Electromagnetic Compatibility

Test Report

Product Name ： Defence Touch Monitor

Model No. ： TDM-P215WH5TAGF-RND2

Test Item ： MIL-STD-461G (CE101, CE102, RE101, RE102)

Applicant ： Elgens Co., Ltd.

Address ： 7F.-6, No. 492, Bannan Rd., Zhonghe Dist., New Taipei City, Taiwan R.O.C.

Date of Receipt ： 2025/04/09

Issued Date ： 2025/07/08

Report No. ： 2540232R-E3072800005-2

Report Version ： V1.0

Testing Laboratory
3024

Report Statement

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF or any agency of the government.

Issued Date : 2025/07/08

Report No. : 2540232R-E3072800005-2

Product Name	:	Defence Touch Monitor
Applicant	:	Elgens Co., Ltd.
Address	:	7F.-6, No. 492, Bannan Rd., Zhonghe Dist., New Taipei City, Taiwan R.O.C.
Model No.	:	TDM-P215WH5TAGF-RND2
EUT Voltage	:	DC 28V
Applicable Standard	:	MIL-STD-461G
Test Result	:	Pass
Laboratory Name	:	DEKRA Testing and Certification Co., Ltd. Hsinchu EMC Laboratory
Address	:	No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 310, Taiwan, R.O.C. TEL: +886-3-582-8001 / FAX: +886-3-582-8958

Documented By : Amber Lin

(Amber Lin / Engineering Adm.)

Approved By : Allen Syu

(Allen Syu / Manager)

Revision History

Report No.	Version	Description	Issued Date
2540232R-E3072800005-2	V1.0	Initial issue of report	2025/07/08

Laboratory Information

We, **DEKRA Testing and Certification Co., Ltd.**, are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted (audited or listed) by the following related bodies in compliance with ISO 17025 and specified testing scopes:

Taiwan R.O.C.	**:**	**BSMI, NCC, TAF**
USA	**:**	**FCC**
Japan	**:**	**VCCI**

The address and introduction of DEKRA Testing and Certification Co., Ltd. laboratories can be founded in our Web site : http://www.dekra.com.tw

If you have any comments, Please don't hesitate to contact us. Our test sites as below:

Test Laboratory	DEKRA Testing and Certification Co., Ltd.
Address	1. No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C. 2. No.372, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C.
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1. General Information

1.1. EUT Description

Product Name	Defence Touch Monitor
Model No.	TDM-P215WH5TAGF-RND2

1.2. Mode of Operation

The test mode defined by client and defined as:

Operation Mode	Details
Mode 1	Normal operation

Performed Item	Test applies (Y/N)	Operating Mode(s) to be used during verification
CE101 conducted emissions, audio frequency currents, power leads	Y	Mode 1
CE102 conducted emissions, radio frequency potential, power leads	Y	Mode 1
RE101 radiated emissions, magnetic field	Y	Mode 1
RE102 radiated emissions, electric field	Y	Mode 1

2. Technical Test

2.1. Summary of Test Result

Performed Item	Limit/ Level	Test Result
CE101 conducted emissions, audio frequency currents, power leads	CE101-4. CURVE #2 ≤28V	Pass
CE102 conducted emissions, radio frequency potential, power leads	CE102-1. BASIC CURVE	Pass
RE101 radiated emissions, magnetic field	RE101-2. All Navy applications.	Pass
RE102 radiated emissions, electric field	RE102-4. Navy Fixed & Air Force	Pass

Decision rule

Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

2.2. Test Environment

Performed Item	Items	Value	Actual
CE101 conducted emissions, audio frequency currents, power leads	Temperature (°C)	18-28	23
CE102 conducted emissions, radio frequency potential, power leads	Temperature (°C)	18-28	23
RE101 radiated emissions, magnetic field	Temperature (°C)	18-28	23
RE102 radiated emissions, electric field	Temperature (°C)	18-28	23

2.3. List of Test Equipment

CE101 conducted emissions, audio frequency currents, power leads/ HC-CB07

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Current Probe	R&S	EZ-17	100667	2024/05/20	2026/05/19
EMI Test Receiver	R&S	ESR7	101562	2024/06/17	2025/06/16
V-LISN	Schwarzbeck	NNBL 8226-2	00258	2023/12/29	2025/12/28
Function generator	Agilent	33120A	MY40001963	2024/08/05	2025/08/04

CE102 conducted emissions, radio frequency potential, power leads/ HC-CB07

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
V-LISN	Schwarzbeck	NNBL 8226-2	00259	2023/12/29	2025/12/28
Signal Generator	Keysight	N5171B	MY53051466	2024/07/10	2025/07/09
Oscilloscope	Tektronix	MSO54	C034665	2025/03/05	2026/03/04
EMI Test Receiver	R&S	ESR7	101562	2024/06/17	2025/06/16
Attenuators	Mini-Circuits	BW-N20W5+	1439	N/A	N/A

RE101 radiated emissions, magnetic field/ HC-CB06

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Magnetic Field Coil	ETS-Lindgren	7604	00243888	2024/03/19	2026/03/18
EMI Test Receiver	R&S	ESR7	102313	2024/09/12	2025/09/11
V-LISN	Schwarzbeck	NNBL 8226-2	00258	2023/12/29	2025/12/28
Signal Generator	Keysight	N5171B	MY53051466	2024/07/10	2025/07/09
Digital Multimeters	Fluke	17B+	55903170WS	2025/01/17	2026/01/16

RE102 radiated emissions, electric field/ HC-CB06

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Active ROD Antenna	R&S	HFH2-Z6	100639	2024/10/16	2025/10/15
Biconical Antenna	Schwarzbeck	VHA9103B & BBA9106	08059	2023/09/22	2025/09/21
Double-Ridged Guide Antenna	ETS-Lindgren	3106B	00205051	2024/02/02	2026/02/01
Horn Antenna	Schwarzbeck	BBHA 9120D	743	2023/09/26	2025/09/25
Pre-Amplifier	EMCI	EMC1150	980396	2025/01/16	2026/01/15
Pre-Amplifier	DEKRA	AP-180C	201801237	2024/09/24	2025/09/23
EMI Test Receiver	R&S	ESR7	102055	2024/09/04	2025/09/03
PSA Series Spectrum analyzer	Agilent	E4440A	MY46187335	2024/10/22	2025/10/21
V-LISN	Schwarzbeck	NNBL 8226-2	00258	2023/12/29	2025/12/28
Signal Generator	Keysight	N5171B	MY53051466	2024/07/10	2025/07/09

3. CE101 conducted emissions, audio frequency currents, power leads

3.1. Test Specification

According to EMC Standard: MIL-STD-461G (Section 5.4)

3.2. Test Configuration

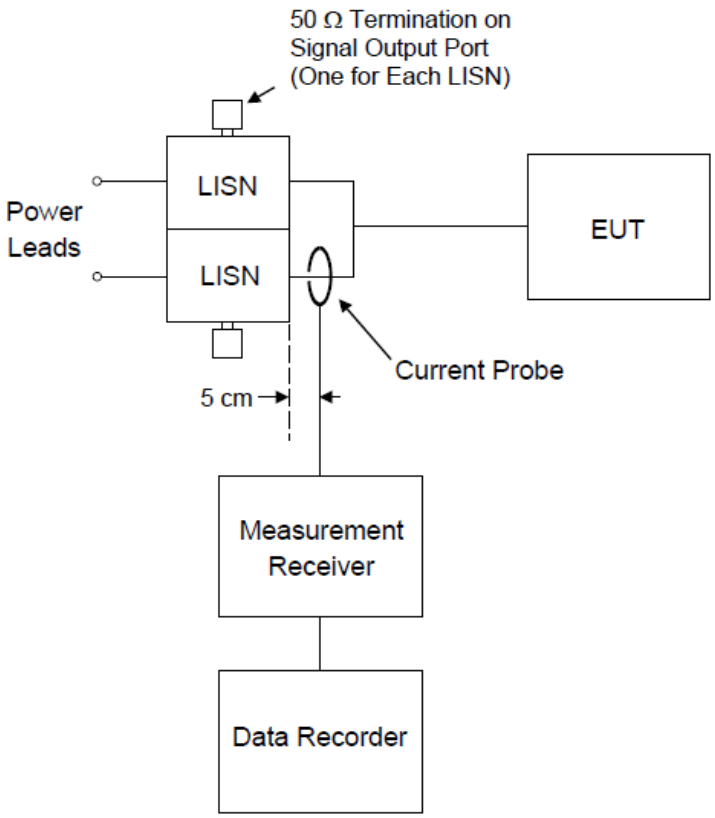


Figure CE101-6. Measurement setup.

3.3. Test Limits

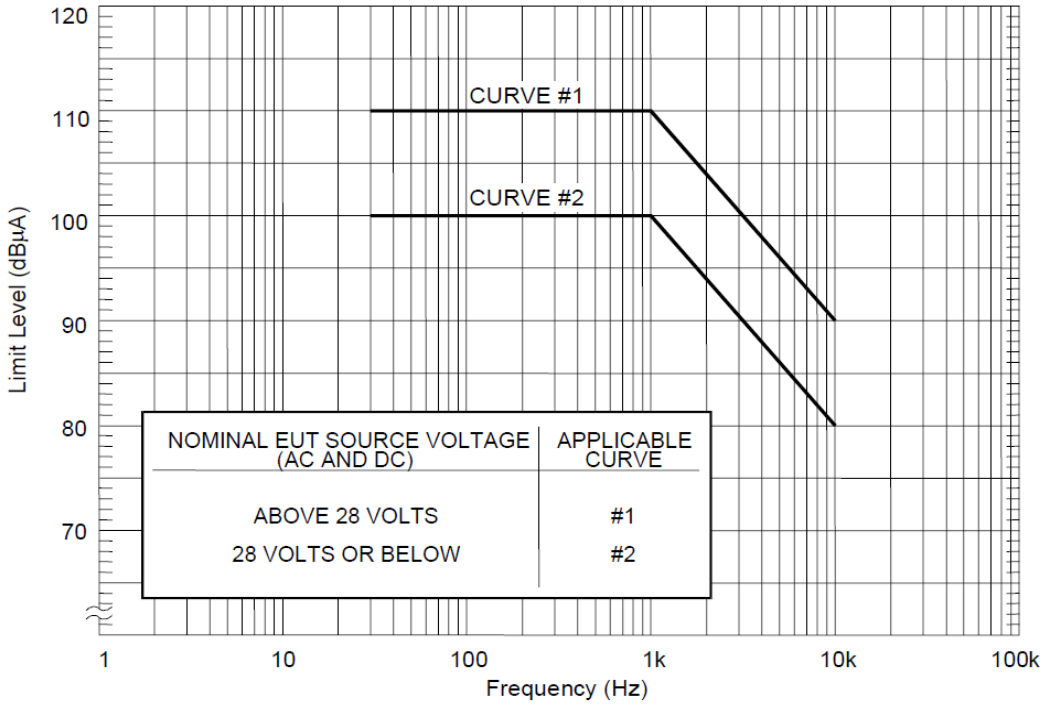


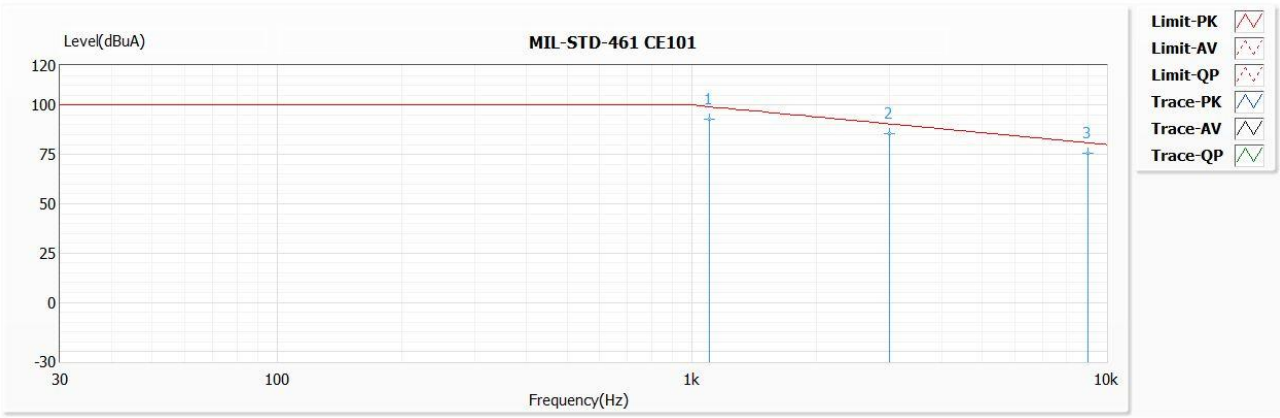
Figure CE101-4. CE101 limit for Navy ASW aircraft and Army aircraft (including flight line) applications.

3.4. Test Procedure

a. Turn on the measurement equipment and allow a sufficient time for stabilization.
b. Calibration. Perform the measurement system check using the measurement system check setup.
c. Turn on the EUT and allow a sufficient time for stabilization.
d. EUT testing. Perform emission data scans using the measurement setup.

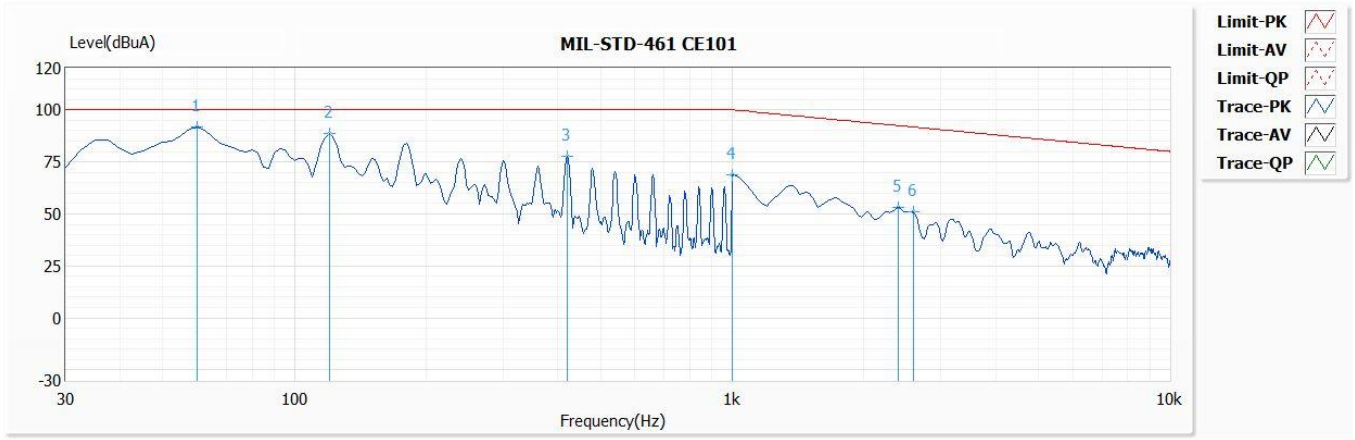
3.5. System calibration level

Limit	MIL-STD-461_CE101_DC,Item=Version D/E/F/G,Limit Class=CE101-4_<=28V, CURVE #2
Note	SYSTEM CHECK



3.6. Test Result

Model No	TDM-P215WH5TAGF-RND2	Site	HC-CB07
Test Voltage	DC 28V	Test Date	2025/6/6
Test Mode	Mode 1: Normal operation	Engineer	Mark Lu
Polarity	(+)	Temperature (℃)	23
Section	N/A	Humidity (%RH)	56
Limit	MIL-STD-461_CE101_DC,Item=Version D/E/F/G,Limit Class=CE101-4_<=28V, CURVE #2		
Note			



No	Frequency (Hz)	Emission Level (dBuA)	Limit (dBuA)	Margin (dB)	Reading Level (dBuA)	Correct Factor (dB)	Detector Type
* 1	60.000	91.57	100.00	-8.43	-8.76	100.33	PK
2	120.000	88.57	100.00	-11.43	-7.89	96.46	PK
3	420.000	77.54	100.00	-22.46	-10.41	87.95	PK
4	1.000k	68.91	100.00	-31.09	-11.83	80.74	PK
5	2.395k	52.84	92.41	-39.57	-21.23	74.07	PK
6	2.600k	50.87	91.70	-40.83	-22.68	73.55	PK

Remark:

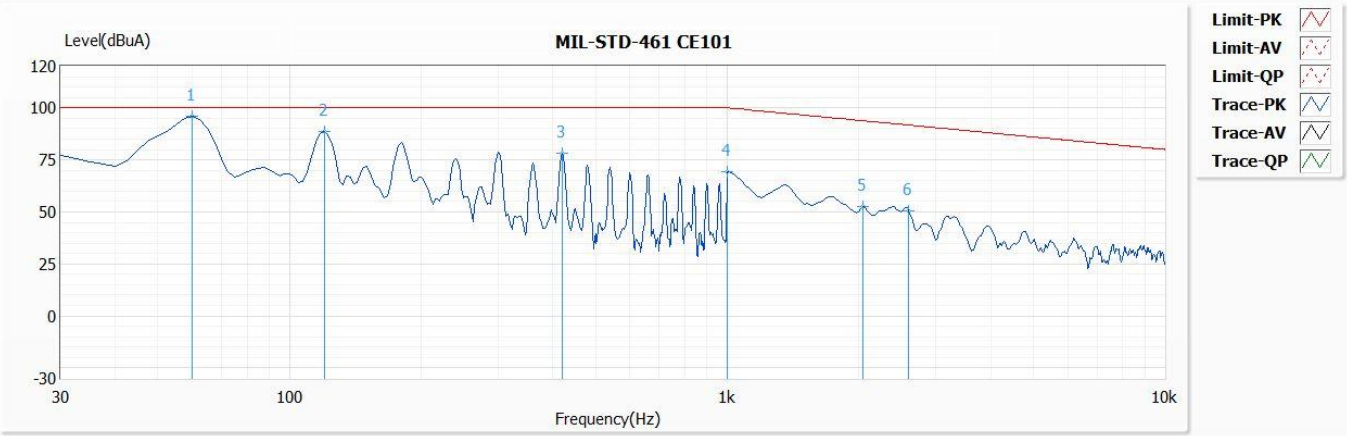
1. "*" means this data is the worst emission level; "!" means this data is over limit.

