


# EMC TEST REPORT

<b>KOSTEC CO., Ltd.</b> 28(175-20, Annyeong-dong) 406-gil sejaro, Hwaseong-si, Gyeonggi-do, Korea Tel:031-222-4251, Fax:031-222-4252	Report No. : KST-FCC-210028(4)	 <b>KOSTEC Co., Ltd.</b> <a href="http://www.kostec.org">http://www.kostec.org</a>
<b>1. Applicant</b>		
• Name : Dogtra Co., Ltd. • Address : 35, Namdongdong-ro 33beon-gil, Namdong-gu, Incheon 21694 Rep. of KOREA		
<b>2. Test Item</b>		
• Product Name : DOG TRAINING DEVICE • Model Name : 280C • FCC ID : SWN-TD12UR		
<b>3. Manufacturer</b>		
• Name : Dogtra Co., Ltd. • Address : 35, Namdongdong-ro 33beon-gil, Namdong-gu, Incheon 21694 Rep. of KOREA		
<b>4. Date of Test :</b> Jul. 23, 2021 to Jul. 25, 2021		
<b>5. Test Method Used :</b>		
ANSI C63.4:2014 47 CFR Part 15 Subpart B Class B Industry Canada ICES-003 Issue 7 CAN/CSA-CISPR 32:17		
<b>6. Test Result :</b> Pass		
<b>7. Note:</b> -		
The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This test report is not related to KOLAS accreditation.		
<b>Affirmation</b>	<b>Tested by</b> Name : Young-Seok, Shin (Signature)	<b>Technical Manager</b> Name : Seok-Jin, Jung (Signature)
2021 . 11 . 08 .		
<b>KOSTEC Co., Ltd.</b>		

## Revision History of Test Report

Rev.	Revisions	Effect page	Reviewed	Date
-	Initial issue	All	Seok-Jin, Jung	Jul. 27, 2021
1	Add FCC ID location and label	Page 37	Chang-Ho, Lee	Sep. 13, 2021
2	Delete TEST Set UP Photo	All	Chang-Ho, Lee	Oct. 06, 2021
3	Described worst case of orientation	Page 9	Chang-Ho, Lee	Oct. 28, 2021
4	Change product label	Page 31	Chang-Ho, Lee	Nov. 08, 2021

## Contents

1.	General Information .....	4
1.1	Information of EUT .....	4
1.2	Applicants Information .....	4
2.	Information of Testing Laboratory .....	5
3.	Test System Configuration .....	6
3.1	Operation Environment .....	6
3.2	Measurement Uncertainty .....	6
3.3	Sample calculation .....	6
4.	Condition and Procedure for Test activities .....	7
4.1	Configuration of EUT .....	7
4.2	Used Peripherals .....	7
4.3	Used cables .....	7
4.4	EUT Test Configuration .....	8
4.5	Operating conditions .....	9
5.	Summary of Test Results .....	10
5.1	Modification to the EUT .....	10
5.2	Summary of Test Results .....	10
6.	Test Results .....	11
6.1	Conducted Emission .....	11
6.2	Radiated Emission .....	15

## 1. General Information

### 1.1 Information of EUT

Product Name	DOG TRAINING DEVICE
Model Name	280C
Serial No.	None
Type of Sample Tested	Pre-production
Supplied Power for Test	AC 120 V, 60 Hz, (Battery) DC 3.7 V, 330 mAh, 1.22 Wh
SWITCHING POWER SUPPLY (for EUT)	M/N : HK-AP-050A100-US Manufacturer : Dogtra Input : AC 100 - 240 V, 50/60 Hz, 0.2 A Output : DC 5 V, 1.0 A
Port	DC In, DC Out
Whether or not ground	Without-ground

**This information was provided by the customer**

Clock used	4 MHz	
High Frequency Used	27.195 MHz	
Operating Frequency	(Rx) 27.195 MHz	
Hardware Version	RevNTC	
Software Version	N28-Rev1100	
Model differences		
Model name	Difference	Tested (checked)
-	-	-

### 1.2 Applicants Information

Applicant	Dogtra Co., Ltd.
Address	35, Namdongdong-ro 33beon-gil, Namdong-gu, Incheon 21694 Rep. of KOREA
Telephone No.	+82-32-812-2445
Facsimile No.	+82-32-812-2449
Contact person	Park In jun (paul@dogtra.com)

## 2. Information of Testing Laboratory

### Test laboratory and address

KOSTEC Co., Ltd.

28(175-20,Annyeong-dong)406-gil sejaro, Hwaseong-si Gyeonggi-do, Korea

Telephone Number: 82-31-222-4251

Facsimile Number: 82-31-222-4252

### Registration information

KOLAS No.: KT232

RRA(National Radio Research Agency): KR0041

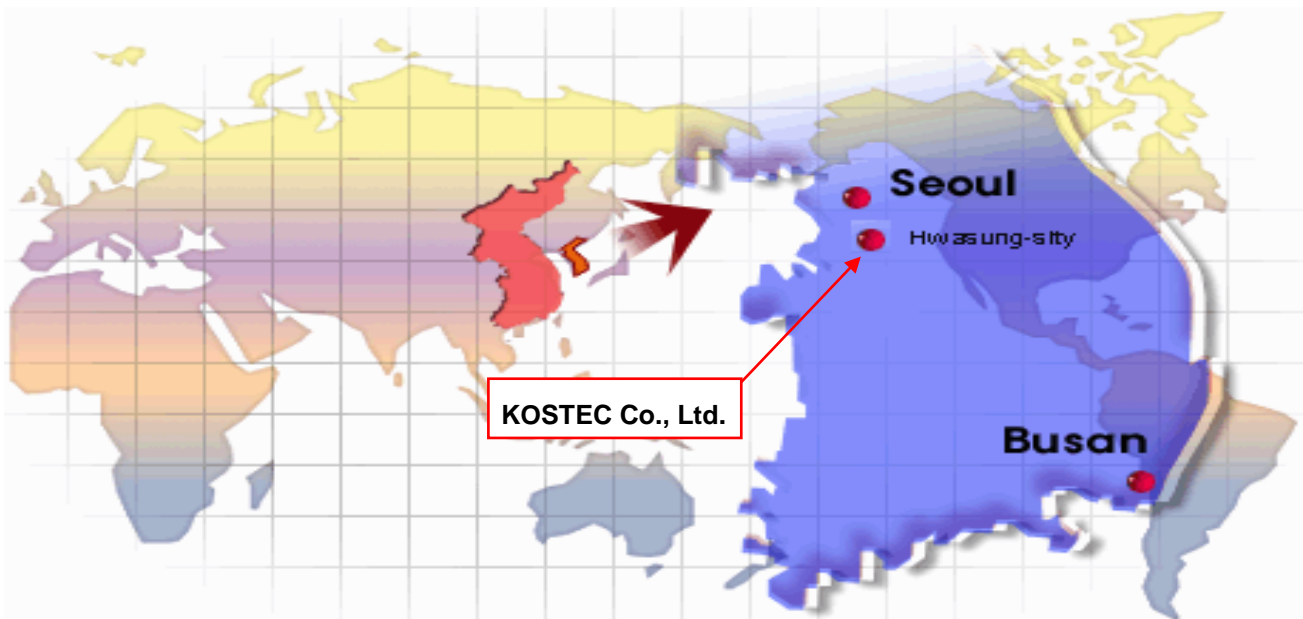
FCC Designation No.: KR0041

IC Designation No.: KR0041

VCCI Membership No. : 2005

VCCI Registration No. of EMI site: R-14202 / C-14685 / G-10834 / T-12225

### Route Map of Measurement Facility





### 3. Test System Configuration

#### 3.1 Operation Environment

Test Items	Test date	Temp (°C)	Humidity (%R.H.)
Conducted Emissions	Jul. 23	21	53
Radiated Emission (Below 1 GHz)	Jul. 24	23	52
Radiated Emission (Above 1 GHz)	Jul. 25	23	(51 ~ 52)

#### 3.2 Measurement Uncertainty

Test Items	$k_p$	Expanded Uncertainty	Note
Conducted Emissions	2	±3.62 dB	-
Radiated Emission (Below 1 GHz)	2	±4.26 dB	-
Radiated Emission (Above 1 GHz)	2	±3.58 dB	-

#### 3.3 Sample calculation

##### Conducted Emission

The field strength is calculated by adding the LISN factor, cable loss from the measured reading. The sample calculation is as follows:

FS = MR + Factor  
MR = Meter Reading  
Factor = Ant. Factor, Cable Loss, etc

If MR is 30 dB, LISN Factor 1 dB, CL 1 dB  
The result (MR) is  $30 + 1 + 1 = 32$  dB $\mu$ V

## 4. Condition and Procedure for Test activities

### 4.1 Configuration of EUT

Description	Model or Part No.	Serial No.	Manufacturer
<b>DOG TRAINING DEVICE</b>	<b>280C</b>	<b>None</b>	<b>Dogtra Co., Ltd.</b>
SWITCHING POWER SUPPLY	HK-AP-050A100-US	None	Dogtra Co., Ltd.

