



中国认可  
国际互认  
检测  
TESTING  
CNAS L4062



# TEST REPORT

Reference No..... : WTF24X12291381X1E  
Applicant..... : CSS Designs  
Address..... : 7755 W Lake Pointe Dr, Franklin WI 53132 USA  
Manufacturer ..... : CSS Designs  
Address..... : 7755 W Lake Pointe Dr, Franklin WI 53132 USA  
Product Name ..... : MIDI Tap Pro  
Model No..... : MIDI Tap Pro  
Standards ..... : **47 CFR FCC Part 15, Subpart B**  
Date of Receipt sample ..... : 2024-12-20  
Date of Test..... : 2024-12-23 to 2024-12-27  
Date of Issue ..... : 2025-02-21  
Test Report Form No. .... : WTX\_FCC PART15B\_001  
Test Result..... : **Pass**

## Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of approver.

## Prepared By:

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Tested by:

Approved by:

Scott Zhang

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## Report version

Version No.	Date of issue	Description
Rev.00	2024-12-27	Original report WTF24X12291381E.
Rev.01	2025-02-21	This report replaces the original report WTF24X12291381E, which is invalid, Add auxiliary equipment, Added test setup chart

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## 1. GENERAL INFORMATION

### 1.1 Product Description for Equipment Under Test (EUT)

#### Client Information

Factory name: CSS Designs  
Factory address: 7755 W Lake Pointe Dr, Franklin

#### General Description of EUT

Product Name:	MIDI Tap Pro
Trade Name:	CSS Designs
Model No.:	MIDI Tap Pro
Adding Model(s):	/
<i>Note: The test data is gathered from production sample, provided by the manufacturer.</i>	

#### Technical Characteristics of EUT

Power Supply:	DC 5V
Power Adaptor:	/
Cable:	Type-C cable *1 (length 1.0m, Unshielded, Without Ferrite, Without Chip)
Rated Power:	/
Rated Current:	/
Lowest Internal Frequency:	/
Highest Internal Frequency:	Above 108MHz
Classification of Equipment:	Class B



## 1.2 Test Standards

The tests were performed according to following standards:

### 47 CFR FCC Part 15, Subpart B: Unintentional Radiators

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product maybe which result in lowering the emission/immunity should be checked to ensure compliance has been maintained.

## 1.3 Test Location

Laboratory: Waltek Testing Group (Shenzhen) Co., Ltd.

Address:

1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road, Block 70  
Bao'an District, Shenzhen, Guangdong, China

## 1.4 Test Facility

### FCC – Registration No.: 125990

Waltek Testing Group (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. The Designation Number is CN5010, and Test Firm Registration Number is 125990.

### Industry Canada (IC) Registration No.: 11464A

The 3m Semi-anechoic chamber of Waltek Testing Group (Shenzhen) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A and the CAB identifier is CN0057.



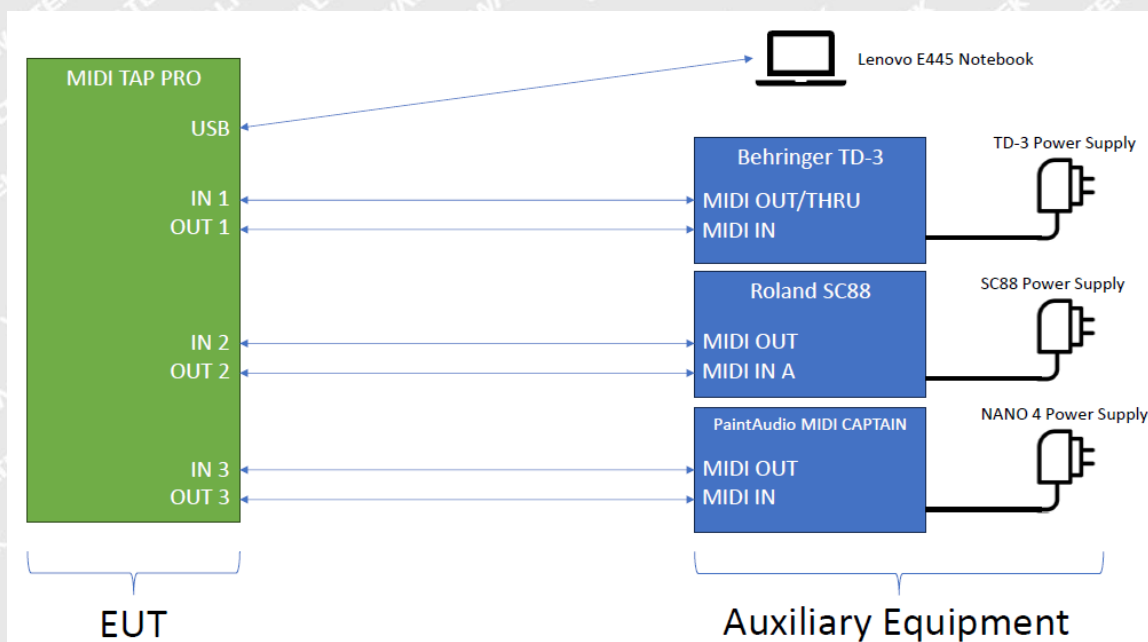
## 1.5 EUT Setup and Operation Mode

The equipment under test (EUT) was configured to measure its highest possible emission. The test modes were adapted according to the operation manual for use, more detailed description as follows:

No	Title	Description
TM1	Working mode	EUT connects the notebook DC 5V

### Auxiliary Equipment List and Details

Description	Manufacturer	Model	Serial Number
Notebook	Lenovo	E445	0C62707
Synthesizer	Behringer	TD-3	/
Synthesizer	Roland	SC88	/
Foot Pedal	PaintAudio	MIDI CAPTAIN	/



## 1.6 Measurement Uncertainty

Test Item	Measurement Uncertainty
Conducted Emissions (AC Mains 150k - 30MHz)	$\pm 3.34\text{dB}$
Radiated Emissions (30M - 1000MHz)	30-200MHz: $\pm 4.52\text{dB}$ 200-1000MHz: $\pm 5.56\text{dB}$
Radiated Emissions (above 1GHz)	1-6GHz: $\pm 3.84\text{dB}$ 6-18GHz: $\pm 3.92\text{dB}$



## 1.7 Test Equipment List and Details

Conducted emissions on AC mains					
Description	Manufacturer	Model	Serial No.	Cal. Date	Due. Date
8-WIRE ISN CAT5	Schwarz beck	8158	CAT5-8158-0117	2024-02-24	2025-02-23
AC LISN	Schwarz beck	NSLK8126	8126-279	2024-02-24	2025-02-23
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2024-02-24	2025-02-23
EMI Test Receiver	Rohde & Schwarz	ESCI	100525	2023-12-12	2024-12-11
EMI Test Software (Conducted Emission Room 1#)	Farad	EZ-EMC	3A1*CE-RE 1.1.4.3	/	/

Radiated emissions (Below 1GHz)					
Description	Manufacturer	Model	Serial No.	Cal. Date	Due. Date
Loop Antenna	Schwarz beck	FMZB 1516	9773	2024-02-26	2025-02-25
Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2024-02-24	2025-02-23
Trilog Broadband Antenna	Schwarz beck	VULB9163	9163-333	2023-03-20	2026-03-19
Amplifier	HP	8447F	2805A03475	2024-02-24	2025-02-23
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2024-03-19	2025-03-18
EMI Test Software (Radiated Emission A)	Farad	EZ-EMC	RA-03A1 (1.1.4.2)	/	/

Radiated emissions (Above 1GHz)					
Description	Manufacturer	Model	Serial No.	Cal. Date	Due. Date
Horn Antenna	ETS	3117	00086197	2024-02-26	2025-02-25
Amplifier	C&D	PAP-1G18	2002	2024-02-27	2025-02-26
Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2024-02-24	2025-02-23
EMI Test Software (Radiated Emission A)	Farad	EZ-EMC	RA-03A1 (1.1.4.2)	/	/