2. “PK” means Peak detector.

3. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).

4. Margin= Emission Level- Limit.

Model No	TDM-P215WH5TAGF-RND2	Site	HC-CB07
Test Voltage	DC 28V	Test Date	2025/6/6
Test Mode	Mode 1: Normal operation	Engineer	Mark Lu
Polarity	(-)	Temperature (℃)	23
Section	N/A	Humidity (%RH)	56
Limit	MIL-STD-461_CE101_DC,Item=Version D/E/F/G,Limit Class=CE101-4_<=28V, CURVE #2		
Note			



No	Frequency (Hz)	Emission Level (dBuA)	Limit (dBuA)	Margin (dB)	Reading Level (dBuA)	Correct Factor (dB)	Detector Type
* 1	60.000	96.15	100.00	-3.85	-4.18	100.33	PK
2	120.000	88.55	100.00	-11.45	-7.91	96.46	PK
3	420.000	78.22	100.00	-21.78	-9.73	87.95	PK
4	1.000k	69.24	100.00	-30.76	-11.50	80.74	PK
5	2.045k	52.43	93.79	-41.36	-22.53	74.96	PK
6	2.600k	50.68	91.70	-41.02	-22.87	73.55	PK

Remark:

1. "*" means this data is the worst emission level; "!" means this data is over limit.

2. “PK” means Peak detector.

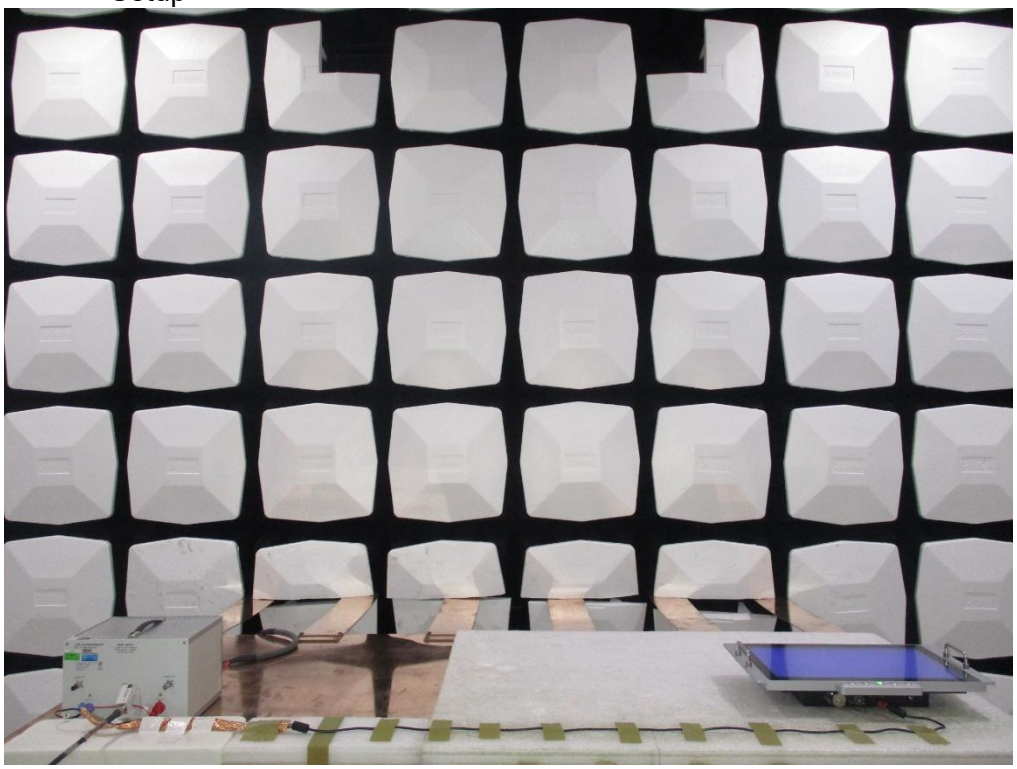
3. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).

4. Margin= Emission Level- Limit.

3.7. Test Photograph

Test Mode ： Mode 1: Normal operation

Description： CE101 conducted emissions, audio frequency currents, power leads_ Test Setup



Test Mode ： Mode 1: Normal operation

Description： CE101 conducted emissions, audio frequency currents, power leads_ Test Setup

4. CE102 conducted emissions, radio frequency potential, power leads

4.1. Test Specification

According to EMC Standard: MIL-STD-461G (Section 5.5).

4.2. Test Configuration

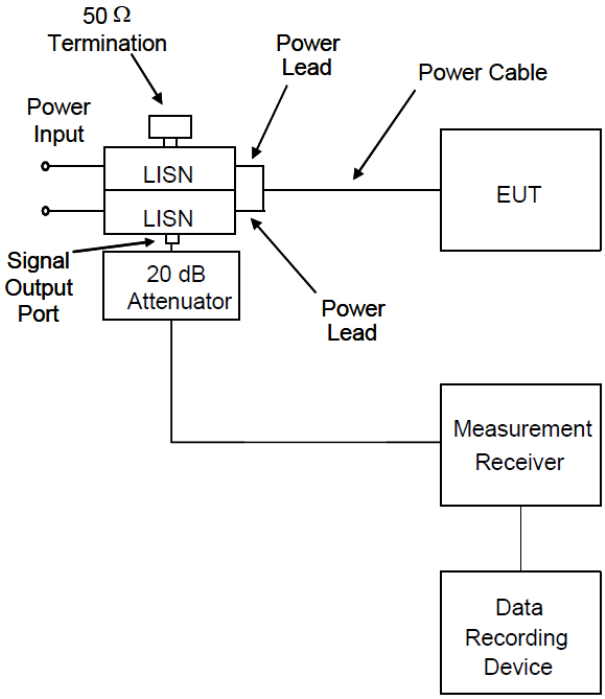


Figure CE102-3. Measurement setup.

4.3. Test Limits

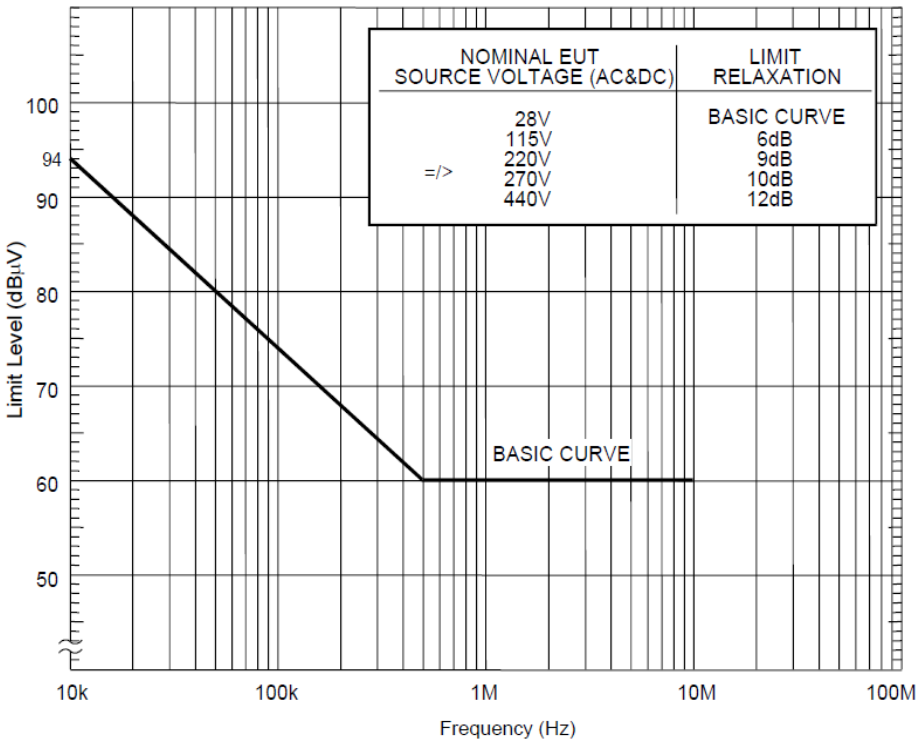


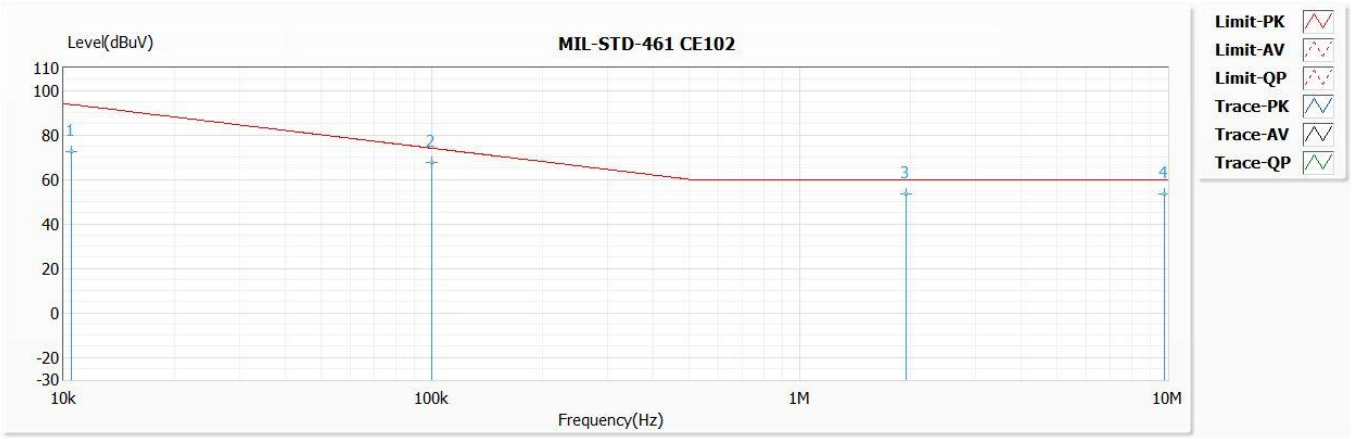
Figure CE102-1. CE102 limit (EUT power leads, AC and DC) for all applications.

4.4. Test Procedure

a. Turn on the measurement equipment and allow a sufficient time for stabilization.
b. Calibration. Perform the measurement system check using the measurement system check setup.
c. Turn on the EUT and allow a sufficient time for stabilization.
d. EUT testing. Perform emission data scans using the measurement setup.

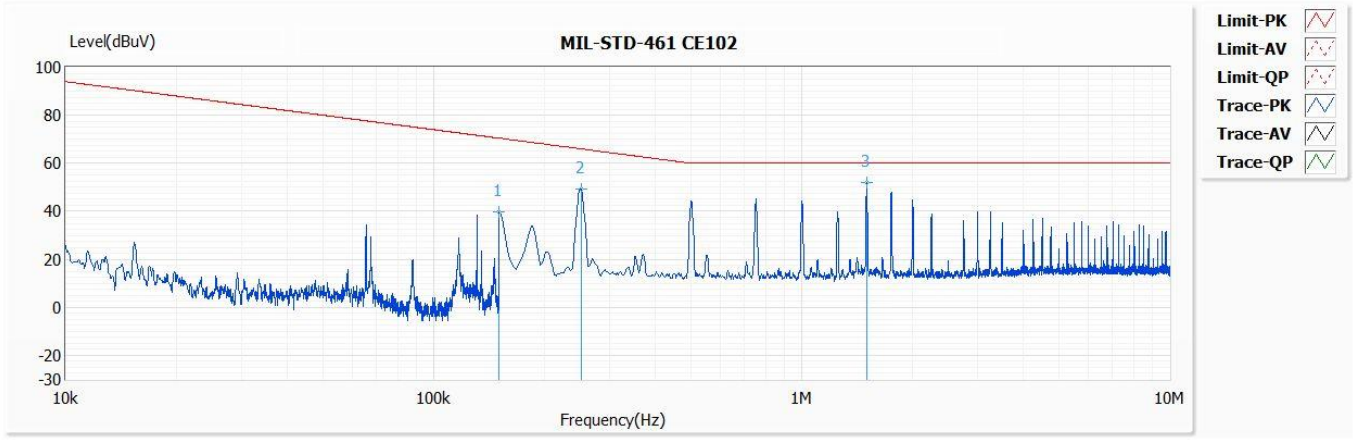
4.5. System calibration level

Limit	MIL-STD-461_CE102_DC,Item=Version D/E/F/G,Limit Class=CE102-1_BASIC CURVE
Note	SYSTEM CHECK



4.6. Test Result

Model No	TDM-P215WH5TAGF-RND2	Site	HC-CB07
Test Voltage	DC 28V	Test Date	2025/6/6
Test Mode	Mode 1: Normal operation	Engineer	Mark Lu
Polarity	(+)	Temperature (℃)	23
Section	N/A	Humidity (%RH)	56
Limit	MIL-STD-461_CE102_DC,Item=Version D/E/F/G,Limit Class=CE102-1_BASIC CURVE		
Note			



No	Frequency (Hz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	150.000k	39.62	70.47	-30.85	19.31	20.31	PK
2	251.250k	49.48	65.98	-16.50	29.21	20.27	PK
* 3	1.504M	52.08	60.00	-7.92	31.75	20.33	PK

Remark:

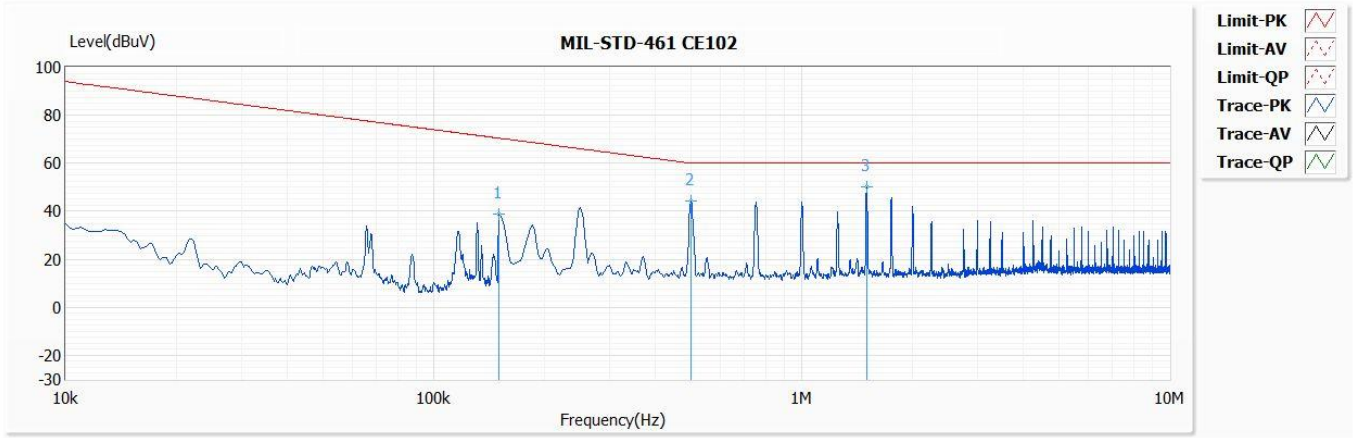
1. "*" means this data is the worst emission level; "!" means this data is over limit.

2. “PK” means Peak detector.

3. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).

4. Margin= Emission Level- Limit.

Model No	TDM-P215WH5TAGF-RND2	Site	HC-CB07
Test Voltage	DC 28V	Test Date	2025/6/6
Test Mode	Mode 1: Normal operation	Engineer	Mark Lu
Polarity	(-)	Temperature (℃)	23
Section	N/A	Humidity (%RH)	56
Limit	MIL-STD-461_CE102_DC,Item=Version D/E/F/G,Limit Class=CE102-1_BASIC CURVE		
Note			



No	Frequency (Hz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	150.000k	38.88	70.47	-31.59	18.56	20.32	PK
2	500.000k	44.10	60.00	-15.90	23.82	20.28	PK
* 3	1.503M	50.34	60.00	-9.66	30.00	20.34	PK

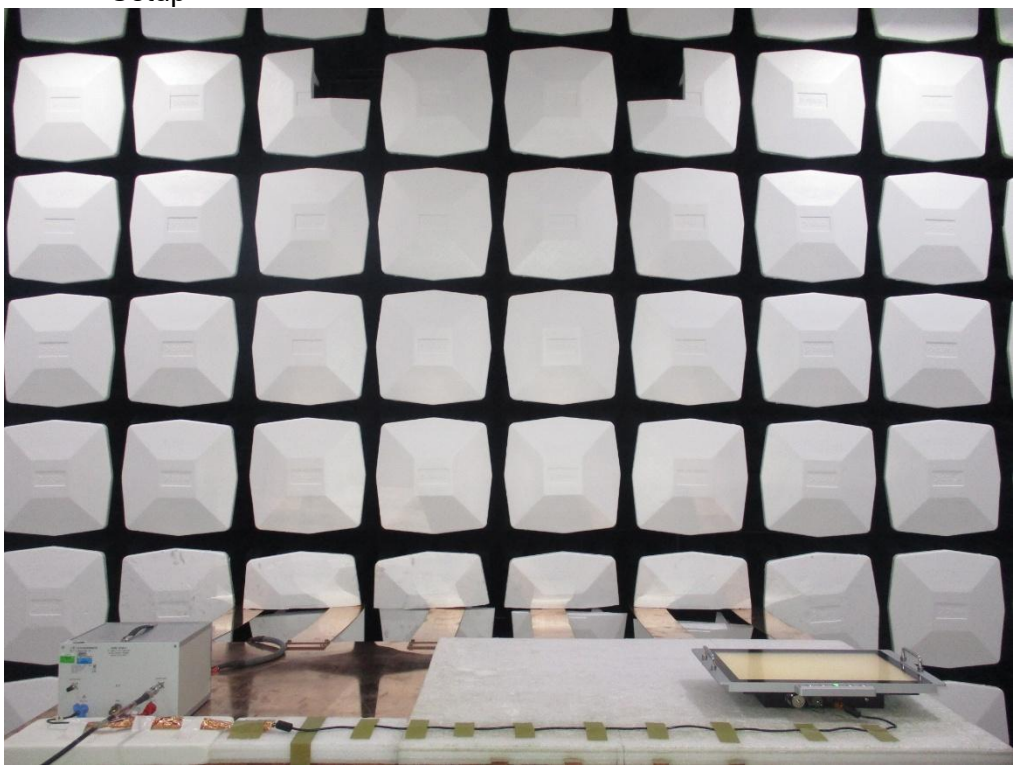
Remark:

1. "*" means this data is the worst emission level; "!" means this data is over limit.
2. “PK” means Peak detector.
3. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).
4. Margin= Emission Level- Limit.

