06-2022

Standard : FCC Part 15.107 Class A
Test Type : Voltage Mains Test
Test Site : DLS OATS Screen Room
Temperature : 73 °F
Humidity : 41 %
Test Specs :
Operator : J. Schneider
DLS Project # : 12439
Result : Pass

EUT

Manufacturer : Brady Corporation
Model : M610 (EM3-02)
Product : Hand Held/Table Top Printer
Notes : 120 V 60 Hz
Comments : EUT Printing, BLE/Row LCD Display/AC DC Adapter

Testing Company : DLS Electronic Systems
Tel./Fax : 262-279-0210
Web site : <http://www.dlsemc.com>

Receiver Details

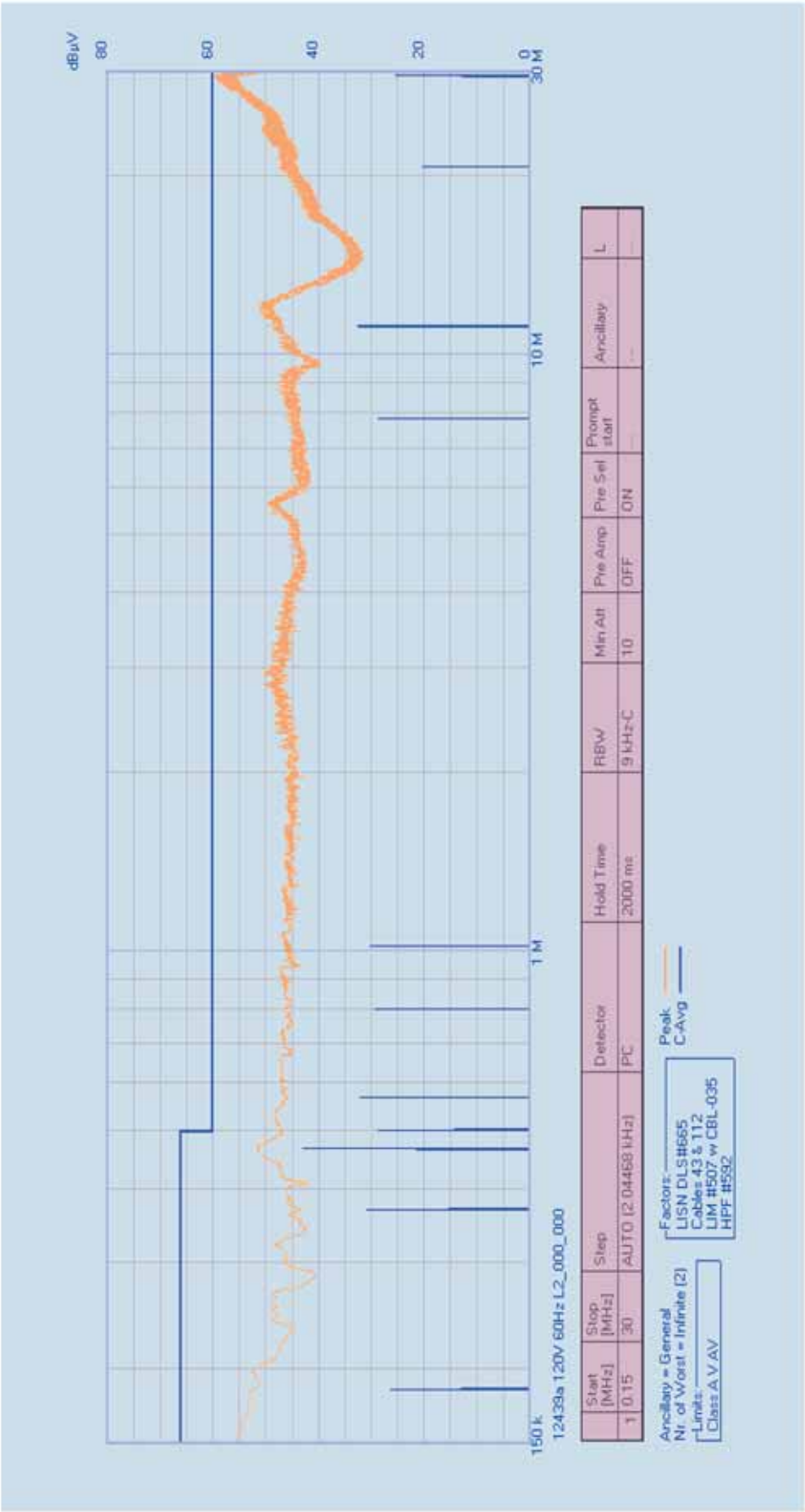
Model : PMM 9010F
Brand : Narda
S/N : 020MW40102
Last Calibration : 03/30/2022

NOTE: The column in the table that is labeled "delta" shows the margin in dB with respect to the limit. A negative number indicates the level of the emission is under the limit by the given value, while a positive number indicates the emission level is above the limit by the given value.





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Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions



12439a 120V 60Hz L2_000_000 06/10/2022 15:20:07
Rel. SW 2.40 (January 2021)
Rel. FW 2.02 21/04/21
Margin: 100 dB

Frequency [MHz]	C-Avg [dBµV]	Limit Class A V.. [dBµV]	Delta [dB]	Factor LISN DLS#.. [dB]	Factor Cables 43.. [dB]	Factor LIM #507 .. [dB]	Factor HPF #592 [dB]
1 0.15	27.09	66.00	-38.91	0.15	0.03	9.71	2.33
2 0.18475356	26.28	66.00	-39.72	0.15	0.08	9.67	1.97
3 0.36878076	30.79	66.00	-35.21	0.14	0.06	9.66	1.21
4 0.4669254	42.94	66.00	-23.06	0.14	0.09	9.70	0.92
5 0.50168496	28.77	60.00	-31.23	0.14	0.09	9.69	0.87
6 0.5691594	32.05	60.00	-27.95	0.14	0.10	9.69	0.75
7 0.79816356	29.37	60.00	-30.63	0.15	0.14	9.66	0.55
8 1.018989	30.11	60.00	-29.89	0.15	0.15	9.66	0.47
9 7.76234364	28.71	60.00	-31.29	0.18	0.53	9.72	0.19
10 11.11152948	32.54	60.00	-27.46	0.18	0.60	9.76	0.22
11 20.5968	20.31	60.00	-39.69	0.14	0.78	9.76	0.32
12 29.27442192	25.35	60.00	-34.65	0.06	0.95	9.89	0.45



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions



PMM NARDA REPORT: 12439b 240V 60Hz L1_000_000

Report issuing date : 10-06-2022

Standard : FCC Part 15.107 Class A
Test Type : Voltage Mains Test
Test Site : DLS OATS Screen Room
Temperature : 73 °F
Humidity : 41 %
Test Specs :
Operator : J. Schneider
DLS Project # : 12439
Result : Pass

EUT

Manufacturer : Brady Corporation
Model : M610 (EM3-02)
Product : Hand Held/Table Top Printer
Notes : 240 V 60 Hz
Comments : EUT Printing, BLE/Row LCD Display/AC DC Adapter

Testing Company : DLS Electronic Systems
Tel./Fax : 262-279-0210
Web site : <http://www.dlsemc.com>

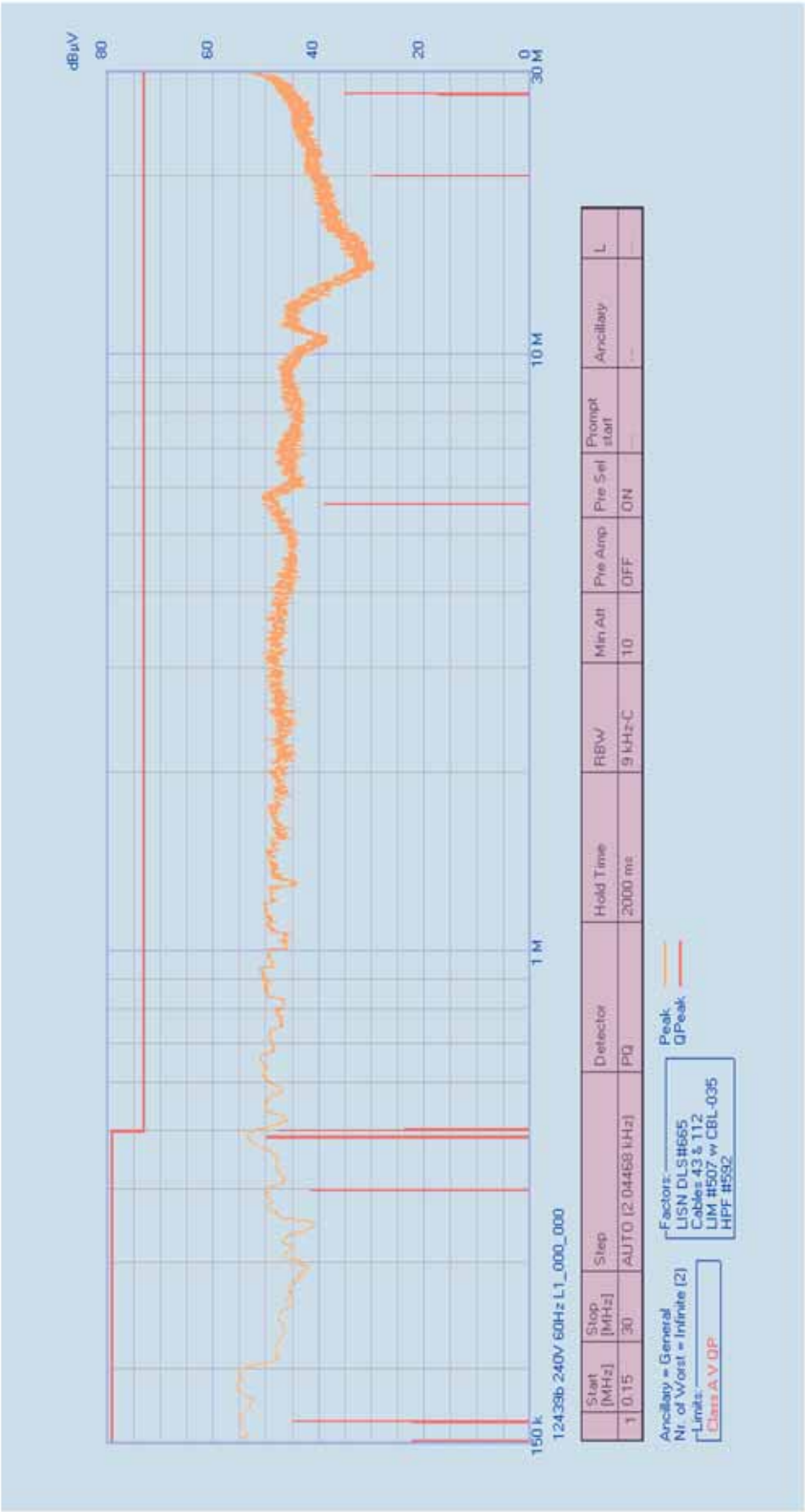
Receiver Details

Model : PMM 9010F
Brand : Narda
S/N : 020MW40102
Last Calibration : 03/30/2022

NOTE: The column in the table that is labeled "delta" shows the margin in dB with respect to the limit. A negative number indicates the level of the emission is under the limit by the given value, while a positive number indicates the emission level is above the limit by the given value.



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions





Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions



12439b 240V 60Hz LI_000_000 06/10/2022 15:23:31
Ref. SW 2.40 (January 2021)
Ref. FW 2.02 21/04/21
Margin: 100 dB

Frequency [MHz]	QPeak [dBµV]	Limit Class A V... [dBµV]	Delta [dB]	Factor LISEN DLS#... [dB]	Factor Cables 43... [dB]	Factor LIM #507 .. [dB]	Factor HPF #592 [dB]
1 0.15	44.85	79.00	-34.17	0.15	0.03	9.71	2.33
2 0.16226808	44.59	79.00	-34.41	0.15	0.05	9.67	2.18
3 0.39740628	41.36	79.00	-37.64	0.14	0.07	9.68	1.10
4 0.4873722	45.89	79.00	-29.11	0.14	0.09	9.69	0.90
5 0.50168496	47.77	73.00	-25.23	0.14	0.09	9.69	0.87
6 5.60316156	38.94	73.00	-34.06	0.16	0.46	9.69	0.20
7 19.87911732	29.64	73.00	-43.36	0.14	0.77	9.77	0.31
8 27.20929512	35.02	73.00	-37.98	0.07	0.90	9.81	0.42
9 29.9818812	41.87	73.00	-31.13	0.05	0.97	9.92	0.46



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions

PMM NARDA REPORT: 12439b 240V 60Hz L1_000_001

Report issuing date : 10-06-2022

Standard : FCC Part 15.107 Class A
Test Type : Voltage Mains Test
Test Site : DLS OATS Screen Room
Temperature : 73 °F
Humidity : 41 %
Test Specs :
Operator : J. Schneider
DLS Project # : 12439
Result : Pass

EUT

Manufacturer : Brady Corporation
Model : M610 (EM3-02)
Product : Hand Held/Table Top Printer
Notes : 240 V 60 Hz
Comments : EUT Printing, BLE/Rev LCD Display/AC DC Adapter

Testing Company : DLS Electronic Systems
Tel./Fax : 262-279-0210
Web site : <http://www.dlsemc.com>

Receiver Details

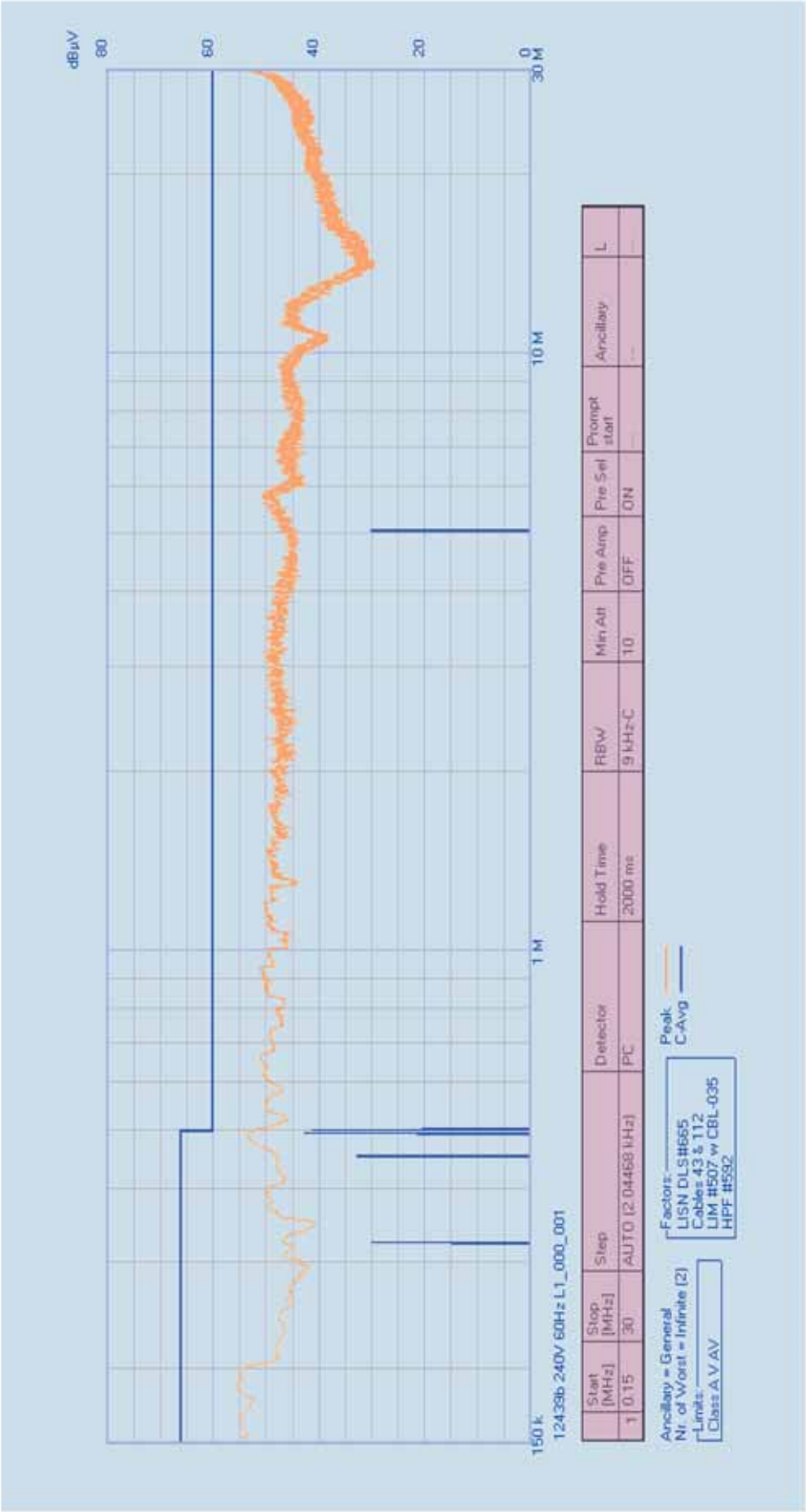
Model : PMM 9010F
Brand : Narda
S/N : 020MW40102
Last Calibration : 03/30/2022

NOTE: The column in the table that is labeled "delta" shows the margin in dB with respect to the limit. A negative number indicates the level of the emission is under the limit by the given value, while a positive number indicates the emission level is above the limit by the given value.





Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions





Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions



12439b 240V 60Hz L1_000_001 06/10/2022 15:25:27
Ref. SW 2.40 (January 2021)
Ref. FW 2.02 21/04/21
Margin: 100 dB

Frequency [MHz]	C-Avg [dBμV]	Limit Class A V... [dBμV]	Delta [dB]	Factor LISEN DLS#... [dB]	Factor Cables 43... [dB]	Factor LIM #507 .. [dB]	Factor HPF #592 [dB]
1 0.15	27.25	66.00	-38.75	0.15	0.03	9.71	2.33
2 0.3237978	29.90	66.00	-36.10	0.14	0.08	9.64	1.36
3 0.45261264	32.81	66.00	-33.19	0.14	0.09	9.70	0.24
4 0.49350624	42.74	66.00	-23.26	0.14	0.09	9.69	0.89
5 0.50168496	41.28	60.00	-18.72	0.14	0.09	9.69	0.87
6 5.02042776	30.14	60.00	-29.86	0.16	0.41	9.68	0.20
7 29.9921046	24.65	60.00	-35.35	0.05	0.97	9.92	0.46



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions



PMM NARDA REPORT: 12439b 240V 60Hz L2_001

Report issuing date : 10-06-2022

Standard : FCC Part 15.107 Class A
Test Type : Voltage Mains Test
Test Site : DLS OATS Screen Room
Temperature : 73 °F
Humidity : 41 %
Test Specs :
Operator : J. Schneider
DLS Project # : 12439
Result : Pass

EUT

Manufacturer : Brady Corporation
Model : M610 (EM3-02)
Product : Hand Held/Table Top Printer
Notes : 240 V 60 Hz
Comments : EUT Printing, BLE/Row LCD Display/AC DC Adapter

Testing Company : DLS Electronic Systems
Tel./Fax : 262-279-0210
Web site : <http://www.dlsemc.com>

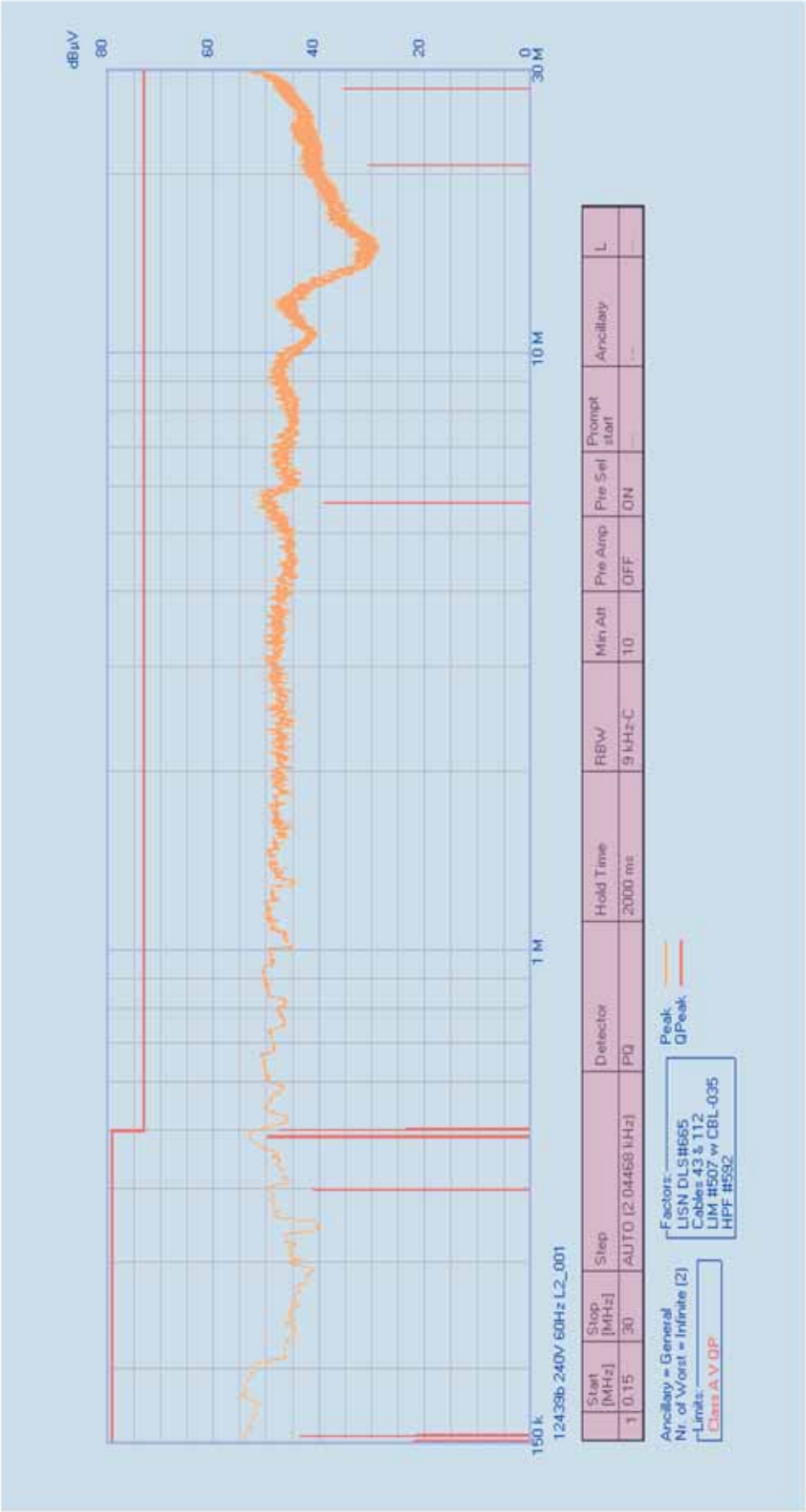
Receiver Details

Model : PMM 9010F
Brand : Narda
S/N : 020MW40102
Last Calibration : 03/30/2022

NOTE: The column in the table that is labeled "delta" shows the margin in dB with respect to the limit. A negative number indicates the level of the emission is under the limit by the given value, while a positive number indicates the emission level is above the limit by the given value.



