EMC Test Report

Product Name	:	RobStride 04
Model No.	:	RSQDD-PG-40-120-01A

Applicant	:	RobStride Dynamics Co., Ltd
Address	:	Room 803, Building 49, No. 3 Yard, Jinhai 5th Road, Economic and Technological Development Zone, Beijing, China

Date of Receipt	:	May 29, 2025
Test Date	:	June 19, 2025
Issued Date	:	July 21, 2025
Report Number	:	2550696R.601
Report Template No.	:	TRF_FCC Part 15 Subpart 18_EMC_V1.2

The test results presented in this report relate only to the object tested.

This report is not used for social proof in China (or Mainland China) market.

The measurement result is considered in conformance with the requirement if it is within the prescribed limit, it is not necessary to calculate the uncertainty associated with the measurement result.

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Issued Date : July 21, 2025
Report No. : 2550696R.601

Product Name	:	RobStride 04
Applicant	:	RobStride Dynamics Co., Ltd
Address	:	Room 803, Building 49, No. 3 Yard, Jinhai 5th Road, Economic and Technological Development Zone, Beijing, China
Manufacturer	:	RobStride Dynamics Co., Ltd
Address		Room 803, Building 49, No. 3 Yard, Jinhai 5th Road, Economic and Technological Development Zone, Beijing, China
Model No.	:	RSQDD-PG-40-120-01A
EUT Rated Voltage	:	48 Vdc
EUT Test Voltage	:	48 Vdc
Trade Name	:	robstride
Applicable Standard	:	FCC CFR Title 47 Part 18: 2022 FCC/OET MP-5: 1986
Test Result	:	Complied
Performed Location	:	DEKRA Testing and Certification (Suzhou) Co., Ltd. No.99 Hongye Rd., Suzhou Industrial Park, Suzhou,215006, Jiangsu,China

Tested By :

(Project engineer: Tony Guo)

Approved By : Star Wang 2025-07-21 13:14:47

(Manager: Star Wang)

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Document History

Report NO.	Date	Description
2550696R.601	July 21, 2025	First release

1. General Information

1.1. EUT Description

Product Name	RobStride 04
Trade Name	robstride
Model No.	RSQDD-PG-40-120-01A

Note 1: The EUT information is from customer declaration.

1.2. Mode of Operation

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

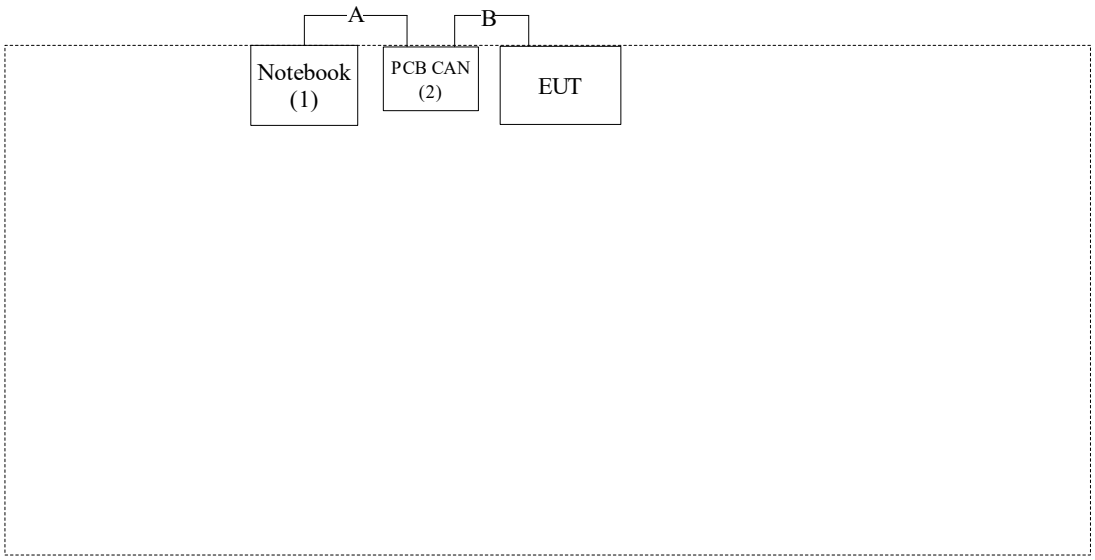
Final Test Mode
Mode 1: Normal operation (The working parameters were set through the test software, and the motor began to operate)