## 2. SUMMARY OF TEST RESULTS

Item	Standard	Method	Result
Conducted emissions on AC mains	47 CFR FCC Part 15, Subpart B	ANSI C63.4-2014 ANSI C63.4a-2017	Compliant
Radiated emissions (Below 1GHz)	47 CFR FCC Part 15, Subpart B	ANSI C63.4-2014 ANSI C63.4a-2017	Compliant
Radiated emissions (Above 1GHz)	47 CFR FCC Part 15, Subpart B	ANSI C63.4-2014 ANSI C63.4a-2017	Compliant

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### 3. Emission Test Results (EMI)

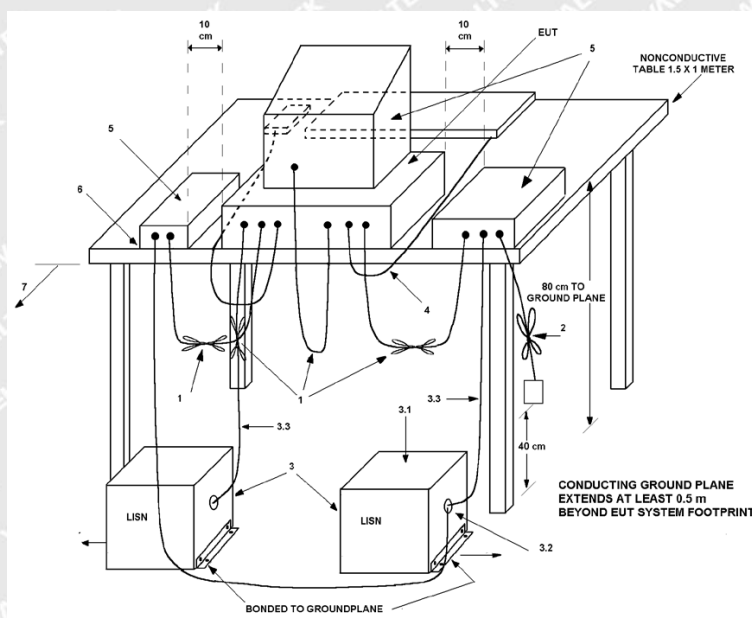
#### 3.1 Conducted emissions on AC mains

<b>Test Requirement:</b>	15.107, Class B		
<b>Test Limit:</b>	<b>Frequency of emission (MHz)</b>	<b>Conducted limit (dBμV)</b>	
		<b>Quasi-peak</b>	<b>Average</b>
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
	5-30	60	50
	*Decreases with the logarithm of the frequency.		
<b>Test Method:</b>	ANSI C63.4-2014 ANSI C63.4a-2017		
<b>Procedure:</b>	An initial pre-scan was performed with peak detector. Quasi-Peak or Average measurement were performed at the frequencies with maximized peak emission were detected. Remark: Level= Read Level+ Cable Loss+ LISN Factor		

##### 3.1.1 E.U.T. Operation

<b>Environmental Conditions</b>	
<b>Temperature:</b>	23.5 °C
<b>Relative Humidity:</b>	54 %
<b>Atmospheric Pressure:</b>	99.8 kPa
<b>Test mode:</b>	TM1

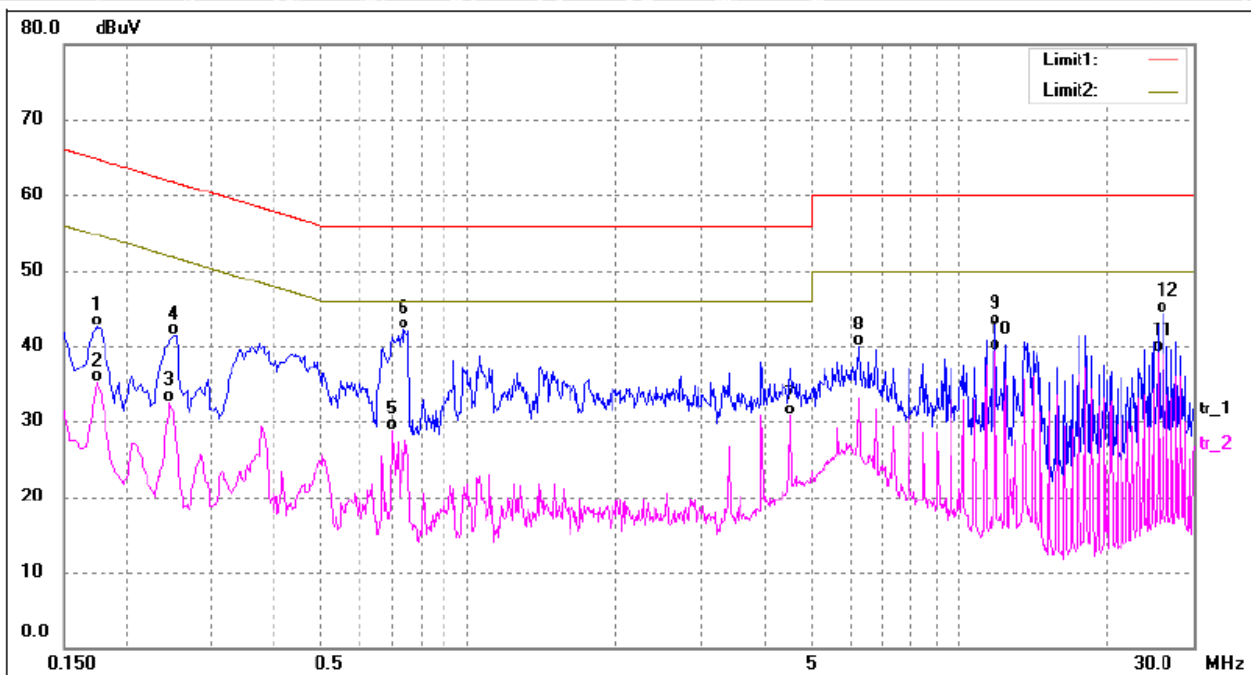
##### 3.1.2 Basic Test Setup Block Diagram



##### 3.1.3 Summary of Test Results



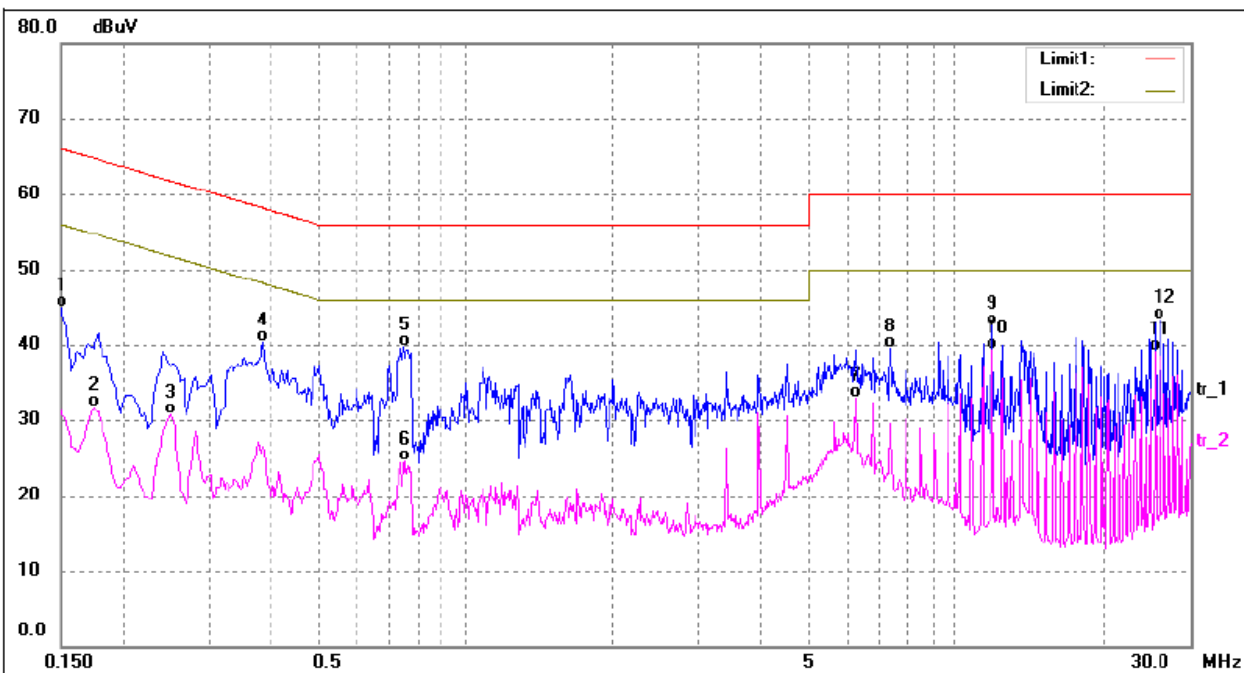
TM1 / Line: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1740	32.47	9.96	42.43	64.76	-22.33	QP
2	0.1740	25.12	9.96	35.08	54.76	-19.68	AVG
3	0.2460	22.47	9.94	32.41	51.89	-19.48	AVG
4	0.2540	31.35	9.95	41.30	61.62	-20.32	QP
5	0.6980	18.72	9.96	28.68	46.00	-17.32	AVG
6	0.7420	32.23	9.96	42.19	56.00	-13.81	QP
7	4.5300	20.67	10.09	30.76	46.00	-15.24	AVG
8	6.2260	29.66	10.16	39.82	60.00	-20.18	QP
9	11.8860	32.18	10.53	42.71	60.00	-17.29	QP
10*	11.8860	28.84	10.53	39.37	50.00	-10.63	AVG
11	25.4700	27.59	11.57	39.16	50.00	-10.84	AVG
12	26.0380	32.58	11.64	44.22	60.00	-15.78	QP



