

## FCC Test Report

**Report No.:** RFBDTL-WTW-P22030484

**FCC ID:** HV4DTH271

**Test Model:** DTH271\*\*\*\*\*("\*" may be alphanumeric/symbol or blank)

**Received Date:** Mar. 24, 2022

**Test Date:** Mar. 30 ~ Apr. 18, 2022

**Issued Date:** May 20, 2022

**Applicant:** Wacom Co., Ltd.

**Address:** 2-510-1 Toyonodai, Kazo-shi, Saitama 349-1148 Japan

**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch  
Lin Kou Laboratories

**Lab Address:** No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

**Test Location:** No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City  
33383, Taiwan

**FCC Registration /  
Designation Number:** 788550 / TW0003



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### Release Control Record

Issue No.	Description	Date Issued
RFBDTL-WTW-P22030484	Original Release	May 20, 2022

## 1 Certificate of Conformity

**Product:** Creative Pen Display

**Brand:** Wacom

**Test Model:** DTH271\*\*\*\*\*("\*" may be alphanumeric/symbol or blank)

**Sample Status:** Identical Prototype

**Applicant:** Wacom Co., Ltd.

**Test Date:** Mar. 30 ~ Apr. 18, 2022

**Standards:** 47 CFR FCC Part 15, Subpart C (Section 15.209)  
ANSI C63.10: 2013

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

**Prepared by :** Gina Liu , **Date:** May 20, 2022  
Gina Liu / Specialist

**Approved by :** Jeremy Lin , **Date:** May 20, 2022  
Jeremy Lin / Project Engineer

## 2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.209)			
FCC Clause	Test Item	Result	Remarks
15.207	Conducted emission test	Pass	Meet the requirement of limit. Minimum passing margin is -8.76 dB at 0.15000 MHz.
15.209	Radiated emission test	Pass	Meet the requirement of limit. Minimum passing margin is -7.2 dB at 150.28 MHz.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

### 2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150 kHz ~ 30 MHz	2.79 dB
Radiated Emissions up to 1 GHz	9 kHz ~ 30 MHz	3.04 dB
	30 MHz ~ 200 MHz	2.93 dB
	200 MHz ~ 1000 MHz	2.95 dB

### 2.2 Modification Record

There were no modifications required for compliance.

### 3 General Information

#### 3.1 General Description of EUT

<b>Product</b>	Creative Pen Display
<b>Brand</b>	Wacom
<b>Test Model</b>	DTH271*****("*" may be alphanumeric/symbol or blank)
<b>Model Difference</b>	for marketing purpose
<b>Status of EUT</b>	Identical Prototype
<b>Power Supply Rating</b>	19 Vdc (adapter)
<b>Modulation Type</b>	EMR
<b>Operating Frequency</b>	667 kHz
<b>Field Strength (Maximum)</b>	16.90 dBuV/m (30m)
<b>Antenna Type</b>	Coil Loop
<b>Antenna Connector</b>	N/A
<b>Accessory Device</b>	Refer to Note as below
<b>Data Cable Supplied</b>	N/A

Note:

1. The EUT contains following accessory devices.

Accessories information		
<b>AC Adapter 1</b>	<b>Brand</b>	ADAPTER TECH.
	<b>Model</b>	ATS160T-P190
	<b>Part Number</b>	NA
	<b>AC Input</b>	100-240V~50-60Hz 2.2A Max
	<b>DC Output</b>	19.0V , 8.4A 159.6w
	<b>DC Output Cable</b>	1.77meter
<b>Power cord</b>	<b>Brand</b>	NA
	<b>Model</b>	NA
	<b>Signal Line</b>	0.9meter
<b>Type C Cable</b>	<b>Brand</b>	NA
	<b>Model</b>	NA
	<b>Signal Line</b>	1.73meter
<b>USB To Type C Cable</b>	<b>Brand</b>	NA
	<b>Model</b>	NA
	<b>Signal Line</b>	1.72meter
<b>Touch Pen</b>	<b>Brand</b>	Wacom
	<b>Model</b>	ACP-500-00

2. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

### 3.2 Description of Test Modes

1 channel is provided to this EUT:

