



EMC TEST REPORT

For

Shenzhen WELLAUTO Technology CO.,LTD

Industrial Ethernet Switch Module

Test Model: AU7 149-6AA23-ECT

Additional Model No.: Please Refer To Page 9

Prepared for : Shenzhen WELLAUTO Technology CO.,LTD
The Room 402, 405, Building C, Fenda High-tech Park,
Address : Xixiang Hangcheng Street, Bao'an District, Shenzhen
city, China

Prepared by : Shenzhen LCS Compliance Testing Laboratory Ltd.
Room 101, 201, Building A and Room 301, Building C,
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Date of receipt of test sample : May 22, 2024
Number of tested samples : 1
Serial number : Prototype
Date of Test : May 22, 2024 to May 24, 2024
Date of Report : February 14, 2025



**TEST REPORT****Report No.** : LCSA05204206E001**Date of Issue** : February 14, 2025**Testing Laboratory Name** : Shenzhen LCS Compliance Testing Laboratory Ltd.**Address** : Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China**Testing Location/ Procedure** : Full application of Harmonised standards ■
Partial application of Harmonised standards □
Other standard testing method □**Applicant's Name** : Shenzhen WELLAUTO Technology CO.,LTD**Address** : The Room 402, 405, Building C, Fenda High-tech Park, Xixiang Hangcheng Street, Bao'an District, Shenzhen city, China**Test Specification****Standard** : EN IEC 61000-6-3:2021
EN IEC 61000-6-1:2019**Test Report Form No** : LCSEMC-1.0**TRF Originator** : Shenzhen LCS Compliance Testing Laboratory Ltd.**Master TRF** : Dated 2011-03**Shenzhen LCS Compliance Testing Laboratory Ltd. All rights reserved.**

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Test Item Description : Industrial Ethernet Switch Module**Trade Mark** : WELLAUTO**Test Model** : AU7 149-6AA23-ECT**Result** : Positive**Compiled by:**

Emma wang / File Administrator

Supervised by:

Cary Luo/ Technique principal

Approved by:

Gavin Liang / Manager



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TEST REPORT

Test Report No.: LCSA05204206E001	<u>February 14, 2025</u> Date of issue
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Test Model	: AU7 149-6AA23-ECT
EUT	: Industrial Ethernet Switch Module
Applicant	: Shenzhen WELLAUTO Technology CO.,LTD
Address	: The Room 402, 405, Building C, Fenda High-tech Park, Xixiang Hangcheng Street, Bao'an District, Shenzhen city, China
Telephone	: /
Fax	: /
Manufacturer	: Shenzhen WELLAUTO Technology CO.,LTD
Address	: The Room 402, 405, Building C, Fenda High-tech Park, Xixiang Hangcheng Street, Bao'an District, Shenzhen city, China
Telephone	: /
Fax	: /
Factory	: Shenzhen WELLAUTO Technology CO.,LTD
Address	: The Room 402, 405, Building C, Fenda High-tech Park, Xixiang Hangcheng Street, Bao'an District, Shenzhen city, China
Telephone	: /
Fax	: /

Test Result	Positive
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The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.



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Revision History

Report Version	Issue Date	Revision Content	Revised By
000	May 25, 2024	Initial Issue	/
001	February 14, 2025	This report replaces the report No. LCSA05204206E, and the original report is invalid.	Emma wang





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1. TEST STANDARDS

The tests were performed according to following standards:

EN IEC 61000-6-3:2021: Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for equipment in residential environments

EN IEC 61000-6-1:2019: Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity standard for residential, commercial and light-industrial environments



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2. SUMMARY OF STANDARDS AND RESULTS

2.1 Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

Description of Test Item	Standard	Limits	Result
Conducted disturbances from DC mains power port	EN IEC 61000-6-3:2021	Table 4	Pass
Radiation disturbance (30MHz-1GHz)	EN IEC 61000-6-3:2021	Table 3	Pass
Electrostatic discharge	EN IEC 61000-6-1:2019	Table 1.4	Pass
Radio-frequency electromagnetic field	EN IEC 61000-6-1:2019	Table 1.2 & 1.3	Pass
Fast transients on Input and output DC power ports	EN IEC 61000-6-1:2019	Table 3.3	Pass
Electrical fast transients / burst for analogue/digital data ports	EN 55035:2017/A11:2020	Table 2.3	Pass
Surges on Input and output DC power ports	EN IEC 61000-6-1:2019	Table 3.2	Pass
Surges for analogue/digital data ports	EN 55035:2017/A11:2020	Table 2.2	Pass
Radio-frequency common mode on Input and output DC power ports	EN IEC 61000-6-1:2019	Table 3.1	Pass
Continuous induced RF disturbances for analogue/digital data ports (150kHz-80MHz)	EN 55035:2017/A11:2020	Table 2.1	Pass





2.2 Description of Test Modes

No	Title	Description
TM1	Working(DC 24V)	Record

2.3 Description of Performance Criteria

Performance criteria A

The EUT shall continue to operate as intended during and after the test. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the EUT is used as intended. If the performance level is not specified by the manufacturer, this may be derived from the product description and documentation and what the user may reasonably expect from the equipment if used as intended.

Performance criteria B

The EUT shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the EUT is used as intended. The performance level may be replaced by a permissible loss of performance. However, during the test degradation of performance is allowed but no change of actual operating state or stored data is allowed. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, either of these may be derived from the product description and documentation and what the user may reasonably expect from the equipment if used as intended.

Performance criteria C

Temporary loss of function is allowed during the test, provided the function is self-recoverable or can be restored by the operation of the controls.





3. GENERAL INFORMATION

3.1 Description of Device (EUT)

EUT	: Industrial Ethernet Switch Module
Test Model	: AU7 149-6AA23-ECT AU7 149H-06A2GF, AU7 149H-08A2GF, AU7 149H-08A4GF, AU7 149H-16A4GF, AU7 149H-24B4GF, AU7 145-4A2ST-ECT, AU7 145-4B2ST-ECT, AU7 149-4AA23-ECT, AU7 149-4A0GF-ECT, AU7 149-6A0GF-ECT, AU7 149-5A0GF, AU7 149-8A0GF,
Additional Model No.	: AU7 149-5AA23-PNT, AU7 149-8AA23-PNT, AU7 148-WFB23-STA, AU7 148-WFB23-AP, AU7 145-1AA23, AU7 149-16A0GF, AU7 149-5A0GF-YT, AU7 149-8A0GF-YT, AU7 150-5A0GF-YT, AU7 150-8A0GF-YT, AU7 149-8A0GF-M12, AU7 150-8A0GF-M12, AU7 150-16A0GF, AU7 149-16A0GF-YT, AU7 150-16A0GF-YT
Model Declaration	: PCB board, structure and internal of these model(s) are the same, So no additional models were tested
Power Supply	: DC 18-28V
Highest Internal Frequency	: Less than 108MHz

3.2 Support equipment List

The EUT was tested as an independent device.

3.3 Description of Test Facility

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. To CISPR 16 – 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements” and is documented in the LCS quality system acc. To DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

NVLAP Accreditation Code is 600167-0.

FCC Designation Number is CN5024.

CAB identifier is CN0071.

CNAS Registration Number is L4595.

3.4 Measurement Uncertainty

Test Item	Measurement Uncertainty
Radiated Emission (30MHz to 1000MHz)	± 3.48 dB
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	





4. MEASURING DEVICES AND TEST EQUIPMENT

Conducted disturbances from AC mains power port

Equipment	Manufacturer	Model No	Serial No.	Cal Date	Due Date
EMI Test Software	Farad	EZ	/	/	/
Artificial Mains	R&S	ENV216	101288	2023-06-09	2024-06-08
Pulse Limiter	R&S	ESH3-Z2	102750-NB	2023-08-15	2024-08-14
EMI Test Receiver	R&S	ESR3	102312	2024-03-02	2025-03-01

Radiation disturbance (30MHz-1GHz)

Equipment	Manufacturer	Model No	Serial No.	Cal Date	Due Date
EMI Test Software	Farad	EZ	/	/	/
EMI Test Software	AUDIX	E3	/	/	/
By-log Antenna	SCHWARZBECK	VULB9163	9163-470	2021-09-12	2024-09-11
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1925	2021-09-05	2024-09-04
EMI Test Receiver	R&S	ESR3	102311	2023-08-15	2024-08-14
Broadband Preamplifier	/	BP-01M18G	P190501	2023-06-09	2024-06-08
EMI Test Receiver	R&S	ESCI7	101173	2023-10-25	2024-10-24
By-log Antenna	SchwarzZBECK	VULB9163	01428	2023-09-05	2024-09-04