1.3. Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook	Lenovo	X250	N/A	Power by Adapter
2	PCB CAN	N/A	N/A	N/A	Power by Notebook

1.4. Configuration of Tested System

Connection Diagram


Signal Cable Type		Signal cable Description
A	USB-Type c Cable	Non-Shielded, 0.8 m
B	CAN Cable	Non-Shielded, 0.1 m

1.5. EUT Exercise Software

1	Set up the EUT and simulators as shown above.
2	Turn on the power of all equipment.
3	Confirm the EUT can work normally.
4	Start testing.

2. Technical Test

2.1. Summary of Test Result

☒ No deviations from the test standards

☐ Deviations from the test standards as below description:

Emission			
Performed Item	Normative References	Test Performed	Deviation
Conducted Emission	FCC CFR Title 47 Part 18: 2022 FCC/OET MP-5: 1986	N/A	See 1)
Radiated Emission	FCC CFR Title 47 Part 18: 2022 FCC/OET MP-5: 1986	Yes	No

Note 1: The EUT does not contain the AC power port.

2.2. List of Test Equipment

Radiated Emission / AC3						
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Cali. Date**	**Cali. Due Date**	**Used In**
EMI Test Receiver	R&S	ESR7	102086	2025.01.11	2026.01.10	☒
loop aerial	R&S	HFH2-Z2	100548	2025.03.02	2026.03.01	☒
Bilog Antenna	Teseq GmbH	CBL6112B	2931	2025.05.28	2026.05.27	☒
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2025.03.24	2026.03.23	☒
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC3-C	2025.03.16	2026.03.15	☒
Temperature/Humidity Meter	RTS	RTS-1909	THM-022	2025.04.30	2026.04.29	☒
Software	Quietek	EMI_V3	V3.0.0	N/A	N/A	☒
EMI Test Receiver	R&S	ESR7	101668	2025.01.11	2026.01.10	☒

2.3. Test Environment

Tests have been performed in a controlled laboratory environment, where the environmental conditions are maintained within the applicable ranges.

Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	10-40	N/A
	Humidity (%RH)	25-75	N/A
	Barometric pressure (mbar)	860-1060	N/A
Radiated Emission (0.15~1000MHz)	Temperature (°C)	10-40	24
	Humidity (%RH)	25-75	47
	Barometric pressure (mbar)	860-1060	1013
Radiated Emission (1~18GHz)	Temperature (°C)	10-40	N/A
	Humidity (%RH)	25-75	N/A
	Barometric pressure (mbar)	860-1060	N/A