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions





Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions



12439b 240V 60Hz L2_001_06/10/2022 15:28:33

Rel. SW 2.40 (January 2021)

Rel. FW 2.02 21/04/21

Margin: 100 dB

Frequency [MHz]	QPeak [dBµV]	Limit Class A V... [dBµV]	Delta [dB]	Factor LISEN DLS#... [dB]	Factor Cables 43... [dB]	Factor LIM #507 .. [dB]	Factor HPF #592 [dB]
1 0.15	44.35	79.00	-34.65	0.15	0.03	9.71	2.33
2 0.15408936	43.61	79.00	-35.39	0.15	0.04	9.70	2.28
3 0.39740628	41.08	79.00	-37.92	0.14	0.07	9.68	1.10
4 0.4873722	45.71	79.00	-29.29	0.14	0.09	9.69	0.90
5 0.50168496	47.59	73.00	-25.41	0.14	0.09	9.69	0.87
6 3.60111688	39.12	73.00	-33.88	0.16	0.46	9.69	0.20
7 20.63564892	30.68	73.00	-42.32	0.14	0.78	9.76	0.32
8 27.64685664	35.46	73.00	-37.54	0.07	0.91	9.83	0.43
9 29.99005992	42.16	73.00	-30.84	0.05	0.97	9.92	0.46



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions



PMM NARDA REPORT: 12439b 240V 60Hz L2_000

Report issuing date : 10-06-2022

Standard : FCC Part 15.107 Class A
Test Type : Voltage Mains Test
Test Site : DLS OATS Screen Room
Temperature : 73 °F
Humidity : 41 %
Test Specs :
Operator : J. Schneider
DLS Project # : 12439
Result : Pass

EUT

Manufacturer : Brady Corporation
Model : M610 (EM3-02)
Product : Hand Held/Table Top Printer
Notes : 240 V 60 Hz
Comments : EUT Printing, BLE/Rev LCD Display/AC DC Adapter

Testing Company : DLS Electronic Systems
Tel./Fax : 262-279-0210
Web site : <http://www.dlsemc.com>

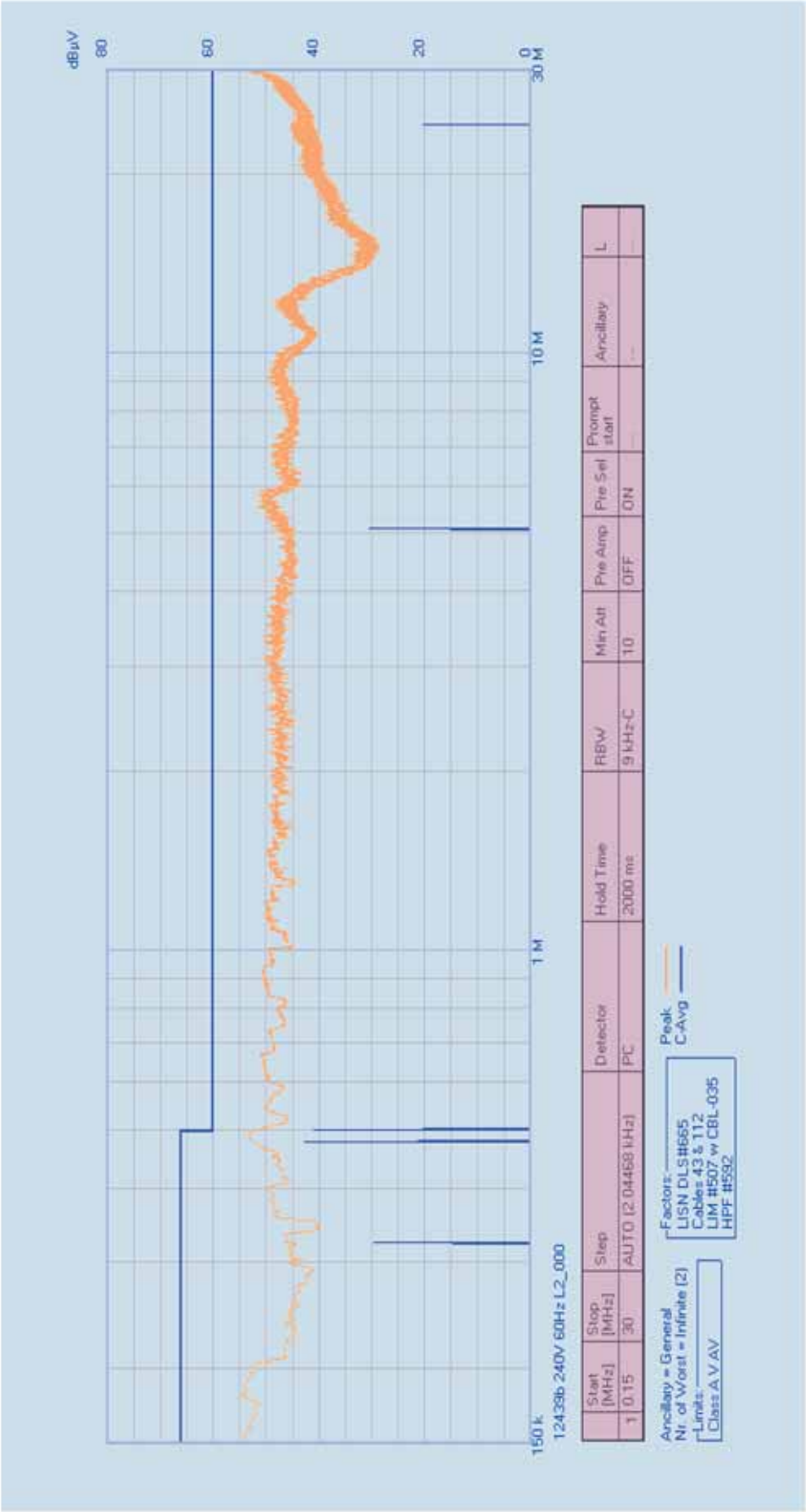
Receiver Details

Model : PMM 9010F
Brand : Narda
S/N : 020MW40102
Last Calibration : 03/30/2022

NOTE: The column in the table that is labeled "delta" shows the margin in dB with respect to the limit. A negative number indicates the level of the emission is under the limit by the given value, while a positive number indicates the emission level is above the limit by the given value.



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions





Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.107 AC Line Conducted Emissions



12439b 240V 60Hz L2_000 06/10/2022 15:27:09

Rel. SW 2.40 (January 2021)

Rel. FW 2.02 21/04/21

Margin: 100 dB

Frequency [MHz]	C-Avg [dBµV]	Limit Class A V... [dBµV]	Delta [dB]	Factor LISEN DLS#... [dB]	Factor Cables 43... [dB]	Factor LIM #507 .. [dB]	Factor HPF #592 [dB]
1 0.15	26.67	66.00	-39.33	0.15	0.03	9.71	2.33
2 0.3237978	29.61	66.00	-36.39	0.14	0.08	9.64	1.36
3 0.47919348	42.65	66.00	-23.35	0.14	0.09	9.69	0.21
4 0.50168496	41.05	60.00	-18.95	0.14	0.09	9.69	0.87
5 5.07154476	30.32	60.00	-29.68	0.16	0.42	9.69	0.20
6 23.99914752	20.32	60.00	-39.68	0.10	0.85	9.76	0.34
7 29.99005992	25.01	60.00	-34.99	0.05	0.97	9.92	0.46



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.109 Radiated Emissions Below 1 GHz

FCC PART 15, SUBPART B, CLASS A
SECTION 15.109 RADIATED EMISSIONS BELOW 1 GHz



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.109 Radiated Emissions Below 1 GHz

1.0 TEST PROCEDURE AND SETUP

The Label Printer was set up according to the general testing requirements of ANSI C63.4:2014.

All test measurements were made with the following mode of operation:

Continuous Print-No cut.

2.0 TEST RESULTS

The Label Printer Model Number: M610 **meets** the requirements of FCC Part 15, Subpart B, Class A for Section 15.109 Radiated Emissions Below 1 GHz. Plots and tabular data can be viewed at the end of this section.

Summary: No non-compliant emissions were observed.

3.0 SAMPLE CALCULATIONS

Radiated emissions: Emissions measurements include all system transducers and are compared against the appropriate limit requirement. See sample calculation below.

$$\begin{array}{lcl} \text{Equations:} & \frac{\text{Total Level(dB}\mu\text{V/m)}}{24.6} = & \frac{\text{Level(dB}\mu\text{V)}}{= 35.51} + \frac{\text{System Loss(dB)}}{+ (-22.1)} + \frac{\text{Antenna Factor(dB/m)}}{+ 11.20} \\ \text{Sample:} & & \end{array}$$

$$\begin{array}{lcl} \frac{\text{Margin(dB)}}{15.4} = & \frac{\text{Limit(dB}\mu\text{V/m)}}{= 40} - & \frac{\text{Total Level(dB}\mu\text{V/m)}}{- 24.6} \end{array}$$



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.109 Radiated Emissions Below 1 GHz

4.0 D.L.S. ELECTRONIC SYSTEMS, INC. MEASUREMENT UNCERTAINTY

Compliance with the limits in this standard are based on the results of the compliance measurement. Our calculated measurement uncertainty including the measurement instrumentation, associated connections between the various instruments in the measurement chain, and other contributions, are provided in this section of the test report.

Radiated Emission Uncertainty										
		(± dB)	(± dB)	(± dB)	(± dB)	(± dB)	(± dB)	(± dB)	(± dB)	(± dB)
Contribution	Probability Distribution	3M	3M	3M	3M	3M	3M	10M	10M	10M
		30-100 MHz	100-700 MHz	700-1000 MHz	1- 4.5 GHz	4.5 – 7 GHz	7 – 18 GHz	30-100 MHz	100-700 MHz	700-1000 MHz
Combined Standard Uncertainty	Normal	1.70	1.62	1.66	2.13	2.48	2.85	1.64	1.58	1.66
Expanded Uncertainty	Normal (k=2)	3.40	3.23	3.33	4.26	4.95	5.69	3.29	3.16	3.31



Company: Brady Corporation, USA
 Model Tested: M610
 Report Number: 27339
 Project Number: 12439
 Test: Section 15.109 Radiated Emissions Below 1 GHz

Registration Number: 90531

TABLE 1 / TEST INSTRUMENTATION

Description	Manufacturer	Model Number	Serial Number	Range	Firmware/ Software Version	Cal On	Cal Due Dates
Antenna, Biconical	EMCO	3104C	4849	20MHz-200MHz	N/A	9/24/2020	9/24/2022
Antenna, Log Periodic	EMCO	3146	1604	200MHz-1GHz	N/A	2/10/2021	2/10/2023
Beldin 9914; N-N; 3 Meter Test	Beldin	9914	CBL-023	9kHz-1GHz	N/A	7/6/2022	7/6/2023
Cable, 20ft, BNC-BNC, RG223/U	Pasternack Enterprises	PE3087-240	CBL-116	9 kHz - 1 GHz	N/A	4/15/2022	4/15/2023
Cable, 4ft, BNC-BNC, RG223/U	Pasternack Enterprises	PE3087-48	CBL-110	9 kHz - 1 GHz	N/A	4/15/2022	4/15/2023
Cable, 6ft, BNC-BNC, RG223/U	Pasternack Enterprises	PE3087-72	CBL-113	9 kHz - 1 GHz	N/A	4/15/2022	4/15/2023
Preamplifier, RF	Rohde & Schwarz	TS-PR10	032001/005	9kHz - 1000 MHz	N/A	7/6/2022	7/6/2023
Receiver, RF, Tuned	Rohde & Schwarz	ESI 40	837808/006	20Hz - 40 GHz	4.34.3:12/13/2001	3/28/2022	3/28/2023

All primary equipment is calibrated against known reference standards with a verified traceable path to NIST.

TABLE 2 / TEST EQUIPMENT

Description	Manufacturer	Model Number	Firmware/ Software Version
EMI Test Software	Rohde & Schwarz	ESK1	1.7.1:12/13/2001

The test equipment above is verified with calibrated equipment.



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.109 Radiated Emissions Below 1 GHz

FCC PART 15, SUBPART B, CLASS A

SECTION 15.109 RADIATED EMISSIONS BELOW 1 GHz

TEST SETUP PHOTOS



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.109 Radiated Emissions Below 1 GHz



Radiated Emissions Below 1GHz Front



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.109 Radiated Emissions Below 1 GHz



Radiated Emissions Below 1GHz Back



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.109 Radiated Emissions Below 1 GHz

FCC PART 15, SUBPART B, CLASS A

SECTION 15.109 RADIATED EMISSIONS BELOW 1 GHz

TEST DATA



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.109 Radiated Emissions Below 1 GHz

FCC Part 15 Class A
Electric Field Strength

EUT: M610 (EM3-02) Printer
Manufacturer: Brady Worldwide
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OATS Site 3
Operator: G. Bradshaw #12439
Test Specification: 120V 60Hz
Comment: Continuous Print-No cut
Date: 09-19-2022

TEXT: "Vert 3 meters"

Short Description: Test Set-up

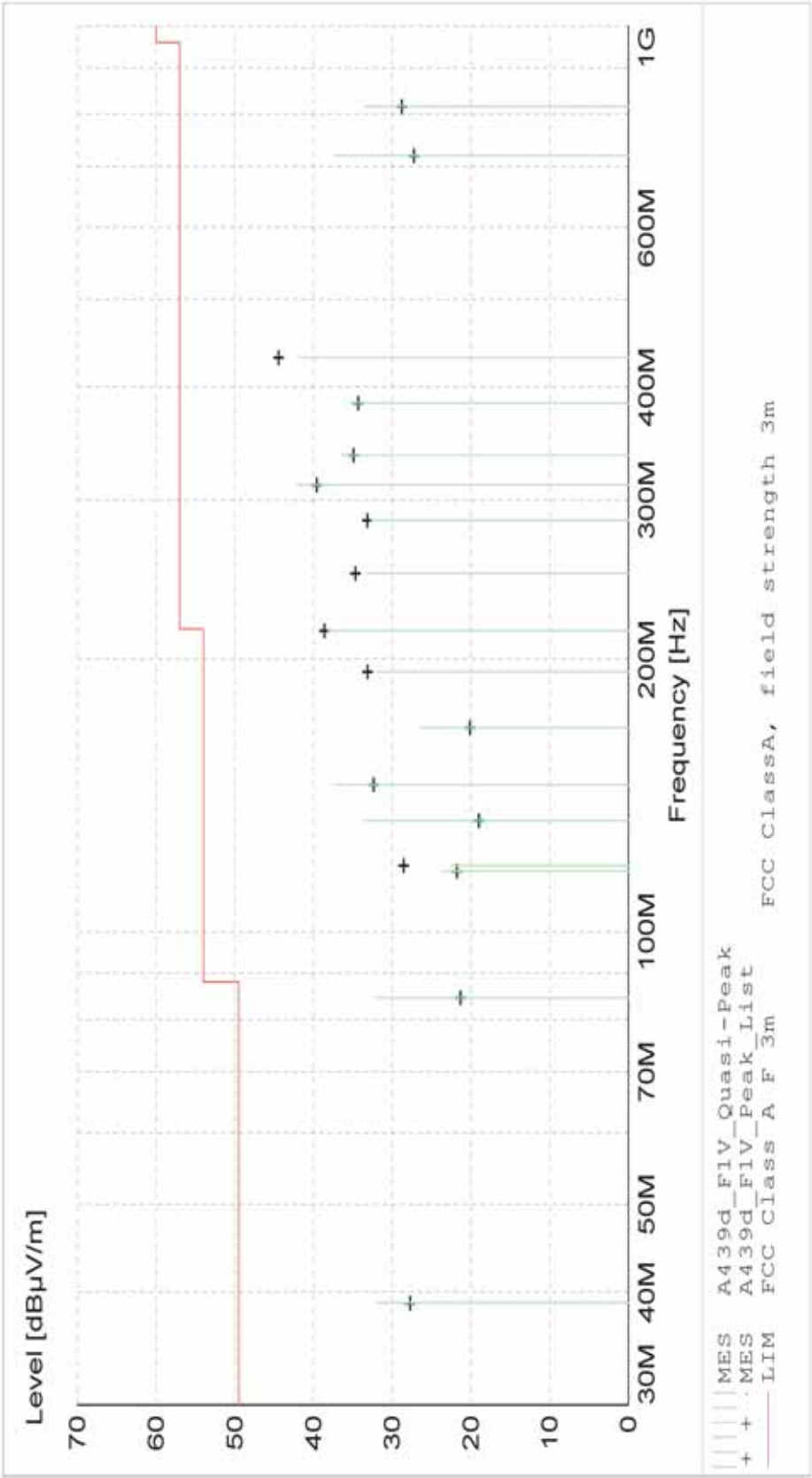
Test Set-up: EUT Measured at 3 Meters with VERTICAL Antenna Polarization

Sample Equations: Total Level(dBµV/m) = Level(dBµV) + System Loss(dB) + Antenna Factor(dB/m)
24.6 = 35.51 + (-22.1) + 11.20
Margin(dB) = Limit(dBµV/m) - Total Level(dBµV/m)
15.4 = 40 - 24.6

Graph Markers: + Frequency marker (Level of marker not related to final level)
| Final maximized level using Quasi-Peak detector
X Final maximized level using Average detector
Final maximized level using Peak detector



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.109 Radiated Emissions Below 1 GHz





Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.109 Radiated Emissions Below 1 GHz

MEASUREMENT RESULT: "A439d_Flv_Final"

9/19/2022 11:49AM	Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
	MHz	dBuV	Factor	Loss	Level	dBuV/m	dB	Ant. m	Angle deg	Detector	
	311.650000	49.51	15.10	-22.5	42.2	57.0	14.8	1.00	180	QUASI-PEAK	X Orientation
	430.650000	48.25	15.70	-22.1	41.9	57.0	15.1	1.00	45	QUASI-PEAK	X Orientation
	215.000000	50.13	10.90	-22.9	38.1	54.0	15.9	1.00	90	QUASI-PEAK	X Orientation
	145.350000	49.02	11.80	-23.5	37.4	54.0	16.6	1.90	280	QUASI-PEAK	X Orientation
	84.500000	49.31	6.95	-24.1	32.2	49.5	17.3	1.00	280	QUASI-PEAK	Z Orientation
	38.900000	45.53	11.28	-24.8	32.0	49.5	17.5	1.00	0	QUASI-PEAK	X Orientation
	720.000000	37.52	21.00	-21.2	37.3	57.0	19.7	1.50	270	QUASI-PEAK	Z Orientation
	132.600000	44.87	12.34	-23.6	33.6	54.0	20.4	1.00	280	QUASI-PEAK	X Orientation
	336.000000	44.69	14.20	-22.3	36.6	57.0	20.4	1.00	190	QUASI-PEAK	X Orientation
	383.650000	42.75	14.77	-22.2	35.4	57.0	21.6	1.00	120	QUASI-PEAK	X Orientation
	193.750000	37.32	17.60	-23.0	31.9	54.0	22.1	1.00	90	QUASI-PEAK	X Orientation
	816.000000	32.83	21.40	-20.7	33.5	57.0	23.5	1.00	45	QUASI-PEAK	X Orientation
	248.750000	44.12	11.70	-22.8	33.1	57.0	23.9	1.00	120	QUASI-PEAK	X Orientation
	284.700000	42.04	13.20	-22.5	32.7	57.0	24.3	1.00	45	QUASI-PEAK	X Orientation
	168.050000	35.09	14.61	-23.2	26.5	54.0	27.5	1.00	45	QUASI-PEAK	Z Orientation
	116.600000	34.48	12.86	-23.7	23.6	54.0	30.4	1.00	90	QUASI-PEAK	X Orientation
	118.250000	33.28	12.90	-23.7	22.5	54.0	31.5	1.00	80	QUASI-PEAK	X Orientation



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.109 Radiated Emissions Below 1 GHz

FCC Part 15 Class A
Electric Field Strength

EUT: M610 (EM3-02) Printer
Manufacturer: Brady Worldwide
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OARS Site 3
Operator: G. Bradshaw #12439
Test Specification: 120V 60Hz
Comment: Continuous Print-No cut
Date: 09-19-2022

TEXT: "Horz 3 meters"

Short Description: Test Set-up

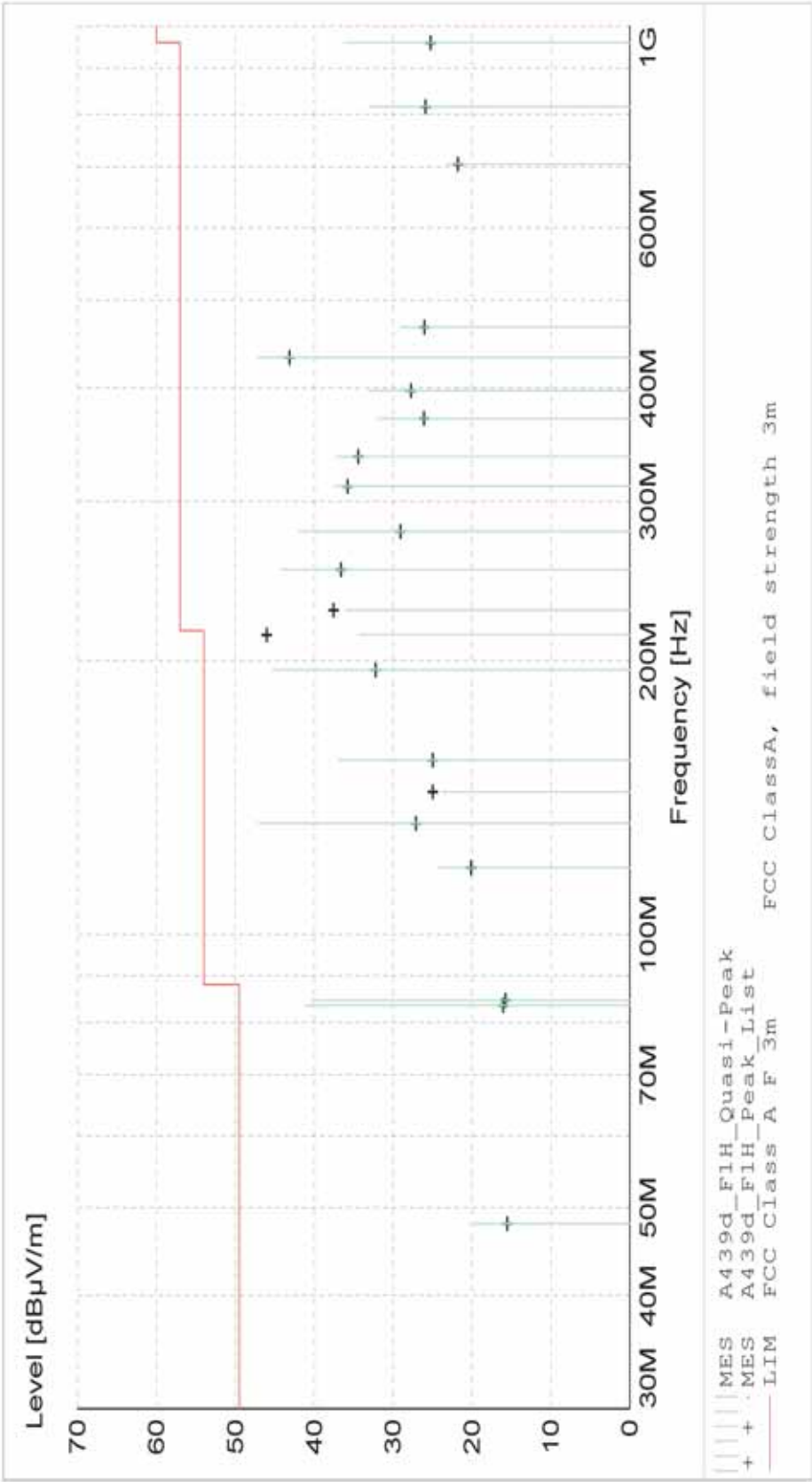
Test Set-up: EUT Measured at 3 Meters with HORIZONTAL Antenna Polarization

Sample Equations: Total Level(dBµV/m) = Level(dBµV) + System Loss(dB) + Antenna Factor(dB/m)
24.6 = 35.51 + (-22.1) + 11.20
Margin(dB) = Limit(dBµV/m) - Total Level(dBµV/m)
15.4 = 40 - 24.6

Graph Markers: + Frequency marker (Level of marker not related to final level)
| Final maximized level using Quasi-Peak detector
X Final maximized level using Average detector
Final maximized level using Peak detector



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.109 Radiated Emissions Below 1 GHz





Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.109 Radiated Emissions Below 1 GHz

MEASUREMENT RESULT: "A439d_F1H_Final"

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBuV	Factor	Loss	Level	dBuV/m	dB	Ant. m	Angle deg	Detector	
132.500000	58.35	12.35	-23.6	47.1	54.0	6.9	2.00	0	QUASI-PEAK	Y Orientation
83.500000	58.46	6.70	-24.1	41.1	49.5	8.4	2.00	0	QUASI-PEAK	Y Orientation
195.500000	50.91	17.40	-23.0	45.3	54.0	8.7	1.98	350	QUASI-PEAK	Y Orientation
84.550000	57.42	6.97	-24.1	40.3	49.5	9.2	2.00	0	QUASI-PEAK	Y Orientation
432.050000	53.51	15.80	-22.0	47.3	57.0	9.7	1.80	80	QUASI-PEAK	X Orientation
252.100000	54.91	11.90	-22.7	44.1	57.0	12.9	1.25	170	QUASI-PEAK	Y Orientation
277.800000	51.59	12.90	-22.6	41.9	57.0	15.1	1.00	160	QUASI-PEAK	Z Orientation
155.500000	47.72	12.65	-23.4	37.0	54.0	17.0	1.90	0	QUASI-PEAK	X Orientation
311.500000	44.81	15.10	-22.5	37.5	57.0	19.5	2.50	260	QUASI-PEAK	Z Orientation
213.750000	46.37	10.90	-22.9	34.4	54.0	19.6	1.30	120	QUASI-PEAK	X Orientation
336.000000	45.29	14.20	-22.3	37.2	57.0	19.8	1.00	170	QUASI-PEAK	Z Orientation
960.000000	32.39	23.10	-19.3	36.2	57.0	20.8	2.10	270	QUASI-PEAK	X Orientation
227.500000	48.31	10.70	-22.9	36.1	57.0	20.9	1.52	260	QUASI-PEAK	X Orientation
397.250000	40.18	15.10	-22.2	33.1	57.0	23.9	1.00	180	QUASI-PEAK	Z Orientation
816.000000	32.29	21.40	-20.7	33.0	57.0	24.0	2.38	250	QUASI-PEAK	Z Orientation
369.800000	39.73	14.40	-22.2	31.9	57.0	25.1	1.00	45	QUASI-PEAK	Z Orientation
466.400000	34.32	16.70	-21.9	29.1	57.0	27.9	1.00	45	QUASI-PEAK	Z Orientation
48.000000	33.13	11.50	-24.6	20.0	49.5	29.5	2.00	240	QUASI-PEAK	X Orientation
118.350000	35.17	12.90	-23.7	24.4	54.0	29.6	2.00	0	QUASI-PEAK	Z Orientation
143.500000	35.39	11.80	-23.5	23.7	54.0	30.3	2.00	220	QUASI-PEAK	X Orientation
705.250000	23.12	21.20	-21.2	23.1	57.0	33.9	1.85	0	QUASI-PEAK	Z Orientation



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.109 Radiated Emissions Above 1 GHz

FCC PART 15, SUBPART B, CLASS A
SECTION 15.109 RADIATED EMISSIONS ABOVE 1 GHz



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.109 Radiated Emissions Above 1 GHz

1.0 TEST PROCEDURE AND SETUP

The Label Printer was set up according to the general testing requirements of ANSI C63.4:2014.

