

04/24/2026

HID Global Corporation (US)
611 Center Ridge Drive
Austin, TX 78753
USA

Dear Erik Ray,

Enclosed is the EMC test report for compliance testing of HID Global Corporation (US), Color Card Printer, DTC1500, tested to the requirements of:

- Title 47 of the CFR, Part 15.225, Subpart C for Certification as an Intentional Radiator.
- RSS-210: Issue 11, License-Exempt Radio Apparatus: Category 1 Equipment

Thank you for using the services of Eurofins E&E North America. If you have any questions regarding these results or if we can be of further service to you, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Nancy LaBrecque".

Nancy LaBrecque
Documentation Department
Eurofins Electrical and Electronic Testing NA, Inc.

Reference: WIRA139157-FCC-IC-HF

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Eurofins MET Laboratories Inc. (Eurofins E&E North America) is part of the Eurofins Electrical & Electronics (E&E) global compliance network.



**13.56MHz RFID
Test Report**

for the

**HID Global Corporation (US)
Color Card Printer, DTC1500 (Model: DTC1500)**

Tested under
the FCC Certification Rules
contained in
15.225 Subpart C and
RSS-210: Issue 11
for Intentional Radiators



Bryan Taylor, Wireless Team Lead
Electromagnetic Compatibility Lab



Nancy LaBrecque
Documentation Department

Engineering Statement: The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them.



Matthew Hinojosa
EMC Manager, Austin Electromagnetic Compatibility Lab

Report Status Sheet

Revision	Report Date	Reason for Revision
Ø	04/24/2026	Initial Issue.

Executive Summary

A. Purpose of Test

An EMC evaluation was performed to determine compliance of the HID Global Corporation (US) Color Card Printer, DTC1500, with the requirements of Part 15, §15.225 and RSS-210 Issue 11, Annex B, B.6. All references are to the most current version of Title 47 of the Code of Federal Regulations and RSS-210 in effect. The following data is presented in support of the Certification of the Color Card Printer, DTC1500. HID Global Corporation (US) should retain a copy of this document which should be kept on file for at least two years after the manufacturing of the Color Card Printer, DTC1500, has been **permanently** discontinued.

B. Executive Summary

The following tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15, §15.225 and RSS-210, in accordance with HID Global Corporation (US), under purchase order number HID028122. All tests were conducted using measurement procedures ANSI C63.4-2014 and ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024.

FCC Reference	ISED Reference	Description	Compliance
Part 15 §15.203	---	Antenna Requirement	Compliant
Part 15 §15.207(a)	RSS-Gen (8.8)	Conducted Emission Limits	Compliant
Part 15 §15.215	---	20dB Occupied Bandwidth	Compliant
---	RSS-Gen (6.7)	99% Occupied Bandwidth	Compliant
Part 15 §15.225(a)	RSS-210 (B.6.a.i)	Field Strength emissions within the band 13.553 – 13.567 MHz	Compliant
Part 15 §15.225(b)	RSS-210 (B.6.a.ii)	Field Strength emissions within the band 13.410 – 13.553 MHz and 13.567 – 13.710 MHz	Compliant
Part 15 §15.225(c)	RSS-210 (B.6.a.iii)	Field Strength emissions within the band 13.110 – 13.410 MHz and 13.710 – 14.010 MHz	Compliant
Part 15 §15.225(d)	RSS-210 (B.6.a.iv)	Outside-Band Field Strength emissions per 15.209 - 13.110 – 14.010 MHz	Compliant
Part 15 §15.225(e)	RSS-210 (B.6.b)	Frequency Tolerance of the Carrier	Compliant

Table 1. Executive Summary

Equipment Configuration

A. Overview

Eurofins E&E North America was contracted by HID Global Corporation (US) to perform testing on the Color Card Printer, DTC1500.

This document describes the test setups, test methods, required test equipment, and the test limit criteria used to perform compliance testing of the HID Global Corporation (US) Color Card Printer, DTC1500.

The results obtained relate only to the item(s) tested.

Product Name:	Color Card Printer, DTC1500	
Model(s) Tested:	DTC1500	
Model(s) Covered:	DTC1500	
Test Sample Number:	26100-9, 26100-16, 26100-23	
EUT Specifications:	Primary Power: 24VDC via AC / DC Power Adapter	
	Type of Modulation(s):	ASK
	Equipment Code:	DXX
	Maximum Fundamental Field Strength:	66.24dBuV/m
	Antenna Type:	loop
	EUT Frequency Ranges:	13.56MHz
Analysis:	The results obtained relate only to the item(s) tested.	
Environmental Test Conditions:	Temperature: 15-35° C	
	Relative Humidity: 30-60%	
	Barometric Pressure: 860-1060 mbar	
Evaluated by:	Bryan Taylor	
Sample Receive Date:	11/25/2025	
Test Start Date:	12/2/2025	
Report Date:	04/24/2026	

Table 2. EUT Summary Table

B. References

CFR 47, Part 15, Subpart C	Federal Communication Commission, Code of Federal Regulations, Title 47, Part 15: General Rules and Regulations, Allocation, Assignment, and Use of Radio Frequencies
RSS-210 Issue 11	Licence-Exempt Radio Apparatus: Category I Equipment
ANSI C63.4:2017	Methods and Measurements of Radio-Noise Emissions from Low-Voltage Electrical And Electronic Equipment in the Range of 9 kHz to 40 GHz
ISO/IEC 17025:2017	General Requirements for the Competence of Testing and Calibration Laboratories
ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024	American National Standard for Testing Unlicensed Wireless Devices

Table 3. References

C. Test Site

Eurofins MET Laboratories Inc. (Eurofins E&E North America) is part of the Eurofins Electrical & Electronics (E&E) global compliance network.

All testing was performed at Eurofins E&E North America, 13501 McCallen Pass, Austin, TX 78753. All equipment used in making physical determinations is accurate and bears recent traceability to the National Institute of Standards and Technology.

ISED Lab Info:

CAB Identifier: US0004

Company Number: 2043D

FCC Lab Info:

Designation Number: US1127

Radiated Emissions measurements were performed in a 10 meter semi-anechoic chamber (equivalent to an Open Area Test Site). In accordance with §2.948(a)(3), a complete site description is contained at MET Laboratories.

Correlation between semi-anechoic chamber and OATS:

Two calibrated Loop antennas were used on an OATS. One antenna was driven by a signal generator with a known power. The receive antenna was initially placed 1m away from the transmit antenna. The two antennas were placed parallel to each other. The receive antenna was in turn connected to a calibrated spectrum analyzer. The emissions were swept from 9 kHz to 30 MHz. The receive antenna was then rotated 90 degrees and measurements re-taken. Additional measurements were taken when the receive antenna was placed at 3meters.

This same setup was taken to inside the semi-anechoic chamber and the measurements repeated.

The data was used to correlate the semi-anechoic chamber and OATS.

D. Measurement Uncertainty

Test Method	Typical Expanded Uncertainty	K	Confidence Level
RF Frequencies	±4.52 Hz	2	95%
RF Power Conducted Emissions	±2.97 dB	2	95%
RF Power Radiated Emissions	±2.95 dB	2	95%
Radiated Emissions, (30 MHz – 1 GHz)	±2.95	2	95%
Radiated Emissions, (1 GHz – 18 GHz)	±3.54	2	95%
Conducted Emission Voltage	±2.97	2	95%

Table 4. Uncertainty Calculations Summary

E. Description of Test Sample

The Color Card Printer, DTC1500 is a modular, direct-to-card printer system designed to print, laminate, and encode ID cards. Three systems were tested to cover all optional modules as follows:

Configuration 0 (Base Model Without OMNIKEY):

Input Hopper, Printer, Flipper, Mag Encoder, Contact Encoder, Laminator Upper RFID, Ribbon RFID

Configuration 1 (SN C5020231):

Input Hopper, Printer, Flipper, Mag Encoder, Contact Encoder, Laminator Upper RFID, Ribbon RFID OMNIKEY 5122

Configuration 2 (SN C5110896):

Input Hopper, Printer, Flipper, Mag Encoder, Contact Encoder, Laminator Upper RFID, Ribbon RFID OMNIKEY 5127SI

Configuration 3 (SN C5110911):

Input Hopper, Printer, Flipper, Mag Encoder, Contact Encoder, Laminator Upper RFID, Ribbon RFID, OMNIKEY 5127CK MINI

Each of the three configurations above are identical with the exception of the OMNIKEY encoder installed into each. Each version includes an identical "ribbon" radio operating at 13.56MHz and identical "Laminator" radio (upper only) operating at 13.56MHz. The table below indicates the radios onboard each OMNIKEY encoder option:

Test Configuration	Model Number	OMNIKEY Encoder Installed	Transmitters Onboard
Configuration 0	DTC1500	None	Ribbon (13.56MHz) Laminator (13.56MHz)
Configuration 1	DTC1500-1	OMNIKEY 5122	Ribbon (13.56MHz) Laminator (13.56MHz) OMNIKEY 5122 (13.56MHz)
Configuration 2	DTC1500-2	OMNIKEY 5127SI	Ribbon (13.56MHz) Laminator (13.56MHz) OMNIKEY 5127SI (125kHz, 13.56MHz)
Configuration 3	DTC1500-3	OMNIKEY 5127CK MINI	Ribbon (13.56MHz) Laminator (13.56MHz) OMNIKEY 5127CK MINI (125kHz, 13.56MHz) BLE (See Note)

Note that the BLE radio onboard the OMNIKEY 5127 CK MINI encoder is not used and is disabled within the DTC1500.

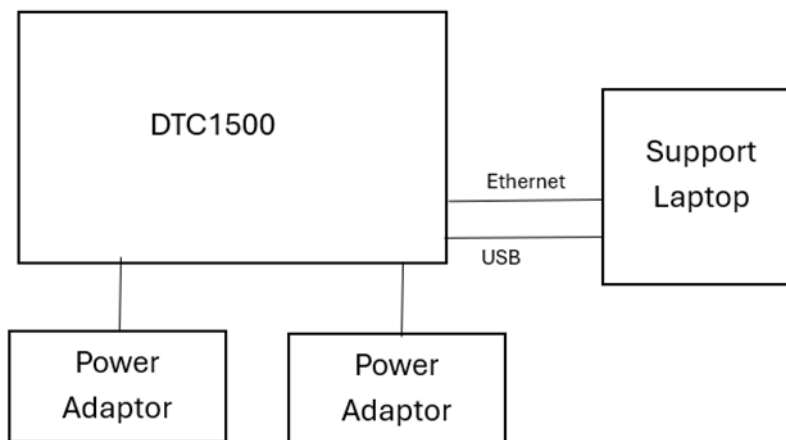


Figure 1. Block Diagram of Test Configuration

F. Equipment Configuration

The individual radios onboard were controlled by software on the support laptop. The software did not allow for adjusting of output power since that is at a fixed non-adjustable level.

G. Support Equipment

Support equipment necessary for the operation and testing of the EUT is included in the following list.

Ref. ID	Name/Description	Manufacturer	Model Number	Customer Supplied Calibration Data
	Laptop Computer	Dell	Latitude	N/A

Table 5. Support Equipment

Ports and Cabling Information

Ref. Id	Port Name on EUT	Cable Description or reason for no cable	Qty	Length as tested (m)	Max Length (m)	Shielded? (Y/N)	Termination Box ID & Port Name
	USB	USB-A to USB- C Cable	1	2	2	Yes	Laptop
	Ethernet	Unshielded Network Cable	1	3	>3m	No	Laptop
	Power	DC Power Cable	2	2	2	No	AC outlet

Table 6. Ports and Cabling Information

H. Mode of Operation

The individual radios onboard were controlled by software on the support laptop. The software tools used were proprietary and provided by HID Global Corporation (US) for the sole purpose of controlling the radios during testing. The software did not allow for adjusting of output power since that is at a fixed non-adjustable level. The test tools used are as follows:

- Utility Commander – hdpX Agency edition v2.3
- SC Reader Radio Control Tool v4

I. Modifications

a) Modifications to EUT

No modifications were made to the EUT.

b) Modifications to Test Standard

No modifications were made to the test standard.

J. Disposition of EUT

The test sample including all support equipment submitted to the Electro-Magnetic Compatibility Lab for testing was returned to HID Global Corporation (US) upon completion of testing.

Antenna Requirements

§ 15.203 Antenna Requirement

Test Requirement:

§ 15.203: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

The structure and application of the EUT were analyzed to determine compliance with Section 15.203 of the Rules. Section 15.203 states that the subject device must meet at least one of the following criteria:

- a.) Antenna must be permanently attached to the unit.
- b.) Antenna must use a unique type of connector to attach to the EUT.
- c.) Unit must be professionally installed. Installer shall be responsible for verifying that the correct antenna is employed with the unit.

Results: The Color Card Printer, DTC1500 as evaluated, was compliant as the antennas were permanently attached.

Test Engineer(s): Bryan Taylor

Test Date(s): 12/2/2025

Conducted Emissions

§ 15.207(a) Conducted Emissions Limits

Test Requirement(s): § 15.207 (a): For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30MHz, shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency range (MHz)	§ 15.207(a), Conducted Limit (dB μ V)	
	Quasi-Peak	Average
* 0.15 - 0.5	66 - 56	56 - 46
0.5 - 5	56	46
5 - 30	60	50

Table 7. Conducted Limits for Intentional Radiators from FCC Part 15 § 15.207(a)

Note: *Decreases with the logarithm of the frequency.

RSS-GEN (8.8) AC Power-Line Conducted Emissions Limits

Test Requirement(s): **RSS-GEN (8.8):** Unless stated otherwise in the applicable RSS, for radio apparatus that are designed to be connected to the public utility AC power network, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the range 150 kHz to 30 MHz shall not exceed the limits in the below figure, as measured using a 50 μ H / 50 Ω line impedance stabilization network (LISN). This requirement applies for the radio frequency voltage measured between each power line and the ground terminal of each AC power-line mains cable of the EUT.

For an EUT that connects to the AC power lines indirectly, through another device, the requirement for compliance with the limits in the below figure shall apply at the terminals of the AC power-line mains cable of a representative support device, while it provides power to the EUT. The lower limit applies at the boundary between the frequency ranges. The device used to power the EUT shall be representative of typical applications.

Frequency (MHz)	Conducted Limit (dB μ V)	
	Quasi-Peak	Average
* 0.15-0.5	66 to 56	56 to 46 ¹
0.5-5	56	46
5-30	60	50

Table 8. AC Power Line Conducted Emissions Limits

Note: *Decreases with the logarithm of the frequency.

Test Procedure: The EUT was placed on a 0.8 m-high non-conducting table above a ground plane. The EUT was situated such that the back of the EUT was 0.4 m from one wall of the vertical ground plane, and the remaining sides of the EUT were no closer than 0.8 m from any other conductive surface. The EUT was powered from a 50 Ω /50 μ H Line Impedance Stabilization Network (LISN). The EMC receiver scanned the frequency range from 150 kHz to 30 MHz. Conducted Emissions measurements were made in accordance with *ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 "Procedures for Compliance Testing of Unlicensed Wireless Devices"*. The measurements were performed over the frequency range of 0.15 MHz to 30 MHz using a 50 Ω /50 μ H LISN as the input transducer to an EMI receiver.

Test Results: The Color Card Printer, DTC1500 was compliant with this requirement. Testing was performed on the AC input to an AC to DC power supply that was feeding the 12VDC to the Color Card Printer, DTC1500.

Test Engineer(s): Sergio Gutierrez

Test Date(s): 12/2/2025 – 12/4/2025

Conducted Emissions Voltage Test Setup

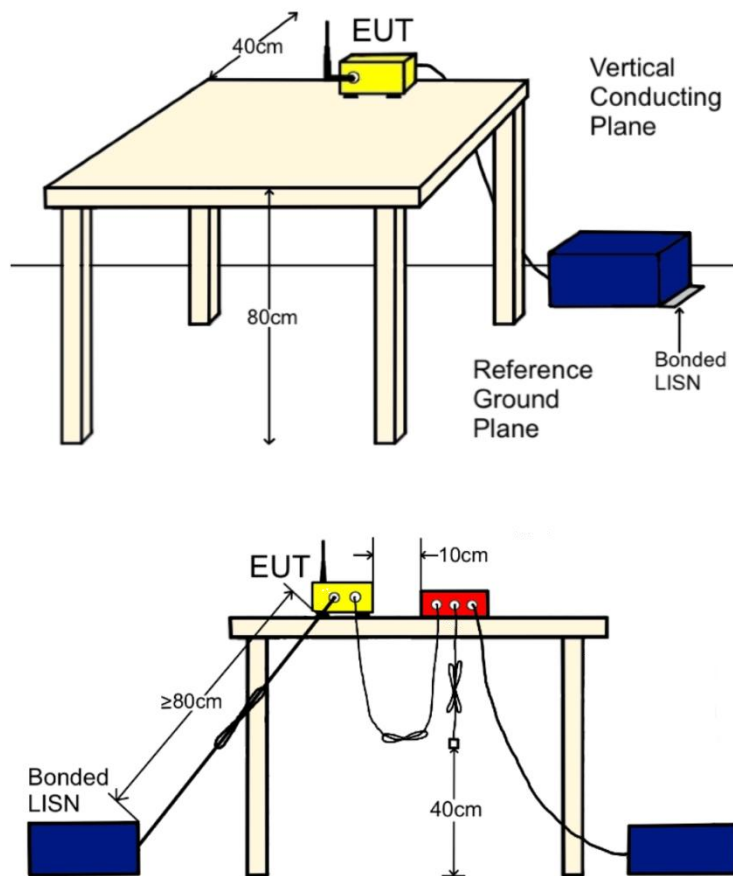
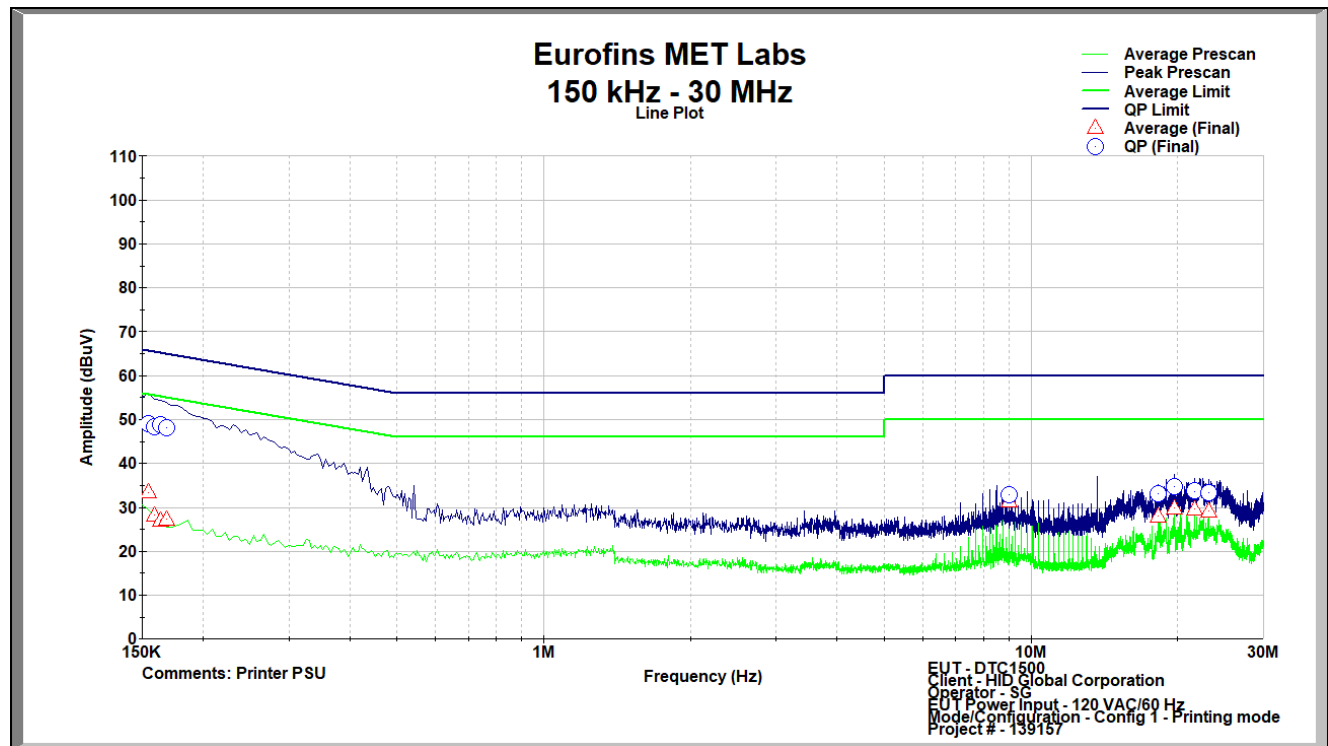


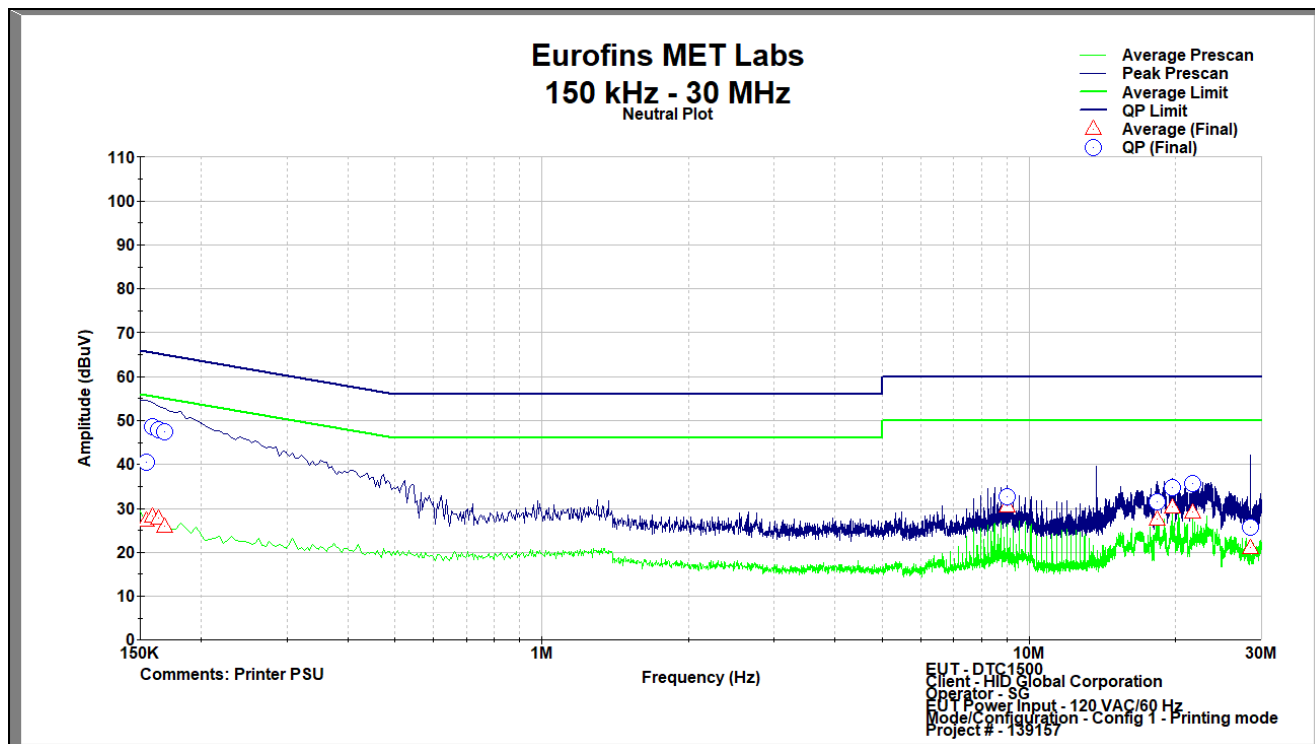
Figure 2. CEV Test Setup



Conducted Emissions, 15.207(a), Phase (Configuration 1)

Frequency (MHz)	Quasi-Peak (dBμV/m)	Quasi-Peak Limit (dBμV/m)	Quasi-Peak Margin (dB)	Average (dBμV/m)	Average Limit (dBμV/m)	Average Margin (dB)
0.154	49.028	65.871	16.844	33.448	55.871	22.424
0.159	48.425	65.743	17.318	28.16	55.743	27.583
0.164	48.709	65.614	16.906	27.179	55.614	28.435
0.168	48.042	65.486	17.443	27.396	55.486	28.089
9.027	32.964	60	27.036	31.409	50	18.591
18.244	33.007	60	26.993	28.12	50	21.88
19.712	34.683	60	25.317	29.788	50	20.212
21.666	33.669	60	26.331	29.553	50	20.447
23.133	33.29	60	26.71	29.193	50	20.807