Channel	Frequency (kHz)
1	667

#### 3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable To		Description
	RE<1G	PLC	
-	√	√	-

Where **RE<1G**: Radiated Emission below 1 GHz

**PLC**: Power Line Conducted Emission

**NOTE:** The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on X-plane.

#### Radiated Emission Test (Below 1 GHz):

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Available Channel	Tested Channel
-	1	1

#### Power Line Conducted Emission Test:

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Available Channel	Tested Channel
-	1	1

#### Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested By
RE	23 deg. C, 72 % RH	120 Vac, 60 Hz	Vincent Chen
PLC	25 deg. C, 75 % RH	120 Vac, 60 Hz	Greg Lin

### 3.3 Description of Support Units

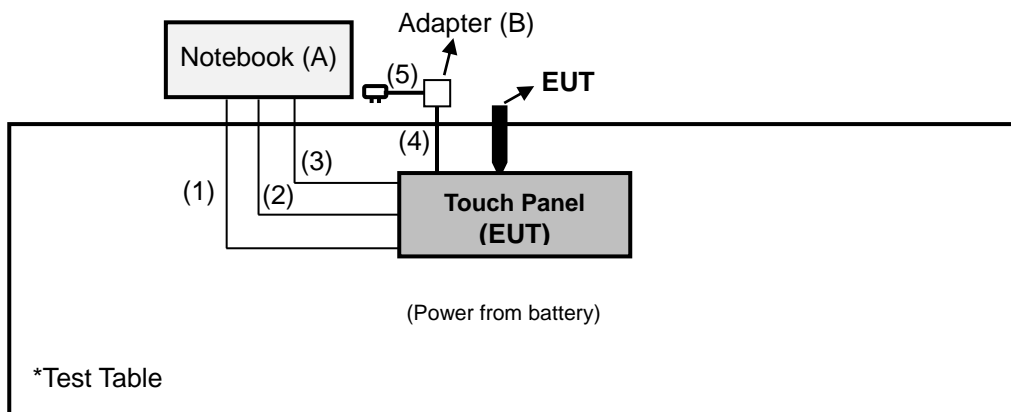
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

No.	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	DELL	P137G	N/A	N/A	Provided by client
B.	Adapter	Adapter	ATS160T-P190	N/A	N/A	Provided by client

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	HDMI Cable	1	1.5	Y	0	Provided by client
2.	Type-A Cable	1	1.8	Y	0	Provided by client
3.	Type-C Cable	1	1.8	Y	0	Provided by client
4.	Adapter Cable	1	1.5	N	0	Provided by client
5.	AC Power Cable	1	1.0	N	0	Provided by client

Note: All power cords of the above support units are non-shielded (1.8m).

#### 3.3.1 Configuration of System under Test



#### 3.3.2 General Description of Applied Standards

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

##### FCC Part 15, Subpart C (15.209)

ANSI C63.10-2013

All test items have been performed and recorded as per the above standards.



## 4 Test Types and Results

### 4.1 Radiated Emission and Bandedge Measurement

#### 4.1.1 Limits of Radiated Emission and Bandedge Measurement

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F (kHz)	300
0.490 ~ 1.705	24000/F (kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

**NOTE:**

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any condition of modulation.

## 4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver Agilent	N9038A	MY51210203	Sep. 22, 2021	Sep. 21, 2022
Spectrum Analyzer Agilent	N9010A	MY52220314	Dec. 03, 2021	Dec. 02, 2022
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-969	Nov. 14, 2021	Nov. 13, 2022
BILOG Antenna SCHWARZBECK	VULB 9168	9168-472	Oct. 28, 2021	Oct. 27, 2022
Fixed Attenuator WORKEN	MDCS18N-10	MDCS18N-10-01	Apr. 13, 2021	Apr. 12, 2022
			Apr. 05, 2022	Apr. 04, 2023
Loop Antenna	HLA 6121	45745	Jul. 21, 2021	Jul. 20, 2022
Preamplifier EMCI	EMC 330H	980112	Oct. 05, 2021	Oct. 04, 2022
RF Coaxial Cable EMCI	EMC104-SM-SM-8000	171005	Oct. 05, 2021	Oct. 04, 2022
RF Coaxial Cable HUBER+SUHNNER	SUCOFLEX 104	EMC104-SM-SM-1000(140807)	Oct. 05, 2021	Oct. 04, 2022
RF Coaxial Cable WORKEN	8D-FB	Cable-Ch10-01	Oct. 05, 2021	Oct. 04, 2022
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Software BV ADT	E3 6.120103	NA	NA	NA
Antenna Tower MF	MFA-440H	NA	NA	NA
Turn Table MF	MFT-201SS	NA	NA	NA
Antenna Tower & Turn Table Controller MF	MF-7802	NA	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. The test was performed in HwaYa Chamber 10.