All test measurements were made with the following mode of operation:

Continuous transmit (100% duty cycle) at 2402 MHz and 2480 MHz with power setting 0 and 2 Mbps data rate. This was the channel, modulation type & data rate shown to be worst-case in the radios' modular certification test reports.

2.0 TEST RESULTS

The Label Printer Model Number: M610 **meets** the requirements of FCC Part 15, Subpart B, Class A for Section 15.109 Radiated Emissions Above 1 GHz. Plots and tabular data can be viewed at the end of this section.

Summary: No non-compliant emissions were observed.

3.0 SAMPLE CALCULATIONS

Radiated emissions: Emissions measurements include all system transducers and are compared against the appropriate limit requirement. See sample calculation below.

$$\begin{array}{lcl} \text{Equations:} & \text{Total Level(dB}\mu\text{V/m)} = & \text{Level(dB}\mu\text{V)} + \text{System Loss(dB)} + \text{Antenna Factor(dB/m)} \\ \text{Sample:} & 24.6 & = 35.51 + (-22.1) + 11.20 \end{array}$$

$$\begin{array}{lcl} \text{Margin(dB)} = & \text{Limit(dB}\mu\text{V/m)} - & \text{Total Level(dB}\mu\text{V/m)} \\ 15.4 & = 40 & - 24.6 \end{array}$$



Company: Brady Corporation, USA
 Model Tested: M610
 Report Number: 27339
 Project Number: 12439
 Test: Section 15.109 Radiated Emissions Above 1 GHz

4.0 D.L.S. ELECTRONIC SYSTEMS, INC. MEASUREMENT UNCERTAINTY

Compliance with the limits in this standard are based on the results of the compliance measurement. Our calculated measurement uncertainty including the measurement instrumentation, associated connections between the various instruments in the measurement chain, and other contributions, are provided in this section of the test report.

Radiated Emission Uncertainty										
Contribution	Probability Distribution	(± dB)	(± dB)	(± dB)	(± dB)	(± dB)	(± dB)	(± dB)	(± dB)	(± dB)
		3M	3M	3M	3M	3M	3M	10M	10M	10M
		30-100 MHz	100-700 MHz	700-1000 MHz	1- 4.5 GHz	4.5 – 7 GHz	7 – 18 GHz	30-100 MHz	100-700 MHz	700-1000 MHz
Combined Standard Uncertainty	Normal	1.70	1.62	1.66	2.13	2.48	2.85	1.64	1.58	1.66
Expanded Uncertainty	Normal (k=2)	3.40	3.23	3.33	4.26	4.95	5.69	3.29	3.16	3.31



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.109 Radiated Emissions Above 1 GHz

Registration Number: 90531

TABLE 1 / TEST INSTRUMENTATION

Description	Manufacturer	Model Number	Serial Number	Range	Firmware/ Software Version	Cal On	Cal Due Dates
Antenna, Horn	Com-Power	AH-118	071127	1GHz- 18GHz	N/A	1/29/2021	1/29/2023
N->N, 10m, High Frequency	Micro-Coax	UFB311A	CBL-099	30Mhz- 18GHz	N/A	5/23/2022	5/23/2023
Preamplifier, RF	Miteq	AMF-7D- 01001800- 22-10P	1809602	1- 18Ghz	N/A	5/23/2022	5/23/2023
Receiver, RF, Tuned	Rohde & Schwarz	ESI 40	837808/006	20Hz – 40 GHz	4.34.3:12/13/2001	3/28/2022	3/28/2023

All primary equipment is calibrated against known reference standards with a verified traceable path to NIST.

TABLE 2 / TEST EQUIPMENT

Description	Manufacturer	Model Number	Firmware/ Software Version
EMI Test Software	Rohde & Schwarz	ESK1	1.7.1:12/13/2001

The test equipment above is verified with calibrated equipment.



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.109 Radiated Emissions Above 1 GHz

FCC PART 15, SUBPART B, CLASS A

SECTION 15.109 RADIATED EMISSIONS ABOVE 1 GHz

TEST SETUP PHOTOS



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.109 Radiated Emissions Above 1 GHz



Radiated Emissions Above 1GHz Front



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.109 Radiated Emissions Above 1 GHz



Radiated Emissions Above 1GHz Back



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.109 Radiated Emissions Above 1 GHz

FCC PART 15, SUBPART B, CLASS A
SECTION 15.109 RADIATED EMISSIONS ABOVE 1 GHz

TEST DATA



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.109 Radiated Emissions Above 1 GHz

FCC PT15 Class A
Electric Field Strength

EUT: M610 (EM3-02) Printer
Manufacturer: Brady Worldwide
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OATS Site 3
Operator: G. Bradshaw #12439
Test Specification: 120V 60Hz
Comment: Continuous Print-No cut
Date: 09-19-2022

TEXT: "Vert 3 meters"

Short Description: Test Set-up

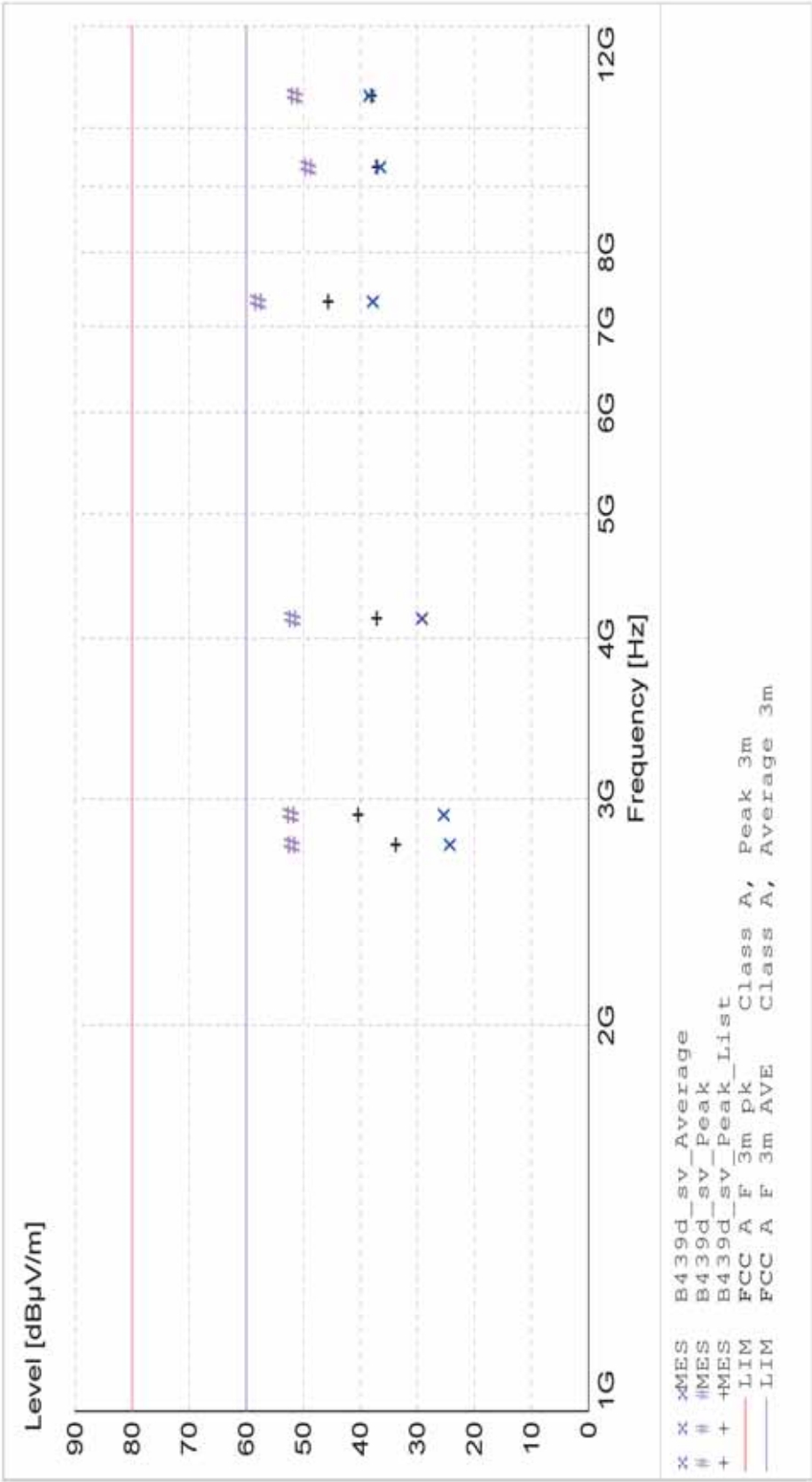
Test Set-up: EUT Measured at 3 Meters with VERTICAL Antenna Polarization

Sample Equations: Total Level(dBµV/m) = Level(dBµV) + System Loss(dB) + Antenna Factor(dB/m)
24.6 = 35.51 + (-22.1) + 11.20
Margin(dB) = Limit(dBµV/m) - Total Level(dBµV/m)
15.4 = 40 - 24.6

Graph Markers: + Frequency marker (Level of marker not related to final level)
| Final maximized level using Quasi-Peak detector
X Final maximized level using Average detector
Final maximized level using Peak detector



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.109 Radiated Emissions Above 1 GHz





Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.109 Radiated Emissions Above 1 GHz

MEASUREMENT RESULT: "B439d_sv_Final"

9/19/2022 2:50PM	Frequency MHz	Level dBuV	Antenna Factor dBuV/m	System Loss dB	Total Level dBuV/m	Limit dBuV/m	Margin dB	Height Ant. m	Eut Angle deg	Final Detector	Comment
10582.400000	50.28	39.58		-51.1	38.7	60.0	21.3	1.00	0	AVERAGE	Noise Floor
7314.000000	52.71	37.11		-51.7	38.1	60.0	21.9	1.00	270	AVERAGE	X Orientation
7314.000000	72.45	37.11		-51.7	57.9	80.0	22.1	1.00	270	MAX PEAK	X Orientation
9310.800000	49.90	37.97		-51.1	36.8	60.0	23.2	1.00	0	AVERAGE	X Orientation
2913.600000	77.89	29.56		-55.3	52.1	80.0	27.9	1.00	300	MAX PEAK	X Orientation
2762.000000	77.52	29.61		-55.2	52.0	80.0	28.0	1.00	120	MAX PEAK	X Orientation
4143.600000	74.85	31.94		-55.0	51.8	80.0	28.2	1.00	340	MAX PEAK	X Orientation
10582.400000	63.00	39.58		-51.1	51.4	80.0	28.6	1.00	0	MAX PEAK	Noise Floor
4143.600000	52.51	31.94		-55.0	29.5	60.0	30.5	1.00	340	AVERAGE	X Orientation
9310.800000	62.21	37.97		-51.1	49.1	80.0	30.9	1.00	0	MAX PEAK	X Orientation
2913.600000	51.41	29.56		-55.3	25.6	60.0	34.4	1.00	300	AVERAGE	X Orientation
2762.000000	50.18	29.61		-55.2	24.6	60.0	35.4	1.00	120	AVERAGE	X Orientation



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.109 Radiated Emissions Above 1 GHz

FCC PT15 Class A

Electric Field Strength

EUT: M610 (EM3-02) Printer
Manufacturer: Brady Worldwide
Operating Condition: 73 deg. F; 66% R.H.
Test Site: DLS OARS Site 3
Operator: G. Bradshaw #12439
Test Specification: 120V 60Hz
Comment: Continuous Print-No cut
Date: 09-19-2022

TEXT: "Horz 3 meters"

Short Description: Test Set-up

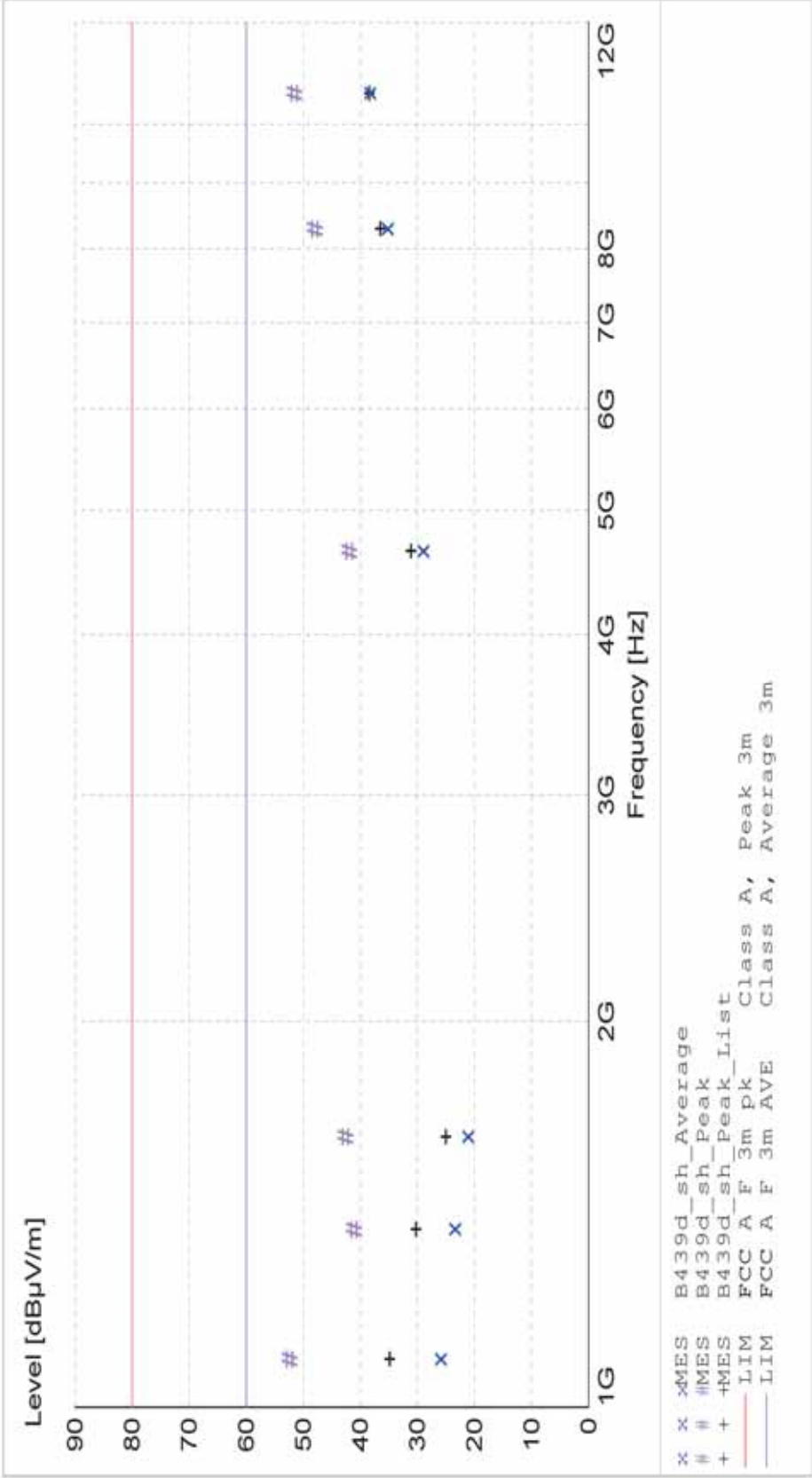
Test Set-up: EUT Measured at 3 Meters with HORIZONTAL Antenna Polarization

Sample Equations: Total Level(dBµV/m) = Level(dBµV) + System Loss(dB) + Antenna Factor(dB/m)
24.6 = 35.51 + (-22.1) + 11.20
Margin(dB) = Limit(dBµV/m) - Total Level(dBµV/m)
15.4 = 40 - 24.6

Graph Markers: + Frequency marker (Level of marker not related to final level)
| Final maximized level using Quasi-Peak detector
X Final maximized level using Average detector
Final maximized level using Peak detector



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.109 Radiated Emissions Above 1 GHz





Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.109 Radiated Emissions Above 1 GHz

MEASUREMENT RESULT: "B439d_sh_Final"

Frequency MHz	Level dBuV	Antenna Factor dBuV/m	System Loss dB	Total Level dBuV/m	Limit dBuV/m	Margin dB	Height Ant. m	EuT Angle deg	Final Detector	Comment
9/19/2022 2:50PM										
10562.400000	50.23	39.58	-51.2	38.6	60.0	21.4	1.00	0	AVERAGE	Z Orientation
8280.800000	48.62	37.38	-50.5	35.5	60.0	24.5	2.00	0	AVERAGE	Z Orientation
1089.600000	83.50	25.15	-56.3	52.3	80.0	27.7	1.50	0	MAX PEAK	X Orientation
10562.400000	63.14	39.58	-51.2	51.5	80.0	28.5	1.00	0	MAX PEAK	Z Orientation
4645.200000	51.40	32.04	-54.2	29.2	60.0	30.8	1.50	0	AVERAGE	X Orientation
8280.800000	61.06	37.38	-50.5	47.9	80.0	32.1	2.00	0	MAX PEAK	Z Orientation
1089.600000	57.30	25.15	-56.3	26.1	60.0	33.9	1.50	0	AVERAGE	X Orientation
1375.600000	53.80	25.69	-55.8	23.7	60.0	36.3	1.25	250	AVERAGE	X Orientation
1624.000000	72.33	25.56	-55.4	42.5	80.0	37.5	1.50	230	MAX PEAK	X Orientation
4645.200000	64.06	32.04	-54.2	41.9	80.0	38.1	1.50	0	MAX PEAK	X Orientation
1624.000000	51.20	25.56	-55.4	21.4	60.0	38.6	1.50	230	AVERAGE	X Orientation
1375.600000	71.20	25.69	-55.8	41.0	80.0	39.0	1.25	250	MAX PEAK	X Orientation



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Below 1 GHz

FCC PART 15, SUBPART B, CLASS A

SECTION 15.209

RADIATED EMISSIONS IN RESTRICTED BANDS BELOW 1 GHz



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Below 1 GHz

1.0 TEST PROCEDURE AND SETUP

The Label Printer was set up according to the general testing requirements of ANSI C63.4:2014.

All test measurements were made with the following mode of operation:

Continuous transmit (100% duty cycle) at 2440 MHz with power setting 0 and 2 Mbps data rate
This was the channel, modulation type & data rate shown to be worst-case in the radios' modular certification test reports.

2.0 TEST RESULTS

The Label Printer Model Number: M610 **meets** the requirements of FCC Part 15, Subpart C, for Section 15.209 Radiated Emissions in Restricted Bands Below 1 GHz. Plots and tabular data can be viewed at the end of this section.

Summary: No emissions were seen that were caused by the BLE transmitter. No data included.

3.0 SAMPLE CALCULATIONS

Radiated emissions: Emissions measurements include all system transducers and are compared against the appropriate limit requirement. See sample calculation below.

$$\begin{array}{lcl} \text{Equations:} & \text{Total Level(dB}\mu\text{V/m)} = & \text{Level(dB}\mu\text{V)} + \text{System Loss(dB)} + \text{Antenna Factor(dB/m)} \\ \text{Sample:} & 24.6 & = 35.51 + (-22.1) + 11.20 \end{array}$$

$$\begin{array}{lcl} \text{Margin(dB)} = & \text{Limit(dB}\mu\text{V/m)} - & \text{Total Level(dB}\mu\text{V/m)} \\ 15.4 & = 40 & - 24.6 \end{array}$$



Company: Brady Corporation, USA
 Model Tested: M610
 Report Number: 27339
 Project Number: 12439
 Test: Section 15.209 Radiated Emissions in Restricted Bands
 Below 1 GHz

4.0 D.L.S. ELECTRONIC SYSTEMS, INC. MEASUREMENT UNCERTAINTY

Compliance with the limits in this standard are based on the results of the compliance measurement. Our calculated measurement uncertainty including the measurement instrumentation, associated connections between the various instruments in the measurement chain, and other contributions, are provided in this section of the test report.

Radiated Emission Uncertainty										
Contribution	Probability Distribution	(± dB)	(± dB)	(± dB)	(± dB)	(± dB)	(± dB)	(± dB)	(± dB)	(± dB)
		3M	3M	3M	3M	3M	3M	10M	10M	10M
		30-100 MHz	100-700 MHz	700-1000 MHz	1- 4.5 GHz	4.5 – 7 GHz	7 – 18 GHz	30-100 MHz	100-700 MHz	700-1000 MHz
Combined Standard Uncertainty	Normal	1.70	1.62	1.66	2.13	2.48	2.85	1.64	1.58	1.66
Expanded Uncertainty	Normal (k=2)	3.40	3.23	3.33	4.26	4.95	5.69	3.29	3.16	3.31



Company: Brady Corporation, USA
 Model Tested: M610
 Report Number: 27339
 Project Number: 12439
 Test: Section 15.209 Radiated Emissions in Restricted Bands
 Below 1 GHz

Registration Number: 90531

TABLE 1 / TEST INSTRUMENTATION

Description	Manufacturer	Model Number	Serial Number	Range	Firmware/ Software Version	Cal On	Cal Due Dates
Antenna, Biconical	EMCO	3104C	9701-4785	20MHz- 200MHz	N/A	6/9/2022	6/8/2024
Antenna, Log Periodic	EMCO	3146	1604	200MHz- 1GHz	N/A	2/10/2021	2/10/2023
Beldin 9914; N-N; 3 Meter Test	Beldin	9914	CBL-005	9kHz- 1000MHz	N/A	7/6/2022	7/6/2023
Cable, 20ft, BNC-BNC, RG223/U	Pasternack Enterprises	PE3087- 300	CBL-117	9 kHz - 1 GHz	N/A	4/15/2022	4/15/2023
Cable, 4ft, BNC-BNC, RG223/U	Pasternack Enterprises	PE3087- 48	CBL-111	9 kHz - 1 GHz	N/A	4/15/2022	4/15/2023
Preamplifier, RF	Rohde & Schwarz	TS- PR10	032001/004	9kHz - 1GHz	N/A	7/6/2022	7/6/2023
Receiver, RF, Tuned	Rohde & Schwarz	ESI 26	837491/010	20Hz – 26GHz	4.34.3:11/17/2000	3/28/2022	3/28/2023

All primary equipment is calibrated against known reference standards with a verified traceable path to NIST.