### 4.2 Used Peripherals

Description	Model or Part No.	Serial No.	Manufacturer
-	-	-	-

### 4.3 Used cables

#### [ Mode 1 ]

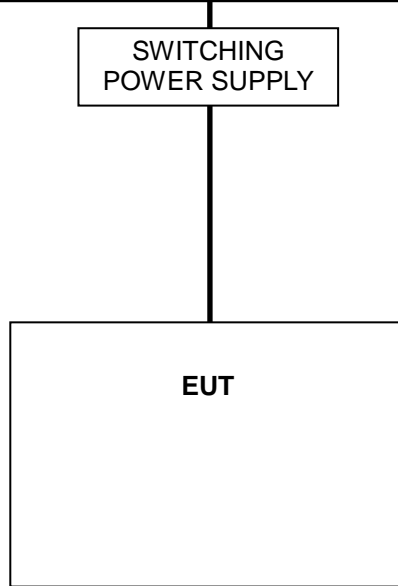
Cable Type	Shield	Length (m)	Ferrite	Connector	Connection Point 1	Connection Point 2
DC In	No	1.5	No	Din	EUT	SWITCHING POWER SUPPLY

#### [ Mode 2, Mode 3 ]

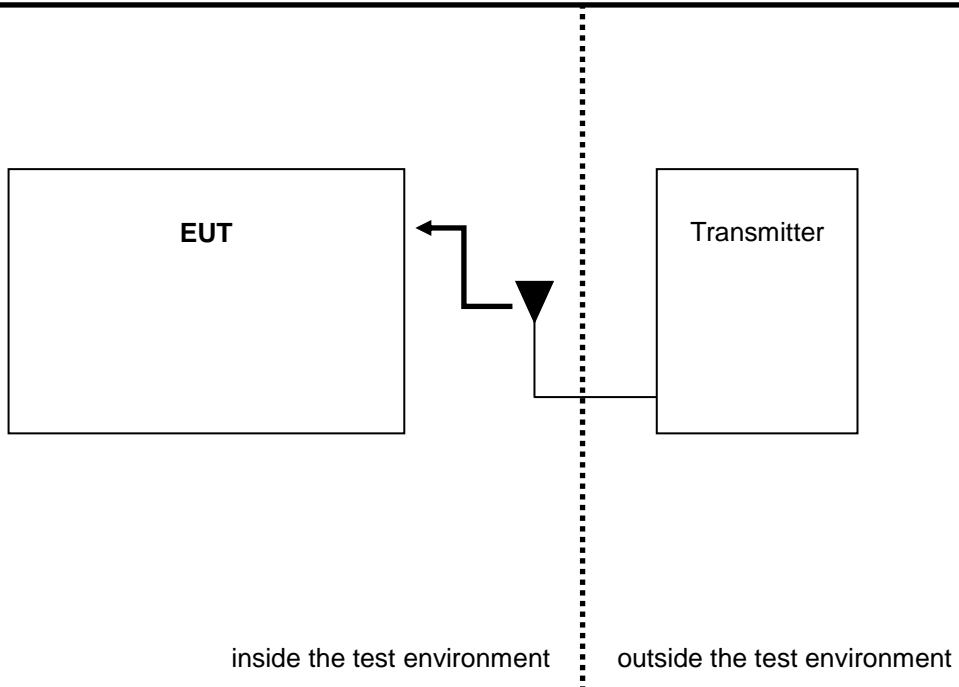
Cable Type	Shield	Length (m)	Ferrite	Connector	Connection Point 1	Connection Point 2
-	-	-	-	-	EUT	-

#### 4.4 EUT Test Configuration

[ Mode 1 ]



[ Mode 2, Mode 3 ]





## 4.5 Operating conditions

### [ Mode 1 ]

After setting, the DC In ports of EUT was connected to SWITCHING POWER SUPPLY.  
After that, the EUT were observed on continuously charge conditions.

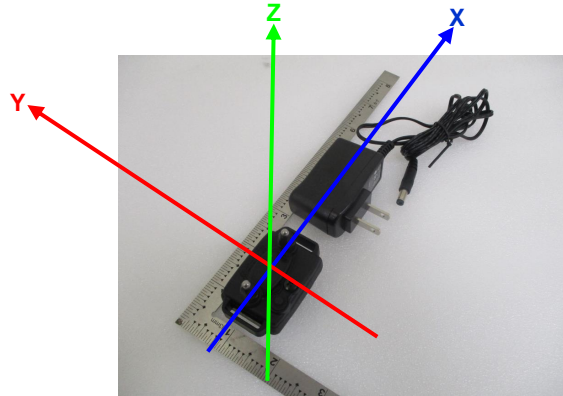
### [ Mode 2, Mode 3 ]

After setup, the EUT was observed continuous operating conditions in a state of wireless communication.

#### ※ Test Mode

- Mode 1 : Charge Mode
- Mode 2 : Vibration Mode
- Mode 3 : Electric Mode

#### ※ Worst case of 3 orientations : X axis



## 5. Summary of Test Results

### 5.1 Modification to the EUT

-

### 5.2 Summary of Test Results

The following tests were performed on a sample submitted for evaluation of compliance with FCC Part 15 Subpart B		
Clause	Test Requirement	Result
15.107	Conducted Emissions	Pass
15.109	Radiated Emission (Below 1 GHz)	Pass
15.109	Radiated Emission (Above 1 GHz)	Pass

Note 1) N/A mean is Not Applicable.

Note 2) Decision rule: The statement of conformity in this report was judged according to the specification limits of the standard without considering uncertainty.

Note 3) This equipment has been shown to be in compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.4-2014

## 6. Test Results

### 6.1 Conducted Emission

#### 6.1.1 Measurement procedure

In the range of 0.15 MHz to 30 MHz, the conducted disturbance was measured and set-up was made accordance with ANSI C63.4.

If the EUT is table top equipment, it was placed on a wooden table with a height of 0.8 m above the reference ground plane and 0.4 m from the conducting wall of the shielded room.

Also if the EUT is floor-standing equipment, it was placed on a non-conducted support with a height up to 0.15 m above the reference ground plane.

Connect the EUT's power source lines to the appropriate power mains / peripherals through the LISN. All the other peripherals are connected to the 2nd LISN, if any.

Unused measuring port of the LISN was resistively terminated by 50 ohm terminator.

The measuring port of the LISN for EUT was connected to spectrum analyzer.

Using conducted emission test software, the emissions were scanned with peak detector mode.

After scanning over the frequency range, suspected emissions were selected to perform final measurement. When performing final measurement, the receiver was used which has Quasi-Peak detector and Average detector.

By varying the configuration of the test sample and the cable routing it was attempted to maximize the emission.

For further description of the configuration refer to the picture of the test set-up.

#### 6.1.2 Limit for conducted emission

(1) Conducted emission at mains ports.

Frequency range [MHz]	Limits [dB(μV)]			
	Quasi-peak		Average	
	Class A	Class B	Class A	Class B
0.15 to 0.50	79	66 to 56	66	56 to 46
0.50 to 5	73	56	60	46
5 to 30		60		50

Note 1 The lower limit shall apply at the transition frequencies.  
Note 2 The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

Note) 1. Emission level = Reading value + Correction factor.

2. Correction factor = Cable loss + Insertion loss of LISN

3. Margin = Limit - Emission level

### 6.1.3 Used equipment

Equipment	Model No.	Serial No.	Manufacturer	Next cal date	Used
Test Receiver	ESCS30	100111	Rohde & Schwarz	2022. 01. 20	●
EMI RECEIVER	ER-30	L0910A010	LIG	2021. 08. 31	-
Pulse Limiter	ESH3-Z2	100097	Rohde & Schwarz	2022. 01. 20	●
Pulse Limiter	ESH3-Z2	100022	Rohde & Schwarz	2022. 01. 20	-
LISN	ESH3-Z5	100147	Rohde & Schwarz	2022. 01. 20	●
LISN	ESH2-Z5	100044	Rohde & Schwarz	2022. 01. 20	-
LISN	ESH2-Z5	100060	Rohde & Schwarz	2022. 01. 20	-
LISN	3825/2	9402-2163	EMCO	2022. 01. 20	-
Test Program	ESxS-K1 Ver2.2	None	Rohde & Schwarz	-	●
Test Program	ETS2008 Ver2.40	None	LIG	-	-

### 6.1.4 Test data

#### < Class B >

Freq. [MHz]	Factor [dB]		POL	QP				CISPR-AV			
	LISN	CABLE +P/L		Limit [dB(μV)]	Reading [dB(μV)]	Result [dB(μV)]	Margin [dB]	Limit [dB(μV)]	Reading [dB(μV)]	Result [dB(μV)]	Margin [dB]
0.298	0.11	9.86	N	60.29	47.49	47.60	12.69	50.29	37.80	37.91	12.38
0.310	0.12	9.86	L	59.97	42.12	42.24	17.73	49.97	28.60	28.72	21.25
0.322	0.11	9.86	N	59.66	48.03	48.14	11.52	49.66	39.90	40.01	9.65
0.373	0.11	9.86	N	58.44	54.81	54.92	3.52	48.44	45.30	45.41	3.03
0.380	0.11	9.86	N	58.27	53.79	53.90	4.37	48.27	43.80	43.91	4.36
0.396	0.11	9.86	N	57.93	54.53	54.64	3.29	47.93	44.60	44.71	3.22
0.408	0.12	9.86	L	57.69	39.95	40.07	17.62	47.69	32.10	32.22	15.47
0.420	0.11	9.86	N	57.46	51.78	51.89	5.57	47.46	44.10	44.21	3.25
0.431	0.12	9.86	L	57.23	44.20	44.32	12.91	47.23	30.80	30.92	16.31

\* LISN: LISN insertion Loss, Cable: Cable Loss, P/L: pulse limiter factor

\* L: Line. Live, N: Line. Neutral

\* Reading: test receiver reading value (with cable loss & pulse limiter factor )

\* Result = LISN + Reading

6.1.5 Conducted emission test graph

Line. Live

Kostec Co.,Ltd

23 Jul 2021 13:59

Conducted Emission

EUT: KST-P0-21-0048  
 Manuf:  
 Op Cond: AC 120V 60Hz  
 Operator: Y.S.SHIN  
 Test Spec: FCC  
 Comment: L