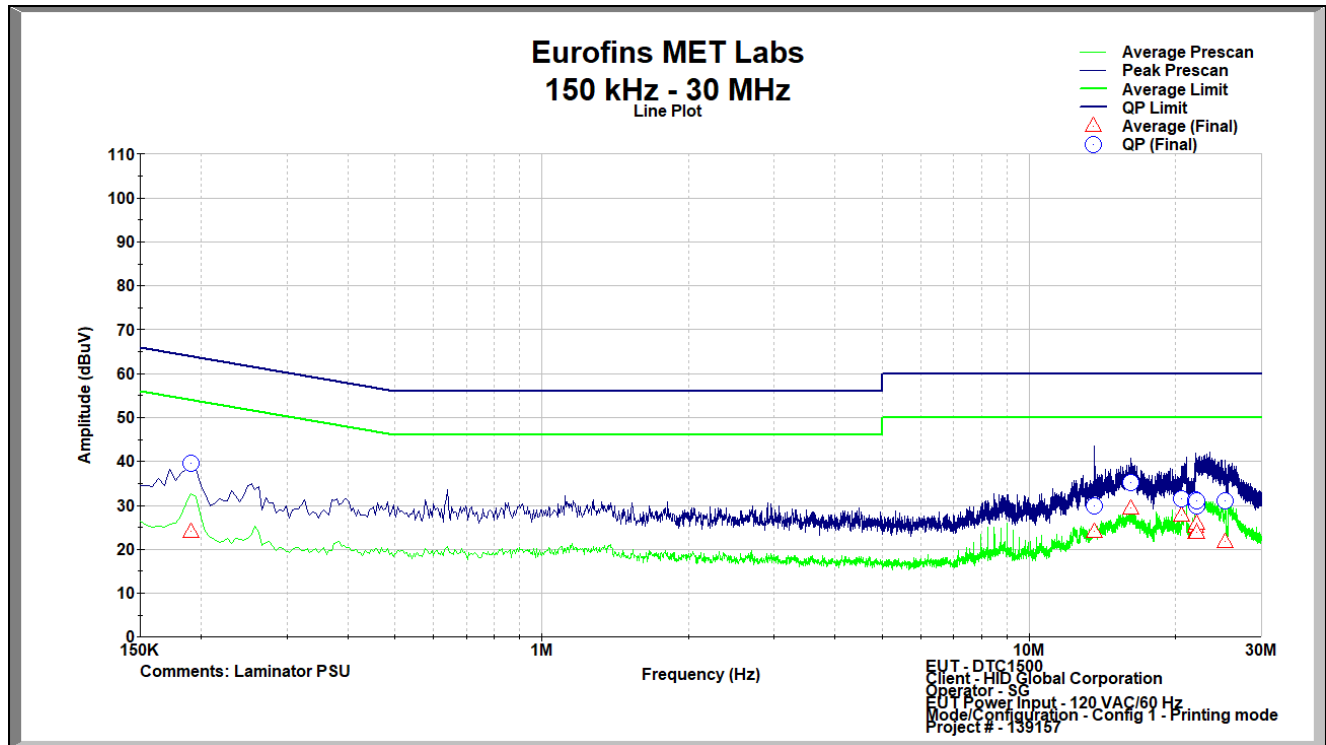
Table 9. Conducted Emissions, 15.207(a), Phase, Test Results (Configuration 1)



Conducted Emissions, 15.207(a), Neutral (Configuration 1)

Frequency (MHz)	Quasi-Peak (dBμV)	Quasi-Peak Limit (dBμV)	Quasi-Peak Margin (dB)	Average (dBμV)	Average Limit (dBμV)	Average Margin (dB)
0.154	40.601	65.871	25.271	27.398	55.871	28.474
0.159	48.687	65.743	17.056	28.254	55.743	27.488
0.164	47.969	65.614	17.645	27.846	55.614	27.769
0.168	47.403	65.486	18.083	25.845	55.486	29.641
9.027	32.682	60	27.318	30.62	50	19.38
18.308	31.571	60	28.429	27.636	50	22.364
19.712	34.79	60	25.21	30.426	50	19.574
21.666	35.746	60	24.254	29.24	50	20.76
28.437	25.594	60	34.406	21.076	50	28.924

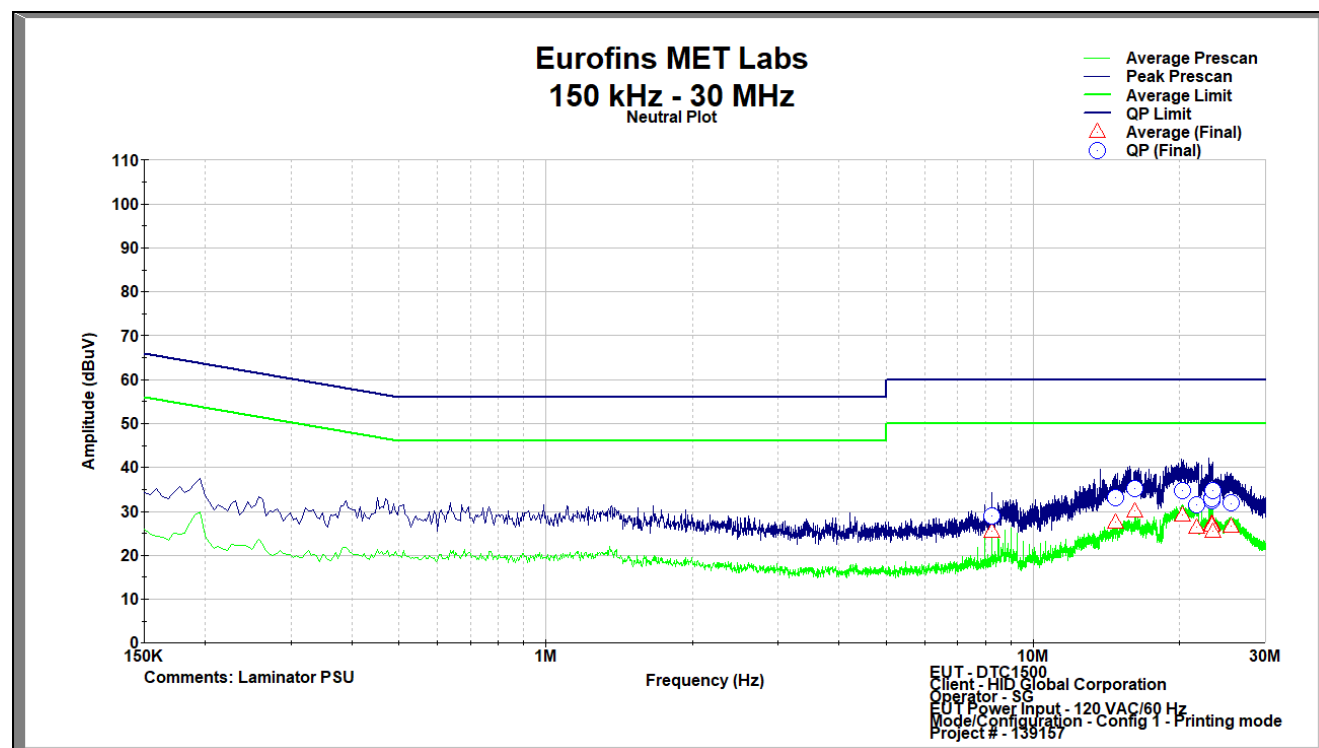
Table 10. Conducted Emissions, 15.207(a), Neutral, Test Results (Configuration 1)



Conducted Emissions, 15.207(a), Phase (Configuration 1, Laminator)

Frequency (MHz)	Quasi-Peak (dBμV/m)	Quasi-Peak Limit (dBμV/m)	Quasi-Peak Margin (dB)	Average (dBμV/m)	Average Limit (dBμV/m)	Average Margin (dB)
0.191	39.531	64.843	25.312	24.026	54.843	30.817
13.643	29.837	60	30.163	24.058	50	25.942
16.169	35.247	60	24.753	29.439	50	20.561
20.521	31.481	60	28.519	27.873	50	22.127
22.003	30.517	60	29.483	25.16	50	24.84
22.017	30.655	60	29.345	25.255	50	24.745
22.021	31.318	60	28.682	23.793	50	26.207
22.076	29.965	60	30.035	25.833	50	24.167
22.08	30.941	60	29.059	23.868	50	26.132
25.232	30.967	60	29.033	21.832	50	28.168

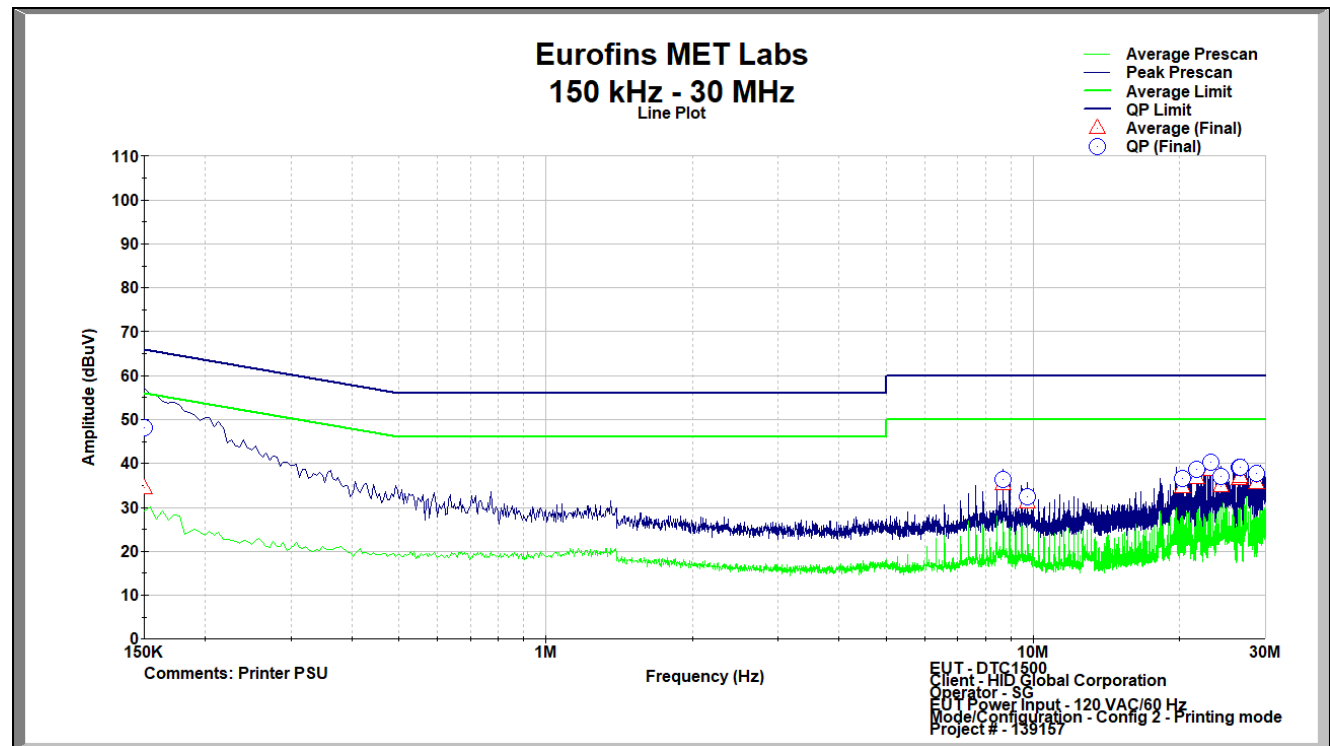
Table 11. Conducted Emissions, 15.207(a), Phase, Test Results (Configuration 1, Laminator)



Conducted Emissions, 15.207(a), Neutral (Configuration 1, Laminator)

Frequency (MHz)	Quasi-Peak (dBμV)	Quasi-Peak Limit (dBμV)	Quasi-Peak Margin (dB)	Average (dBμV)	Average Limit (dBμV)	Average Margin (dB)
8.226	28.966	60	31.034	25.45	50	24.55
14.745	33.119	60	26.881	27.59	50	22.41
16.169	35.23	60	24.77	30	50	20
20.261	34.624	60	25.376	29.144	50	20.856
21.671	31.534	60	28.466	26.45	50	23.55
23.255	33.16	60	26.84	27.327	50	22.673
23.264	32.379	60	27.621	27.204	50	22.796
23.277	32.842	60	27.158	26.947	50	23.053
23.43	34.755	60	25.245	25.462	50	24.538
25.439	31.829	60	28.171	26.73	50	23.27

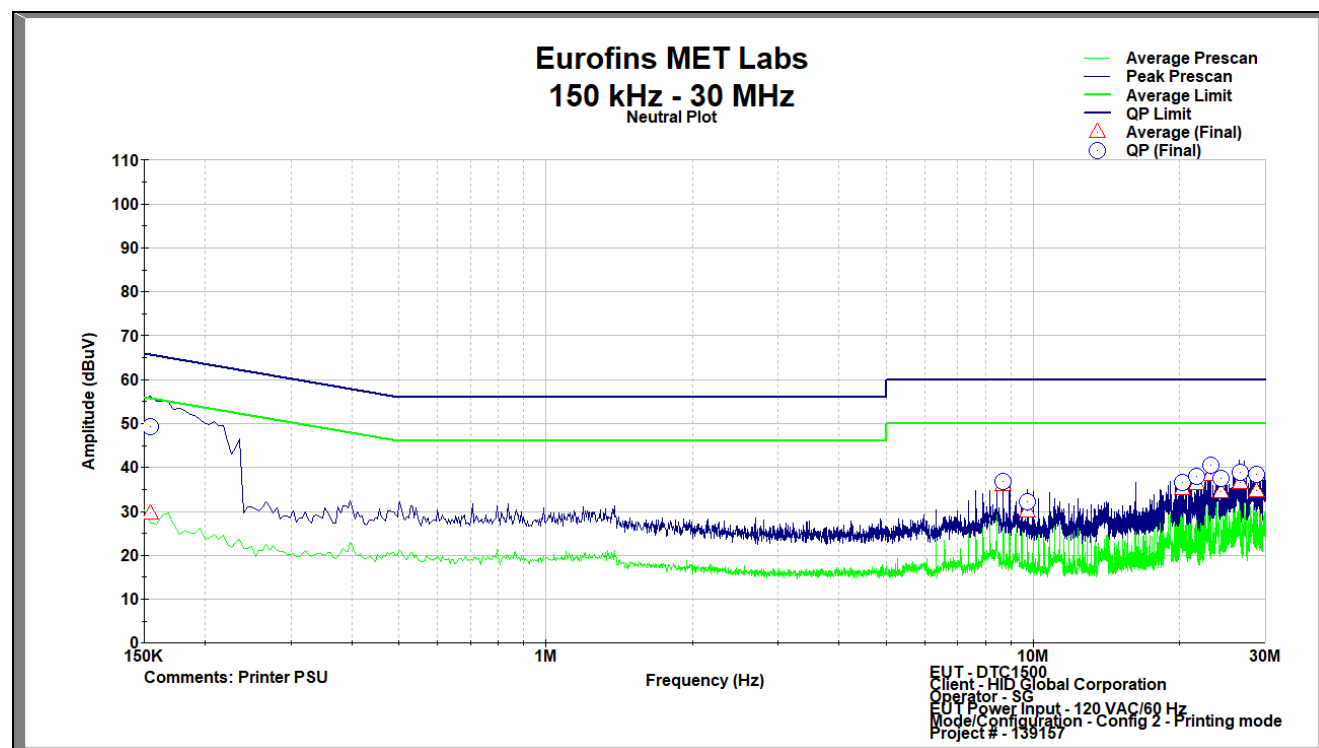
Table 12. Conducted Emissions, 15.207(a), Neutral, Test Results (Configuration 1, Laminator)



Conducted Emissions, 15.207(a), Phase (Configuration 2)

Frequency (MHz)	Quasi-Peak (dBμV/m)	Quasi-Peak Limit (dBμV/m)	Quasi-Peak Margin (dB)	Average (dBμV/m)	Average Limit (dBμV/m)	Average Margin (dB)
0.15	48.124	66	17.876	34.495	56	21.505
8.69	36.41	60	23.59	35.422	50	14.578
9.744	32.472	60	27.528	31.213	50	18.787
20.261	36.589	60	23.411	34.817	50	15.183
21.666	38.721	60	21.279	36.87	50	13.13
23.133	40.343	60	19.657	38.741	50	11.259
24.354	37.044	60	22.956	34.831	50	15.169
26.491	39.03	60	20.97	36.51	50	13.49
26.613	39.119	60	20.881	37.133	50	12.867
28.689	37.772	60	22.228	35.575	50	14.425

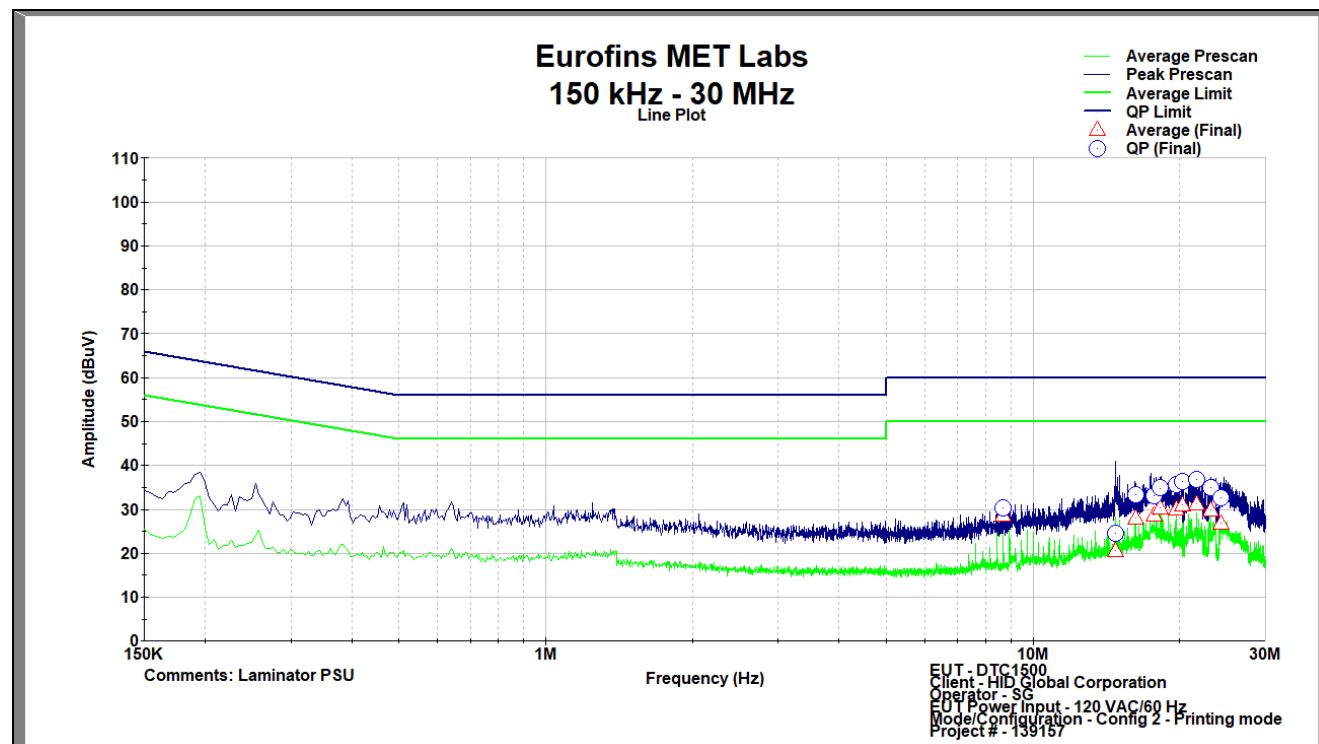
Table 13. Conducted Emissions, 15.207(a), Phase, Test Results (Configuration 2)



Conducted Emissions, 15.207(a), Neutral (Configuration 2)

Frequency (MHz)	Quasi-Peak (dBμV)	Quasi-Peak Limit (dBμV)	Quasi-Peak Margin (dB)	Average (dBμV)	Average Limit (dBμV)	Average Margin (dB)
0.154	49.265	65.871	16.607	29.567	55.871	26.304
8.69	36.821	60	23.179	36.06	50	13.94
9.744	32.224	60	27.776	30.102	50	19.898
20.261	36.488	60	23.512	35.072	50	14.928
21.666	37.877	60	22.123	36.303	50	13.697
23.133	40.407	60	19.593	38.391	50	11.609
24.354	37.581	60	22.419	34.54	50	15.46
26.613	38.975	60	21.025	36.607	50	13.393
28.689	38.412	60	21.588	34.792	50	15.208

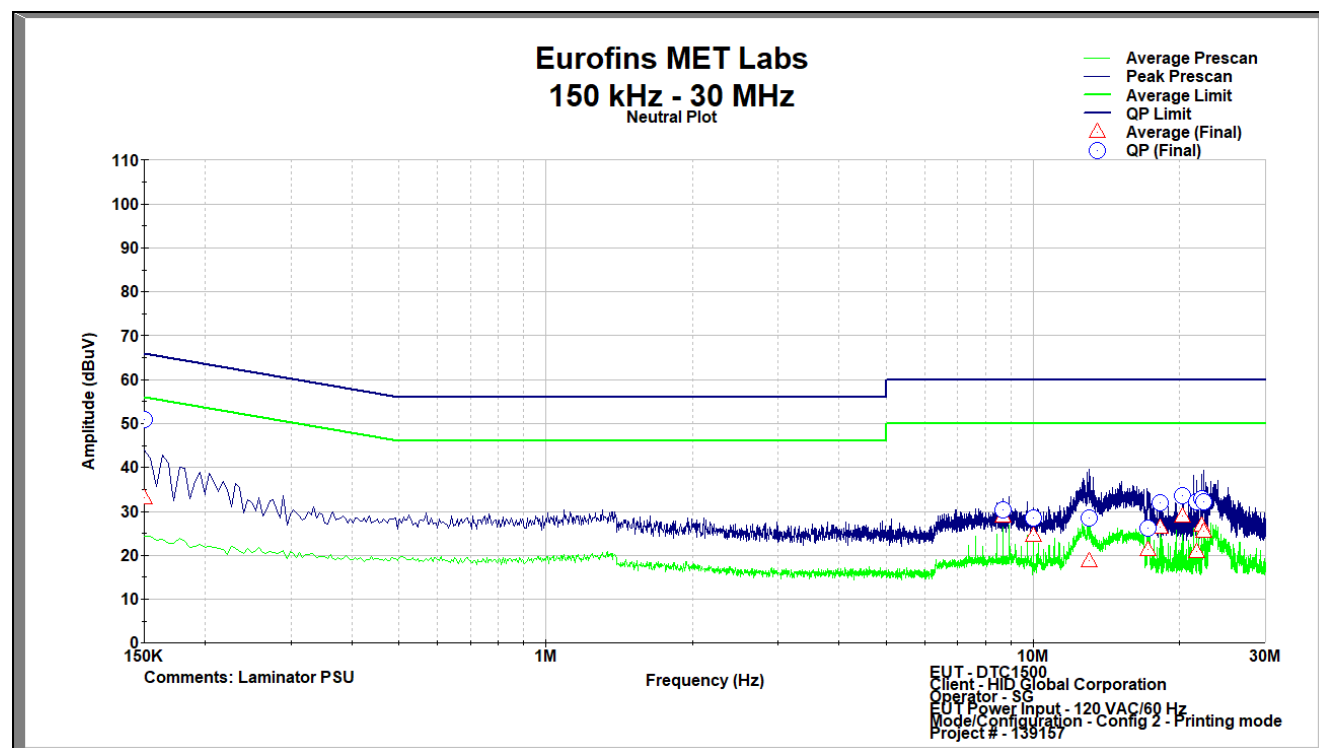
Table 14. Conducted Emissions, 15.207(a), Neutral, Test Results (Configuration 2)



Conducted Emissions, 15.207(a), Phase (Configuration 2, Laminator)

Frequency (MHz)	Quasi-Peak (dBμV/m)	Quasi-Peak Limit (dBμV/m)	Quasi-Peak Margin (dB)	Average (dBμV/m)	Average Limit (dBμV/m)	Average Margin (dB)
8.685	30.397	60	29.603	28.822	50	21.178
14.736	24.439	60	35.561	20.623	50	29.377
16.232	33.252	60	26.748	28.097	50	21.903
17.694	33.053	60	26.947	28.733	50	21.267
18.244	34.827	60	25.173	30.261	50	19.739
19.712	35.658	60	24.342	30.116	50	19.884
20.261	36.257	60	23.743	31.044	50	18.956
21.666	36.754	60	23.246	31.218	50	18.782
23.128	34.847	60	25.153	29.938	50	20.062
24.291	32.576	60	27.424	26.767	50	23.233

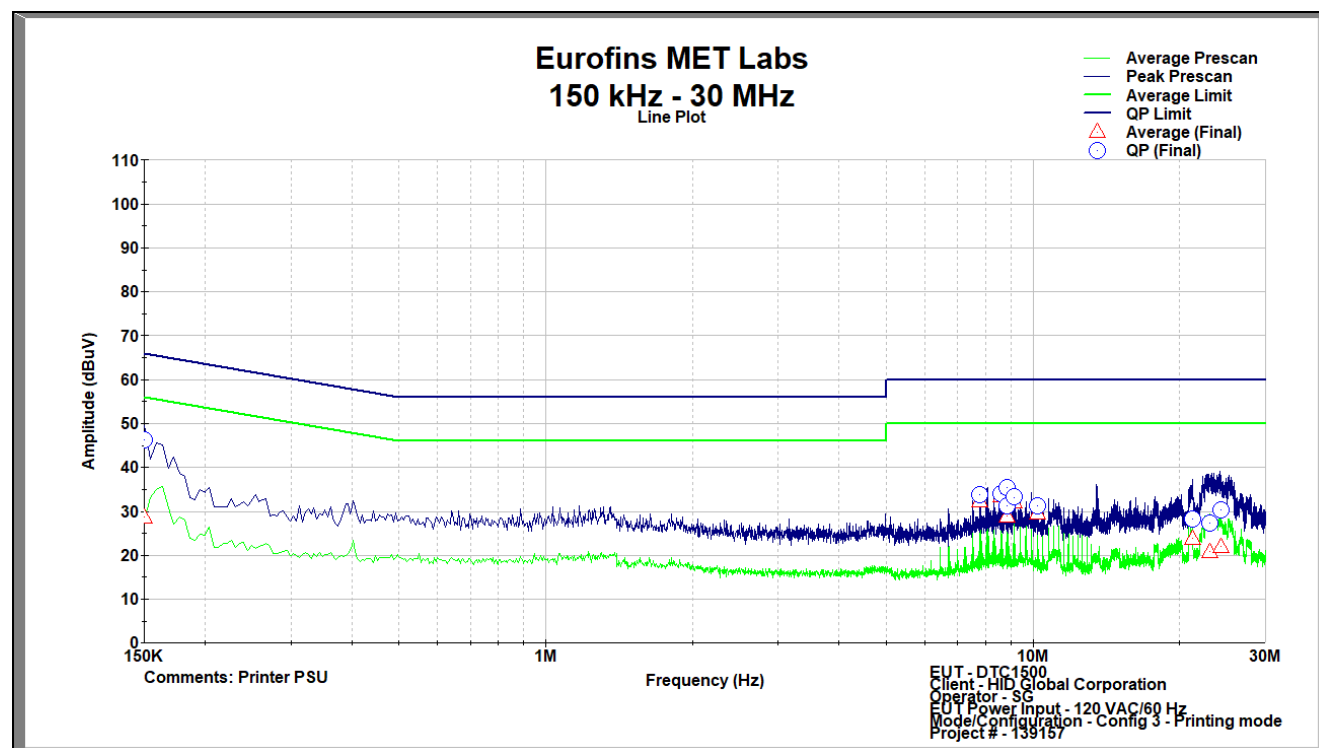
Table 15. Conducted Emissions, 15.207(a), Phase, Test Results (Configuration 2, Laminator)