TABLE 2 / TEST EQUIPMENT

Description	Manufacturer	Model Number	Firmware/ Software Version
EMI Test Software	Rohde & Schwarz	ESK1	1.7.1:11/17/2000

The test equipment above is verified with calibrated equipment.



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Above 1 GHz

FCC PART 15, SUBPART C

SECTION 15.209

RADIATED EMISSIONS IN RESTRICTED BANDS ABOVE 1 GHz



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Above 1 GHz

1.0 TEST PROCEDURE AND SETUP

The Label Printer was set up according to the general testing requirements of ANSI C63.4:2014.

All test measurements were made with the following mode of operation:

EUT was set to transmit in BLE mode. Worst case transmit setting was based on testing from the certified module.

2.0 TEST RESULTS

The Label Printer Model Number: M610 **meets** the requirements of FCC Part 15, Subpart C, Section 15.209 Radiated Emissions in Restricted Bands Above 1 GHz. Plots and tabular data can be viewed at the end of this section.

Summary:

No non-compliant emissions were observed. Emissions dropped off after the 2nd harmonic of 4.8GHz, therefore, 18-26GHz testing was omitted.

3.0 SAMPLE CALCULATIONS

Radiated emissions: Emissions measurements include all system transducers and are compared against the appropriate limit requirement. See sample calculation below.

$$\begin{array}{l} \text{Equations: } \underline{\text{Total Level(dB}\mu\text{V/m)}} = \underline{\text{Level(dB}\mu\text{V)}} + \underline{\text{System Loss(dB)}} + \underline{\text{Antenna Factor(dB/m)}} \\ \text{Sample: } \quad \quad \quad 24.6 \quad \quad \quad = 35.51 \quad \quad \quad + (-22.1) \quad \quad \quad + 11.20 \\ \\ \quad \quad \quad \underline{\text{Margin(dB)}} = \underline{\text{Limit(dB}\mu\text{V/m)}} - \underline{\text{Total Level(dB}\mu\text{V/m)}} \\ \quad \quad \quad 15.4 \quad \quad \quad = 40 \quad \quad \quad - 24.6 \end{array}$$



Company: Brady Corporation, USA
 Model Tested: M610
 Report Number: 27339
 Project Number: 12439
 Test: Section 15.209 Radiated Emissions in Restricted Bands
 Above 1 GHz

4.0 D.L.S. ELECTRONIC SYSTEMS, INC. MEASUREMENT UNCERTAINTY

Compliance with the limits in this standard are based on the results of the compliance measurement. Our calculated measurement uncertainty including the measurement instrumentation, associated connections between the various instruments in the measurement chain, and other contributions, are provided in this section of the test report.

Radiated Emission Uncertainty										
Contribution	Probability Distribution	(± dB)	(± dB)	(± dB)	(± dB)	(± dB)	(± dB)	(± dB)	(± dB)	(± dB)
		3M	3M	3M	3M	3M	3M	10M	10M	10M
		30-100 MHz	100-700 MHz	700-1000 MHz	1- 4.5 GHz	4.5 – 7 GHz	7 – 18 GHz	30-100 MHz	100-700 MHz	700-1000 MHz
Combined Standard Uncertainty	Normal	1.70	1.62	1.66	2.13	2.48	2.85	1.64	1.58	1.66
Expanded Uncertainty	Normal (k=2)	3.40	3.23	3.33	4.26	4.95	5.69	3.29	3.16	3.31



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Above 1 GHz

Registration Number: 90531

TABLE 1 / TEST INSTRUMENTATION

Description	Manufacturer	Model Number	Serial Number	Range	Firmware/ Software Version	Cal On	Cal Due Dates
Antenna, Horn	EMCO	3115	9502-4451	1GHz-18GHz	N/A	10/7/2021	10/7/2023
Filter, High Pass	Q Microwave	100462	2	4.2GHz-18GHz	N/A	6/7/2022	6/7/2023
N->N, 6m, High Frequency	Micro-Coax	UFB311A-1	CBL-096	30MHz-18GHz	N/A	5/24/2022	5/24/2023
Preamplifier, RF	Miteq	AMF-7D-01001800-22-10P	1809602	1-18GHz	N/A	5/23/2022	5/23/2023
Receiver, RF, Tuned	Rohde & Schwarz	ESI 40	837808/005	20Hz – 40 GHz	4.34.3:12/13/2000	2/8/2022	2/8/2023

All primary equipment is calibrated against known reference standards with a verified traceable path to NIST.

TABLE 2 / TEST EQUIPMENT

Description	Manufacturer	Model Number	Firmware/ Software Version
EMI Test Software	Rohde & Schwarz	ESK1	1.7.1:12/13/2000

The test equipment above is verified with calibrated equipment.



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Above 1 GHz

FCC PART 15, SUBPART C

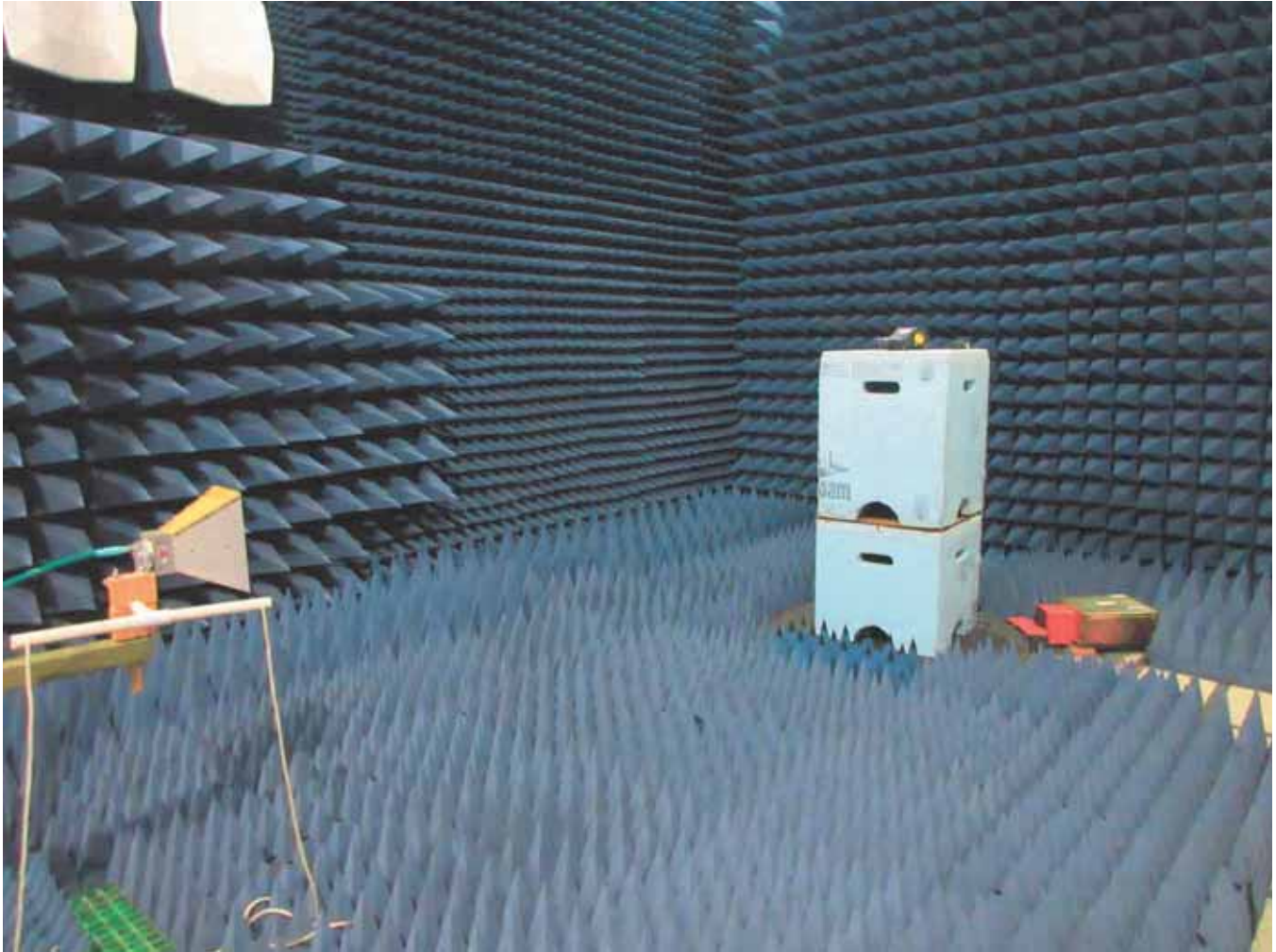
SECTION 15.209

RADIATED EMISSIONS IN RESTRICTED BANDS ABOVE 1 GHz

TEST SETUP PHOTO



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Above 1 GHz



Radiated Emissions Above 1GHz BLE



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Above 1 GHz

FCC PART 15, SUBPART C

SECTION 15.209

RADIATED EMISSIONS IN RESTRICTED BANDS ABOVE 1 GHz

TEST DATA



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Above 1 GHz

FCC Part 15.247 Restricted Bands

Electric Field Strength

EUT: M610 Table Top Printer
Manufacturer: Brady Corporation
Operating Condition: 68 deg F, 37% R.H.
Test Site: DLS O.F. GI
Operator: J. Schneider #12439
Test Specification: BLE Restricted Bands
Comment: BLE, 2402MHz, 1Mbps
Date: 10-06-2022

TEXT: "Vert 3 meters"

Short Description: Test Set-up

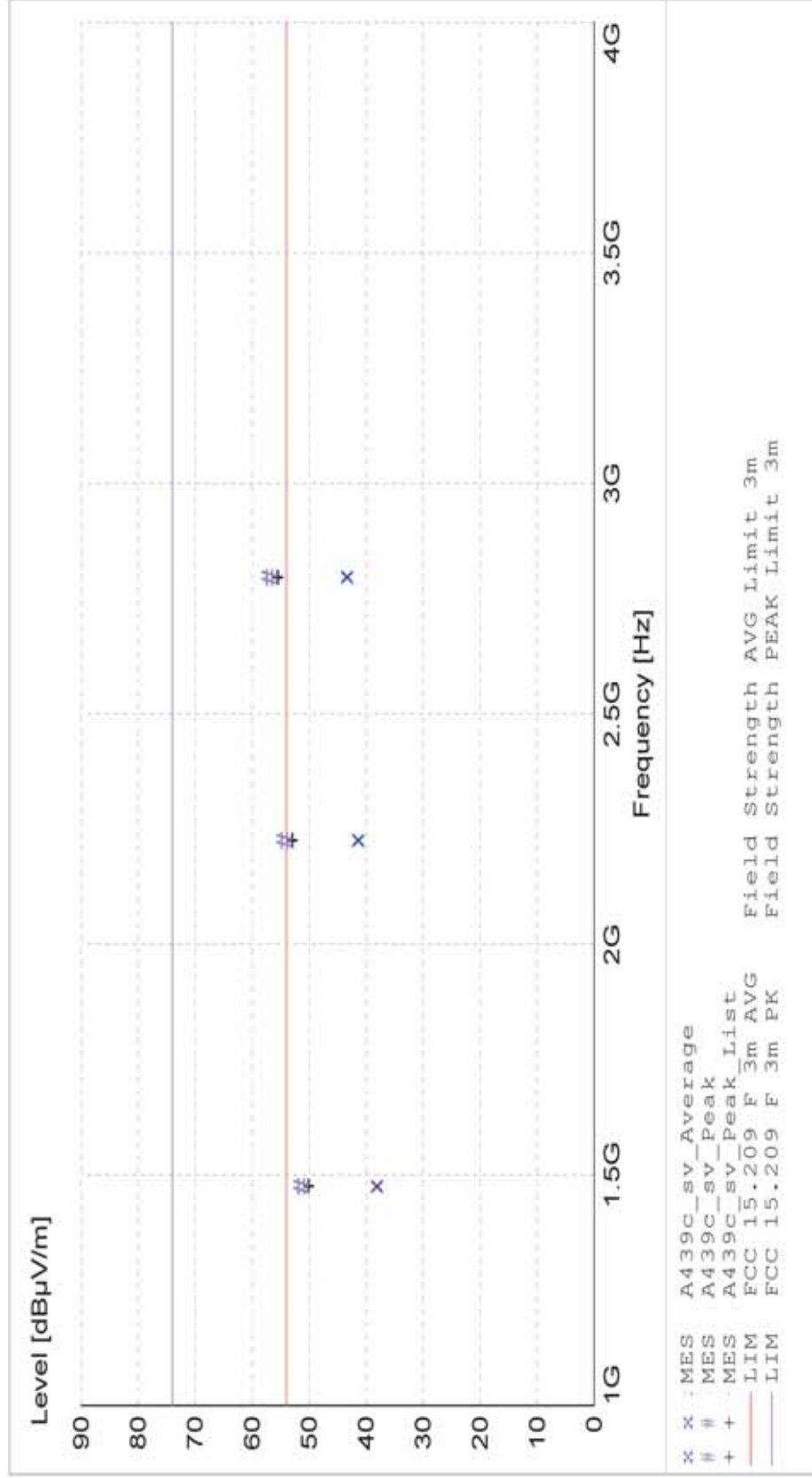
Test Set-up: EUT Measured at 3 Meters with VERTICAL Antenna Polarization

Sample Equations: Total Level(dBµV/m) = Level(dBµV) + System Loss(dB) + Antenna Factor(dBµV/m)
24.6 = 35.51 + (-22.1) + 11.20
Margin(dB) = Limit(dBµV/m) - Total Level(dBµV/m)
15.4 = 40 - 24.6

Graph Markers: + Frequency marker (Level of marker not related to final level)
| Final maximized level using Quasi-Peak detector
X Final maximized level using Average detector
Final maximized level using Peak detector
- Background Scan Peak Detector (Optional)
- Background Scan Average Detector (Optional)



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Above 1 GHz





Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Above 1 GHz

MEASUREMENT RESULT: "A439c_sv_Final"

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBuV	Factor	Loss	Level	dBuV/m	dB	Ant. m	Angle deg	Detector	
2796.000000	12.28	28.86	2.5	43.7	54.0	10.3	1.00	0	AVERAGE	noise floor
2225.200000	11.82	27.65	2.2	41.7	54.0	12.3	1.00	0	AVERAGE	noise floor
1475.200000	11.46	25.12	1.8	38.4	54.0	15.6	1.00	0	AVERAGE	noise floor
2796.000000	25.49	28.86	2.5	56.9	74.0	17.1	1.00	0	MAX PEAK	noise floor
2225.200000	24.41	27.65	2.2	54.3	74.0	19.7	1.00	0	MAX PEAK	noise floor
1475.200000	24.41	25.12	1.8	51.3	74.0	22.7	1.00	0	MAX PEAK	noise floor



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Above 1 GHz

FCC Part 15.247 Restricted Bands

Electric Field Strength

EUT: M610 Table Top Printer (EM3-02)
Manufacturer: Brady Corporation
Operating Condition: 68 deg F, 37% R.H.
Test Site: DLS O.F. GI
Operator: J. Schneider #12439
Test Specification: BLE Restricted Bands
Comment: BLE, 2402MHz, 1Mbps
Date: 10-06-2022

TEXT: "Horz 3 meters"

Short Description: Test Set-up

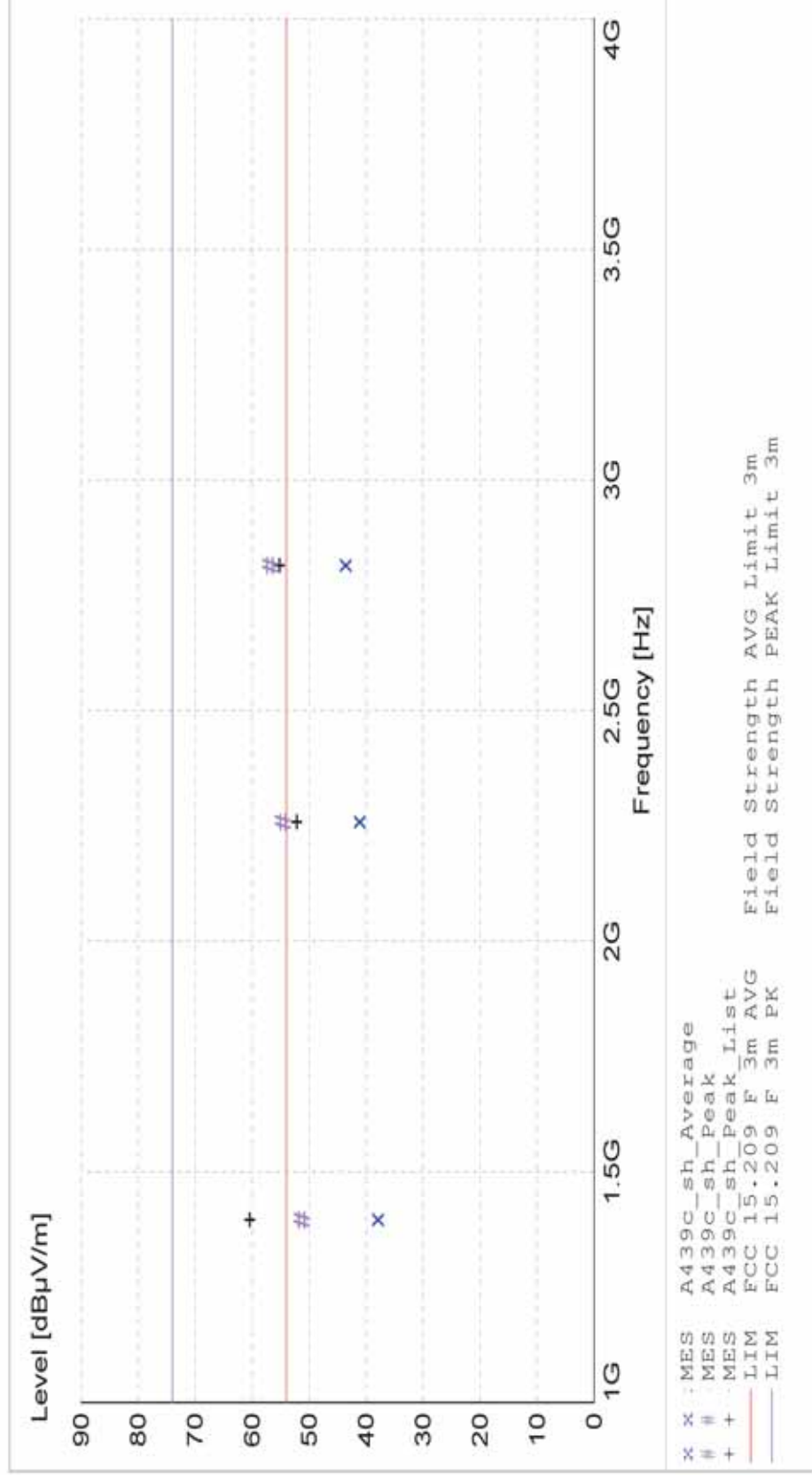
Test Set-up: EUT Measured at 3 Meters with HORIZONTAL Antenna Polarization

Sample Equations: Total Level(dBµV/m) = Level(dBµV) + System Loss(dB) + Antenna Factor(dBµV/m)
24.6 = 35.51 + (-22.1) + 11.20
Margin(dB) = Limit(dBµV/m) - Total Level(dBµV/m)
15.4 = 40 - 24.6

Graph Markers: + Frequency marker (Level of marker not related to final level)
| Final maximized level using Quasi-Peak detector
X Final maximized level using Average detector
Final maximized level using Peak detector
- Background Scan Peak Detector (Optional)
- Background Scan Average Detector (Optional)



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Above 1 GHz





Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Above 1 GHz

MEASUREMENT RESULT: "A439c_sh_Final"

Frequency MHz	Level dBuV	Antenna Factor dBuV/m	System Loss dB	Total Level dBuV/m	Limit dBuV/m	Margin dB	Height Ant. m	Eut Angle deg	Final Detector	Comment
10/6/2022 11:02AM										
2814.800000	12.39	28.94	2.5	43.9	54.0	10.1	1.00	0	AVERAGE	noise floor
2258.400000	11.58	27.61	2.2	41.4	54.0	12.6	1.00	0	AVERAGE	noise floor
1396.000000	11.08	25.36	1.8	38.2	54.0	15.8	1.00	0	AVERAGE	noise floor
2814.800000	25.36	28.94	2.5	56.8	74.0	17.2	1.00	0	MAX PEAK	noise floor
2258.400000	24.68	27.61	2.2	54.5	74.0	19.5	1.00	0	MAX PEAK	noise floor
1396.000000	24.14	25.36	1.8	51.3	74.0	22.7	1.00	0	MAX PEAK	noise floor



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Above 1 GHz

FCC Part 15.247 Restricted Bands

Electric Field Strength

EUT: M610 Table Top Printer (EMS-02)
Manufacturer: Brady Corporation
Operating Condition: 68 deg F, 37% R.H.
Test Site: DLS O.F. GI
Operator: J. Schneider #12439
Test Specification: BLE Restricted Bands
Comment: BLE, 2402MHz, 1Mbps
Date: 10-06-2022

TEXT: "Vert 3 meters"

Short Description: Test Set-up

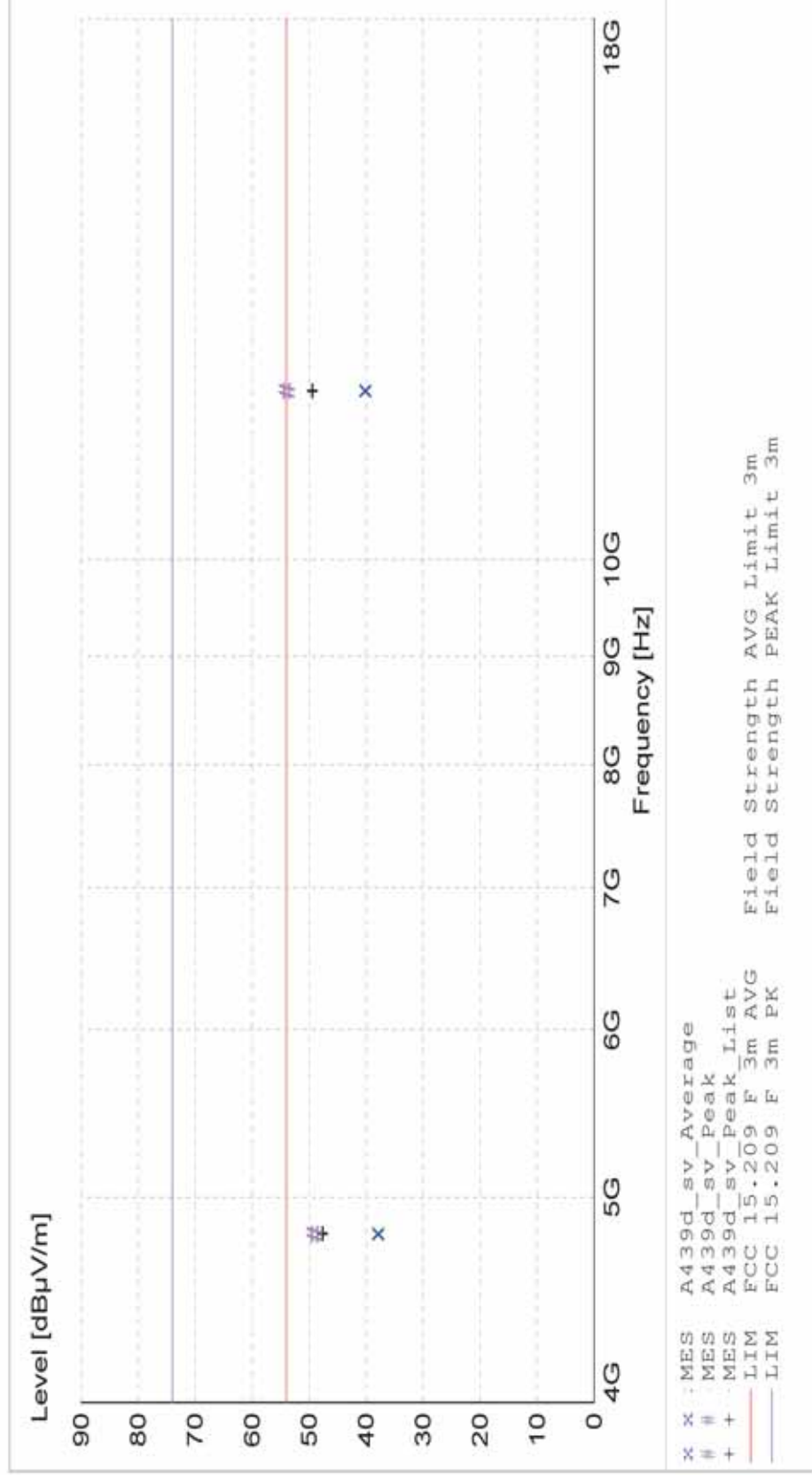
Test Set-up: EUT Measured at 3 Meters with VERTICAL Antenna Polarization