Electrostatic discharge

Equipment	Manufacturer	Model No	Serial No.	Cal Date	Due Date
ESD Simulator	SCHLODER	SESD 230	604035	2023-07-17	2024-07-16

Radio-frequency electromagnetic field

Equipment	Manufacturer	Model No	Serial No.	Cal Date	Due Date
MXG Vector Signal Generator	Agilent	E4438C	MY42081396(6G)	2023-06-09	2024-06-08
RF POWER AMPLIFIER	SKET	HAP_0306G-50W	/	2023-06-09	2024-06-08
RF POWER AMPLIFIER	OPHIR	5225R	1052	2023-06-09	2024-06-08
RF POWER AMPLIFIER	OPHIR	5273F	1019	2023-06-09	2024-06-08
Stacked Broadband Log Periodic Antenna	SCHWARZBECK	STLP 9128	9128ES-145	/	/
Stacked Mikrowellen Log.-Per Antenna	SCHWARZBECK	STLP 9149	9149-484	/	/
RS Electric field probe	narda	EP601	611WX80208	2023-06-09	2024-06-08



**Fast transients on Input and output DC power ports****Electrical fast transients / burst for analogue/digital data ports**

Equipment	Manufacturer	Model No	Serial No.	Cal Date	Due Date
Electric fast pulse group generator	3ctest	EFT-4001G	EC0461044	2023-10-18	2024-10-17
Immunity Simulative Generator	EM TEST	UCS500-M4	0101-34	2023-08-15	2024-08-14
Immunity Simulative Generator	EM TEST	UCS500-M4	0101-34	2023-08-15	2024-08-14

Surges on Input and output DC power ports**Surges for analogue/digital data ports**

Equipment	Manufacturer	Model No	Serial No.	Cal Date	Due Date
Immunity Simulative Generator	EM TEST	UCS500-M4	0101-34	2023-08-15	2024-08-14
Communication wave lightning generator	HTEC	HTSG 70	181701	2023-10-18	2024-10-17
Symmetrical data line coupling network	HTEC	HCN 8	182701	2023-10-18	2024-10-17
Data line decoupling network	HTEC	HDEC 8	182702	2023-10-18	2024-10-17

Radio-frequency common mode on Input and output DC power ports**Continuous induced RF disturbances for analogue/digital data ports (150kHz-80MHz)**

Equipment	Manufacturer	Model No	Serial No.	Cal Date	Due Date
Simulator	FRANKONIA	CIT-10/75	A126A1195	2023-08-15	2024-08-14
CDN	FRANKONIA	CDN-M2+M3	A2210177	2023-06-09	2024-06-08
6dB Attenuator	FRANKONIA	DAM25W	1172040	2023-06-09	2024-06-08
Electromagnetic coupling injection clamp	ZHINAN	ZN23203	14017	2023-06-09	2024-06-08





5. EMISSION TEST RESULTS (EMI)

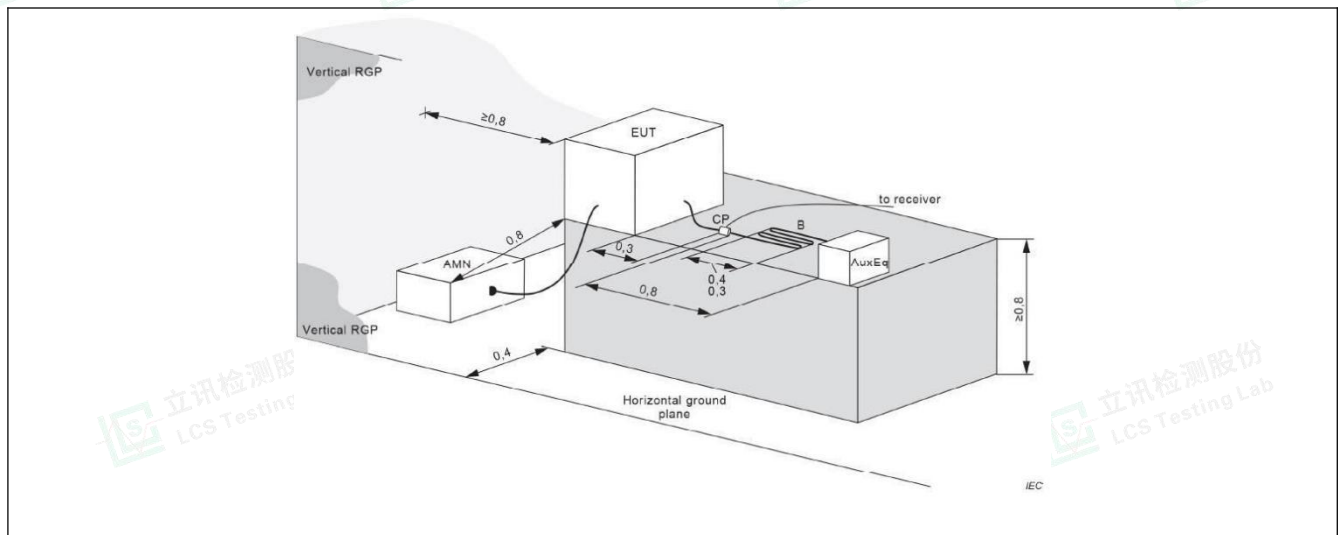
5.1 Conducted disturbances from AC mains power port

Test Requirement:	Table 4		
Test Limit:	Frequency range	Limits	
	0,15 MHz to 0,5 MHz	66 dB(uV) to 56 dB(uV) quasi-peak 56 dB(uV) to 46 dB(uV) average Limits decrease linearly with the logarithm of the frequency	
	0,5 MHz to 5 MHz	56 dB(uV) quasi-peak 46 dB(uV) average	
	5 MHz to 30 MHz	60 dB(uV) quasi-peak 50 dB(uV) average	
	At transitional frequencies the lower limit applies.		
Test Method:	CISPR 16-2-1 Clause 7		
Procedure:	An initial pre-scan was performed with peak detector. Quasi-Peak or Average measurement were performed at the frequencies with maximized peak emission were detected.		

5.1.1 E.U.T. Operation:

Operating Environment:			
Temperature:	24.4 °C	Humidity:	53 %
Pre test mode:	TM1		
Final test mode:	TM1		

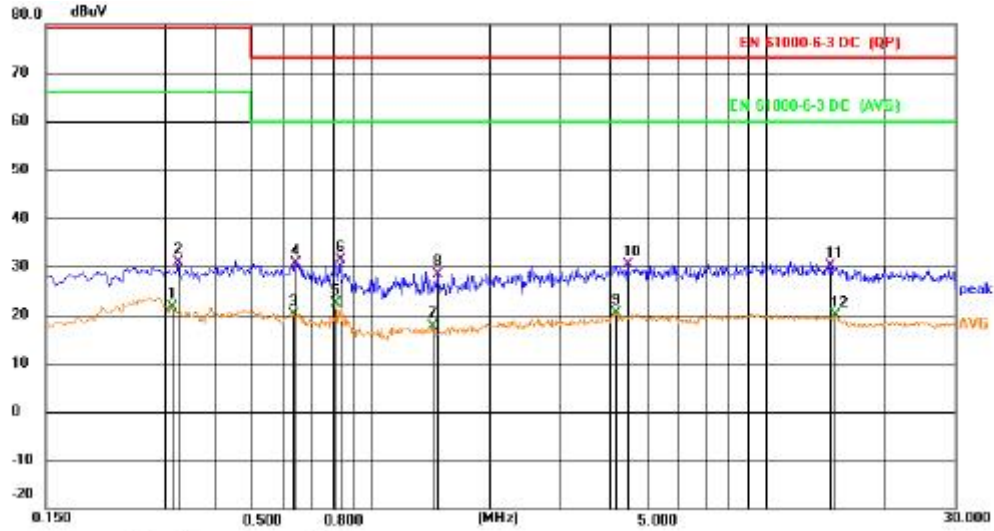
5.1.2 Test Setup Diagram:





5.1.3 Test Data:

TM1 / Line: Line



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin		
		MHz	dBuV	Factor	ment	dBuV	dB	Detector	Comment
1		0.3120	1.96	19.63	21.59	66.00	-44.41	AVG	
2		0.3256	11.23	19.63	30.86	79.00	-48.14	QP	
3		0.6360	0.59	19.66	20.25	60.00	-39.75	AVG	
4		0.6404	10.85	19.66	30.51	73.00	-42.49	QP	
5	*	0.8158	2.72	19.64	22.36	60.00	-37.64	AVG	
6		0.8385	11.86	19.64	31.50	73.00	-41.50	QP	
7		1.4279	-2.01	19.66	17.65	60.00	-42.35	AVG	
8		1.4775	8.74	19.66	28.40	73.00	-44.60	QP	
9		4.1641	0.46	19.80	20.26	60.00	-39.74	AVG	
10		4.4565	10.67	19.80	30.47	73.00	-42.53	QP	
11		14.4825	10.21	19.86	30.07	73.00	-42.93	QP	
12		14.9686	0.05	19.87	19.92	60.00	-40.08	AVG	