4.7. Test Photograph

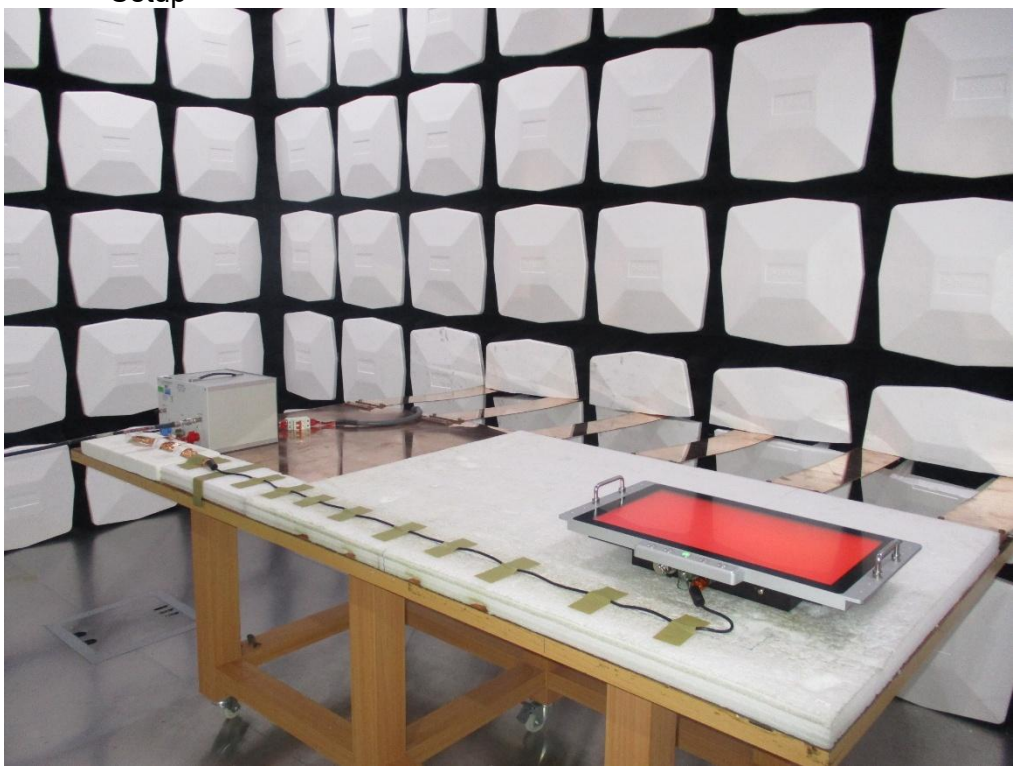
Test Mode ： Mode 1: Normal operation

Description： CE102 conducted emissions, radio frequency potential, power leads_ Test Setup



Test Mode ： Mode 1: Normal operation

Description： CE102 conducted emissions, radio frequency potential, power leads_ Test Setup



5. RE101 radiated emissions, magnetic field

5.1. Test Specification

According to EMC Standard: MIL-STD-461G (Section 5.16)

5.2. Test Configuration

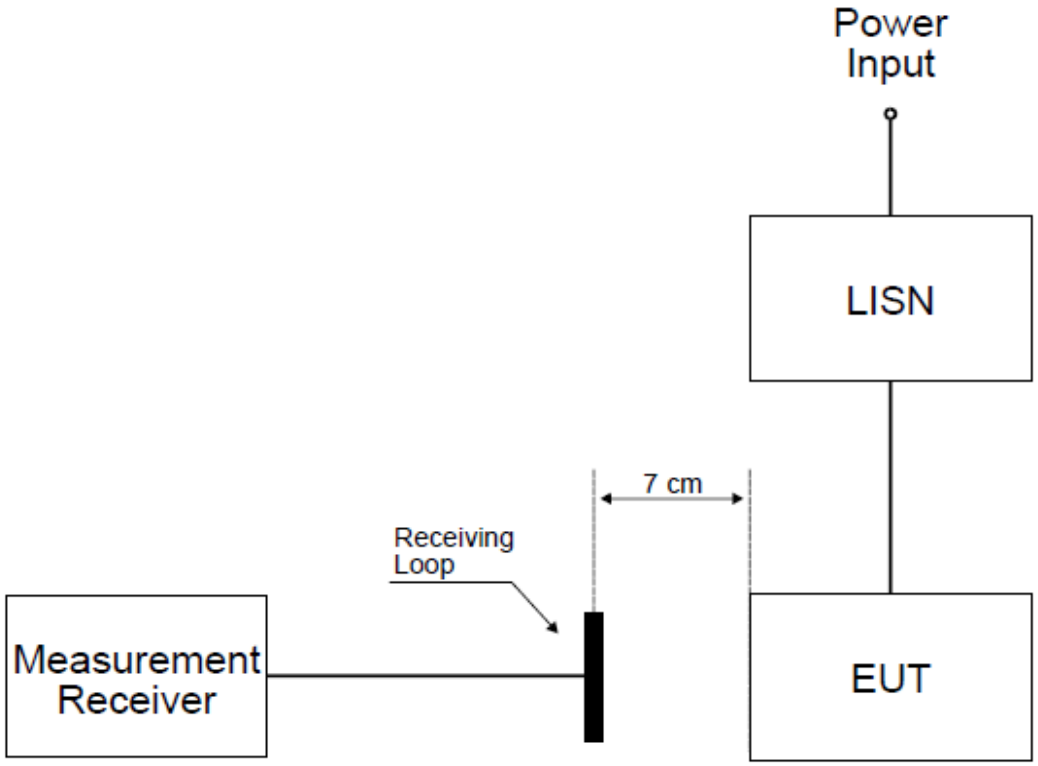


Figure RE101-4. Basic test setup.

5.3. Test Limits

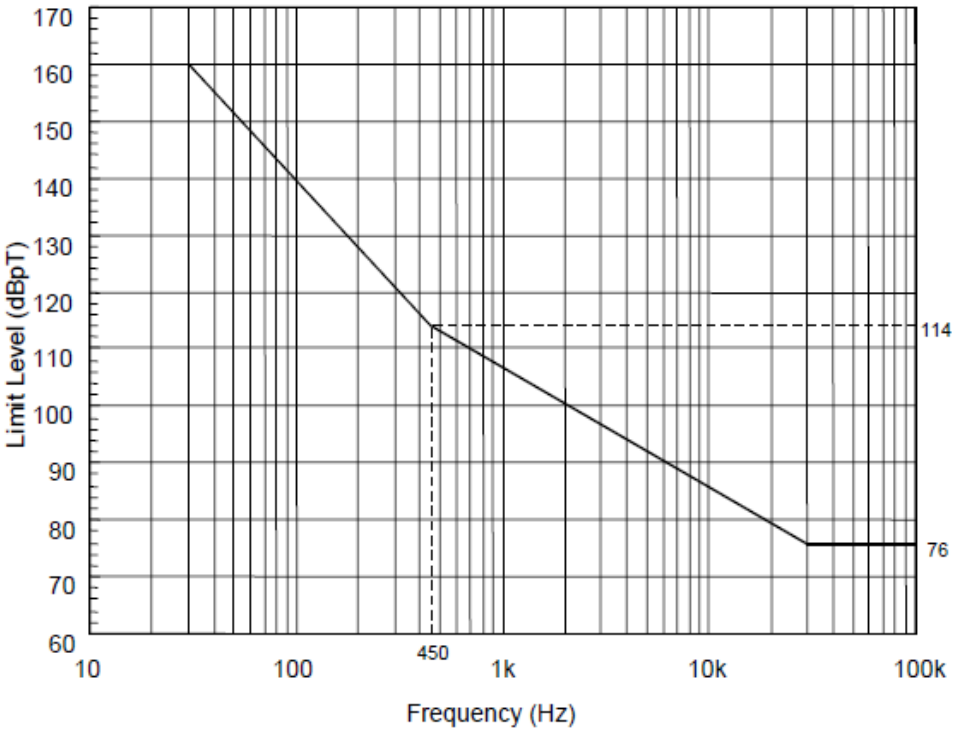


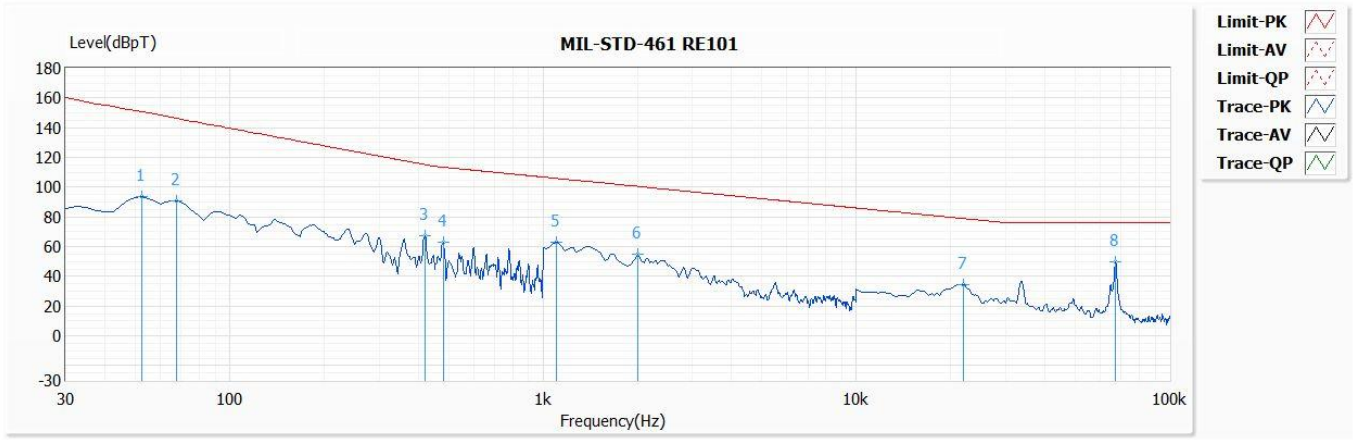
Figure RE101-2. RE101 limit for all Navy applications.

5.4. Test Procedure

a. Turn on the measurement equipment and allow a sufficient time for stabilization.
b. Calibration. Perform the measurement system check using the measurement system check setup.
c. Turn on the EUT and allow a sufficient time for stabilization.
d. EUT testing. Perform emission data scans using the measurement setup.

5.5. Test Result

Model No	TDM-P215WH5TAGF-RND2	Site	HC-CB06
Test Voltage	DC 28V	Test Date	2025/6/10
Test Mode	Mode 1: Normal operation	Engineer	Jerry Jhan
Polarity		Temperature (℃)	23
Section	Front	Humidity (%RH)	56
Limit	MIL-STD-461_RE101,Item=Version E/F/G,Limit Class=RE101-2_all Navy		
Note			



No	Frequency (Hz)	Emission Level (dBpT)	Limit (dBpT)	Margin (dB)	Reading Level (dBpT)	Correct Factor (dB)	Detector Type
1	52.500	93.30	150.49	-57.19	14.23	79.07	PK
2	67.500	90.73	146.23	-55.50	13.84	76.89	PK
3	420.000	67.62	115.17	-47.55	6.23	61.39	PK
4	480.000	63.27	113.42	-50.15	3.20	60.07	PK
5	1.100k	62.96	105.91	-42.95	9.48	53.48	PK
6	2.000k	55.11	100.51	-45.40	5.63	49.48	PK
7	22.000k	34.44	78.81	-44.37	3.41	31.03	PK
* 8	67.250k	49.50	76.00	-26.50	23.86	25.64	PK

Remark:

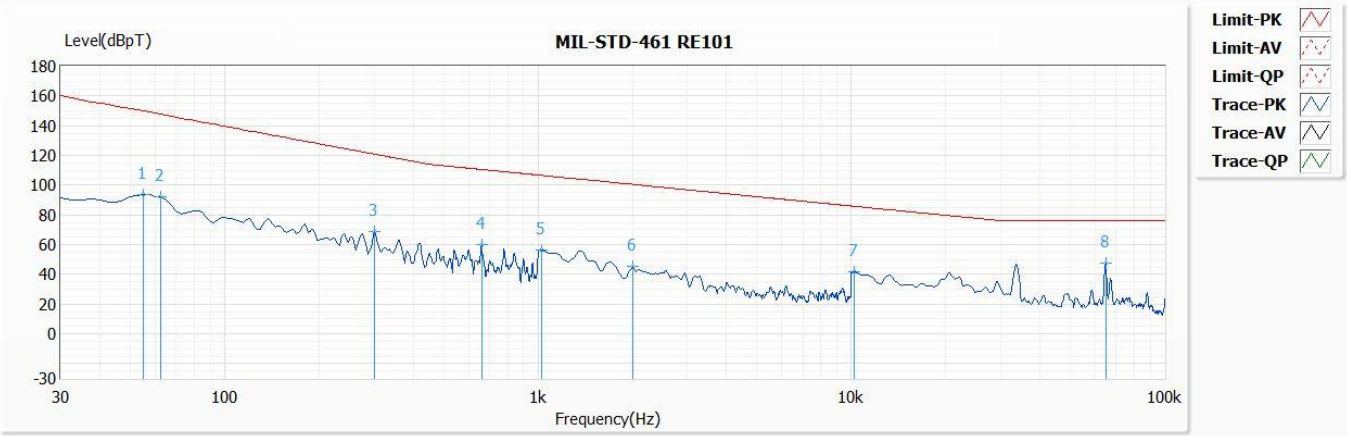
1. "*" means this data is the worst emission level; "!" means this data is over limit.

2. “PK” means Peak detector.

3. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).

4. Margin= Emission Level- Limit.

Model No	TDM-P215WH5TAGF-RND2	Site	HC-CB06
Test Voltage	DC 28V	Test Date	2025/6/10
Test Mode	Mode 1: Normal operation	Engineer	Jerry Jhan
Polarity		Temperature (℃)	23
Section	Left	Humidity (%RH)	56
Limit	MIL-STD-461_RE101,Item=Version E/F/G,Limit Class=RE101-2_all Navy		
Note			



No	Frequency (Hz)	Emission Level (dBpT)	Limit (dBpT)	Margin (dB)	Reading Level (dBpT)	Correct Factor (dB)	Detector Type
1	55.000	93.85	149.70	-55.85	15.14	78.71	PK
2	62.500	92.31	147.53	-55.22	14.69	77.62	PK
3	300.000	69.06	120.89	-51.83	5.03	64.03	PK
4	660.000	59.82	110.54	-50.72	2.43	57.39	PK
5	1.025k	56.30	106.55	-50.25	2.48	53.82	PK
6	2.000k	45.72	100.51	-54.79	-3.76	49.48	PK
7	10.250k	41.56	85.72	-44.16	6.42	35.14	PK
* 8	64.750k	47.73	76.00	-28.27	22.01	25.72	PK

Remark:

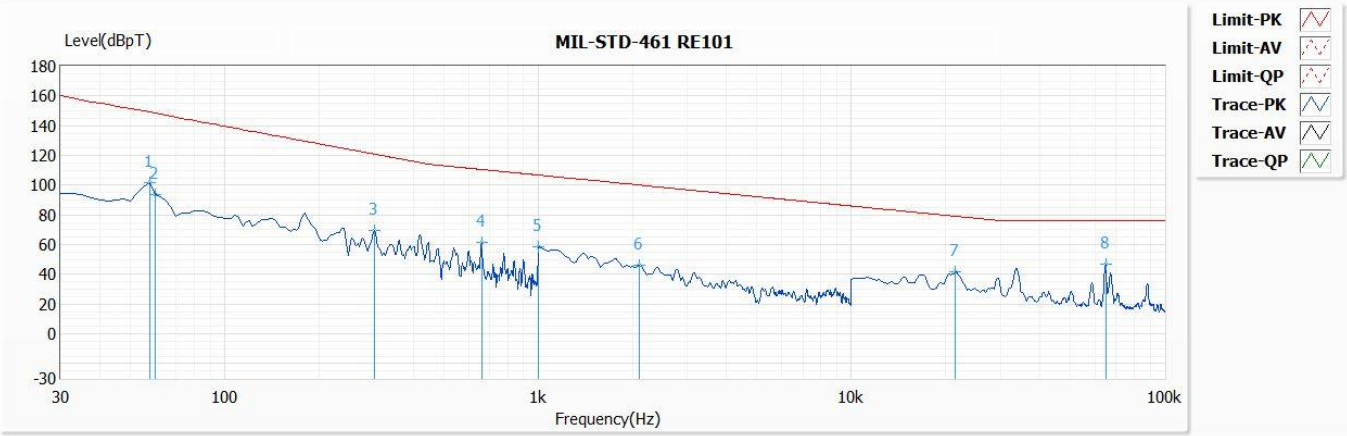
1. "*" means this data is the worst emission level; "!" means this data is over limit.

2. “PK” means Peak detector.

3. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).