Sample Equations: Total Level(dBµV/m) = Level(dBµV) + System Loss(dB) + Antenna Factor(dBµV/m)
24.6 = 35.51 + (-22.1) + 11.20
Margin(dB) = Limit(dBµV/m) - Total Level(dBµV/m)
15.4 = 40 - 24.6

Graph Markers: + Frequency marker (Level of marker not related to final level)
| Final maximized level using Quasi-Peak detector
X Final maximized level using Average detector
Final maximized level using Peak detector
- Background Scan Peak Detector (Optional)
- Background Scan Average Detector (Optional)



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Above 1 GHz





Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Above 1 GHz

MEASUREMENT RESULT: "A439d_sv_Final"

10/6/2022 11:34AM		Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
		MHz	dBuV	Factor	Loss	Level	dBuV/m	dB	Ant. m	Angle deg	Detector	
		12010.000000	49.30	39.07	-47.9	40.4	54.0	13.6	1.00	0	AVERAGE	5th harm NF
		4804.000000	57.81	32.90	-52.5	38.2	54.0	15.8	1.30	0	AVERAGE	2nd harm
		12010.000000	62.74	39.07	-47.9	53.9	74.0	20.1	1.00	0	MAX PEAK	5th harm NF
		4804.000000	68.61	32.90	-52.5	49.0	74.0	25.0	1.30	0	MAX PEAK	2nd harm



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Above 1 GHz

FCC Part 15.247 Restricted Bands

Electric Field Strength

EUT: M610 Table Top Printer (EMS-02)
Manufacturer: Brady Corporation
Operating Condition: 68 deg F, 37% R.H.
Test Site: DLS O.F. GI
Operator: J. Schneider #12439
Test Specification: BLE Restricted Bands
Comment: BLE, 2402MHz, 1Mbps
Date: 10-06-2022

TEXT: "Horz 3 meters"

Short Description: Test Set-up

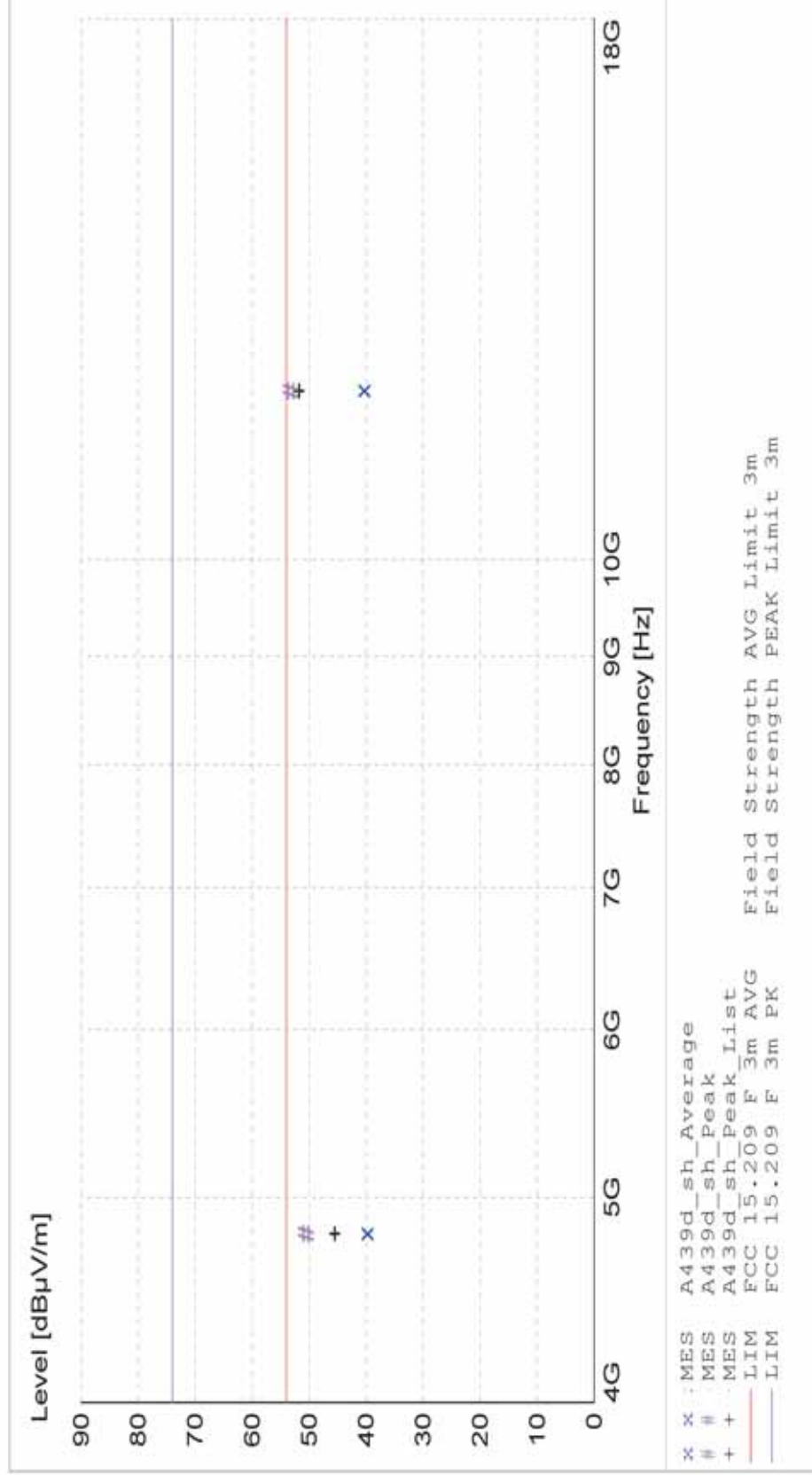
Test Set-up: EUT Measured at 3 Meters with HORIZONTAL Antenna Polarization

Sample Equations: Total Level(dBµV/m) = Level(dBµV) + System Loss(dB) + Antenna Factor(dBµV/m)
24.6 = 35.51 + (-22.1) + 11.20
Margin(dB) = Limit(dBµV/m) - Total Level(dBµV/m)
15.4 = 40 - 24.6

Graph Markers: + Frequency marker (Level of marker not related to final level)
| Final maximized level using Quasi-Peak detector
X Final maximized level using Average detector
Final maximized level using Peak detector
- Background Scan Peak Detector (Optional)
- Background Scan Average Detector (Optional)



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Above 1 GHz





Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Above 1 GHz

MEASUREMENT RESULT: "A439d_sh_Final"

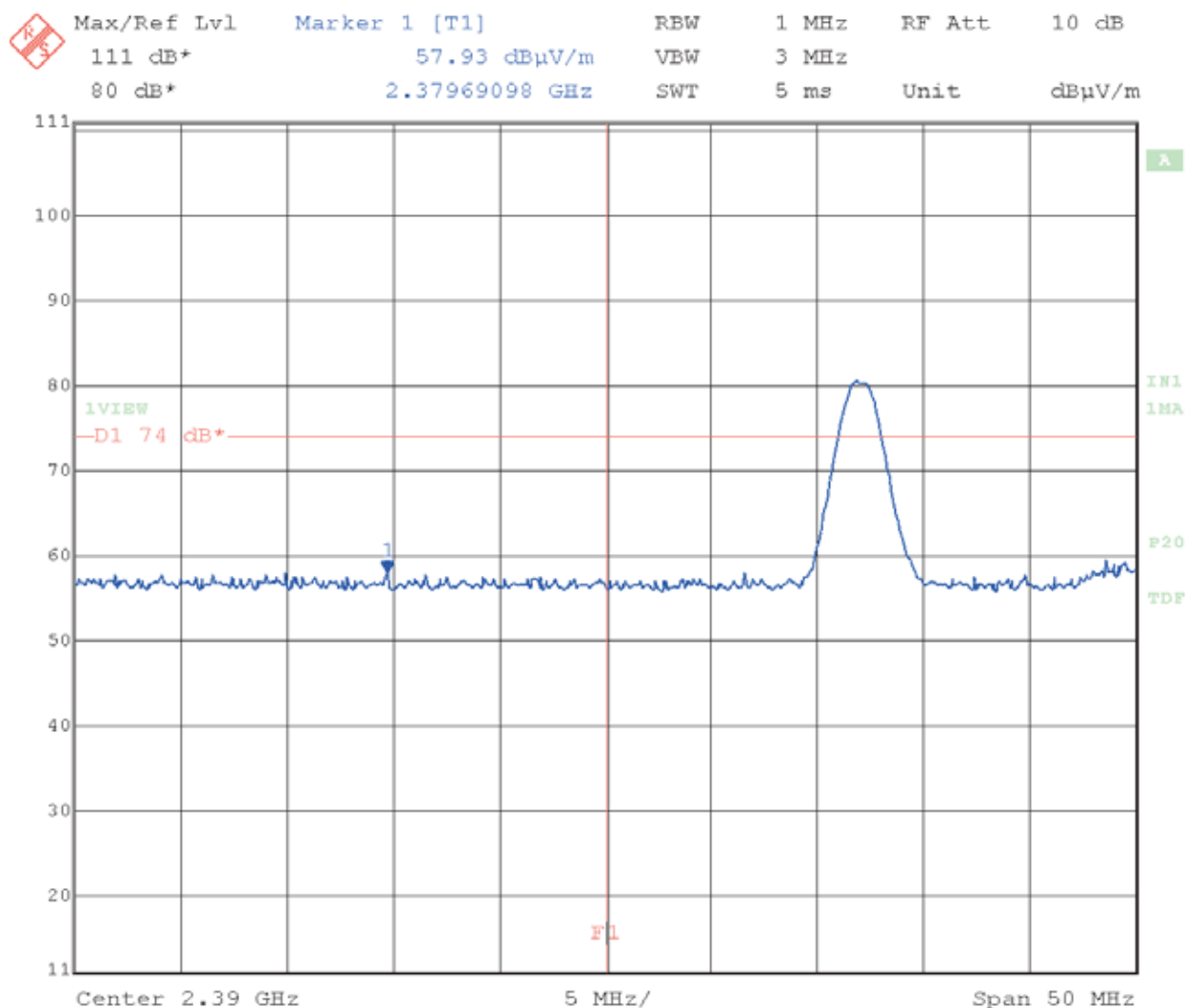
10/6/2022 11:26AM		Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
	MHz	dBuV		Factor	Loss	Level	dBuV/m	dB	Ant.	Angle	Detector	
						dB			m	deg		
12010.000000	49.46	39.07	-47.9	40.6	54.0	13.4	1.00	0	AVERAGE	5th harm	NF	
4804.000000	59.67	32.90	-52.5	40.1	54.0	13.9	1.00	306	AVERAGE	2nd harm		
12010.000000	62.06	39.07	-47.9	53.2	74.0	20.8	1.00	0	MAX PEAK	5th harm	NF	
4804.000000	70.13	32.90	-52.5	50.5	74.0	23.5	1.00	306	MAX PEAK	2nd harm		



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Above 1 GHz

Standard: FCC 15.247 Restricted Band Edge
Test Date: 10-06-2022
Company: Brady Corporation
EUT: M610 Handheld/Tabletop Printer (EM3-02)
Test: **Lower** Band-Edge – Radiated
(Lower Band-Edge Frequency: 2400 MHz)
(Restricted Band Edge: 2390 MHz)
Operator: J. Schneider; #12439
Comment: BLE Low Channel 0: 2402 MHz; 1Mbps
Test Distance: 3 meters

PEAK Detector; **VERTICAL Antenna**; Limit = 74 dB μ V/m
Measured level: **57.93dB μ V/m** Margin = 16.07dB



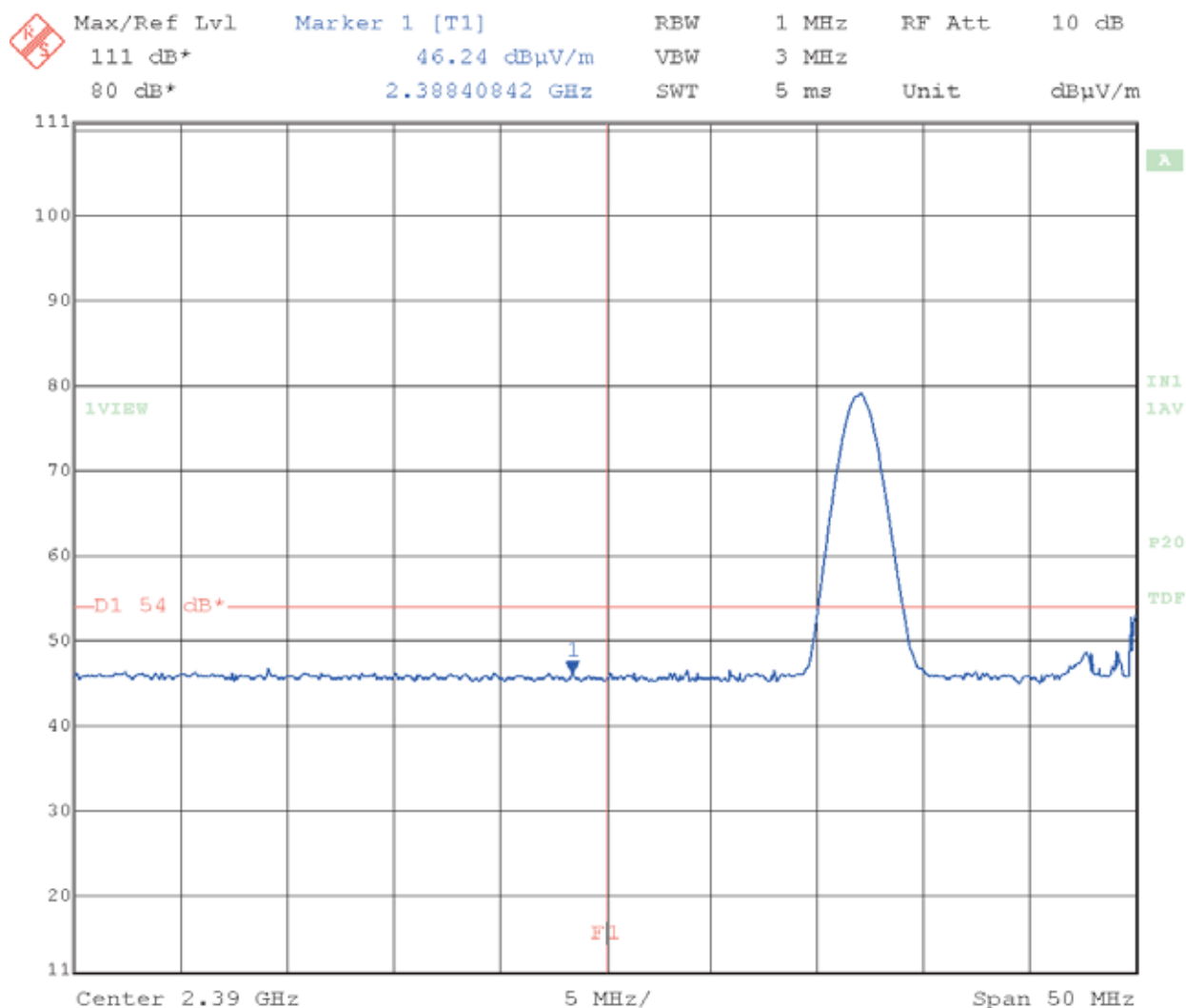
Date: 6.OCT.2022 10:04:45



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Above 1 GHz

Standard: FCC 15.247 Restricted Band Edge
Test Date: 10-06-2022
Company: Brady Corporation
EUT: M610 Handheld/Tabletop Printer (EM3-02)
Test: **Lower** Band-Edge – Radiated
(Lower Band-Edge Frequency: 2400 MHz)
(Restricted Band Edge: 2390 MHz)
Operator: J. Schneider; #12439
Comment: BLE Low Channel 0: 2402 MHz; 1Mbps
Test Distance: 3 meters

AVERAGE Detector; **VERTICAL Antenna**; Limit = 54 dB μ V/m
Measured level: **46.24dB μ V/m** Margin = 7.76dB



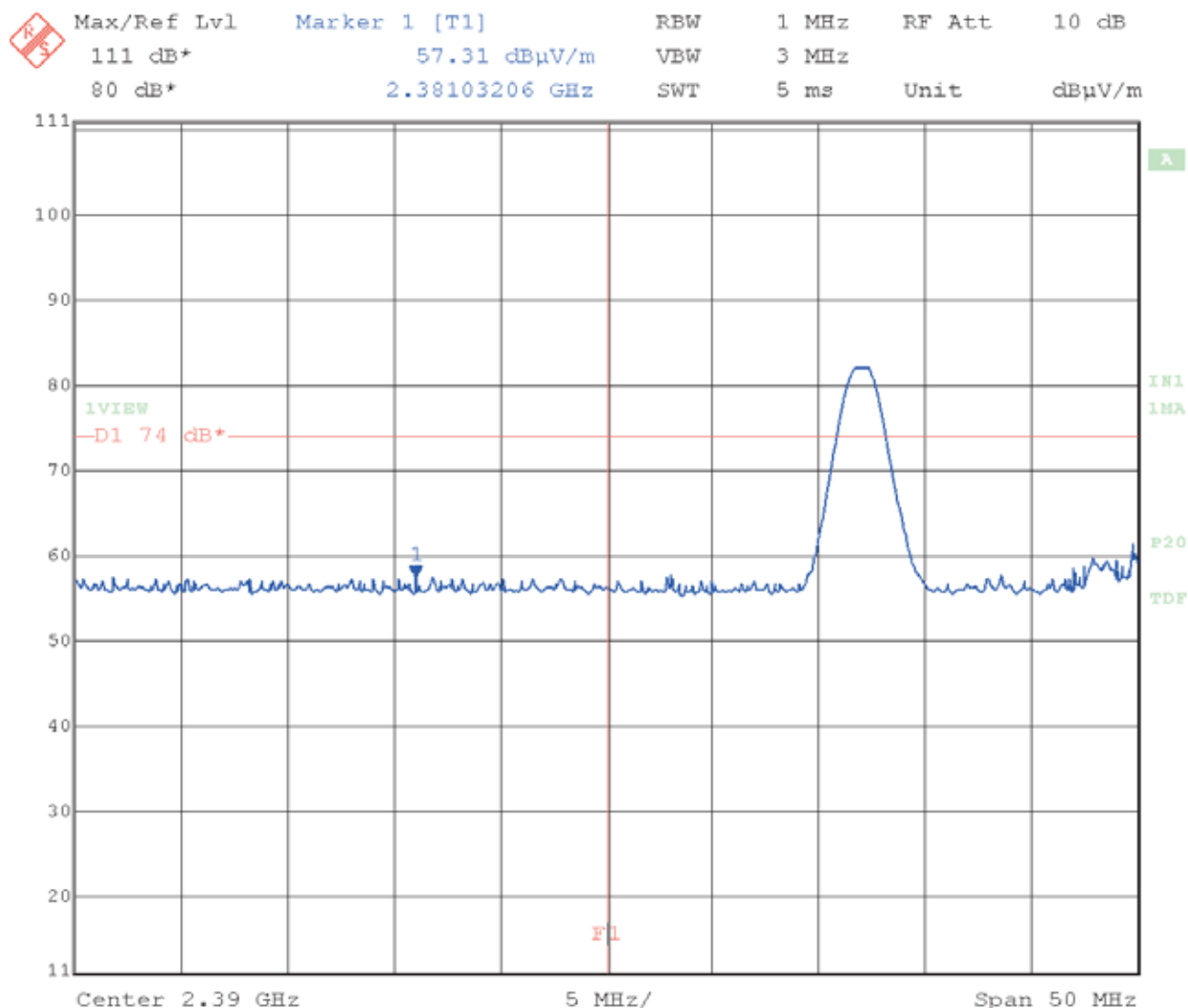
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Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Above 1 GHz

Standard: FCC 15.247 Restricted Band Edge
Test Date: 10-06-2022
Company: Brady Corporation
EUT: M610 Handheld/Tabletop Printer (EM3-02)
Test: **Lower** Band-Edge – Radiated
(Lower Band-Edge Frequency: 2400 MHz)
(Restricted Band Edge: 2390 MHz)
Operator: J. Schneider; #12439
Comment: BLE Low Channel 0: 2402 MHz; 1Mbps
Test Distance: 3 meters

PEAK Detector; **HORIZONTAL Antenna**; Limit = 74 dB μ V/m
Measured level: **57.31**dB μ V/m Margin = 16.69dB