Conducted Emissions, 15.207(a), Neutral (Configuration 2, Laminator)

Frequency (MHz)	Quasi-Peak (dBμV)	Quasi-Peak Limit (dBμV)	Quasi-Peak Margin (dB)	Average (dBμV)	Average Limit (dBμV)	Average Margin (dB)
0.15	50.84	66	15.16	33.068	56	22.932
8.685	30.429	60	29.571	28.91	50	21.09
10.001	28.502	60	31.498	24.589	50	25.411
13.04	28.403	60	31.597	18.865	50	31.135
17.181	26.182	60	33.818	21.24	50	28.76
18.244	31.942	60	28.058	26.348	50	23.652
20.261	33.633	60	26.367	28.929	50	21.071
21.652	32.27	60	27.73	20.911	50	29.089
22.233	32.764	60	27.236	26.84	50	23.16
22.372	32.073	60	27.927	25.552	50	24.448

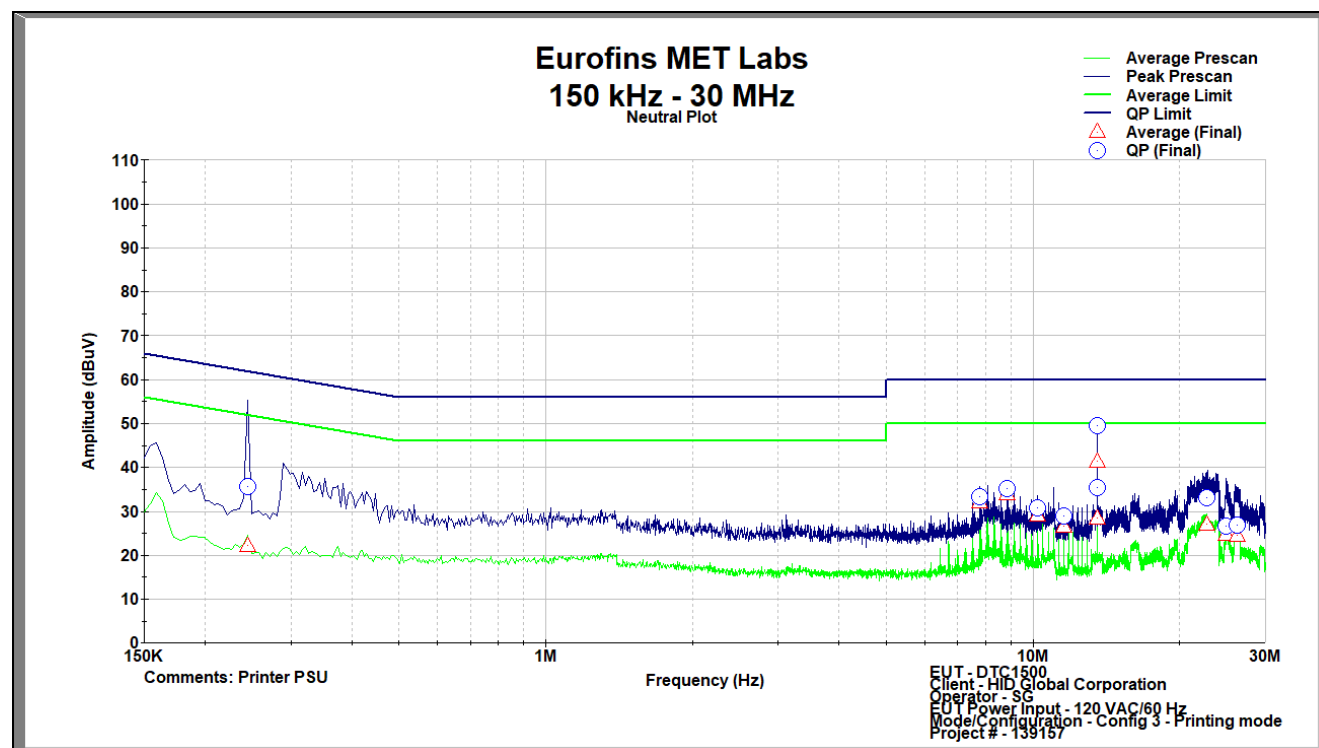
Table 16. Conducted Emissions, 15.207(a), Neutral, Test Results (Configuration 2, Laminator)



Conducted Emissions, 15.207(a), Phase (Configuration 3)

Frequency (MHz)	Quasi-Peak (dBμV/m)	Quasi-Peak Limit (dBμV/m)	Quasi-Peak Margin (dB)	Average (dBμV/m)	Average Limit (dBμV/m)	Average Margin (dB)
0.15	46.337	66	19.663	28.608	56	27.392
7.79	33.728	60	26.272	32.417	50	17.583
8.595	34.008	60	25.992	33.496	50	16.504
8.861	31.152	60	28.848	28.844	50	21.156
8.865	35.312	60	24.688	34.323	50	15.677
9.132	33.206	60	26.794	32.148	50	17.852
10.207	31.191	60	28.809	29.628	50	20.372
21.297	28.319	60	31.681	23.863	50	26.137
23.003	27.435	60	32.565	20.881	50	29.119
24.318	30.256	60	29.744	21.906	50	28.094

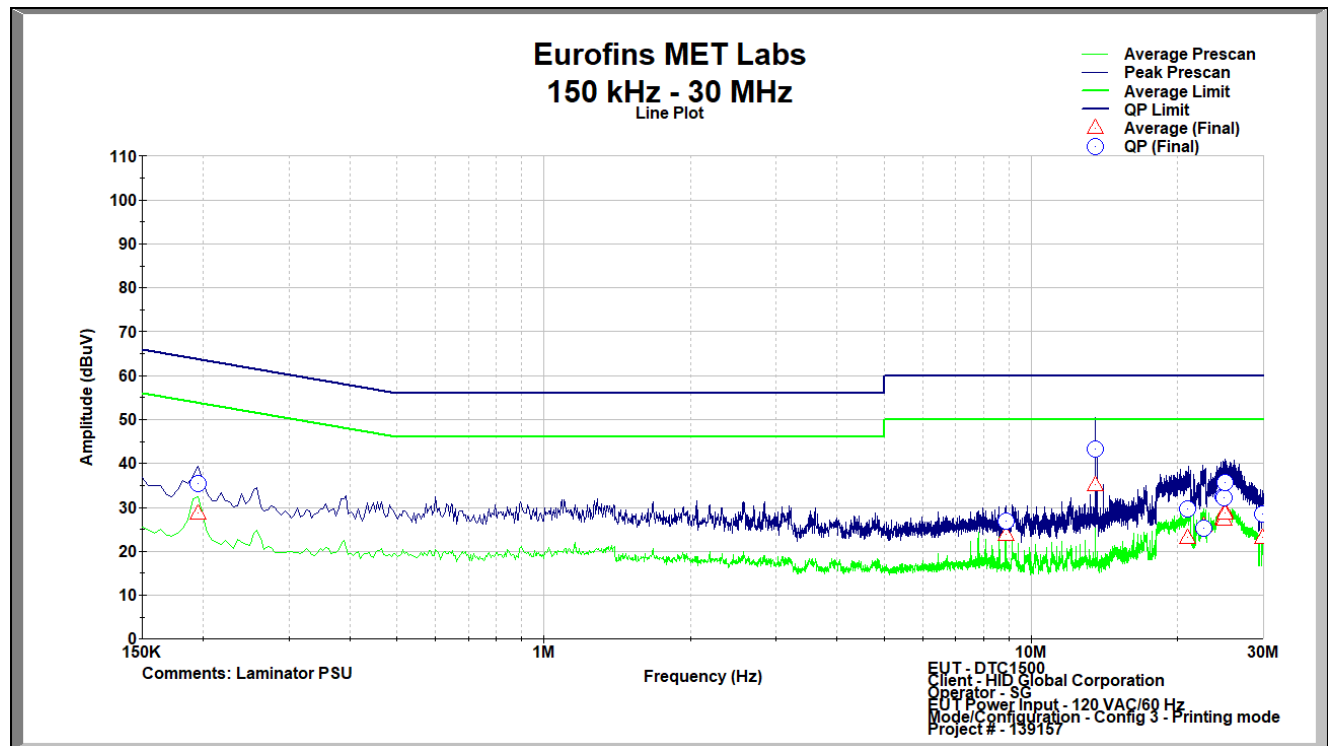
Table 17. Conducted Emissions, 15.207(a), Phase, Test Results (Configuration 3)



Conducted Emissions, 15.207(a), Neutral (Configuration 3)

Frequency (MHz)	Quasi-Peak (dBμV)	Quasi-Peak Limit (dBμV)	Quasi-Peak Margin (dB)	Average (dBμV)	Average Limit (dBμV)	Average Margin (dB)
0.244	35.731	63.3	27.569	22.134	53.3	31.166
7.79	33.329	60	26.671	32.251	50	17.749
8.865	35.096	60	24.904	34.084	50	15.916
10.207	30.751	60	29.249	29.104	50	20.896
11.553	28.962	60	31.038	26.734	50	23.266
13.553	35.424	60	24.576	28.405	50	21.595
13.557	49.439	60	10.561	41.533	50	8.467
22.755	33.163	60	26.837	27.099	50	22.901
24.881	26.716	60	33.284	24.713	50	25.287
26.253	26.783	60	33.217	24.657	50	25.343

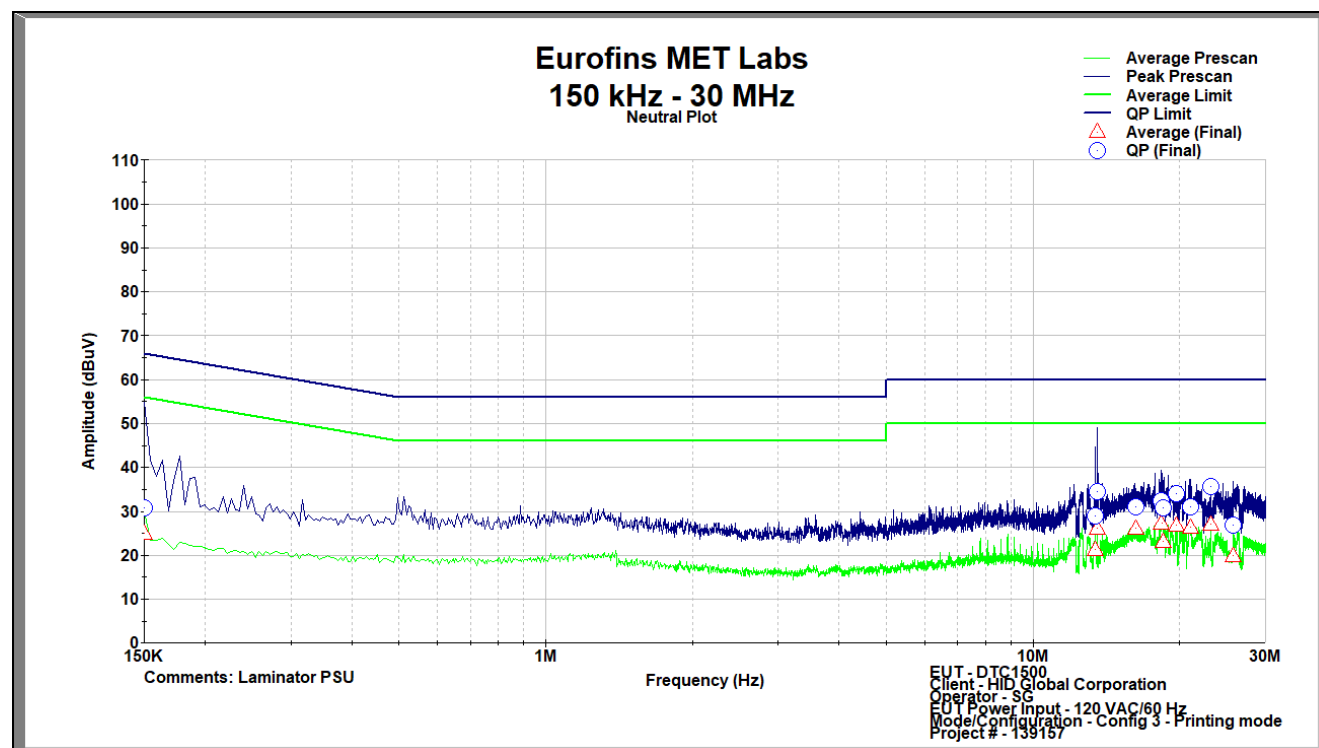
Table 18. Conducted Emissions, 15.207(a), Neutral, Test Results (Configuration 3)



Conducted Emissions, 15.207(a), Phase (Configuration 3, Laminator)

Frequency (MHz)	Quasi-Peak (dBμV/m)	Quasi-Peak Limit (dBμV/m)	Quasi-Peak Margin (dB)	Average (dBμV/m)	Average Limit (dBμV/m)	Average Margin (dB)
0.195	35.506	64.714	29.208	28.621	54.714	26.094
8.87	26.839	60	33.161	23.84	50	26.16
13.553	43.347	60	16.653	35.109	50	14.891
20.94	29.667	60	30.333	23.118	50	26.882
22.638	25.202	60	34.798	25.847	50	24.153
24.732	32.33	60	27.67	27.478	50	22.522
24.939	32.121	60	27.879	27.263	50	22.737
24.98	35.651	60	24.349	29.23	50	20.77
24.997	35.743	60	24.257	28.703	50	21.297
29.931	28.371	60	31.629	23.17	50	26.83

Table 19. Conducted Emissions, 15.207(a), Phase, Test Results (Configuration 3, Laminator)



Conducted Emissions, 15.207(a), Neutral (Configuration 3, Laminator)

Frequency (MHz)	Quasi-Peak (dBμV)	Quasi-Peak Limit (dBμV)	Quasi-Peak Margin (dB)	Average (dBμV)	Average Limit (dBμV)	Average Margin (dB)
0.15	30.882	66	35.118	25.011	56	30.989
13.444	28.956	60	31.044	21.425	50	28.575
13.57	34.54	60	25.46	26.214	50	23.786
16.232	31.036	60	28.964	26.116	50	23.884
18.366	32.297	60	27.703	27.408	50	22.592
18.483	30.86	60	29.14	23.089	50	26.911
19.712	33.958	60	26.042	26.845	50	23.155
21.054	30.995	60	29.005	26.448	50	23.552
23.128	35.74	60	24.26	27.152	50	22.848
25.7	26.942	60	33.058	19.922	50	30.078

Table 20. Conducted Emissions, 15.207(a), Neutral, Test Results (Configuration 3, Laminator)

Occupied Bandwidth Measurements

§ 15.215(c) 20 dB Occupied Bandwidth

Test Requirement(s):	§ 15.215 (c) Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§15.217 through 15.257 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.
Test Procedure:	The transmitter was on and transmitting at the highest output power. The bandwidth of the fundamental frequency was measured with the spectrum analyzer. Per ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 the RBW should be between 1% and 5% of the occupied bandwidth.
Test Results:	The Color Card Printer, DTC1500 was compliant with this requirement. The 20dB Bandwidth is shown on the plots on the following pages.
Test Engineer(s):	Bryan Taylor
Test Date(s):	12/10/2025 – 12/12/2025

RSS-GEN (6.7) 99% Occupied Bandwidth

Test Requirements: The occupied bandwidth or the “99% emission bandwidth” is defined as the frequency range between two points, one above and the other below the carrier frequency, within which 99% of the total transmitted power of the fundamental transmitted emission is contained. The occupied bandwidth shall be reported for all equipment in addition to the specified bandwidth required in the applicable RSSs.

Test Procedure: The EUT was on and transmitting at the highest output power. The bandwidth of the fundamental frequency was measured with the spectrum analyzer. Per ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 the RBW should be between 1% and 5% of the occupied bandwidth.

Test Results The Color Card Printer, DTC1500 was compliant with this requirement. The 99% Bandwidth is shown on the plots on the following pages.

Test Engineer(s): Bryan Taylor

Test Date(s): 12/10/2025 – 12/12/2025

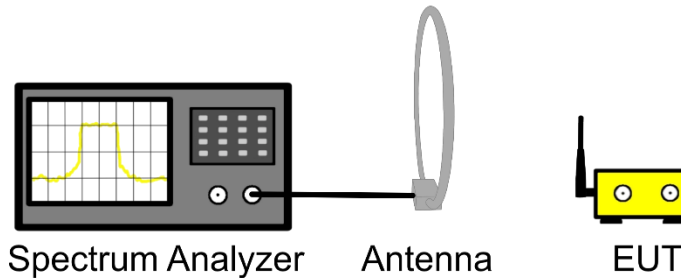


Figure 3. 20 dB Bandwidth and 99% Bandwidth Test Setup

Configuration Tested	Radio	Center Frequency (MHz)	20 dB Bandwidth	99% Bandwidth
Configuration 1	Ribbon	13.56MHz	25.17Hz	262.37kHz
Configuration 1	OMNIKEY 5122	13.56MHz	228.69Hz	540.5Hz
Configuration 2	OMNIKEY 5127SI	13.56MHz	44.57Hz	87.98Hz
Configuration 3	OMNIKEY 5127 CK MINI	13.56MHz	25.17Hz	21.41Hz
Configuration 3	Laminator	13.56MHz	53.25Hz	270.62Hz

Table 21. Occupied Bandwidth Test Results (With Credential In Place)

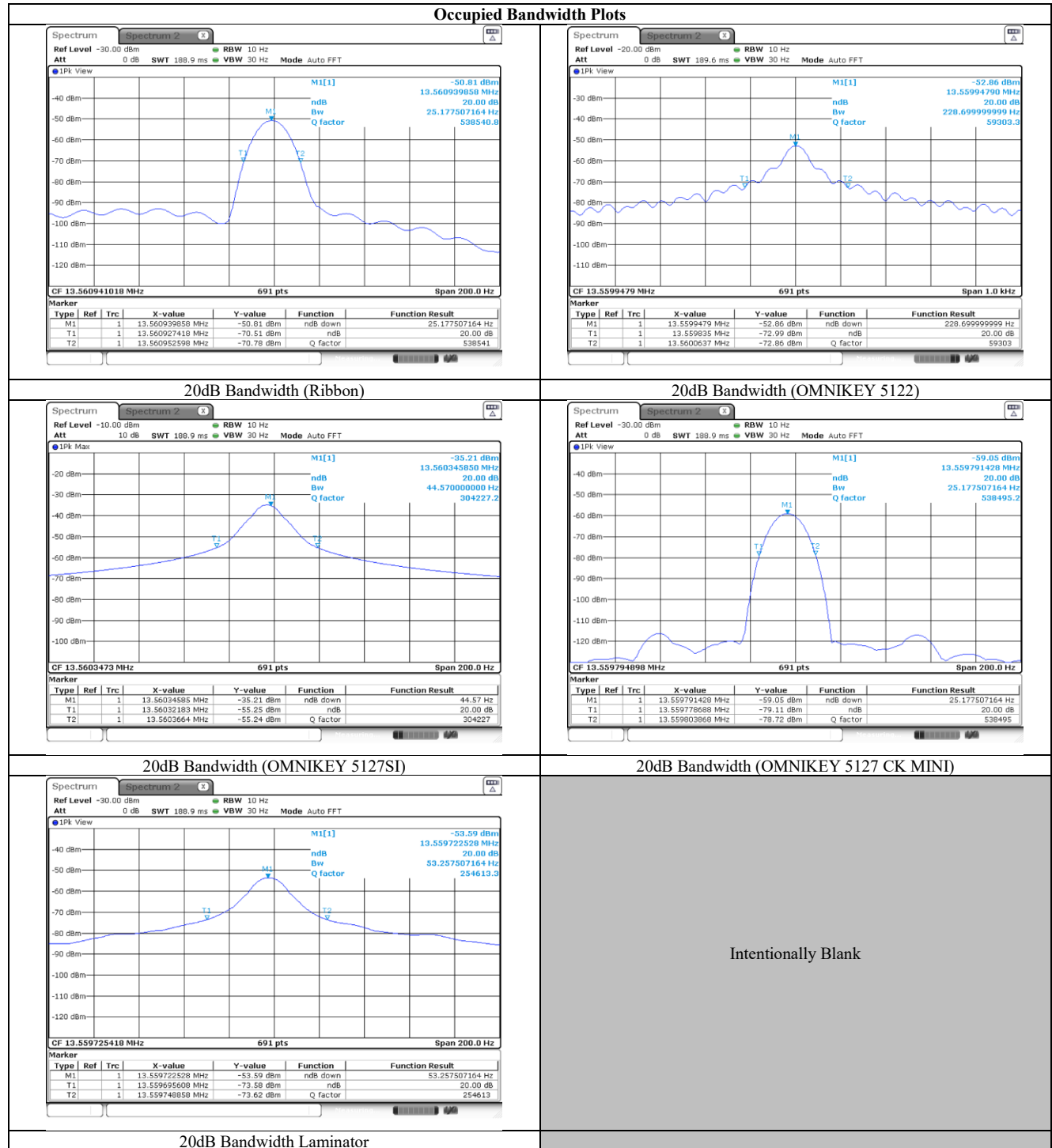


Table 22. 20dB Occupied Bandwidth Test Results (With Credential In Place)

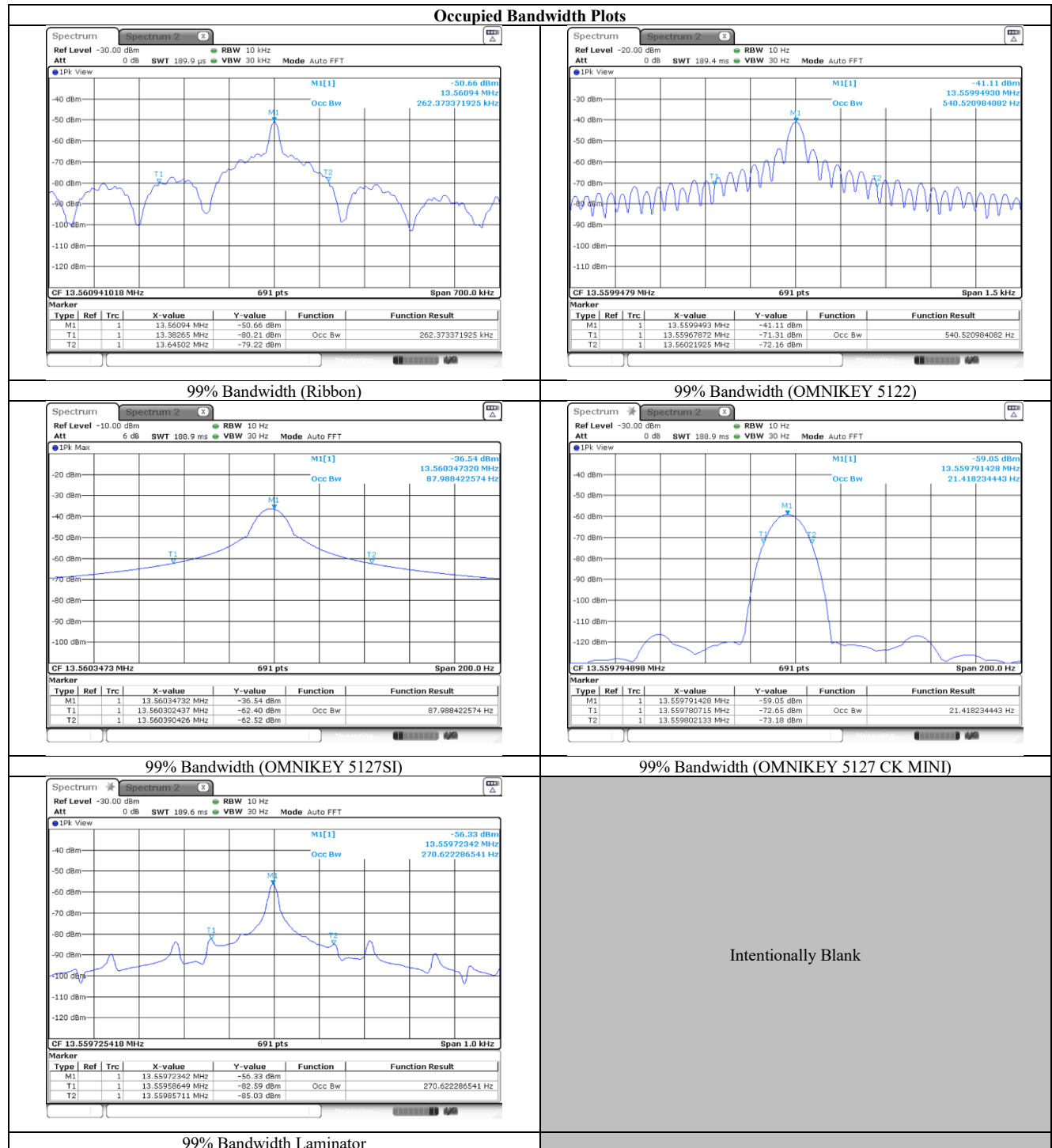


Table 23. 99% Occupied Bandwidth Test Results (With Credential In Place)

