

Applicant: LUSMAR SRL
Address: str. Ana Ipatescu nr. 20A, Craiova, Dolj, Romania
Manufacturer: LUSMAR SRL
Manufacturer Address: str. Ana Ipatescu nr. 20A, Craiova, Dolj, Romania
Sample Name: H7 Led headlight bulb
Model No.: H7-IN50

The submitted samples of the above equipment has been tested and found to comply with the following European Directives:

RoHS Directive 2011/65/EU Annex II amending Directive (EU) 2015/863

Applicable Standard(s):

**IEC 62321-1:2013, IEC 62321-2:2013, IEC 62321-3-1:2013, IEC 62321-4:2013+A1:2017 CSV,
IEC 62321-5:2013, IEC 62321-6:2015, IEC 62321-7-1:2015, IEC 62321-7-2:2017,
IEC 62321-8:2017**

Test Report(s) Number:
FTC25378037

The submitted samples have been tested by FTC with the listed standards and found in conformity with the Directive 2011/65/EU Annex II amending Directive (EU) 2015/863 of the European Parliament and of the Council with regard to the restriction of the use of certain hazardous substances in electrical and electronic equipment. It is possible to use CE marking to demonstrate the conformity with this Directive.

This certification is part of the full test report(s) and should be read in conjunction with it. The certificate is based on a single evaluation of one sample of above-mentioned products. It does not imply an assessment of the whole production during the RoHS assessment.

The CE mark as shown below can be used under the responsibility of the relevant finished-product manufacturer, after completion of an EU Declaration of Conformity and compliances with all relevant EU Directives.



RoHS

Signature: _____



Test Verification of Conformity

On the basis of the referenced test report(s), the sample(s) of the below product has been found to comply with the relevant harmonized standard(s) to the directive(s) listed on this verification at the time the tests were carried out. The manufacturer may indicate compliance to only the said directives by signing a DoC himself and may affix the CE marking to products identical to the tested sample(s) if the product complies with all CE marking directives that has the product in their scope. In addition, the manufacturer shall file and keep the documentation according to the rules of the applicable directive(s) and shall consider changes of the standards as they may occur.

Applicant Name & Address : LUSMAR SRL
str. Ana Ipatescu nr. 20A, Craiova, Dolj, Romania

Manufacturer Name & Address : LUSMAR SRL
str. Ana Ipatescu nr. 20A, Craiova, Dolj, Romania

Product Name : H7-IN50

Model No. : H7 Led headlight bulb

Variants : See the report for details.

Trade mark : LUSMAR

Electrical Rating : DC 12V

Relevant Standard(s) : EN 50498: 2010

/Specification(s) / Electromagnetic compatibility (EMC) — Product family

Directive(s) standard for aftermarket electronic equipment in vehicles

Measured by the method described in Automotive

EMC Directive 2014/30/EU

Report Number(s) : SQT2509110

Test Result : Pass

Note 1 : This verification is part of the full test report(s) and should be read in conjunction with it.



Approved by



数字签名者: 练国辉
DN: c=CN, st=广东省, l=广
州市, o=广州顺泰质量技术
服务有限公司, cn=练国辉
日期: 2025.10.13 11:30:48
+08'00'

Technical Supervisor



Guangzhou Shuntai Quality Technical Service Co.,Ltd
Room 101, Building 1, No.63, Punan Road, Huangpu District,
Guangzhou, Guangdong, China

Web: www.gzst-test.com

Tel : 0086-020-29840423

Email: service@gzst-test.com

Test Report

Applicant Name & Address:	LUSMAR SRL str. Ana Ipatescu nr. 20A, Craiova, Dolj, Romania
Manufacturer Name & Address:	LUSMAR SRL str. Ana Ipatescu nr. 20A, Craiova, Dolj, Romania
Product Name:	H7-IN50
Model No.:	H7 Led headlight bulb
Variants:	/
Trade mark:	LUSMAR
Electrical Rating:	DC 12V
Date Received:	2025-08-21
Date Test Conducted:	2025-08-21 to 2025-08-24
Prepared by:	Guangzhou Shuntai Quality Technical Service Co., Ltd.
Test Standard(s):	EN 50498: 2010 Electromagnetic compatibility (EMC) — Product family standard for aftermarket electronic equipment in vehicles Measured by the method described in Automotive EMC Directive 2014/30/EU
Test Result:	Pass
Conclusion:	In the configuration tested, the DUT complied with the standards specified above.

Prepared and Checked By:

Allen Ou

Allen Ou

Project Engineer



Approved by

Signature

Kent Lian

Technical Supervisor

2025-10-13 Issued Date

Statement

1. The report is invalid without "special stamp for inspection and testing".
2. Failure to affix "special seal for inspection and testing" to the copy report is invalid, and some copies are invalid.
3. The report is invalid without the signature and seal of the person preparing, reviewing and approving it.
4. The report is invalid if altered.
5. If there is any objection concerning the report, please inform us within 15 days from the date of receiving the report.
6. This test is only responsible for incoming samples, and the report is only valid for this test.
7. The decision rules for statements of conformity in this report is based on the simple acceptance of ILAC - G8:09/2019.

CONTENT

Test Report	1
Statement	2
CONTENT	3
1. Description of version	4
2. Test summary	5
3. Measurement uncertainty	5
4. LABORATORY MEASUREMENTS	6
4.1 Configuration Information	6
4.2 Worse Case Description	6
4.3 Block diagram of DUT configuration	7
4.4 Support Equipment	7
4.5 Explanation of test method deviation	7
5. TEST ITEM AND RESULTS	8
5.1 Radiated emissions	8
5.1.1 Test Required	8
5.1.2 Used Test Equipment	8
5.1.3 Test Setup and Procedure	8
5.1.4 Test Results	11
5.1.5 Test Photos	15
5.2 Conducted transient emission	16
5.2.1 Test Required	16
5.2.2 Used Test Equipment	16
5.2.3 Test Setup and Procedure	16
5.2.4 Test Results	17
5.2.5 Test Photos	18
5.3 Conducted Transient Immunity	19
5.3.1 Test Required	19
5.3.2 Used Test Equipment	19
5.3.3 Test Setup and Procedure	19
5.3.4 Test Results	20
5.3.5 Test Photos	20
6. Photographs of DUT	21

1. Description of version

Version No.	Issue Date	Description	Approved
V0	2025-10-13	Original	Valid

2. Test summary

Test item	Test Method	Result
Broadband radiated disturbances/ Narrowband disturbances	EN 50498: 2010 Measured by the method described in EMC Directive 2014/30/EU	PASS
Conducted transient disturbances emission	EN 50498: 2010 Measured by the method described in EMC Directive 2014/30/EU	PASS
Transient Conducted Immunity	EN 50498: 2010 Measured by the method described in EMC Directive 2014/30/EU	PASS
Remark: The symbol "N/A" in above table means <u>N</u> ot <u>A</u> pplicable. When determining the test results, measurement uncertainty of tests has been considered. This test covers all possible operating modes of the device, only the worst data are list in report. The worst data is the nearest standard limit which were recorded in this report.		