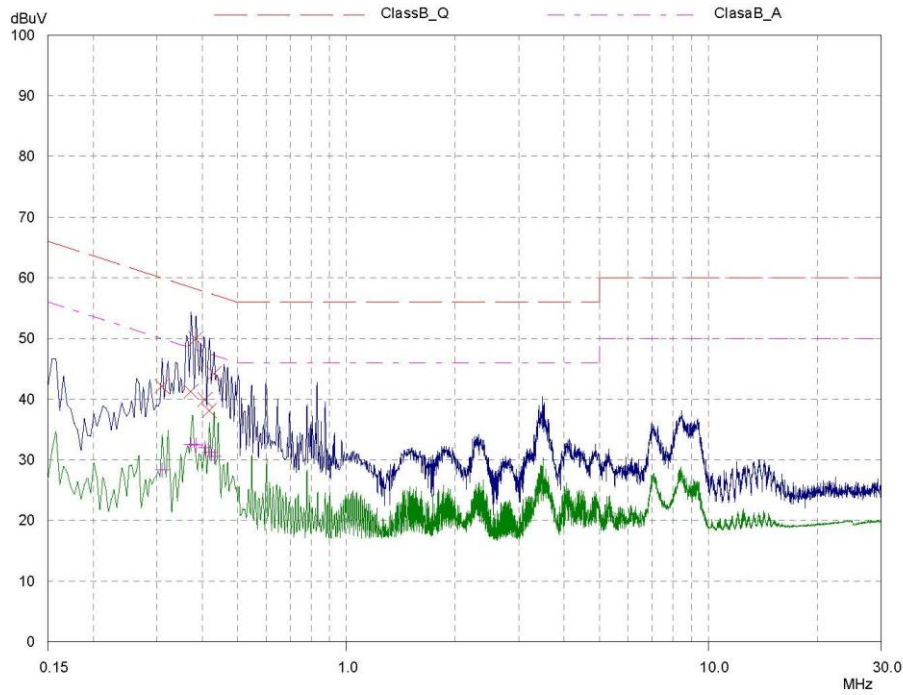
Result File: 0048\_1.dat : New Measurement

Scan Settings

(1 Range)

Frequencies				Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge	
150kHz	30MHz	3.9063kHz	9kHz	PK+AV	10msec	15 dB	OFF	60dB	
Transducer	No.	Start	Stop	Name					
	11	9kHz	30MHz	MAIN					

Final Measurement: Detectors: X QP / + AV  
 Meas Time: 1sec  
 Peaks: 25  
 Acc Margin: 50 dB



Line. Neutral

Kostec Co.,Ltd

23 Jul 2021 14:14

Conducted Emission

EUT: KST-P0-21-0048  
 Manuf:  
 Op Cond: AC 120V 60Hz  
 Operator: Y.S.SHIN  
 Test Spec: FCC  
 Comment: N

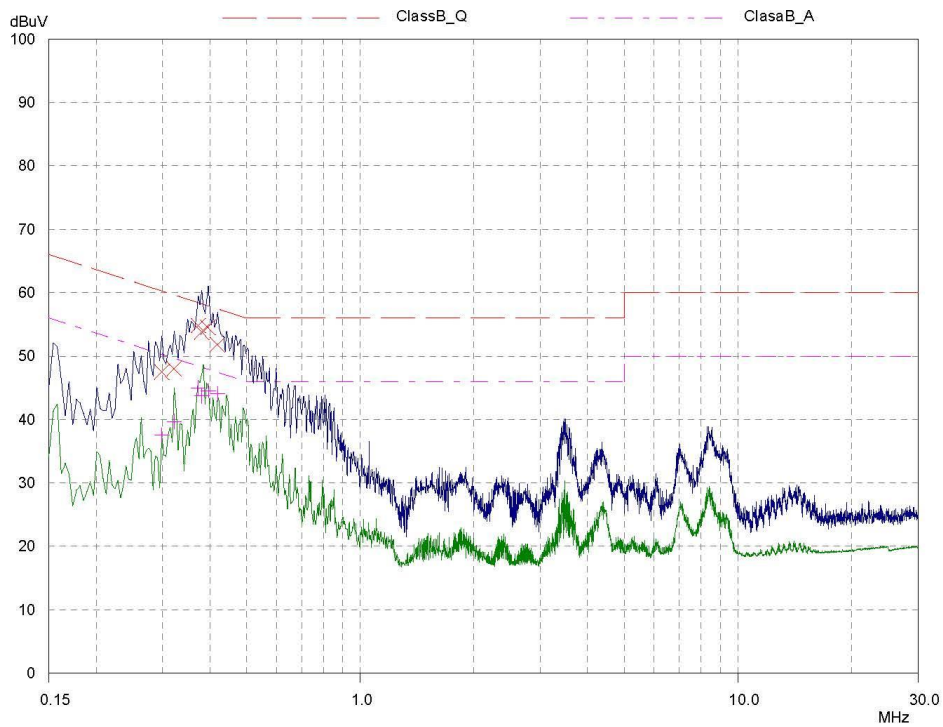
Result File: 0048\_n.dat : New Measurement

Scan Settings (1 Range)

Frequencies			Receiver Settings					
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp	OpRge
150kHz	30MHz	3.9063kHz	9kHz	PK+AV	10msec	15 dB	OFF	60dB

Transducer	No.	Start	Stop	Name
	11	9kHz	30MHz	MAIN

Final Measurement: Detectors: X QP / + AV  
 Meas Time: 1sec  
 Peaks: 25  
 Acc Margin: 50 dB



## 6.2 Radiated Emission

### 6.2.1 Measurement procedure

The radiated disturbance was measured and set-up was made accordance with ANSI C63.4. If the EUT is tabletop equipment, it was placed on a wooden table with a height of 0.8 m above the reference ground plane and 3 m or 10 m away from the interference receiving antenna in the 10 m semi-anechoic chamber.

Also if the EUT is floor-standing equipment, it was placed on a non-conducted support with a height up to 0.15 m above the reference ground plane.

Rotate the EUT from (0 - 360)° and position the receiving antenna at heights from (1 - 4) m above the reference ground plane continuously to determine associated with higher emission levels and record them.

The measurement was made in both the vertical and horizontal polarization, and the maximum value is presented in the report.

For below 1 GHz frequency range, Quasi-Peak detector with 120 kHz RBW was used.

Also Peak and Average detector with 1 MHz RBW were used for above 1 GHz frequency range.

For further description of the configuration refer to the picture of the test set-up.

### 6.2.2 Limit for Radiated emission

- The test frequency range of Radiated disturbance measurements are listed below.

Highest frequency generated or used in the device or on which the device operates or tunes [MHz]	Upper frequency of measurement range [MHz]
Below 108	1 000
108 – 500	2 000
500 – 1 000	5 000
Above 1 000	5 <sup>th</sup> harmonic of the highest frequency or 40 GHz, whichever is lower

#### (1) Limit for Radiated emission below 1 000 MHz

Frequency range [MHz]	Class A Equipment (10 m distance)	Class B Equipment (3 m distance)
	Quasi-peak [dB(μV/m)]	Quasi-peak [dB(μV/m)]
30 to 88	39.1	40
88 to 216	43.5	43.5
216 to 960	46.4	46
960 to 1 000	49.5	54

Note 1 The lower limit shall apply at the transition frequency.

Note 2 Additional provisions may be required for cases where interference occurs.

Note 3 According to 15.109(g), as an alternative to the radiated emission limit shown above, digital devices may be shown to comply with the standards(CISPR), Pub. 22 shown as below.

Frequency range [MHz]	Class A Equipment (10 m distance)	Class B Equipment (10 m distance)
	Quasi-peak [dB(μV/m)]	Quasi-peak [dB(μV/m)]
30 to 230	40	30
230 to 1 000	47	37

(2) Limits for Radiated emission above 1 000 MHz at a measuring distance of 3 m

Frequency [GHz]	Class A Equipment		Class B Equipment	
	Peak [dB(μV/m)]	Average [dB(μV/m)]	Peak [dB(μV/m)]	Average [dB(μV/m)]
1 to 40	80	60	74	54

- Note) 1. Emission level = Reading value + Correction factor.  
 2. Correction factor = Cable loss - Amp gain + Antenna factor + Distance compensation value  
 3. Margin = Limit - Emission level

Fig.1 Dimensions of test site (Below 1 GHz) : Class A (10 m), Class B (3 m)

Semi-Anechoic Chamber ( 9.8 m x 18.8 m x 8.7 m )