Date: 6.OCT.2022 10:19:38

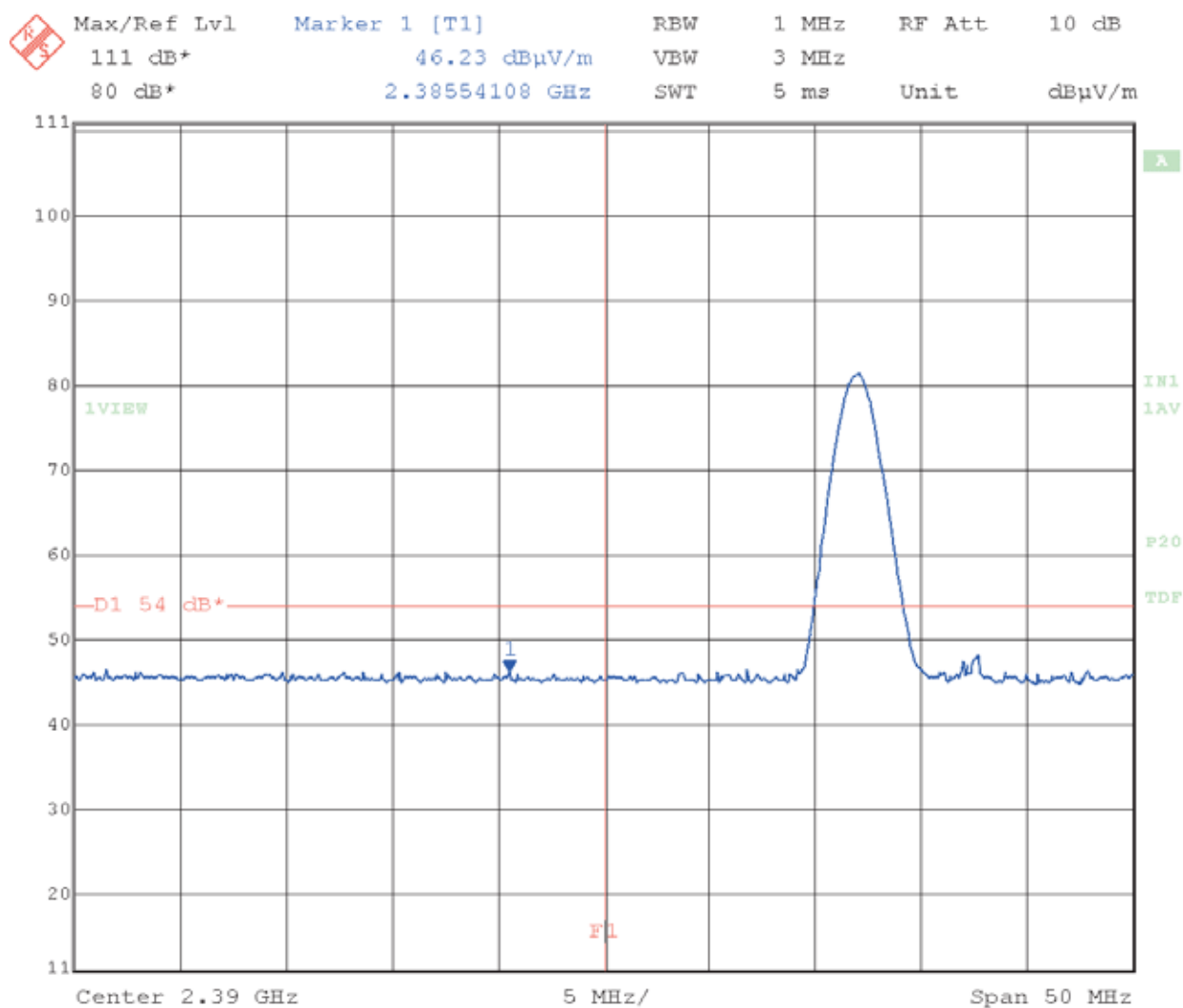


Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Above 1 GHz

Standard: FCC 15.247 Restricted Band Edge
Test Date: 10-06-2022
Company: Brady Corporation
EUT: M610 Handheld/Tabletop Printer (EM3-02)
Test: **Lower** Band-Edge – Radiated
(Lower Band-Edge Frequency: 2400 MHz)
(Restricted Band Edge: 2390 MHz)
Operator: J. Schneider; #12439
Comment: BLE Low Channel 0: 2402 MHz; 1Mbps
Test Distance: 3 meters

AVERAGE Detector; **HORIZONTAL Antenna**; Limit = 54 dB μ V/m

Measured level: **46.23**dB μ V/m Margin = 7.77dB



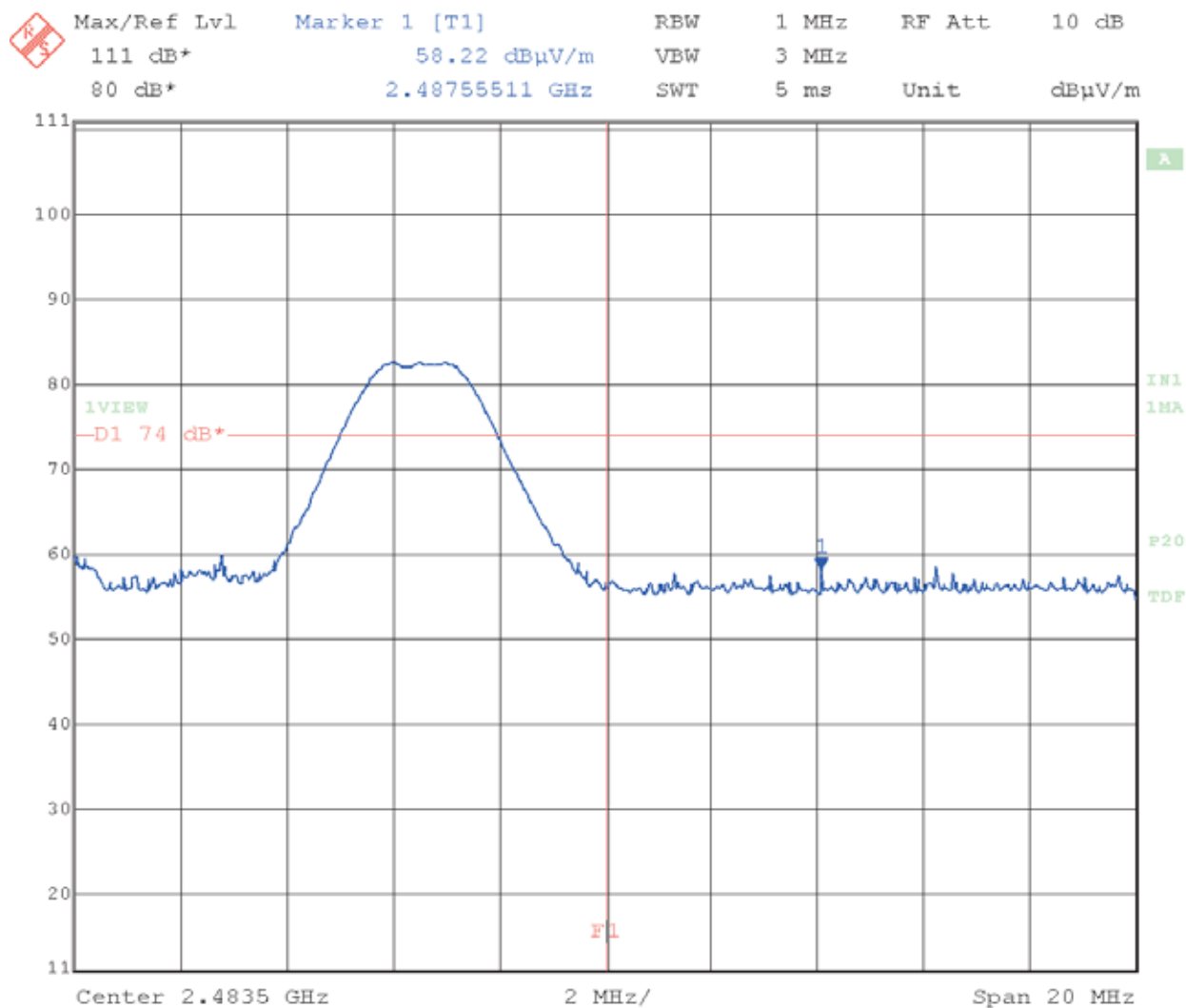
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Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Above 1 GHz

Standard: FCC 15.247 Restricted Band Edge
Test Date: 10-06-2022
Company: Brady Corporation
EUT: M610 Handheld/Tabletop Printer (EM3-02)
Test: **Upper** Band-Edge – Radiated
(Upper Band-Edge Frequency: 2483.5 MHz)
(Restricted Band Edge: 2483.5 MHz)
Operator: J. Schneider; #12439
Comment: High Channel 19: 2480 MHz; 2Mbps
Test Distance: 3 meters

PEAK Detector; **HORIZONTAL Antenna**; Limit = 74 dB μ V/m
Measured level: **58.22dB μ V/m** Margin = 15.78dB



Date: 6.OCT.2022 10:39:06

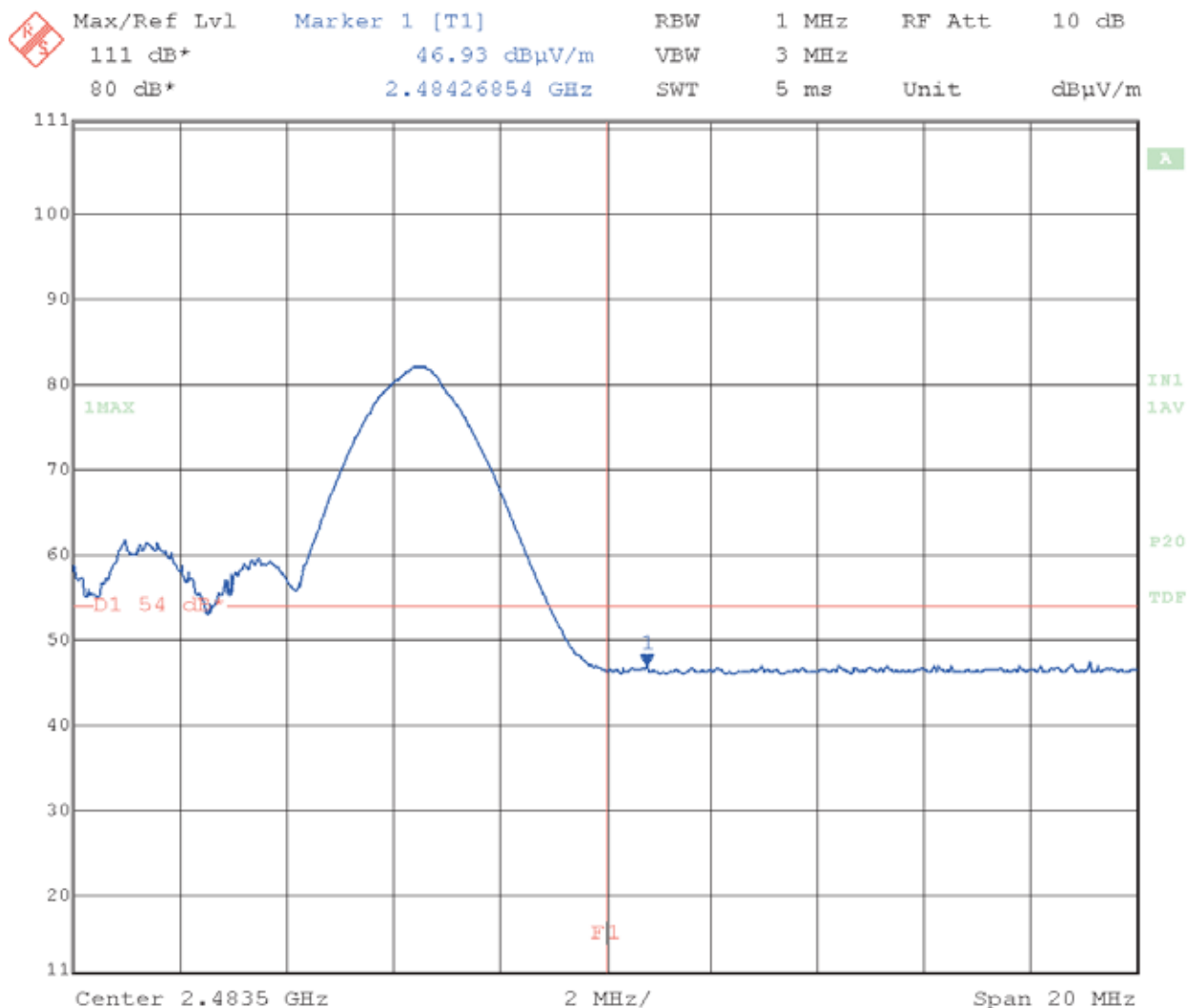


Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Above 1 GHz

Standard: FCC 15.247 Restricted Band Edge
Test Date: 10-06-2022
Company: Brady Corporation
EUT: M610 Handheld/Tabletop Printer (EM3-02)
Test: **Upper** Band-Edge – Radiated
(Upper Band-Edge Frequency: 2483.5 MHz)
(Restricted Band Edge: 2483.5 MHz)
Operator: J. Schneider; #12439
Comment: High Channel 19: 2480 MHz; 2Mbps
Test Distance: 3 meters

AVERAGE Detector; **HORIZONTAL Antenna**; Limit = 54 dB μ V/m

Measured level: **46.93dB μ V/m** Margin = 7.07dB



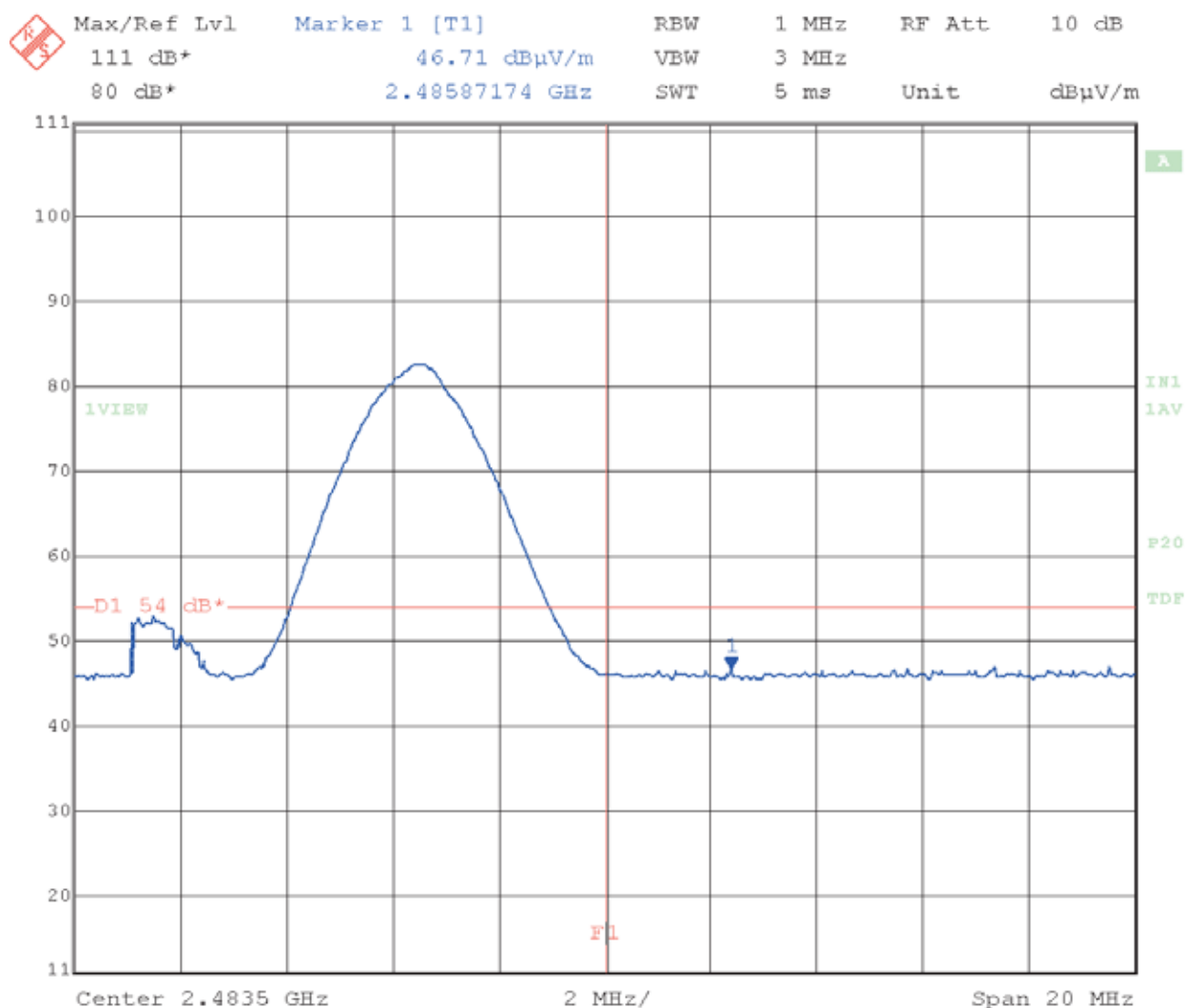
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Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Above 1 GHz

Standard: FCC 15.247 Restricted Band Edge
Test Date: 10-06-2022
Company: Brady Corporation
EUT: M610 Handheld/Tabletop Printer (EM3-02)
Test: **Upper** Band-Edge – Radiated
(Upper Band-Edge Frequency: 2483.5 MHz)
(Restricted Band Edge: 2483.5 MHz)
Operator: J. Schneider; #12439
Comment: High Channel 19: 2480 MHz; 2Mbps
Test Distance: 3 meters

AVERAGE Detector; **VERTICAL Antenna**; Limit = 54 dB μ V/m
Measured level: **46.71**dB μ V/m Margin = 7.29dB



Date: 6.OCT.2022 10:49:28

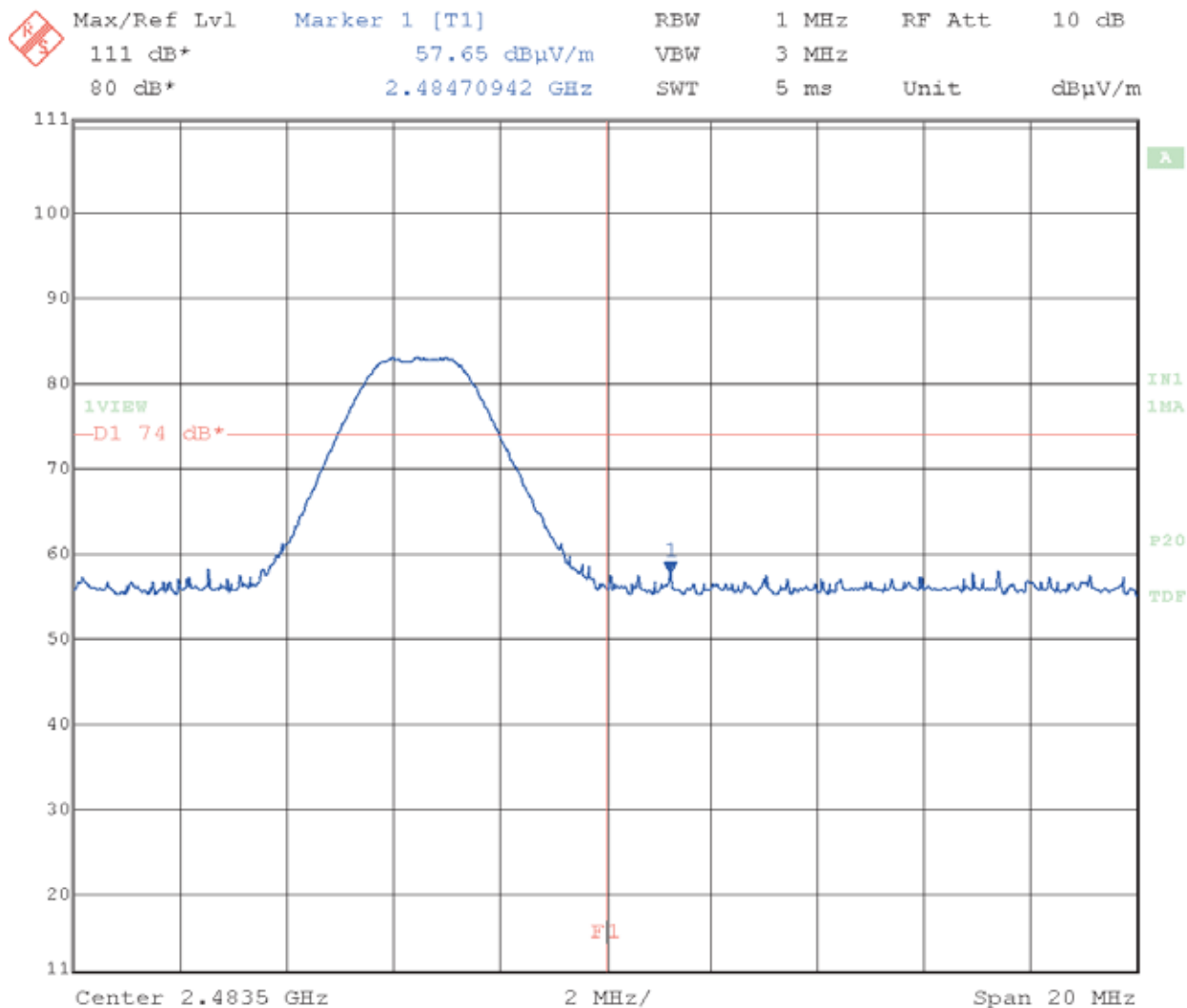


Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Test: Section 15.209 Radiated Emissions in Restricted Bands
Above 1 GHz

Standard: FCC 15.247 Restricted Band Edge
Test Date: 10-06-2022
Company: Brady Corporation
EUT: M610 Handheld/Table Top Printer (EM3-02)
Test: **Upper** Band-Edge – Radiated
(Upper Band-Edge Frequency: 2483.5 MHz)
(Restricted Band Edge: 2483.5 MHz)
Operator: J. Schneider; #12439
Comment: High Channel 19: 2480 MHz; 2Mbps
Test Distance: 3 meters

PEAK Detector; **VERTICAL** Antenna; Limit = 74 dB μ V/m

Measured level: **57.65dB μ V/m** Margin = 16.35dB



Date: 6.OCT.2022 10:50:45



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Appendix A: FCC Part 15.207 AC Line Conducted Emissions Test Data

APPENDIX A

FCC PART 15.207 AC LINE CONDUCTED EMISSIONS TEST DATA

Test Configuration: Continuous transmit (100% duty cycle) at 2440 MHz with power setting 0 and 2 Mbps data rate This was the channel, modulation type & data rate shown to be worst-case in the radios' modular certification test reports.



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Appendix A: FCC Part 15.207 AC Line Conducted Emissions Test Data



PMM NARDA REPORT: 12439a 120V 60Hz L1_001

Report issuing date : 10-06-2022

Standard : FCC Part 15.207
Test Type : Voltage Mains Test
Test Site : DLS OATS Screen Room
Temperature : 73 °F
Humidity : 41 %
Test Specs :
Operator : J. Schneider
DLS Project # : 12439
Result : Pass

EUT

Manufacturer : Brady Corporation
Model : M610 (EM3-02)
Product : Hand Held/Table Top Printer
Notes : 120 V 60 Hz
Comments : BLE transmit at 2402 MHz, 1Mbps (worst case in module certification test report)

Testing Company : DLS Electronic Systems
Tel./Fax : 262-279-0210
Web site : <http://www.dlsamc.com>

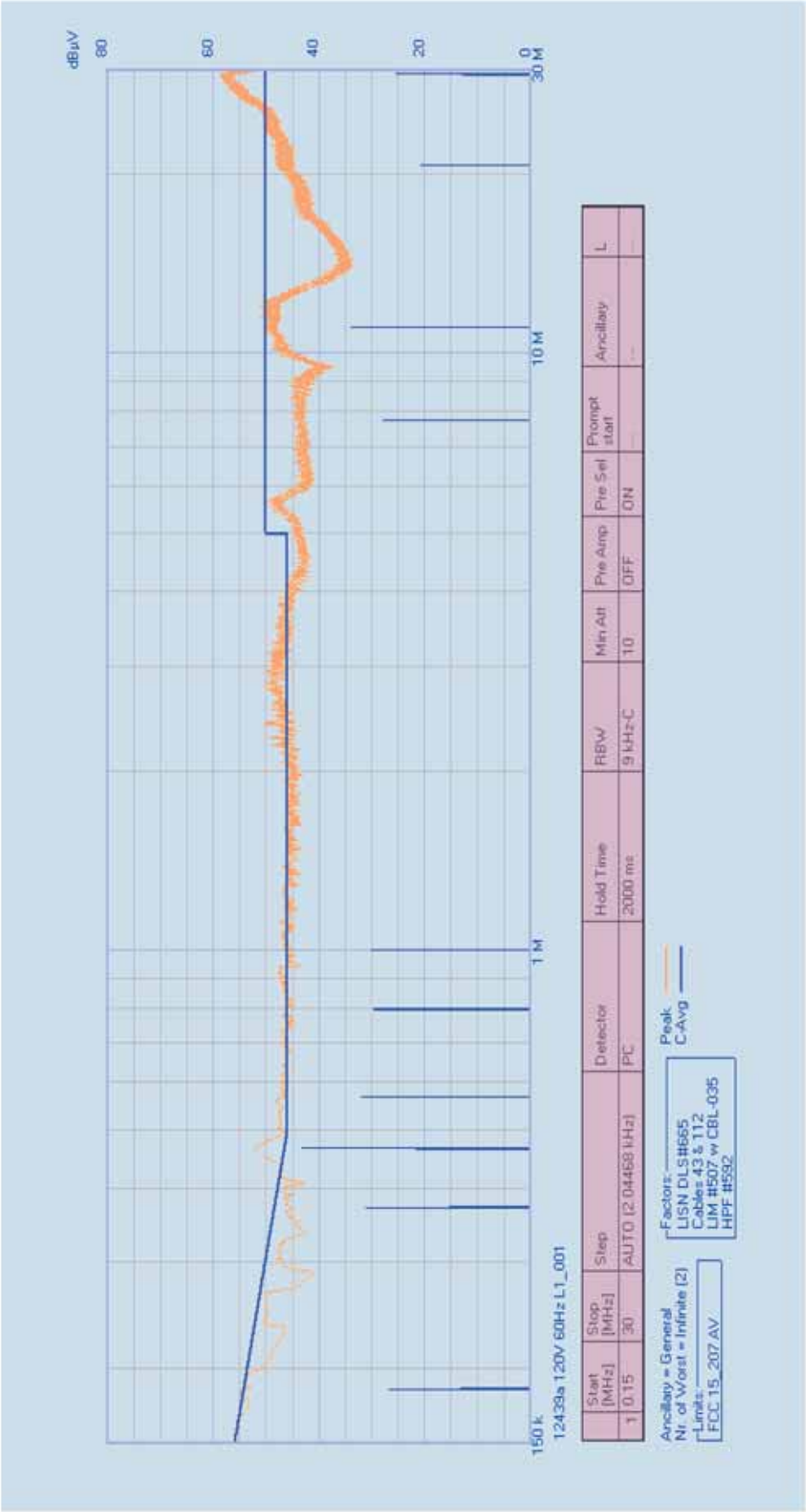
Receiver Details

Model : PMM 9010F
Brand : Narda
S/N : 020W40102
Last Calibration : 03/30/2022

NOTE: The column in the table that is labeled "delta" shows the margin in dB with respect to the limit. A negative number indicates the level of the emission is under the limit by the given value, while a positive number indicates the emission level is above the limit by the given value.