3. Measurement uncertainty

The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

Test item	Frequency	Expanded Uncertainty (U_{Lab})
Broadband radiated disturbances/ Narrowband radiated disturbances	30MHz to 300 MHz	± 4.86 dB
	300MHz to 1000 MHz	± 5.42 dB
Conducted transient disturbances emission	/	± 4.1 V

4.LABORATORY MEASUREMENTS

4.1 Configuration Information

Product name	H7-IN50	
Category	Component	
Model No.	H7 Led headlight bulb	
Software version	/	
Hardware version	/	
Quantity of sample	1pcs	
Sample No.	Q2508178-004	
Operating Mode	MO# 1	Normal operation
Test Voltage	DC 13.5V	
Tested Setup	Remotely grounded/ Locally grounded	
Electronic oscillator with frequency greater than 9 kHz	YES	
Noise floor of the measurement system shall be at least 6 dB lower than the applicable limits	YES	
Test Laboratory	Guangzhou Shuntai Quality Technical Service Co., Ltd. Room 101, Building 1, No.63, Punan Road, Huangpu District, Guangzhou, Guangdong, China	

Note: The above DUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

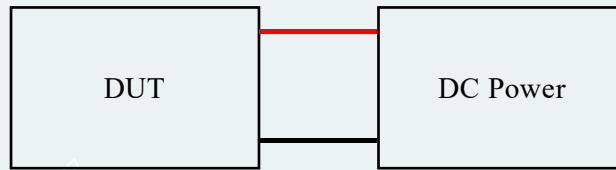
4.2 Worse Case Description

Model No.: H7 Led headlight bulb

Variants: /

Model H7 Led headlight bulb is selected as typical model to perform testing and the worst case.

4.3 Block diagram of DUT configuration



4.4 Support Equipment

No.	Device Type	Brand	Model	Specification	Note
1.	/	/	/	/	/

4.5 Explanation of test method deviation

The test method deviates from the standard method: **yes/no**

If yes, please explain in details: ---

5. TEST ITEM AND RESULTS

5.1 Radiated emissions

5.1.1 Test Required

Frequency range F/MHz	Limits broadband radiated Quasi peak(dBμV/m)	Limits narrowband radiated Average (dBμV/m)
30 to 75	62 – 52 ^a	52 – 42 ^a
75 to 400	52 – 63 ^b	42 – 53 ^b
400 to 1 000	63	53

a Decreasing linearly with the log of the frequency.

b Increasing linearly with the log of the frequency.

5.1.2 Used Test Equipment

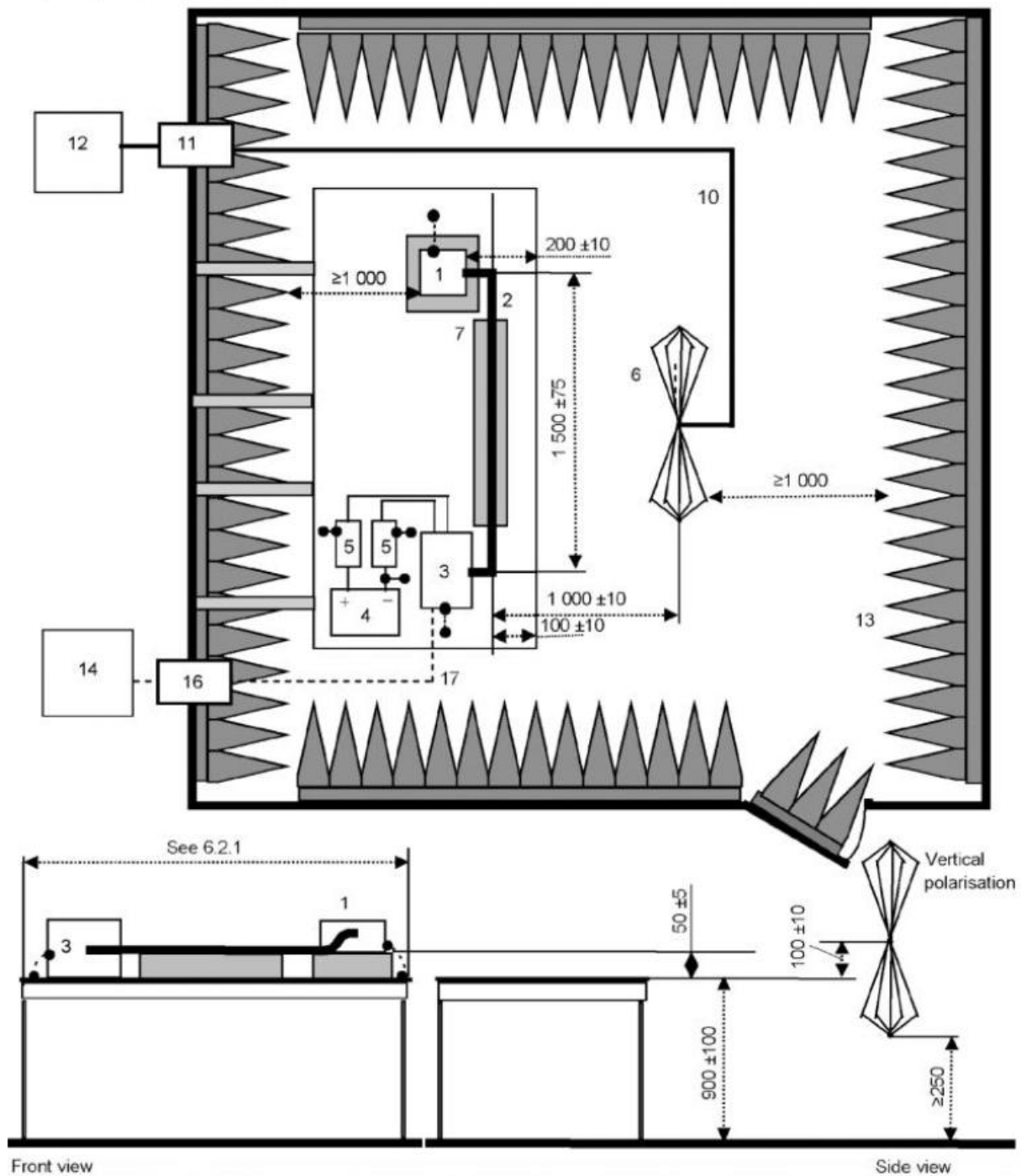
Equipment	Equipment S/N	Manufacturer	Model No.	Calibration Due
4# ALSE	GZST/YQ-EMC-159	YIHENG ELECTRONIC	ALSE-966	2027-08-19
Scanning receiver	GZST/YQ-EMC-161	ROHDE&SCHWAR Z	ESU26	2026-01-08
Artificial mains network 10	GZST/YQ-EMC-143	SCHWARZBECK	NNBM 8124-200	2025-11-21
Artificial mains network 11	GZST/YQ-EMC-144	SCHWARZBECK	NNBM 8124-200	2025-11-21
Biconical antenna	GZST/YQ-EMC-126	SCHWARZBECK	VHBB9124+BB A9106	2026-07-03
Log-periodic antenna	GZST/YQ-EMC-127	SCHWARZBECK	VULP9118B	2026-07-25