4. Margin= Emission Level- Limit.

Model No	TDM-P215WH5TAGF-RND2	Site	HC-CB06
Test Voltage	DC 28V	Test Date	2025/6/10
Test Mode	Mode 1: Normal operation	Engineer	Jerry Jhan
Polarity		Temperature (℃)	23
Section	Right	Humidity (%RH)	56
Limit	MIL-STD-461_RE101,Item=Version E/F/G,Limit Class=RE101-2_all Navy		
Note			



No	Frequency (Hz)	Emission Level (dBpT)	Limit (dBpT)	Margin (dB)	Reading Level (dBpT)	Correct Factor (dB)	Detector Type
1	57.500	101.35	148.95	-47.60	23.01	78.34	PK
2	60.000	93.83	148.23	-54.40	15.85	77.98	PK
3	300.000	69.21	120.89	-51.68	5.18	64.03	PK
4	660.000	61.79	110.54	-48.75	4.40	57.39	PK
5	1.000k	58.20	106.78	-48.58	4.27	53.93	PK
6	2.100k	45.83	100.06	-54.23	-3.20	49.03	PK
7	21.500k	41.61	79.02	-37.41	10.40	31.21	PK
* 8	64.750k	46.47	76.00	-29.53	20.75	25.72	PK

Remark:

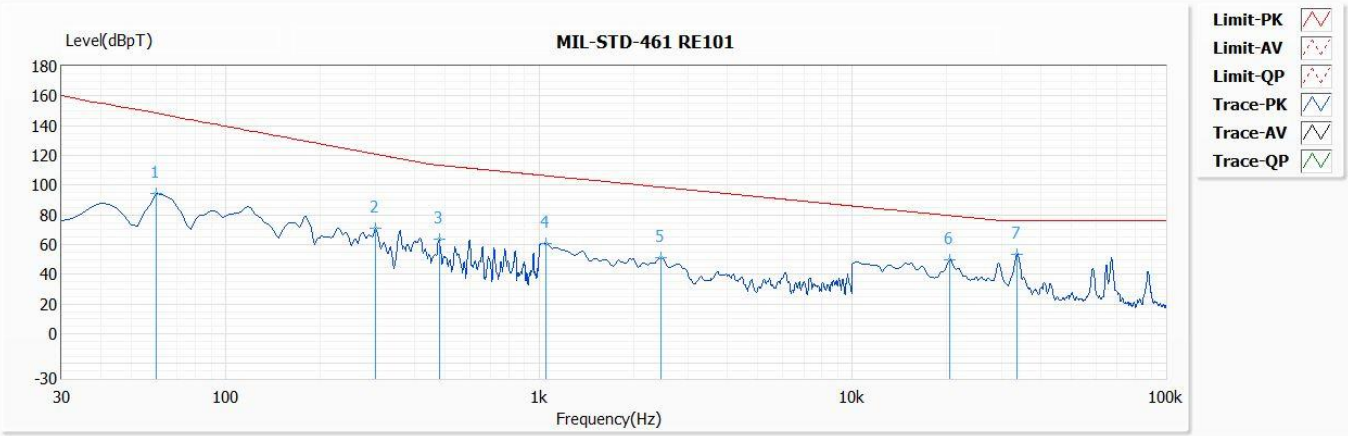
1. "*" means this data is the worst emission level; "!" means this data is over limit.

2. “PK” means Peak detector.

3. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).

4. Margin= Emission Level- Limit.

Model No	TDM-P215WH5TAGF-RND2	Site	HC-CB06
Test Voltage	DC 28V	Test Date	2025/6/10
Test Mode	Mode 1: Normal operation	Engineer	Jerry Jhan
Polarity		Temperature (℃)	23
Section	Top	Humidity (%RH)	56
Limit	MIL-STD-461_RE101,Item=Version E/F/G,Limit Class=RE101-2_all Navy		
Note			



No	Frequency (Hz)	Emission Level (dBpT)	Limit (dBpT)	Margin (dB)	Reading Level (dBpT)	Correct Factor (dB)	Detector Type
1	60.000	94.53	148.23	-53.70	16.55	77.98	PK
2	300.000	70.87	120.89	-50.02	6.84	64.03	PK
3	480.000	63.58	113.42	-49.84	3.51	60.07	PK
4	1.050k	60.56	106.34	-45.78	6.85	53.71	PK
5	2.450k	50.89	98.67	-47.78	3.41	47.48	PK
6	20.500k	50.06	79.45	-29.39	18.51	31.55	PK
* 7	33.500k	53.43	76.00	-22.57	25.54	27.89	PK

Remark:

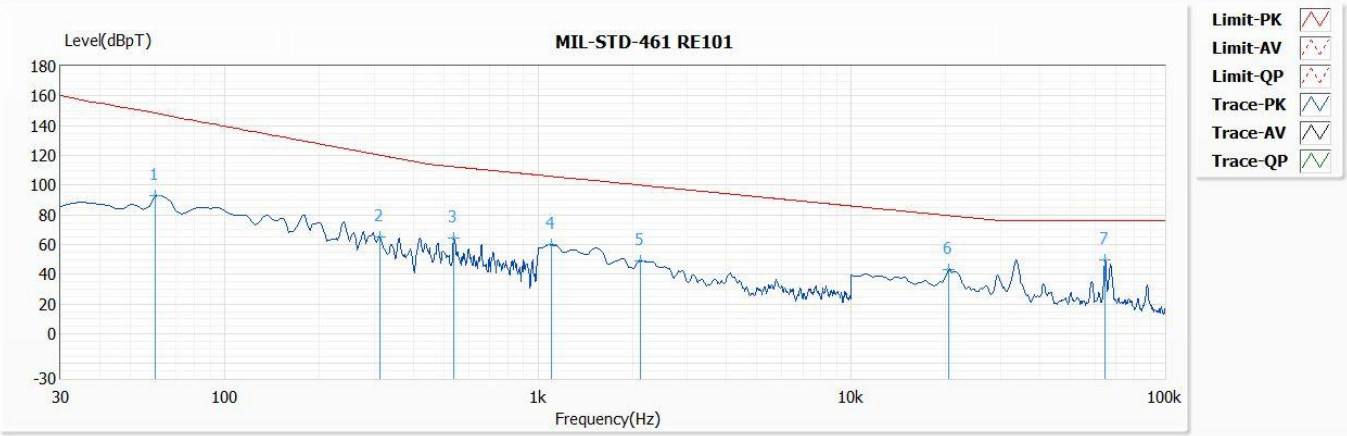
1. "*" means this data is the worst emission level; "!" means this data is over limit.

2. “PK” means Peak detector.

3. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).

4. Margin= Emission Level- Limit.

Model No	TDM-P215WH5TAGF-RND2	Site	HC-CB06
Test Voltage	DC 28V	Test Date	2025/6/10
Test Mode	Mode 1: Normal operation	Engineer	Jerry Jhan
Polarity		Temperature (℃)	23
Section	Bottom	Humidity (%RH)	56
Limit	MIL-STD-461_RE101,Item=Version E/F/G,Limit Class=RE101-2_all Navy		
Note			



No	Frequency (Hz)	Emission Level (dBpT)	Limit (dBpT)	Margin (dB)	Reading Level (dBpT)	Correct Factor (dB)	Detector Type
1	60.000	92.70	148.23	-55.53	14.72	77.98	PK
2	312.500	65.13	120.20	-55.07	1.37	63.76	PK
3	540.000	64.07	112.35	-48.28	5.00	59.07	PK
4	1.100k	59.95	105.91	-45.96	6.47	53.48	PK
5	2.125k	49.25	99.96	-50.71	0.33	48.92	PK
6	20.500k	43.01	79.45	-36.44	11.46	31.55	PK
* 7	64.500k	49.99	76.00	-26.01	24.26	25.73	PK

Remark:

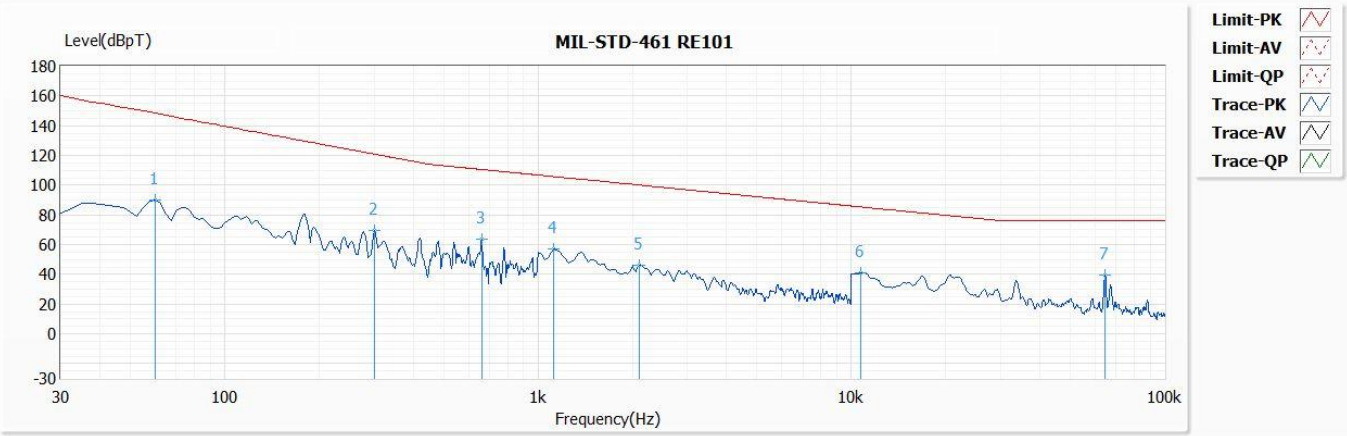
1. "*" means this data is the worst emission level; "!" means this data is over limit.

2. “PK” means Peak detector.

3. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).

4. Margin= Emission Level- Limit.

Model No	TDM-P215WH5TAGF-RND2	Site	HC-CB06
Test Voltage	DC 28V	Test Date	2025/6/10
Test Mode	Mode 1: Normal operation	Engineer	Jerry Jhan
Polarity		Temperature (℃)	23
Section	Back	Humidity (%RH)	56
Limit	MIL-STD-461_RE101,Item=Version E/F/G,Limit Class=RE101-2_all Navy		
Note			



No	Frequency (Hz)	Emission Level (dBpT)	Limit (dBpT)	Margin (dB)	Reading Level (dBpT)	Correct Factor (dB)	Detector Type
1	60.000	90.22	148.23	-58.01	12.24	77.98	PK
2	300.000	69.18	120.89	-51.71	5.15	64.03	PK
3	660.000	63.39	110.54	-47.15	6.00	57.39	PK
4	1.125k	56.99	105.71	-48.72	3.62	53.37	PK
5	2.100k	46.35	100.06	-53.71	-2.68	49.03	PK
6	10.750k	41.19	85.29	-44.10	6.22	34.97	PK
* 7	64.500k	39.63	76.00	-36.37	13.90	25.73	PK

Remark:

1. "*" means this data is the worst emission level; "!" means this data is over limit.

2. “PK” means Peak detector.

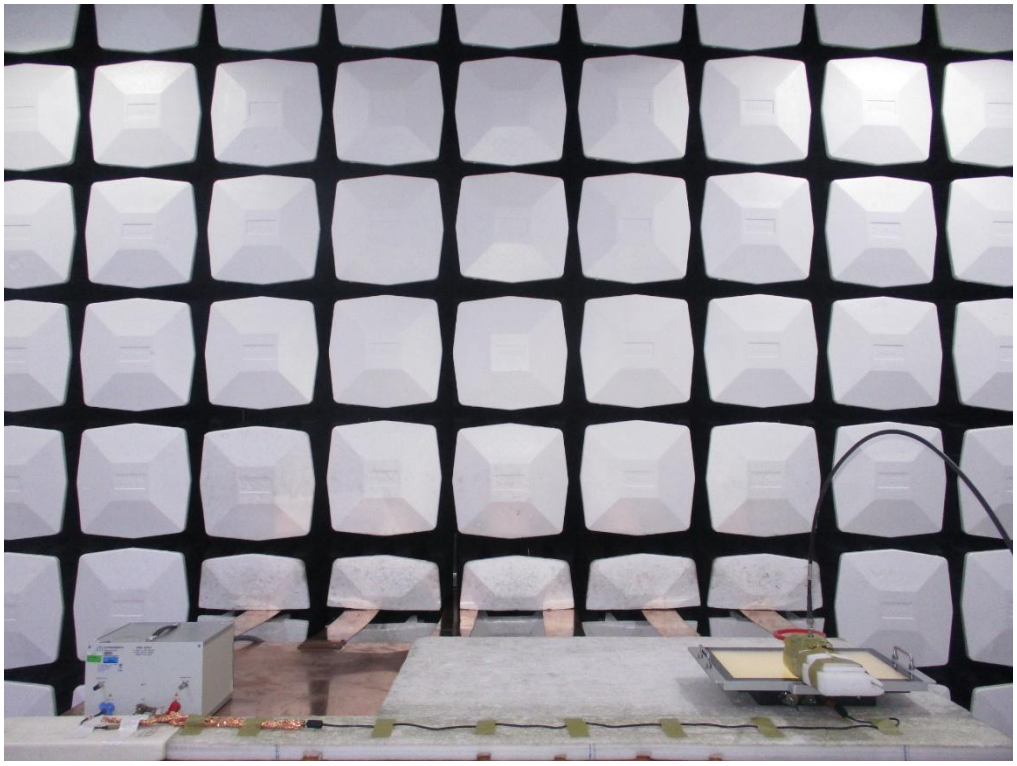
3. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).

4. Margin= Emission Level- Limit.

5.6. Test Photograph

Test Mode ： Mode 1: Normal operation

Description： RE101 radiated emissions, magnetic field _Test Setup



Test Mode ： Mode 1: Normal operation

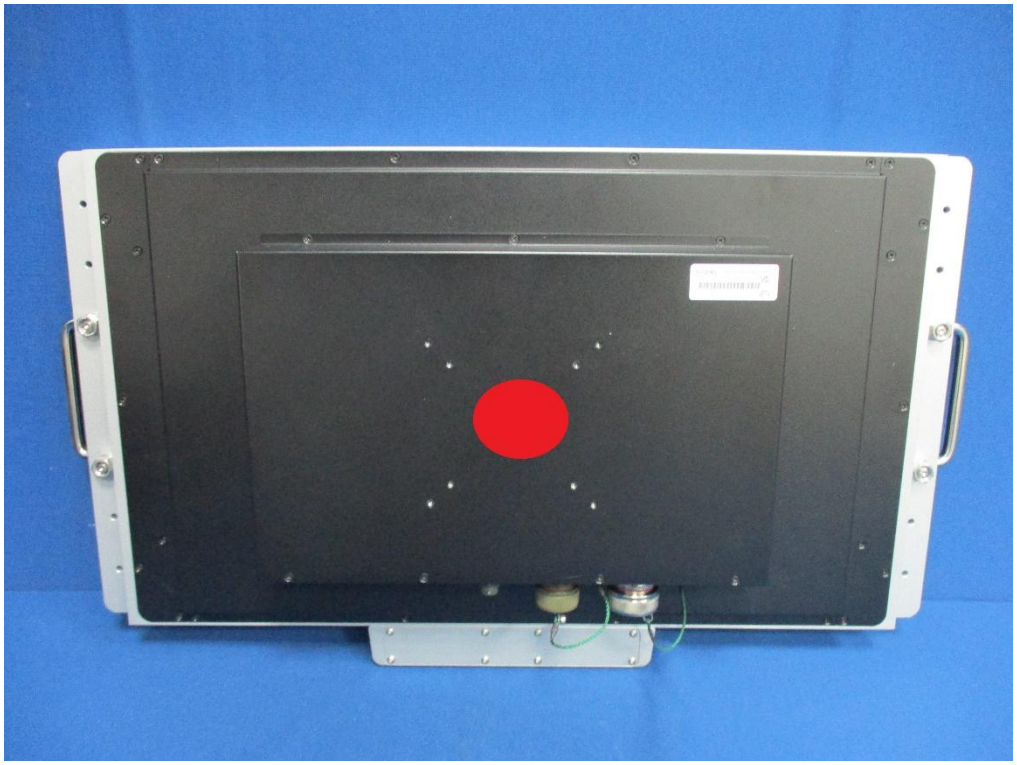
Description： RE101 radiated emissions, magnetic field _Test Setup