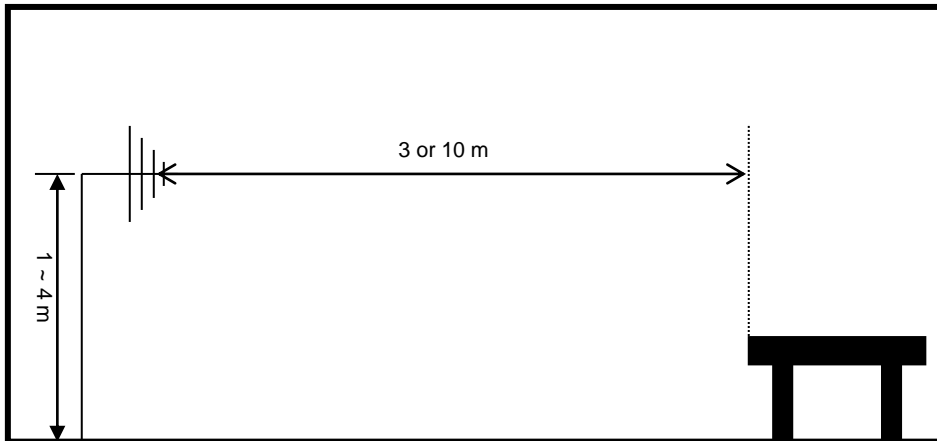
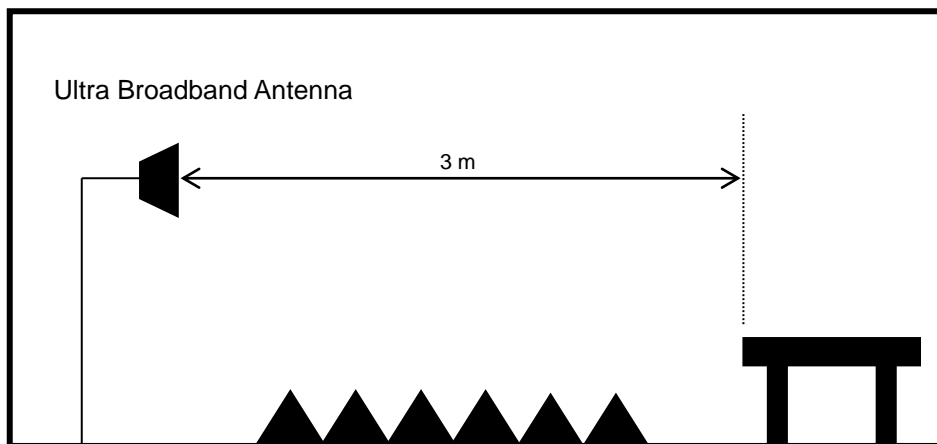


Fig.2 Dimensions of test site (Above 1 GHz)

Semi-Anechoic Chamber + Absorber





### 6.2.3 Used equipment

#### 1) Below 1 GHz

##### 3 m Semi-Anechoic chamber

Equipment	Model No.	Serial No.	Manufacturer	Next cal date	Used
Test Receiver	ESI	837514/004	Rohde & Schwarz	2021. 08. 31	●
Hybrid Antenna	VULB9168	606	Schwarzbeck	2022. 09. 21	●
LOW NOISE AMPLIFIER	TK-PA01S	200141-L	TESTEK	2021. 09. 23	●
Antenna Mast	MA4640	None	innco systems GmbH	-	●
Turn Table	DS2000-S-1t	None	innco systems GmbH	-	●

##### 10 m Semi-Anechoic chamber

Equipment	Model No.	Serial No.	Manufacturer	Next cal date	Used
Test Receiver	ESCI7	100823	Rohde & Schwarz	2022. 01. 20	-
Test Receiver	ESPI	100488	Rohde & Schwarz	2022. 01. 20	-
Biconilog Antenna	3142B	1745	EMCO	2022. 04. 24	-
Biconilog Antenna	3142B	9910-1432	EMCO	2022. 04. 07	-
AMPLIFIER	TK-PA6S	120009	TESTEK	2022. 01. 19	-
Antenna Master	MA4000-EP	None	innco systems GmbH	-	-
Turn Table	None	None	innco systems GmbH	-	-

2) Above 1 GHz

3 m Semi-Anechoic chamber

Equipment	Model No.	Serial No.	Manufacturer	Next cal date	Used
Test Receiver	ESI	837514/004	Rohde & Schwarz	2021. 08. 31	●
Horn Antenna	3115	2996	EMCO	2022. 02. 14	●
Broadband Horn Antenna	BBHA 9170	743	SCHWARZBECK MESS-ELEKTRONIK	2023. 01. 21	-
Antenna Mast	MA4640	None	innco systems GmbH	-	●
Turn Table	DS2000-S-1t	None	innco systems GmbH	-	●
AMPLIFIER	8449B	3008A02577	Agilent	2022. 01. 19	●
Low Noise Amplifier	TK-PA1840H	160010-L	TESTEK	2022. 01. 21	-

10 m Semi-Anechoic chamber

Equipment	Model No.	Serial No.	Manufacturer	Next cal date	Used
Test Receiver	ESI	837514/004	Rohde & Schwarz	2021. 08. 31	-
Test Receiver	ESCI7	100823	Rohde & Schwarz	2022. 01. 20	-
Test Receiver	ESCI7	100969	Rohde & Schwarz	2022. 01. 20	-
Horn Antenna	3115	2996	EMCO	2022. 02. 14	-
Antenna Master	MA4000-EP	None	innco systems GmbH	-	-
Turn Table	None	None	innco systems GmbH	-	-
AMPLIFIER	TK-PA6S	120009	TESTEK	2022. 01. 19	-
AMPLIFIER	8449B	3008A02577	Agilent	2022. 01. 19	-
AMPLIFIER	8449B	3008A00149	H.P	2021. 09. 01	-
Low Noise Amplifier	TK-PA1840H	160010-L	TESTEK	2022. 01. 21	-

6.2.4 Test data

a) Below 1 GHz

[ Mode 1 ]

< Class B >

Freq. [MHz]	Reading [dB(μV)]	POL	H [m]	Factor			Limit [dB(μV/m)]	Result [dB(μV/m)]	Margin [dB]
				ANT. [dB/m]	CABLE [dB]	AMP. [dB]			
46.05	60.10	V	1.0	19.54	0.85	46.46	40.00	34.04	5.96
50.81	60.82	V	1.0	19.64	0.91	46.49	40.00	34.88	5.12
65.90	52.31	V	1.0	18.03	1.08	46.48	40.00	24.93	15.07
75.85	60.54	V	1.0	16.02	1.10	46.47	40.00	31.18	8.82
140.77	48.44	V	1.0	18.51	1.50	46.44	43.50	22.00	21.50
183.86	51.95	V	1.0	17.34	1.72	46.41	43.50	24.60	18.90

\*Result = Reading + Antenna factor + Cable loss - AMP. \*Reading : Test receiver reading value

\*POL = Antenna polarization / H = Antenna Height \*Receiving antenna mode : Horizontal, Vertical

\*ANT. = Antenna factor / CABLE = Cable loss / AMP. : Gain of the amplifier

[ Mode 2 ]

< Class B >

Freq. [MHz]	Reading [dB(μV)]	POL	H [m]	Factor			Limit [dB(μV/m)]	Result [dB(μV/m)]	Margin [dB]
				ANT. [dB/m]	CABLE [dB]	AMP. [dB]			
34.28	40.80	V	1.0	18.67	0.75	46.35	40.00	13.87	26.13

\*Result = Reading + Antenna factor + Cable loss - AMP. \*Reading : Test receiver reading value

\*POL = Antenna polarization / H = Antenna Height \*Receiving antenna mode : Horizontal, Vertical

\*ANT. = Antenna factor / CABLE = Cable loss / AMP. : Gain of the amplifier

※ Except for the above data, the emission levels were very low, so that the other data are not reported.  
(See Radiated Emission Graph)

[ Mode 3 ]

< Class B >

Freq. [MHz]	Reading [dB(μV)]	POL	H [m]	Factor			Limit [dB(μV/m)]	Result [dB(μV/m)]	Margin [dB]
				ANT. [dB/m]	CABLE [dB]	AMP. [dB]			
34.28	41.46	V	1.0	18.67	0.75	46.35	40.00	14.53	25.47

\*Result = Reading + Antenna factor + Cable loss - AMP. \*Reading : Test receiver reading value

\*POL = Antenna polarization / H = Antenna Height \*Receiving antenna mode : Horizontal, Vertical

\*ANT. = Antenna factor / CABLE = Cable loss / AMP. : Gain of the amplifier

※ Except for the above data, the emission levels were very low, so that the other data are not reported.  
(See Radiated Emission Graph)

b) Above 1 GHz

[ Mode 1 ]

< Class B >

Freq. [GHz]	Reading		POL	H [m]	Factor				Peak			CISPR Average		
	Peak [dB(μV)]	Average [dB(μV)]			ANT. [dBm]	CABLE [dB]	AMP. [dB]	Distance [dB]	Limit [dB(μV/m)]	Result [dB(μV/m)]	Margin [dB]	Limit [dB(μV/m)]	Result [dB(μV/m)]	Margin [dB]
1.493	51.30	37.31	V	1.0	25.28	4.82	31.59	1.34	74.00	49.80	24.20	54.00	35.81	18.19
3.336	45.40	32.10	V	1.0	31.03	7.95	30.36	1.34	74.00	54.02	19.98	54.00	40.72	13.28
3.724	45.50	32.00	V	1.0	31.97	8.46	30.50	1.34	74.00	55.43	18.57	54.00	41.93	12.07
6.569	44.90	31.39	V	1.0	35.17	12.47	30.09	1.34	74.00	62.44	11.56	54.00	48.93	5.07
9.969	40.50	27.44	V	1.0	37.59	15.09	30.03	1.34	74.00	63.15	10.85	54.00	50.09	3.91
13.950	34.03	19.67	V	1.0	41.51	17.79	27.97	1.34	74.00	65.37	8.63	54.00	51.01	2.99

\*Result = Reading + Antenna factor + Cable loss - AMP. + Distance compensation value

\*Reading : test receiver reading value \*POL = Antenna Polarization / H = Antenna Height

\*ANT. = Antenna factor / CABLE = used Cable loss / AMP. : Gain of the Amplifier /

Distance : Distance compensation value

\* Receiving Antenna Mode : Horizontal, Vertical

[ Mode 2 ]