5.1.3 Test Setup and Procedure

The ground plane minimum thickness of 0.5mm was situated at a height of 0.9m above the test facility floor on a non-metallic table. The ESA and its wiring harness was supported 50 ± 5 mm above a wooden or non-metallic table and place along the support with keeping 100mm distance from the edge. The length of wiring harness was 1500 ± 75 mm to the artificial network (AN). Power supply was applied to the ESA via a $5\mu\text{H}/50\Omega$ AN which was electrically bonded to the ground plane.

The measurement distance between the DUT harness and the emissions antenna was 1m.

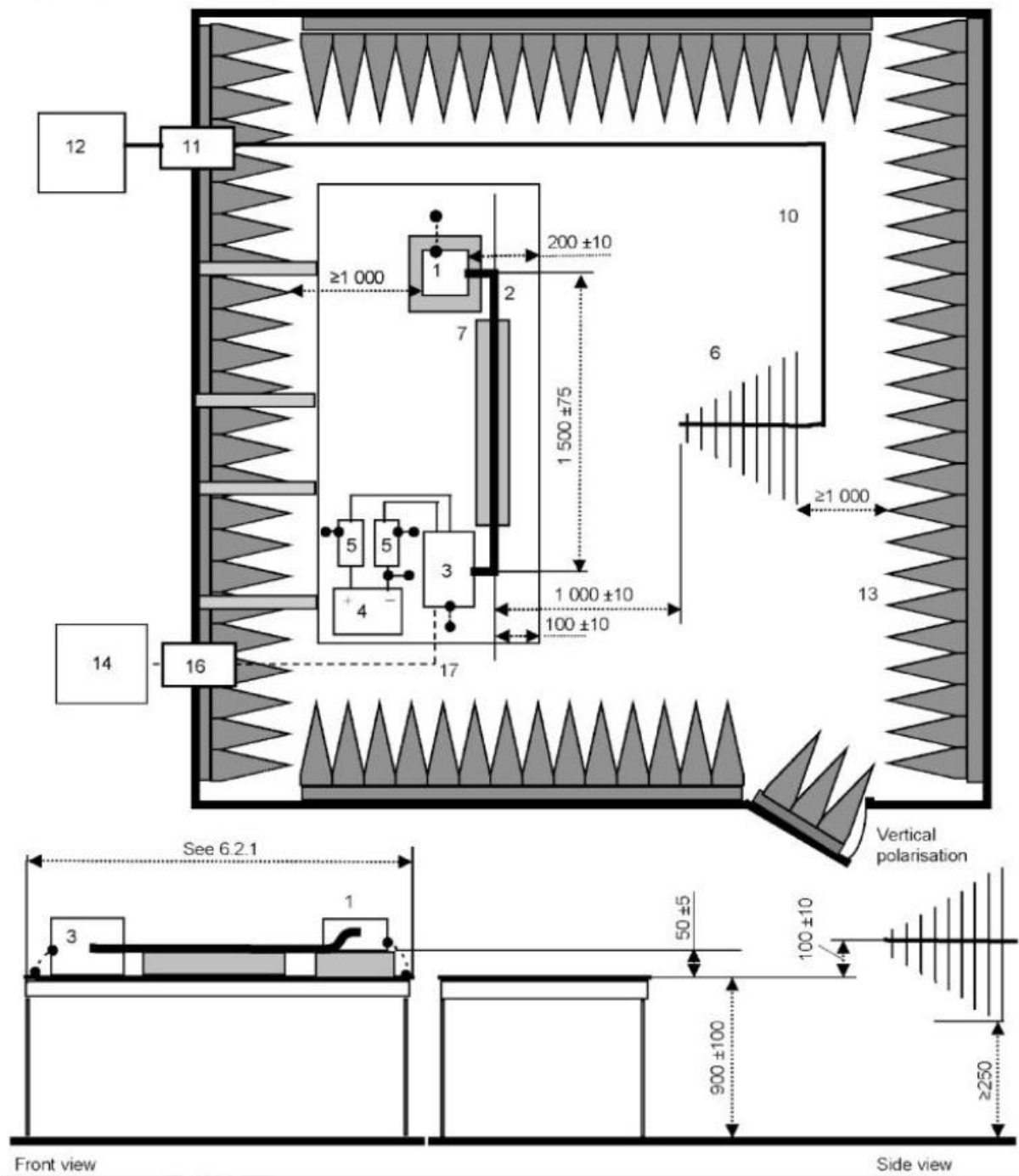
Top view (horizontal polarisation)



Key:

- 1 DUT (grounded locally if required in test plan)
- 2 Test harness
- 3 Load
- 4 Power
- 5 LISN
- 6 Biconical antenna (no part of the antenna closer than 700 mm to the wiring harness or DUT)

Top view (horizontal polarisation)



Log-periodic antenna

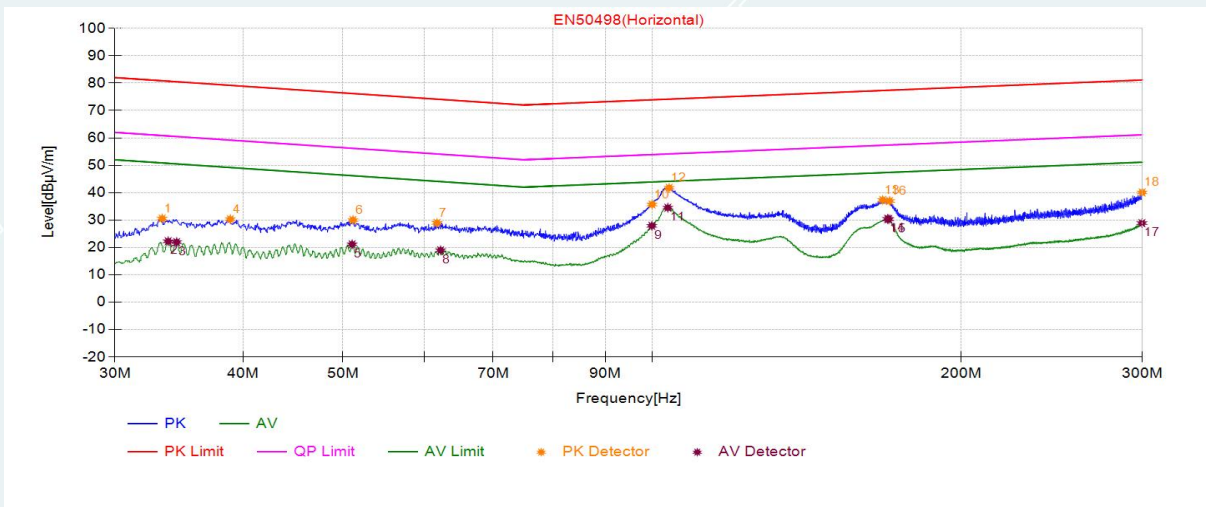
Key:

- 1 DUT (grounded locally if required in test plan)
- 2 Test harness
- 3 Load
- 4 Power
- 5 LISN
- 6 Log-periodic antenna

5.1.4 Test Results

Project Information			
Test Lab:	EMC Lab 4	Project:	Q2508178-11
EUT:	H7-IN50	Test Engineer:	Linmos
Mode:	MO# 1	Temperature:	20.3°C
S/N:	004	Humidity:	51%RH
Model:	H7 Led headlight bulb	Voltage:	DC 13.5V
Note:		Barometric:	101kPa
Polarity:	Horizontal		

Test Graph

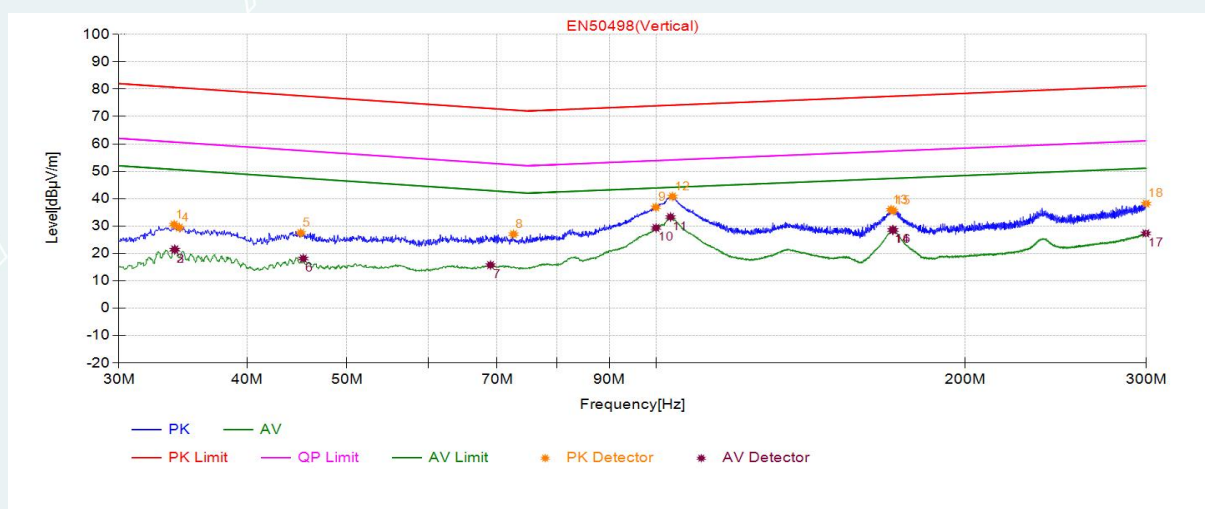


Suspected Data List

NO.	Freq. [MHz]	Reading Level [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Limit Line	Verdict
1	33.350	17.04	13.51	30.55	80.84	50.29	PK	PASS
2	33.800	8.76	13.50	22.26	50.69	28.43	AV	PASS
3	34.450	8.46	13.50	21.96	50.49	28.53	AV	PASS
4	38.850	16.88	13.44	30.32	79.17	48.85	PK	PASS
5	51.050	8.33	12.81	21.14	46.20	25.06	AV	PASS
6	51.150	17.18	12.81	29.99	76.18	46.19	PK	PASS
7	61.750	16.56	12.38	28.94	74.13	45.19	PK	PASS
8	62.250	6.58	12.37	18.95	44.04	25.09	AV	PASS
9	99.950	15.32	12.57	27.89	43.89	16.00	AV	PASS
10	100.000	23.11	12.57	35.68	73.89	38.21	PK	PASS
11	103.600	21.62	12.88	34.50	44.12	9.62	AV	PASS
12	103.900	28.85	12.91	41.76	74.14	32.38	PK	PASS
13	167.700	20.91	16.41	37.32	77.29	39.97	PK	PASS
14	169.550	13.87	16.54	30.41	47.36	16.95	AV	PASS
15	170.000	13.75	16.57	30.32	47.38	17.06	AV	PASS
16	170.300	20.37	16.58	36.95	77.39	40.44	PK	PASS
17	299.850	3.44	25.43	28.87	51.11	22.24	AV	PASS
18	300.000	14.63	25.45	40.08	81.11	41.03	PK	PASS

Project Information			
Test Lab:	EMC Lab 4	Project:	Q2508178-11
EUT:	H7-IN50	Test Engineer:	Linmos
Mode:	MO# 1	Temperature:	20.3°C
S/N:	004	Humidity:	51%RH
Model:	H7 Led headlight bulb	Voltage:	DC 13.5V
Note:		Barometric:	101kPa
Polarity:	Vertical		