2.4. Measurement Uncertainty

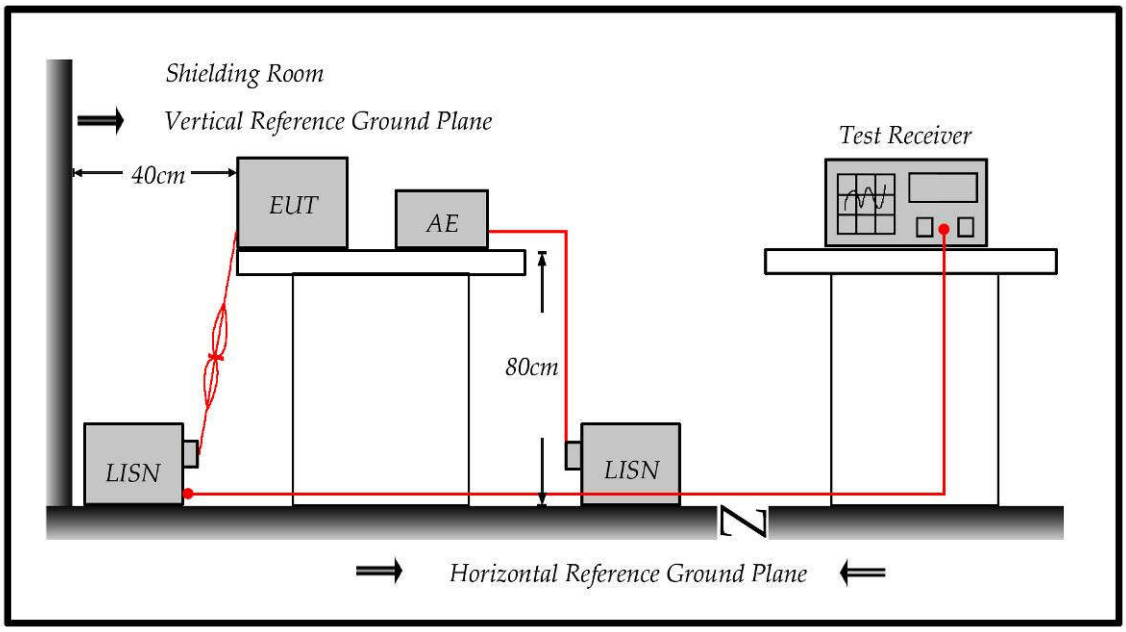
Radiated emission / AC3
The maximum measurement uncertainty is evaluated as: Horizontal: 9k~30 MHz：2.1 dB 30 MHz~300 MHz: 4.6 dB 300 MHz~1 GHz: 4.1 dB Vertical: 9k~30 MHz：2.2 dB 30 MHz~300 MHz: 4.8 dB 300 MHz~1 GHz: 4.2 dB

3. Conducted Emission

3.1. Test Specification

According to Standard: FCC Part 18 and FCC/OET MP-5

3.2. Test Setup



3.3. Limit

(a) All Induction cooking ranges and ultrasonic equipment:

Frequency MHz	Conducted limit (dBuV)	
	Quasi-peak	Average
0.009–0.05	110	–
0.05–0.15	90-80*	–
0.15–0.5	66 to 56*	56 to 46*
0.5– 5	56	46
5–30	60	50

* Decreases with the logarithm of the frequency.

(b) All other part 18 consumer devices:

Frequency MHz	Conducted limit (dBuV)	
	Quasi-peak	Quasi-peak
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

(c) RF lighting devices:

Frequency (MHz)	Maximum RF line voltage measured with a 50 uH/50 ohm LISN (uV)
Non-consumer equipment:	
0.45 to 1.6	1000
1.6 to 30	3000
Consumer equipment:	
0.45 to 2.51	250
2.51 to 3.0	3000
3.0 to 30	250

Note:

1. These conduction limits shall apply outside the bands specified in § 18.301.
2. For ultrasonic equipment, compliance with these conduction limits shall preclude the need to show compliance with unless requested by the Commission.
3. The tighter limits shall apply at the boundary between two frequency ranges.

3.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH (50 ohm /50uH for RF lighting devices) coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50 ohm/50uH (50 ohm /50uH for RF lighting devices) coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs.)
Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to FCC/OET MP-5: 1986 on conducted measurement.
Conducted emissions were invested over the frequency range from 0.009MHz to 30MHz using a receiver bandwidth of 9kHz.

3.5. Test Result

The EUT does not contain the AC power port.