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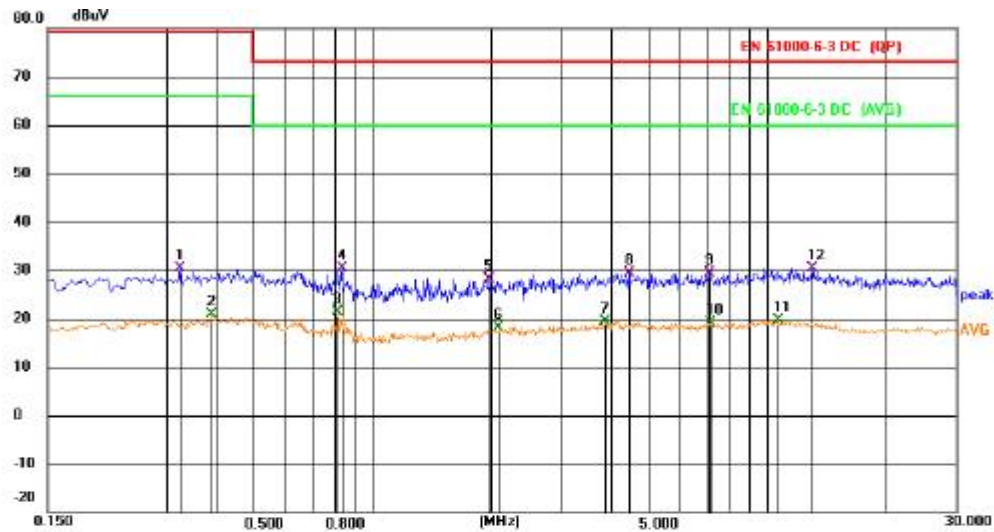
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TM1 / Line: Neutral



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.3256	10.73	19.63	30.36	79.00	-48.64	QP	
2		0.3930	1.22	19.63	20.85	60.00	-45.15	AVG	
3	*	0.8158	1.72	19.64	21.36	60.00	-38.64	AVG	
4		0.8385	10.86	19.64	30.50	73.00	-42.50	QP	
5		1.9679	8.55	19.68	28.23	73.00	-44.77	QP	
6		2.0895	-1.64	19.68	18.04	60.00	-41.96	AVG	
7		3.8896	-0.52	19.79	19.27	60.00	-40.73	AVG	
8		4.4565	9.67	19.80	29.47	73.00	-43.53	QP	
9		7.1745	9.66	19.83	29.49	73.00	-43.51	QP	
10		7.2106	-0.74	19.83	19.09	60.00	-40.91	AVG	
11		10.5810	-0.09	19.84	19.75	60.00	-40.25	AVG	
12		13.0110	10.48	19.84	30.32	73.00	-42.68	QP	





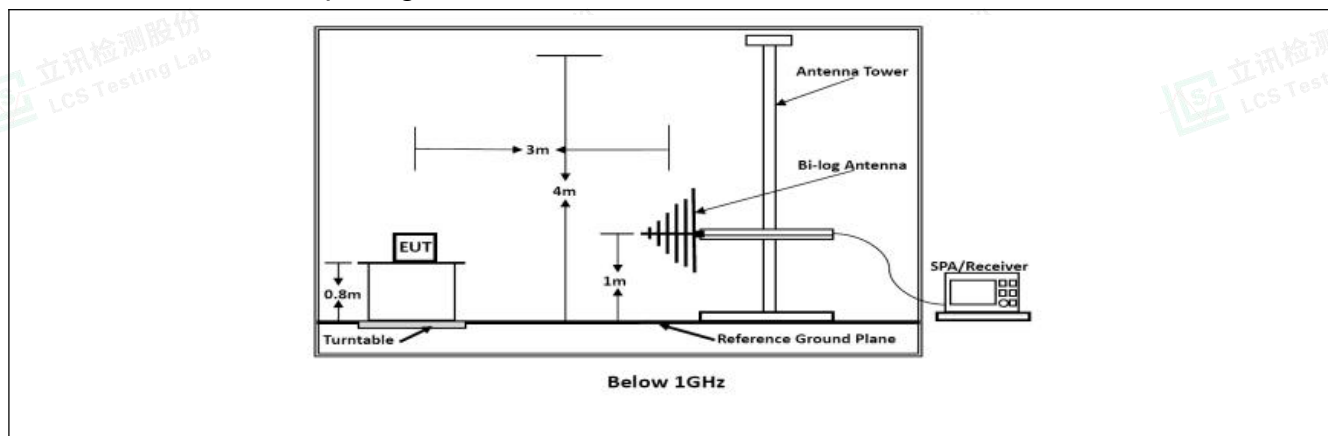
5.2 Radiation disturbance (30MHz-1GHz)

Test Requirement:	Table 3		
Test Limit:	Frequency range	Limits at 10m	Limits at 3m
	30 MHz to 230 MHz	30 dB(uV/m) quasi-peak	40 dB(uV/m) quasi-peak
	230 MHz to 1 000 MHz	37 dB(uV/m) quasi-peak	47 dB(uV/m) quasi-peak
	At transitional frequencies the lower limit applies.		
Test Method:	CISPR 16-2-3 Clause 7.3		
Procedure:	An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities. Level=Read Level + Antenna Factor + Cable Loss - Preamp Factor		

5.2.1 E.U.T. Operation:

Operating Environment:			
Temperature:	26.4 °C	Humidity:	54.2 %
Pre test mode:	TM1		
Final test mode:	TM1		

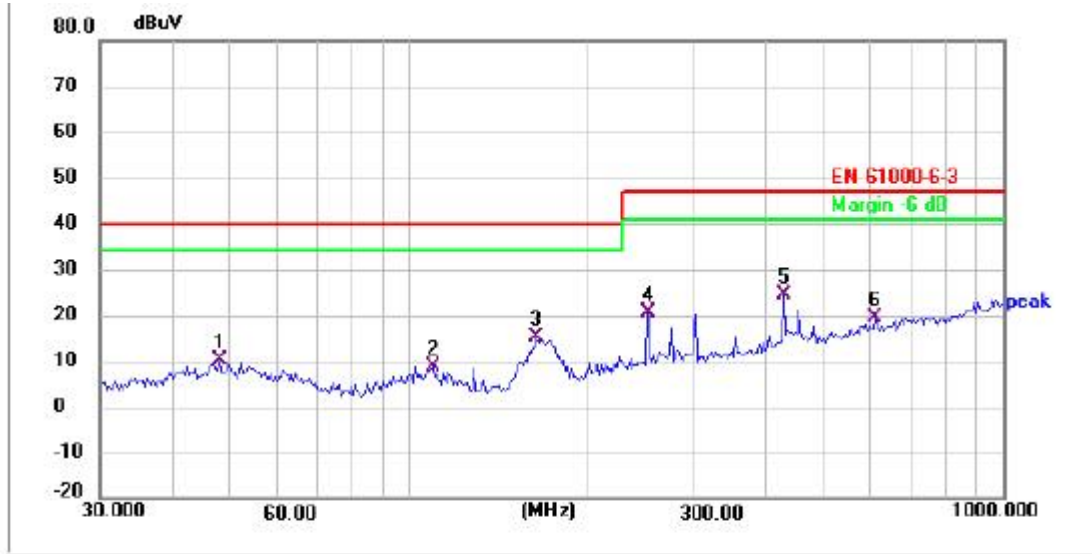
5.2.2 Test Setup Diagram:





5.2.3 Test Data:

TM1 / Polarization: Horizontal

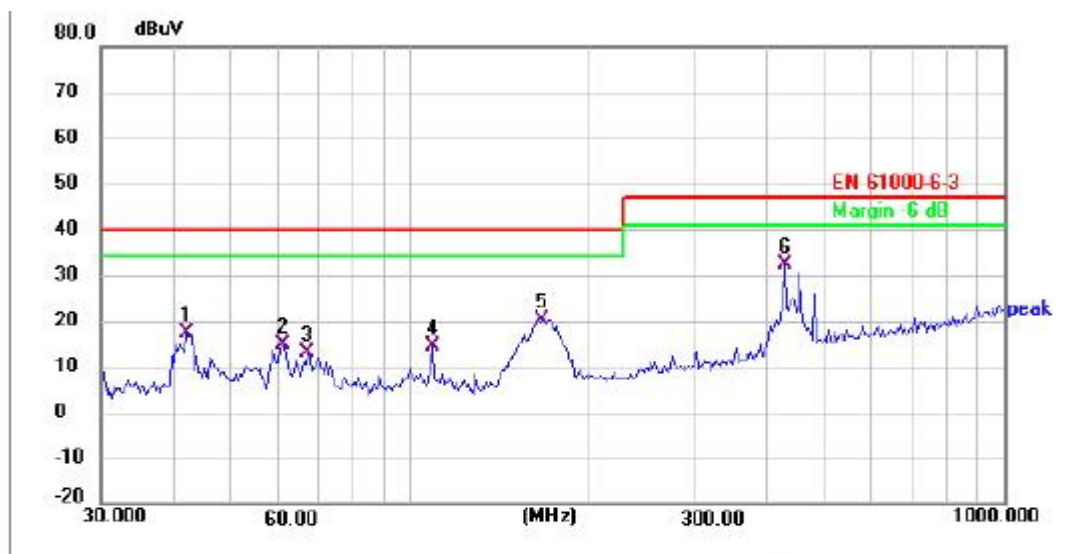


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	47.7028	27.06	-16.99	10.07	40.00	-29.93	QP			P	
2	109.3110	28.33	-19.45	8.88	40.00	-31.12	QP			P	
3	163.1622	37.23	-22.11	15.12	40.00	-24.88	QP			P	
4	252.2521	38.39	-17.75	20.64	47.00	-26.36	QP			P	
5 *	427.2920	38.77	-14.15	24.62	47.00	-22.38	QP			P	
6	607.1805	29.79	-10.47	19.32	47.00	-27.68	QP			P	





TM1 / Polarization: Vertical



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	41.7408	35.03	-17.64	17.39	40.00	-22.61	QP			P	
2	60.5770	33.60	-18.88	14.74	40.00	-25.26	QP			P	
3	66.8395	33.51	-20.33	13.18	40.00	-26.82	QP			P	
4	108.5455	33.91	-19.48	14.45	40.00	-25.55	QP			P	
5	166.6383	42.18	-21.95	20.23	40.00	-19.77	QP			P	
6 *	427.2920	46.39	-14.15	32.24	47.00	-14.76	QP			P	





6. IMMUNITY TEST RESULTS (EMS)

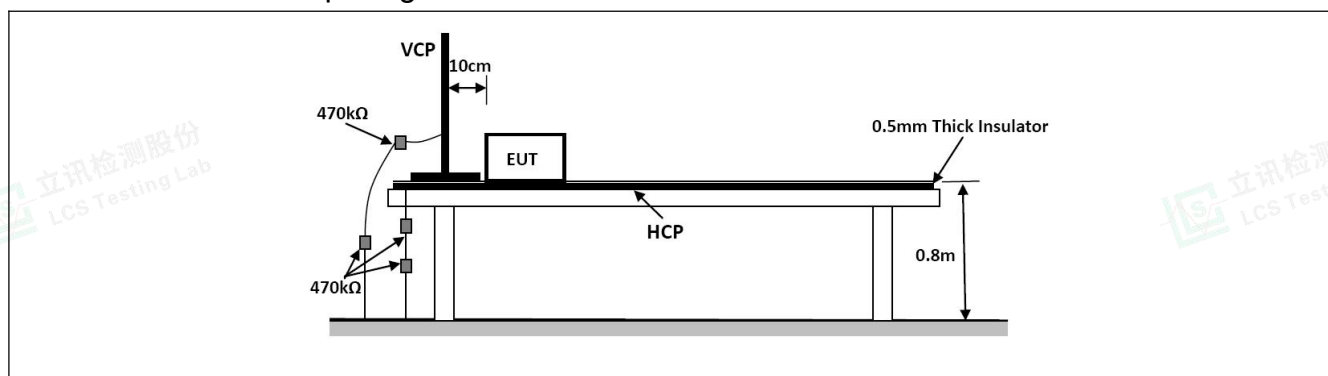
6.1 Electrostatic discharge

Test Requirement:	Table 1.4
Test Method:	EN 61000-4-2: 2009
Procedure:	Discharge Impedance: 330 Ω / 150 pF Discharge Voltage: Air Discharge: 8 kV; Contact Discharge: 4 kV; VCP/HCP: 4 kV. Polarity: Positive & Negative Number of Discharge: Minimum 10 times at each test point Discharge Mode: Single Discharge Discharge Period: 1 second minimum
Performance Criteria:	B

6.1.1 E.U.T. Operation:

Operating Environment:			
Temperature:	22.9 °C	Humidity:	48.7 %
Pre test mode:	TM1		
Final test mode:	TM1		

6.1.2 Test Setup Diagram:





6.1.3 Test Data:

Discharge type	Volt (kV)	Polarity	Test Point	Result/ Observations
Air discharge	8	+	1	A
Air discharge	8	-	1	A
Contact discharge	4	+	2	A
Contact discharge	4	-	2	A
Horizontal Coupling	4	+	3	A
Horizontal Coupling	4	-	3	A
Vertical Coupling	4	+	3	A
Vertical Coupling	4	-	3	A

Test Point: 1. All insulated enclosure and seams.

2. All accessible metal parts of the enclosure.

3. All side.

A: No degradation in the performance of the EUT was observed.





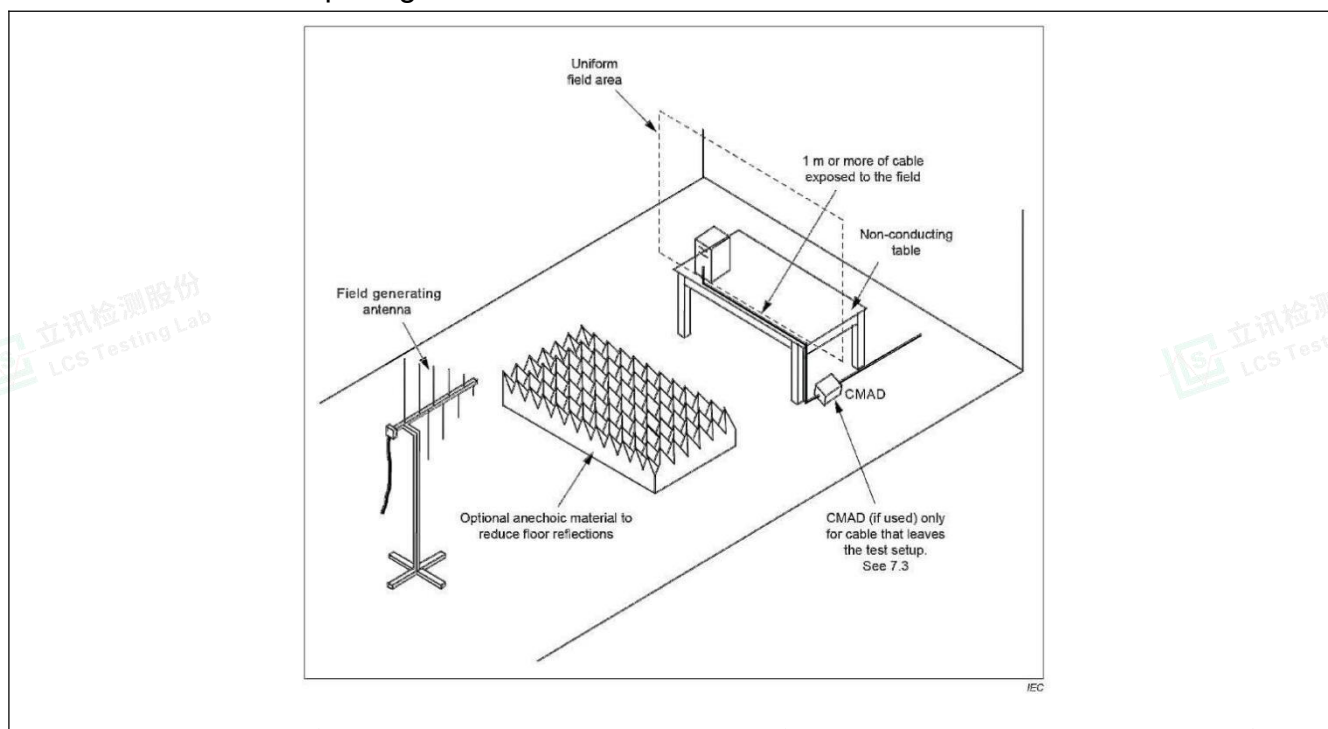
6.2 Radio-frequency electromagnetic field

Test Requirement:	Table 1.2 & 1.3
Test Method:	EN IEC 61000-4-3:2020
Procedure:	Antenna Polarisation: Vertical and Horizontal Modulation: 1kHz,80% Amp. Mod,1% increment Frequency Range: 80MHz to 1GHz, 1.4GHz to 6GHz
Performance Criteria:	A

6.2.1 E.U.T. Operation:

Operating Environment:			
Temperature:	22.9 °C	Humidity:	48.7 %
Pre test mode:	TM1		
Final test mode:	TM1		

6.2.2 Test Setup Diagram:





6.2.3 Test Data:

Frequency	Field Strength (V/m)	EUT face	Dwell time	Result/ Observations
80MHz-1GHz	3	Front	2s	A
80MHz-1GHz	3	Back	2s	A
80MHz-1GHz	3	Left	2s	A
80MHz-1GHz	3	Right	2s	A
80MHz-1GHz	3	Top	2s	A
80MHz-1GHz	3	Bottom	2s	A
1.4GHz-6GHz	3	Front	2s	A
1.4GHz-6GHz	3	Back	2s	A
1.4GHz-6GHz	3	Left	2s	A
1.4GHz-6GHz	3	Right	2s	A
1.4GHz-6GHz	3	Top	2s	A
1.4GHz-6GHz	3	Bottom	2s	A

A: No degradation in the performance of the EUT was observed.