Configuration Tested	Radio	Center Frequency (MHz)	20 dB Bandwidth	99% Bandwidth
Configuration 1	Ribbon	13.56MHz	25.75Hz	247.17kHz
Configuration 1	OMNIKEY 5122	13.56MHz	146.19Hz	583.93Hz
Configuration 2	OMNIKEY 5127SI	13.56MHz	32.71Hz	68.88Hz
Configuration 3	OMNIKEY 5127 CK MINI	13.56MHz	25.17Hz	21.12Hz
Configuration 3	Laminator	13.56MHz	40.51Hz	247.46Hz

Table 24. Occupied Bandwidth Test Results (Without Credential)

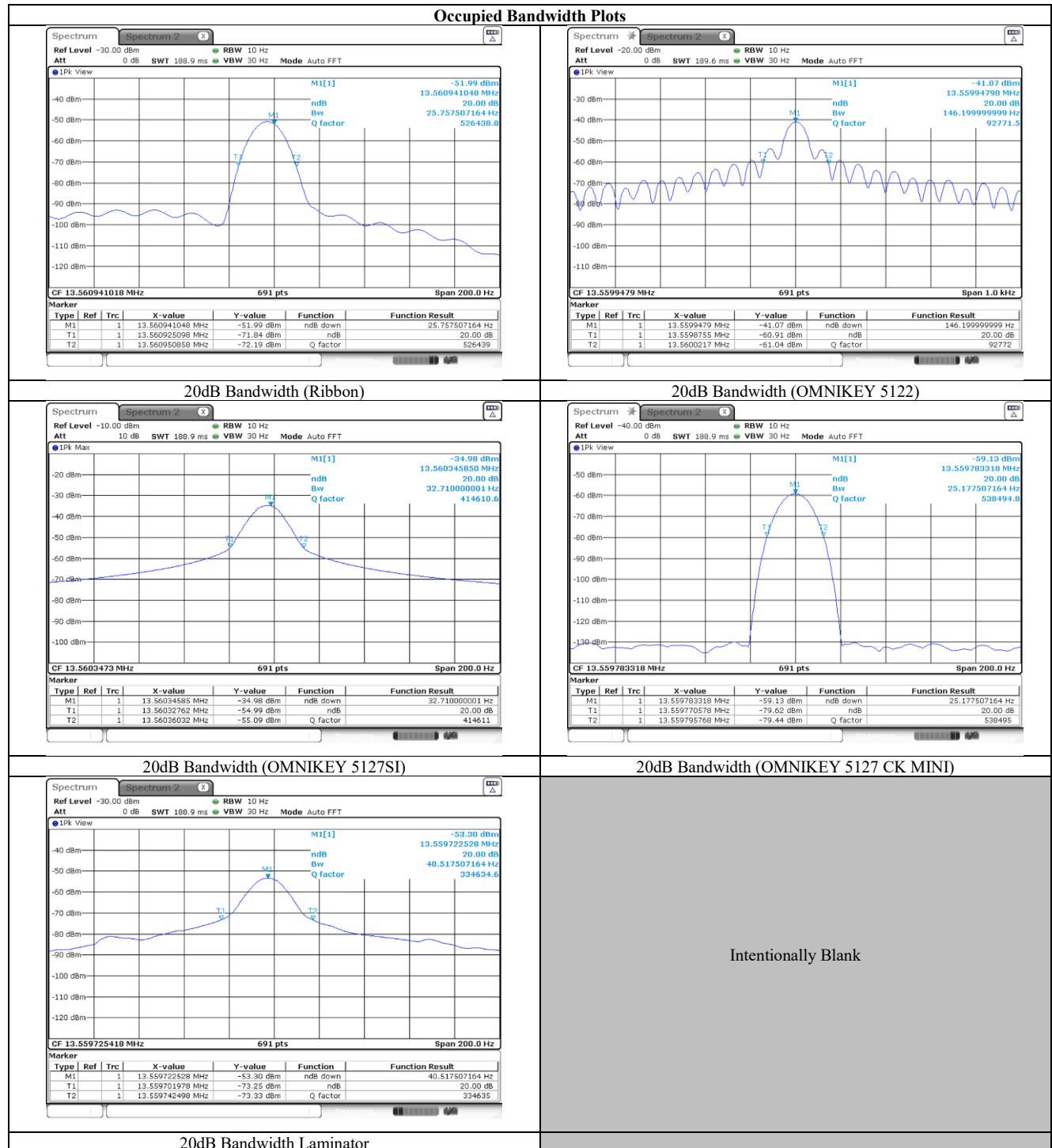


Table 25. 20dB Occupied Bandwidth Test Results (Without Credential)

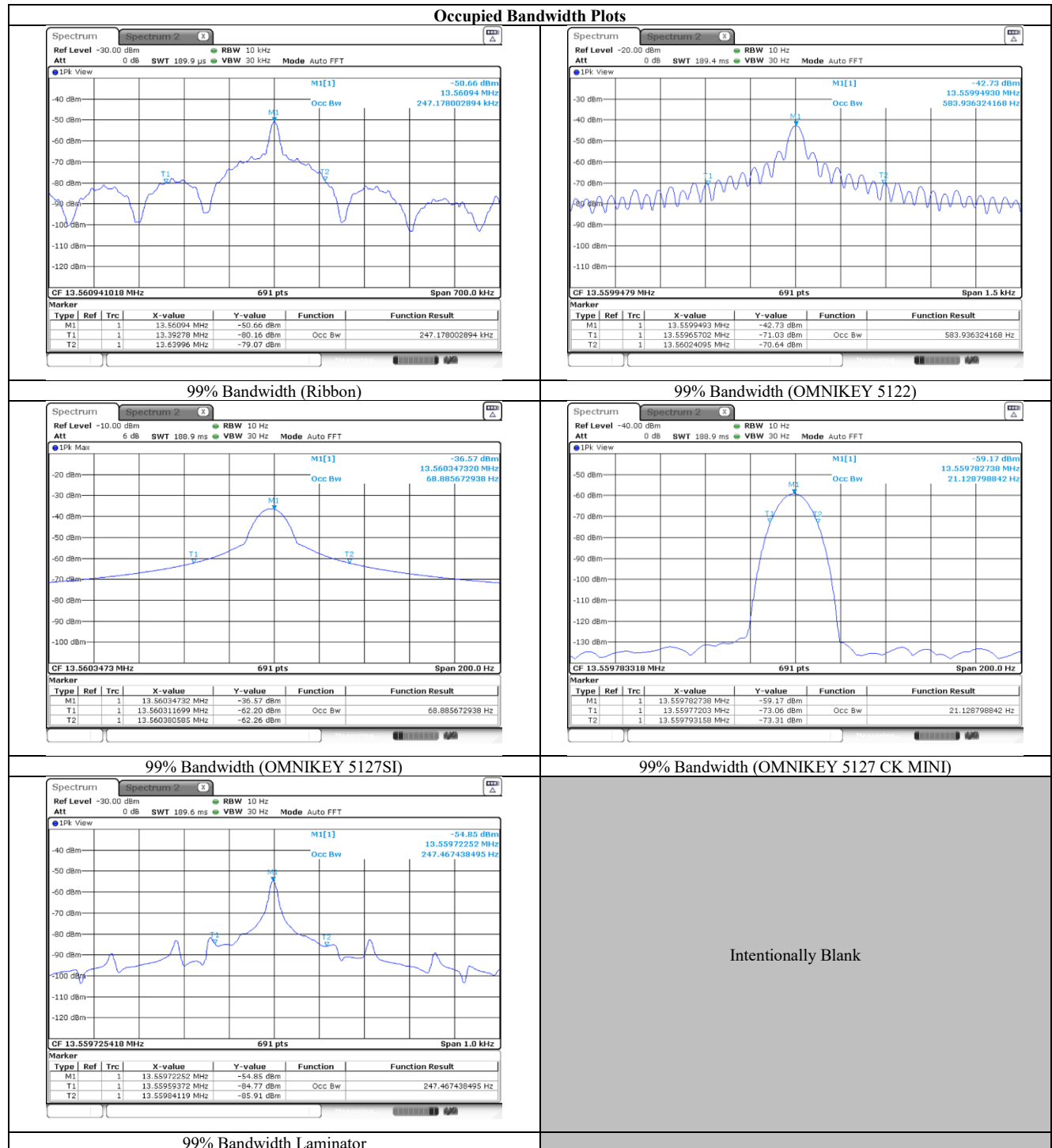


Table 26. 99% Occupied Bandwidth Test Results (Without Credential)

Electromagnetic Compatibility Criteria for Intentional Radiators

§ 15.225(a-d) Field Strength of Radiated Emissions

- Test Requirement(s):** **15.225 (a)** The field strength of any emissions within the band 13.553 – 13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters.
- 15.225 (b)** Within the bands 13.410–13.553 MHz and 13.567–13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.
- 15.225 (c)** Within the bands 13.110–13.410 MHz and 13.710–14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.
- 15.225 (d)** The field strength of any emissions appearing outside of the 13.110–14.010 MHz band shall not exceed the general radiated emission limits in § 15.209.

RSS-210 (B.6.a(ii - iv)) Field Strength of Radiated Emissions

- Test Requirement(s):** **RSS-210 (B.6.a(i))** The field strength of any emissions within the band 13.553 – 13.567 MHz shall not exceed 15.848 mV/m (84 dBμV/m) at 30 meters.
- RSS-210 (B.6.a(ii))** Within the bands 13.410–13.553 MHz and 13.567–13.710 MHz, the field strength of any emissions shall not exceed 334 μV/m (50.5 dBμV/m) at 30 meters.
- RSS-210 (B.6.a(iii))** Within the bands 13.110–13.410 MHz and 13.710–14.010 MHz the field strength of any emissions shall not exceed 106 μV/m (40.5 dBμV/m) at 30 meters.
- RSS-210 (B.6.a(iv))** The field strength of any emissions appearing outside of the 13.110–14.010 MHz band shall not exceed the general radiated emission limits in RSS-GEN Section 8.9.

Test Procedure:

The EUT was set to transmit and placed on a 0.8 m-high wooden stand inside a semi-anechoic chamber. The method of testing and test conditions of ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 were used. For measurements below 30 MHz a loop antenna placed 3m away from the unit was used. For measurements above 30 MHz a biconalog antenna placed 10 m away from the unit was used. Measurements below 30 MHz were conducted with the loop antenna at coaxial (parallel) and planar (perpendicular) orientations. Measurements above 30 MHz were conducted with the biconalog antenna in the vertical and horizontal polarizations. A peak detector was used to perform a pre-scan from 9 kHz to 10 times the fundamental frequency. Spurious emissions within 20 dB of the applicable limit were measured using a quasi-peak detector and recorded in the subsequent section. Peak emissions that were observed over the applicable limit were determined to be digital emissions subject to the requirements of FCC Part 15 Subpart B and ICES-003 subsection 6.2 for Class A devices.

The measurements were made at 3 m with the loop antenna (below 30MHz). They were then extrapolated to 30m or 300 m using the following correction factors which were applied to the limit.

$$40\log(30/3) = 40 \text{ dB}$$
$$40\log(300/3) = 80 \text{ dB}$$

The measurements made at 10 m with the biconilog antenna (above 30MHz) were then extrapolated to the 3m using the following correction factor.

$$20\log(10/3) = +10.46 \text{ dB}$$

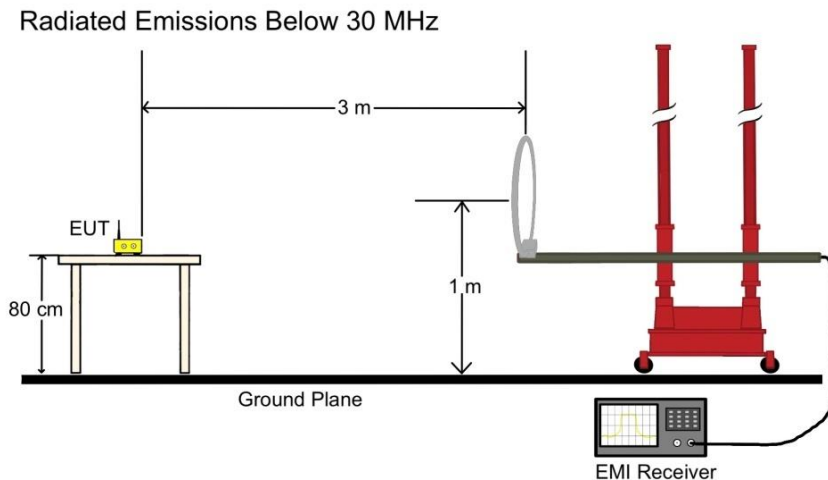


Figure 4: Radiated Emissions (Below 30MHz), Test Setup

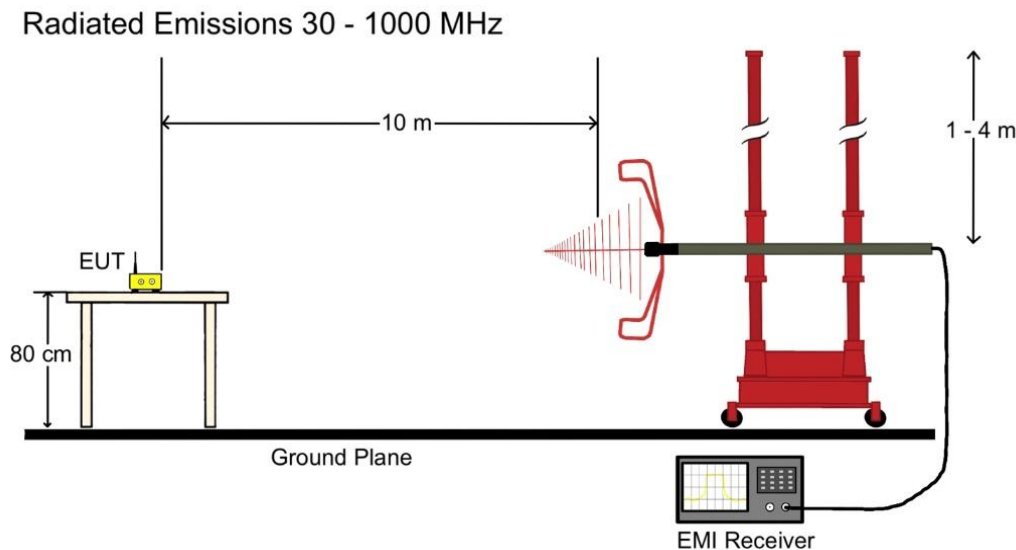


Figure 5. Radiated Emissions (Above 30MHz), Test Setup

Test Results: The Color Card Printer, DTC1500 was compliant with the requirements of §15.225(a - d) and RSS-210 RSS-210 (B.6.a(i, ii, iii, and iv)).

Test Engineer(s): Bryan Taylor

Test Date(s): 12/9/2025 – 12/12/2025

Radiated Field Strength Test Results

Frequency [MHz]	Peak Level [dBμV/m] ¹	Limit [dBμV/m]	Margin [dB]	Correction [dB] ²	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
13.277	17.17	80.50	63.33	10.62	H	62	1.00	9.000	Pass
13.479	19.40	90.50	71.10	10.61	H	229.5	1.00	9.000	Pass
13.560	66.24	124.00	57.76	10.61	H	315.4	1.00	9.000	Pass
13.682	17.87	90.50	72.63	10.60	H	215.3	1.00	9.000	Pass
13.889	18.55	80.50	61.95	10.59	H	345	1.00	9.000	Pass

Figure 6. Worst Case In-Band Field Strength, Ribbon

Frequency [MHz]	Peak Level [dBμV/m] ¹	Limit [dBμV/m]	Margin [dB]	Correction [dB] ²	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
0.018	56.04	122.43	66.39	15.09	H	75	1.00	0.200	Pass
0.067	51.05	111.07	60.02	11.54	V	81.5	1.00	0.200	Pass
0.645	42.46	71.41	28.95	11.37	V	141.1	1.00	9.000	Pass
1.131	37.90	66.53	28.63	11.75	V	135.2	1.00	9.000	Pass
1.527	33.83	63.92	30.08	11.69	H	44.9	1.00	9.000	Pass
25.004	30.50	69.50	39.00	9.72	H	248.4	1.00	9.000	Pass

Figure 7. Worst Case Field Strength Below 30MHz, Ribbon

Frequency [MHz]	QPK Level [dBμV/m] ¹	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB] ²	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
40.680	20.44	29.55	9.11	-8.17	V	72.2	1.24	120.000	Pass
60.000	20.49	29.55	9.06	-14.11	V	107.1	2.18	120.000	Pass
70.830	18.99	29.55	10.56	-14.03	V	22.7	1.60	120.000	Pass
74.550	21.22	29.55	8.33	-13.26	V	31.9	2.10	120.000	Pass
81.360	25.95	29.55	3.60	-12.45	V	79.4	2.17	120.000	Pass
108.480	22.51	33.07	10.56	-7.92	V	96.4	1.13	120.000	Pass
135.630	28.41	33.07	4.66	-7.84	V	45	1.02	120.000	Pass

Figure 8. Worst Case Field Strength Above 30MHz, Ribbon

¹ This corrected level includes the factor shown in the “correction” column. The corrected level = Raw Reading + Correction Factor. The raw reading is not shown in the table above.

² This correction factor includes cable loss in dB, preamplifier gain in dB, and an electric field antenna factor in (dB/m).

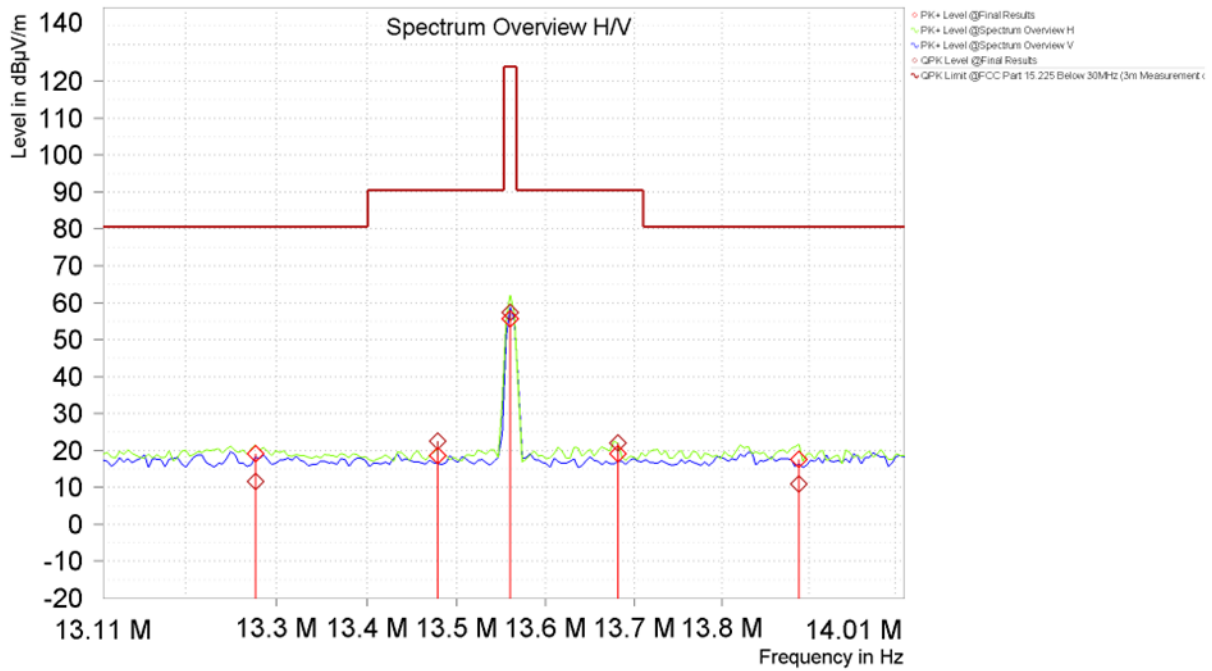


Figure 9. In-Band Emission Mask, Ribbon

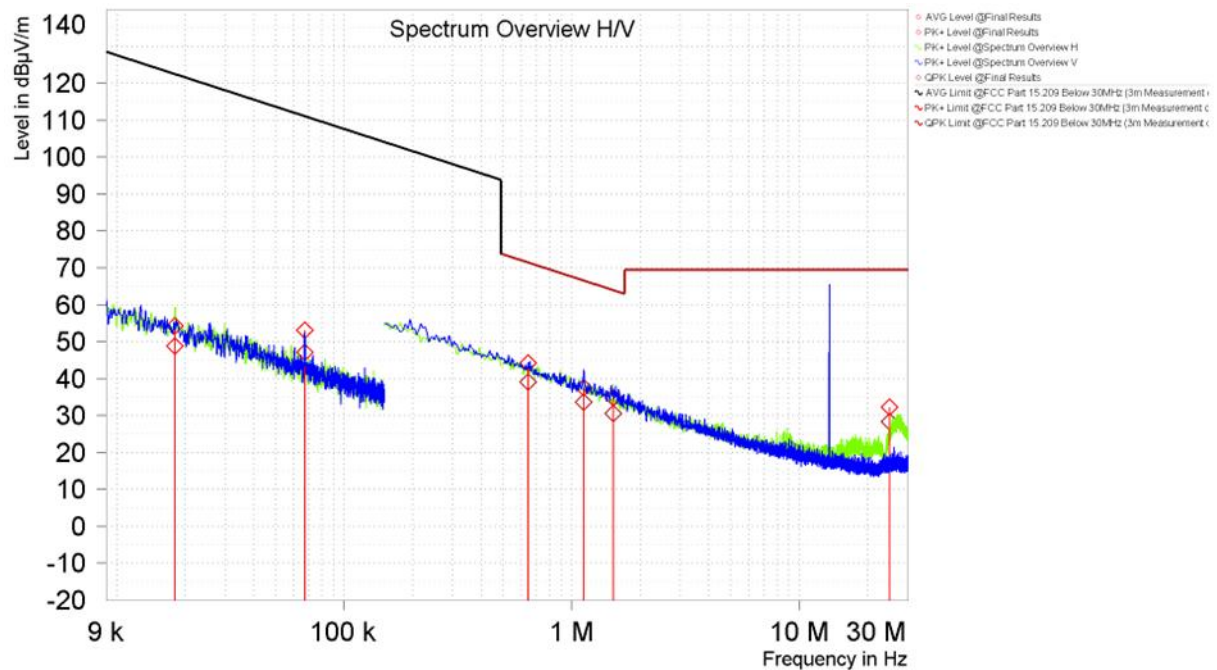


Figure 10. Out of Band Emissions Below 30MHz, Ribbon

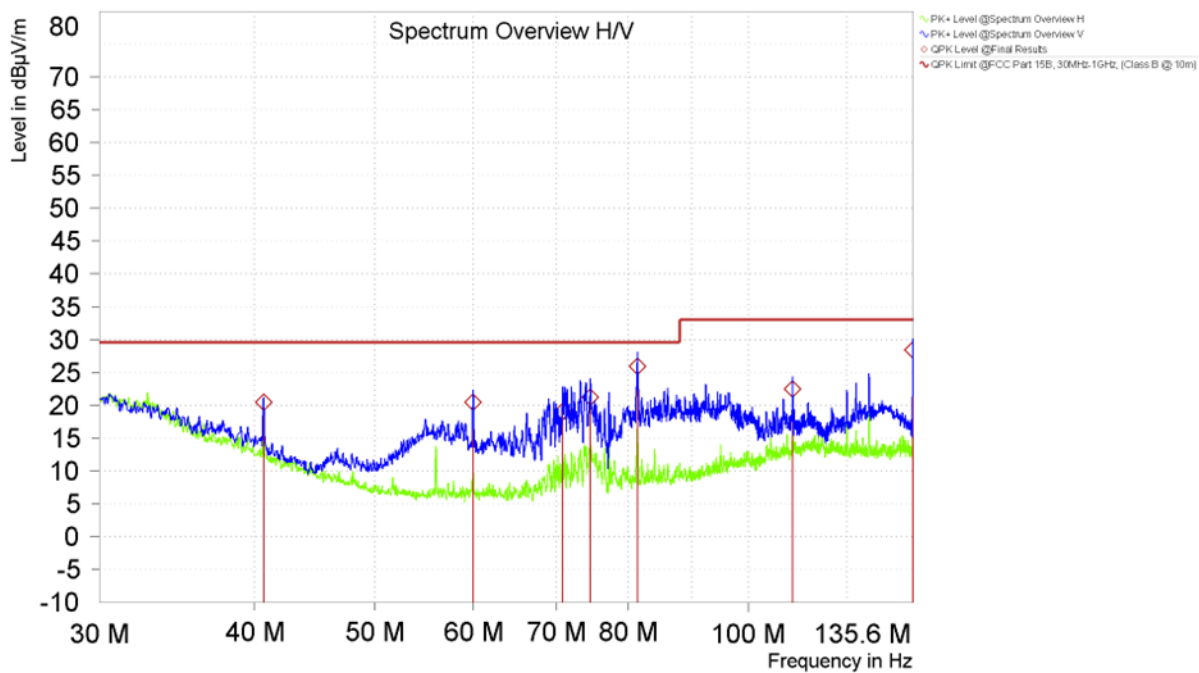


Figure 11. Out of Band Emissions Above 30MHz, Vertical and Horizontal Polarity, Ribbon

Frequency [MHz]	Peak Level [dBμV/m] ³	Limit [dBμV/m]	Margin [dB]	Correction [dB] ⁴	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
13.313	18.97	80.50	61.53	10.62	H	190.2	1.00	9.000	Pass
13.493	19.94	90.50	70.56	10.61	H	64.9	1.00	9.000	Pass
13.560	58.73	124.00	65.27	10.61	V	5.3	1.00	9.000	Pass
13.587	18.07	90.50	72.43	10.61	H	114.2	1.00	9.000	Pass
13.758	17.08	80.50	63.42	10.60	H	142.2	1.00	9.000	Pass

Figure 12. Worst Case In-Band Field Strength, Ribbon (No Credential)

Frequency [MHz]	Peak Level [dBμV/m] ¹	Limit [dBμV/m]	Margin [dB]	Correction [dB] ²	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
0.014	57.62	124.60	66.98	16.80	H	135.1	1.00	0.200	Pass
0.067	48.66	111.02	62.36	11.52	V	229.7	1.00	0.200	Pass
0.231	52.64	100.33	47.68	11.39	H	278.7	1.00	9.000	Pass
0.236	52.36	100.16	47.81	11.40	V	235	1.00	9.000	Pass
0.807	41.16	69.46	28.30	11.51	H	244.9	1.00	9.000	Pass
0.951	39.18	68.04	28.85	11.59	V	178.7	1.00	9.000	Pass

Figure 13. Worst Case Field Strength Below 30MHz, Ribbon (No Credential)

Frequency [MHz]	QPK Level [dBμV/m] ¹	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB] ²	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
45.870	4.31	29.55	25.24	-11.14	V	140.8	2.33	120.000	Pass
60.000	20.39	29.55	9.16	-14.11	V	115.3	2.50	120.000	Pass
74.550	21.85	29.55	7.70	-13.26	V	73.4	1.69	120.000	Pass
81.360	25.86	29.55	3.69	-12.45	V	71.4	2.21	120.000	Pass
108.510	21.59	33.07	11.48	-7.92	V	101.6	1.55	120.000	Pass
124.980	23.65	33.07	9.42	-7.46	V	171.1	1.06	120.000	Pass
135.600	29.13	33.07	3.94	-7.84	V	90	1.00	120.000	Pass

Figure 14. Worst Case Field Strength Above 30MHz, Ribbon (No Credential)

³ This corrected level includes the factor shown in the “correction” column. The corrected level = Raw Reading + Correction Factor. The raw reading is not shown in the table above.