TM1 / Line: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1500	34.92	9.97	44.89	65.99	-21.10	QP
2	0.1740	21.65	9.96	31.61	54.76	-23.15	AVG
3	0.2500	20.66	9.95	30.61	51.75	-21.14	AVG
4	0.3860	30.39	9.95	40.34	58.15	-17.81	QP
5	0.7500	29.73	9.96	39.69	56.00	-16.31	QP
6	0.7580	14.56	9.96	24.52	46.00	-21.48	AVG
7	6.2260	22.77	10.16	32.93	50.00	-17.07	AVG
8	7.3620	29.33	10.22	39.55	60.00	-20.45	QP
9	11.8860	31.89	10.53	42.42	60.00	-17.58	QP
10*	11.8860	28.85	10.53	39.38	50.00	-10.62	AVG
11	25.4700	27.59	11.57	39.16	50.00	-10.84	AVG
12	26.0380	31.72	11.64	43.36	60.00	-16.64	QP



### 3.2 Radiated emissions (Below 1GHz)

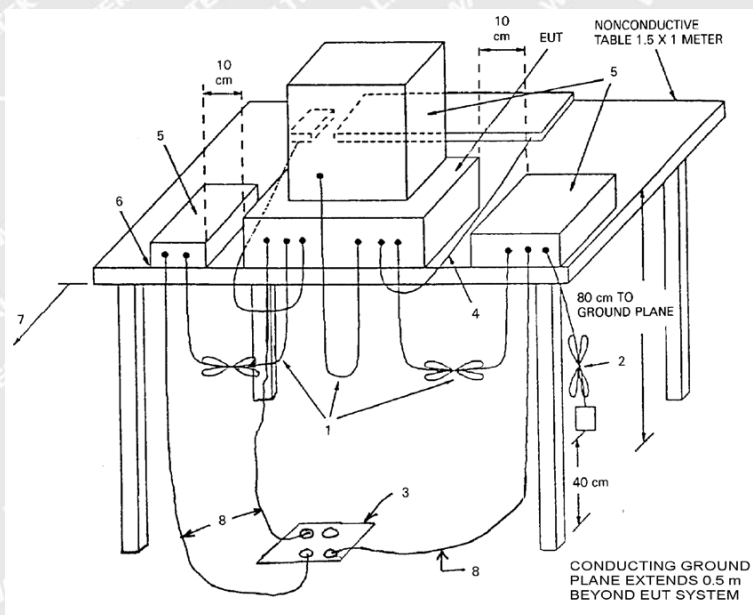
<b>Test Requirement:</b>	15.109, Class B				
<b>Test Limit:</b>	Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:				
	<b>Frequency of emission (MHz)</b>	<b>Field strength @3m</b>		<b>Field strength @10m</b>	
		<b>(uV/m)</b>	<b>(dBuV/m)</b>	<b>(uV/m)</b>	<b>(dBuV/m)</b>
	30 – 88	100	40	30	29.5
	88 – 216	150	43.5	45	33.1
	216 – 960	200	46	60	35.6
	Above 960	500	54	150	43.5
<b>Test Method:</b>	ANSI C63.4-2014 ANSI C63.4a-2017				
<b>Procedure:</b>	An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities. Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor				

#### 3.2.1 E.U.T. Operation

<b>Environmental Conditions</b>	
<b>Temperature:</b>	22.5 °C
<b>Relative Humidity:</b>	54 %
<b>Atmospheric Pressure:</b>	99.8 kPa
<b>Test mode:</b>	TM1

Reference No.: WTF24X12291381X1E

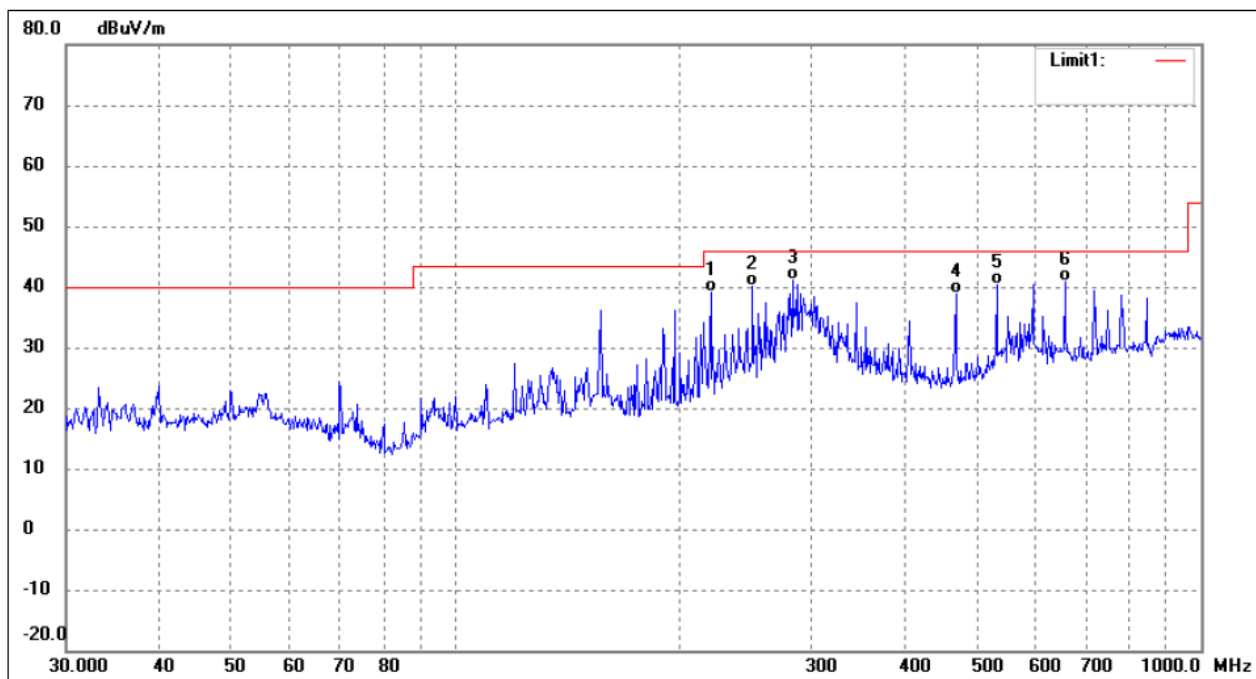
### 3.2.2 Basic Test Setup Block Diagram



