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TEST REPORT

Applicant: FUJIAN EVERLIFE TRADING CO., LTD

Address of Applicant: Room 4800, A District, No. 15th Floor, Common Building of Free

Trade Area, Fuzhou, Fujian

Equipment Under Test (EUT)

Product Name: LED LIGHT CONTROLLER

Model No.: 902030

Applicable standards: EN IEC 55015:2019+A11:2020

EN 61547:2009

Date of sample receipt: February 28, 2022

Date of Test: February 28, 2022 To March 4, 2022

Date of report issued: March 4, 2022

Test Result: PASS*

*In the configuration tested, the EUT complied with the standards specified above.

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

Authorized Signature

Kevin Wang Laboratory Manager CE



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2 Version

Version No.	Date	Description
00	March 4, 2022	Original

Prepared By: Date: **Project Engineer** Reviewed By: Date: Reviewer

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Test Summary

Test Item	Test Requirement	Test Method	Class / Severity	Result
Radiated Emissions (30MHz-1000MHz)	EN IEC 55015	EN IEC 55015	Table 10	Pass
Radiated Emissions (9kHz-30MHz)	EN IEC 55015	EN IEC 55015	Table 8	Pass
Electrostatic discharges	EN 61547	EN 61000-4-2	Contact ± 4 kV Air ± 8 kV	Pass
Radiated Immunity	EN 61547	EN 61000-4-3	3V/m 80%, 1kHz, AM	Pass
Remark: Pass: Comply with the	essential requirements in	the standard.		

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5 General Information

5.1 Client Information

Applicant:	FUJIAN EVERLIFE TRADING CO., LTD
Address of Applicant:	Room 4800, A District, No. 15th Floor, Common Building of Free Trade
	Area, Fuzhou, Fujian
Manufacturer:	FUJIAN EVERLIFE TRADING CO., LTD
Address of Manufacturer:	Room 4800, A District, No. 15th Floor, Common Building of Free Trade
	Area, Fuzhou, Fujian

5.2 General Description of E.U.T

Product Name:	LED LIGHT CONTROLLER
Model No	902030
Power Supply:	DC 5V(power by DC power supply charging) or DC 3.7V, 500mAh, 1.85Wh lithium battery

5.3 Test mode

On mode	Keep the EUT lighting
Charging mode	Keep the EUT in charging mode

5.4 Description of Support Units

Manufacturer	Description	Model	Serial Number
MEILI	DC POWER SUPPLY	MCH-305A	011121168

5.5 Deviation from Standards

None.

5.6 Abnormalities from Standard Conditions

None.

5.7 Monitoring of EUT for All Immunity Test

Visual:	• 🔥	Monitor the lighting of EUT
Audio:		,N/A

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Test Instruments List

Rad	liated Emission: (30MHz-1	000MHz):				
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	N/A	N/A
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A
3	EMI Test Receiver	ROHDE & SCHWARZ	ESRP	GTS602	Mar. 19 2021	Mar. 18 2022
4	BiConiLog Antenna	SCHWARZBECK	VULB 9168	GTS606	Mar. 19 2021	Mar. 18 2022
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120 D	GTS208	June. 24 2021	June. 23 2022
6	Horn Antenna	ETS-LINDGREN	3160	GTS217	June. 24 2021	June. 23 2022
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
8	Coaxial Cable	GTS	N/A	GTS213	June. 24 2021	June. 23 2022
9	Coaxial Cable	GTS	N/A	GTS211	June. 24 2021	June. 23 2022
10	Coaxial cable	GTS	N/A 👅 💉	GTS210	June. 24 2021	June. 23 2022
11	Coaxial Cable	GTS	N/A	GTS212	June. 24 2021	June. 23 2022
12	Amplifier(100kHz-3GHz)	N/A	LNA 0920N	GTS605	Mar. 19 2021	Mar. 18 2022
13	Amplifier(2GHz-20GHz)	HP	84722A	GTS206	June. 24 2021	June. 23 2022
14	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June. 24 2021	June. 23 2022
15	Band filter	Amindeon	82346	GTS219	June. 24 2021	June. 23 2022
16	Power Meter	Anritsu 🦰 🌈	ML2495A	GTS540	June. 24 2021	June. 23 2022
17	Power Sensor	Anritsu	MA2411B	GTS541	June. 24 2021	June. 23 2022
18	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	GTS575	June. 24 2021	June. 23 2022
19	Splitter	Agilent	11636B	GTS237	June. 24 2021	June. 23 2022
20	Loop Antenna	ZHINAN	ZN30900A	GTS534	June. 24 2021	June. 23 2022
21	Breitband hornantenne	SCHWARZBECK	BBHA 9170	GTS579	Oct. 8 2021	Oct. 7 2022
22	Amplifier	TDK	PA-02-02	GTS574	Oct. 8 2021	Oct. 7 2022
23	Amplifier	TDK	PA-02-03	GTS576	Oct. 8 2021	Oct. 7 2022
24	PSA Series Spectrum Analyzer	Rohde & Schwarz	FSP	GTS578	June. 24 2021	June. 23 2022