⁴ This correction factor includes cable loss in dB, preamplifier gain in dB, and an electric field antenna factor in (dB/m).

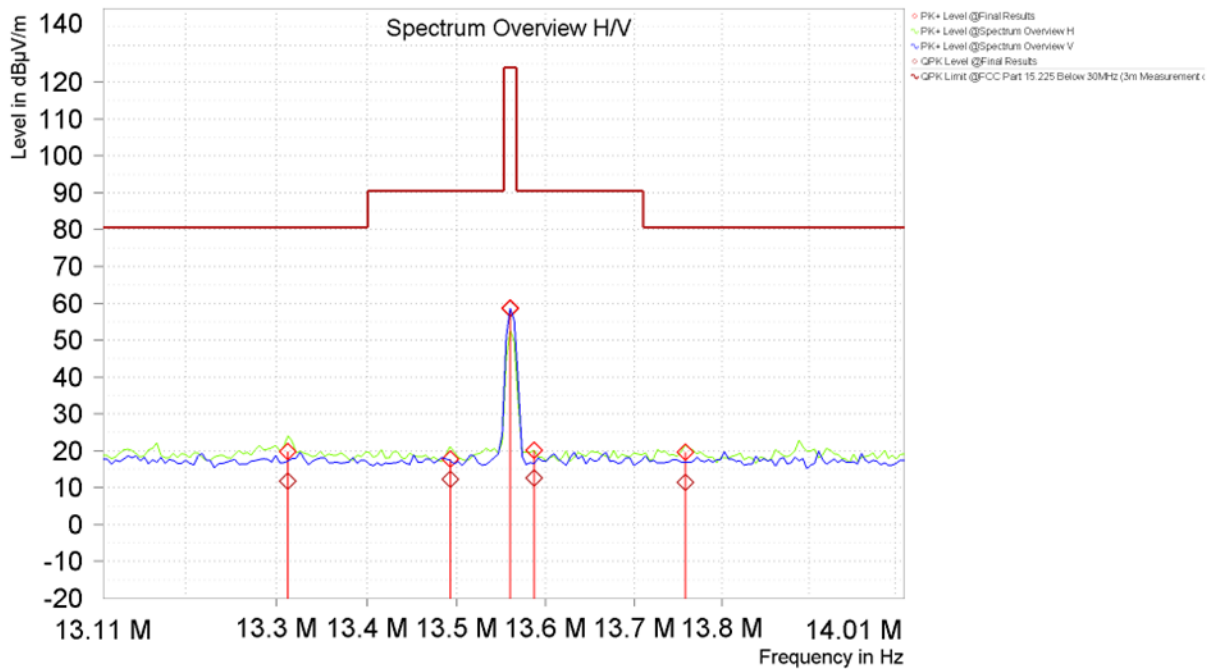


Figure 15. In-Band Emission Mask, Ribbon (No Credential)

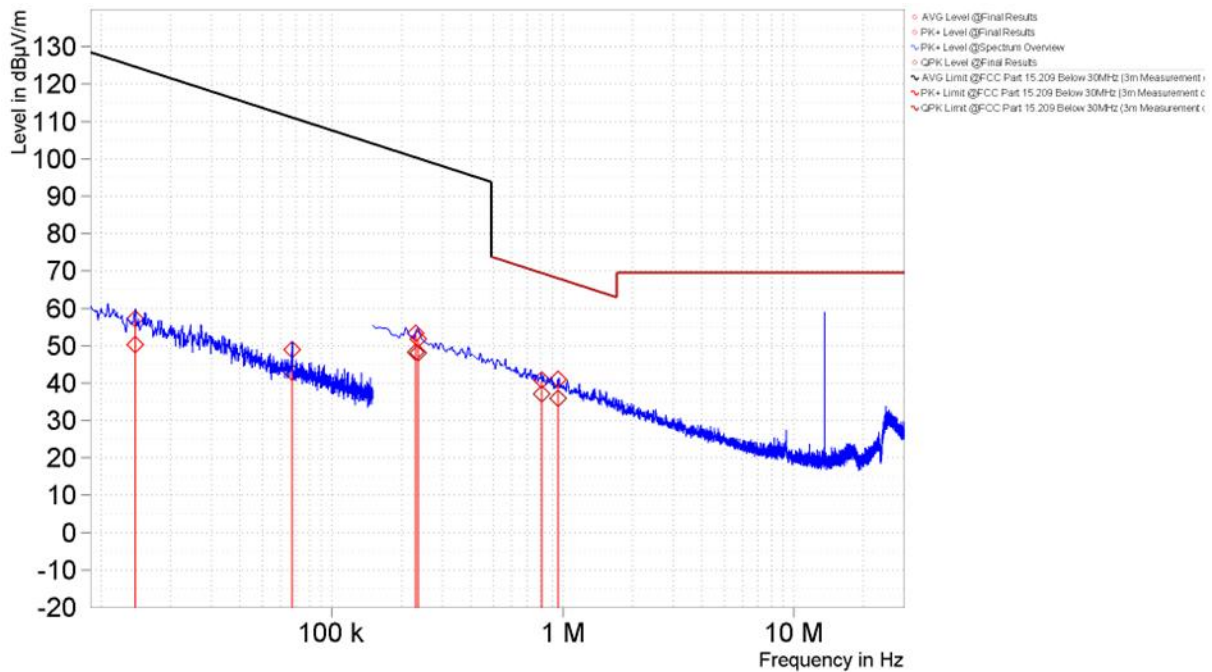


Figure 16. Out of Band Emissions Below 30MHz, Ribbon (No Credential)

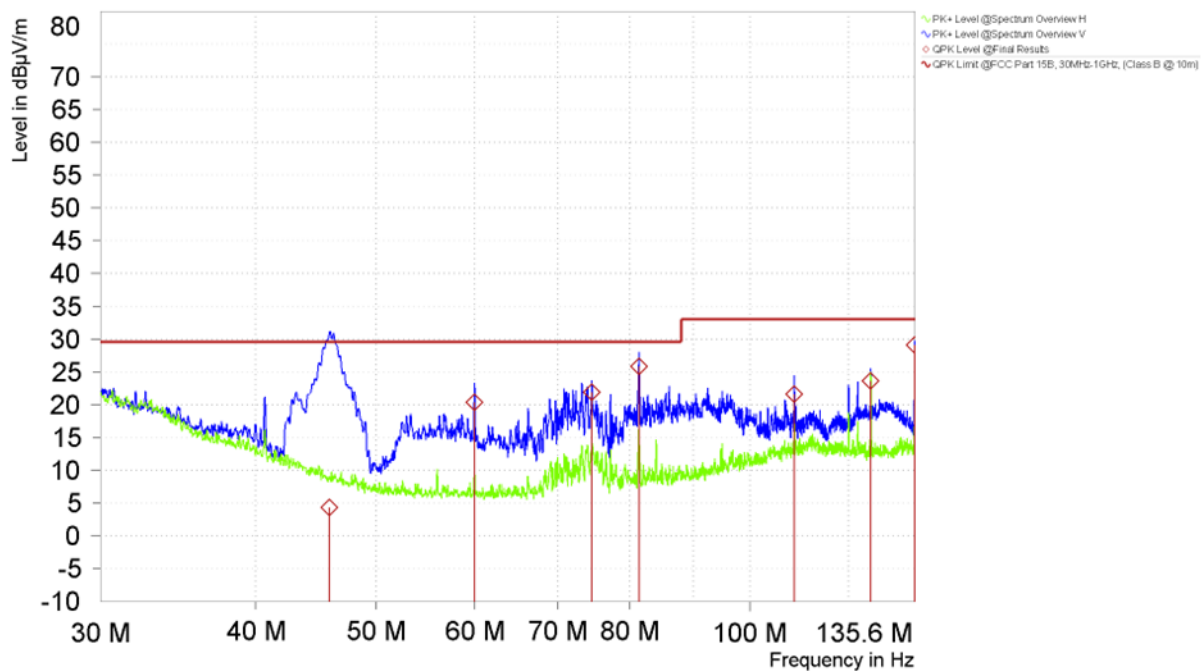


Figure 17. Out of Band Emissions Above 30MHz, Vertical and Horizontal Polarity, Ribbon (No Credential)

Frequency [MHz]	Peak Level [dBμV/m] ⁵	Limit [dBμV/m]	Margin [dB]	Correction [dB] ⁶	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
13.263	16.65	80.50	63.85	10.62	H	232.3	1.00	9.000	Pass
13.416	18.75	90.50	71.75	10.61	H	215.2	1.00	9.000	Pass
13.560	62.52	124.00	61.48	10.61	V	290.7	1.00	9.000	Pass
13.605	17.51	90.50	72.99	10.61	H	125.7	1.00	9.000	Pass
13.817	17.58	80.50	62.92	10.60	H	324.9	1.00	9.000	Pass

Figure 18. Worst Case In-Band Field Strength, 5122

Frequency [MHz]	Peak Level [dBμV/m] ¹	Limit [dBμV/m]	Margin [dB]	Correction [dB] ²	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
0.177	55.59	102.64	42.21	11.26	V	32.4	1.00	9.000	Pass
0.510	45.30	73.45	9.21	11.35	V	72	1.00	9.000	Pass
0.591	44.85	72.17	7.82	11.32	V	167.5	1.00	9.000	Pass
0.663	43.44	71.17	6.99	11.41	V	137.6	1.00	9.000	Pass
0.771	42.24	69.86	2.68	11.46	V	18.8	1.00	9.000	Pass
0.942	39.92	68.12	6.40	11.64	V	137.4	1.00	9.000	Pass

Figure 19. Worst Case Field Strength Below 30MHz, 5122

Frequency [MHz]	QPK Level [dBμV/m] ¹	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB] ²	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
40.680	18.99	29.55	10.56	-8.17	V	52.4	1.00	120.000	Pass
60.000	19.81	29.55	9.74	-14.11	V	78.7	2.37	120.000	Pass
84.000	23.25	29.55	6.30	-11.81	V	146.2	1.55	120.000	Pass
180.000	28.92	33.07	4.15	-9.87	V	71.7	0.99	120.000	Pass

Figure 20. Worst Case Field Strength Above 30MHz, 5122

⁵ This corrected level includes the factor shown in the “correction” column. The corrected level = Raw Reading + Correction Factor. The raw reading is not shown in the table above.

⁶ This correction factor includes cable loss in dB, preamplifier gain in dB, and an electric field antenna factor in (dB/m).

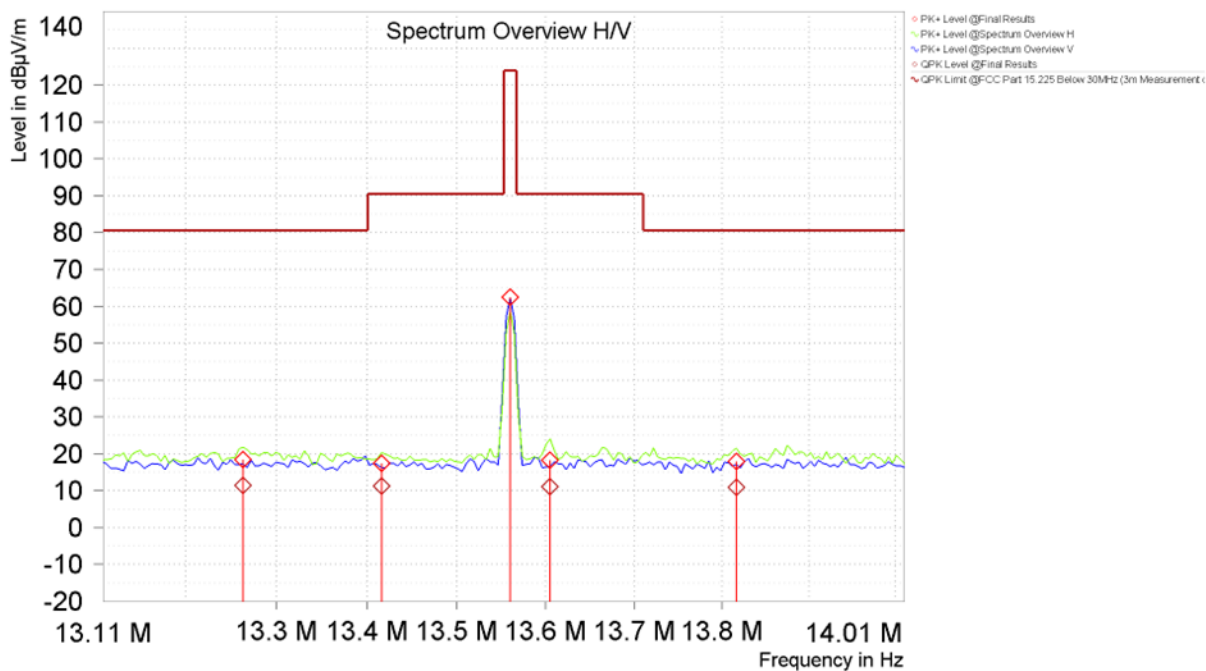


Figure 21. In-Band Emission Mask, 5122

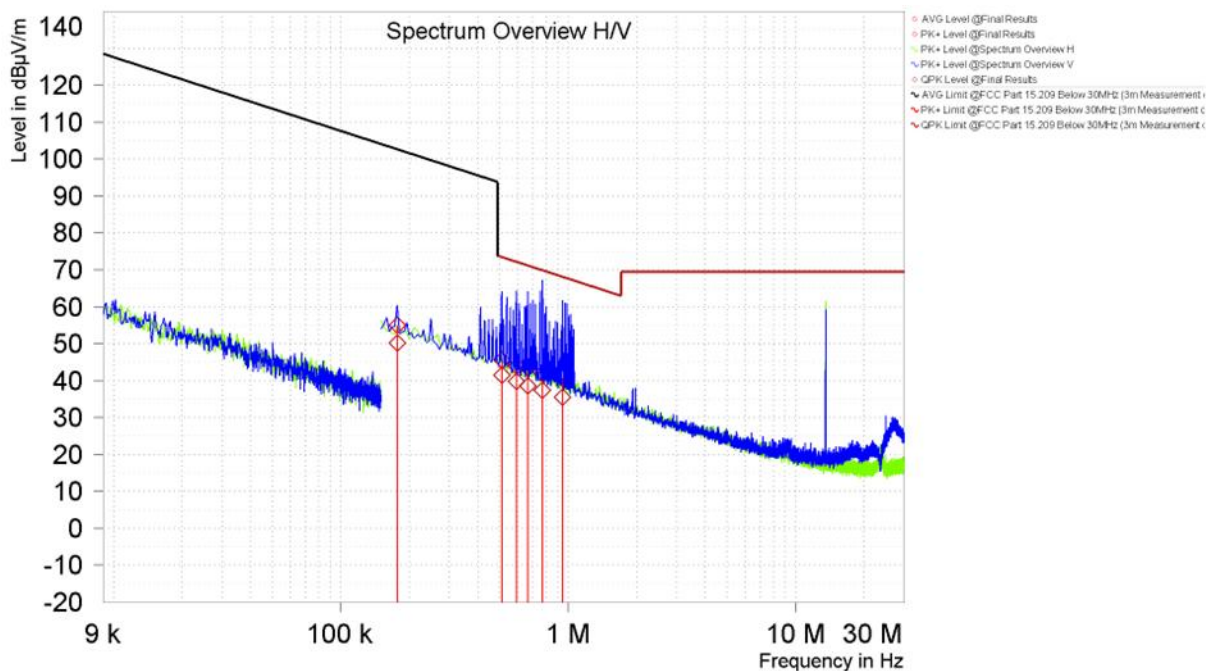


Figure 22. Out of Band Emissions Below 30MHz, 5122

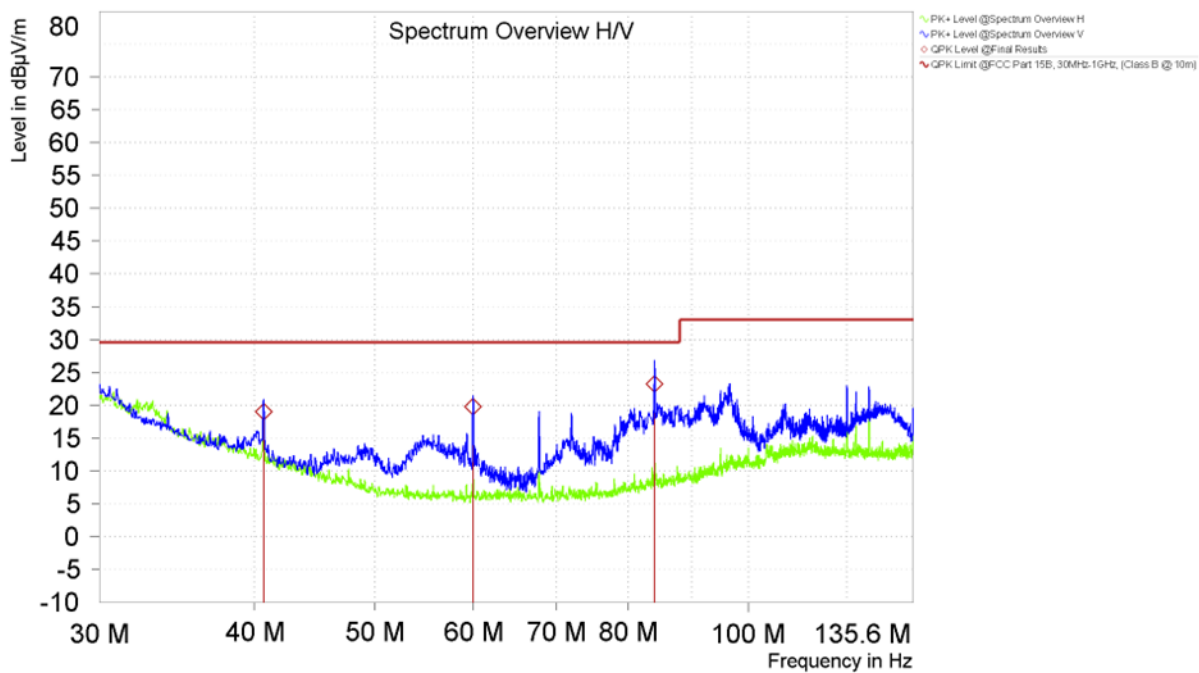


Figure 23. Out of Band Emissions Above 30MHz, Vertical and Horizontal Polarity, 5122

Frequency [MHz]	Peak Level [dBμV/m] ⁷	Limit [dBμV/m]	Margin [dB]	Correction [dB] ⁸	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
13.137	21.06	80.50	59.44	10.62	V	161	1.00	9.000	Pass
13.398	20.09	80.50	60.41	10.61	V	145.1	1.00	9.000	Pass
13.538	22.75	90.50	67.75	10.61	V	133.4	1.00	9.000	Pass
13.560	58.56	124.00	65.44	10.61	V	255	1.00	9.000	Pass
13.587	21.29	90.50	69.21	10.61	V	104.4	1.00	9.000	Pass
13.718	20.63	80.50	59.87	10.60	V	139.4	1.00	9.000	Pass
13.983	20.58	80.50	59.92	10.59	V	141.1	1.00	9.000	Pass

Figure 24. Worst Case In-Band Field Strength, 5122 (No Credential)

Frequency [MHz]	Peak Level [dBμV/m] ¹	Limit [dBμV/m]	Margin [dB]	Correction [dB] ²	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
0.044	44.64	114.82	70.18	12.30	V	217.1	1.00	0.200	Pass
0.191	52.93	102.00	49.07	11.33	V	45.3	1.00	9.000	Pass
1.388	35.34	64.75	29.42	11.70	V	180.8	1.00	9.000	Pass
17.327	22.44	69.50	47.06	10.54	H	225.1	1.00	9.000	Pass
23.901	19.78	69.50	49.72	9.58	V	274.2	1.00	9.000	Pass
25.004	34.52	69.50	34.98	9.72	H	182.1	1.00	9.000	Pass

Figure 25. Worst Case Field Strength Below 30MHz, 5122 (No Credential)

Frequency [MHz]	QPK Level [dBμV/m] ¹	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB] ²	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
30.090	15.05	29.55	14.50	-2.33	H	172	2.37	120.000	Pass
33.060	11.12	29.55	18.43	-3.79	H	152.7	2.04	120.000	Pass
36.690	8.82	29.55	20.73	-5.90	H	101.8	1.50	120.000	Pass
60.000	20.97	29.55	8.58	-14.11	V	87.5	2.03	120.000	Pass
74.550	21.84	29.55	7.71	-13.26	V	63.9	1.33	120.000	Pass
125.010	23.08	33.07	9.99	-7.45	V	161	1.02	120.000	Pass

Figure 26. Worst Case Field Strength Above 30MHz, 5122 (No Credential)

⁷ This corrected level includes the factor shown in the “correction” column. The corrected level = Raw Reading + Correction Factor. The raw reading is not shown in the table above.

⁸ This correction factor includes cable loss in dB, preamplifier gain in dB, and an electric field antenna factor in (dB/m).