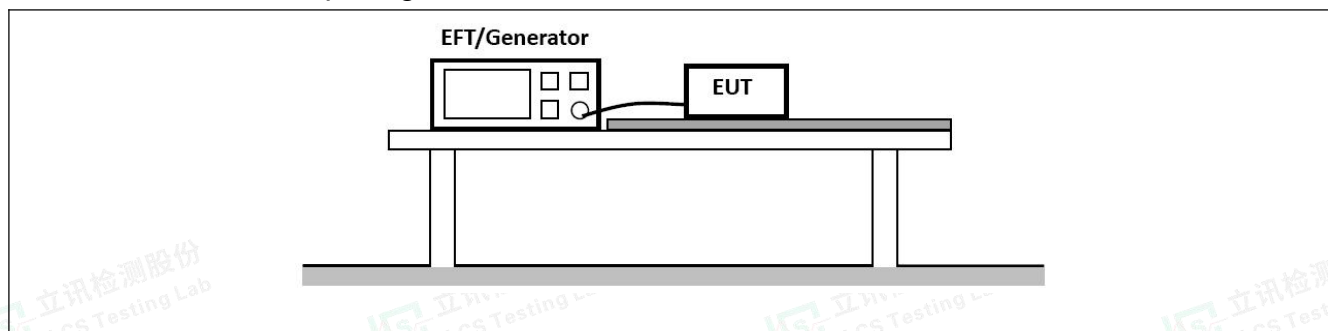
6.3 Fast transients on Input and output DC power ports

Test Requirement:	Table 3.3
Test Method:	EN 61000-4-4:2012
Procedure:	Repetition Frequency: 5kHz or 100kHz Burst Period: 300ms Test Duration: 2 minute per level & polarity Test Level: 0.5kV
Performance Criteria:	B

6.3.1 E.U.T. Operation:

Operating Environment:			
Temperature:	22.9 °C	Humidity:	48.7 %
Pre test mode:	TM1		
Final test mode:	TM1		

6.3.2 Test Setup Diagram:



6.3.3 Test Data:

Port	Volt (kV)	Polarity	CDN/ Clamp	Result/ Observations
DC power port	0.5	+	CDN	B
DC power port	0.5	-	CDN	B

A: No degradation in the performance of the EUT was observed.





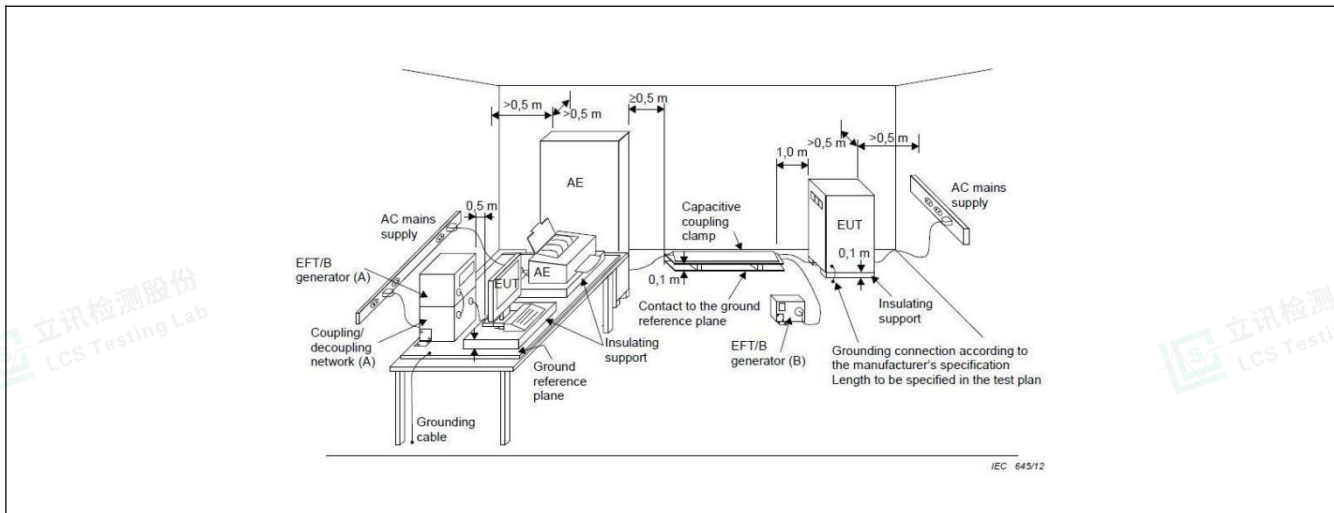
6.4 Electrical fast transients / burst for analogue/digital data ports

Test Requirement:	0.5kV; 5/50ns Tr/Th; 5kHz Repetition Frequency
Test Method:	EN 61000-4-4: 2012
Procedure:	Repetition Frequency: 5kHz Burst Period: 300ms Test Duration: 2 minute per level & polarity
Performance Criteria:	B

6.4.1 E.U.T. Operation:

Operating Environment:			
Temperature:	22.9 °C	Humidity:	48.7 %
Pre test mode:	TM1		
Final test mode:	TM1		

6.4.2 Test Setup Diagram:



6.4.3 Test Data:

Port	Volt (kV)	Polarity	CDN/ Clamp	Result/ Observations
Signal port	0.5	+	Clamp	B
Signal port	0.5	-	Clamp	B





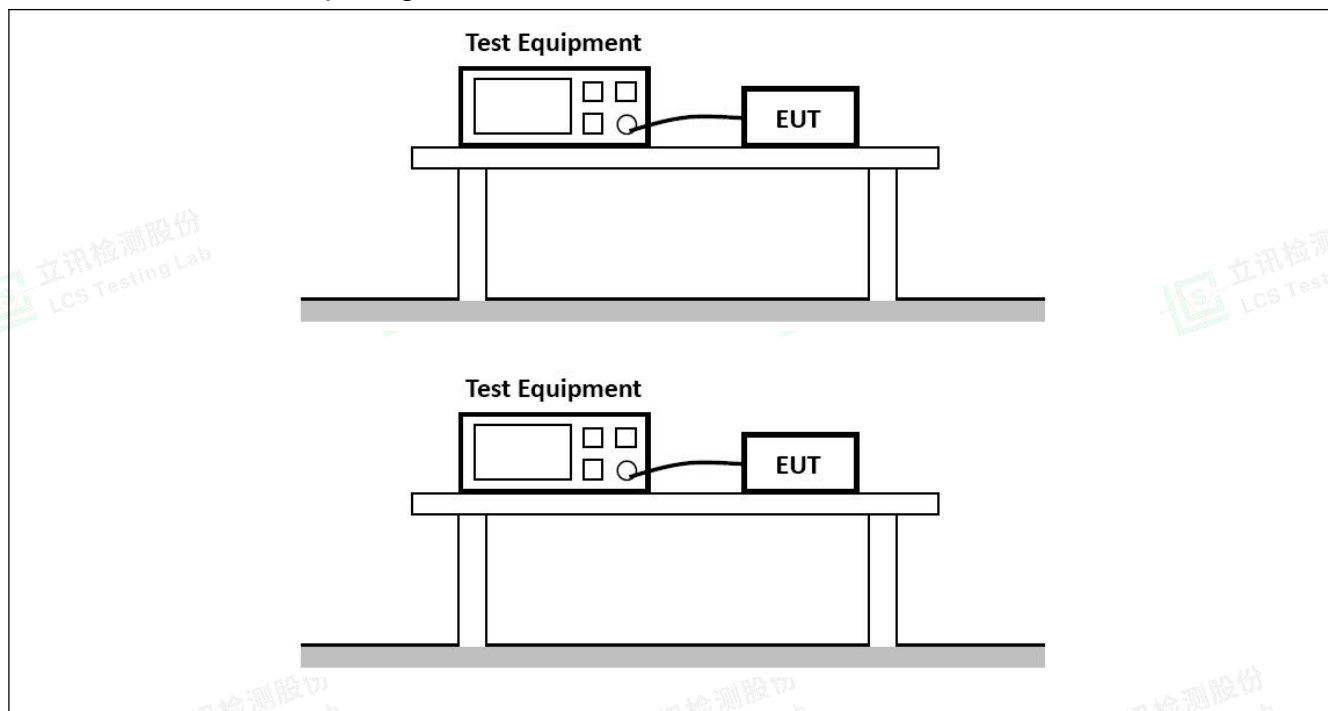
6.5 Surges on Input and output DC power ports