< Class B >

Freq. [GHz]	Reading		POL	H [m]	Factor				Peak			CISPR Average		
	Peak [dB(μV)]	Average [dB(μV)]			ANT. [dBm]	CABLE [dB]	AMP. [dB]	Distance [dB]	Limit [dB(μV/m)]	Result [dB(μV/m)]	Margin [dB]	Limit [dB(μV/m)]	Result [dB(μV/m)]	Margin [dB]
1.432	56.86	39.36	V	1.0	25.10	4.79	31.71	1.58	74.00	55.03	18.97	54.00	37.53	16.47
1.465	58.86	41.89	V	1.0	25.20	4.80	31.65	1.58	74.00	57.21	16.79	54.00	40.24	13.76
1.491	59.88	46.66	V	1.0	25.27	4.82	31.60	1.58	74.00	58.37	15.63	54.00	45.15	8.85
1.517	60.73	43.30	V	1.0	25.32	4.84	31.58	1.58	74.00	59.31	14.69	54.00	41.88	12.12
1.571	57.72	43.44	V	1.0	25.37	4.90	31.57	1.58	74.00	56.42	17.58	54.00	42.14	11.86
1.626	53.80	40.86	V	1.0	25.61	4.91	31.56	1.58	74.00	52.76	21.24	54.00	39.82	14.18

\*Result = Reading + Antenna factor + Cable loss - AMP. + Distance compensation value

\*Reading : test receiver reading value \*POL = Antenna Polarization / H = Antenna Height

\*ANT. = Antenna factor / CABLE = used Cable loss / AMP. : Gain of the Amplifier /

Distance : Distance compensation value

\* Receiving Antenna Mode : Horizontal, Vertical

[ Mode 3 ]

< Class B >

Freq. [GHz]	Reading		POL	H [m]	Factor				Peak			CISPR Average		
	Peak [dB(μV)]	Average [dB(μV)]			ANT. [dBm]	CABLE [dB]	AMP. [dB]	Distance [dB]	Limit [dB(μV/m)]	Result [dB(μV/m)]	Margin [dB]	Limit [dB(μV/m)]	Result [dB(μV/m)]	Margin [dB]
1.465	58.85	41.89	V	1.0	25.20	4.80	31.65	1.58	74.00	57.20	16.80	54.00	40.24	13.76
1.491	59.81	46.36	V	1.0	25.27	4.82	31.60	1.58	74.00	58.30	15.70	54.00	44.85	9.15
1.517	60.27	42.91	V	1.0	25.32	4.84	31.58	1.58	74.00	58.85	15.15	54.00	41.49	12.51
1.544	60.60	43.02	V	1.0	25.34	4.87	31.57	1.58	74.00	59.24	14.76	54.00	41.66	12.34
1.580	57.52	43.51	V	1.0	25.38	4.91	31.56	1.58	74.00	56.24	17.76	54.00	42.23	11.77
1.957	51.03	38.53	V	1.0	27.30	5.47	31.51	1.58	74.00	52.28	21.72	54.00	39.78	14.22

\*Result = Reading + Antenna factor + Cable loss - AMP. + Distance compensation value

\*Reading : test receiver reading value \*POL = Antenna Polarization / H = Antenna Height

\*ANT. = Antenna factor / CABLE = used Cable loss / AMP. : Gain of the Amplifier /

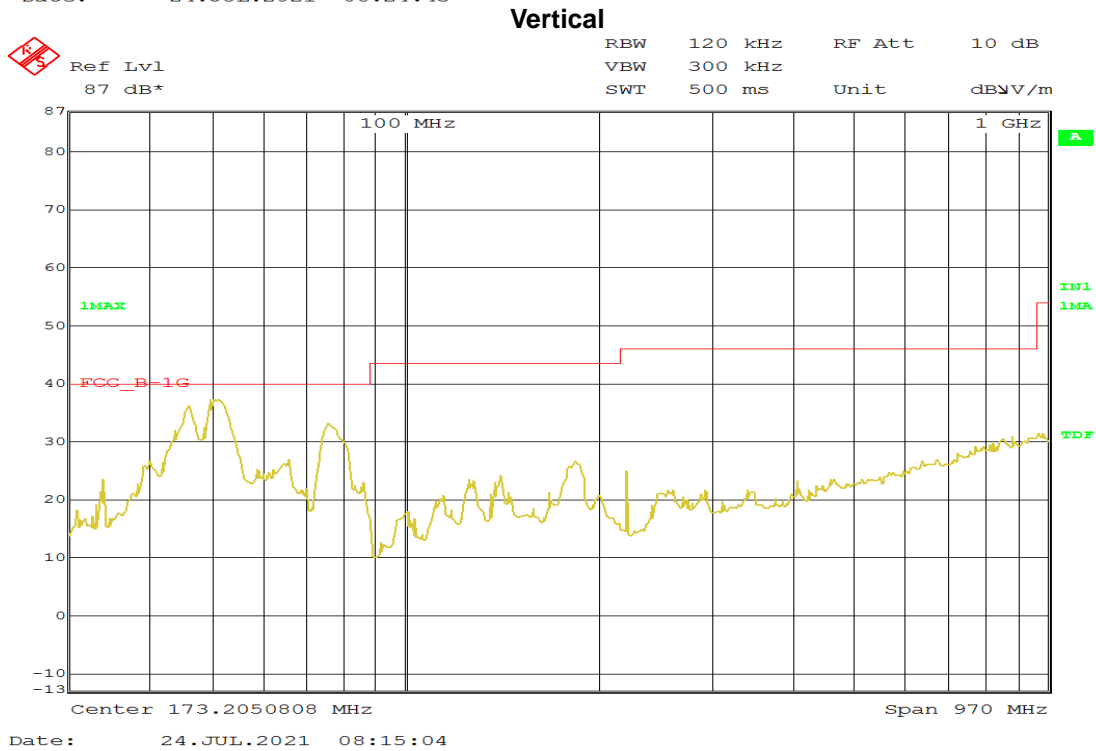
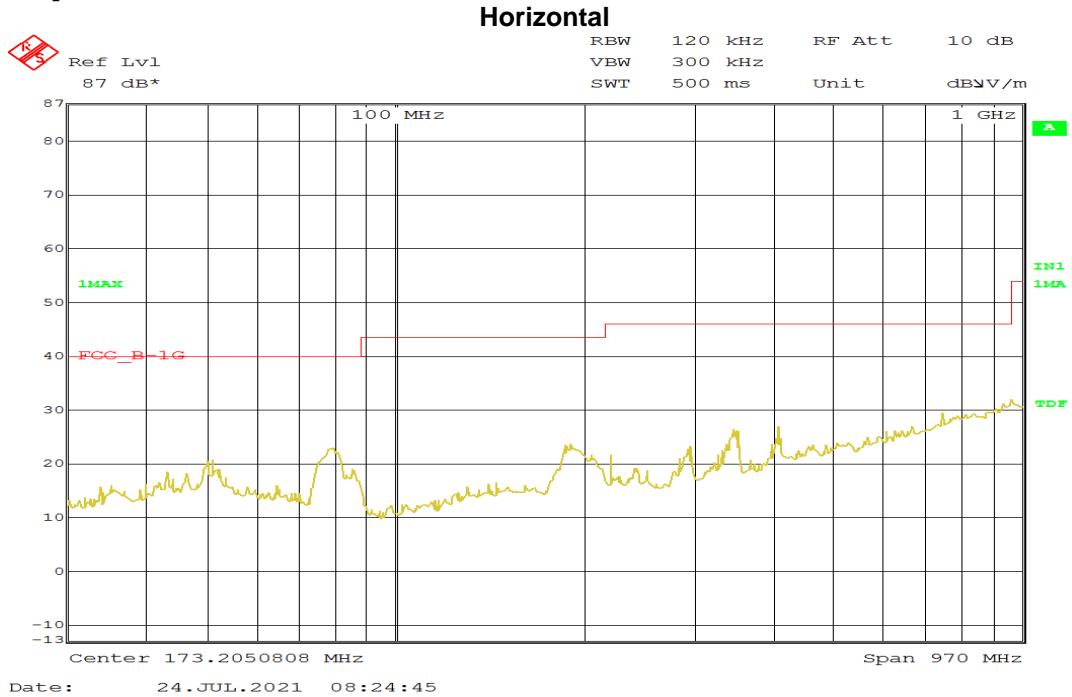
Distance : Distance compensation value

\* Receiving Antenna Mode : Horizontal, Vertical

6.2.5 Radiated Emission test graph

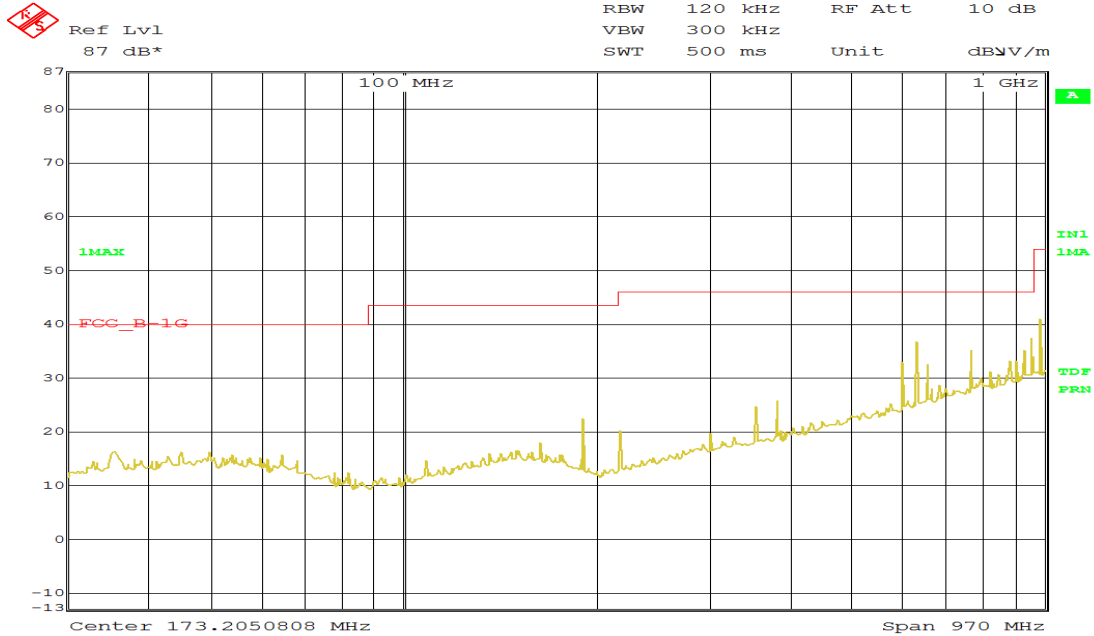
a) Below 1 GHz

[ Mode 1 ]