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Appendix A: FCC Part 15.207 AC Line Conducted Emissions Test Data





Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Appendix A: FCC Part 15.207 AC Line Conducted Emissions Test Data



12439a 120V 60Hz L1_001_06/10/2022 15:18:14

Ref. SW 2.40 (January 2021)

Ref. FW 2.02 21/04/21

Margin: 100 dB

	Frequency [MHz]	C-Avg [dBµV]	Limit FCC 15.207 [dBµV]	Delta [dB]	Factor LISN DLS#... [dB]	Factor Cables 43... [dB]	Factor LIM #507 [dB]	Factor HPF #592 [dB]
1	0.15	27.37	56.00	-28.63	0.15	0.03	9.71	2.33
2	0.18475956	26.72	54.27	-27.55	0.15	0.08	9.67	1.97
3	0.37082544	31.16	48.48	-17.32	0.14	0.06	9.56	1.20
4	0.4669254	43.21	46.57	-3.36	0.14	0.09	9.70	0.92
5	0.5691594	31.95	46.00	-14.05	0.14	0.10	9.69	0.75
6	0.79611888	29.53	46.00	-16.47	0.15	0.14	9.66	0.55
7	1.00058688	29.94	46.00	-16.06	0.15	0.15	9.66	0.48
8	7.69282452	27.88	50.00	-22.12	0.18	0.53	9.72	0.19
9	11.04609972	33.95	50.00	-16.05	0.18	0.60	9.76	0.22
10	20.59475532	20.70	50.00	-29.30	0.14	0.78	9.76	0.32
11	29.21308152	25.41	50.00	-24.59	0.06	0.95	9.89	0.45



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Appendix A: FCC Part 15.207 AC Line Conducted Emissions Test Data



PMM NARDA REPORT: 12439a 120V 60Hz L1_000

Report issuing date : 10-06-2022

Standard : FCC Part 15.207
Test Type : Voltage Mains Test
Test Site : DLS OATS Screen Room
Temperature : 73 °F
Humidity : 41 %
Test Specs :
Operator : J. Schneider
DLS Project # : 12439
Result : Pass

EUT

Manufacturer : Brady Corporation
Model : M610 (EM3-02)
Product : Hand Held/Table Top Printer
Notes : 120 V 60 Hz
Comments : BLE transmit at 2402 MHz, 1Mbps (worst case in module certification test report)

Testing Company : DLS Electronic Systems
Tel./Fax : 262-279-0210
Web site : <http://www.dlsamc.com>

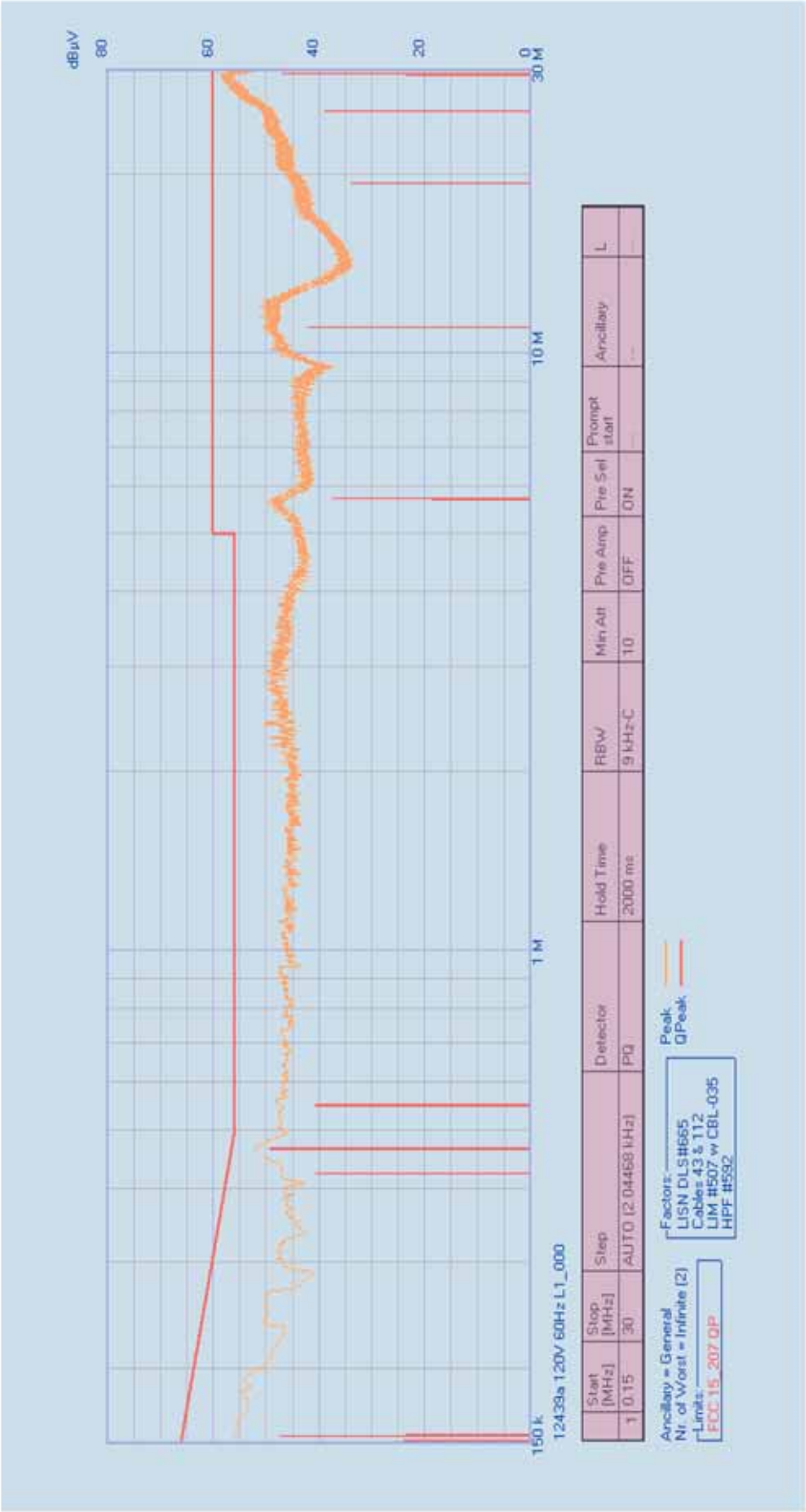
Receiver Details

Model : PMM 9010F
Brand : Narda
S/N : 020W40102
Last Calibration : 03/30/2022

NOTE: The column in the table that is labeled "delta" shows the margin in dB with respect to the limit. A negative number indicates the level of the emission is under the limit by the given value, while a positive number indicates the emission level is above the limit by the given value.



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Appendix A: FCC Part 15.207 AC Line Conducted Emissions Test Data





Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Appendix A: FCC Part 15.207 AC Line Conducted Emissions Test Data



12439a 120V 60Hz L1_000 06/10/2022 15:15:22

Ref. SW 2.40 (January 2021)

Ref. FW 2.02 21/04/21

Margin: 100 dB

	Frequency [MHz]	QPeak [dBμV]	Limit FCC 15.20... [dBμV]	Delta [dB]	Factor LISN DLS#... [dB]	Factor Cables 43... [dB]	Factor LIM #507 ... [dB]	Factor HPF #592 [dB]
1	0.15	49.12	66.00	-17.88	0.08	9.71	2.23	0.03
2	0.15408936	47.32	65.78	-18.46	0.15	0.04	9.70	2.28
3	0.42398712	40.48	57.37	-16.89	0.14	0.08	9.69	1.01
4	0.46488072	45.16	56.60	-7.44	0.14	0.09	9.70	0.92
5	0.55075728	40.61	56.00	-15.39	0.14	0.10	9.69	0.78
6	5.68699344	37.39	60.00	-22.61	0.16	0.47	9.69	0.19
7	11.05223376	41.98	60.00	-18.02	0.18	0.60	9.76	0.22
8	19.17983676	33.78	60.00	-26.22	0.14	0.77	9.77	0.31
9	25.33227888	38.82	60.00	-21.18	0.09	0.87	9.78	0.37
10	29.18650068	46.85	60.00	-13.15	0.06	0.95	9.89	0.45



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Appendix A: FCC Part 15.207 AC Line Conducted Emissions Test Data



PMM NARDA REPORT: 12439a 120V 60Hz L2_000_000

Report issuing date : 10-06-2022

Standard : FCC Part 15.207
Test Type : Voltage Mains Test
Test Site : DLS OATS Screen Room
Temperature : 73 °F
Humidity : 41 %
Test Specs :
Operator : J. Schneider
DLS Project # : 12439
Result : Pass

EUT

Manufacturer : Brady Corporation
Model : M610 (EM3-02)
Product : Hand Held/Table Top Printer
Notes : 120 V 60 Hz
Comments : BLE transmit at 2402 MHz, 1Mbps (worst case in module certification test report)

Testing Company : DLS Electronic Systems
Tel./Fax : 262-279-0210
Web site : <http://www.dlsenc.com>

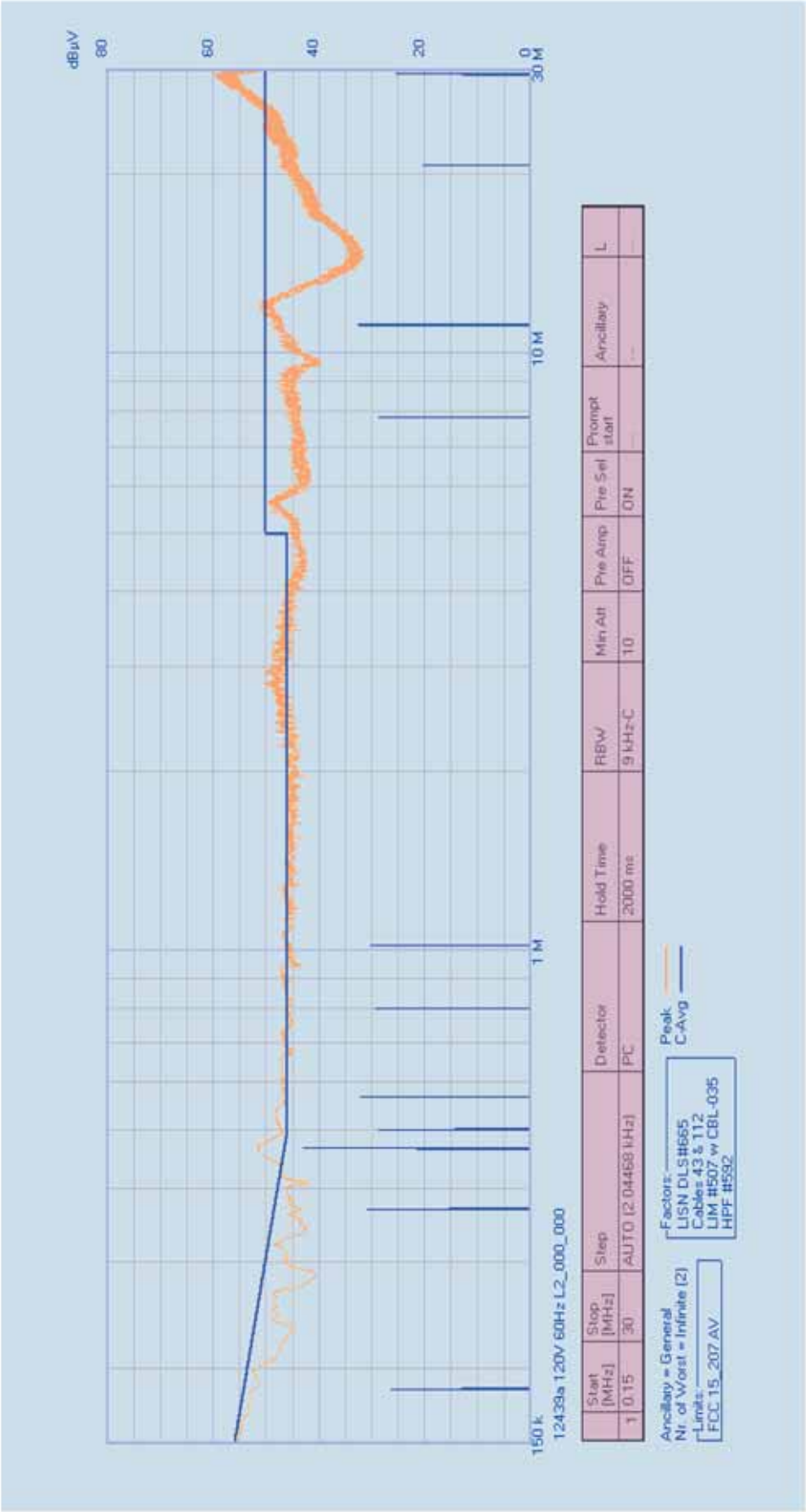
Receiver Details

Model : PMM 9010F
Brand : Narda
S/N : 020W40102
Last Calibration : 03/30/2022

NOTE: The column in the table that is labeled "delta" shows the margin in dB with respect to the limit. A negative number indicates the level of the emission is under the limit by the given value, while a positive number indicates the emission level is above the limit by the given value.



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Appendix A: FCC Part 15.207 AC Line Conducted Emissions Test Data





Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Appendix A: FCC Part 15.207 AC Line Conducted Emissions Test Data



12439a 120V 60Hz L2_000_000 06/10/2022 15:20:07

Rel. SW 2.40 (January 2021)

Rel. FW 2.02 21/04/21

Margin: 100 dB

Frequency [MHz]	C-Avg [dBµV]	Limit FCC 15.20... [dBµV]	Delta [dB]	Factor LISN DLS#... [dB]	Factor Cables 43... [dB]	Factor LIM #507 .. [dB]	Factor HPF #592 [dB]
1 0.15	27.09	56.00	-28.91	0.15	0.03	9.71	2.33
2 0.18475956	26.28	54.27	-27.99	0.15	0.08	9.67	1.97
3 0.36878076	30.79	48.53	-17.74	0.14	0.06	9.66	1.21
4 0.4669254	42.94	46.57	-3.63	0.14	0.09	9.70	0.92
5 0.50168496	28.77	46.00	-17.23	0.14	0.09	9.69	0.87
6 0.5691594	32.05	46.00	-13.95	0.14	0.10	9.69	0.75
7 0.79816356	29.37	46.00	-16.63	0.15	0.14	9.66	0.55
8 1.018989	30.11	46.00	-15.89	0.15	0.15	9.66	0.47
9 7.76234364	28.71	50.00	-21.29	0.18	0.53	9.72	0.19
10 11.1152948	32.54	50.00	-17.46	0.18	0.60	9.76	0.22
11 20.5968	20.31	50.00	-29.69	0.14	0.78	9.76	0.32
12 25.27442192	25.35	50.00	-24.65	0.06	0.95	9.89	0.45



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Appendix A: FCC Part 15.207 AC Line Conducted Emissions Test Data



PMM NARDA REPORT: 12439a 120V 60Hz L2_000_001

Report issuing date : 10-06-2022

Standard : FCC Part 15.207
Test Type : Voltage Mains Test
Test Site : DLS OATS Screen Room
Temperature : 73 °F
Humidity : 41 %
Test Specs :
Operator : J. Schneider
DLS Project # : 12439
Result : Pass

EUT

Manufacturer : Brady Corporation
Model : M610 (EM3-02)
Product : Hand Held/Table Top Printer
Notes : 120 V 60 Hz
Comments : BLE transmit at 2402 MHz, 1Mbps (worst case in module certification test report)

Testing Company : DLS Electronic Systems
Tel./Fax : 262-279-0210
Web site : <http://www.dlsenc.com>

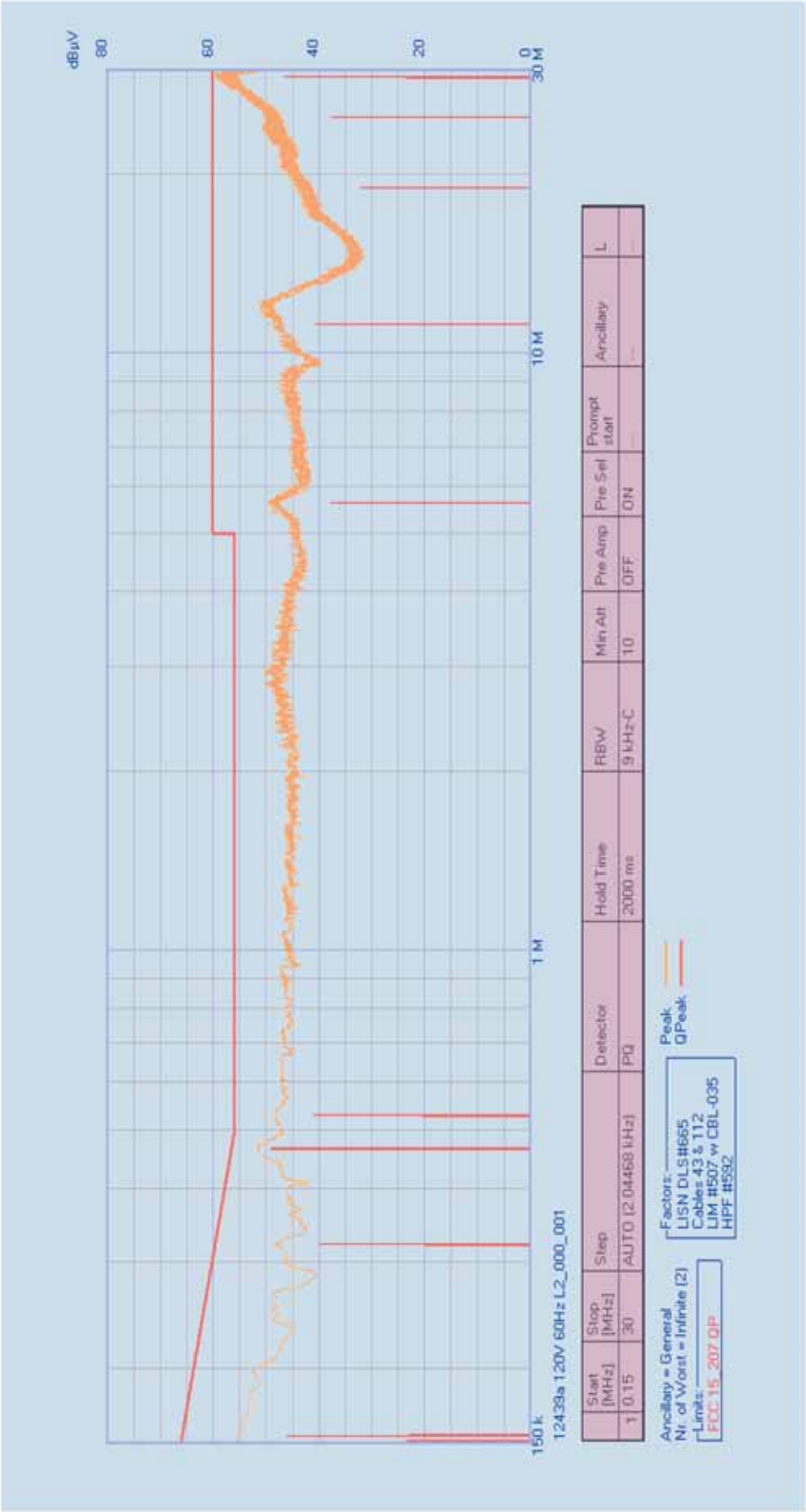
Receiver Details

Model : PMM 9010F
Brand : Narda
S/N : 020W40102
Last Calibration : 03/30/2022

NOTE: The column in the table that is labeled "delta" shows the margin in dB with respect to the limit. A negative number indicates the level of the emission is under the limit by the given value, while a positive number indicates the emission level is above the limit by the given value.