#### 4.1.3 Test Procedures

##### **For Radiated Emission below 30 MHz**

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

##### **Note:**

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9 kHz at frequency below 30 MHz.

##### **For Radiated Emission above 30 MHz**

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detected function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

##### **Note:**

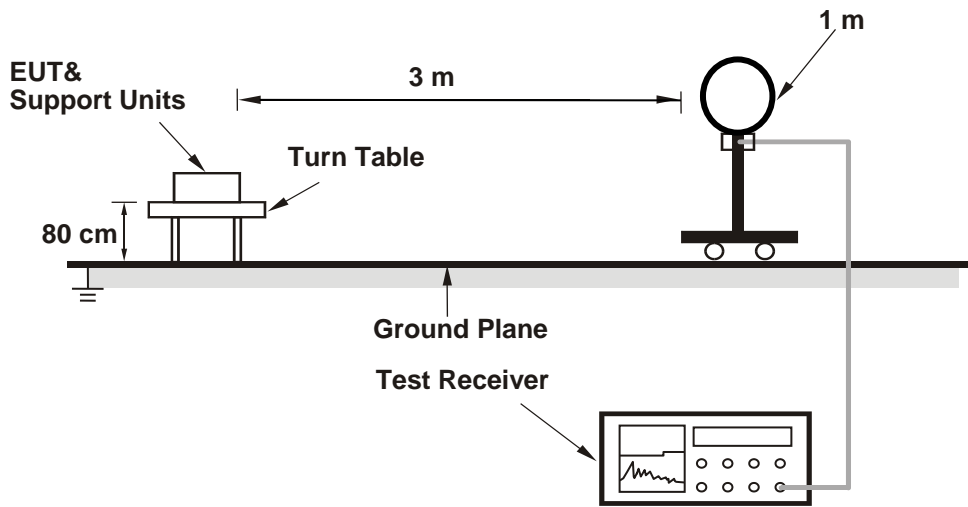
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is  $\geq 1/T$  (Duty cycle < 98 %) or 10 Hz (Duty cycle  $\geq 98$  %) for Average detection (AV) at frequency above 1 GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

#### 4.1.4 Deviation from Test Standard

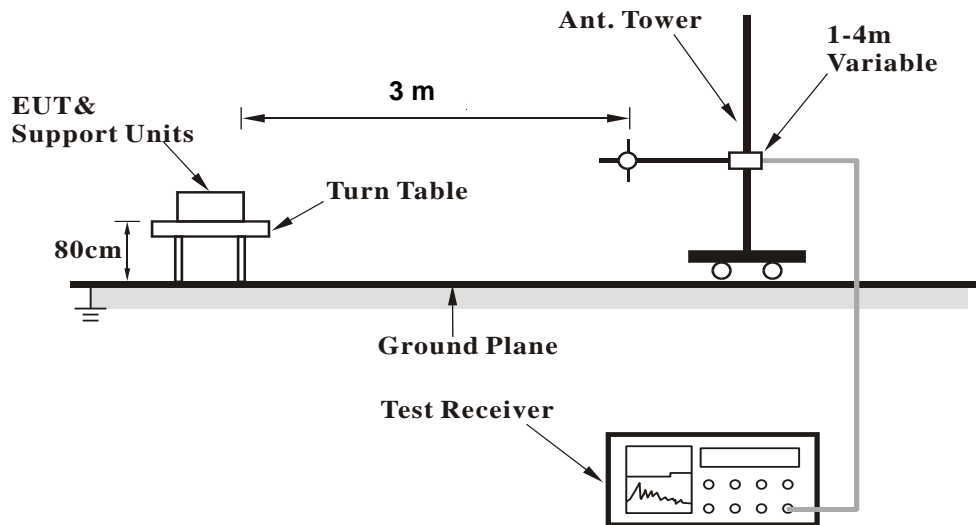
No deviation.