Test Mode ： Mode 1: Normal operation

Description： RE101 radiated emissions, magnetic field Test point_ Front

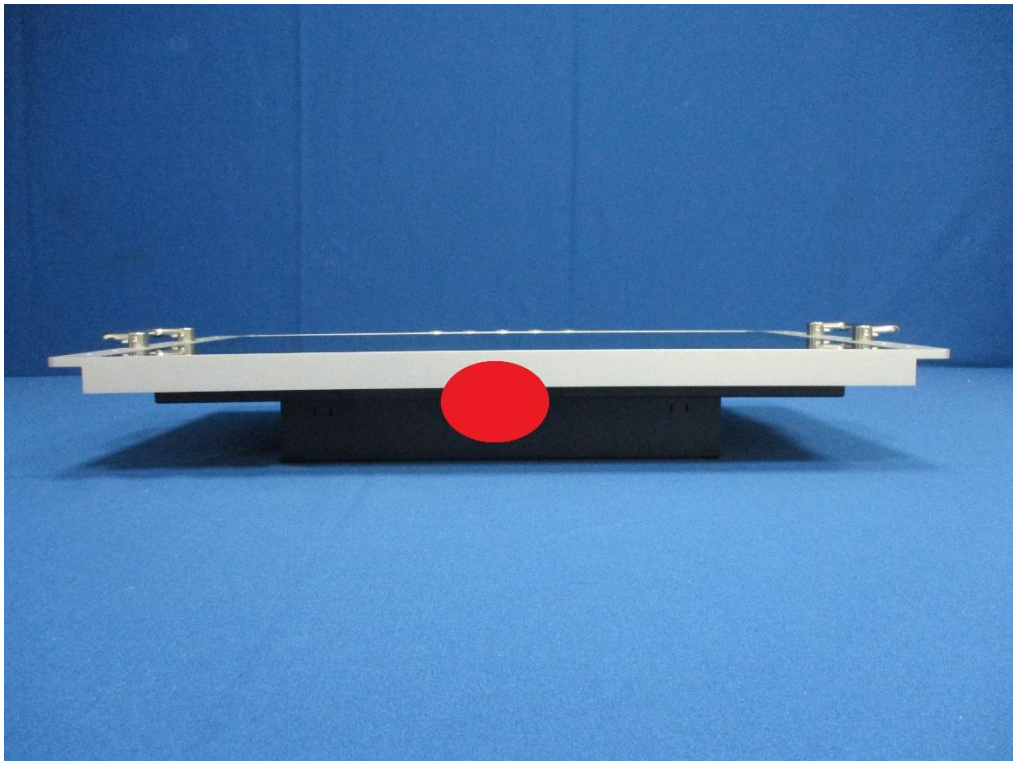
Test Mode ： Mode 1: Normal operation

Description： RE101 radiated emissions, magnetic field Test point_ Back



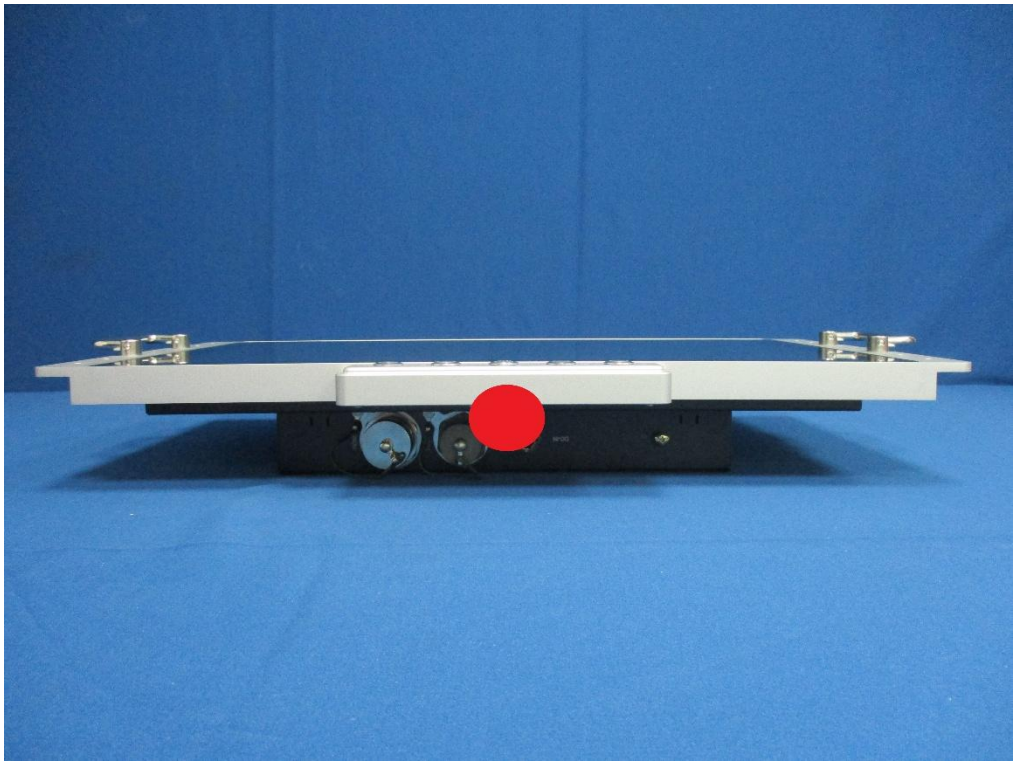
Test Mode ： Mode 1: Normal operation

Description： RE101 radiated emissions, magnetic field Test point_ Top



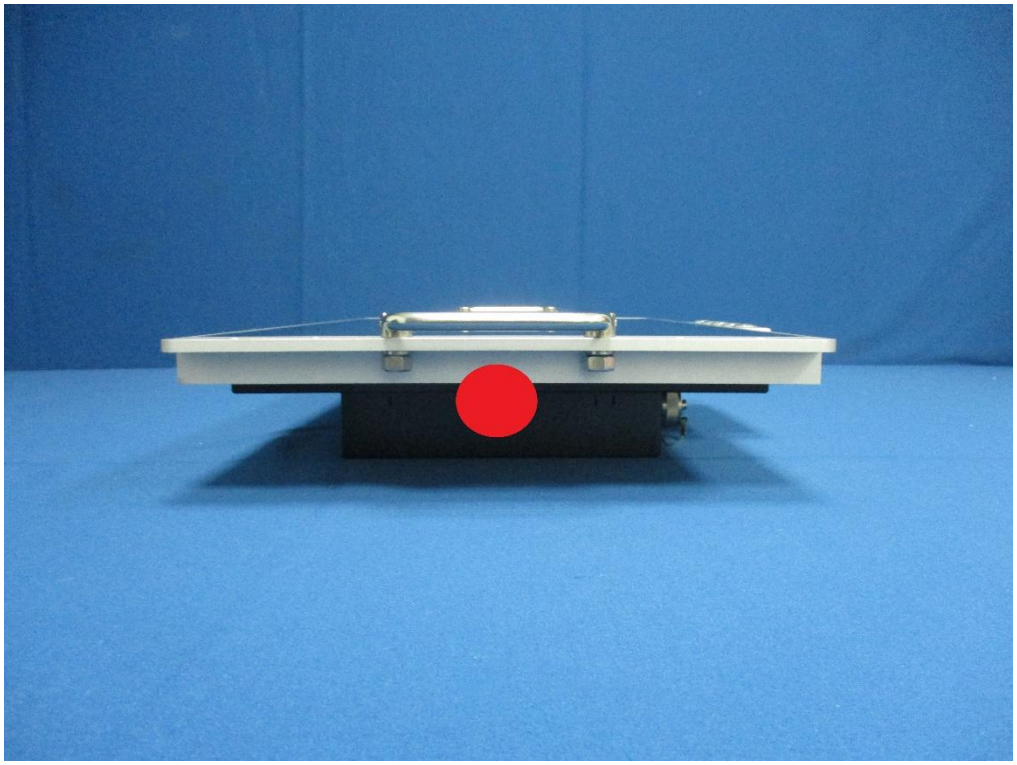
Test Mode ： Mode 1: Normal operation

Description： RE101 radiated emissions, magnetic field Test point_ Bottom



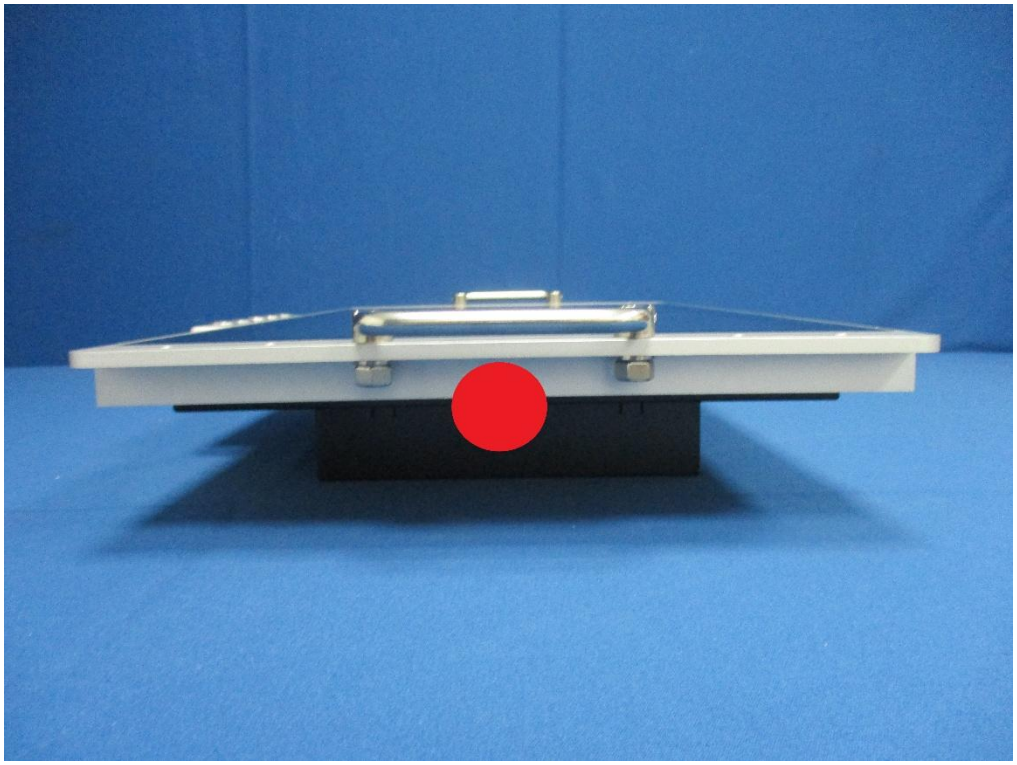
Test Mode ： Mode 1: Normal operation

Description： RE101 radiated emissions, magnetic field Test point_ Left



Test Mode ： Mode 1: Normal operation

Description： RE101 radiated emissions, magnetic field Test point_ Right



6. RE102 radiated emissions, electric field

6.1. Test Specification

According to EMC Standard: MIL-STD-461G (Section 5.18)

6.2. Test Configuration

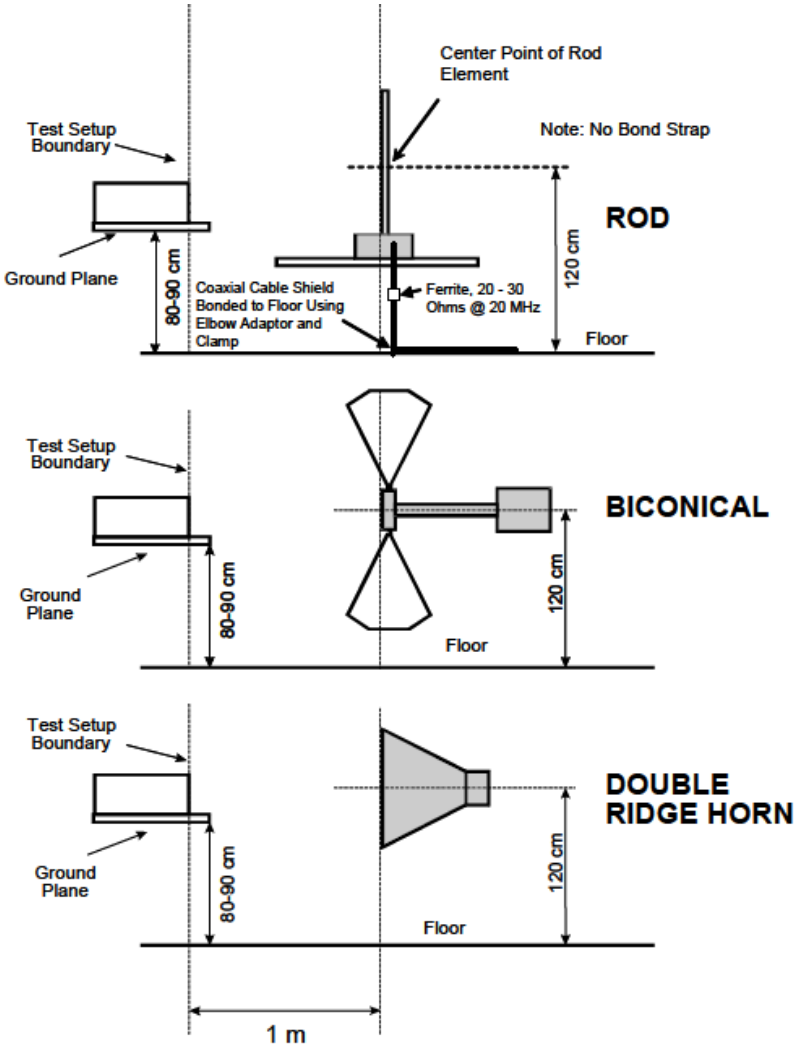


Figure RE102-6. Antenna positioning.

6.3. Test Limits

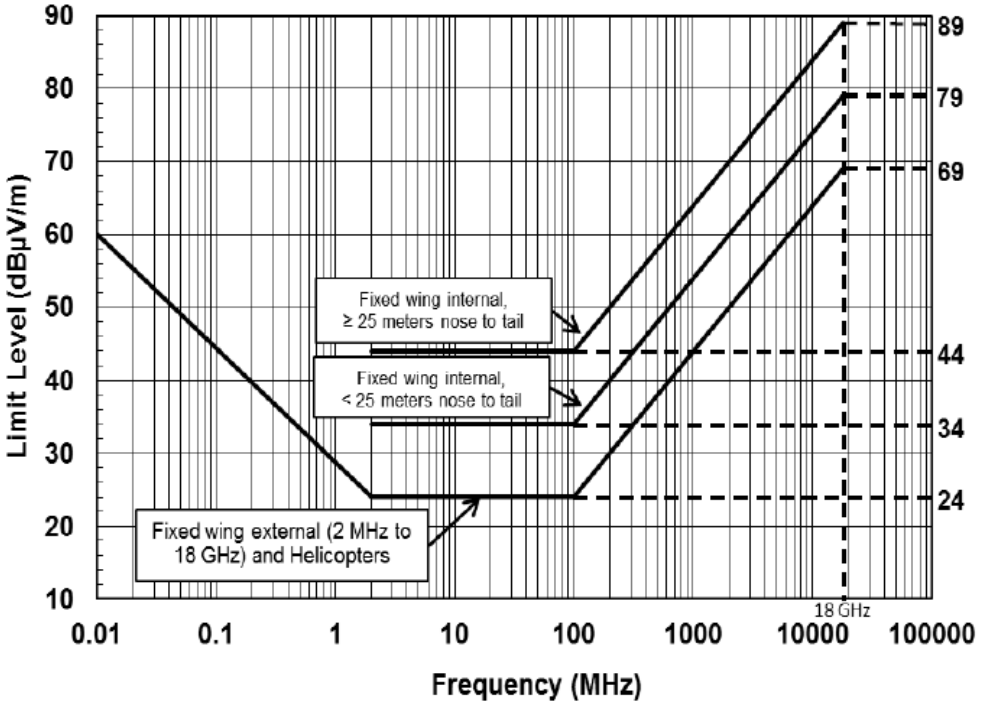


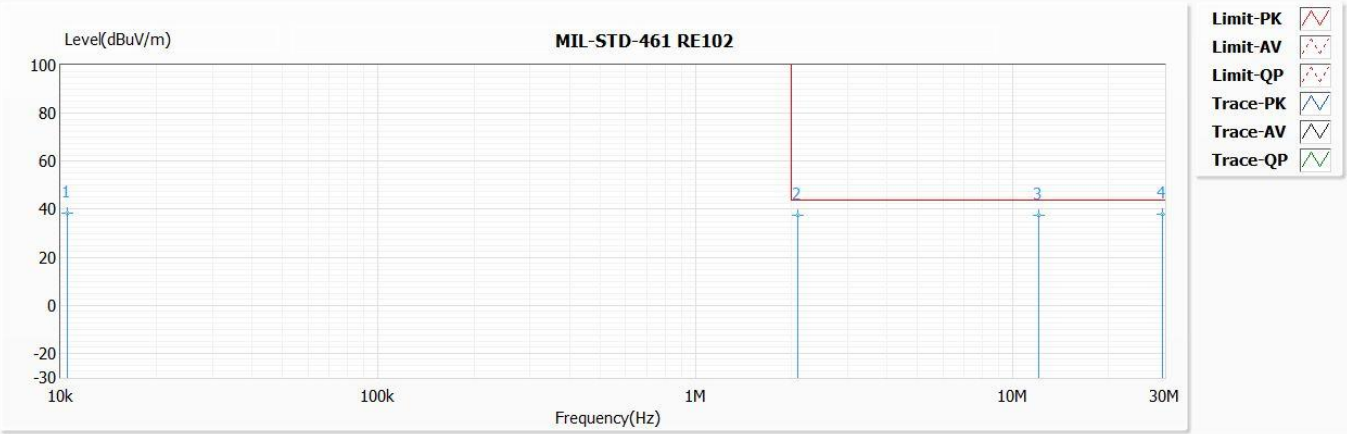
FIGURE RE102-3. RE102 limit for aircraft and space system applications

6.4. Test Procedure

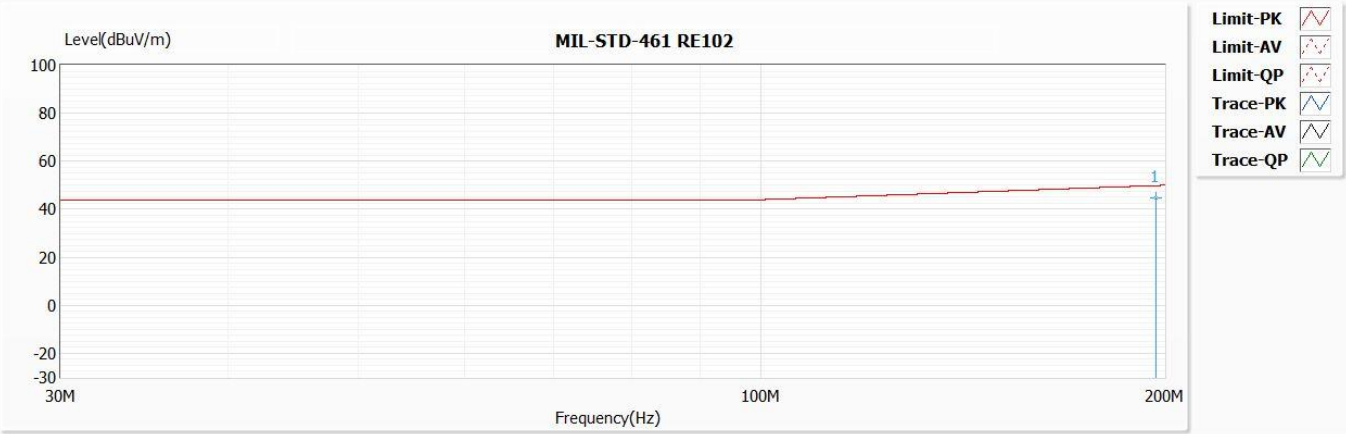
a. Turn on the measurement equipment and allow a sufficient time for stabilization.
b. Calibration. Perform the measurement system check using the measurement system check setup.
c. Turn on the EUT and allow a sufficient time for stabilization.
d. EUT testing. Perform emission data scans using the measurement setup.