3.6. Test Photograph

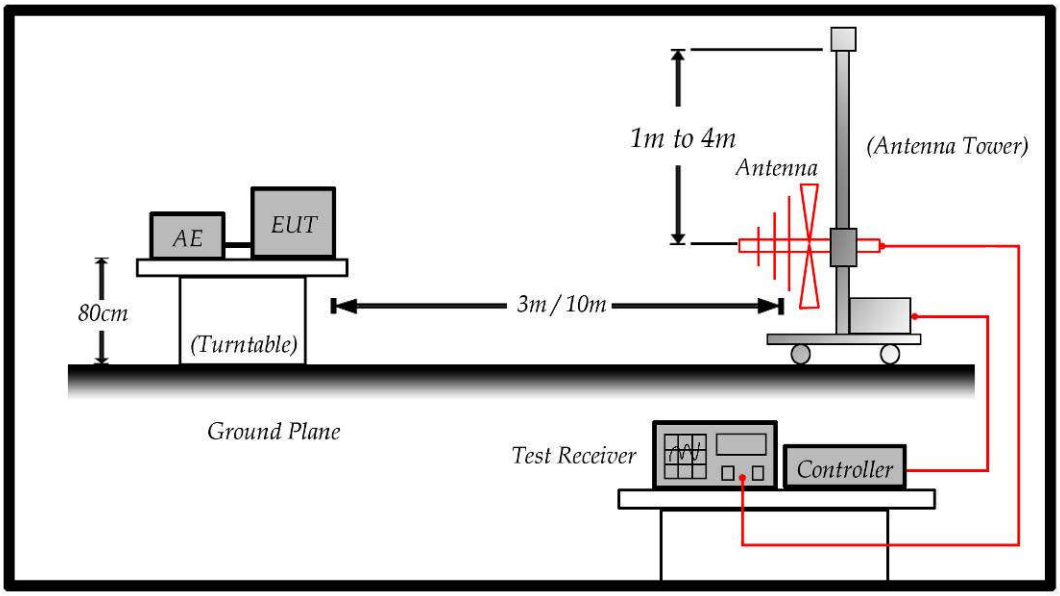
N/A

4. Radiated Emission

4.1. Test Specification

According to EMC Standard: FCC Part 18 and FCC/OET MP-5

4.2. Test Setup



4.3. Limit

(a) ISM equipment operating on a frequency specified in §18.301 is permitted unlimited radiated energy in the band specified for that frequency:

ISM frequency	Tolerance	ISM frequency	Tolerance	ISM frequency	Tolerance
6.78 MHz	± 15.0 kHz	13.56 MHz	± 7.0 kHz	27.12 MHz	± 163.0 kHz
40.68 MHz	± 20.0 kHz	915 MHz	± 13.0 MHz	2,450 MHz	± 50.0 MHz
5,800 MHz	± 75.0 MHz	24,125 MHz	± 125.0 MHz	61.25 GHz	± 250.0 MHz
122.50 GHz	± 500.0 MHz	245.00 GHz	± 1.0 GHz		

Remark:

The use of the 6.78 MHz ± 15.0 kHz frequency band is subject to the condition of footnote 524 of the Table of Allocations.

(b) The field strength level of emissions which lie outside the bands specified in §18.301, unless otherwise indicated, shall not exceed the following:

Equipment	Operating frequency	RF Power generated by equipment (Watts)	Field strength limit (uV/m)	Distance (meters)
Any type unless otherwise specified (miscellaneous).	Any ISM frequency Any Non-ISM frequency	Below 500 500 or more Below 500 500 or more	25 25*SQRT(power/500) 15 15*SQRT(power/500)	300 [1]300 300 [1]300
Industrial heaters and RF stabilized arc welders.	ON or below 5.725MHz Above 5.725MHz	Any Any	10 (2)	1600 (2)
Medical diathermy	Any ISM frequency Any Non-ISM frequency	Any Any	25 15	300 300
Ultrasonic	Below 490 kHz 490 to 1600 kHz Above 1600 kHz	Below 500 500 or more Any Any	2400/F(kHz) 2400/F(kHz)* SQRT(power/500) 24000/F(kHz) 15	300 [3]300 30 30
Induction cooking ranges	Below 90 kHz On or above 90 kHz	Any Any	1500 300	[4]30 [4]30

Remark:

1. Field strength may not exceed 10 uV/m at 1600 meters. Consumer equipment operating below 1000 MHz is not permitted the increase in field strength otherwise permitted here for power over 500watts.
2. Reduced to the greatest extend possible.
3. Field strength may not exceed 10 uV/m at 1600 meters. Consumer equipment is not permitted the increase in field strength otherwise permitted here for over 500watts.
4. Induction cooking ranges manufactured prior to February 1, 1980, shall be subject to the field strength limits for miscellaneous ISM equipment.

(c) The field strength limits for RF lighting devices shall be the following:

Frequency (MHz)	Field strength limit at 30 meters (uV/m)	
	(uV/m)	(dBuV/m)
Non-consumer equipment:		
30 – 88	30	29.5
88 – 216	50	34
216 – 1000	70	36.9
Consumer equipment:		

30 – 88	10	20
88 – 216	15	23.5
216 – 1000	20	26

Remark:

1. The tighter limits shall apply at the boundary between two frequency ranges.
2. Testing for compliance with these limits may be made at closer distances, provided a sufficient number of measurements are taken to plot the radiation pattern, to determine the major lobes of radiation, and to determine the expected field strength level at 30, 300, or 1600 meters. Alternatively, if measurements are made at only one closer fixed distance, then the permissible field strength limits shall be adjusted using 1/d as attenuation factor.