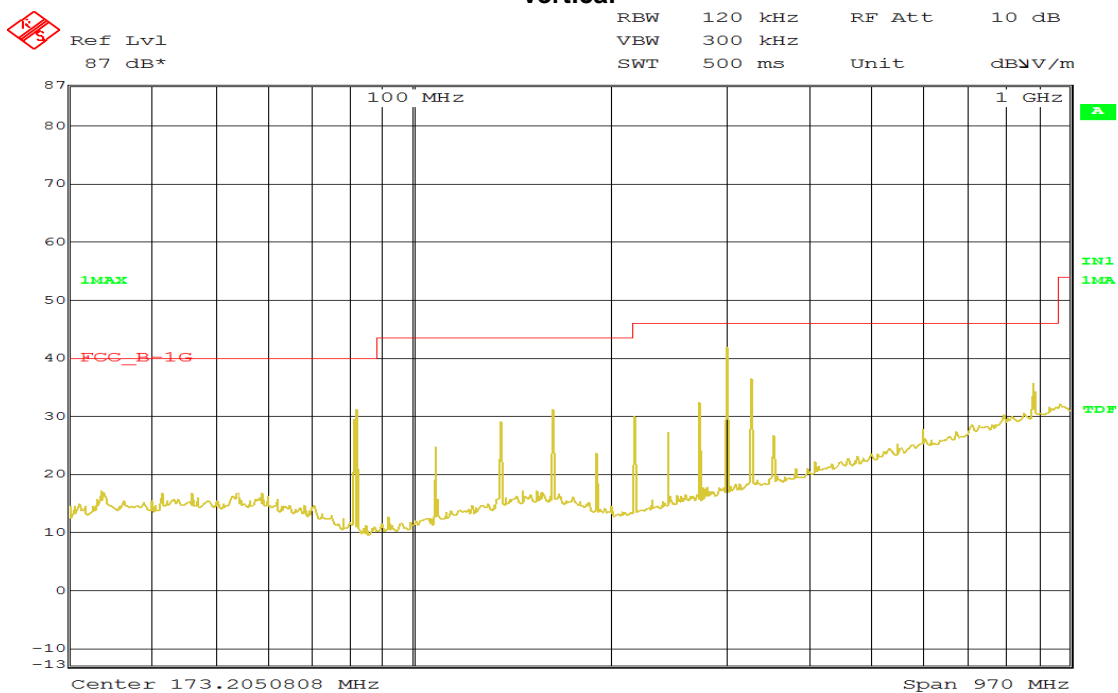
[ Mode 2 ]

Horizontal



Date: 24.JUL.2021 07:40:22

Vertical



Date: 24.JUL.2021 07:30:25

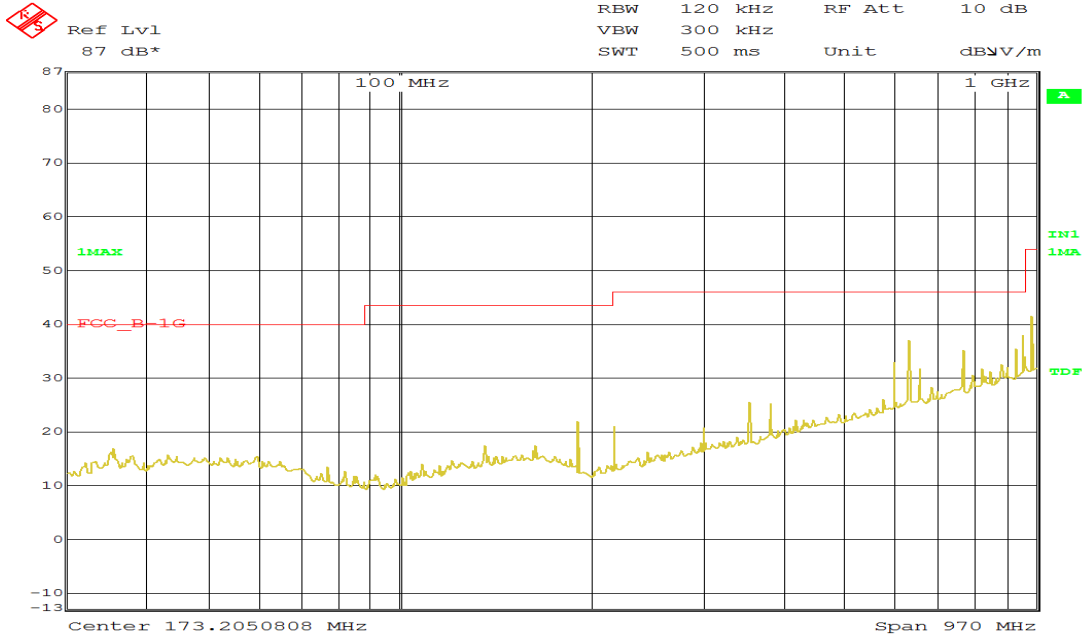
\* Fundamental frequency of transmitter : 27.195 MHz

\* Harmonic Frequency of transmitter :

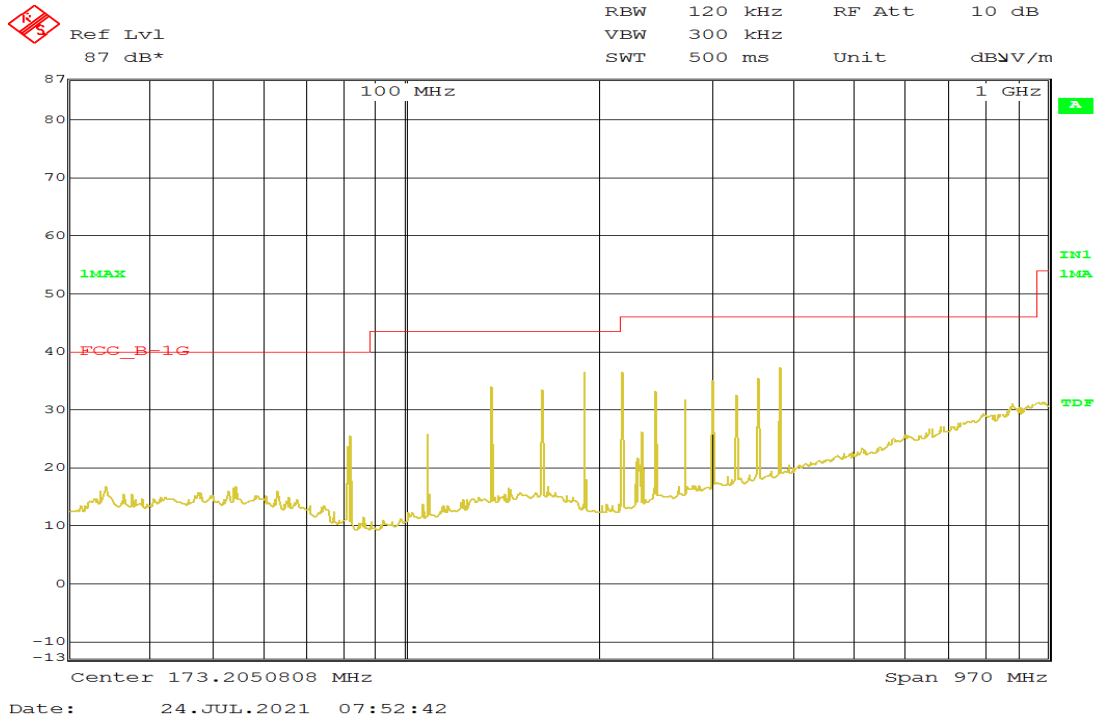
- 81.585 MHz, 108.78 MHz, 135.975 MHz, 163.17 MHz, 190.365 MHz, 217.56 MHz, 244.755 MHz,
- 271.95 MHz, 299.145 MHz, 326.34 MHz, 353.535 MHz, 598.29 MHz, 625.485 MHz, 652.68 MHz,
- 679.875 MHz, 788.655 MHz, 815.85 MHz, 870.24 MHz, 924.63 MHz, 951.825 MHz, 979.02 MHz

[ Mode 3 ]

Horizontal



Vertical



\* Fundamental frequency of transmitter : 27.195 MHz

\* Harmonic Frequency of transmitter :