#### 4.1.5 Test Setup

##### <Radiated Emission below 30 MHz>



##### <Radiated Emission 30 MHz to 1 GHz>



For the actual test configuration, please refer to the attached file (Test Setup Photo).

#### 4.1.6 EUT Operating Conditions

Set the EUT under transmission condition continuously at specific channel frequency.

#### 4.1.7 Test Results

Below 30MHz Data:

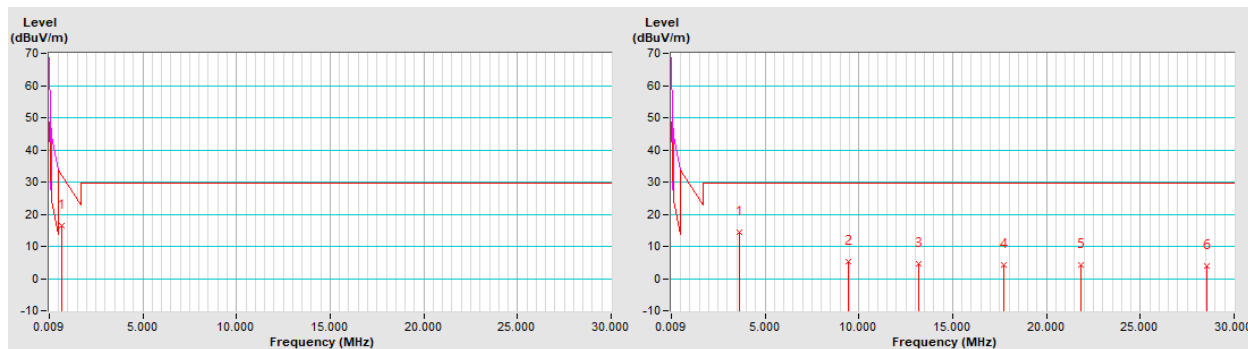
Operated Mode

Channel	TX Channel 1	Detector Function	Quasi-Peak (QP)
Frequency Range	9 kHz ~ 30 MHz		

Antenna Polarity & Test Distance: Loop antenna Parallel at 3m								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*0.667	16.60 QP	31.12	-14.52	1.00	2	36.37	-19.77
2	3.638	14.32 QP	29.54	-15.22	1.00	182	34.26	-19.94
3	9.426	5.11 QP	29.54	-24.43	1.00	72	23.41	-18.30
4	13.205	4.54 QP	29.54	-25.00	1.00	307	22.54	-18.00
5	17.704	4.20 QP	29.54	-25.34	1.00	54	22.07	-17.87
6	21.812	4.31 QP	29.54	-25.23	1.00	87	22.15	-17.84
7	28.530	3.74 QP	29.54	-25.80	1.00	12	21.71	-17.97

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ \* “: Fundamental frequency.
6. Loop antenna was used for all radiated emission below 30MHz.
7. For 0.009 ~ 0.49MHz, the measured field strength was extrapolated to distance 300 meters  
Distance factor@3m =  $40 \cdot \log(3/300) = -80\text{dB}$   
For 0.49 ~ 30MHz, the measured field strength was extrapolated to distance 30 meters  
Distance factor@3m =  $40 \cdot \log(3/30) = -40\text{dB}$