6.5. System calibration level

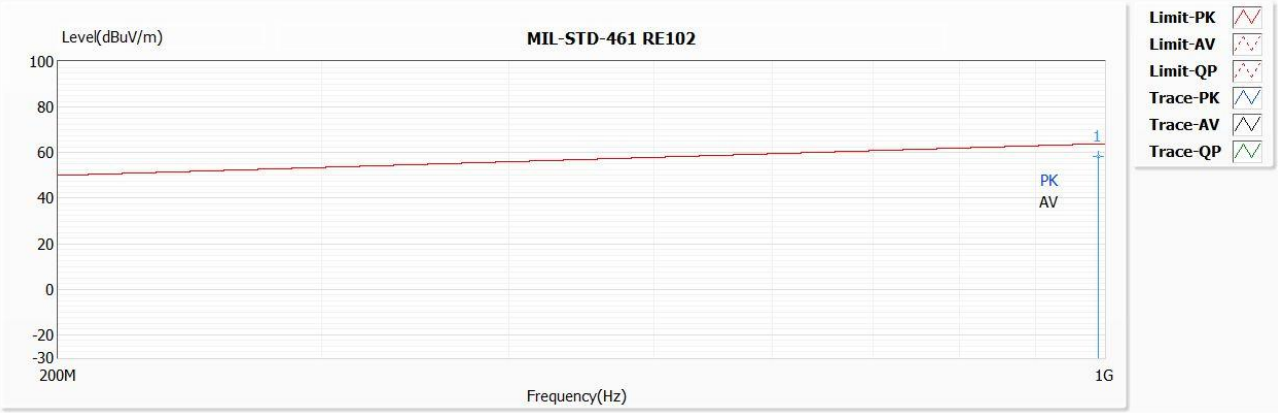
Limit	MIL-STD-461_RE102_radiated_emissions_electric_field(10kHz~30MHz),Item=Version G,Limit Class=RE102-4_Navy Fixed & Air Force
Note	SYSTEM CHECK



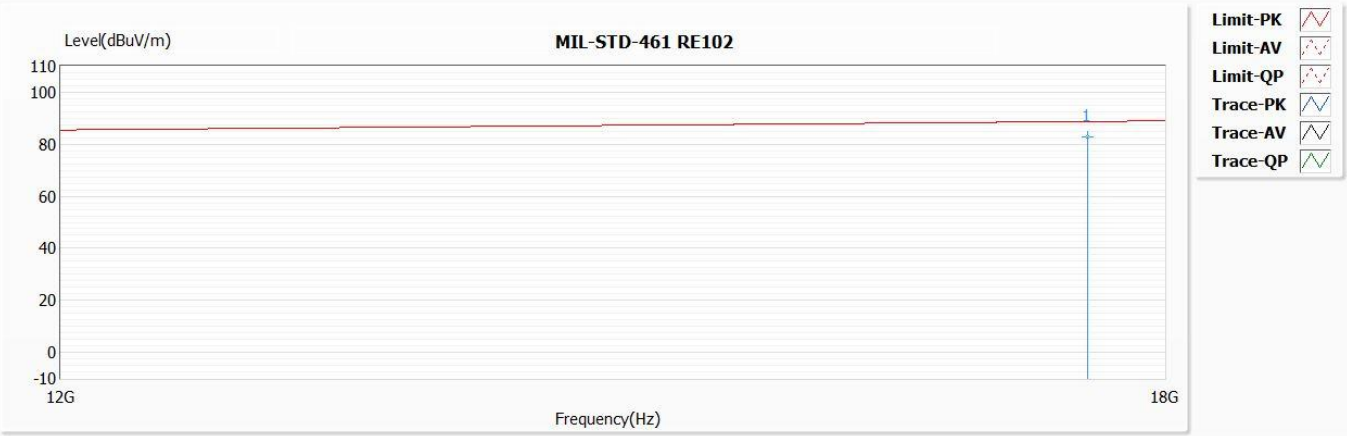
Limit	MIL-STD-461_RE102_radiated_emissions_electric_field(30MHz~200MHz),Item=Version G,Limit Class=RE102-4_Navy Fixed & Air Force
Note	SYSTEM CHECK



Limit	MIL-STD-461_RE102_radiated_emissions_electric_field(200MHz~1000MHz),Item=Version G,Limit Class=RE102-4_Navy Fixed & Air Force
Note	SYSTEM CHECK

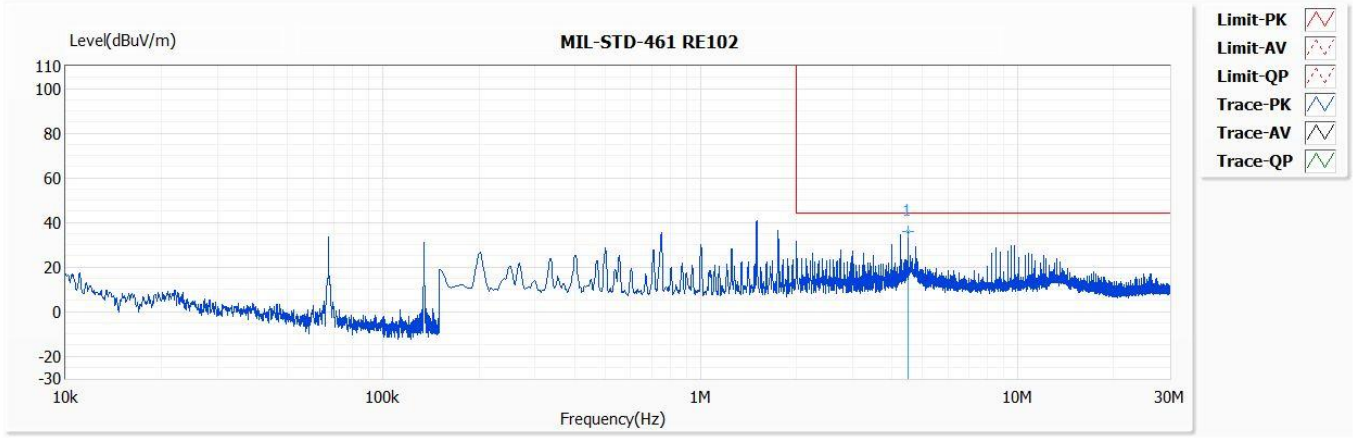


Limit	MIL-STD-461G_RE102_radiated_emissions_electric_field(1GHz~18GHz),Item=Version G,Limit Class=RE102-4_Navy Fixed & Air Force
Note	SYSTEM CHECK



6.6. Test Result

Model No	TDM-P215WH5TAGF-RND2	Site	HC-CB06
Test Voltage	DC 28V	Test Date	2025/6/6
Test Mode	Mode 1: Normal operation	Engineer	Mark Lu
Polarity	Vertical	Temperature (℃)	23
Section	N/A	Humidity (%RH)	56
Limit	MIL-STD-461_RE102_radiated_emissions_electric_field(10kHz~30MHz),Item=Version G,Limit Class=RE102-4_Navy Fixed & Air Force		
Note			

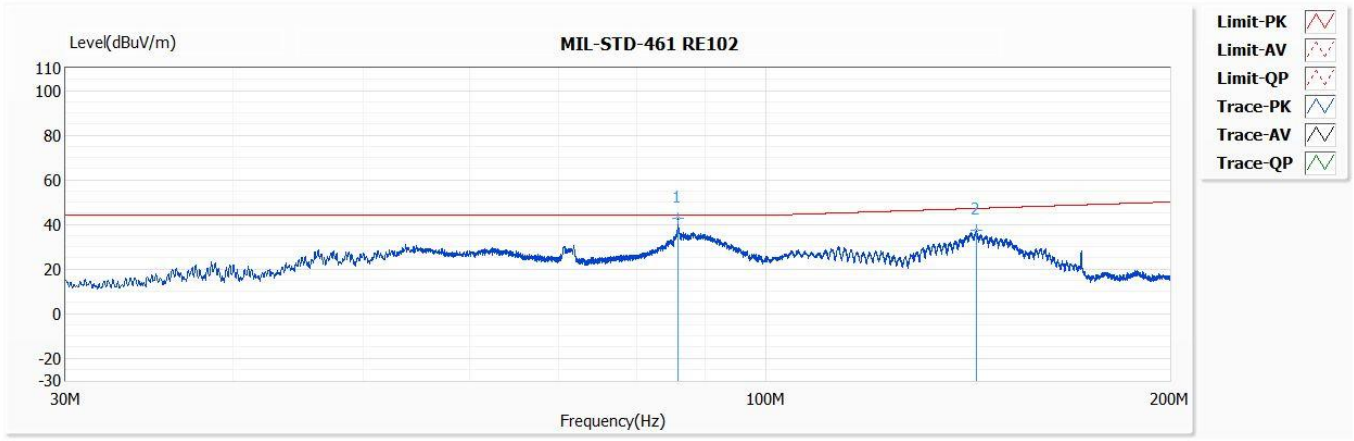


No	Frequency (Hz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	4.504M	36.07	44.00	-7.93	25.45	10.62	PK

Remark:

1. "*" means this data is the worst emission level; "!" means this data is over limit.
2. “PK” means Peak detector.
3. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).
4. Margin= Emission Level- Limit.

Model No	TDM-P215WH5TAGF-RND2	Site	HC-CB06
Test Voltage	DC 28V	Test Date	2025/6/6
Test Mode	Mode 1: Normal operation	Engineer	Mark Lu
Polarity	Horizontal	Temperature (℃)	23
Section	N/A	Humidity (%RH)	56
Limit	MIL-STD-461_RE102_radiated_emissions_electric_field(30MHz~200MHz),Item=Version G,Limit Class=RE102-4_Navy Fixed & Air Force		
Note			



No	Frequency (Hz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	85.920M	42.65	44.00	-1.35	84.18	-41.53	PK
2	143.410M	37.08	47.12	-10.04	71.95	-34.87	PK

Remark:

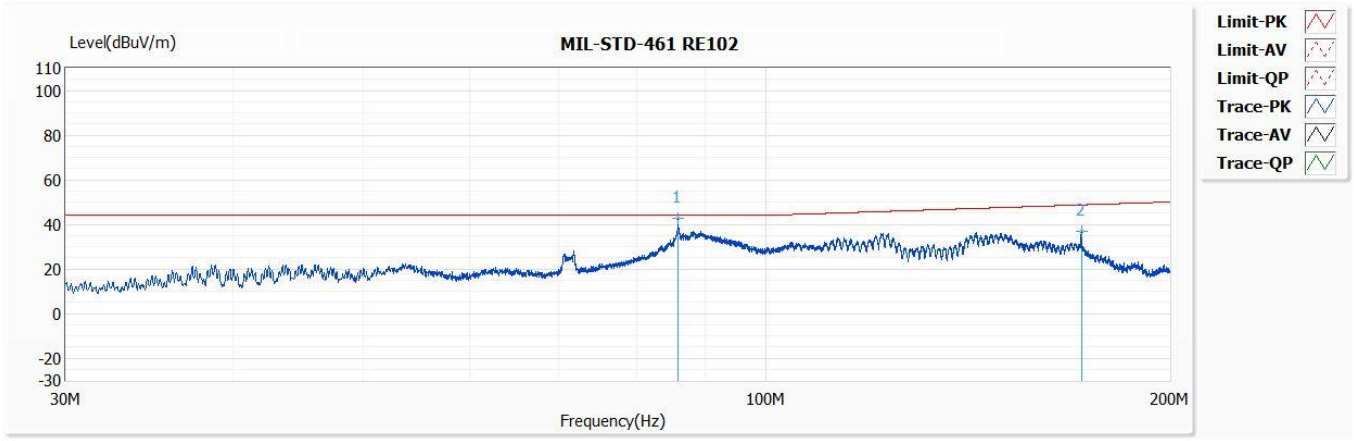
1. "*" means this data is the worst emission level; "!" means this data is over limit.

2. “PK” means Peak detector.

3. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).

4. Margin= Emission Level- Limit.

Model No	TDM-P215WH5TAGF-RND2	Site	HC-CB06
Test Voltage	DC 28V	Test Date	2025/6/6
Test Mode	Mode 1: Normal operation	Engineer	Mark Lu
Polarity	Vertical	Temperature (℃)	23
Section	N/A	Humidity (%RH)	56
Limit	MIL-STD-461_RE102_radiated_emissions_electric_field(30MHz~200MHz),Item=Version G,Limit Class=RE102-4_Navy Fixed & Air Force		
Note			



No	Frequency (Hz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	85.920M	42.58	44.00	-1.42	84.11	-41.53	PK
2	171.850M	36.81	48.69	-11.88	70.09	-33.28	PK

Remark:

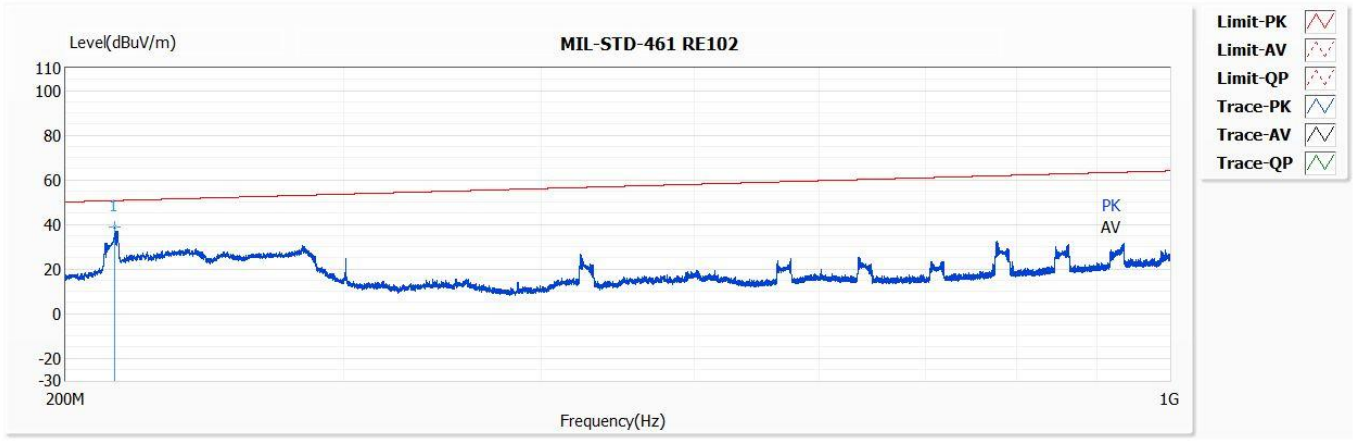
1. "*" means this data is the worst emission level; "!" means this data is over limit.

2. “PK” means Peak detector.

3. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).

4. Margin= Emission Level- Limit.

Model No	TDM-P215WH5TAGF-RND2	Site	HC-CB06
Test Voltage	DC 28V	Test Date	2025/6/6
Test Mode	Mode 1: Normal operation	Engineer	Mark Lu
Polarity	Horizontal	Temperature (℃)	23
Section	N/A	Humidity (%RH)	56
Limit	MIL-STD-461_RE102_radiated_emissions_electric_field(200MHz~1000MHz),Item=Version G,Limit Class=RE102-4_Navy Fixed & Air Force		
Note			



No	Frequency (Hz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	214.790M	38.91	50.63	-11.72	76.65	-37.74	PK

Remark:

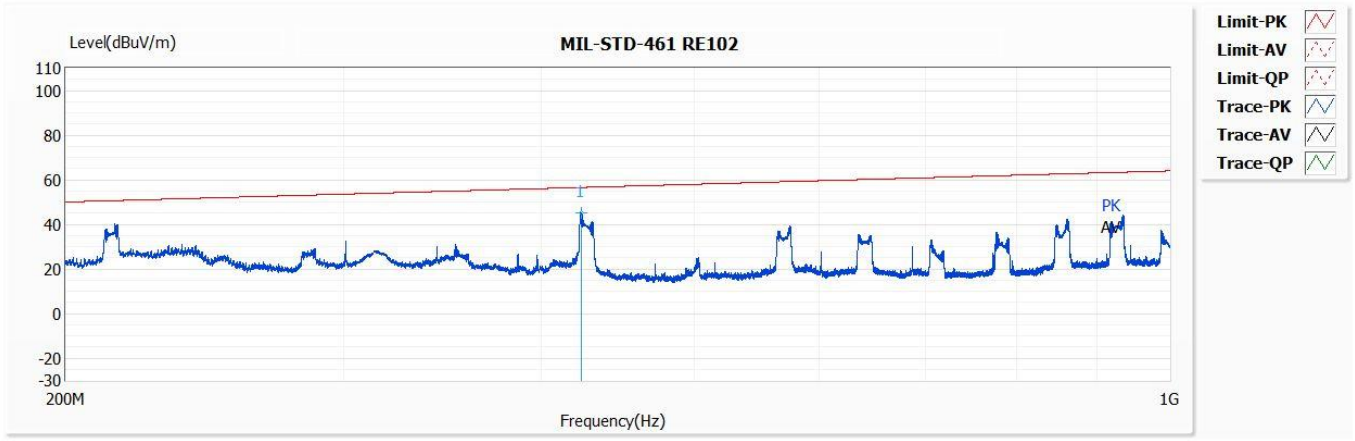
1. "*" means this data is the worst emission level; "!" means this data is over limit.