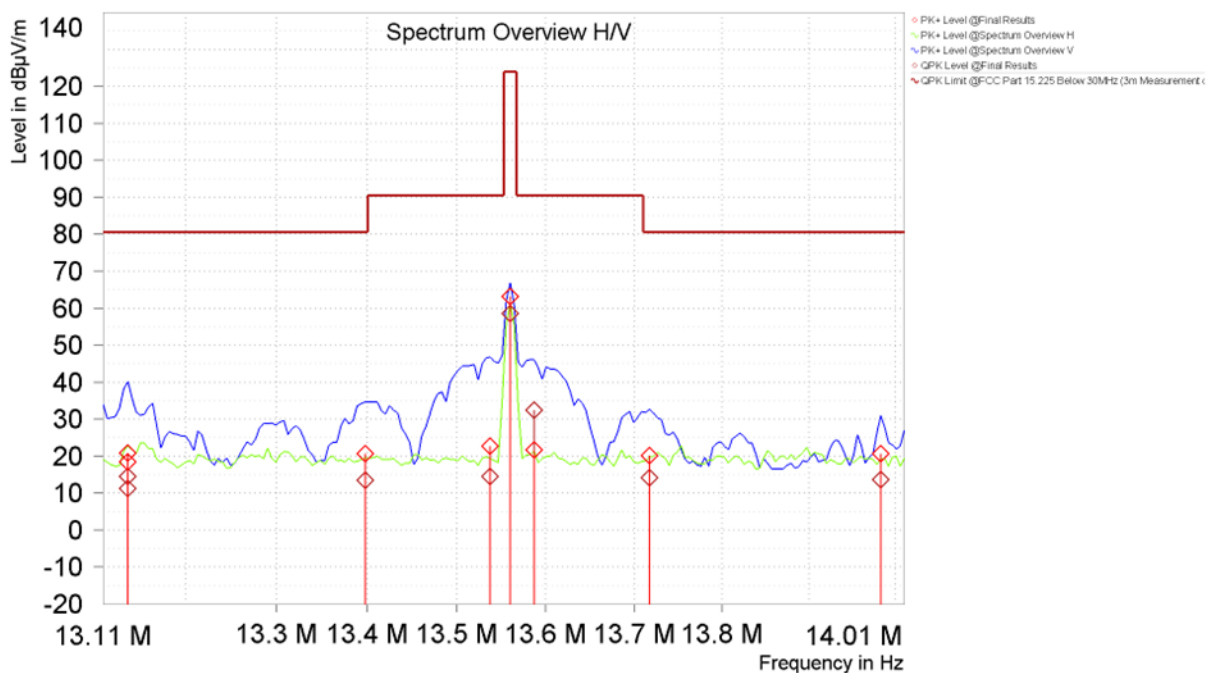


Figure 27. In-Band Emission Mask, 5122 (No Credential)

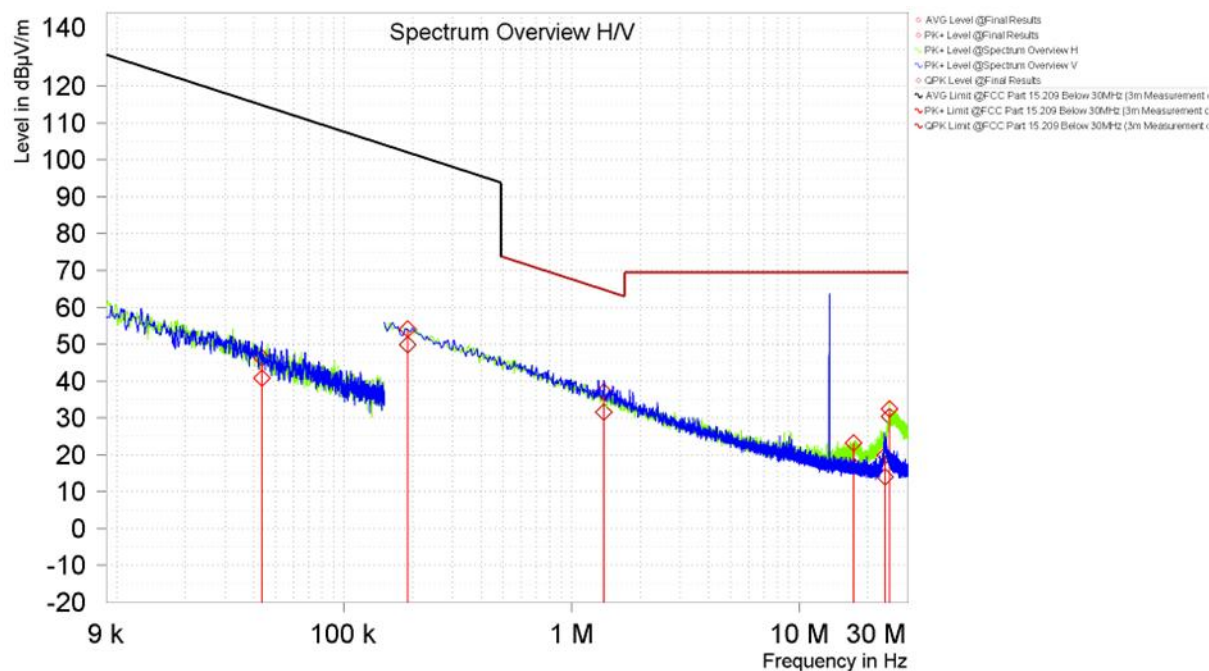


Figure 28. Out of Band Emissions Below 30MHz, 5122 (No Credential)

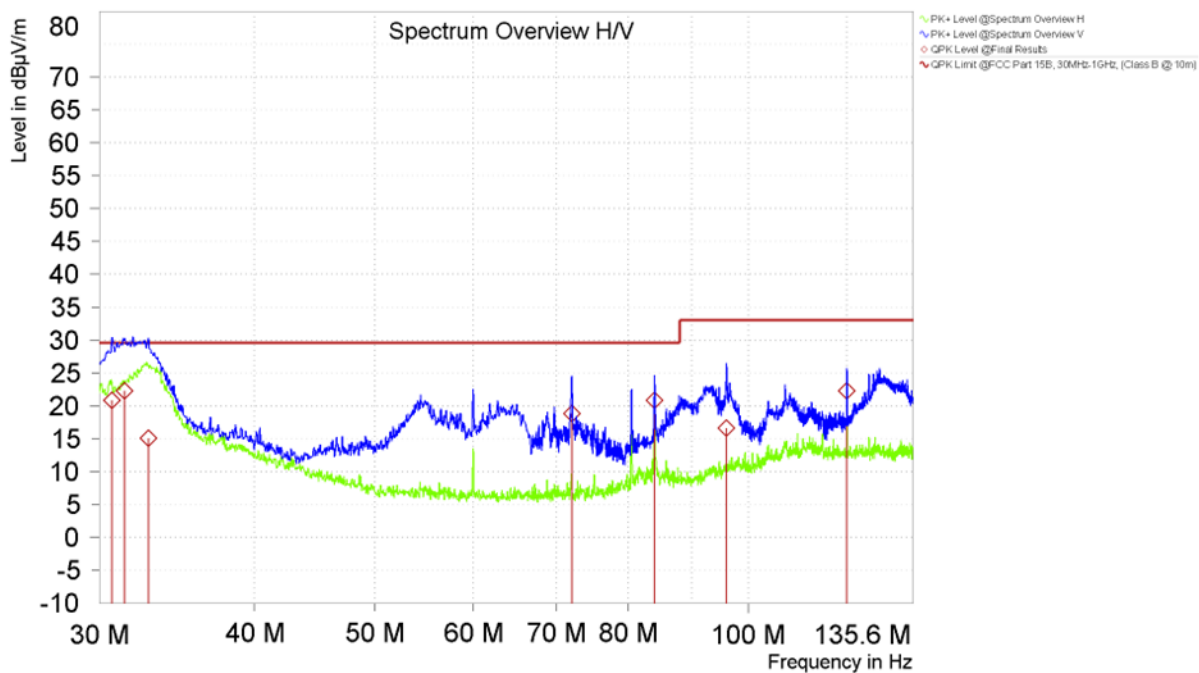


Figure 29. Out of Band Emissions Above 30MHz, Vertical and Horizontal Polarity, 5122 (No Credential)

Frequency [MHz]	Peak Level [dBμV/m] ⁹	Limit [dBμV/m]	Margin [dB]	Correction [dB] ¹⁰	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
13.326	18.52	80.50	61.98	10.62	H	267.5	1.00	9.000	Pass
13.484	18.50	90.50	72.00	10.61	H	53.6	1.00	9.000	Pass
13.560	61.04	124.00	62.96	10.61	H	283	1.00	9.000	Pass
13.560	60.98	124.00	63.02	10.61	V	274.6	1.00	9.000	Pass
13.605	18.00	90.50	72.50	10.61	H	255.1	1.00	9.000	Pass
13.902	17.66	80.50	62.84	10.59	H	14.1	1.00	9.000	Pass

Figure 30. Worst Case In-Band Field Strength, 5127SI

Frequency [MHz]	Peak Level [dBμV/m] ¹	Limit [dBμV/m]	Margin [dB]	Correction [dB] ²	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
0.125	70.18	105.66	35.48	11.31	V	222.8	1.00	0.200	Pass
0.155	55.50	103.82	48.32	11.26	H	112.2	1.00	9.000	Pass
0.762	40.53	69.96	29.43	11.43	H	103.2	1.00	9.000	Pass
1.086	37.12	66.88	29.76	11.77	H	238.6	1.00	9.000	Pass
8.678	26.56	69.50	42.94	10.83	H	121.8	1.00	9.000	Pass
25.004	26.93	69.50	42.57	9.72	H	153.4	1.00	9.000	Pass

Figure 31. Worst Case Field Strength Below 30MHz, 5127SI

⁹ This corrected level includes the factor shown in the “correction” column. The corrected level = Raw Reading + Correction Factor. The raw reading is not shown in the table above.

¹⁰ This correction factor includes cable loss in dB, preamplifier gain in dB, and an electric field antenna factor in (dB/m).

Frequency [MHz]	QPK Level [dBμV/m] ¹	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB] ²	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
32.190	15.77	29.55	13.78	-3.66	V	236.5	1.00	120.000	Pass
60.000	21.27	29.55	8.28	-14.11	V	34.6	2.50	120.000	Pass
72.060	10.92	29.55	18.63	-13.78	V	220.2	1.42	120.000	Pass
84.000	28.33	29.55	1.22	-11.81	V	259	1.15	120.000	Pass
120.000	21.44	33.07	11.63	-7.67	V	110.1	1.00	120.000	Pass
127.350	14.59	33.07	18.48	-7.52	V	274	1.30	120.000	Pass

Figure 32. Worst Case Field Strength Above 30MHz, 5127SI

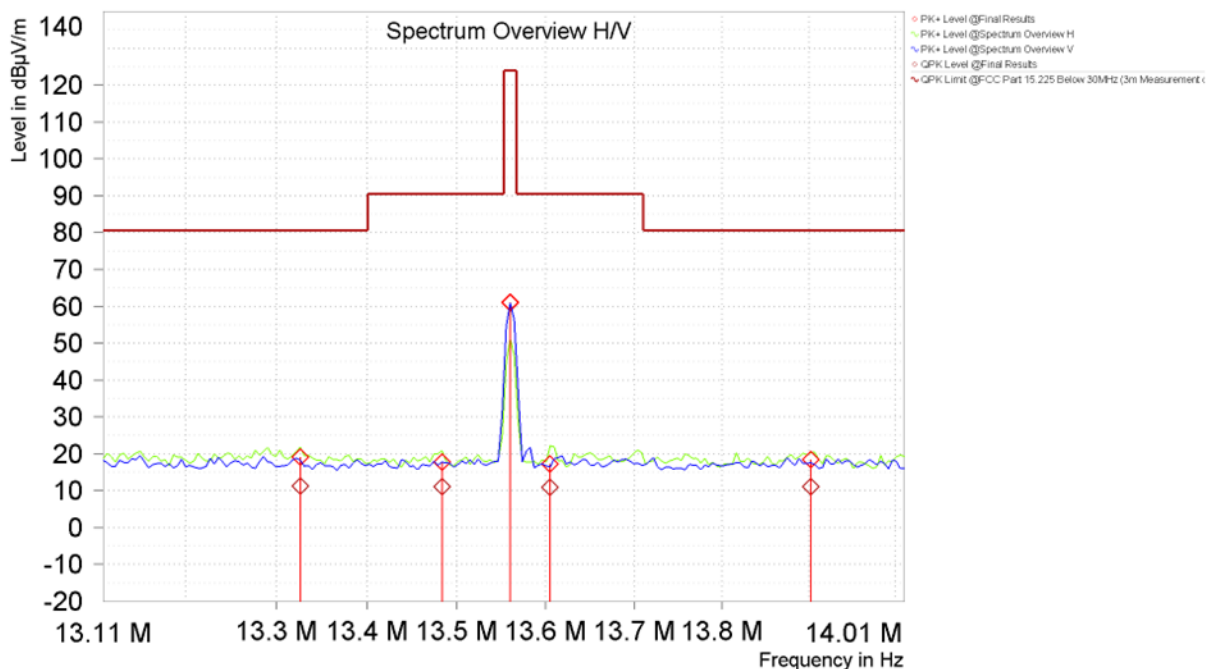


Figure 33. In-Band Emission Mask, 5127SI

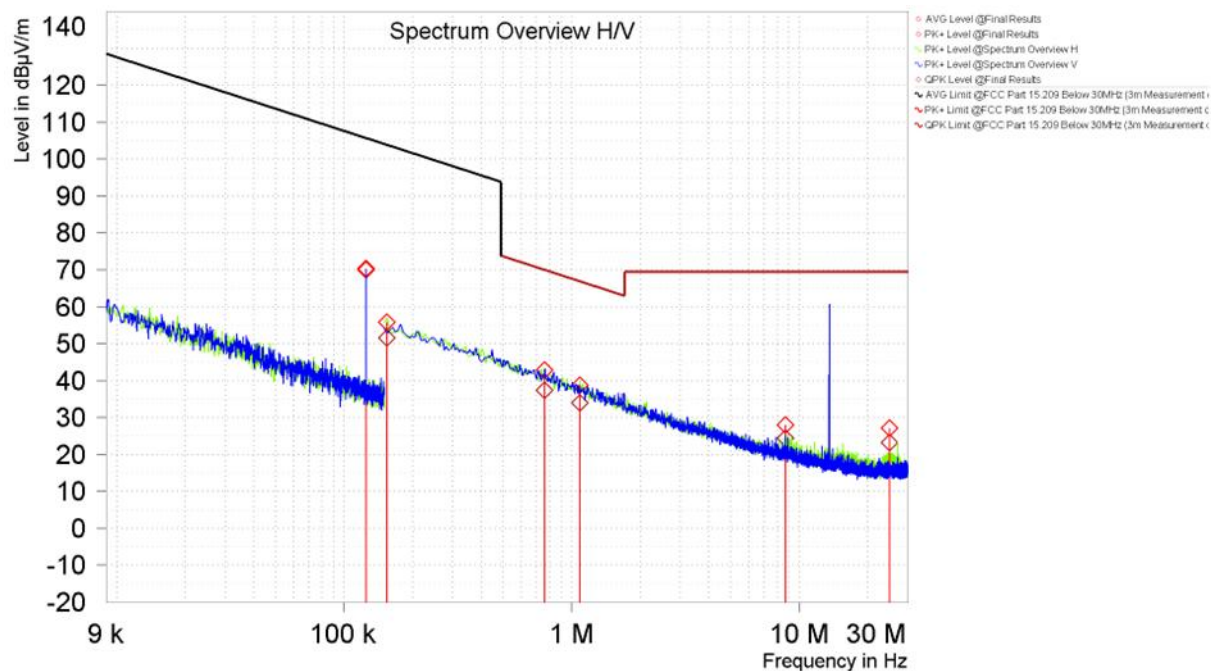


Figure 34. Out of Band Emissions Below 30MHz, 5127SI

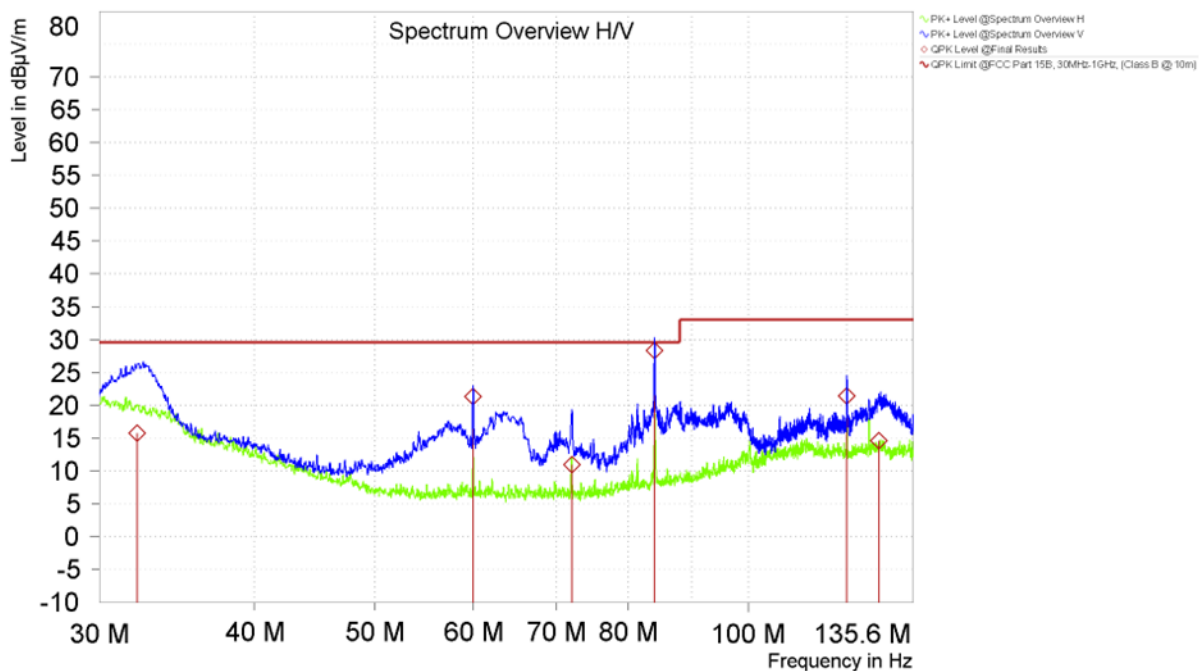


Figure 35. Out of Band Emissions Above 30MHz, Vertical and Horizontal Polarity, 5127SI

Frequency [MHz]	Peak Level [dBμV/m] ¹¹	Limit [dBμV/m]	Margin [dB]	Correction [dB] ¹²	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
13.308	16.93	80.50	63.57	10.62	H	70.7	1.00	9.000	Pass
13.389	18.76	80.50	61.74	10.61	H	164.4	1.00	9.000	Pass
13.479	18.85	90.50	71.65	10.61	H	46.6	1.00	9.000	Pass
13.560	60.48	124.00	63.52	10.61	H	268.3	1.00	9.000	Pass
13.560	60.48	124.00	63.52	10.61	V	275.2	1.00	9.000	Pass
13.646	17.23	90.50	73.27	10.60	H	238.6	1.00	9.000	Pass
13.920	16.75	80.50	63.75	10.59	H	317.9	1.00	9.000	Pass

Figure 36. Worst Case In-Band Field Strength, 5127SI (No Credential)

Frequency [MHz]	Peak Level [dBμV/m] ¹¹	Limit [dBμV/m]	Margin [dB]	Correction [dB] ¹²	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
0.019	54.32	122.20	67.88	14.90	V	243.5	1.00	0.200	Pass
0.125	69.86	105.66	35.80	11.31	V	238.6	1.00	0.200	Pass
0.596	43.42	72.10	28.69	11.41	V	255	1.00	9.000	Pass
1.491	35.56	64.13	28.56	11.70	V	123.5	1.00	9.000	Pass
8.678	26.08	69.50	43.42	10.83	H	86.4	1.00	9.000	Pass
25.004	26.89	69.50	42.61	9.72	H	280.6	1.00	9.000	Pass

Figure 37. Worst Case Field Strength Below 30MHz, 5127SI (No Credential)

¹¹ This corrected level includes the factor shown in the “correction” column. The corrected level = Raw Reading + Correction Factor. The raw reading is not shown in the table above.

¹² This correction factor includes cable loss in dB, preamplifier gain in dB, and an electric field antenna factor in (dB/m).

Frequency [MHz]	QPK Level [dBμV/m] ¹	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB] ²	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
60.000	21.31	29.55	8.24	-14.11	V	275.3	2.50	120.000	Pass
84.000	27.93	29.55	1.62	-11.81	V	290.6	1.04	120.000	Pass
96.870	12.42	33.07	20.65	-9.44	V	262.9	1.62	120.000	Pass
120.000	21.49	33.07	11.58	-7.67	V	87.9	1.17	120.000	Pass
127.500	16.26	33.07	16.81	-7.55	V	79.1	1.01	120.000	Pass
180.000	30.32	33.07	2.75	-10.07	H	252.4	2.42	120.000	Pass

Figure 38. Worst Case Field Strength Above 30MHz, 5127SI (No Credential)

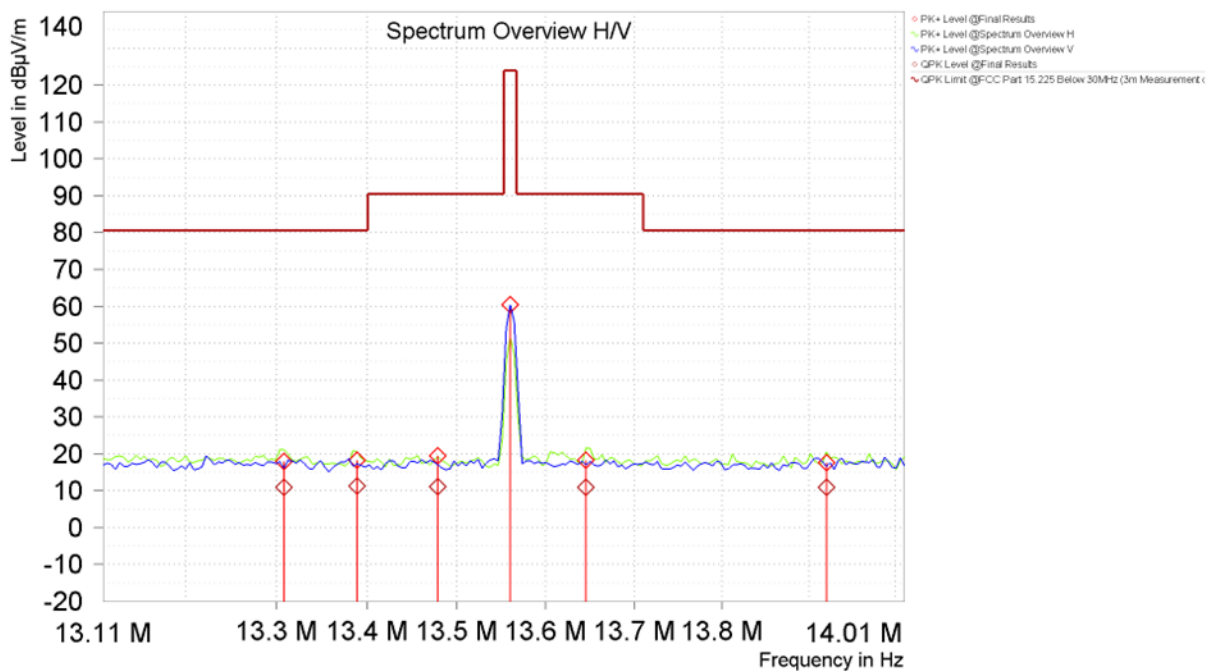


Figure 39. In-Band Emission Mask, 5127SI (No Credential)

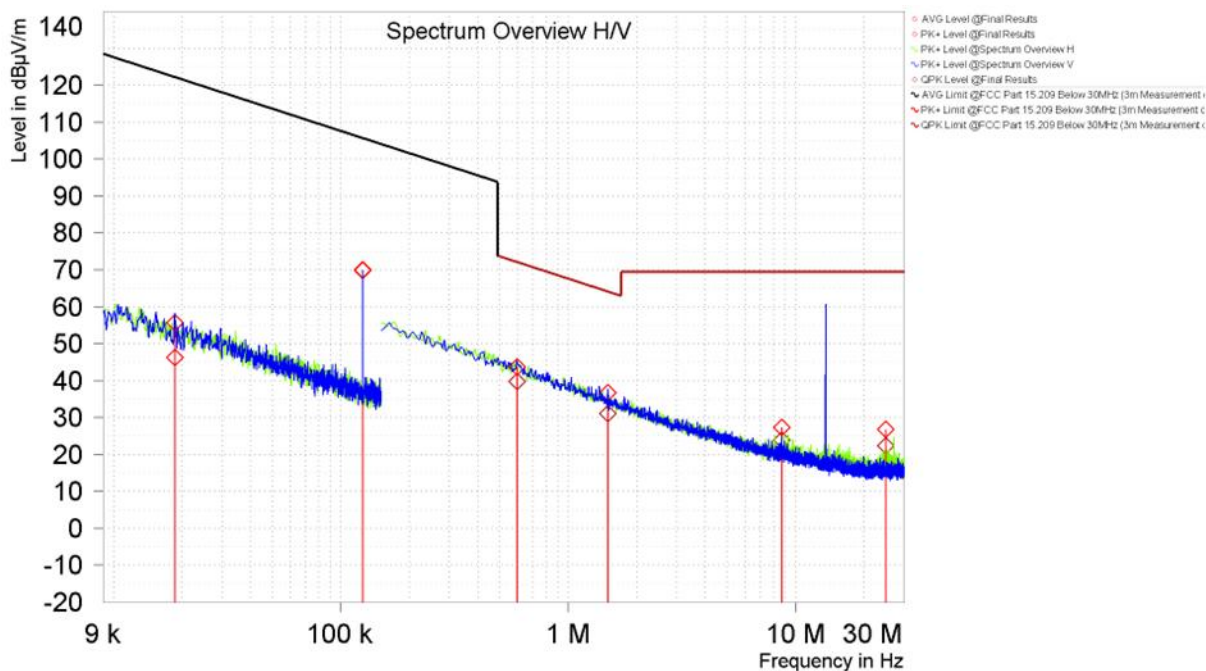


Figure 40. Out of Band Emissions Below 30MHz, 5127SI (No Credential)

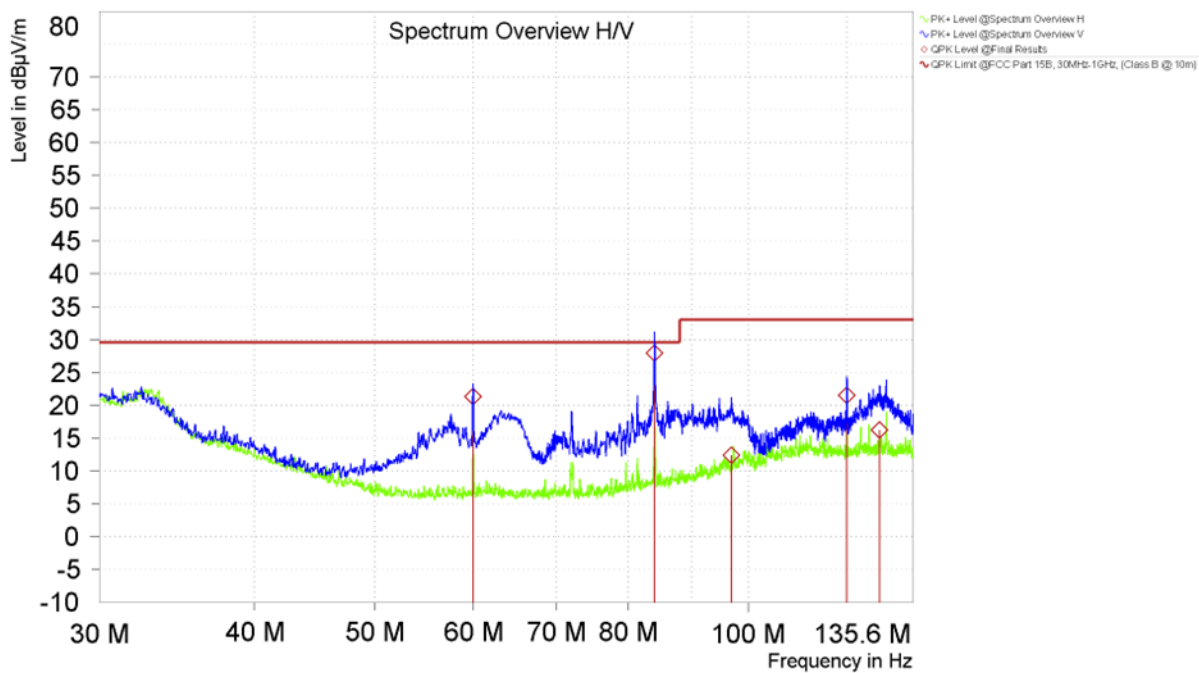


Figure 41. Out of Band Emissions Above 30MHz, Vertical and Horizontal Polarity, 5127SI (No Credential)

Frequency [MHz]	Peak Level [dBμV/m] ¹³	Limit [dBμV/m]	Margin [dB]	Correction [dB] ¹⁴	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
13.349	17.07	80.50	63.43	10.62	H	147.2	1.00	9.000	Pass
13.484	18.78	90.50	71.72	10.61	H	158.1	1.00	9.000	Pass
13.560	47.31	124.00	76.69	10.61	H	142.9	1.00	9.000	Pass
13.560	56.80	124.00	67.20	10.61	V	254.7	1.00	9.000	Pass
13.632	26.18	90.50	64.32	10.60	H	159.2	1.00	9.000	Pass
13.772	28.68	80.50	51.82	10.60	H	159.7	1.00	9.000	Pass

Figure 42. Worst Case In-Band Field Strength, 5127 CK MINI

Frequency [MHz]	Peak Level [dBμV/m] ¹	Limit [dBμV/m]	Margin [dB]	Correction [dB] ²	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
0.070	43.04	110.71	67.67	11.42	H	66.2	1.00	0.200	Pass
0.125	61.72	105.67	43.95	11.31	V	285	1.00	0.200	Pass
0.731	50.50	70.33	19.82	11.46	V	255	1.00	9.000	Pass
1.460	34.90	64.31	29.41	11.70	V	255	1.00	9.000	Pass
13.560	47.87	69.50	21.63	10.61	V	3.9	1.00	9.000	Pass
23.132	30.03	69.50	39.47	9.86	H	73.6	1.00	9.000	Pass
24.720	28.68	69.50	40.82	9.67	H	250	1.00	9.000	Pass

Figure 43. Worst Case Field Strength Below 30MHz, 5127 CK MINI

Frequency [MHz]	QPK Level [dBμV/m] ¹	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB] ²	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
30.720	20.83	29.55	8.72	-2.71	V	171.9	1.00	120.000	Pass
31.440	22.25	29.55	7.30	-3.20	V	180	1.08	120.000	Pass
32.850	15.05	29.55	14.50	-3.97	V	17.3	1.00	120.000	Pass
72.030	18.83	29.55	10.72	-13.79	V	204.1	2.06	120.000	Pass
83.970	20.88	29.55	8.67	-11.82	V	180.1	1.49	120.000	Pass
95.970	16.63	33.07	16.44	-9.78	V	107.1	1.78	120.000	Pass
120.000	22.25	33.07	10.82	-7.67	V	69	1.15	120.000	Pass

Figure 44. Worst Case Field Strength Above 30MHz, 5127 CK MINI

¹³ This corrected level includes the factor shown in the “correction” column. The corrected level = Raw Reading + Correction Factor. The raw reading is not shown in the table above.