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Appendix A: FCC Part 15.207 AC Line Conducted Emissions Test Data





Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Appendix A: FCC Part 15.207 AC Line Conducted Emissions Test Data



12439a 120V 60Hz L2_000_001 06/10/2022 15:21:44
Rel. SW 2.40 (January 2021)
Rel. FW 2.02 21/04/21
Margin: 100 dB

Frequency [MHz]	QPeak [dBµV]	Limit FCC 15.207 [dBµV]	Delta [dB]	Factor LISN DLS#... [dB]	Factor Cables 43... [dB]	Factor LIM #507 ... [dB]	Factor HPF #592 [dB]
1 0.15	46.84	66.00	-19.16	0.15	0.03	9.71	2.33
2 0.15408936	46.18	65.78	-19.60	0.15	0.04	9.70	2.28
3 0.32175312	39.62	59.66	-20.01	0.14	0.08	9.64	1.36
4 0.46488072	48.94	56.60	-7.66	0.14	0.09	9.70	0.92
5 0.5282658	40.91	56.00	-15.09	0.14	0.10	9.69	0.82
6 3.59498284	37.76	60.00	-22.24	0.16	0.46	9.69	0.20
7 11.14628904	40.49	60.00	-19.51	0.17	0.61	9.76	0.22
8 16.94469856	32.12	60.00	-27.88	0.14	0.77	9.77	0.31
9 24.73932168	37.56	60.00	-22.44	0.10	0.86	9.77	0.36
10 28.97180928	46.55	60.00	-13.45	0.06	0.94	9.88	0.45



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Appendix A: FCC Part 15.207 AC Line Conducted Emissions Test Data



PMM NARDA REPORT: 12439b 240V 60Hz L1_000_001

Report issuing date : 10-06-2022

Standard : FCC Part 15.207
Test Type : Voltage Mains Test
Test Site : DLS OATS Screen Room
Temperature : 73 °F
Humidity : 41 %
Test Specs : Line 1: [X] Quasi-Peak Detector [X] Average Detector
Operator : J. Schneider
DLS Project # : 12439
Result : Pass

EUT

Manufacturer : Brady Corporation
Model : M610 (EM3-02)
Product : Hand Held/Table Top Printer
Notes : 240 V 60 Hz
Comments : BLE transmit at 2402 MHz, 1Mbps (worst case in module certification test report)

Testing Company : DLS Electronic Systems
Tel./Fax : 262-279-0210
Web site : <http://www.dlsenc.com>

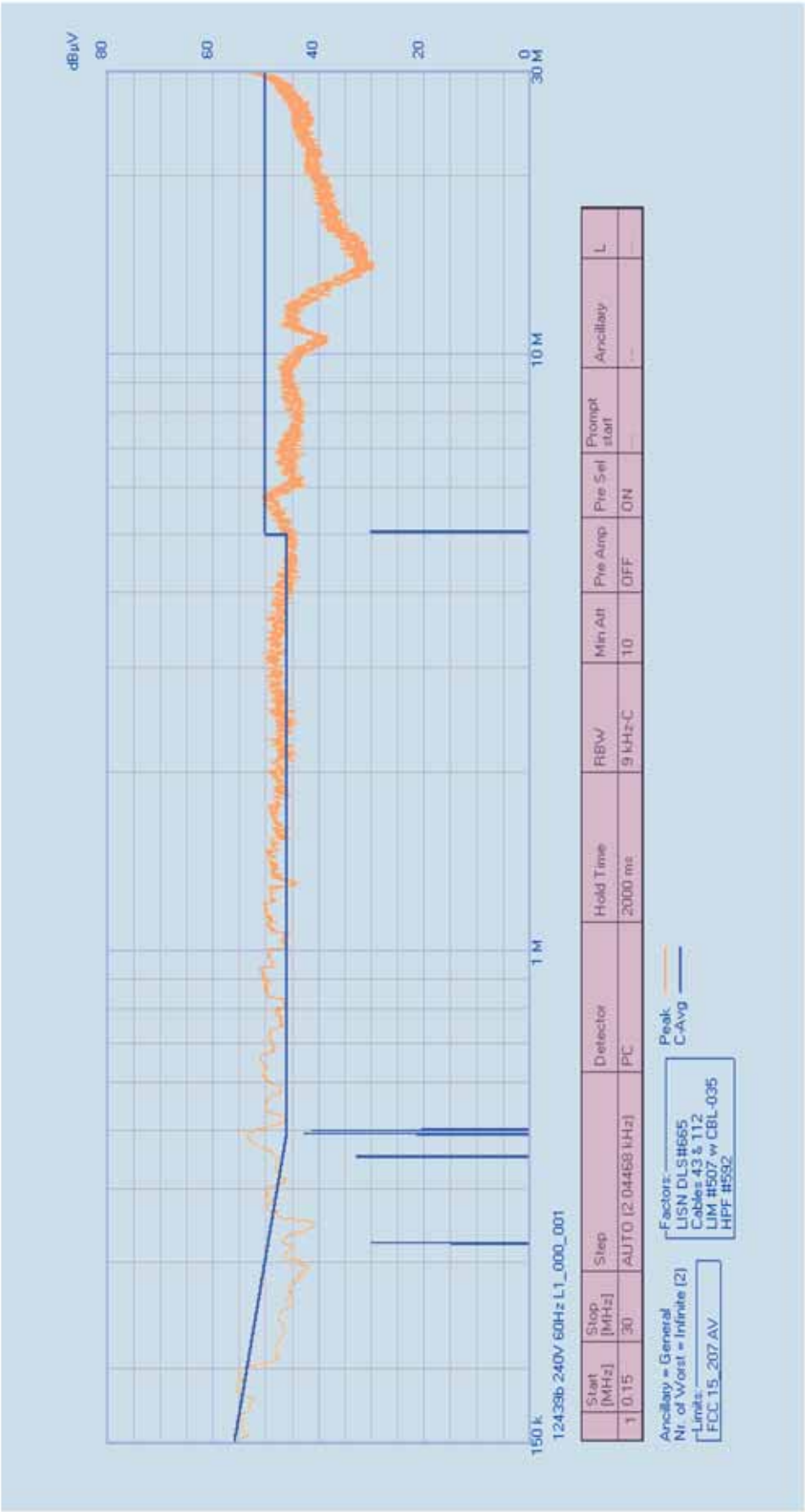
Receiver Details

Model : PMM 9010F
Brand : Narda
S/N : 020W40102
Last Calibration : 03/30/2022

NOTE: The column in the table that is labeled "delta" shows the margin in dB with respect to the limit. A negative number indicates the level of the emission is under the limit by the given value, while a positive number indicates the emission level is above the limit by the given value.



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Appendix A: FCC Part 15.207 AC Line Conducted Emissions Test Data





Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Appendix A: FCC Part 15.207 AC Line Conducted Emissions Test Data



12439b 240V 60Hz L1_000_001 06/10/2022 15:25:27
Ref. SW 2.40 (January 2021)
Ref. FW 2.02 21/04/21
Margin: 100 dB

Frequency [MHz]	C-Avg [dBµV]	Limit FCC 15.207 [dBµV]	Delta [dB]	Factor LISN DLS#... [dB]	Factor Cables 43... [dB]	Factor LIM #507 ... [dB]	Factor HPF #592 [dB]
1 0.15	27.25	56.00	-28.75	0.15	0.03	9.71	2.33
2 0.3237978	29.90	49.61	-19.71	0.14	0.08	9.64	1.36
3 0.45261264	32.81	46.83	-14.02	0.14	0.09	9.70	0.94
4 0.49350624	42.74	46.11	-3.37	0.14	0.09	9.69	0.89
5 0.50168496	41.28	46.00	-4.72	0.14	0.09	9.69	0.87
6 5.02042776	30.14	50.00	-19.86	0.16	0.41	9.68	0.20
7 29.9921046	24.65	50.00	-25.35	0.05	0.97	9.92	0.46



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Appendix A: FCC Part 15.207 AC Line Conducted Emissions Test Data



PMM NARDA REPORT: 12439b 240V 60Hz L1_000_000

Report issuing date : 10-06-2022

Standard : FCC Part 15.207
Test Type : Voltage Mains Test
Test Site : DLS OATS Screen Room
Temperature : 73 °F
Humidity : 41 %
Test Specs : Line 1: [X]Quasi-Peak Detector [] Average Detector
Operator : J. Schneider
DLS Project # : 12439
Result : Pass

EUT

Manufacturer : Brady Corporation
Model : M610 (EM3-02)
Product : Hand Held/Table Top Printer
Notes : 240 V 60 Hz
Comments : BLE transmit at 2402 MHz, 1Mbps (worst case in module certification test report)

Testing Company : DLS Electronic Systems
Tel./Fax : 262-279-0210
Web site : <http://www.dlsamc.com>

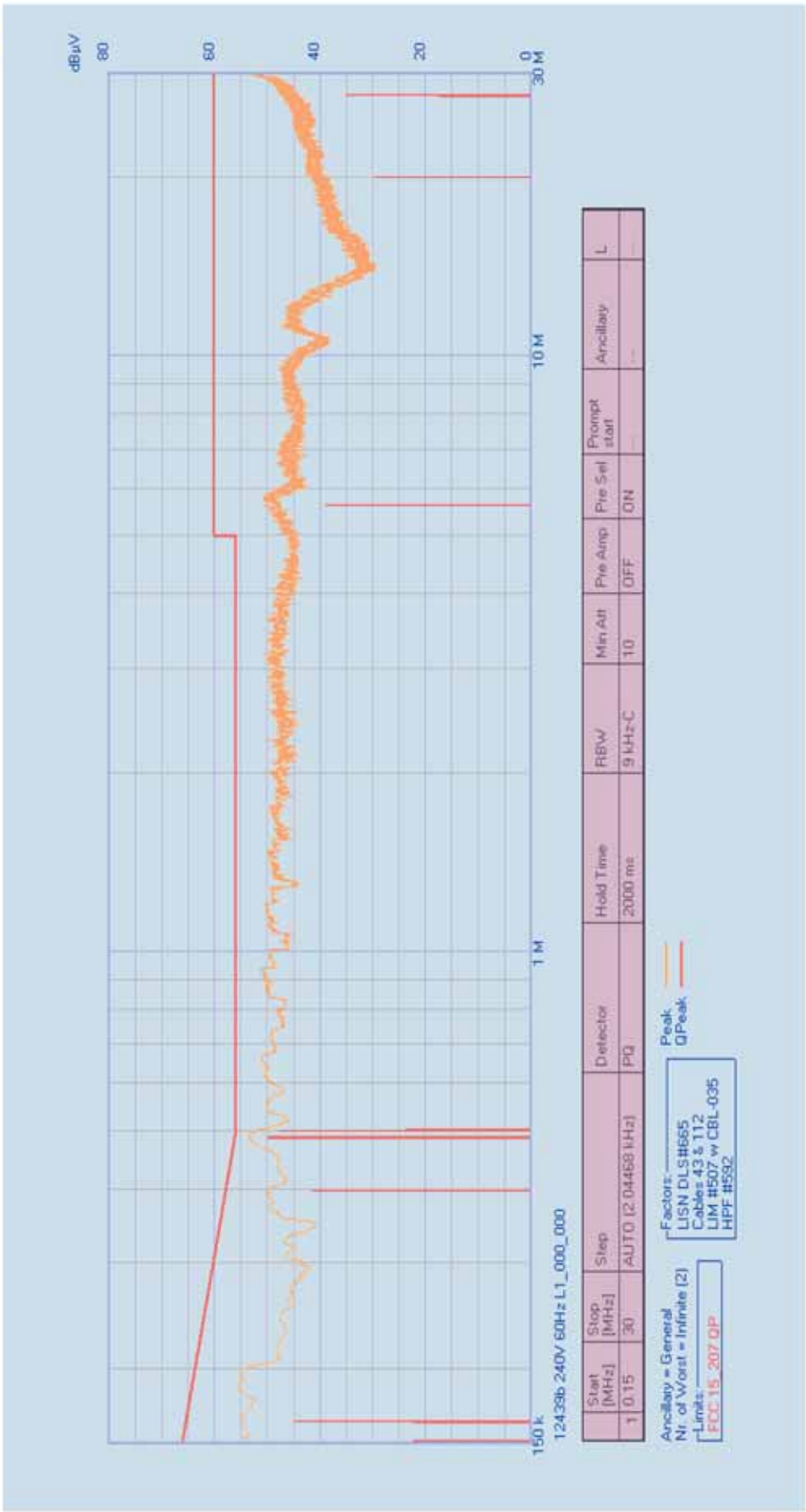
Receiver Details

Model : PMM 9010F
Brand : Narda
S/N : 020W40102
Last Calibration : 03/30/2022

NOTE: The column in the table that is labeled "delta" shows the margin in dB with respect to the limit. A negative number indicates the level of the emission is under the limit by the given value, while a positive number indicates the emission level is above the limit by the given value.



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Appendix A: FCC Part 15.207 AC Line Conducted Emissions Test Data





Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Appendix A: FCC Part 15.207 AC Line Conducted Emissions Test Data



12439b 240V 60Hz L1_000_000 06/10/2022 15:23:31
Rel. SW 2.40 (January 2021)
Rel. FW 2.02 21/04/21
Margin: 100 dB

Frequency [MHz]	QPeak [dBµV]	Limit FCC 15.207 [dBµV]	Delta [dB]	Factor LISN DLS#... [dB]	Factor Cables 43... [dB]	Factor LIM #507 ... [dB]	Factor HPF #592 [dB]
1 0.15	44.83	66.00	-21.17	0.15	0.03	9.71	2.33
2 0.16226908	44.59	65.35	-20.76	0.15	0.05	9.67	2.18
3 0.39740628	41.36	57.91	-16.55	0.14	0.07	9.68	1.10
4 0.4873722	45.89	56.21	-6.32	0.14	0.09	9.69	0.90
5 0.50168496	47.77	56.00	-8.23	0.14	0.09	9.69	0.87
6 3.60316156	38.94	60.00	-21.06	0.16	0.46	9.69	0.20
7 19.87911732	29.64	60.00	-30.36	0.14	0.77	9.77	0.31
8 27.20929512	35.02	60.00	-24.98	0.07	0.90	9.81	0.42
9 29.9818812	41.87	60.00	-18.13	0.05	0.97	9.92	0.46



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Appendix A: FCC Part 15.207 AC Line Conducted Emissions Test Data



PMM NARDA REPORT: 12439b 240V 60Hz L2_000

Report issuing date : 10-06-2022

Standard : FCC Part 15.207
Test Type : Voltage Mains Test
Test Site : DLS OATS Screen Room
Temperature : 73 °F
Humidity : 41 %
Test Specs :
Operator : J. Schneider
DLS Project # : 12439
Result : Pass

EUT

Manufacturer : Brady Corporation
Model : M610 (EM3-02)
Product : Hand Held/Table Top Printer
Notes : 240 V 60 Hz
Comments : BLE transmit at 2402 MHz, 1Mbps (worst case in module certification test report)

Testing Company : DLS Electronic Systems
Tel./Fax : 262-279-0210
Web site : <http://www.dlsenc.com>

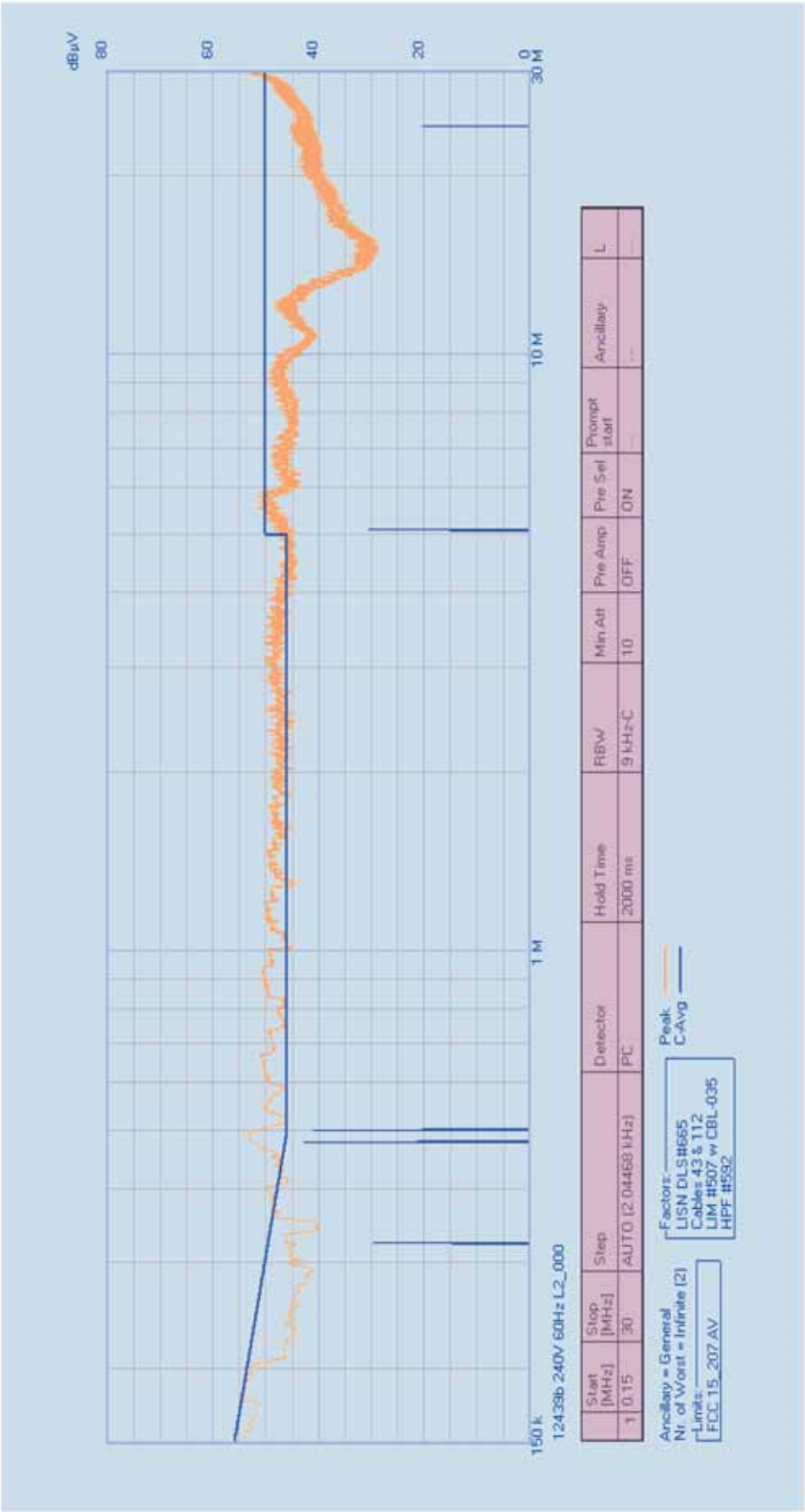
Receiver Details

Model : PMM 9010F
Brand : Narda
S/N : 020W40102
Last Calibration : 03/30/2022

NOTE: The column in the table that is labeled "delta" shows the margin in dB with respect to the limit. A negative number indicates the level of the emission is under the limit by the given value, while a positive number indicates the emission level is above the limit by the given value.



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Appendix A: FCC Part 15.207 AC Line Conducted Emissions Test Data





Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Appendix A: FCC Part 15.207 AC Line Conducted Emissions Test Data



12439b 240V 60Hz L2_000 06/10/2022 15:27:09

Rel. SW 2.40 (January 2021)

Rel. FW 2.02 21/04/21

Margin: 100 dB

Frequency [MHz]	C-Avg [dBμV]	Limit FCC 15.207 [dBμV]	Delta [dB]	Factor LISN DLS#... [dB]	Factor Cables 43... [dB]	Factor LIM #507 ... [dB]	Factor HPF #592 [dB]
1 0.15	26.67	56.00	-29.33	0.15	0.03	9.71	2.33
2 0.3237978	29.61	49.61	-20.00	0.14	0.08	9.64	1.36
3 0.47919348	42.62	46.35	-3.70	0.14	0.09	9.69	0.91
4 0.50168496	41.05	46.00	-4.95	0.14	0.09	9.69	0.87
5 5.07154476	30.32	50.00	-19.68	0.16	0.42	9.69	0.20
6 23.99914752	20.32	50.00	-29.68	0.10	0.85	9.76	0.34
7 29.99005992	25.01	50.00	-24.99	0.05	0.97	9.92	0.46



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Appendix A: FCC Part 15.207 AC Line Conducted Emissions Test Data



PMM NARDA REPORT: 12439b 240V 60Hz L2_001

Report issuing date : 10-06-2022

Standard : FCC Part 15.207
Test Type : Voltage Mains Test
Test Site : DLS OATS Screen Room
Temperature : 73 °F
Humidity : 41 %
Test Specs :
Operator : J. Schneider
DLS Project # : 12439
Result : Pass

EUT

Manufacturer : Brady Corporation
Model : M610 (EM3-02)
Product : Hand Held/Table Top Printer
Notes : 240 V 60 Hz
Comments : BLE transmit at 2402 MHz, 1Mbps (worst case in module certification test report)

Testing Company : DLS Electronic Systems
Tel./Fax : 262-279-0210
Web site : <http://www.dlsamc.com>

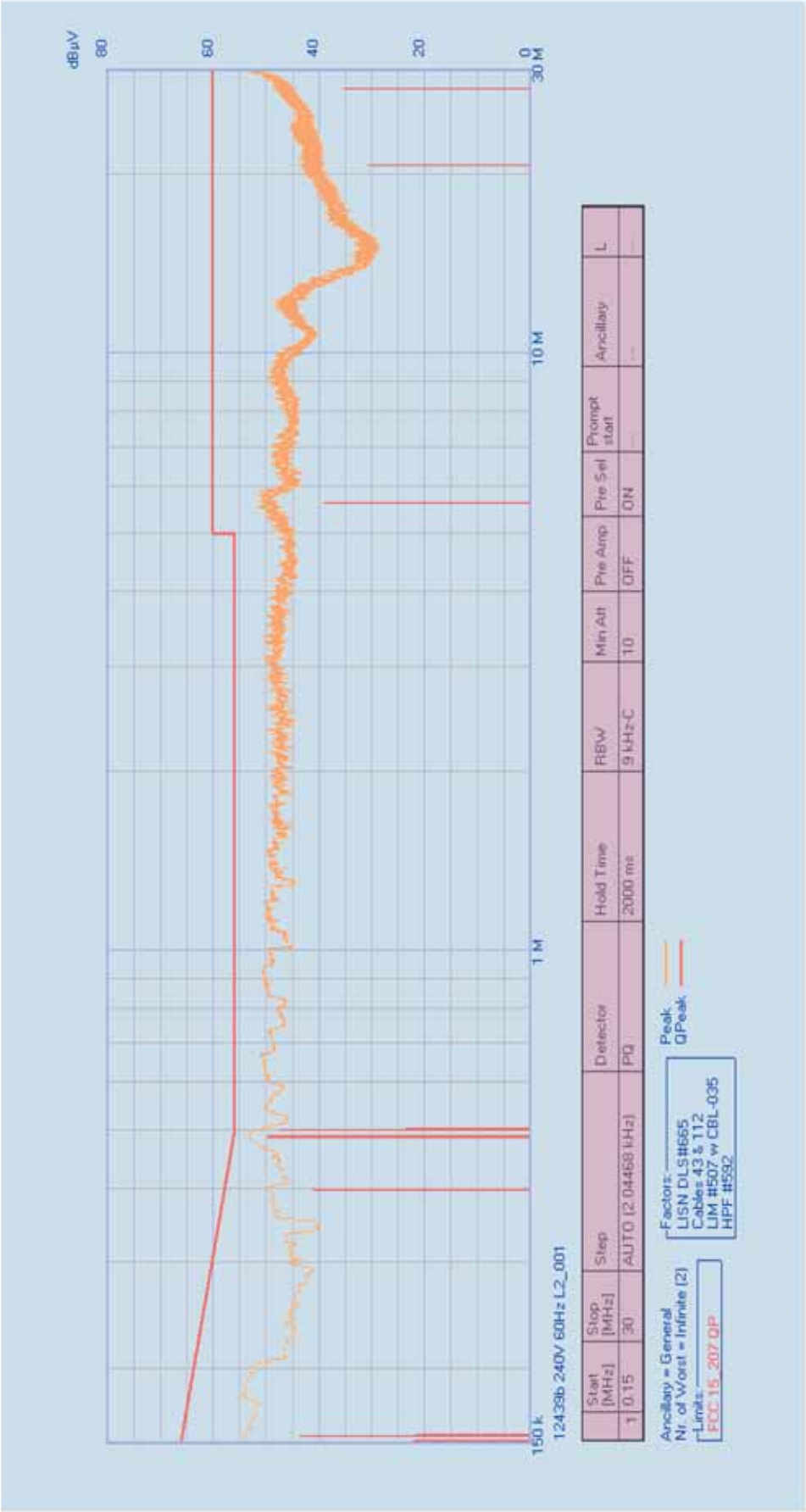
Receiver Details

Model : PMM 9010F
Brand : Narda
S/N : 020W40102
Last Calibration : 03/30/2022

NOTE: The column in the table that is labeled "delta" shows the margin in dB with respect to the limit. A negative number indicates the level of the emission is under the limit by the given value, while a positive number indicates the emission level is above the limit by the given value.



Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Appendix A: FCC Part 15.207 AC Line Conducted Emissions Test Data





Company: Brady Corporation, USA
Model Tested: M610
Report Number: 27339
Project Number: 12439
Appendix A: FCC Part 15.207 AC Line Conducted Emissions Test Data



12439b 240V 60Hz L2_001_06/10/2022 15:28:33
Rel. SW 2.40 (January 2021)
Rel. FW 2.02 21/04/21
Margin: 100 dB

Frequency [MHz]	QPeak [dBµV]	Limit FCC 15.207 [dBµV]	Delta [dB]	Factor LISN DLS#... [dB]	Factor Cables 43... [dB]	Factor LIM #507 ... [dB]	Factor HPF #592 [dB]
1 0.15	44.35	66.00	-21.65	0.15	0.03	9.71	2.33
2 0.15408936	43.61	65.78	-22.17	0.15	0.04	9.70	2.28
3 0.39740628	41.08	57.91	-16.83	0.14	0.07	9.68	1.10
4 0.4873722	45.71	56.21	-6.50	0.14	0.09	9.69	0.90
5 0.50168496	47.59	56.00	-8.41	0.14	0.09	9.69	0.87
6 3.60111689	39.12	60.00	-20.88	0.16	0.46	9.69	0.20
7 20.63564892	30.68	60.00	-29.32	0.14	0.78	9.76	0.32
8 27.64685664	35.46	60.00	-24.54	0.07	0.91	9.83	0.43
9 29.99005992	42.16	60.00	-17.84	0.05	0.97	9.92	0.46