2. “PK” means Peak detector.

3. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).

4. Margin= Emission Level- Limit.

Model No	TDM-P215WH5TAGF-RND2	Site	HC-CB06
Test Voltage	DC 28V	Test Date	2025/6/6
Test Mode	Mode 1: Normal operation	Engineer	Mark Lu
Polarity	Vertical	Temperature (℃)	23
Section	N/A	Humidity (%RH)	56
Limit	MIL-STD-461_RE102_radiated_emissions_electric_field(200MHz~1000MHz),Item=Version G,Limit Class=RE102-4_Navy Fixed & Air Force		
Note			



No	Frequency (Hz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	424.370M	45.00	56.53	-11.53	81.03	-36.03	PK

Remark:

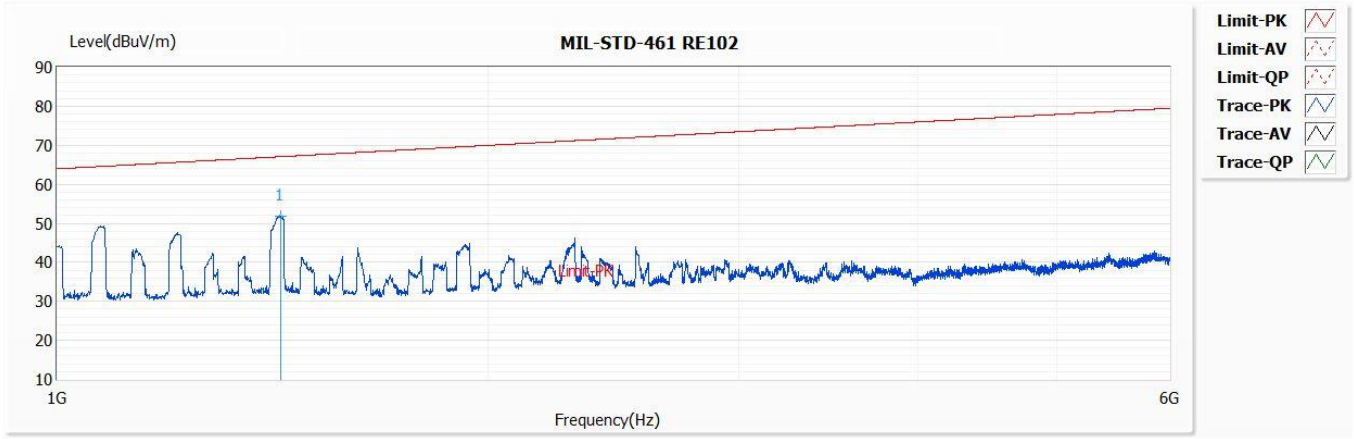
1. "*" means this data is the worst emission level; "!" means this data is over limit.

2. “PK” means Peak detector.

3. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).

4. Margin= Emission Level- Limit.

Model No	TDM-P215WH5TAGF-RND2	Site	HC-CB06
Test Voltage	DC 28V	Test Date	2025/6/6
Test Mode	Mode 1: Normal operation	Engineer	Mark Lu
Polarity	Horizontal	Temperature (℃)	23
Section	N/A	Humidity (%RH)	56
Limit	MIL-STD-461G_RE102_radiated_emissions_electric_field(1GHz~18GHz),Item=Version G,Limit Class=RE102-4_Navy Fixed & Air Force		
Note			

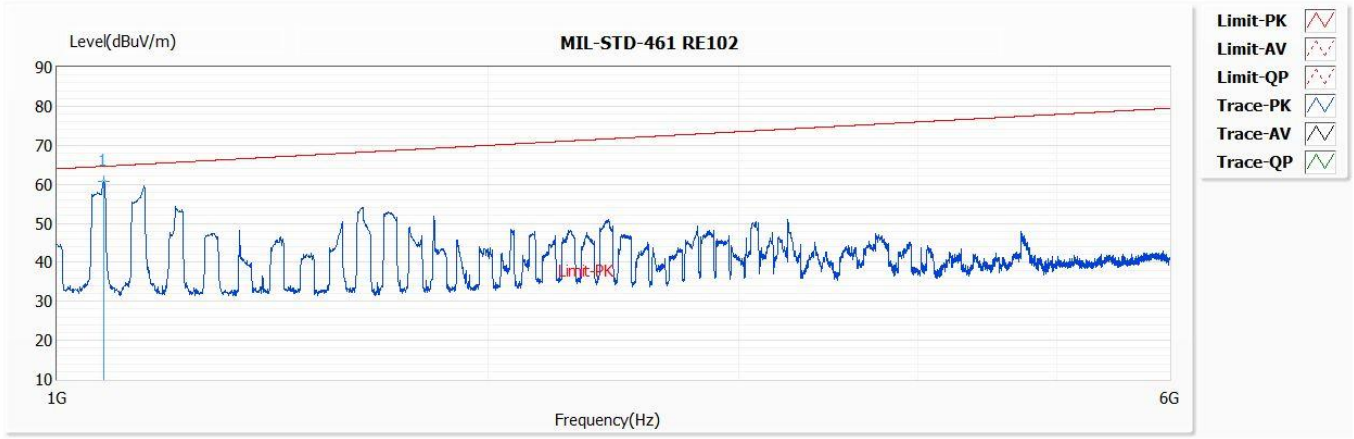


No	Frequency (Hz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	1434.000M	51.86	67.08	-15.22	59.18	-7.32	PK

Remark:

1. "*" means this data is the worst emission level; "!" means this data is over limit.
2. “PK” means Peak detector.
3. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).
4. Margin= Emission Level- Limit.

Model No	TDM-P215WH5TAGF-RND2	Site	HC-CB06
Test Voltage	DC 28V	Test Date	2025/6/6
Test Mode	Mode 1: Normal operation	Engineer	Mark Lu
Polarity	Vertical	Temperature (℃)	23
Section	N/A	Humidity (%RH)	56
Limit	MIL-STD-461G_RE102_radiated_emissions_electric_field(1GHz~18GHz),Item=Version G,Limit Class=RE102-4_Navy Fixed & Air Force		
Note			

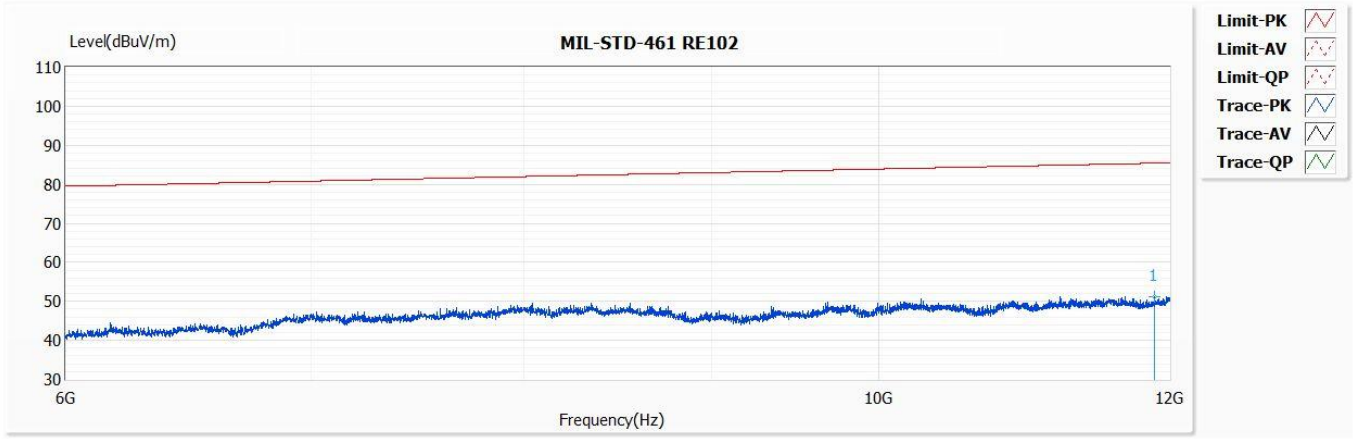


No	Frequency (Hz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	1079.000M	60.83	64.61	-3.78	70.34	-9.51	PK

Remark:

1. "*" means this data is the worst emission level; "!" means this data is over limit.
2. “PK” means Peak detector.
3. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).
4. Margin= Emission Level- Limit.

Model No	TDM-P215WH5TAGF-RND2	Site	HC-CB06
Test Voltage	DC 28V	Test Date	2025/6/6
Test Mode	Mode 1: Normal operation	Engineer	Mark Lu
Polarity	Horizontal	Temperature (℃)	23
Section	N/A	Humidity (%RH)	56
Limit	MIL-STD-461G_RE102_radiated_emissions_electric_field(1GHz~18GHz),Item=Version G,Limit Class=RE102-4_Navy Fixed & Air Force		
Note			



No	Frequency (Hz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	11885.000M	51.32	85.41	-34.09	34.25	17.07	PK

Remark:

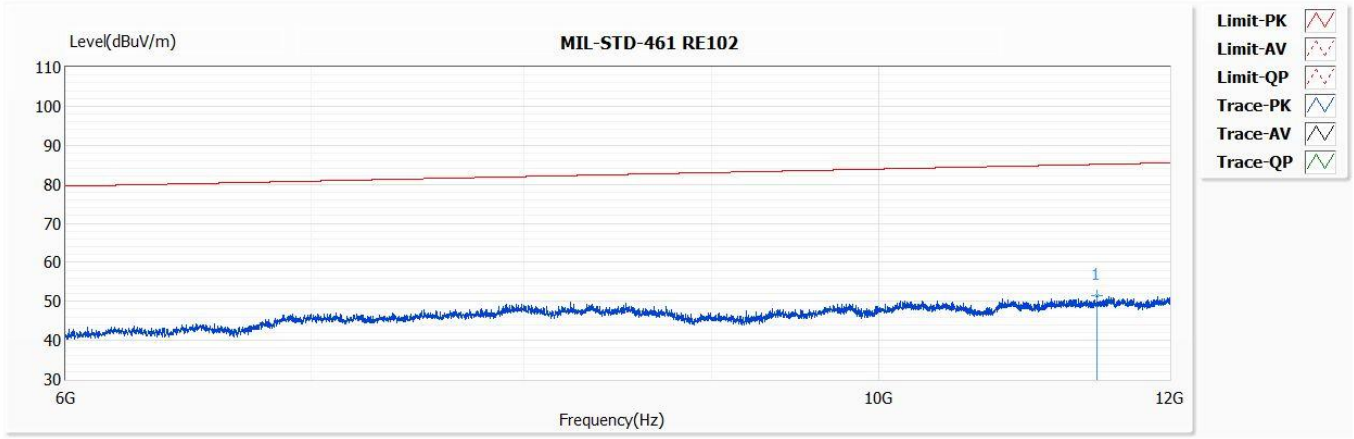
1. "*" means this data is the worst emission level; "!" means this data is over limit.

2. “PK” means Peak detector.

3. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).

4. Margin= Emission Level- Limit.

Model No	TDM-P215WH5TAGF-RND2	Site	HC-CB06
Test Voltage	DC 28V	Test Date	2025/6/6
Test Mode	Mode 1: Normal operation	Engineer	Mark Lu
Polarity	Vertical	Temperature (℃)	23
Section	N/A	Humidity (%RH)	56
Limit	MIL-STD-461G_RE102_radiated_emissions_electric_field(1GHz~18GHz),Item=Version G,Limit Class=RE102-4_Navy Fixed & Air Force		
Note			



No	Frequency (Hz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	11464.000M	51.43	85.09	-33.66	34.28	17.15	PK

Remark:

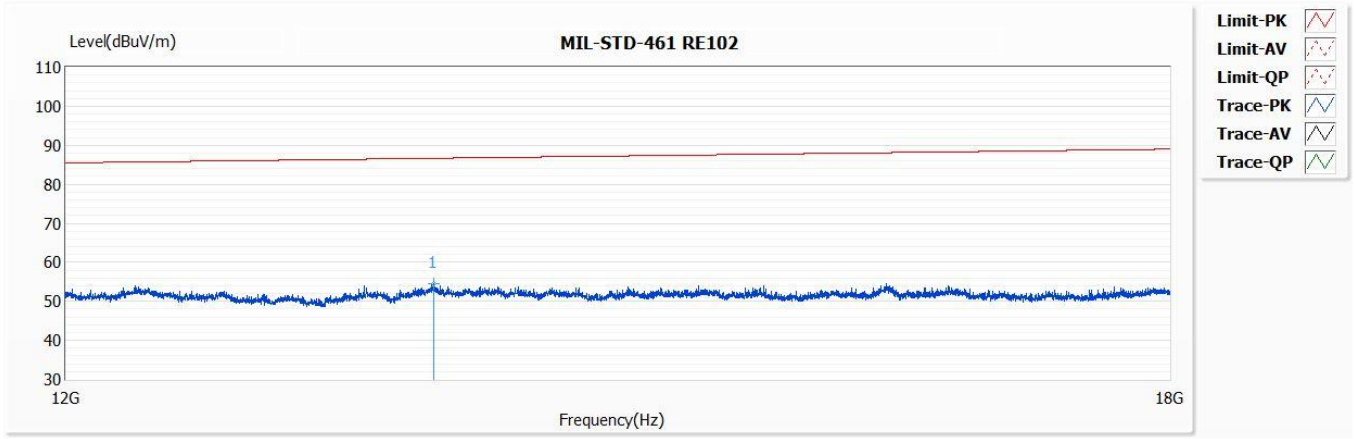
1. "*" means this data is the worst emission level; "!" means this data is over limit.

2. “PK” means Peak detector.

3. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).

4. Margin= Emission Level- Limit.

Model No	TDM-P215WH5TAGF-RND2	Site	HC-CB06
Test Voltage	DC 28V	Test Date	2025/6/6
Test Mode	Mode 1: Normal operation	Engineer	Mark Lu
Polarity	Horizontal	Temperature (℃)	23
Section	N/A	Humidity (%RH)	56
Limit	MIL-STD-461G_RE102_radiated_emissions_electric_field(1GHz~18GHz),Item=Version G,Limit Class=RE102-4_Navy Fixed & Air Force		
Note			



No	Frequency (Hz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	13734.000M	54.54	86.66	-32.12	36.83	17.71	PK

Remark:

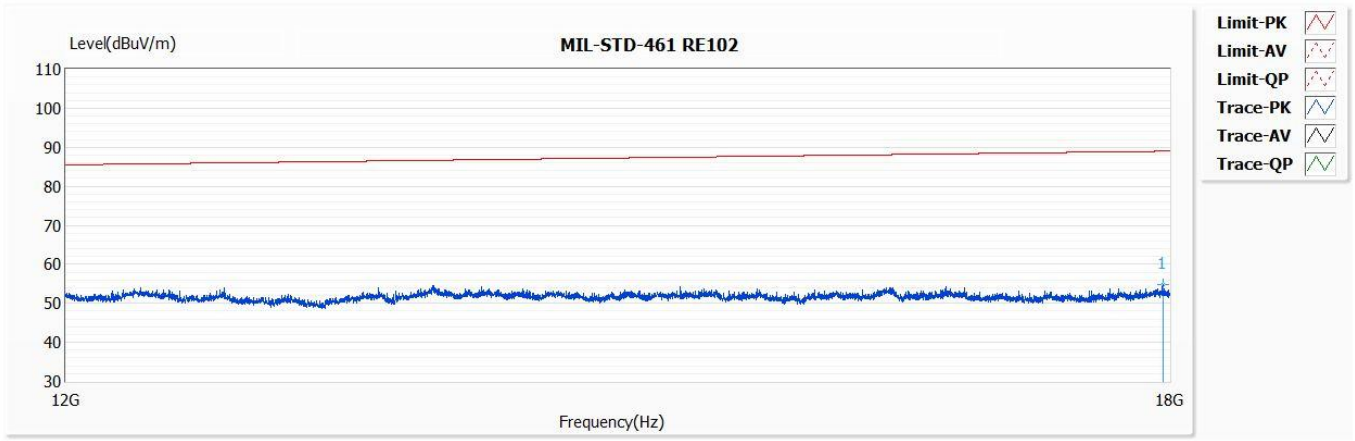
1. "*" means this data is the worst emission level; "!" means this data is over limit.

2. “PK” means Peak detector.

3. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).

4. Margin= Emission Level- Limit.

Model No	TDM-P215WH5TAGF-RND2	Site	HC-CB06
Test Voltage	DC 28V	Test Date	2025/6/6
Test Mode	Mode 1: Normal operation	Engineer	Mark Lu
Polarity	Vertical	Temperature (℃)	23
Section	N/A	Humidity (%RH)	56
Limit	MIL-STD-461G_RE102_radiated_emissions_electric_field(1GHz~18GHz),Item=Version G,Limit Class=RE102-4_Navy Fixed & Air Force		
Note			



No	Frequency (Hz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
* 1	17959.000M	54.68	88.98	-34.30	26.56	28.12	PK

Remark:

1. "*" means this data is the worst emission level; "!" means this data is over limit.

2. “PK” means Peak detector.