4.4. Test Procedure

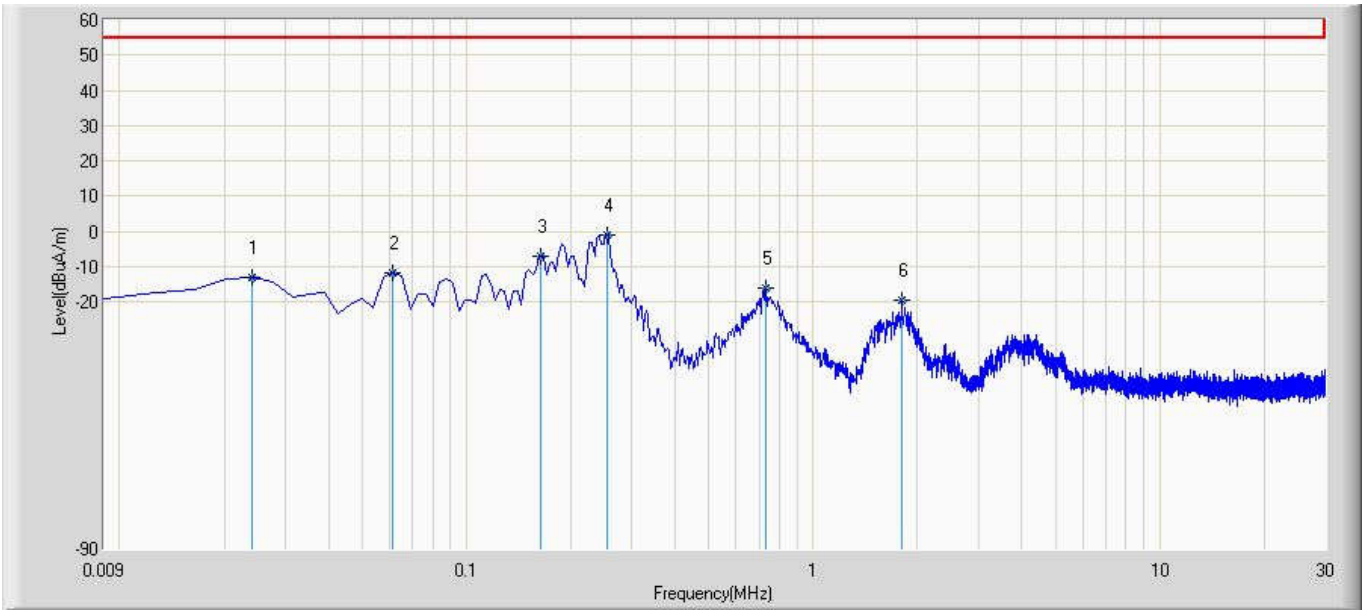
The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level and the antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated on radiated measurement.

Radiated emissions were invested over the frequency range from 30MHz to1GHz using a receiver bandwidth of 120kHz. Radiated was performed at an antenna to EUT distance of 3 meters.

4.5. Test Result

Engineer: Lawrence	
Site: AC3	Time: 2025/06/19
Limit: FCC_Part18_Above500W_RE (3m)	Margin: 0
Probe: HFH2-Z2_833799(0.009-30MHz)	Polarity: Horizontal
EUT: RobStride 04	Power: 48 Vdc
Note: Mode 1	