### 3.2.3 Summary of Test Results



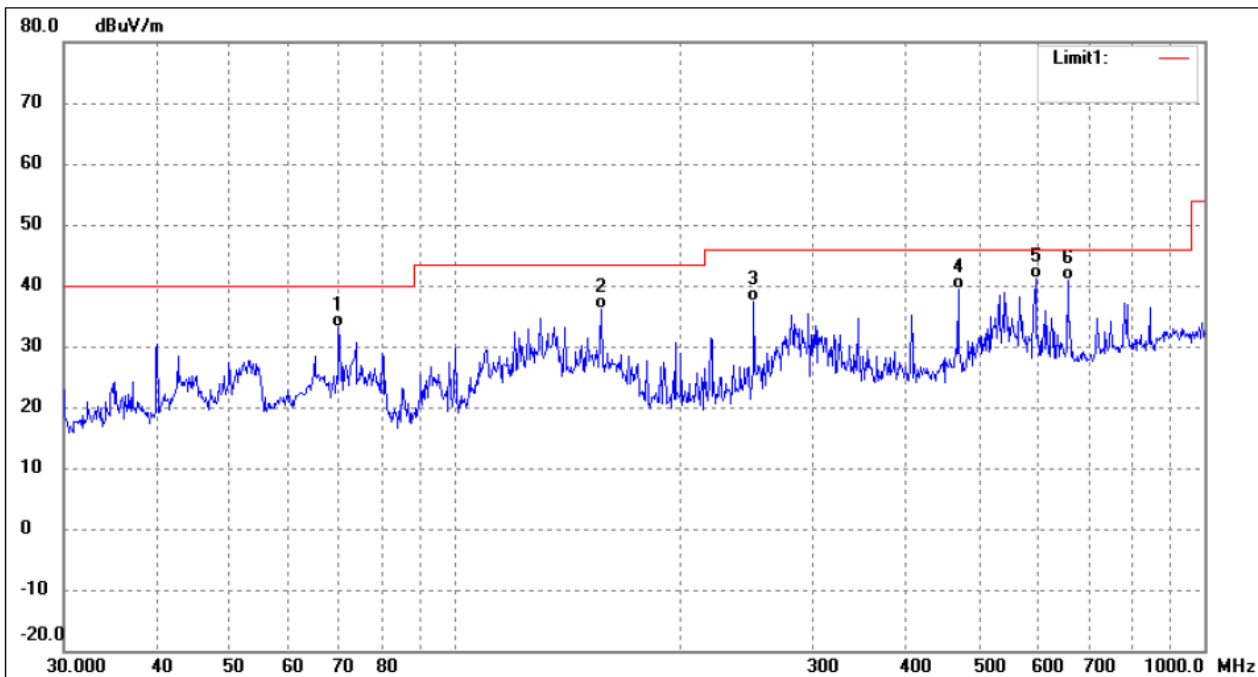
TM1 / Polarization: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	219.8449	47.48	-8.45	39.03	46.00	-6.97	QP
2	250.3012	46.85	-6.72	40.13	46.00	-5.87	QP
3	282.9852	47.27	-6.19	41.08	46.00	-4.92	QP
4	468.8762	41.92	-2.95	38.97	46.00	-7.03	QP
5	531.9635	42.15	-1.77	40.38	46.00	-5.62	QP
6	656.5300	40.12	0.76	40.88	46.00	-5.12	QP



## TM1 / Polarization: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	69.8450	45.04	-12.03	33.01	40.00	-6.99	QP
2	156.4578	48.31	-12.15	36.16	43.50	-7.34	QP
3	250.3012	44.18	-6.72	37.46	46.00	-8.54	QP
4	468.8762	42.29	-2.95	39.34	46.00	-6.66	QP
5	595.1329	41.00	0.01	41.01	46.00	-4.99	QP
6	656.5300	40.14	0.76	40.90	46.00	-5.10	QP



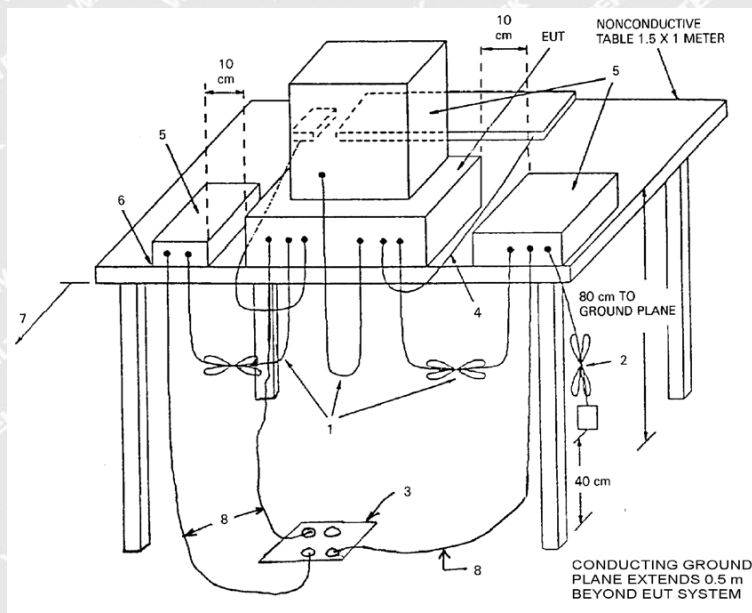
### 3.3 Radiated emissions (Above 1GHz)

<b>Test Requirement:</b>	15.109, Class B			
<b>Test Limit:</b>	<b>Frequency of emission (MHz)</b>	<b>Field strength @3m</b>		
		<b>Average (uV/m)</b>	<b>Average(dB uV/m)</b>	<b>Peak (dBuV/m)</b>
	Above 1GHz	500	54	74
<b>Test Method:</b>	ANSI C63.4-2014 ANSI C63.4a-2017			
<b>Procedure:</b>	An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. For below 1GHz test, Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities. For above 1GHz test, Average measurements were conducted based on the peak sweep graph. The EUT was measured by Horn antenna with 2 orthogonal polarities. Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor			

#### 3.3.1 E.U.T. Operation

<b>Environmental Conditions</b>	
<b>Temperature:</b>	22.5 °C
<b>Relative Humidity:</b>	54 %
<b>Atmospheric Pressure:</b>	99.8 kPa
<b>Test mode:</b>	TM1

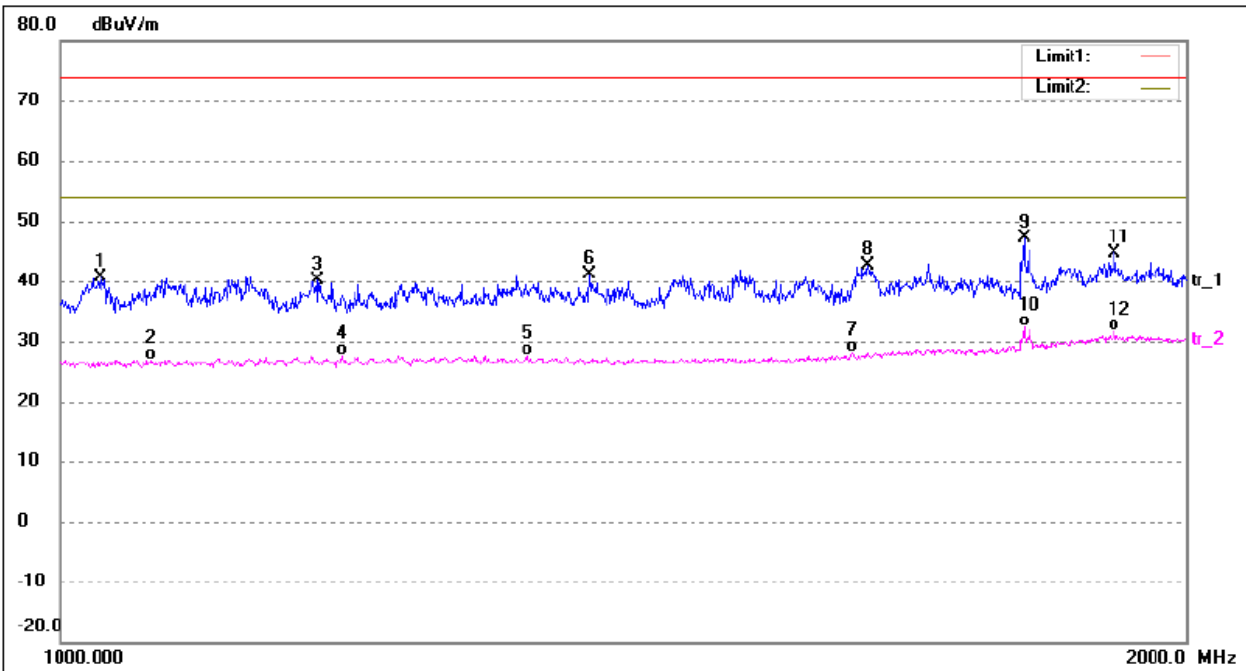
#### 3.3.2 Basic Test Setup Block Diagram