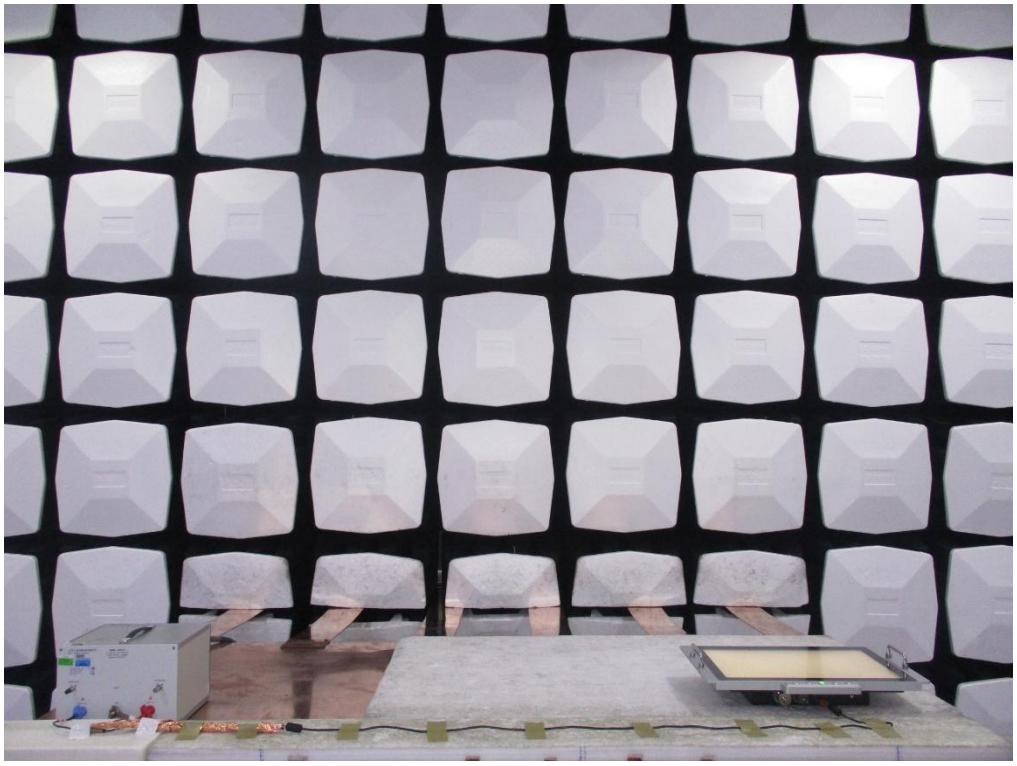
3. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).

4. Margin= Emission Level- Limit.

6.7. Test Photograph

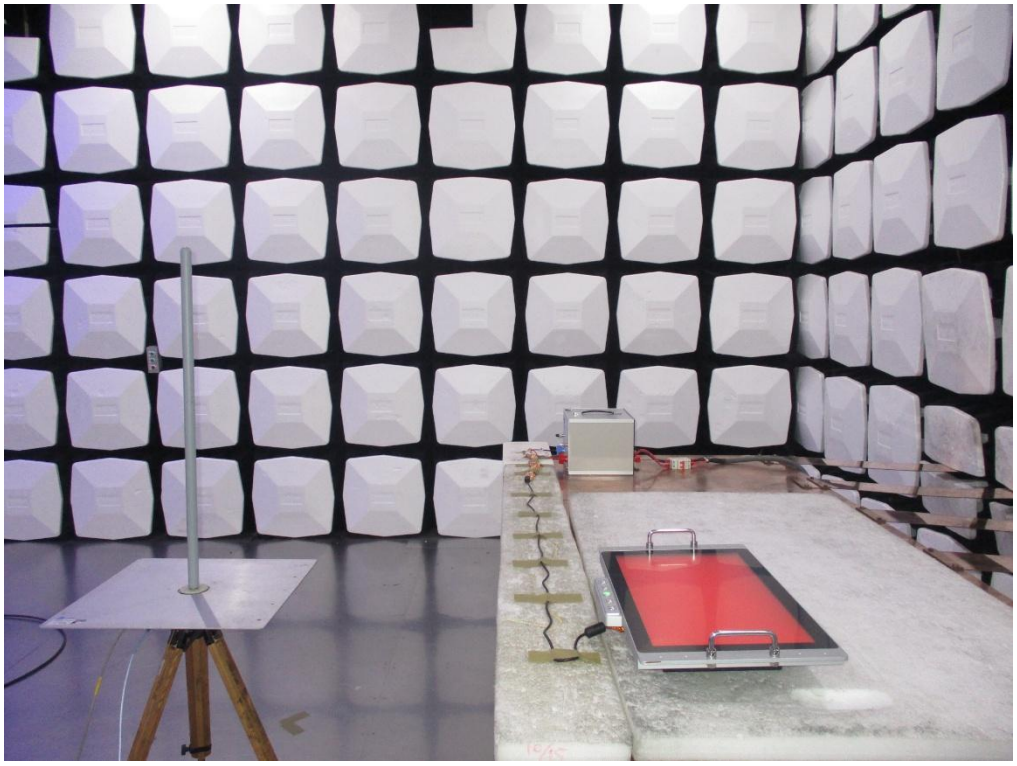
Test Mode ： Mode 1: Normal operation

Description： RE102 radiated emissions, electric field_ Test Setup



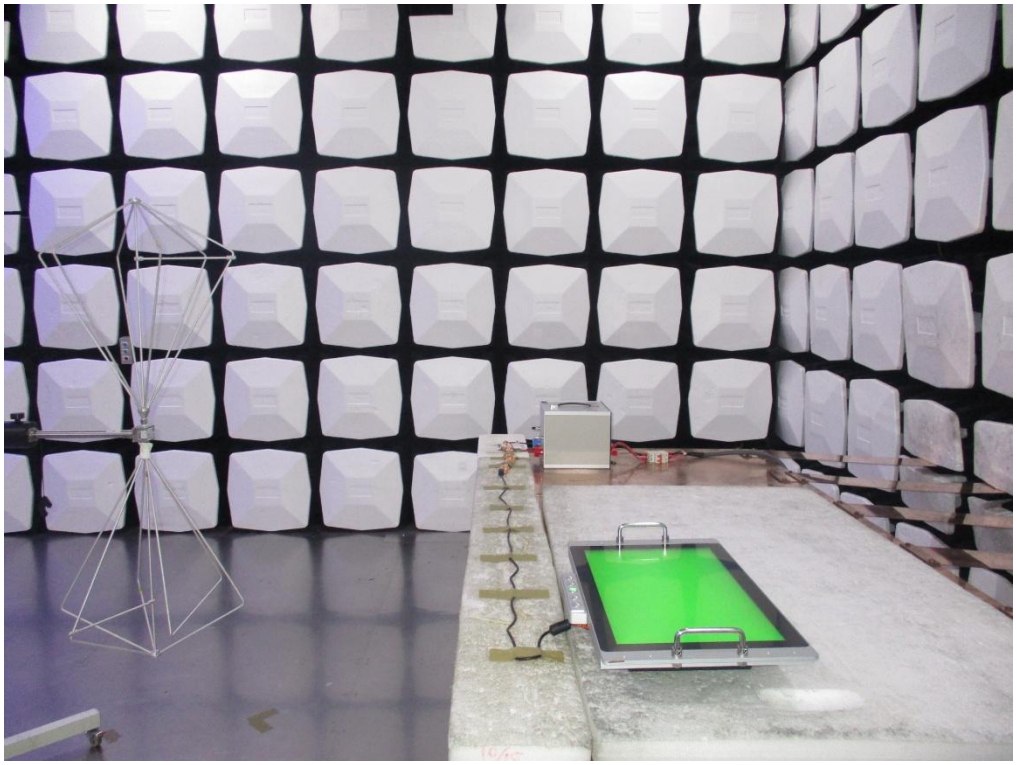
Test Mode ： Mode 1: Normal operation

Description： RE102 radiated emissions, electric field_ Test Setup



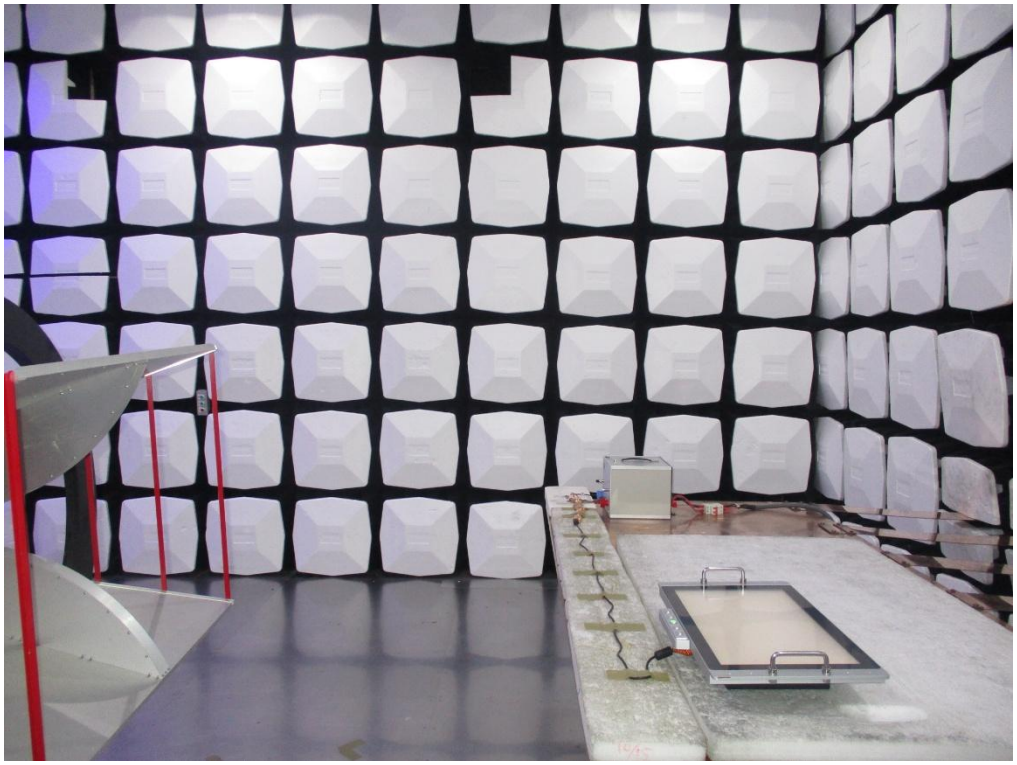
Test Mode ： Mode 1: Normal operation

Description： RE102 radiated emissions, electric field_ Test Setup



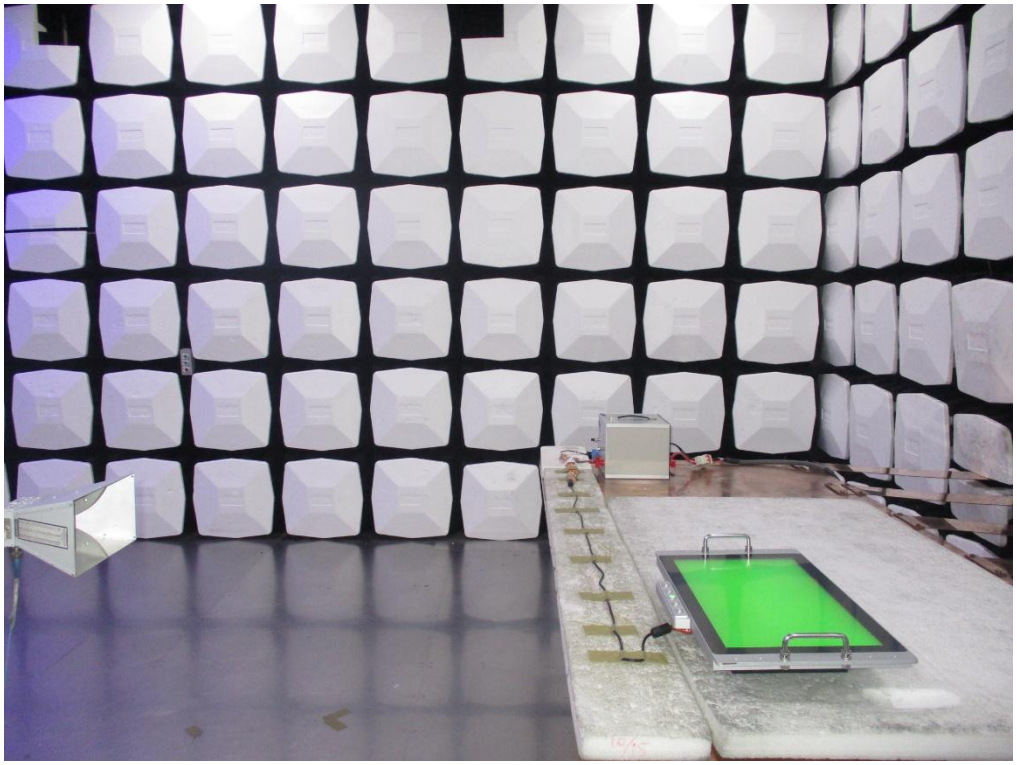
Test Mode ： Mode 1: Normal operation

Description： RE102 radiated emissions, electric field_ Test Setup



Test Mode ： Mode 1: Normal operation

Description： RE102 radiated emissions, electric field_ Test Setup

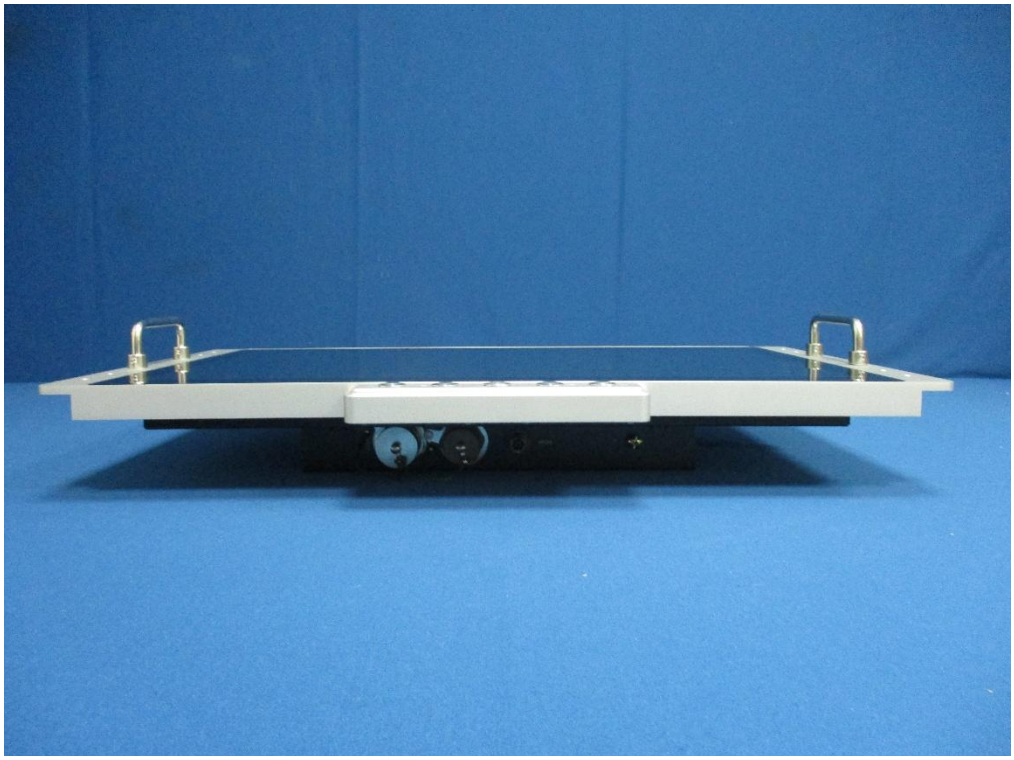


7. EUT Photograph

(1) EUT Photo_ Front

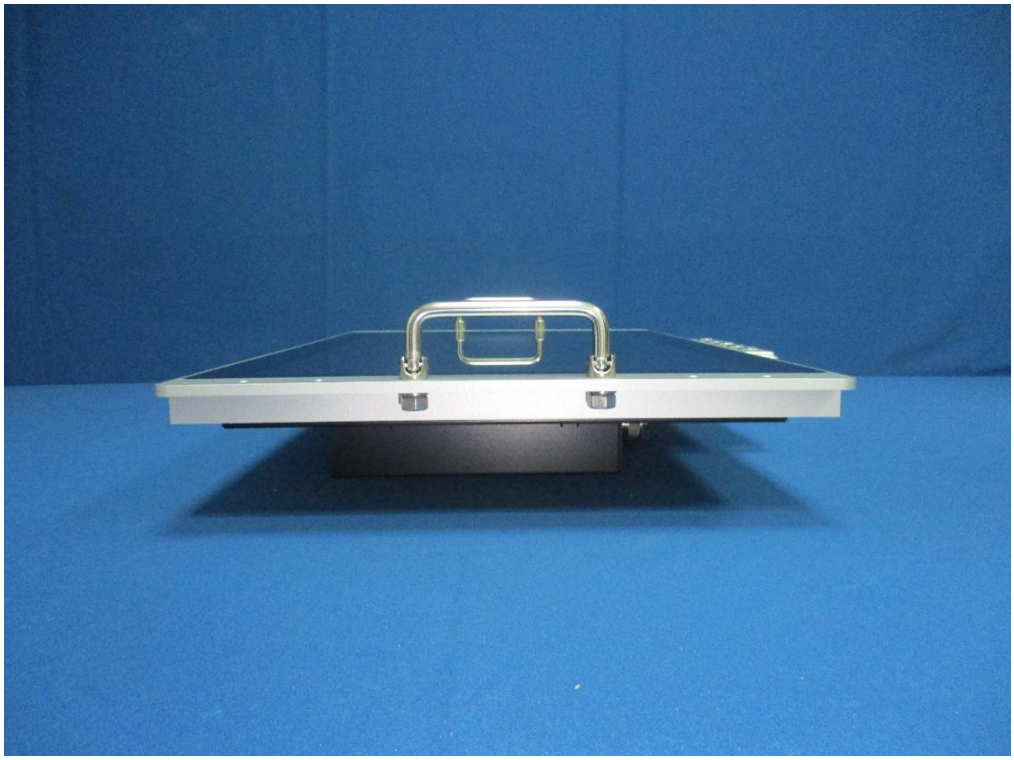
(2) EUT Photo_ Back

(3) EUT Photo_ Top



(4) EUT Photo_ Bottom

(5) EUT Photo_ Left



(6) EUT Photo_ Right