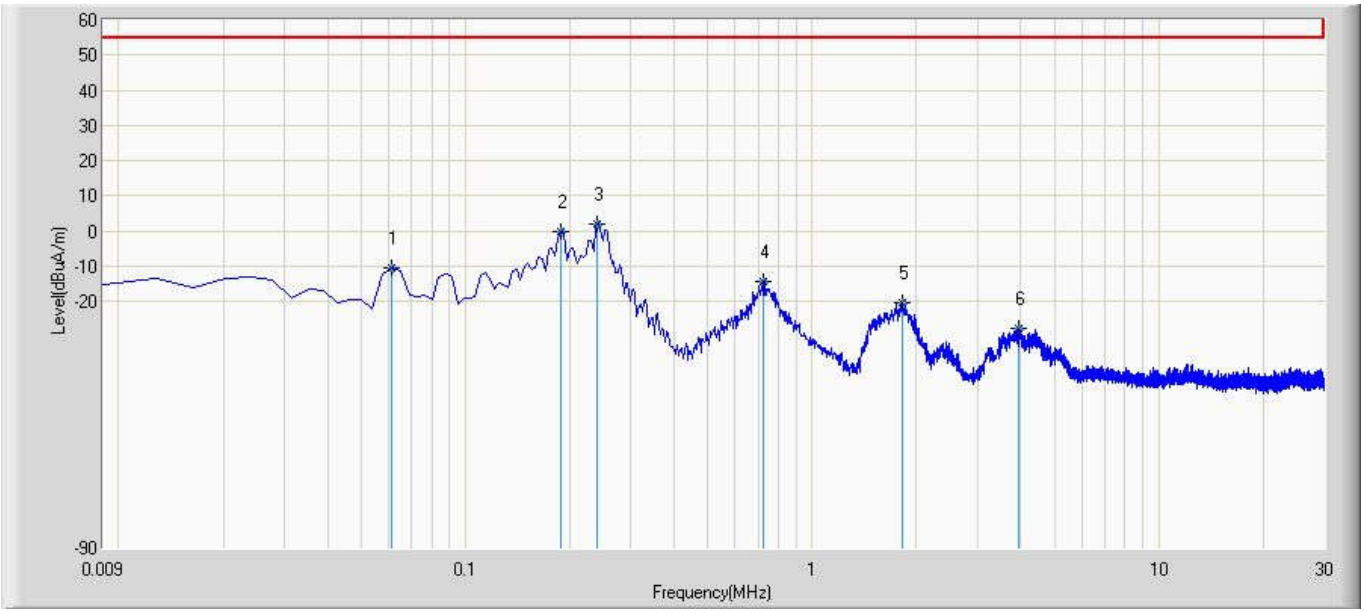


No	Mark	Frequency (MHz)	Measure Level (dBuA/m)	Reading Level (dBuA)	Over Limit (dB)	Limit (dBuA/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		0.024	-12.957	16.023	-67.897	54.940	-29.030	0.050	0.000	100	40	QP
2		0.061	-11.676	16.883	-66.616	54.940	-28.582	0.023	0.000	100	104	QP
3		0.163	-6.950	21.719	-61.890	54.940	-28.695	0.027	0.000	100	122	QP
4	*	0.256	-1.165	27.598	-56.105	54.940	-28.799	0.037	0.000	100	249	QP
5		0.729	-16.195	13.526	-71.135	54.940	-29.781	0.060	0.000	100	164	QP
6		1.805	-19.342	10.408	-74.282	54.940	-29.852	0.103	0.000	100	254	QP

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Engineer: Lawrence	
Site: AC3	Time: 2025/06/19
Limit: FCC_Part18_Above500W_RE (3m)	Margin: 0
Probe: HFH2-Z2_833799(0.009-30MHz)	Polarity: Vertical
EUT: RobStride 04	Power: 48 Vdc
Note: Mode 1	