¹⁴ This correction factor includes cable loss in dB, preamplifier gain in dB, and an electric field antenna factor in (dB/m).

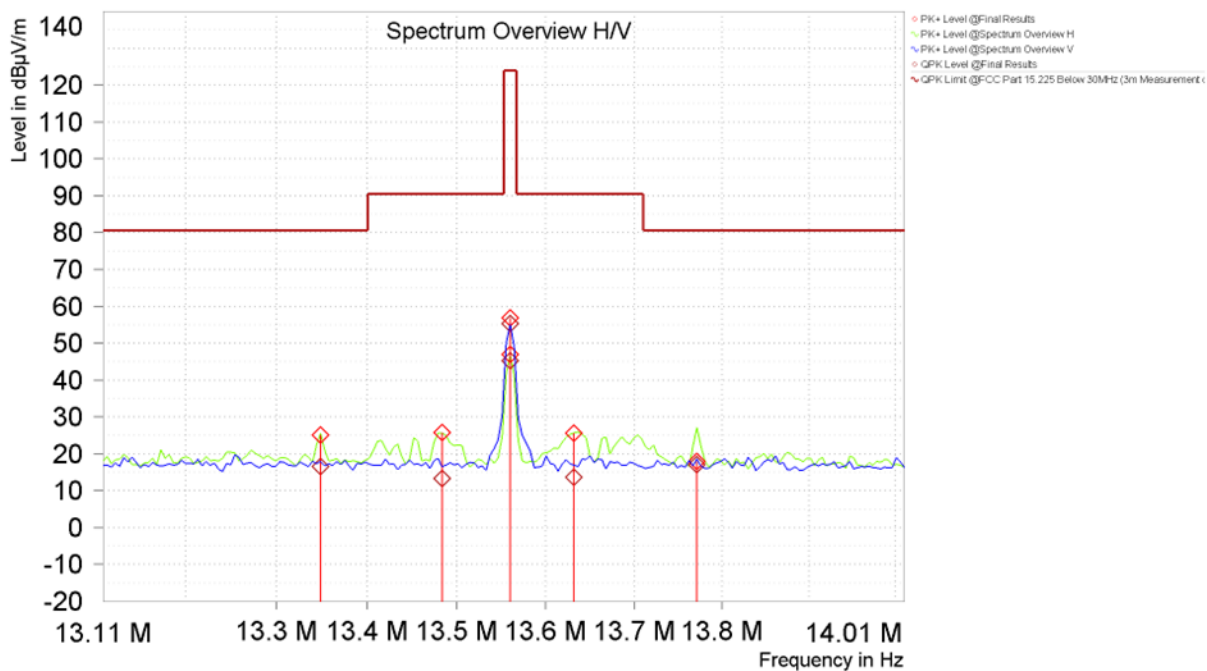


Figure 45. In-Band Emission Mask, 5127 CK MINI

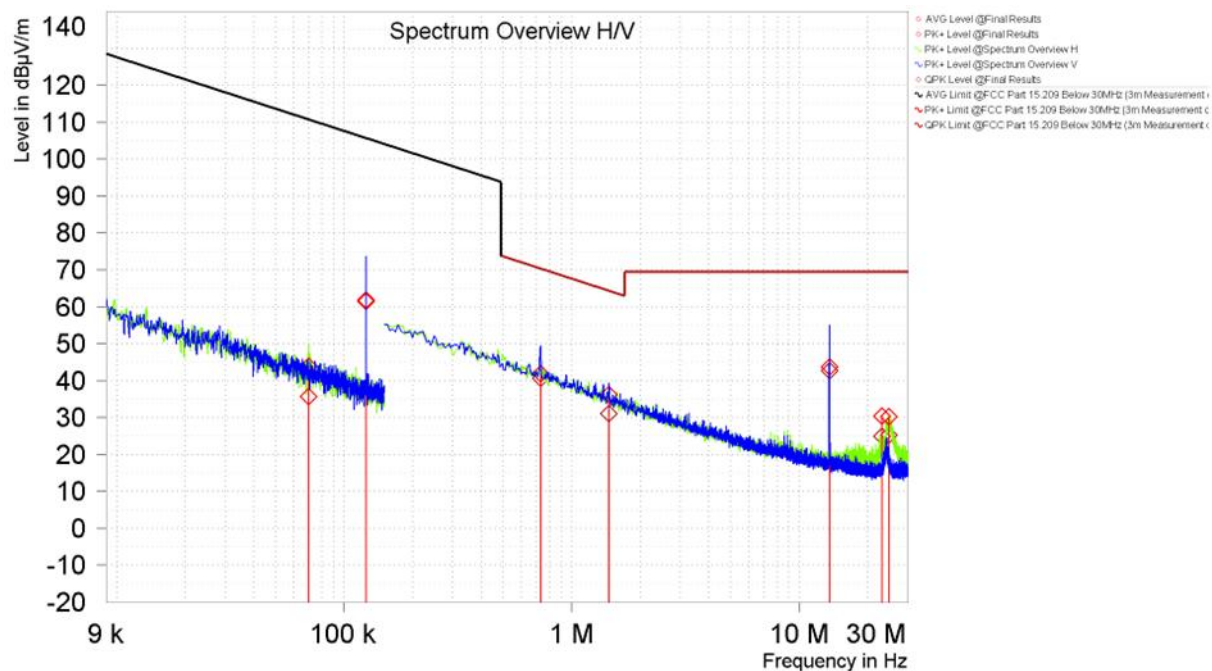


Figure 46. Out of Band Emissions Below 30MHz, 5127 CK MINI

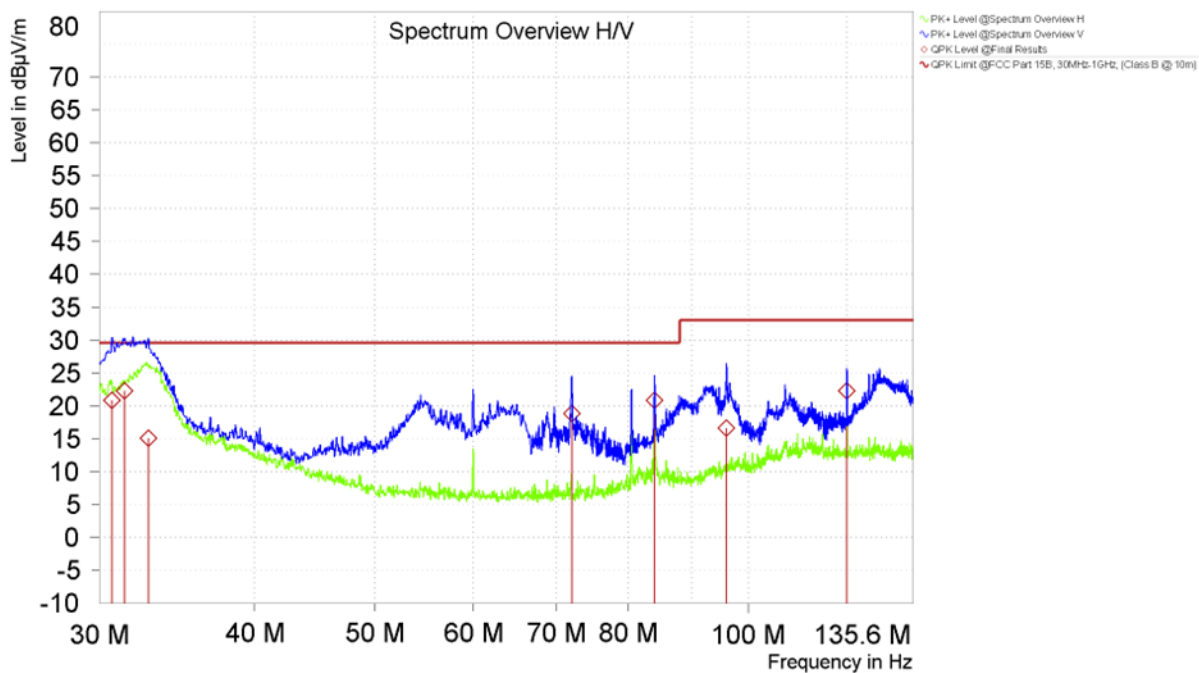


Figure 47. Out of Band Emissions Above 30MHz, Vertical and Horizontal Polarity, 5127 CK MINI

Frequency [MHz]	Peak Level [dBμV/m] ¹⁵	Limit [dBμV/m]	Margin [dB]	Correction [dB] ¹⁶	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
13.299	20.82	80.50	59.68	10.62	H	135.1	1.00	9.000	Pass
13.439	18.11	90.50	72.39	10.61	H	126	1.00	9.000	Pass
13.560	46.25	124.00	77.75	10.61	H	143.5	1.00	9.000	Pass
13.560	56.98	124.00	67.02	10.61	V	278.1	1.00	9.000	Pass
13.619	19.81	90.50	70.69	10.60	H	75	1.00	9.000	Pass
13.871	20.66	80.50	59.84	10.60	H	134.2	1.00	9.000	Pass

Figure 48. Worst Case In-Band Field Strength, 5127 CK MINI (No Credential)

Frequency [MHz]	Peak Level [dBμV/m] ¹	Limit [dBμV/m]	Margin [dB]	Correction [dB] ²	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
0.125	60.85	105.67	44.82	11.31	V	195	1.00	0.200	Pass
0.555	43.06	72.72	29.66	11.42	V	271.9	1.00	9.000	Pass
1.149	38.39	66.39	28.00	11.74	H	14.5	1.00	9.000	Pass
13.560	44.22	69.50	25.28	10.61	V	225.1	1.00	9.000	Pass
23.069	23.02	69.50	46.48	9.88	H	172.1	1.00	9.000	Pass
23.982	16.74	69.50	52.76	9.56	V	289.7	1.00	9.000	Pass

Figure 49. Worst Case Field Strength Below 30MHz, 5127 CK MINI (No Credential)

Frequency [MHz]	QPK Level [dBμV/m] ¹	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB] ²	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
32.370	16.29	29.55	13.26	-3.75	V	143.2	1.17	120.000	Pass
60.000	21.03	29.55	8.52	-14.11	V	309.8	2.50	120.000	Pass
72.000	20.25	29.55	9.30	-13.80	V	173.1	1.84	120.000	Pass
84.000	22.72	29.55	6.83	-11.81	V	201.7	1.50	120.000	Pass
96.000	17.78	33.07	15.29	-9.78	V	92.1	1.51	120.000	Pass
129.120	18.09	33.07	14.98	-7.75	V	90.1	1.26	120.000	Pass

Figure 50. Worst Case Field Strength Above 30MHz, 5127 CK MINI (No Credential)

¹⁵ This corrected level includes the factor shown in the “correction” column. The corrected level = Raw Reading + Correction Factor. The raw reading is not shown in the table above.

¹⁶ This correction factor includes cable loss in dB, preamplifier gain in dB, and an electric field antenna factor in (dB/m).

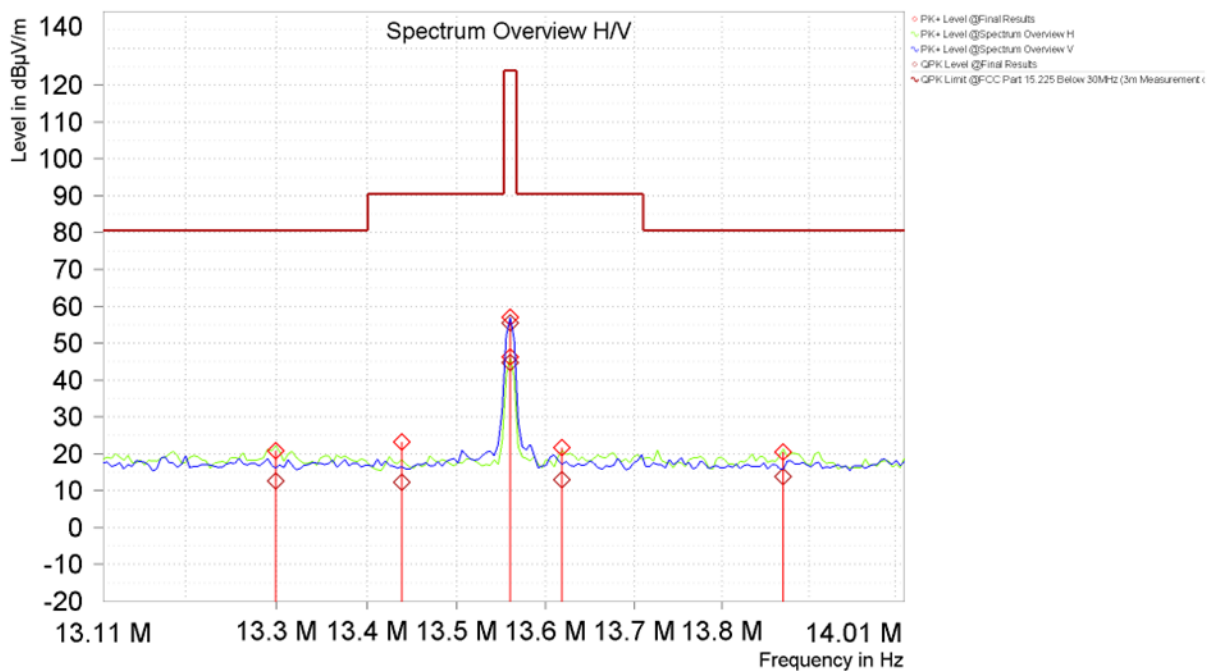


Figure 51. In-Band Emission Mask, 5127 CK MINI (No Credential)

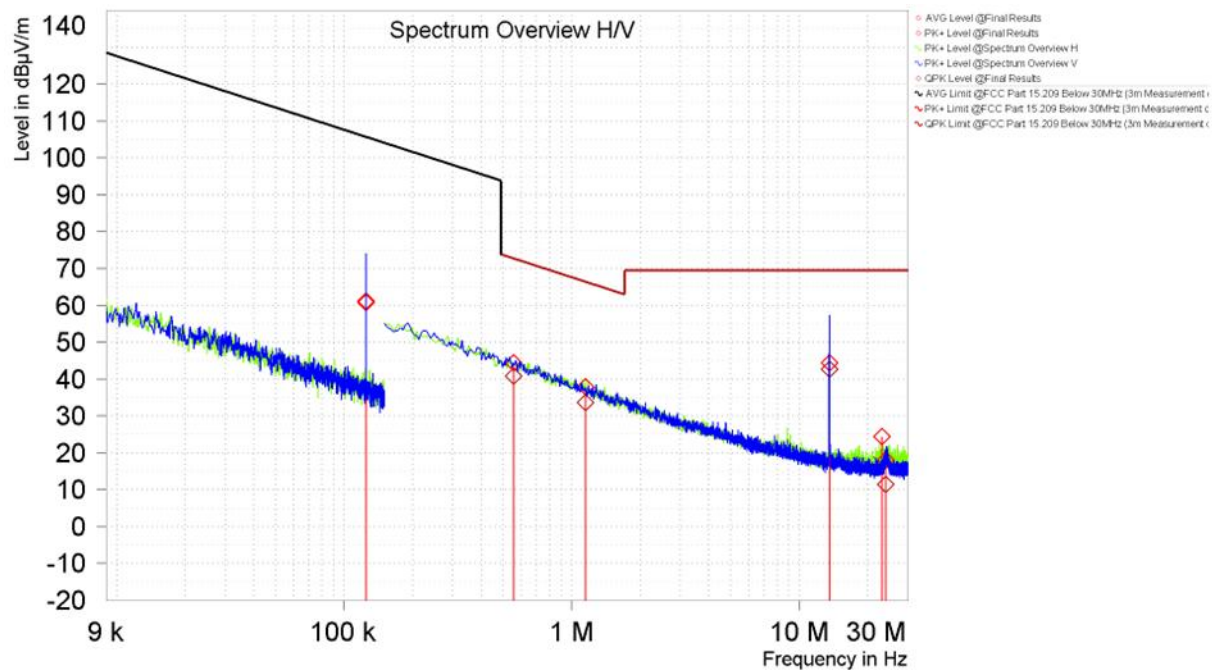


Figure 52. Out of Band Emissions Below 30MHz, 5127 CK MINI (No Credential)

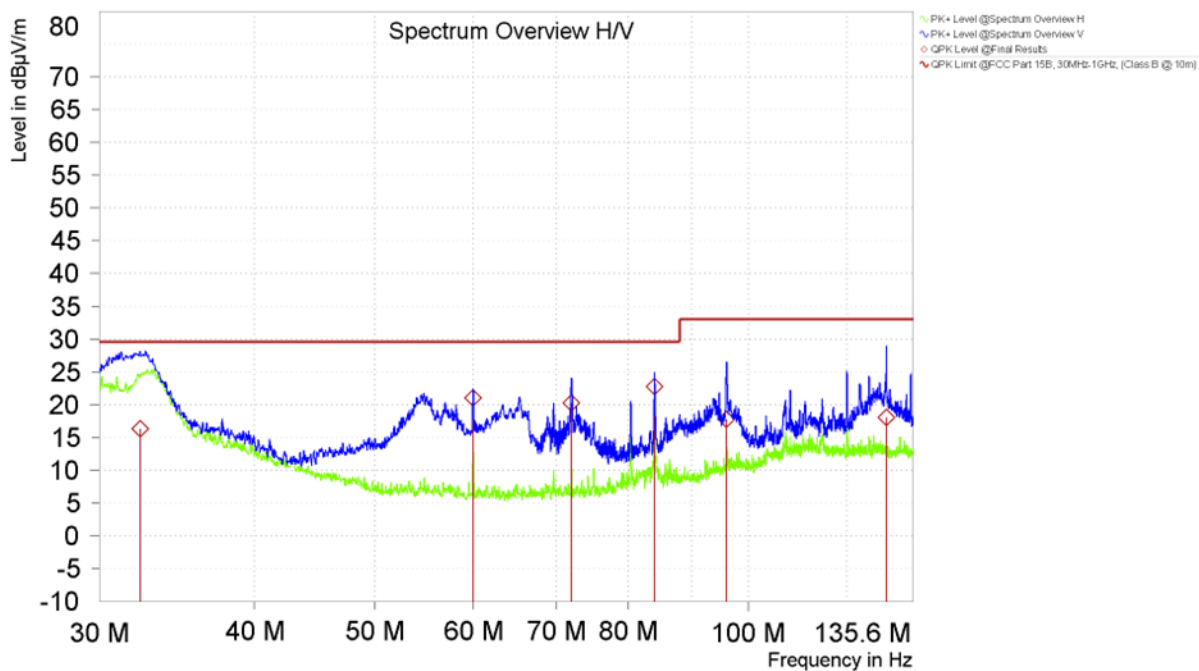


Figure 53. Out of Band Emissions Above 30MHz, Vertical and Horizontal, 5127 CK MINI (No Credential)

Frequency [MHz]	Peak Level [dBμV/m] ¹⁷	Limit [dBμV/m]	Margin [dB]	Correction [dB] ¹⁸	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
13.268	21.37	80.50	59.13	10.62	V	195	1.00	9.000	Pass
13.389	19.20	80.50	61.30	10.61	V	86.1	1.00	9.000	Pass
13.560	58.75	124.00	65.25	10.61	H	255.9	1.00	9.000	Pass
13.619	19.79	90.50	70.71	10.60	V	207.4	1.00	9.000	Pass
13.740	19.76	80.50	60.74	10.60	V	148.4	1.00	9.000	Pass

Figure 54. Worst Case In-Band Field Strength, Laminator

Frequency [MHz]	Peak Level [dBμV/m] ¹	Limit [dBμV/m]	Margin [dB]	Correction [dB] ²	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
0.018	55.92	122.73	66.81	15.31	V	199.8	1.00	0.200	Pass
0.068	52.40	111.01	58.61	11.51	V	87.3	1.00	0.200	Pass
0.650	41.45	71.35	29.90	11.37	H	226.4	1.00	9.000	Pass
1.401	35.81	64.67	28.85	11.69	V	213.4	1.00	9.000	Pass
25.004	31.65	69.50	37.85	9.72	V	277.3	1.00	9.000	Pass
26.597	28.14	69.50	41.36	9.23	H	235.5	1.00	9.000	Pass

Figure 55. Worst Case Field Strength Below 30MHz, Laminator

Frequency [MHz]	QPK Level [dBμV/m] ¹	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB] ²	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
30.540	19.20	29.55	10.35	-2.58	V	241.3	2.50	120.000	Pass
40.680	20.24	29.55	9.31	-8.17	V	107.1	1.26	120.000	Pass
59.970	20.57	29.55	8.98	-14.11	V	56.5	2.12	120.000	Pass
73.170	21.15	29.55	8.40	-13.50	V	65	1.89	120.000	Pass
81.390	27.08	29.55	2.47	-12.44	V	38.1	1.52	120.000	Pass
108.480	22.78	33.07	10.29	-7.92	V	91.3	1.49	120.000	Pass
135.600	28.46	33.07	4.61	-7.84	V	19.4	0.99	120.000	Pass

Figure 56. Worst Case Field Strength Above 30MHz, Laminator

¹⁷ This corrected level includes the factor shown in the “correction” column. The corrected level = Raw Reading + Correction Factor. The raw reading is not shown in the table above.

¹⁸ This correction factor includes cable loss in dB, preamplifier gain in dB, and an electric field antenna factor in (dB/m).