#### 3.3.3 Summary of Test Results



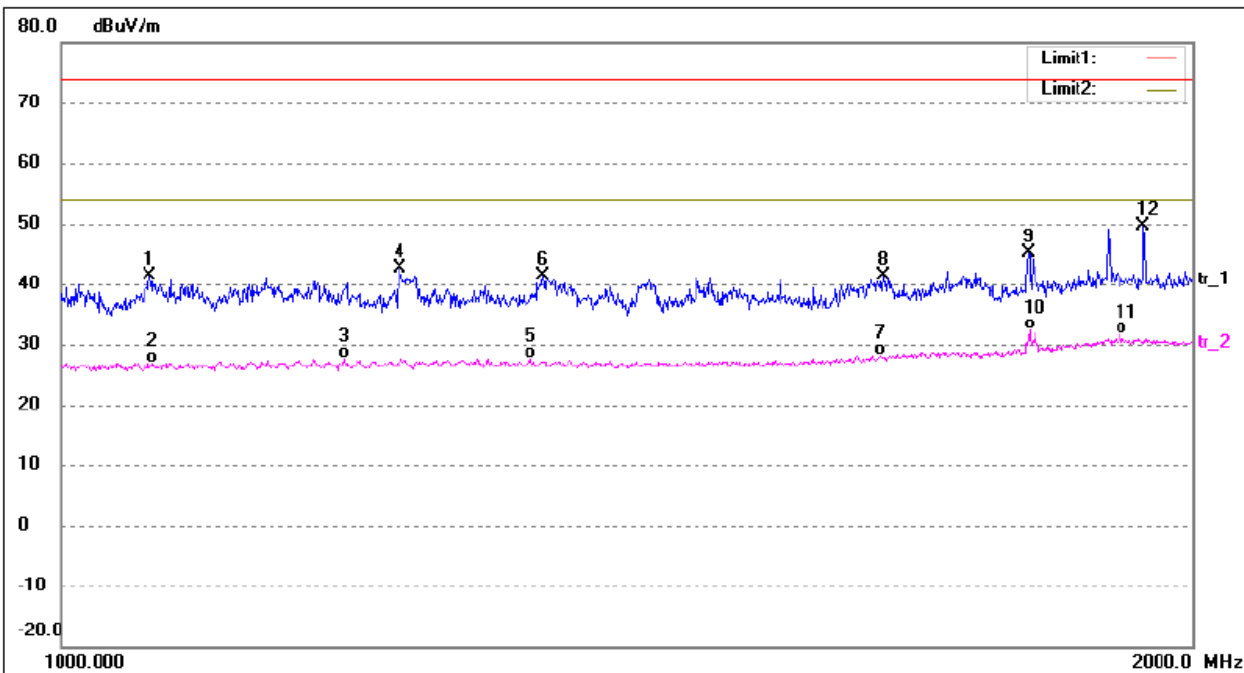
TM1 / Polarization: Horizontal



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1024.557	54.92	-14.19	40.73	74.00	-33.27	peak
2	1057.018	41.09	-14.10	26.99	54.00	-27.01	AVG
3	1171.210	54.03	-13.83	40.20	74.00	-33.80	peak
4	1189.207	41.48	-13.79	27.69	54.00	-26.31	AVG
5	1333.299	41.02	-13.45	27.57	54.00	-26.43	AVG
6	1385.110	54.43	-13.33	41.10	74.00	-32.90	peak
7	1627.886	40.03	-11.96	28.07	54.00	-25.93	AVG
8	1644.900	54.35	-11.82	42.53	74.00	-31.47	peak
9	1810.013	57.60	-10.41	47.19	74.00	-26.81	peak
10	1810.013	42.72	-10.41	32.31	54.00	-21.69	AVG
11	1914.543	54.27	-9.52	44.75	74.00	-29.25	peak
12	1914.543	41.18	-9.52	31.66	54.00	-22.34	AVG



## TM1 / Polarization: Vertical



No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1055.554	55.53	-14.11	41.42	74.00	-32.58	peak
2	1057.018	41.09	-14.10	26.99	54.00	-27.01	AVG
3	1189.207	41.48	-13.79	27.69	54.00	-26.31	AVG
4	1230.291	56.43	-13.69	42.74	74.00	-31.26	peak
5	1333.299	41.02	-13.45	27.57	54.00	-26.43	AVG
6	1343.503	54.86	-13.43	41.43	74.00	-32.57	peak
7	1651.755	39.99	-11.76	28.23	54.00	-25.77	AVG
8	1655.194	53.13	-11.73	41.40	74.00	-32.60	peak
9	1808.759	55.50	-10.41	45.09	74.00	-28.91	peak
10	1810.013	42.72	-10.41	32.31	54.00	-21.69	AVG
11	1914.543	41.18	-9.52	31.66	54.00	-22.34	AVG
12	1941.269	58.87	-9.29	49.58	74.00	-24.42	peak



## 4. EXHIBIT 1 - PRODUCT LABELING

### 4.1 Proposed Label Format

#### CSS Designs

**PRODUCT MODEL: MIDI Tap Pro**

**FCC ID: 2BGHX-MTPRO**



This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Specifications: Text is Black in color and is justified. Labels are printed in indelible ink on permanent adhesive backing or silk-screened onto the EUT or shall be affixed at a conspicuous location on the EUT. Where the EUT is constructed in two or more sections connected by wires and marketed together, the above statement is required to be affixed only to the main control unit. When the EUT is so small or for such use that it is not practicable to place the statement on it, the above information shall be placed in a prominent location in the instruction manual or pamphlet supplied to the user or, alternatively, shall be placed on the container in which the device is marketed.