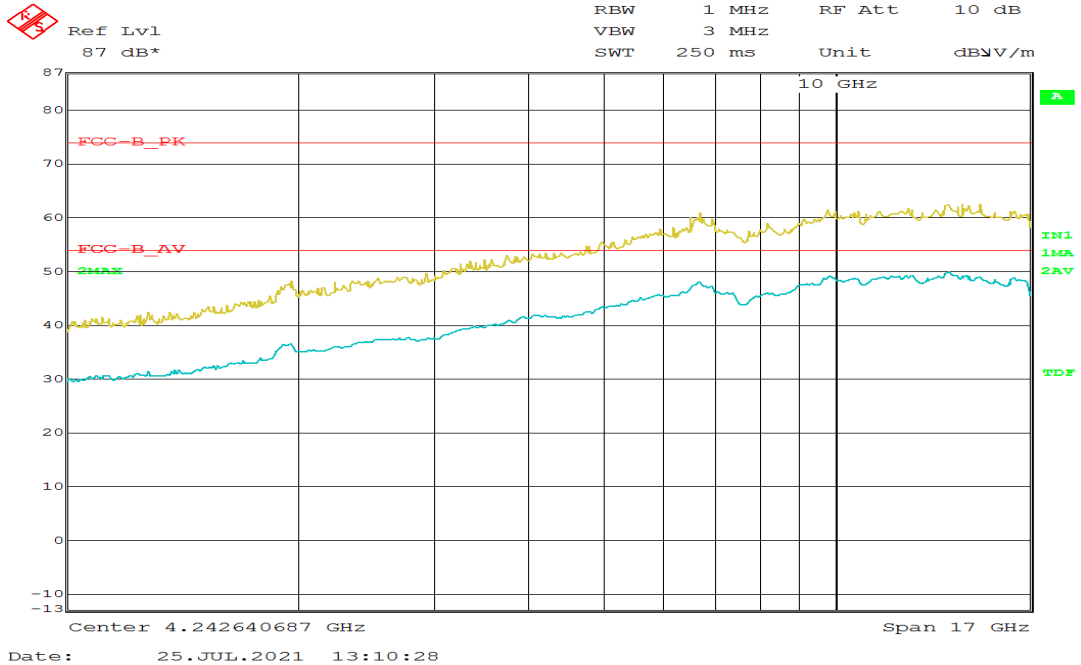
- 81.585 MHz, 108.78 MHz, 135.975 MHz, 163.17 MHz, 190.365 MHz, 217.56 MHz, 244.755 MHz,
- 271.95 MHz, 299.145 MHz, 326.34 MHz, 353.535 MHz, 380.73 MHz, 598.29 MHz, 625.485 MHz,
- 652.68 MHz, 679.875 MHz, 788.655 MHz, 815.85 MHz, 870.24 MHz, 924.63 MHz, 951.825 MHz,
- 979.02 MHz



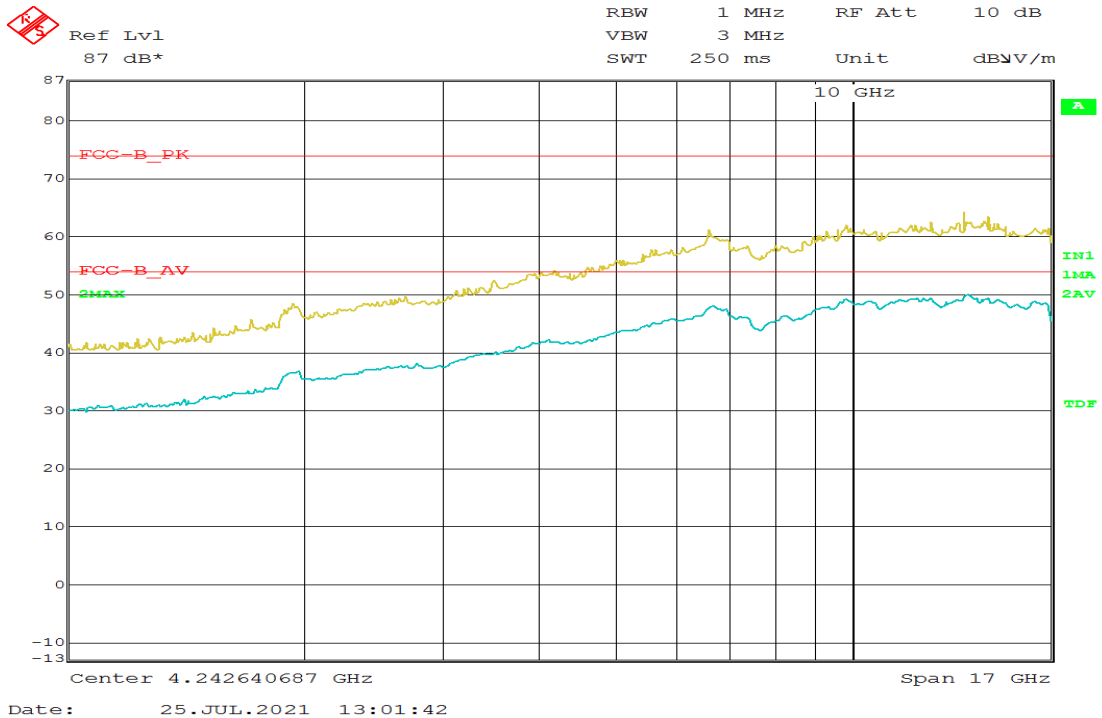
b) Above 1 GHz

[ Mode 1 ]

**Horizontal**

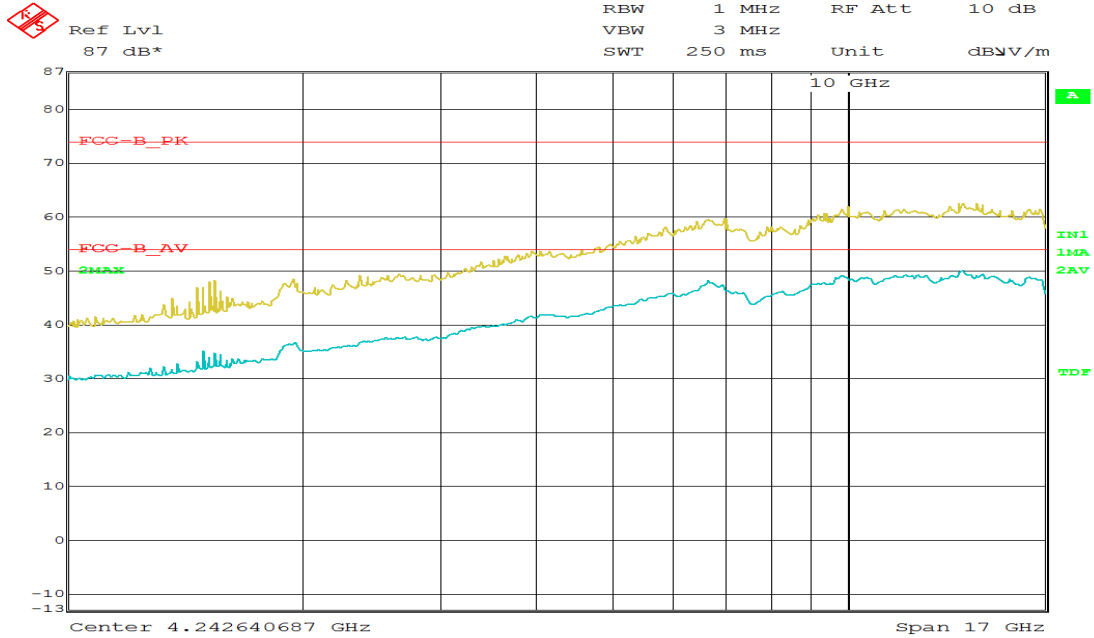


**Vertical**



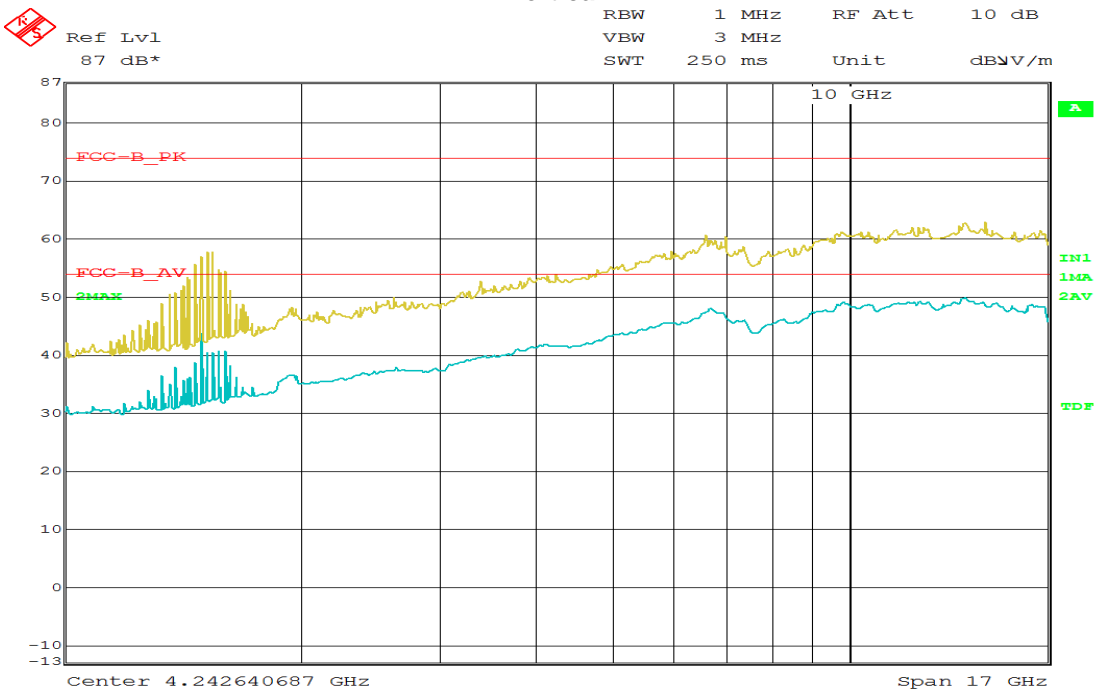
[ Mode 2 ]