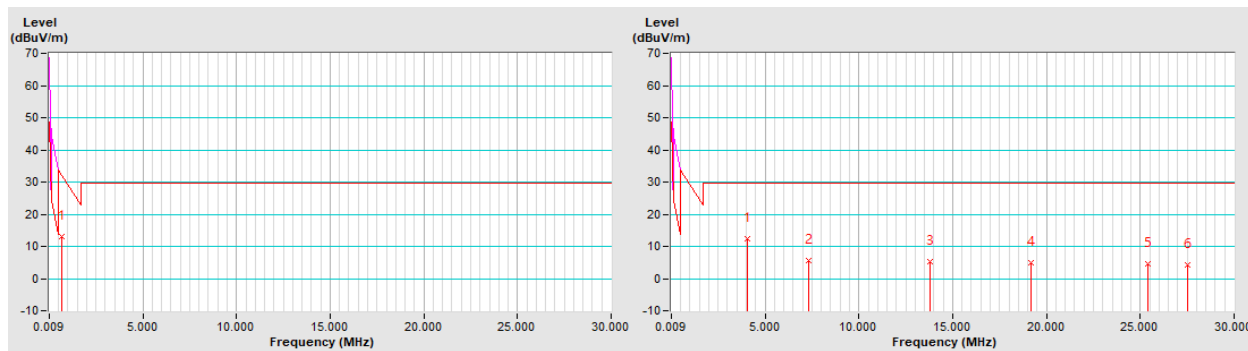


Channel	TX Channel 1	Detector Function	Quasi-Peak (QP)
Frequency Range	9 kHz ~ 30 MHz		

Antenna Polarity & Test Distance: Loop antenna Perpendicular at 3m								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*0.667	12.90 QP	31.12	-18.22	1.00	173	32.67	-19.77
2	4.088	12.33 QP	29.54	-17.21	1.00	134	32.22	-19.89
3	7.297	5.60 QP	29.54	-23.94	1.00	2	24.62	-19.02
4	13.805	5.42 QP	29.54	-24.12	1.00	9	23.41	-17.99
5	19.203	4.88 QP	29.54	-24.66	1.00	223	22.70	-17.82
6	25.381	4.73 QP	29.54	-24.81	1.00	272	22.64	-17.91
7	27.511	4.14 QP	29.54	-25.40	1.00	299	22.09	-17.95

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ \* “: Fundamental frequency.
6. Loop antenna was used for all radiated emission below 30MHz.
7. For 0.009 ~ 0.49MHz, the measured field strength was extrapolated to distance 300 meters  
Distance factor@3m =  $40 \cdot \log(3/300) = -80\text{dB}$   
For 0.49 ~ 30MHz, the measured field strength was extrapolated to distance 30 meters  
Distance factor@3m =  $40 \cdot \log(3/30) = -40\text{dB}$

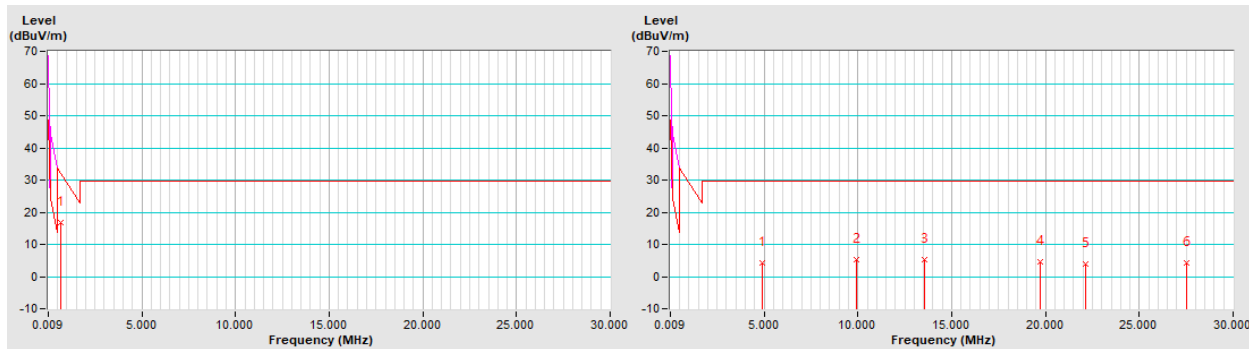


Channel	TX Channel 1	Detector Function	Quasi-Peak (QP)
Frequency Range	9 kHz ~ 30 MHz		