Test Requirement:	Table 3.2
Test Method:	EN 61000-4-5:2014+A1:2017
Procedure:	Interval: 60s between each surge No. of surges: 5 positive, 5 negative Test Level: Line to Earth 0.5kV, 1kV Line to Line 0.5kV
Performance Criteria:	B

6.5.1 E.U.T. Operation:

Operating Environment:			
Temperature:	22.9 °C	Humidity:	48.7 %
Pre test mode:	TM1		
Final test mode:	TM1		

6.5.2 Test Setup Diagram:





6.5.3 Test Data:

Port	Volt (kV)	Polarity	Result/ Observations
Line-L	0.5	+	B
P-N	0.5	-	B
P-E	0.5	+	B
P-E	0.5	-	B
P-E	1	+	B
P-E	1	-	B
N-E	0.5	+	B
N-E	0.5	-	B
N-E	1	+	B
N-E	1	-	B

A: No degradation in the performance of the EUT was observed.





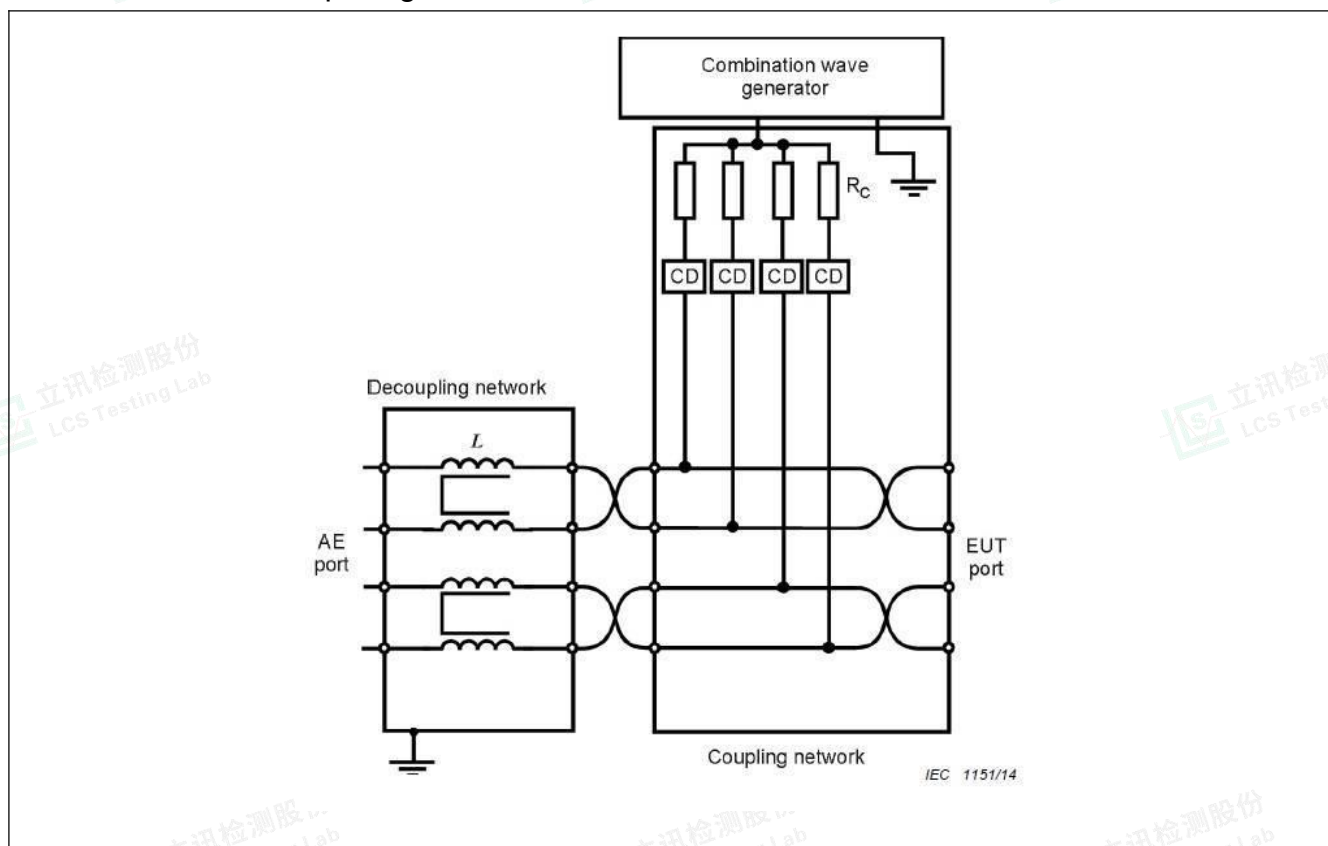
6.6 Surges for analogue/digital data ports

Test Requirement:	1.2/50 μ s Tr/Td; 1 kV Shield to Ground
Test Method:	EN 61000-4-5: 2014 +A1: 2017
Procedure:	Interval: 60s between each surge
Performance Criteria:	B

6.6.1 E.U.T. Operation:

Operating Environment:			
Temperature:	22.9 °C	Humidity:	48.7 %
Pre test mode:	TM1		
Final test mode:	TM1		

6.6.2 Test Setup Diagram:



6.6.3 Test Data:

Port	Line	Waveform(μ s)	Volt (kV)	Polarity	Result/ Observations
Signal port	Shield-Ground	1,2/50 (8/20)	1	+	B
Signal port	Shield-Ground	1,2/50 (8/20)	1	-	B





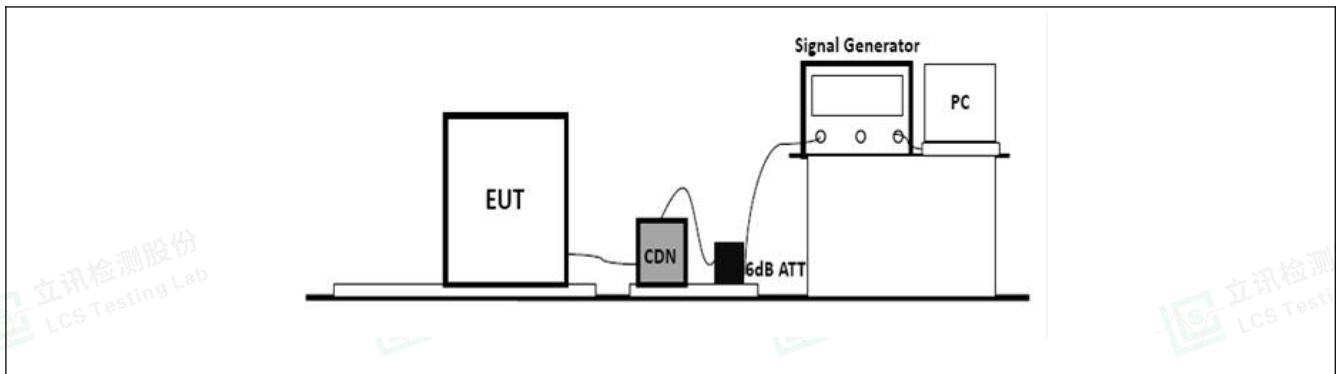
6.7 Radio-frequency common mode on Input and output DC power ports

Test Requirement:	Table 3.1
Test Method:	EN 61000-4-6:2014
Procedure:	Frequency Range: 0.15MHz to 80MHz Modulation: 80%, 1kHz Amplitude Modulation Step Size 1%
Performance Criteria:	A

6.7.1 E.U.T. Operation:

Operating Environment:			
Temperature:	22.9 °C	Humidity:	48.7 %
Pre test mode:	TM1		
Final test mode:	TM1		

6.7.2 Test Setup Diagram:



6.7.3 Test Data:

Port	Strength (Vrms)	CDN/Clamp	Dwell Time	Result /Observation
DC power input port	10	CDN	3s	A

A: No degradation in the performance of the EUT was observed.