Test Graph

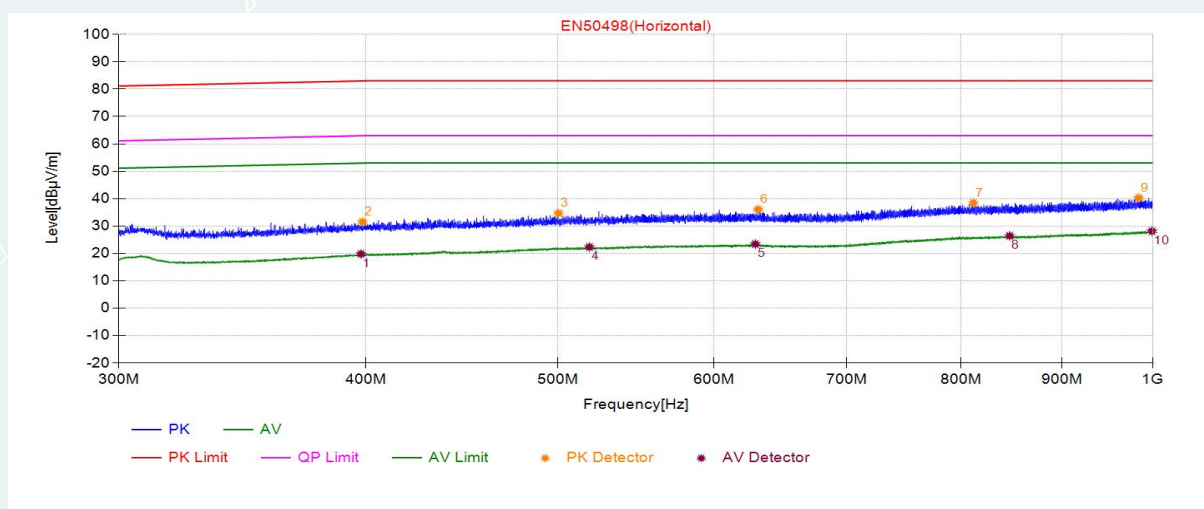


Suspected Data List

NO.	Freq. [MHz]	Reading Level [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Limit Line	Verdict
1	33.950	17.03	13.50	30.53	80.65	50.12	PK	PASS
2	34.000	7.90	13.50	21.40	50.63	29.23	AV	PASS
3	34.000	7.90	13.50	21.40	50.63	29.23	AV	PASS
4	34.350	15.94	13.50	29.44	80.52	51.08	PK	PASS
5	45.100	14.34	13.14	27.48	77.55	50.07	PK	PASS
6	45.350	5.02	13.13	18.15	47.49	29.34	AV	PASS
7	69.000	3.55	12.21	15.76	42.91	27.15	AV	PASS
8	72.650	14.87	12.16	27.03	72.35	45.32	PK	PASS
9	99.950	24.27	12.57	36.84	73.89	37.05	PK	PASS
10	100.000	16.74	12.57	29.31	43.89	14.58	AV	PASS
11	103.300	20.44	12.86	33.30	44.10	10.80	AV	PASS
12	103.750	27.89	12.90	40.79	74.13	33.34	PK	PASS
13	169.350	19.47	16.52	35.99	77.35	41.36	PK	PASS
14	169.900	11.98	16.56	28.54	47.38	18.84	AV	PASS
15	170.150	18.99	16.57	35.56	77.39	41.83	PK	PASS
16	170.200	12.00	16.57	28.57	47.39	18.82	AV	PASS
17	299.800	1.90	25.43	27.33	51.11	23.78	AV	PASS
18	299.950	12.74	25.44	38.18	81.11	42.93	PK	PASS

Project Information			
Test Lab:	EMC Lab 4	Project:	Q2508178-11
EUT:	H7-IN50	Test Engineer:	Linmos
Mode:	MO# 1	Temperature:	20.3°C
S/N:	004	Humidity:	51%RH
Model:	H7 Led headlight bulb	Voltage:	DC 13.5V
Note:		Barometric:	101kPa
Polarity:	Horizontal		

Test Graph

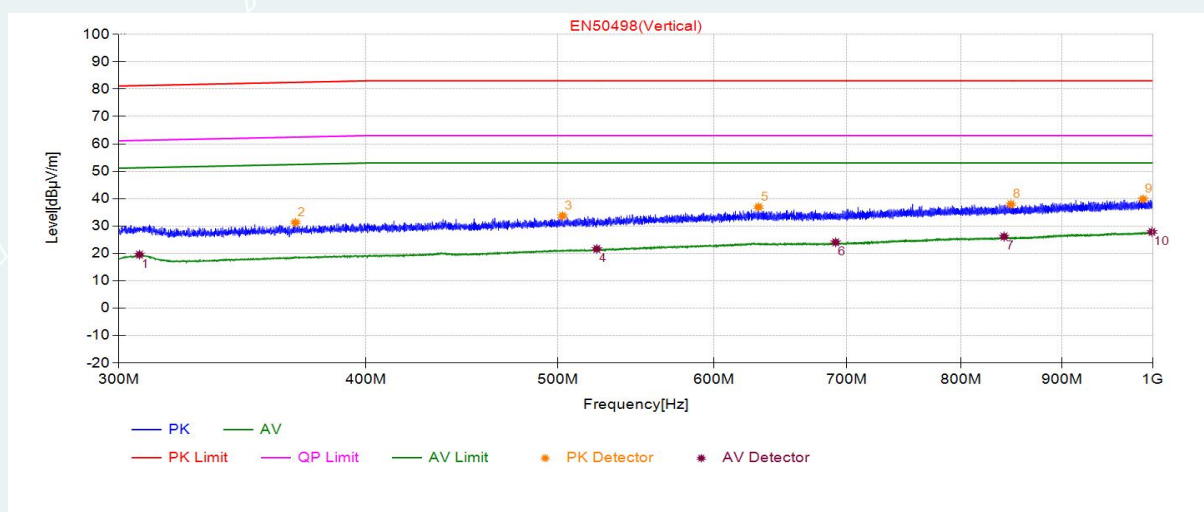


Suspected Data List

NO.	Freq. [MHz]	Reading Level [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Limit Line	Verdict
1	397.750	1.31	18.49	19.80	52.96	33.16	AV	PASS
2	398.400	13.03	18.52	31.55	82.97	51.42	PK	PASS
3	500.550	13.77	20.90	34.67	83.00	48.33	PK	PASS
4	518.900	1.20	21.13	22.33	53.00	30.67	AV	PASS
5	629.650	1.88	21.53	23.41	53.00	29.59	AV	PASS
6	631.650	14.55	21.52	36.07	83.00	46.93	PK	PASS
7	811.650	13.91	24.51	38.42	83.00	44.58	PK	PASS
8	846.700	1.71	24.70	26.41	53.00	26.59	AV	PASS
9	984.000	13.97	26.30	40.27	83.00	42.73	PK	PASS
10	999.350	1.64	26.49	28.13	53.00	24.87	AV	PASS

Project Information			
Test Lab:	EMC Lab 4	Project:	Q2508178-11
EUT:	H7-IN50	Test Engineer:	Linmos
Mode:	MO# 1	Temperature:	20.3°C
S/N:	004	Humidity:	51%RH
Model:	H7 Led headlight bulb	Voltage:	DC 13.5V
Note:		Barometric:	101kPa
Polarity:	Vertical		

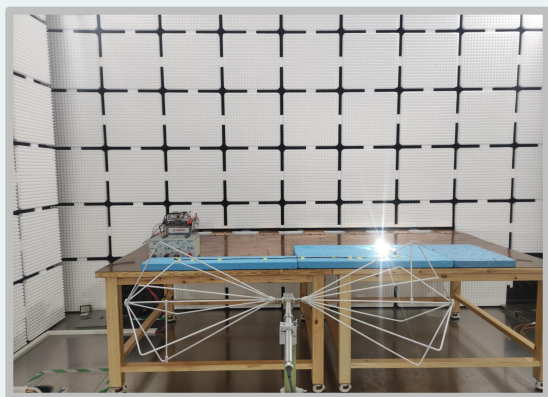
Test Graph



Suspected Data List

NO.	Freq. [MHz]	Reading Level [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Limit Line	Verdict
1	307.250	3.27	16.28	19.55	51.27	31.72	AV	PASS
2	368.500	13.77	17.48	31.25	82.46	51.21	PK	PASS
3	502.950	13.56	20.15	33.71	83.00	49.29	PK	PASS
4	523.450	1.07	20.57	21.64	53.00	31.36	AV	PASS
5	631.950	14.87	22.07	36.94	83.00	46.06	PK	PASS
6	691.350	1.28	22.79	24.07	53.00	28.93	AV	PASS
7	841.200	1.86	24.29	26.15	53.00	26.85	AV	PASS
8	847.950	13.64	24.31	37.95	83.00	45.05	PK	PASS
9	989.050	13.69	26.11	39.80	83.00	43.20	PK	PASS
10	999.350	1.66	26.19	27.85	53.00	25.15	AV	PASS