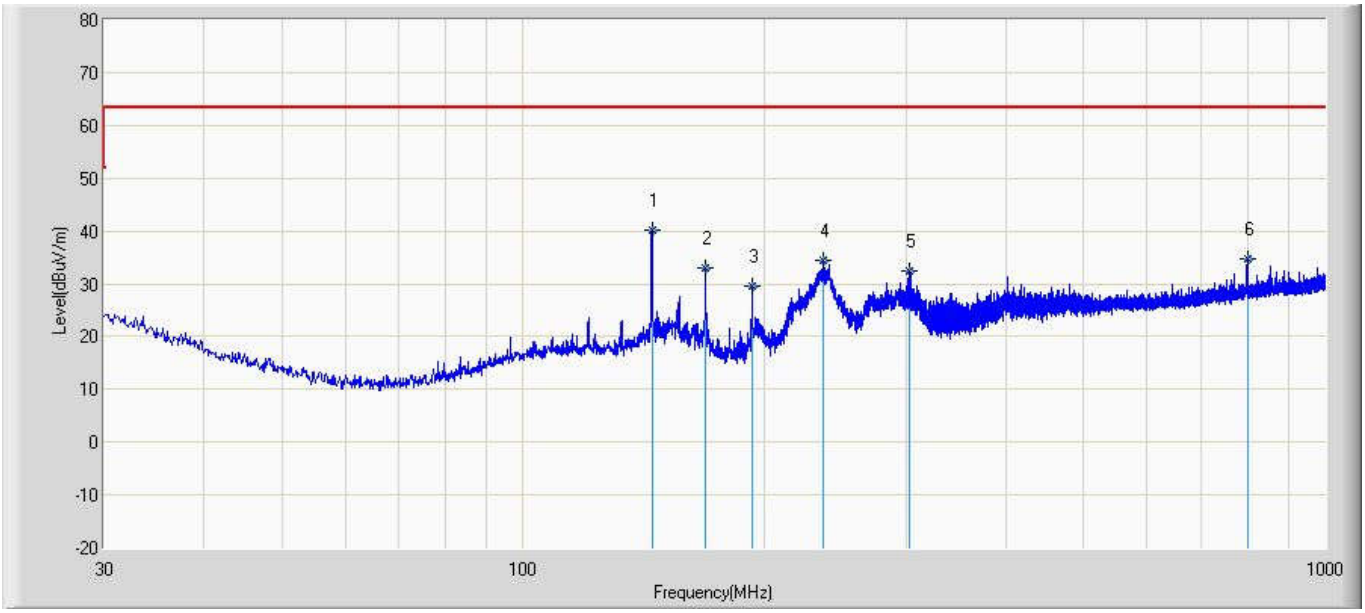


No	Mark	Frequency (MHz)	Measure Level (dBuA/m)	Reading Level (dBuA)	Over Limit (dB)	Limit (dBuA/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		0.061	-10.640	17.919	-65.580	54.940	-28.582	0.023	0.000	100	326	QP
2		0.189	-0.060	28.636	-55.000	54.940	-28.730	0.034	0.000	100	48	QP
3	*	0.241	2.037	30.783	-52.903	54.940	-28.782	0.036	0.000	100	120	QP
4		0.725	-14.522	15.187	-69.462	54.940	-29.769	0.059	0.000	100	245	QP
5		1.827	-20.464	9.268	-75.404	54.940	-29.831	0.100	0.000	100	317	QP
6		3.942	-27.615	2.177	-82.555	54.940	-29.940	0.148	0.000	100	318	QP

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Engineer: Lawrence	
Site: AC3	Time: 2025/06/19
Limit: FCC_Part18_Below500W_RE (3m)	Margin: 0
Probe: SuZ-0011(30-1000MHz)	Polarity: Horizontal
EUT: RobStride 04	Power: 48 Vdc
Note: Mode 1	