### 4.2 Proposed Label Location of EUT

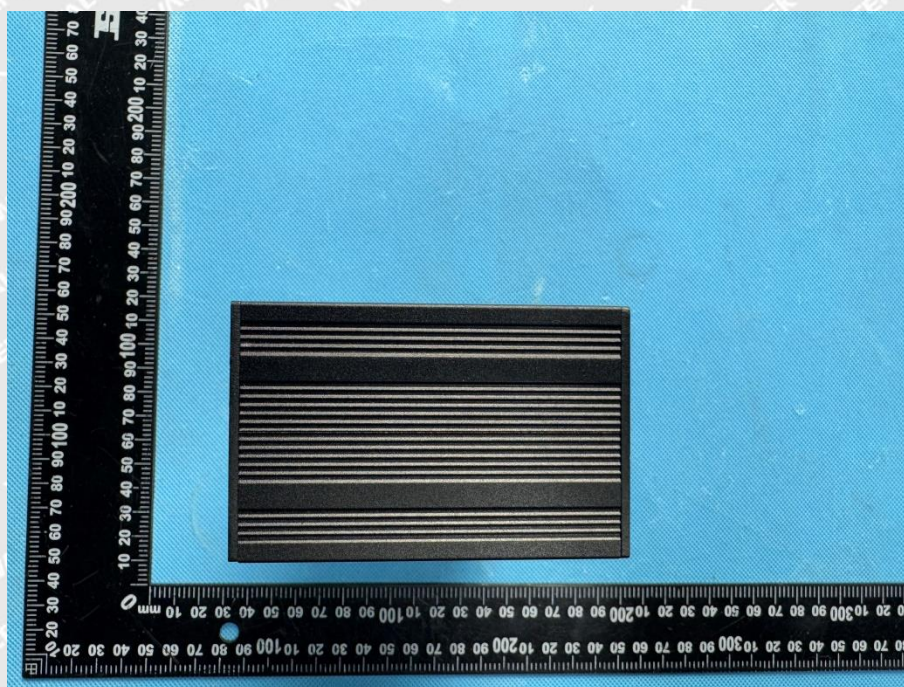
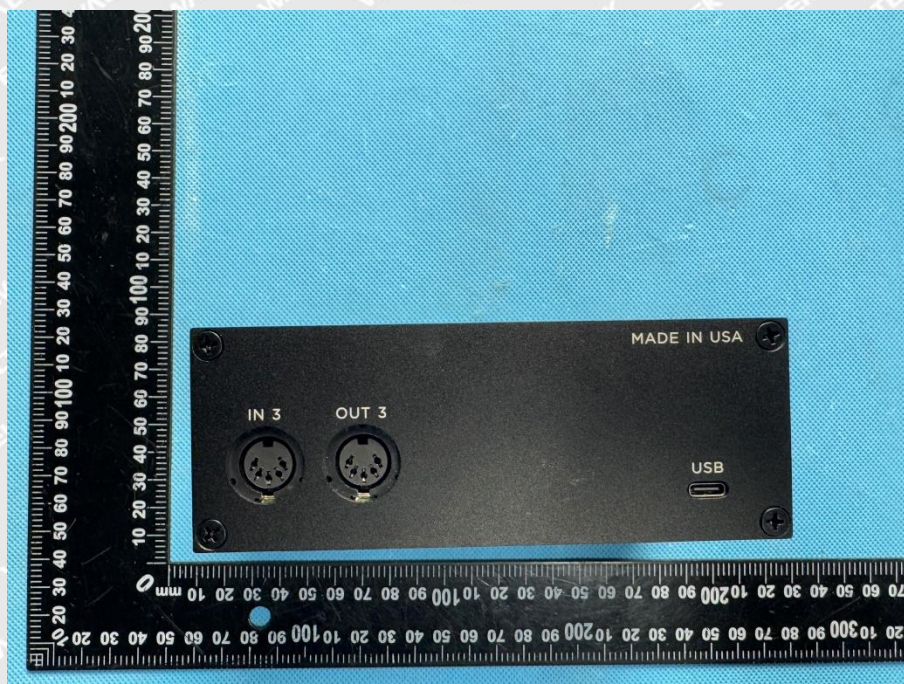


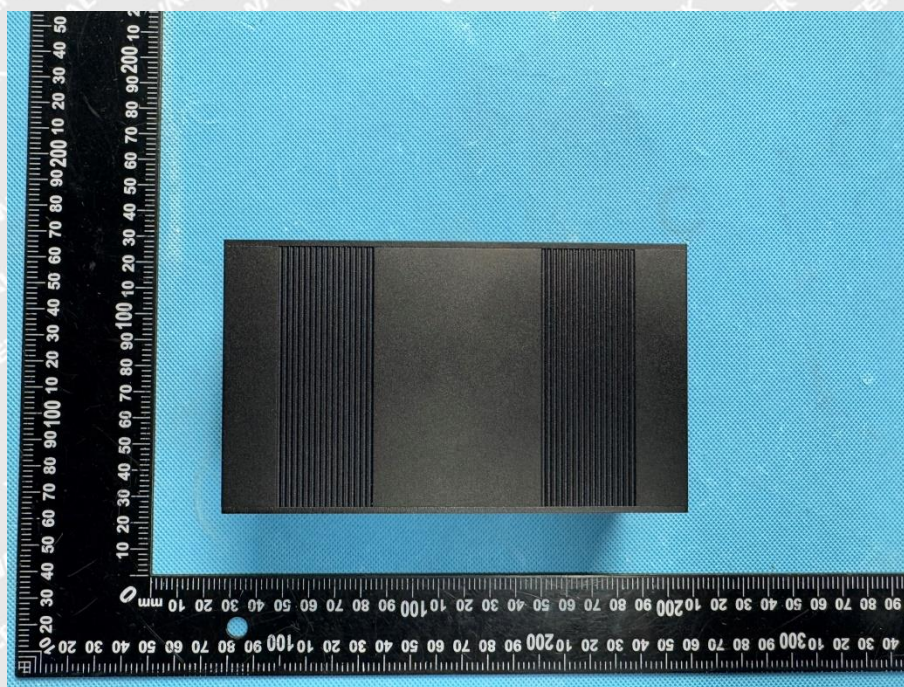
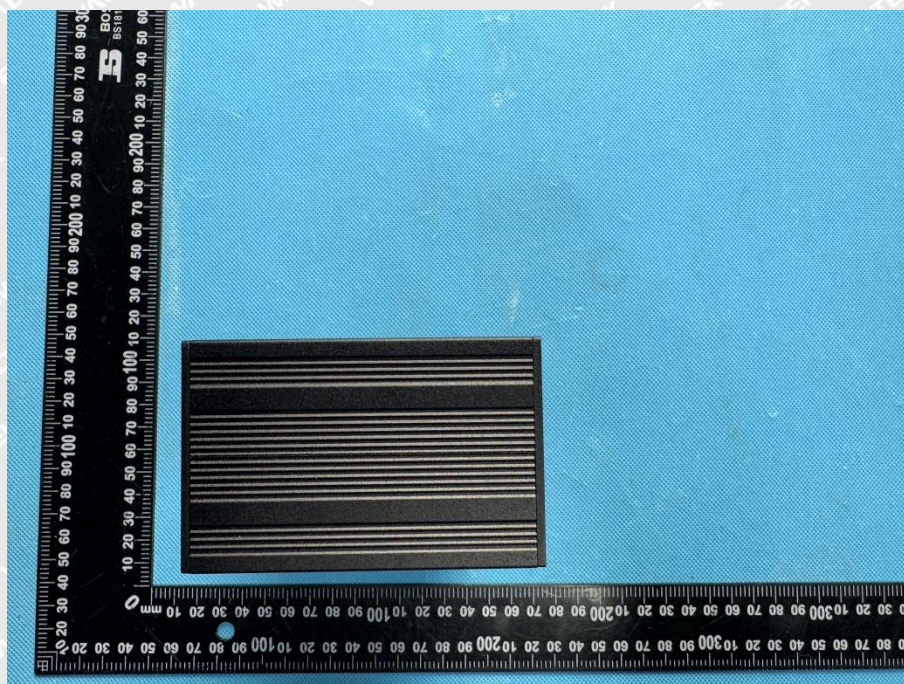