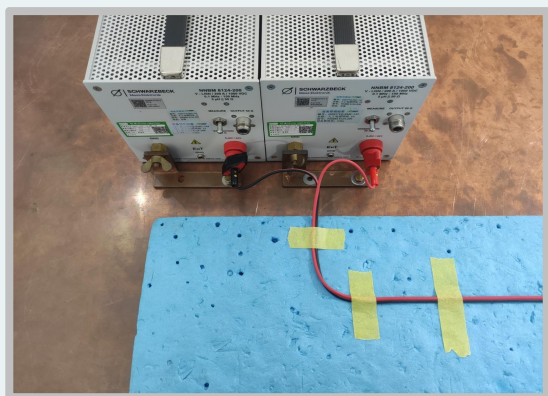
5.1.5 Test Photos



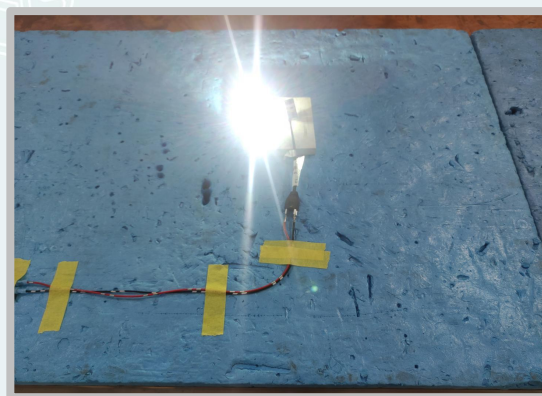
Biconical antenna



Log-periodic antenna



Particulars-1



Particulars-2

5.2 Conducted transient emission

5.2.1 Test Required

Polarity of pulse amplitude	Maximum allowed pulse amplitude for	
	Vehicles with 12V systems	Vehicles with 24V systems
Positive	+75V	+150V
Negative	-100V	-450V

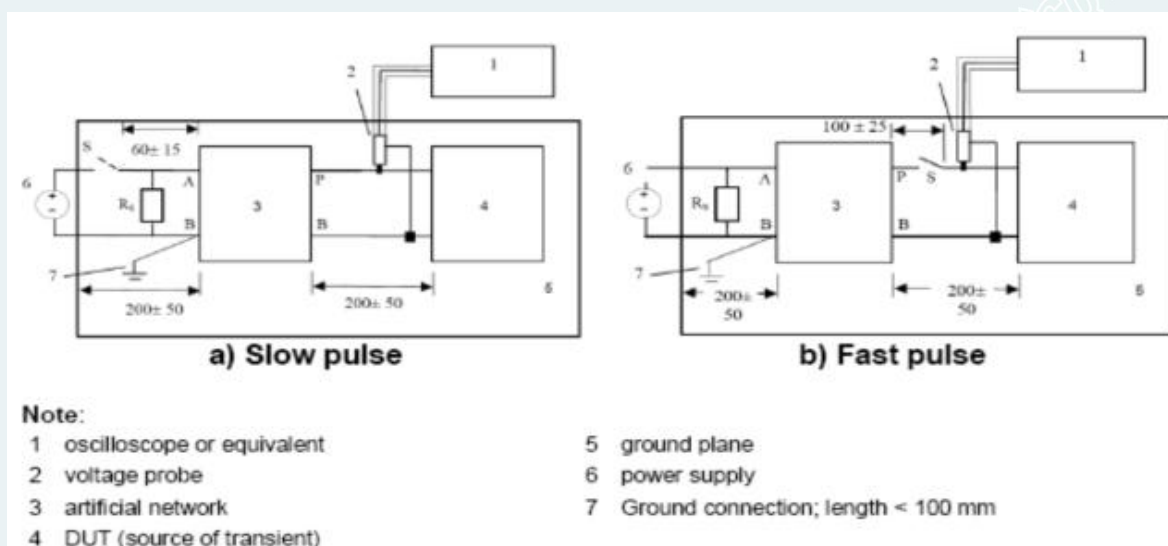
5.2.2 Used Test Equipment

Equipment	Equipment S/N	Manufacturer	Model No.	Calibration Due
Supply Voltage Change Simulator	GZST/YQ-EMC-10	3CTEST	APS40C15	2026-06-19
Oscilloscope	GZST/YQ-EMC-89	Tektronix	MDO3052	2026-01-08
Transient launch system	GZST/YQ-EMC-204	3Ctest	VTE 100	2025-12-22
Electronic switch	GZST/YQ-EMC-204-01	3Ctest	VTE 100-ES	2025-12-22

5.2.3 Test Setup and Procedure

The test was set-up to the requirements of ISO 7637-2, Electrical transient conduction along supply lines only.

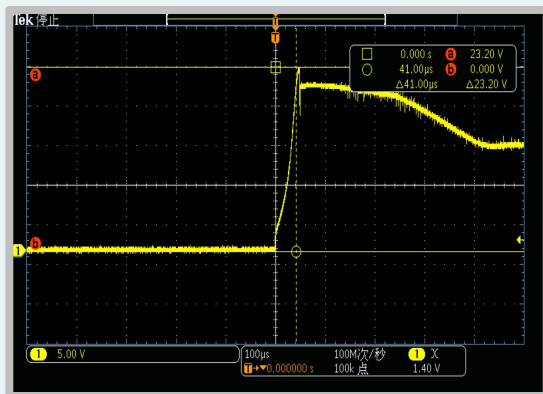
For conducted emission, all wiring connections between artificial network, switch, and the DUT shall 50mm + 10mm above the metal ground plane. The DUT shall be place on a non-conductive material 50mm + 10mm above the ground plane. The artificial network shall be kept 200mm ± 50mm with the edge of the ground plane and DUT.