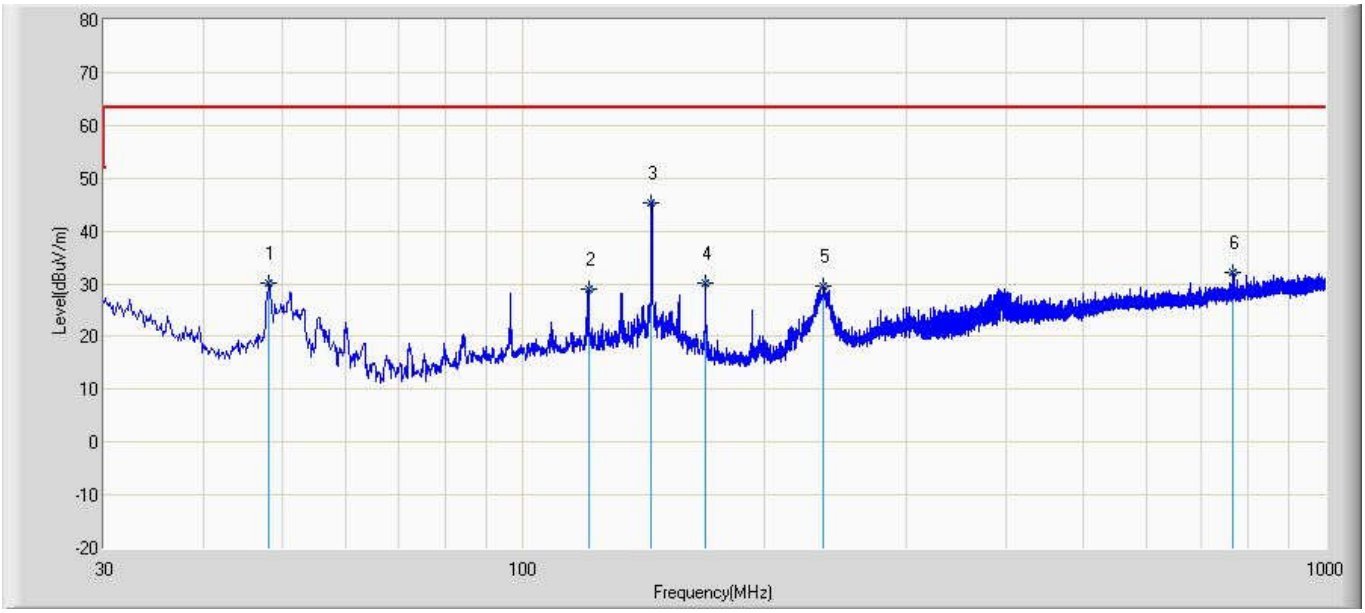


No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1	*	144.702	40.312	22.116	-23.188	63.500	10.737	7.459	0.000	135	359	QP
2		168.831	33.104	15.783	-30.396	63.500	9.834	7.486	0.000	327	105	QP
3		192.839	29.677	12.927	-33.823	63.500	9.238	7.512	0.000	384	165	QP
4		236.974	34.354	15.700	-29.146	63.500	11.038	7.616	0.000	330	98	QP
5		303.783	32.310	11.106	-31.190	63.500	13.415	7.789	0.000	190	298	QP
6		799.816	34.735	5.656	-28.765	63.500	20.219	8.859	0.000	261	237	QP

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

Engineer: Lawrence	
Site: AC3	Time: 2025/06/19
Limit: FCC_Part18_Below500W_RE (3m)	Margin: 0
Probe: SuZ-0011(30-1000MHz)	Polarity: Vertical
EUT: RobStride 04	Power: 48 Vdc
Note: Mode 1	



No	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Probe (dB/m)	Cable (dB)	Amp (dB)	Ant Pos (cm)	Table Pos (deg)	Type
1		48.187	30.108	14.366	-33.392	63.500	9.315	6.426	0.000	239	288	QP
2		120.574	29.036	9.328	-34.464	63.500	12.275	7.432	0.000	318	292	QP
3	*	144.581	45.434	27.229	-18.066	63.500	10.746	7.459	0.000	181	29	QP
4		168.831	30.006	12.685	-33.494	63.500	9.834	7.486	0.000	224	201	QP
5		236.852	29.567	10.927	-33.933	63.500	11.024	7.616	0.000	103	47	QP
6		766.109	32.032	3.114	-31.468	63.500	20.129	8.789	0.000	320	49	QP

Note:

1. " * ", means this data is the worst emission level.
2. Measurement Level = Reading Level + Factor(Probe+Cable-Amp).

4.6. Test Photograph

Test Mode: Mode 1

Description: Front View of Radiated Emission Test Setup (Below 1GHz)



Test Mode: Mode 1

Description: Rear View of Radiated Emission Test Setup (Below 1GHz)



Test Mode: Mode 1

Description: Front View of Radiated Emission Test Setup (Below 1GHz)



Test Mode: Mode 1

Description: Rear View of Radiated Emission Test Setup (Below 1GHz)



5. Attachment

➢ EUT Photograph

(1) EUT Photo



(2) EUT Photo



(3) EUT Photo



(4) EUT Photo



(5) EUT Photo



(6) EUT Photo



The End