Antenna Polarity & Test Distance: Loop antenna Ground-Parallel at 3m								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	<b>*0.667</b>	<b>16.90 QP</b>	<b>31.12</b>	<b>-14.22</b>	<b>1.00</b>	<b>202</b>	<b>36.67</b>	<b>-19.77</b>
2	4.898	4.14 QP	29.54	-25.40	1.00	240	23.95	-19.81
3	9.936	5.12 QP	29.54	-24.42	1.00	336	23.24	-18.12
4	13.535	5.40 QP	29.54	-24.14	1.00	68	23.39	-17.99
5	19.713	4.53 QP	29.54	-25.01	1.00	15	22.34	-17.81
6	22.112	4.04 QP	29.54	-25.50	1.00	22	21.88	-17.84
7	27.511	4.24 QP	29.54	-25.30	1.00	338	22.19	-17.95

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. “ \* “: Fundamental frequency.
6. Loop antenna was used for all radiated emission below 30MHz.
7. For 0.009 ~ 0.49MHz, the measured field strength was extrapolated to distance 300 meters  
Distance factor@3m =  $40 \cdot \log(3/300) = -80\text{dB}$   
For 0.49 ~ 30MHz, the measured field strength was extrapolated to distance 30 meters  
Distance factor@3m =  $40 \cdot \log(3/30) = -40\text{dB}$



Below 1GHz Data:

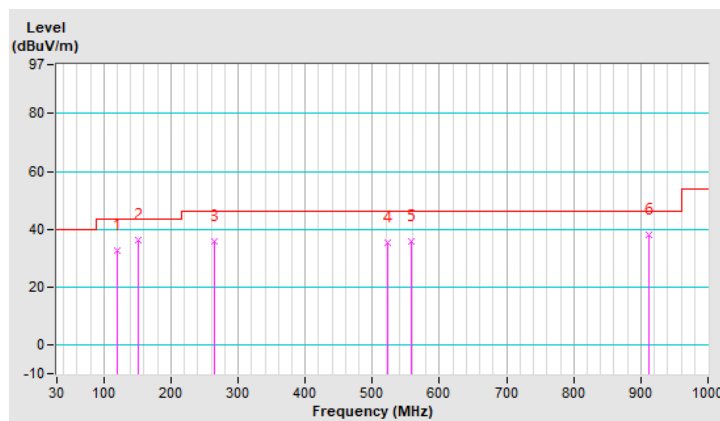
Operated Mode

<b>RF Mode</b>	EMR Tx	<b>Operating Frequency</b>	667KHz
<b>Frequency Range</b>	30MHz ~ 1GHz	<b>Detector Function</b>	Quasi-Peak (QP)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	120.21	32.4 QP	43.5	-11.1	1.43 H	61	46.7	-14.3
2	<b>152.22</b>	<b>36.3 QP</b>	<b>43.5</b>	<b>-7.2</b>	<b>1.37 H</b>	<b>192</b>	<b>48.5</b>	<b>-12.2</b>
3	263.77	35.8 QP	46.0	-10.2	2.26 H	307	49.7	-13.9
4	522.76	35.5 QP	46.0	-10.5	3.37 H	126	41.1	-5.6
5	558.65	36.0 QP	46.0	-10.0	1.93 H	131	41.0	-5.0
6	911.73	37.9 QP	46.0	-8.1	1.23 H	306	36.0	1.9

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.





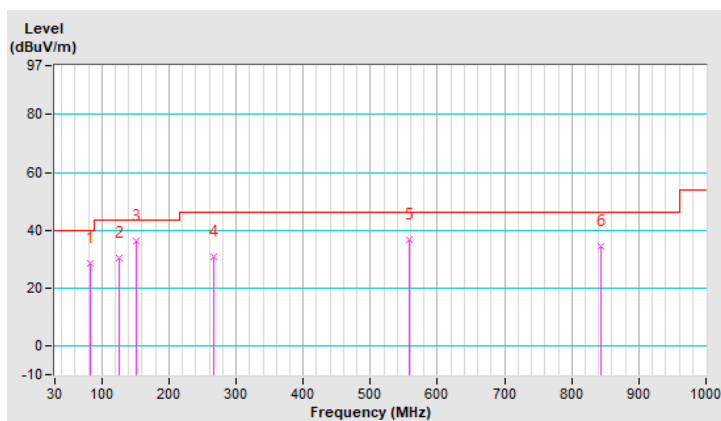
<b>RF Mode</b>	EMR Tx	<b>Operating Frequency</b>	667KHz
<b>Frequency Range</b>	30MHz ~ 1GHz	<b>Detector Function</b>	Quasi-Peak (QP)