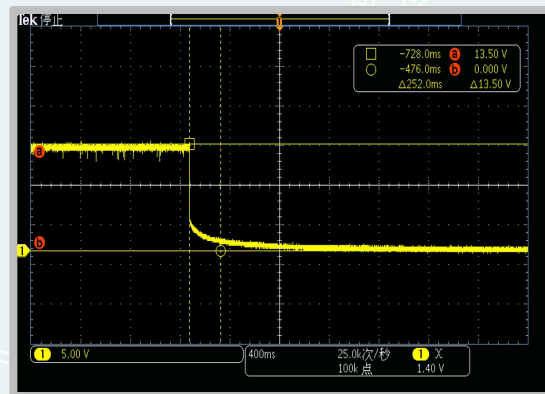
5.2.4 Test Results

Test Site: 1# EMS Test Room-7637	Test Date: 2025-08-24
Condition: 22.5°C, 52%RH	Tested By: Linmos Zou
DUT Name: H7-IN50	Model No.: H7 Led headlight bulb
Memo: /	

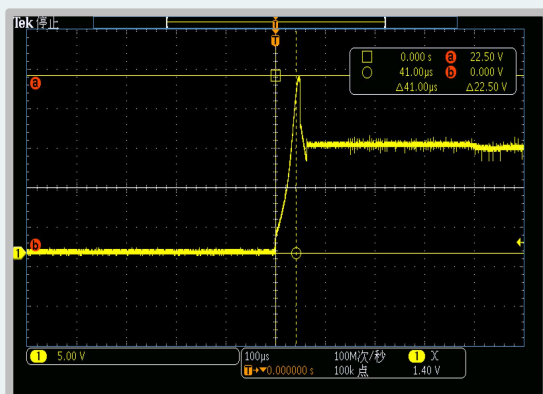
Sample No.: Q2508178-004		Test Mode: MO# 1			
Power Supply: DC 13.5V		Memo: /			
Tested Voltage	Pulse		Maximum pulse amplitude allowed	Measurements	Test Results
13.5V	Fast	Switch on	+75V	+9.0V	Pass
		Switch off	-100V	-22.6V	Pass
	Slow	Switch on	+75V	+9.7V	Pass
		Switch off	-100V	-13.5V	Pass



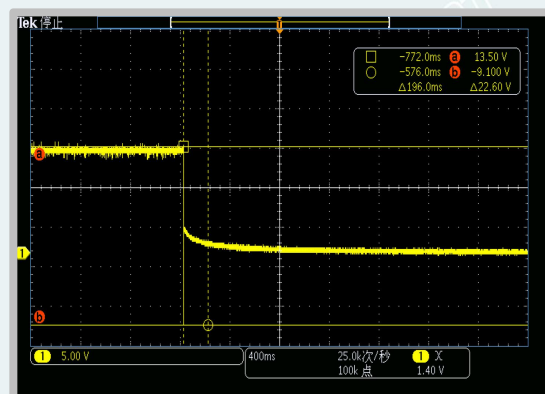
Slow Pulse: OFF-->ON Data Graph



Slow Pulse: ON-->OFF Data Graph

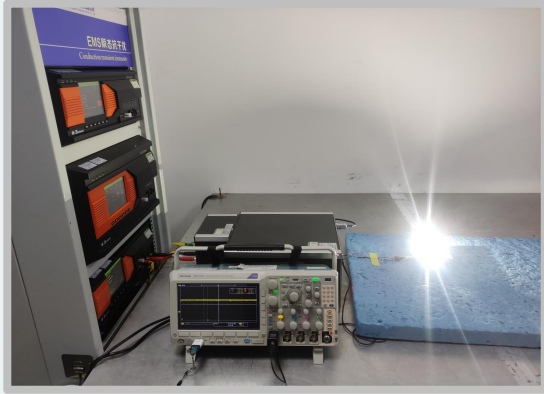


Fast Pulse: OFF-->ON Data Graph

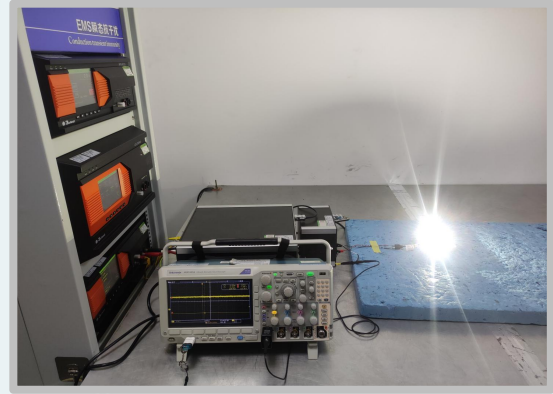


Fast Pulse: ON-->OFF Data Graph

5.2.5 Test Photos



Slow Pulse



Fast Pulse

5.3 Conducted Transient Immunity

5.3.1 Test Required

Pulse	Immunity level	Vehicles with 12V systems	Vehicles with 24V systems	Performance criteria
1	III	-75V	-450 V	C
2a	III	+37 V	+37 V	B
2b	III	+10 V	+20 V	C
3a	III	-112 V	-150 V	A
3b	III	+75V	+150V	A
4	III	-6 V	-12 V	B/C

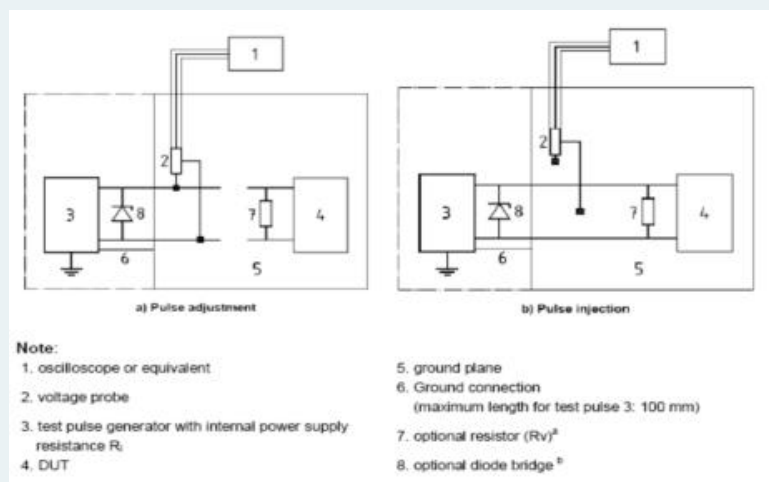
5.3.2 Used Test Equipment

Equipment	Equipment S/N	Manufacturer	Model No.	Calibration Due
Supply Voltage Change Simulator	GZST/YQ-EMC-10	3CTEST	APS40C15	2026-06-19
Oscilloscope	GZST/YQ-EMC-89	Tektronix	MDO3052	2026-01-08
Load dump wave simulator	GZST/YQ-EMC-11	3CTEST	LDS200N30	2026-06-19
Transient pulse disturbance	GZST/YQ-EMC-12	3ctest	TIS700	2026-06-19

5.3.3 Test Setup and Procedure

For transient immunity, the supply lines between the terminals of the test pulse generator and the DUT shall be laid out in a straight parallel line at a height of 50mm + 10mm above the ground plane and shall have a length of $0.5\text{m} \pm 0.1\text{m}$.