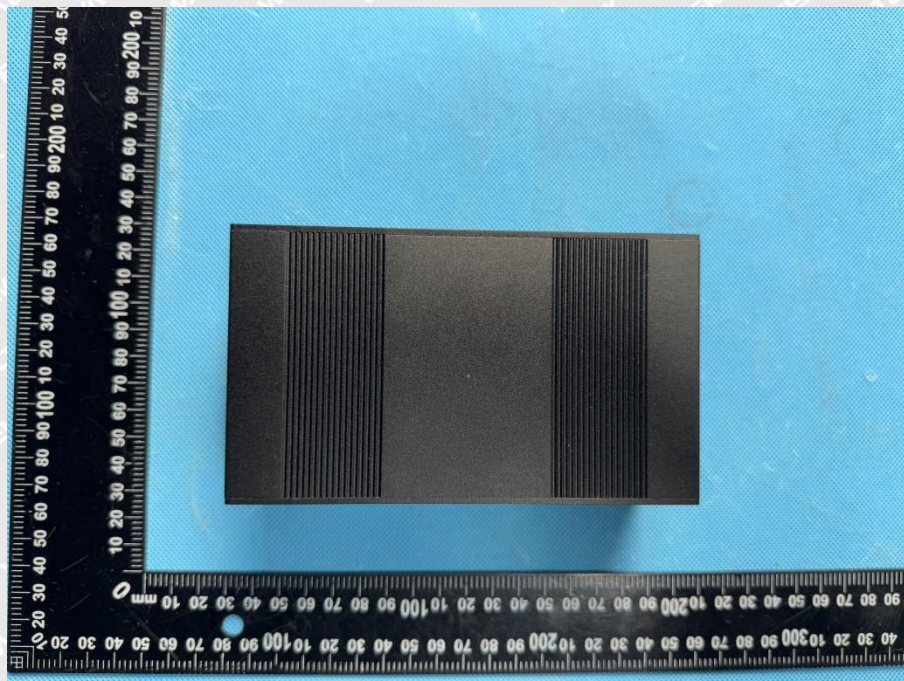
## 5. EXHIBIT 2 - EUT PHOTOGRAPHS

External

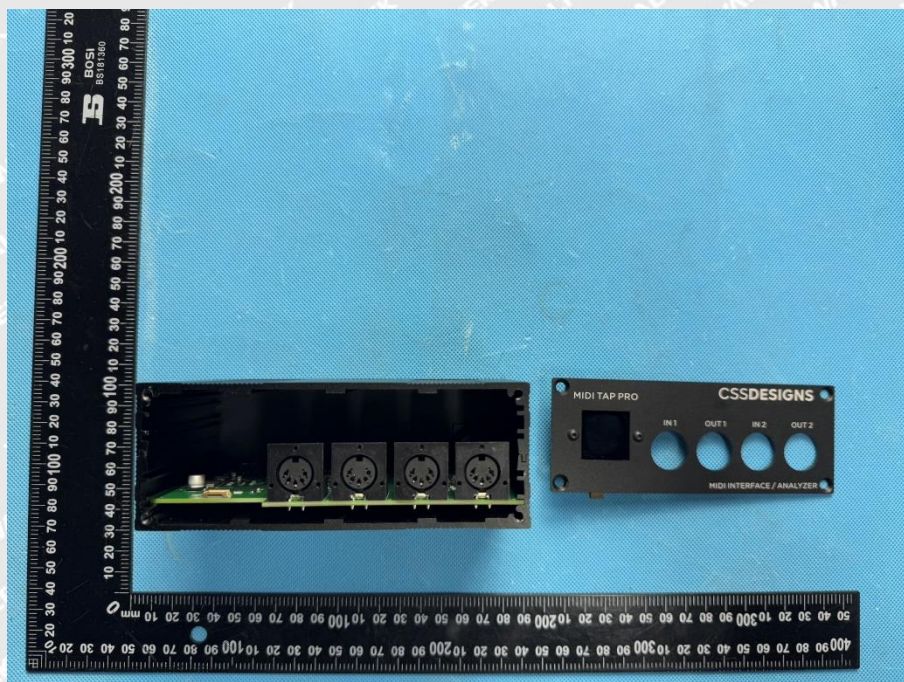


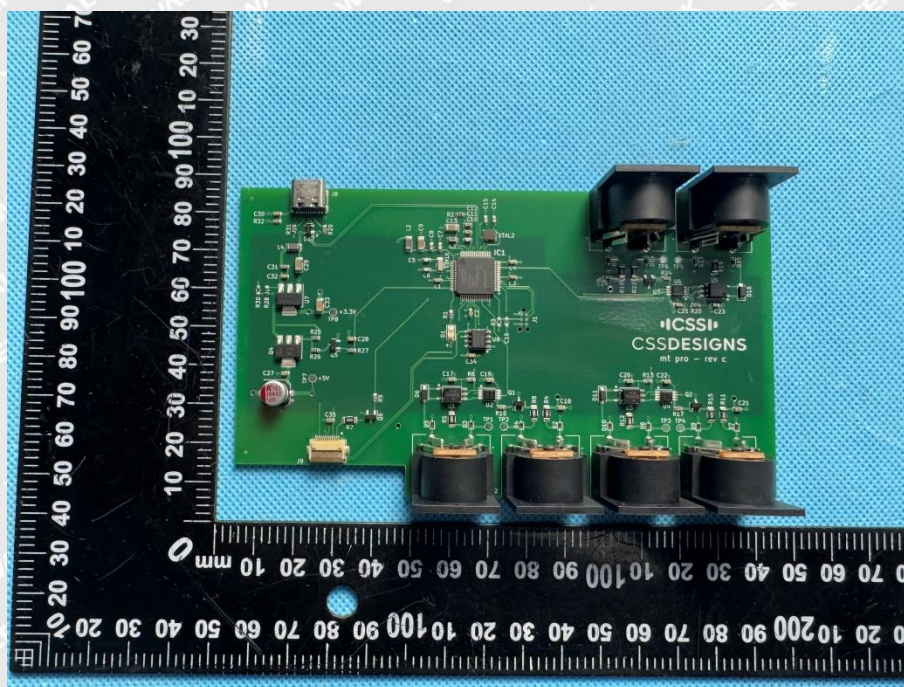
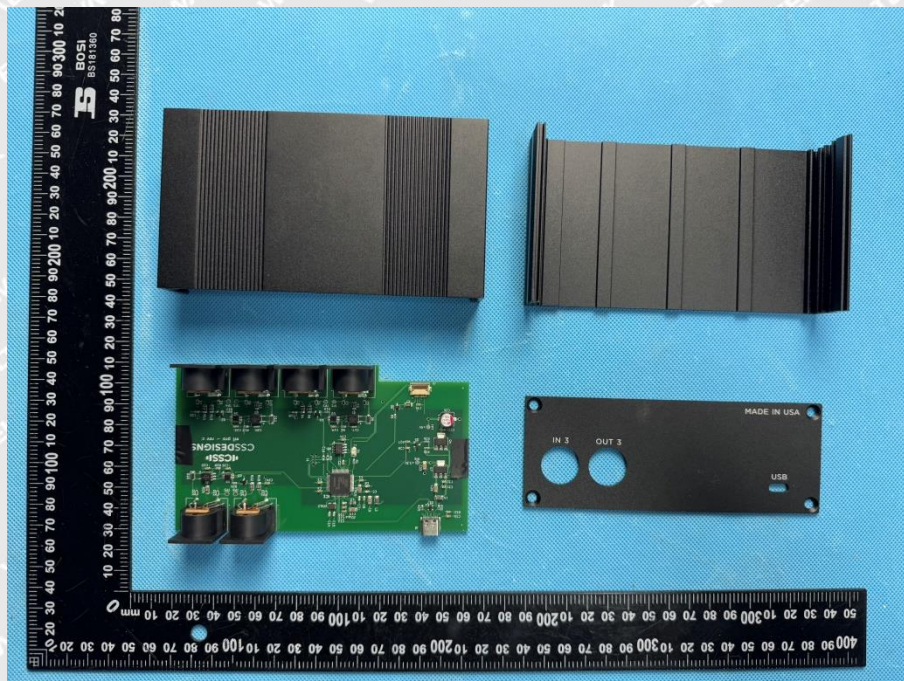