**Antenna Polarity & Test Distance : Vertical at 3 m**

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	82.38	28.7 QP	40.0	-11.3	1.03 V	186	46.8	-18.1
2	126.03	30.4 QP	43.5	-13.1	1.11 V	332	44.1	-13.7
<b>3</b>	<b>150.28</b>	<b>36.3 QP</b>	<b>43.5</b>	<b>-7.2</b>	<b>2.36 V</b>	<b>187</b>	<b>48.4</b>	<b>-12.1</b>
4	265.71	30.7 QP	46.0	-15.3	2.38 V	354	44.5	-13.8
5	557.68	36.5 QP	46.0	-9.5	3.45 V	26	41.5	-5.0
6	842.86	34.4 QP	46.0	-11.6	1.88 V	177	33.3	1.1

**Remarks:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



## 4.2 Conducted Emission Measurement

### 4.2.1 Limits of Conducted Emission Measurement

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-Peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Note:

1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.
3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

### 4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver R&S	ESR3	102783	2021/12/20	2022/12/19
RF Coaxial Cable WORKEN	5D-FB	Cable-cond2-01	2021/9/4	2022/9/3
LISN R&S	ESH2-Z5	100100	2022/2/17	2023/2/16
LISN R&S	ESH3-Z5	100312	2021/9/17	2022/9/16
Software BVADT	BVADT_Cond_V7.3.7.4	NA	NA	NA

- Note:
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
  2. The test was performed in HwaYa Shielded Room 2.
  3. The VCCI Site Registration No. is C-12047

### 4.2.3 Test Procedures

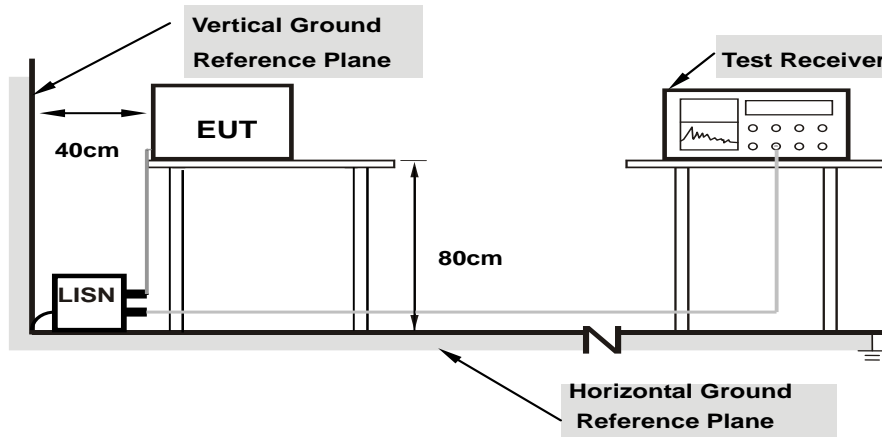
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50 uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

**NOTE:** The resolution bandwidth and video bandwidth of test receiver is 9 kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15 MHz - 30 MHz.

#### 4.2.4 Deviation from Test Standard

No deviation.

#### 4.2.5 Test Setup



**Note: 1.Support units were connected to second LISN.**

For the actual test configuration, please refer to the attached file (Test Setup Photo).

#### 4.2.6 EUT Operating Conditions

Same as 4.1.6.