The measurements were made to the requirements of EN 50498 for an ESA, section 7.4, Specifications concerning the immunity to transient disturbances conducted along supply lines. The test was set-up to the requirements of ISO 7637-2:2004 Electrical transient conduction along supply lines only.



5.3.4 Test Results

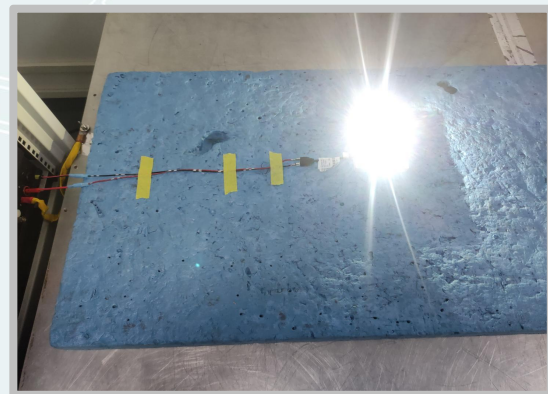
Test Site: 1# EMS Test Room-7637	Test Date: 2025-08-24
Condition: 22.4°C, 52%RH, 101kPa	Tested By: Linmos Zou
DUT Name: H7-IN50	Model No.: H7 Led headlight bulb
Memo: /	

Sample No.: Q2508178-004		Test Mode: MO# 1		
Power Supply: DC 13.5V		Memo: /		
Test voltage	Test Pulses	System voltage	Pulse duration repetition time	Results
13.5V	1	-75V	Ri=10Ω, td=2ms, tr=1μs, t1=1s, t2=200ms, t3<100μs	C
	2a	+37 V	Ri=2Ω, td=0.05ms, tr=1μs, t1=5s	A
	2b	+10 V	Ri=0Ω, td=1s, t12=1ms, tr=1ms, t6=1ms	C
	3a	-112 V	Ri=50Ω, td=0.1μs, tr=5ns, t1=100μs, t4=10ms, t5=90ms	A
	3b	+75 V	Ri=50Ω, td=0.1μs, tr=5ns, t1=100μs, t4=10ms, t5=90ms	A
	4	-6 V	Va=-2.5V, Ri=0Ω, t8<50ms, t9=10s, t10=5ms, t11=5ms to100ms	C

5.3.5 Test Photos

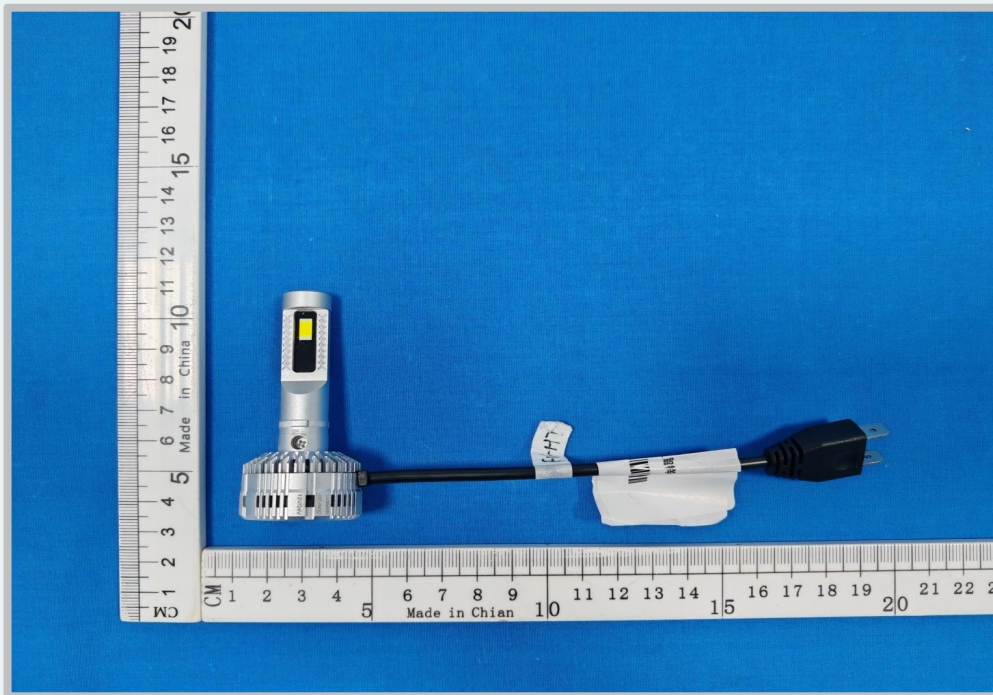


Overall photo

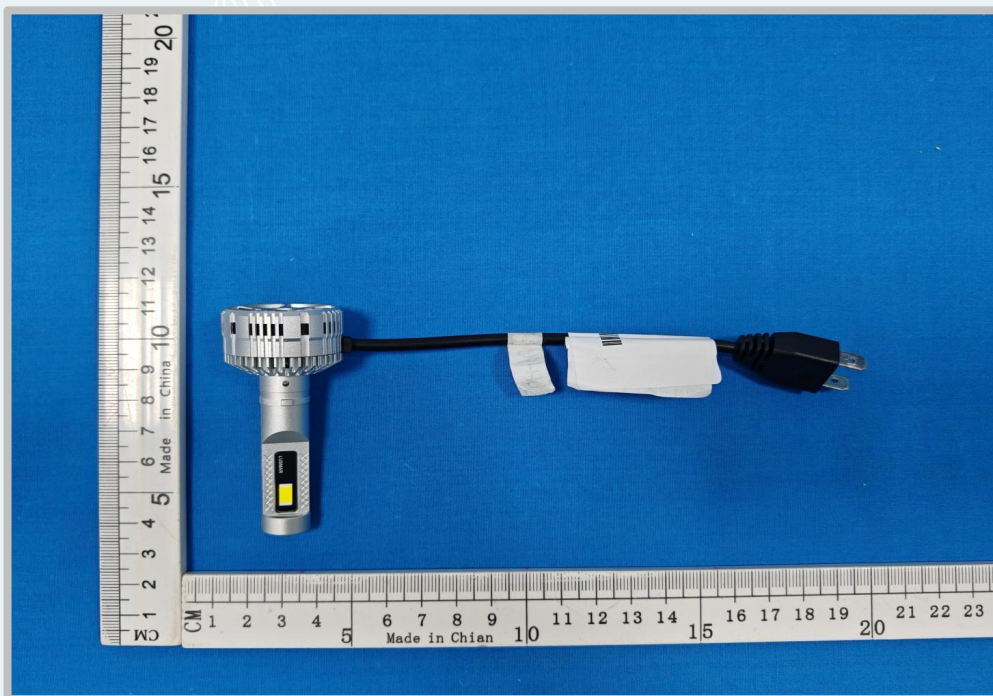


Particulars

6. Photographs of DUT



EUT photo 1



EUT photo 2

END