ESE						
Item	Test Equipment	Manufacturer	Model No.	Inventory	Cal.Date	Cal.Due date
item	Test Equipment	Manufacturei	woder No.	No.	(mm-dd-yy)	(mm-dd-yy)
1	ESD Simulator	KIKUSUI	KES4021A	GTS242	June. 24 2021	June. 23 2022
2	Thermo meter	KTJ	TA328	GTS243	June. 24 2021	June. 23 2022

Radiated Emissions (9kHz-30MHz):						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Shielding Room	ZhongYu Electron	7.3(L)x3.1(W)x2.9(H)	GTS252	May.15 2019	May.14 2022
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 24 2021	June. 23 2022
3	TPIPLE-LOOP ANTENNA	EVERFINE	LLA-2	GTS539	June. 24 2021	June. 23 2022



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em	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Fully-Anechoic Chamber 2	Chang Zhou Zhong Shuo	854	SEM001-05	May. 08 2021	May. 07 2022
2	Power Sensor	Rohde & Schwarz	NRP-Z91	SEM009-09	Mar. 31 2021	Mar. 30 2022
3	Stacked LogPer Broadband Antenna (70MHz-10GHz)	Schwarzbeck	STLP 9129	SEM003-25	N/A	N/A
4	Signal Generator (9kHz-6GHz)	Rohde & Schwarz	SMB100A	SEM006-11	Mar. 31 2021	Mar. 30 2022
5	Broadband Amplifier (80MHz-1GHz)	Rohde & Schwarz	BBA150-BC250	SEM005-12	Sep. 22 2021	Sep. 21 2022
6	Broadband Amplifier(800MHz- 3GHz)	Rohde & Schwarz	BBA150-D110	SEM005-13	Mar. 31 2021	Mar. 30 2022
7	Broadband Amplifier(2.5GHz- 6GHz)	Rohde & Schwarz	BBA150-E60	SEM005-16	April. 10 2021	April. 09 2022
8	Measurement Software	Rohde & Schwarz	EMC32 V9.25.00	N/A	N/A	N/A
		8	©			
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7 Emission Test Results

7.1 Radiated Emissions (9kHz-30MHz)

Test Requirement:	EN IEC 55015				
Test Method:	EN IEC 55015				
Test Frequency Range:	9kHz to 30MHz				
Limit:					
	Frequency range (MHz)	Limits for loop diameter			
	1 requeries range (iii iz)	dBuA @2m			
	0.009-0.070	88			
	0.070-0.150	88 to 58*			
	0.15-3.0	58 to22*			
	3.0-30	22			
	*Decreasing linearly with the	logarithm of the frequency.			
		luminaires, the limit in the frequency range dB(μ A) for 2 m, 51dB(μ A) for 3 m and 45			
Test Setup:	Test Receiver	Polarization Switcher 2m Loop Antenna			
Test procedure	spectrum analyser in per				
		for X(A), Y(B), Z(C) polarities.			
		easurements were performed since no EUT were detected within 6dB of the limit tenna.			
Test Instruments:	Temp.: 25 °C Humid	.: 50% Press.: 1012mbar			
Measurement Record:	,	Uncertainty: ± 4.5dB			
Test Instruments:	Refer to section 6 for details				
Test mode:	Refer to section 5.3 for details				
Test results:	Pass				