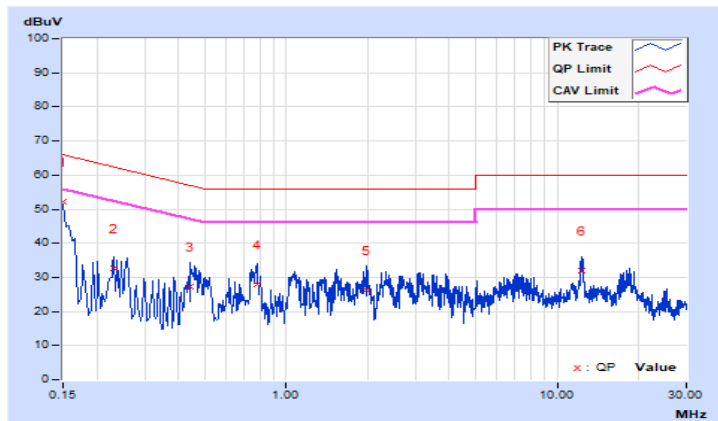
#### 4.2.7 Test Results

<b>Frequency Range</b>	150kHz ~ 30MHz	<b>Detector Function &amp; Resolution Bandwidth</b>	Quasi-Peak (QP) / Average (AV), 9kHz
<b>Input Power</b>	120Vac, 60Hz	<b>Environmental Conditions</b>	25 °C, 75% RH
<b>Tested by</b>	Greg Lin	<b>Test Date</b>	2022/4/18

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.13	42.21	37.11	52.34	47.24	66.00	56.00	-13.66	-8.76
2	0.23000	10.14	22.52	5.82	32.66	15.96	62.45	52.45	-29.79	-36.49
3	0.44200	10.16	17.02	8.32	27.18	18.48	57.02	47.02	-29.84	-28.54
4	0.77800	10.18	17.62	6.74	27.80	16.92	56.00	46.00	-28.20	-29.08
5	1.97400	10.22	15.95	3.01	26.17	13.23	56.00	46.00	-29.83	-32.77
6	12.33000	10.31	21.66	11.94	31.97	22.25	60.00	50.00	-28.03	-27.75

**Remarks:**

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

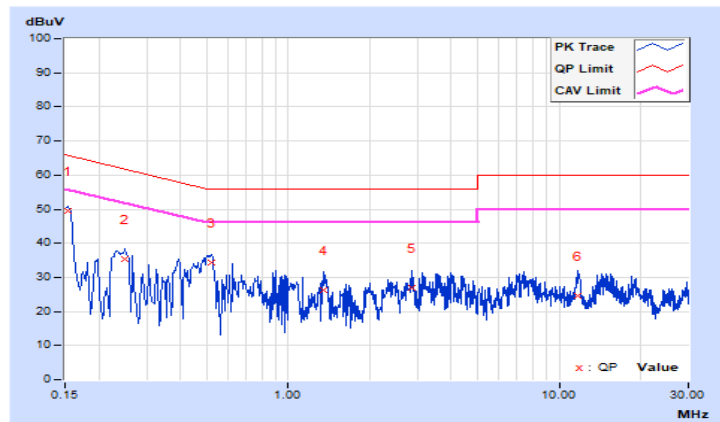


<b>Frequency Range</b>	150kHz ~ 30MHz	<b>Detector Function &amp; Resolution Bandwidth</b>	Quasi-Peak (QP) / Average (AV), 9kHz
<b>Input Power</b>	120Vac, 60Hz	<b>Environmental Conditions</b>	25 °C, 75% RH
<b>Tested by</b>	Greg Lin	<b>Test Date</b>	2022/4/18

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15400	10.14	39.26	36.28	49.40	46.42	65.78	55.78	-16.38	-9.36
2	0.25000	10.16	25.21	9.63	35.37	19.79	61.76	51.76	-26.39	-31.97
3	0.52016	10.18	24.27	6.79	34.45	16.97	56.00	46.00	-21.55	-29.03
4	1.35800	10.21	16.20	3.58	26.41	13.79	56.00	46.00	-29.59	-32.21
5	2.87400	10.25	16.79	2.77	27.04	13.02	56.00	46.00	-28.96	-32.98
6	11.77800	10.38	14.18	0.57	24.56	10.95	60.00	50.00	-35.44	-39.05

**Remarks:**

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value



## 5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

## Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

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The address and road map of all our labs can be found in our web site also.

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