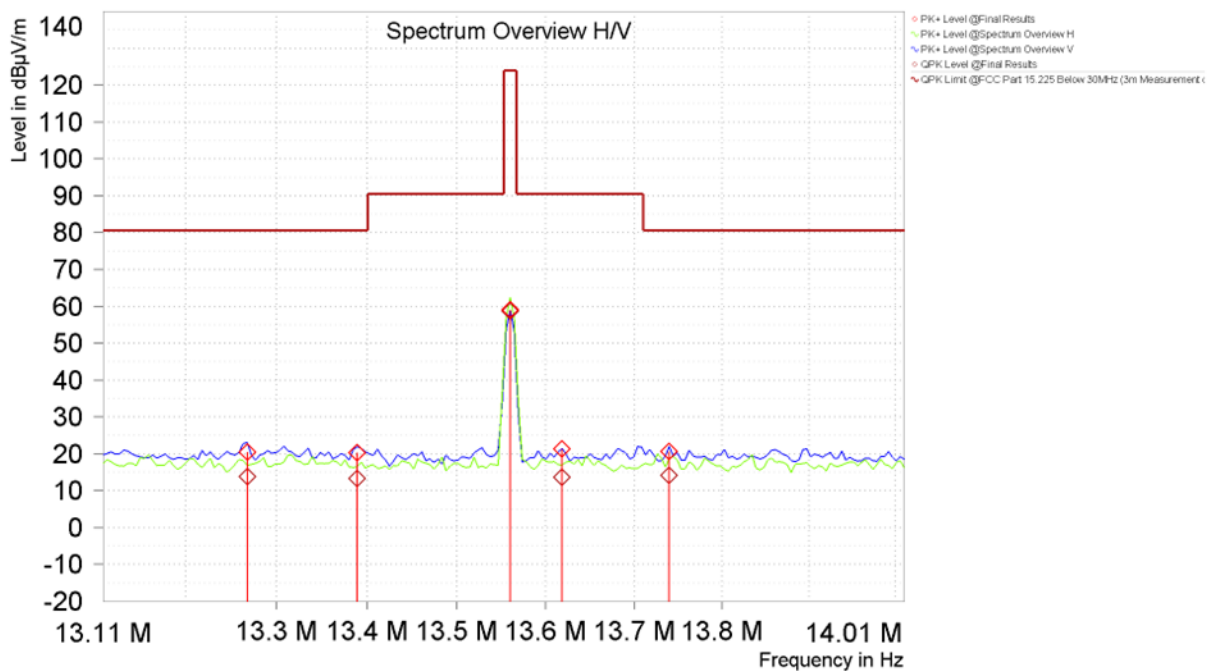


Figure 57. In-Band Emission Mask, Laminator

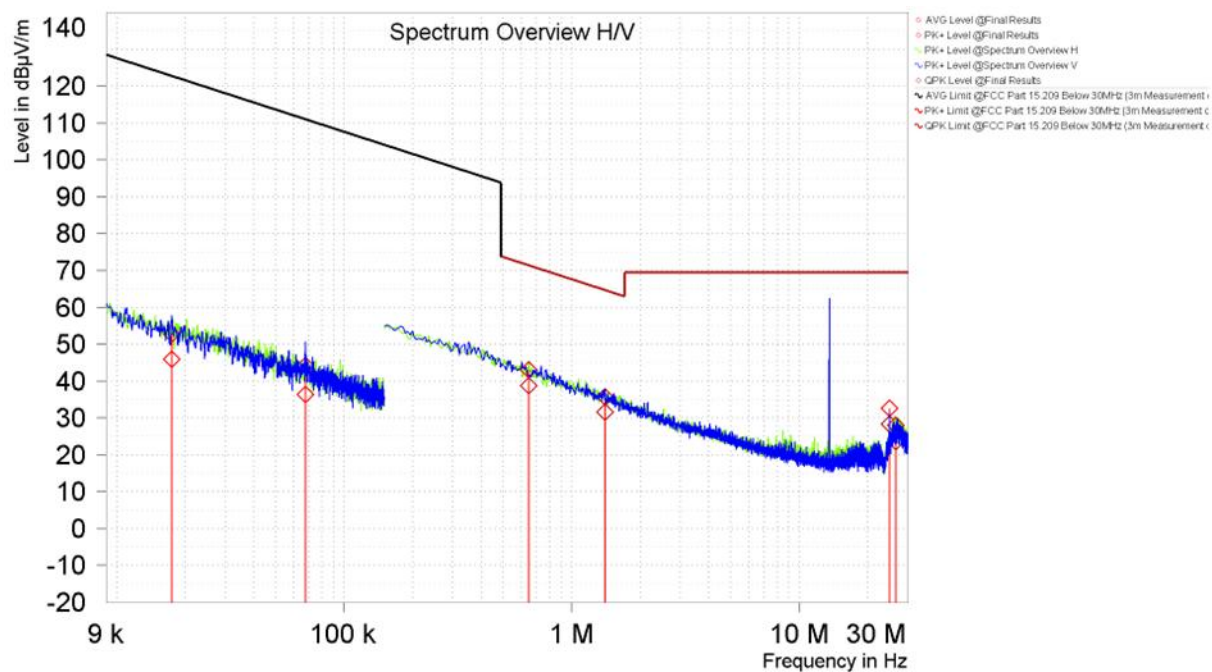


Figure 58. Out of Band Emissions Below 30MHz, Laminator

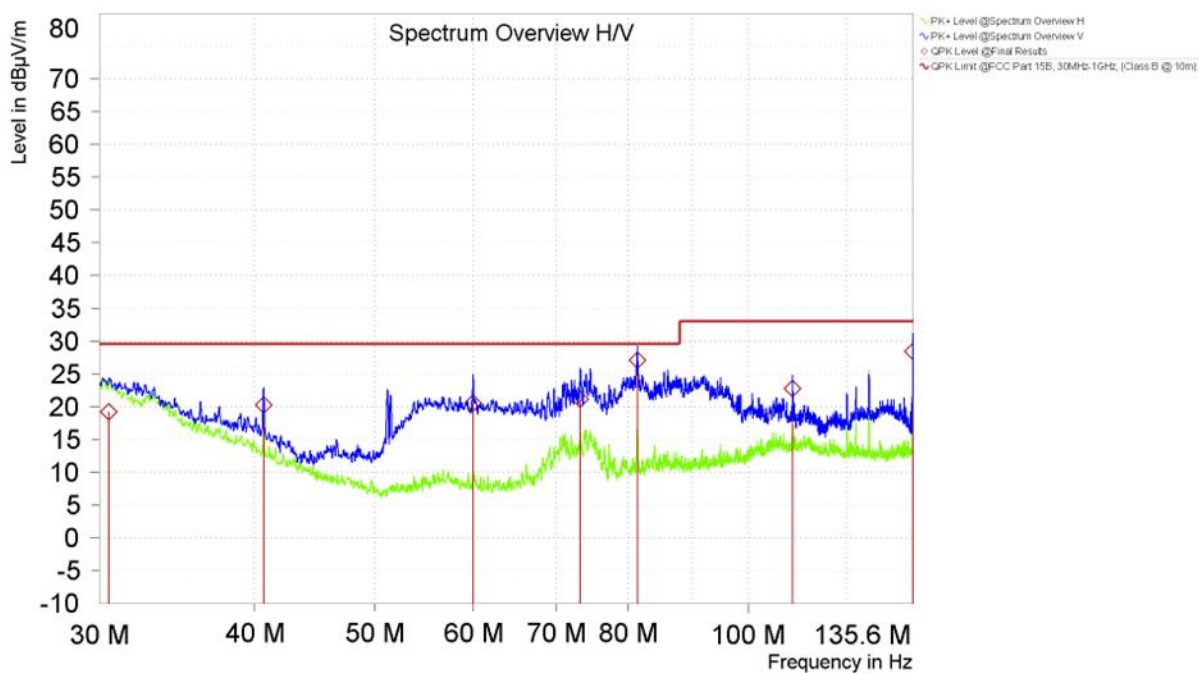


Figure 59. Out of Band Emissions Above 30MHz, Vertical and Horizontal Polarity, Laminator

Frequency [MHz]	Peak Level [dBμV/m] ¹⁹	Limit [dBμV/m]	Margin [dB]	Correction [dB] ²⁰	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
13.137	38.96	80.50	41.54	10.62	V	176.2	1.00	9.000	Pass
13.385	18.00	80.50	62.50	10.61	V	217.2	1.00	9.000	Pass
13.524	42.93	90.50	47.57	10.61	V	209.6	1.00	9.000	Pass
13.560	62.88	124.00	61.12	10.61	V	255	1.00	9.000	Pass
13.592	28.91	90.50	61.59	10.61	V	197.8	1.00	9.000	Pass
13.736	28.41	80.50	52.09	10.60	V	175	1.00	9.000	Pass

Figure 60. Worst Case In-Band Field Strength, Laminator (No Credential)

Frequency [MHz]	Peak Level [dBμV/m] ¹	Limit [dBμV/m]	Margin [dB]	Correction [dB] ²	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
0.067	51.31	111.06	60.14	11.53	V	178.8	1.00	0.200	Pass
0.159	56.45	103.57	46.60	11.26	H	119.6	1.00	9.000	Pass
9.245	22.22	69.50	44.46	10.82	H	198.5	1.00	9.000	Pass
13.133	33.64	69.50	37.64	10.62	H	303.6	1.00	9.000	Pass
23.667	22.47	69.50	45.92	9.67	V	83.1	1.00	9.000	Pass
25.778	15.95	69.50	37.13	9.28	H	44.7	1.00	9.000	Pass

Figure 61. Worst Case Field Strength Below 30MHz, Laminator (No Credential)

Frequency [MHz]	QPK Level [dBμV/m] ¹	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB] ²	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]	Result
30.660	20.01	29.55	9.54	-2.67	V	309.2	2.50	120.000	Pass
40.680	21.33	29.55	8.22	-8.17	V	75.4	1.11	120.000	Pass
60.000	22.51	29.55	7.04	-14.11	V	87.8	2.43	120.000	Pass
74.550	22.65	29.55	6.90	-13.26	V	69.9	1.50	120.000	Pass
81.390	27.05	29.55	2.50	-12.44	V	62.5	1.53	120.000	Pass
108.480	23.17	33.07	9.90	-7.92	V	104.1	1.15	120.000	Pass
135.600	28.22	33.07	4.85	-7.84	V	62	1.34	120.000	Pass

Figure 62. Worst Case Field Strength Above 30MHz, Laminator (No Credential)

¹⁹ This corrected level includes the factor shown in the “correction” column. The corrected level = Raw Reading + Correction Factor. The raw reading is not shown in the table above.

²⁰ This correction factor includes cable loss in dB, preamplifier gain in dB, and an electric field antenna factor in (dB/m).

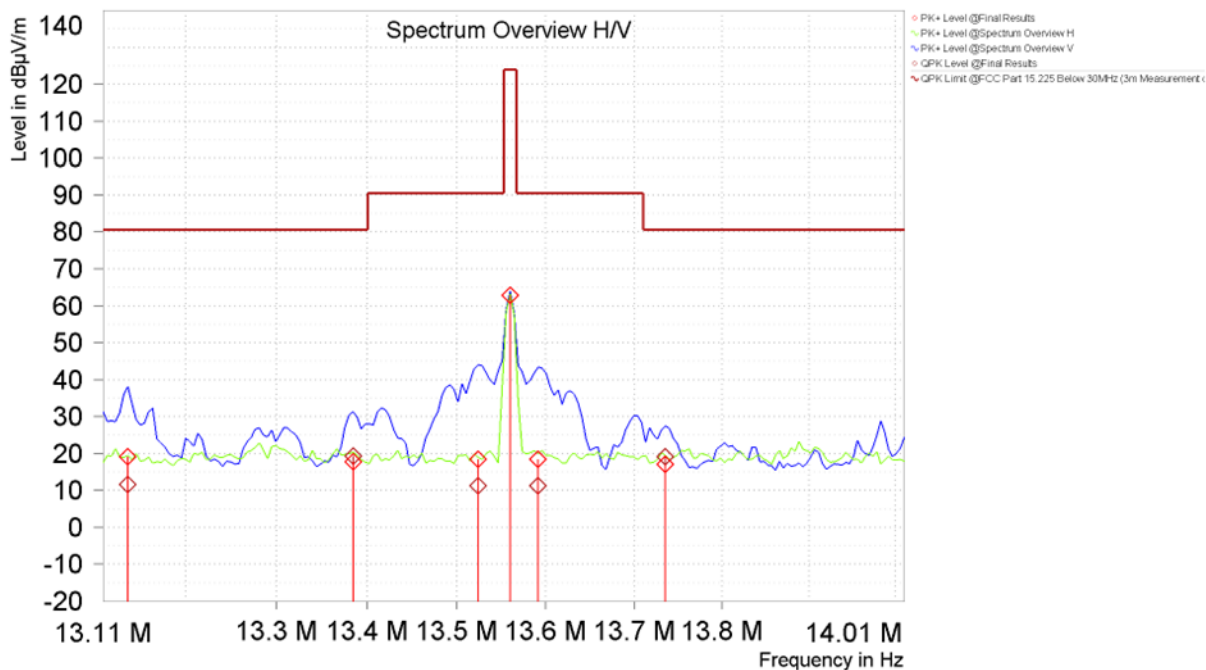


Figure 63. In-Band Emission Mask, Laminator (No Credential)

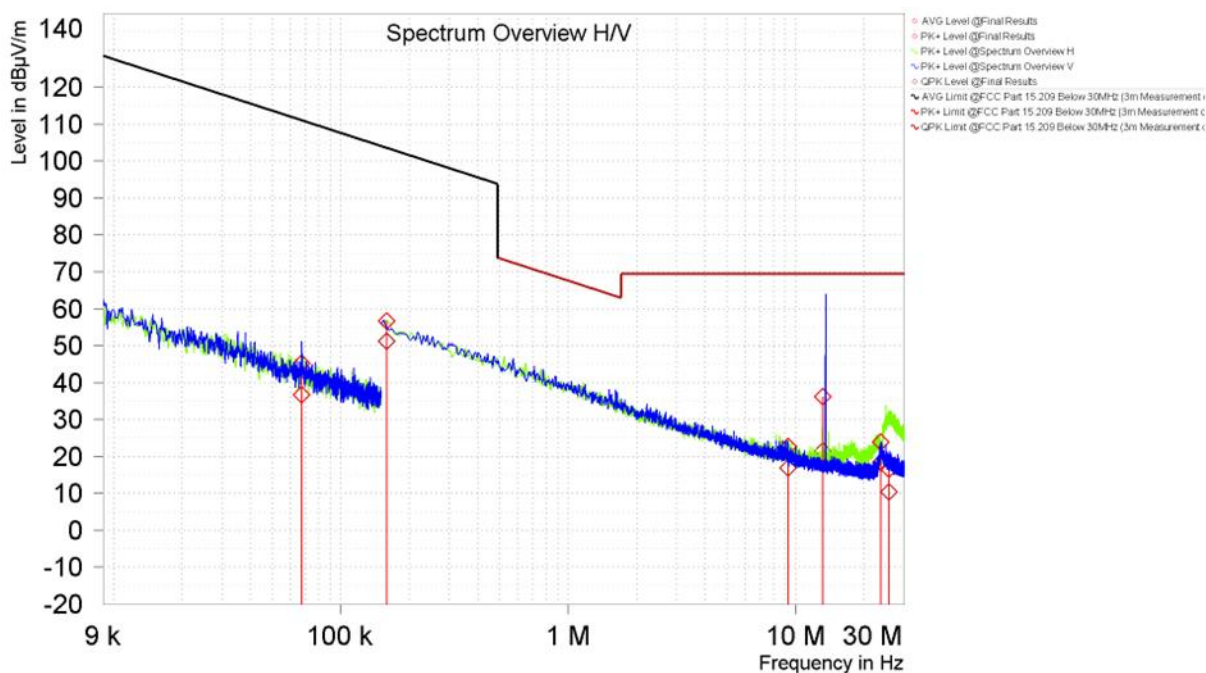


Figure 64. Out of Band Emissions Below 30MHz, Laminator (No Credential)

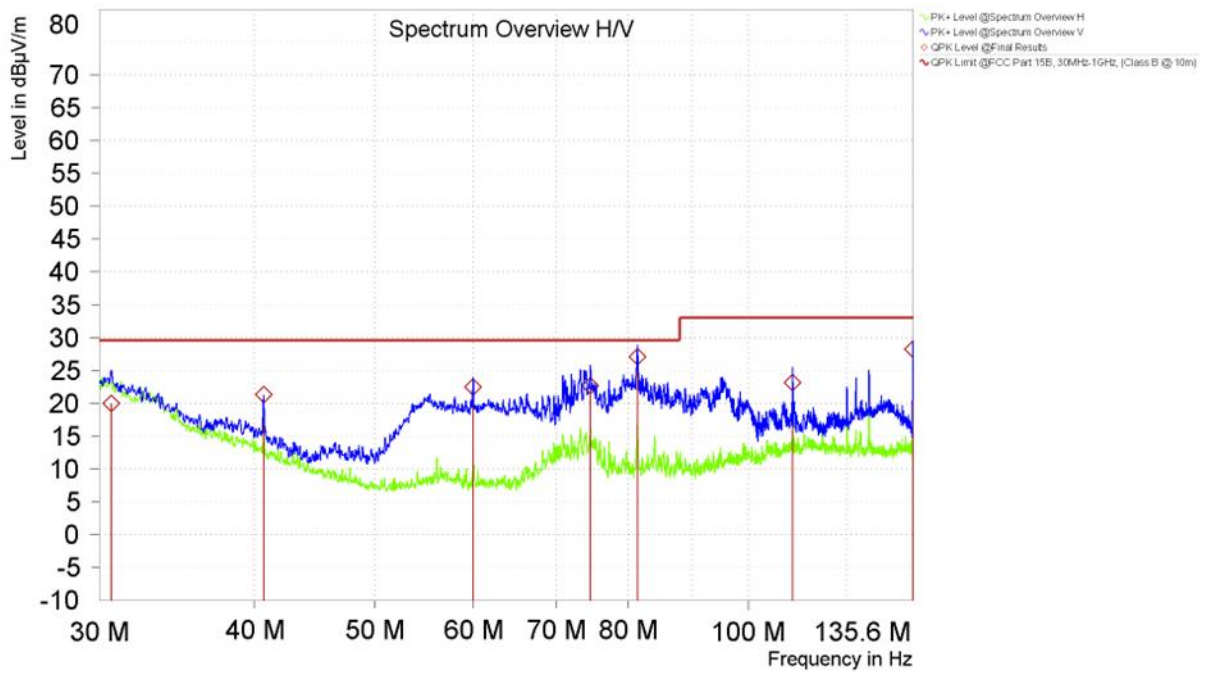


Figure 65. Out of Band Emissions Above 30MHz, Vertical and Horizontal Polarity, Laminator (No Credential)

Electromagnetic Compatibility Criteria for Intentional Radiators

Frequency Stability

Test Requirement(s): **15.225(e)** The frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ of the operating frequency over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

RSS-210 (B.6.b) The frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ (± 100 ppm) of the operating frequency over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

Test Procedure: Measurements are in accordance with section 6.8 of ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024. The EUT was placed in the Environmental Chamber and allowed to reach desired temperature. A spectrum analyzer was connected to a magnetic field loop antenna and used to measure the frequency drift via a radiated path measurement. The EUT was set to transmit in the operating frequency range. Frequency drift was investigated for the extreme temperatures and nominal temperature, until the unit is stabilized then recorded the reading in tabular format with the temperature range of -20° to 50°C.

Test Results: The Color Card Printer, DTC1500 was compliant with Part 15.225 (e) and RSS-210 (B.6.b) requirement(s) of this section.

Test Engineer(s): Bryan Taylor

Test Date(s): 12/10/2025 – 12/11/2025

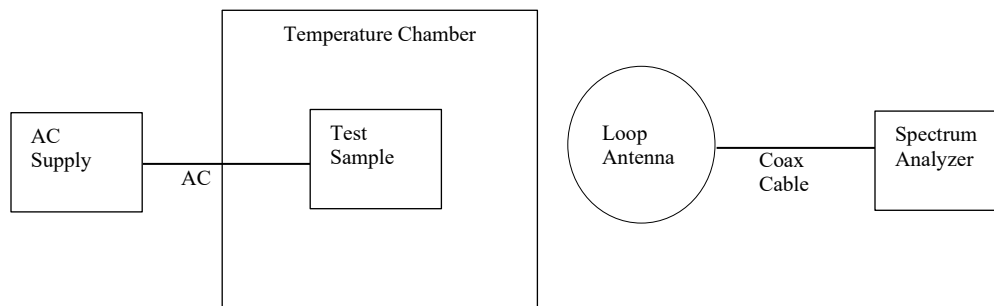


Figure 66. Temperature Stability Test Setup

Operating Frequency:		13,560,000	Hz			
Reference Voltage:		120	VAC			
Deviation Limit:		0.01	%			
Voltage %	Voltage (VAC)	Temp (°C)	Measured Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	Limit (%)
100%	120	-30	13,559,884	-116	-0.0009	0.01
100%	120	-20	13,559,870	-130	-0.0010	0.01
100%	120	-10	13,559,847	-153	-0.0011	0.01
100%	120	0	13,559,801	-199	-0.0015	0.01
100%	120	10	13,559,783	-217	-0.0016	0.01
100%	120	20	13,559,768	-232	-0.0017	0.01
100%	120	30	13,559,765	-235	-0.0017	0.01
100%	120	40	13,559,768	-232	-0.0017	0.01
100%	120	50	13,560,913	913	0.0067	0.01
115%	138	20	13,559,759	-241	-0.0018	0.01
85%	102	20	13,559,762	-238	-0.0018	0.01

Figure 67. Frequency Stability Test Results (Ribbon)

Operating Frequency:		13,560,000	Hz			
Reference Voltage:		120	VAC			
Deviation Limit:		0.01	%			
Voltage %	Voltage (VAC)	Temp (°C)	Measured Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	Limit (%)
100%	120	-30	13,559,877	-123	-0.0009	0.01
100%	120	-20	13,559,862	-138	-0.0010	0.01
100%	120	-10	13,559,844	-156	-0.0012	0.01
100%	120	0	13,559,786	-214	-0.0016	0.01
100%	120	10	13,559,773	-227	-0.0017	0.01
100%	120	20	13,559,771	-229	-0.0017	0.01
100%	120	30	13,559,768	-232	-0.0017	0.01
100%	120	40	13,559,763	-237	-0.0017	0.01
100%	120	50	13,559,761	-239	-0.0018	0.01
115%	138	20	13,559,774	-226	-0.0017	0.01
85%	102	20	13,559,773	-227	-0.0017	0.01

Figure 68. Frequency Stability Test Results (5122)

Operating Frequency:		13,560,000	Hz			
Reference Voltage:		120	VAC			
Deviation Limit:		0.01	%			
Voltage %	Voltage (VAC)	Temp (°C)	Measured Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	Limit (%)
100%	120	-30	13,559,879	-121	-0.0009	0.01
100%	120	-20	13,559,866	-134	-0.0010	0.01
100%	120	-10	13,559,837	-163	-0.0012	0.01
100%	120	0	13,559,812	-188	-0.0014	0.01
100%	120	10	13,559,786	-214	-0.0016	0.01
100%	120	20	13,559,779	-221	-0.0016	0.01
100%	120	30	13,559,772	-228	-0.0017	0.01
100%	120	40	13,559,769	-231	-0.0017	0.01
100%	120	50	13,559,761	-239	-0.0018	0.01
115%	138	20	13,559,811	-189	-0.0014	0.01
85%	102	20	13,559,817	-183	-0.0013	0.01

Figure 69. Frequency Stability Test Results (5127SI)

Operating Frequency:		13,560,000	Hz			
Reference Voltage:		120	VAC			
Deviation Limit:		0.01	%			
Voltage %	Voltage (VAC)	Temp (°C)	Measured Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	Limit (%)
100%	120	-30	13,559,886	-114	-0.0008	0.01
100%	120	-20	13,559,867	-133	-0.0010	0.01
100%	120	-10	13,559,848	-152	-0.0011	0.01
100%	120	0	13,559,802	-198	-0.0015	0.01
100%	120	10	13,559,781	-219	-0.0016	0.01
100%	120	20	13,559,766	-234	-0.0017	0.01
100%	120	30	13,559,765	-235	-0.0017	0.01
100%	120	40	13,559,770	-230	-0.0017	0.01
100%	120	50	13,559,792	-208	-0.0015	0.01
115%	138	20	13,559,759	-241	-0.0018	0.01
85%	102	20	13,559,763	-237	-0.0017	0.01

Figure 70. Frequency Stability Test Results (5127 CK MINI)

Operating
Frequency: 13,560,000 Hz
Reference Voltage: 120 VAC
Deviation Limit: 0.01 %

Voltage %	Voltage (VAC)	Temp (°C)	Measured Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	Limit (%)
100%	120	-30	13,559,855	-145	-0.0011	0.01
100%	120	-20	13,559,861	-139	-0.0010	0.01
100%	120	-10	13,559,844	-156	-0.0012	0.01
100%	120	0	13,559,802	-198	-0.0015	0.01
100%	120	10	13,559,781	-219	-0.0016	0.01
100%	120	20	13,559,783	-217	-0.0016	0.01
100%	120	30	13,559,787	-213	-0.0016	0.01
100%	120	40	13,559,783	-217	-0.0016	0.01
100%	120	50	13,559,566	-434	-0.0032	0.01
115%	138	20	13,559,778	-222	-0.0016	0.01
85%	102	20	13,559,783	-217	-0.0016	0.01

Figure 71. Frequency Stability Test Results (Laminator)

Test Equipment

Calibrated test equipment utilized during testing was maintained in a current state of calibration per the requirements of ISO/IEC 17025:2017.

MET Asset #	Description	Manufacturer	Model	Last Cal Date	Cal Due Date
1A1234	FSV Signal Analyzer	Rohde & Schwarz	FSV 40	03/13/2025	03/13/2026
1A1250	EMI Test Receiver	Rohde & Schwarz	ESW44	03/28/2025	03/28/2026
1A1176	Active Loop Antenna (9KHz-30MHz)	ETS-Lindgren	6502	08/22/2024	08/22/2026
1A1050	Bi-Log Antenna	Schaffner	CBL-6112D	03/05/2024	03/05/2026
1A1065	EMI Test Receiver	Rohde & Schwarz	ESCI	08/28/2025	08/28/2026
1A1177	Pulse Limiter	Rohde & Schwarz	ESH3Z2	12/11/2024	12/11/2025
3A3215	DC Milli-Ohm Meter	Valhalla	4150ATC	05/28/2025	05/28/2026
3A3377	Thermohygrometer with barometer	Omega	Q68706	03/31/2025	03/31/2026
1A1257	True-RMS Multimeter	Fluke	179	02/07/2025	02/07/2026
1A1123	LISN	TESEQ	NNB 51	12/11/2024	12/11/2025
1A1225	Environmental Chamber	Espec	EXP-2H/New	05/16/2025	05/16/2026
1A1099	Generator	Com-Power	CGO-51000	See Note	
1A1044	Generator	Com-Power	CG-520	See Note	
1A1073	Multi Device Controller	ETS	2090	See Note	
1A1074	System Controller	Panasonic	WV-CU101	See Note	
1A1080	Multi-Device	ETS	2090	See Note	
1A1180	Preamplifier	Miteq	AMF-7D-01001800-22-10P	See Note	

Table 27. Test Equipment List

Note: Functionally tested equipment is verified using calibrated instrumentation at the time of testing.

End of Report