Horizontal



Date: 25.JUL.2021 13:40:25

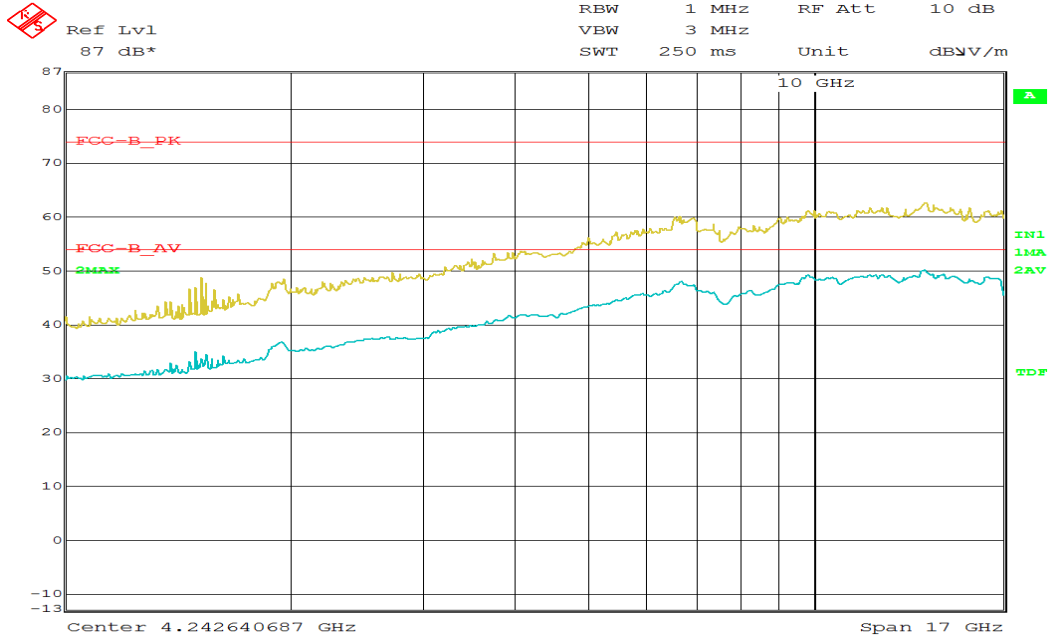
Vertical



Date: 25.JUL.2021 13:51:10

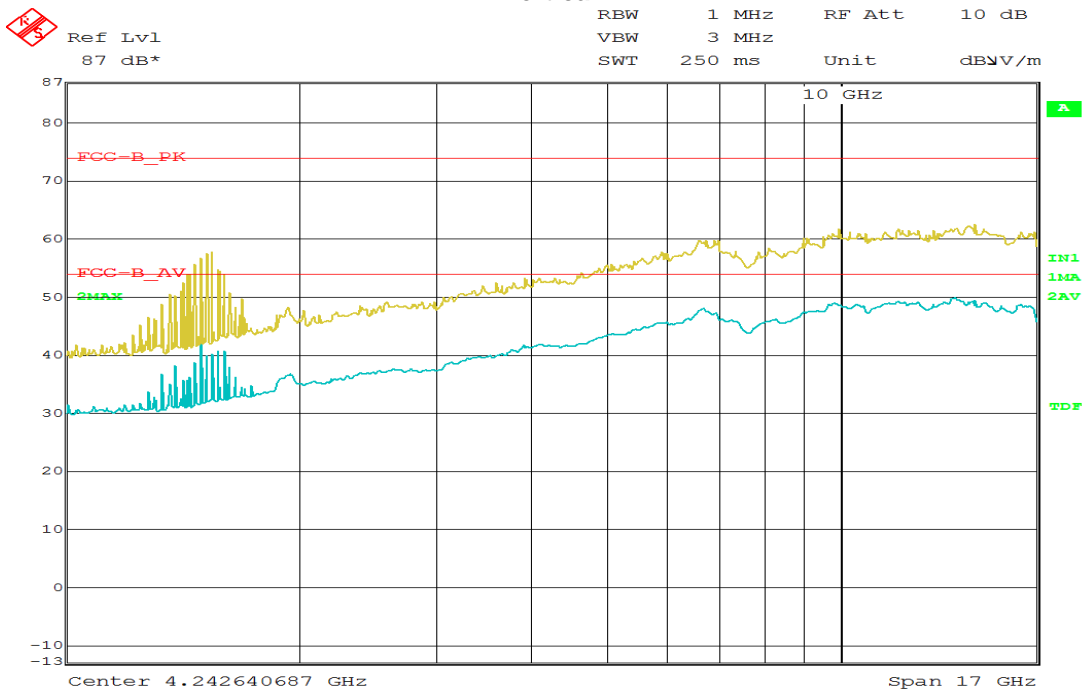
[ Mode 3 ]

Horizontal



Date: 25.JUL.2021 13:21:12

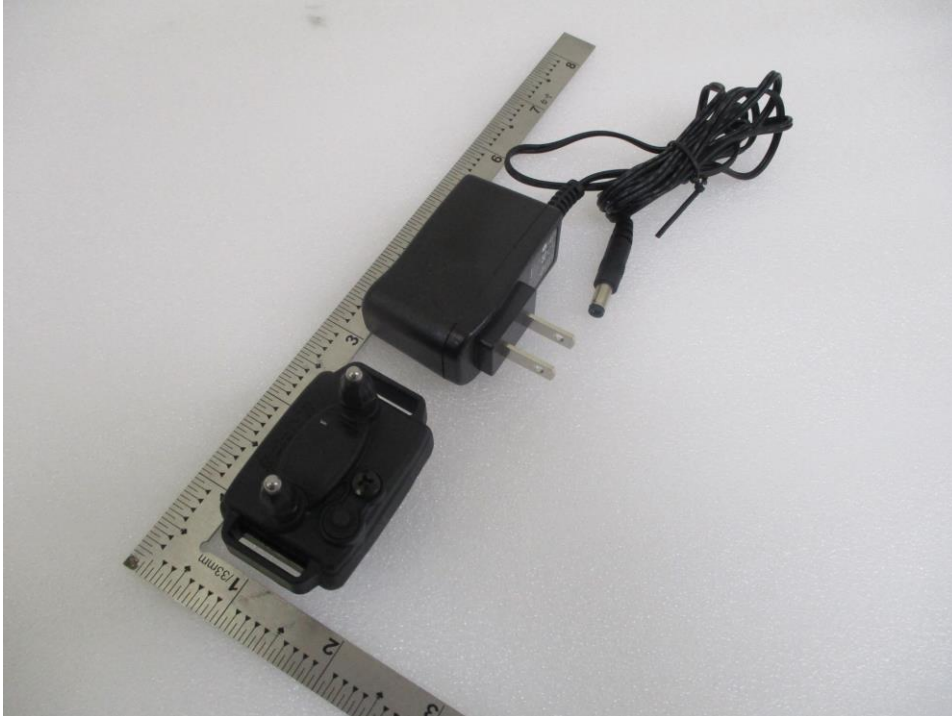
Vertical



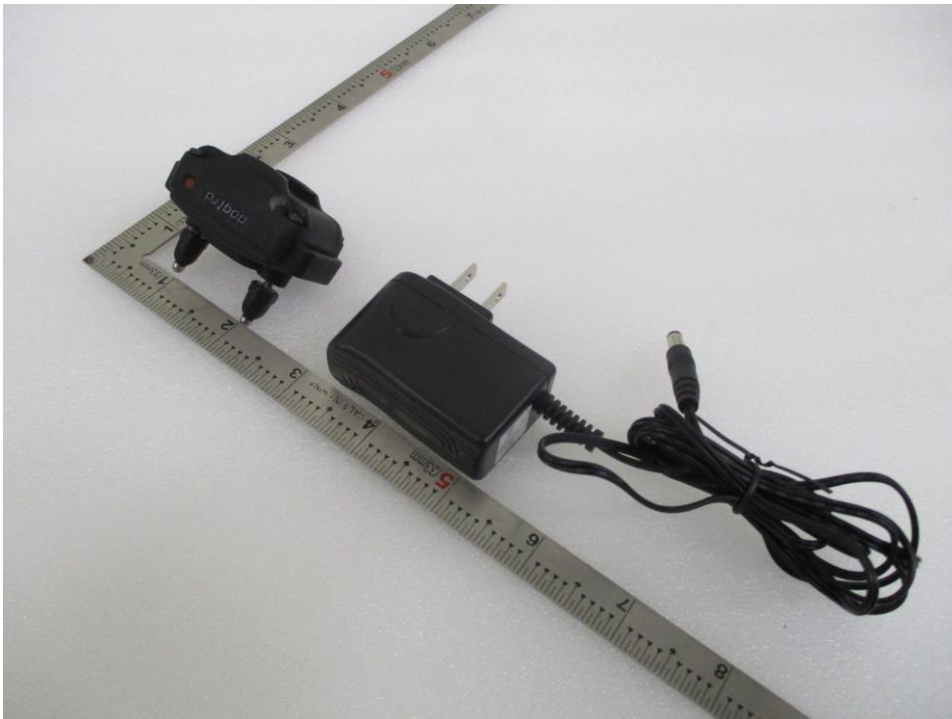
Date: 25.JUL.2021 13:30:54

# EUT

Front



Rear



Inside



Port 1



Port 2



**Blank**

Label location



Label