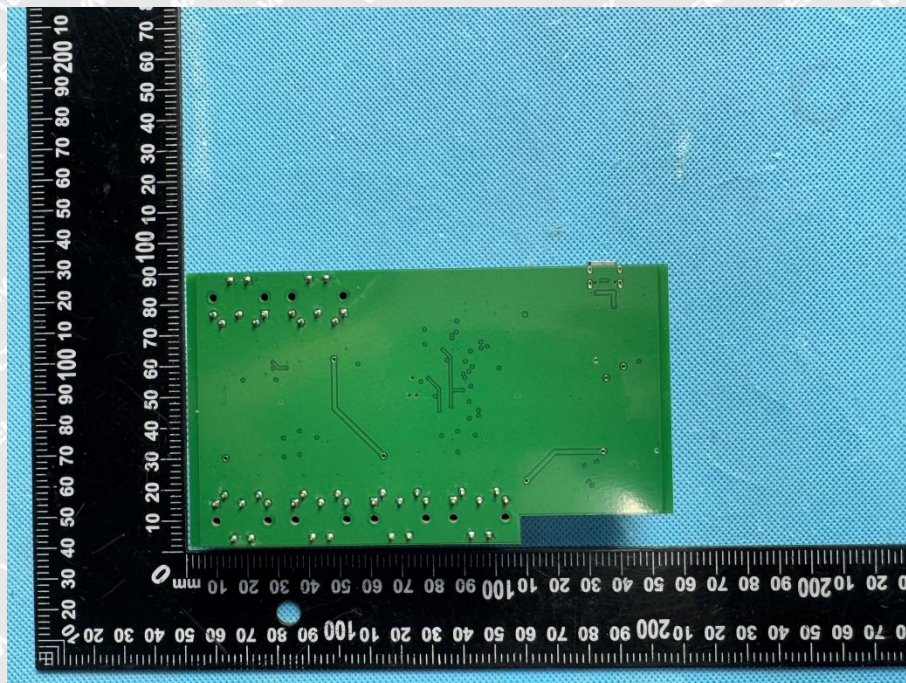


Internal





Reference No.: WTF24X12291381X1E

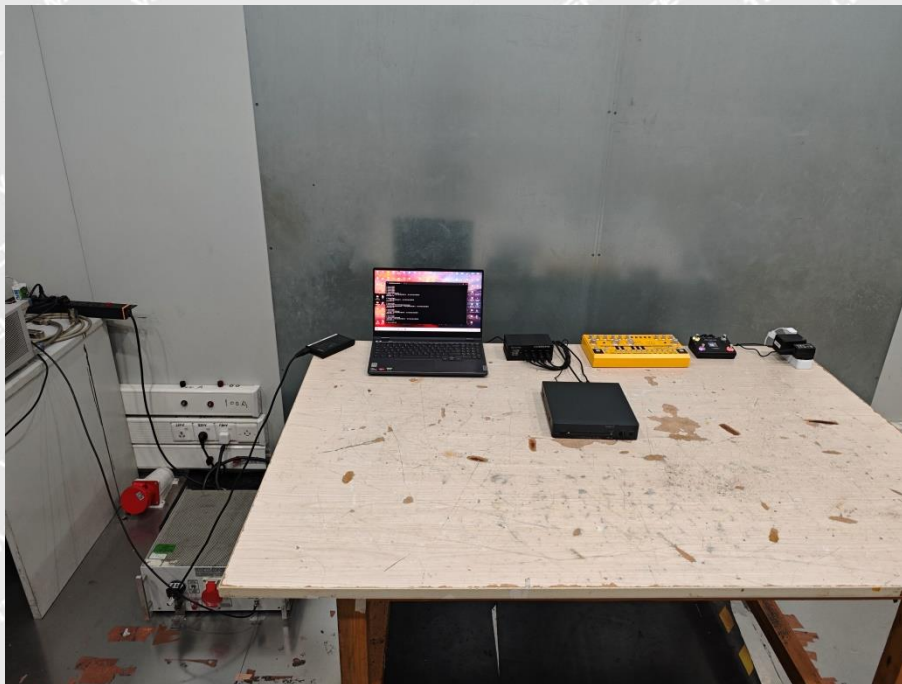


# WALTEK

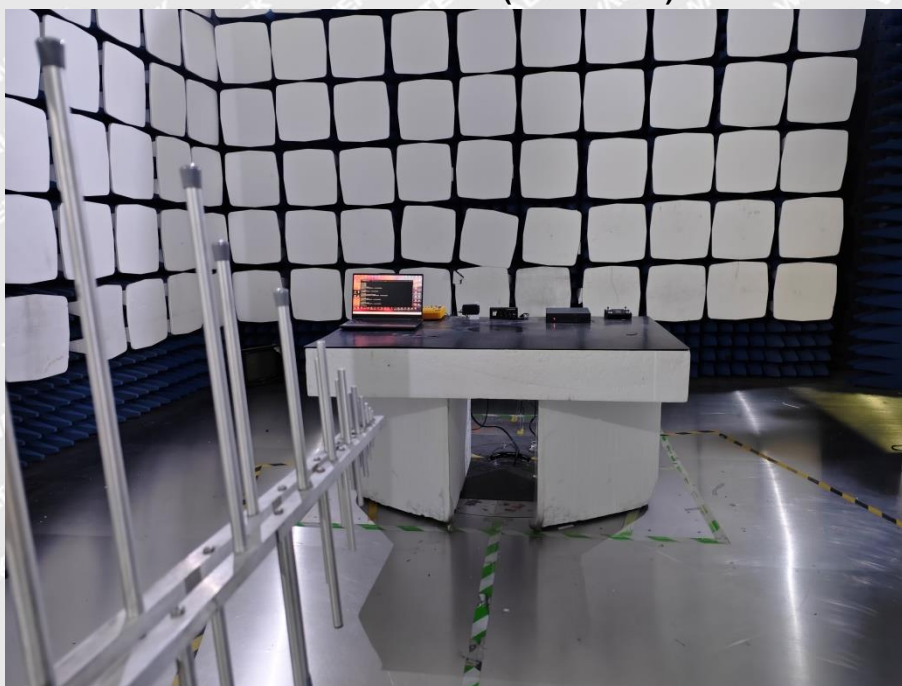


## 6. EXHIBIT 3 - TEST SETUP PHOTOGRAPHS

Conducted emissions on AC mains

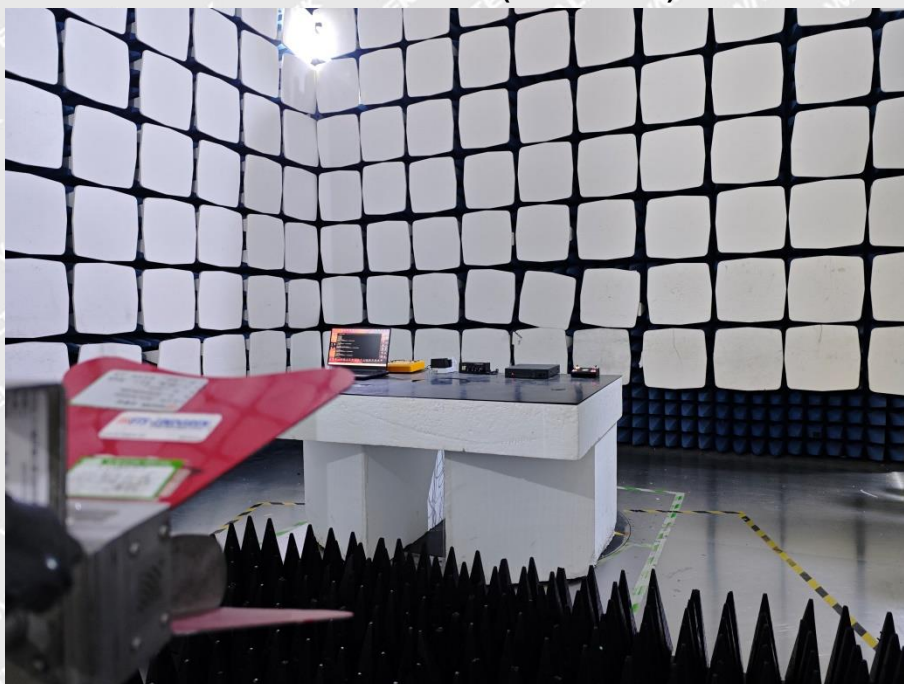


Radiated emissions (Below 1GHz)





**Radiated emissions (Above 1GHz)**



**WALTEK**



## 7. EXHIBIT 4 - USERS MANUAL

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### Information to Users

According to the FCC Part 15.19, 15.21, and 15.105 rules, for this EUT, the instructions or operation manual furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:

### FCC Caution

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE 1: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

NOTE 2: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

\*\*\*\*\* END OF REPORT \*\*\*\*\*