7. TEST SETUP PHOTOS

Radiation disturbance (30MHz-1GHz)



Electrostatic discharge





Radio-frequency electromagnetic field



Fast transients on Input and output DC power ports Surges on Input and output DC power ports Electrical fast transients / burst for analogue/digital data ports Surges for analogue/digital data ports





**Radio-frequency common mode on Input and output DC power ports
Continuous induced RF disturbances for analogue/digital data ports
(150kHz-80MHz)**





8. EUT CONSTRUCTIONAL DETAILS (EUT PHOTOS)

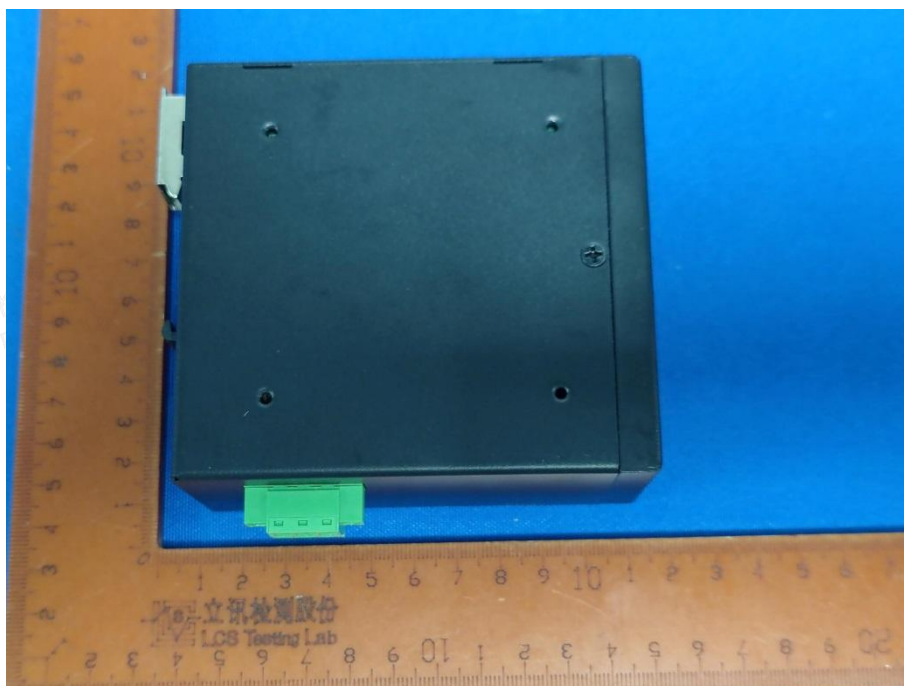


Fig. 1

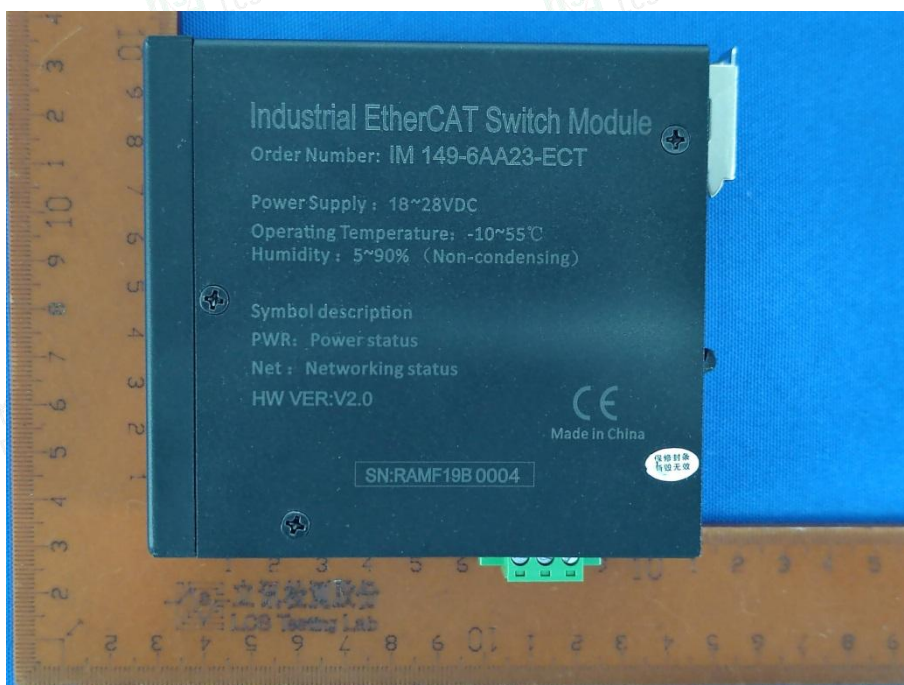


Fig. 2



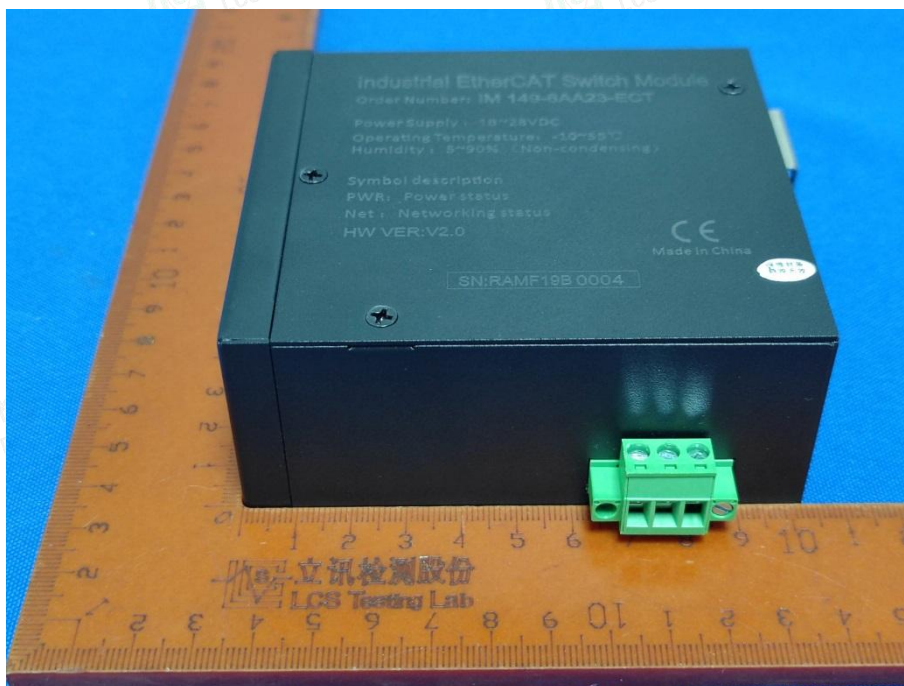


Fig. 3



Fig. 4





Fig. 5

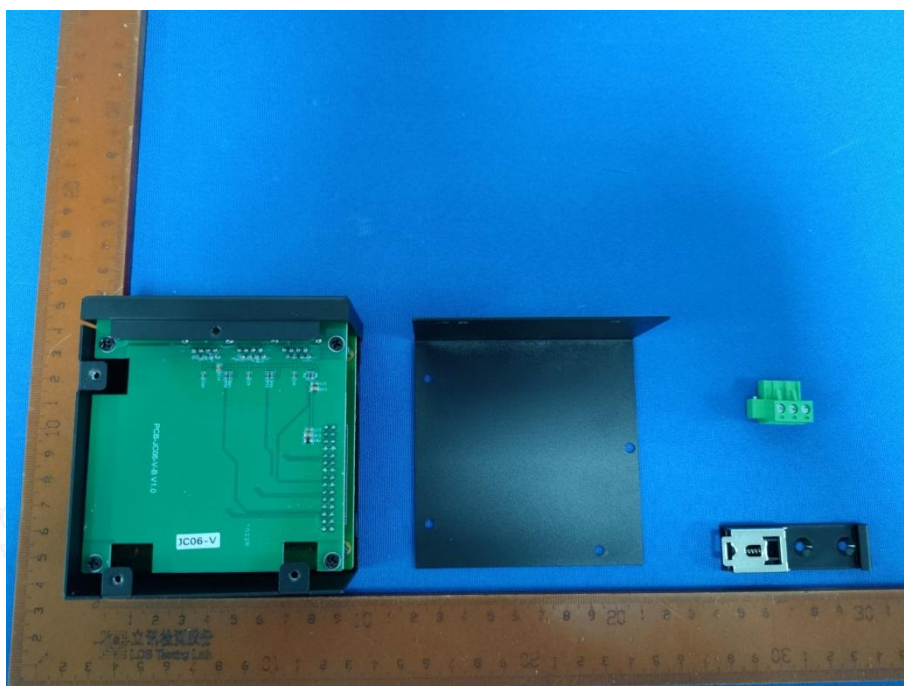


Fig. 6



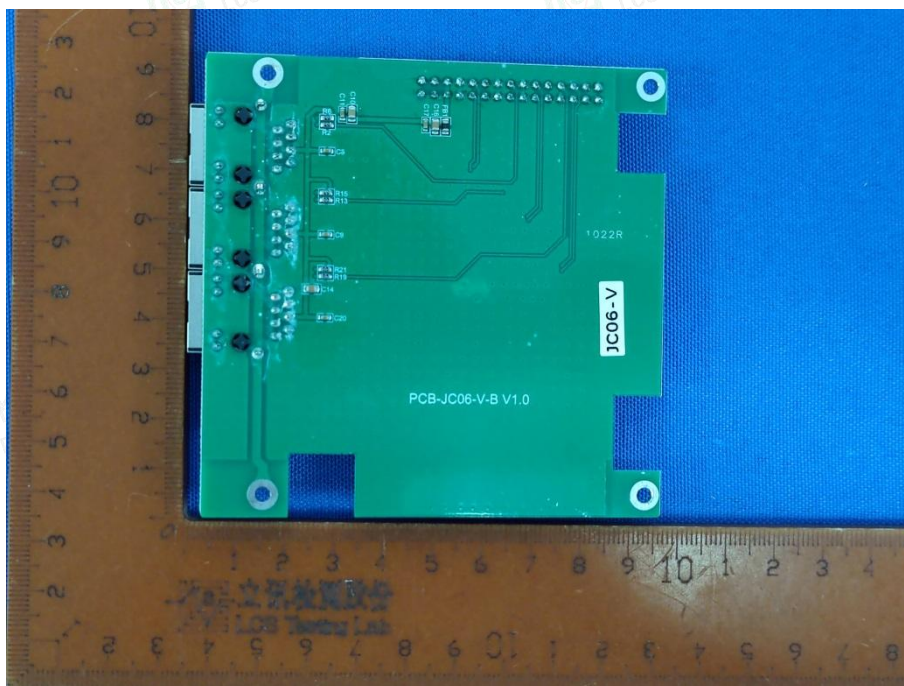


Fig. 7

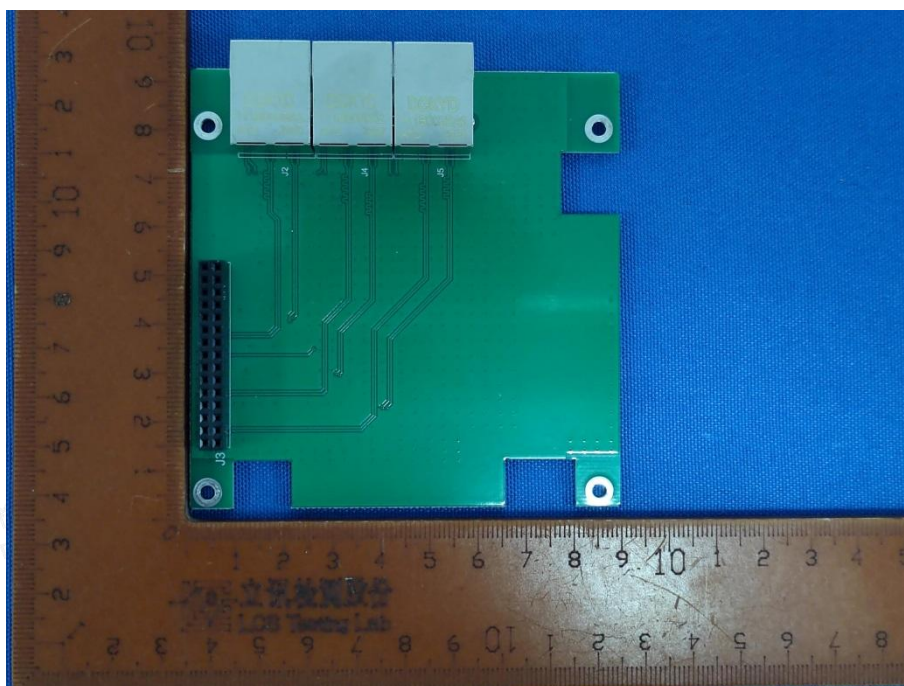


Fig. 8



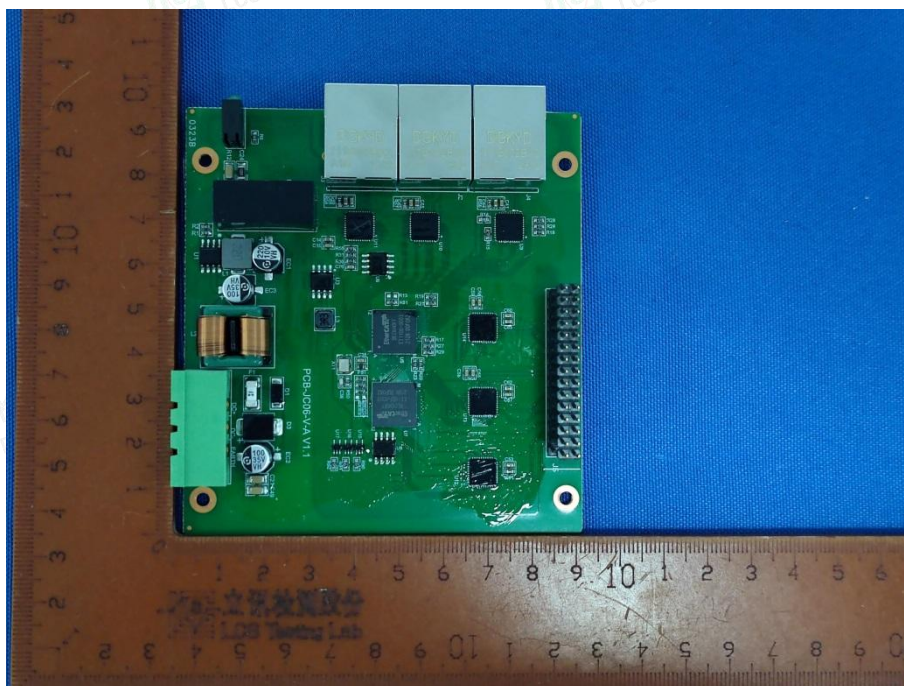


Fig. 9

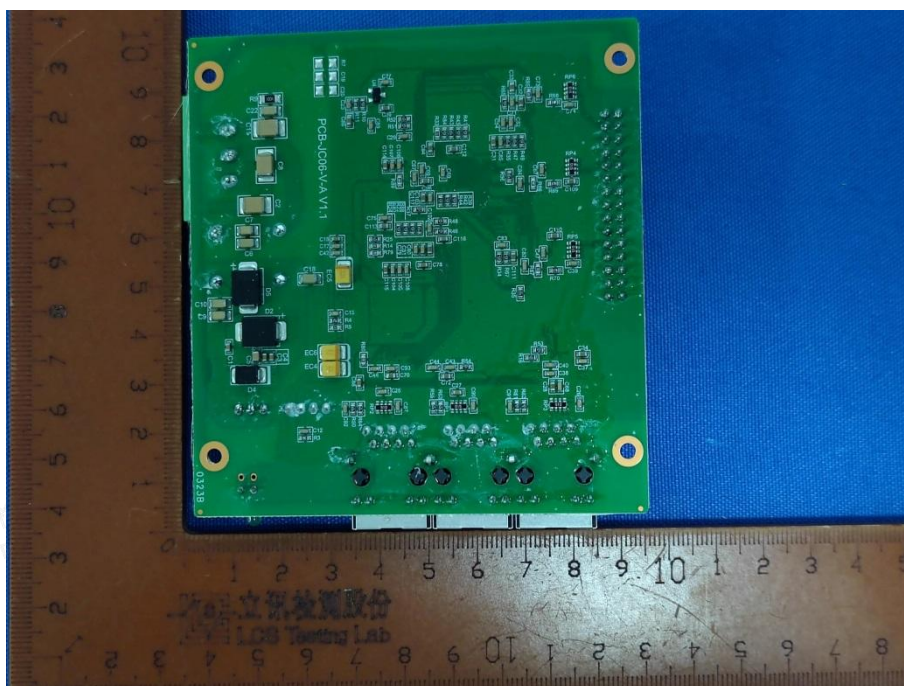


Fig. 10

--- End of Report ---