Measurement Data

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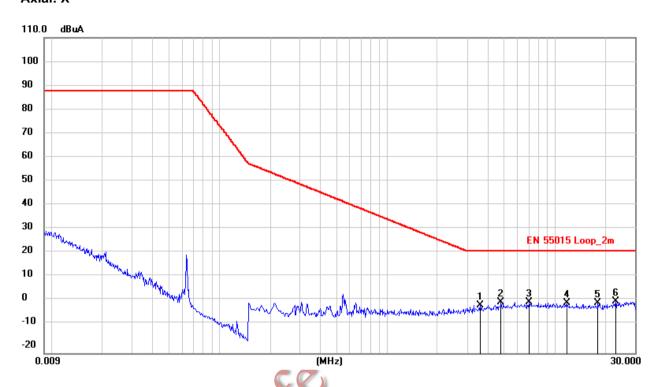
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Axial: X



				,			
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuA)	dB	(dBuA)	(dBuA)	(dB)	
1	3.6106	-34.84	34.61	-0.23	22.00	-22.23	QP
2	4.7941	-33.87	34.93	1.06	22.00	-20.94	QP
3	7.0306	-34.02	35.08	1.06	22.00	-20.94	QP
4	11.8051	-34.17	34.70	0.53	22.00	-21.47	QP
5	18.0916	-34.16	34.67	0.51	22.00	-21.49	QP
6	23.1316	-33.50	34.95	1.45	22.00	-20.55	QP

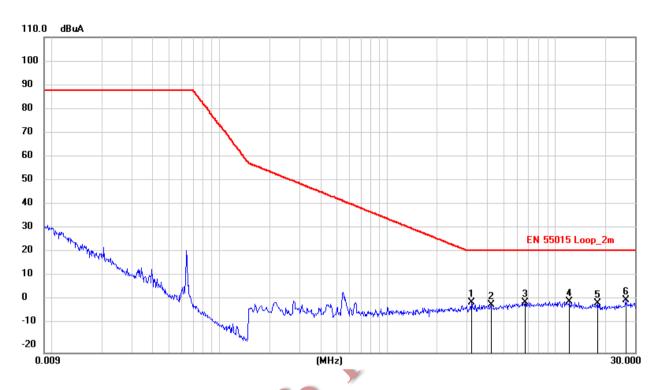


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Axial: Y



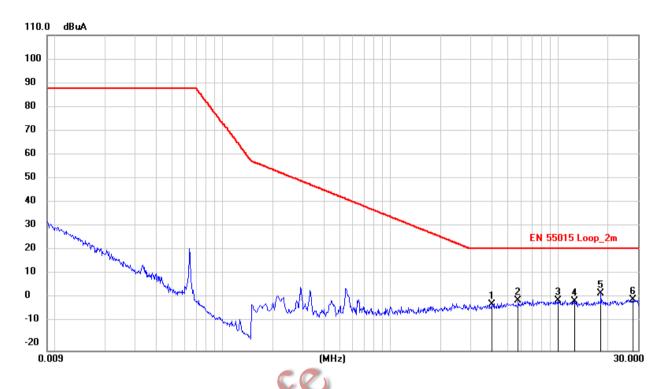
Na	Гиоличанан	Dooding	Correct	Decult	1 ::4	Marain	Damark
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuA)	dB	(dBuA)	(dBuA)	(dB)	
1	3.1921	-33.94	34.50	0.56	22.00	-21.44	QP
2	4.1461	-34.97	34.53	-0.44	22.00	-22.44	QP
3	6.6391	-34.35	34.99	0.64	22.00	-21.36	QP
4	12.2596	-33.77	34.87	1.10	22.00	-20.90	QP
5	18.0780	-34.08	34.27	0.19	22.00	-21.81	QP
6	26.3986	-32.91	34.41	1.50	22.00	-20.50	QP



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Axial: Z



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuA)	dB	(dBuA)	(dBuA)	(dB)	
1	4.0381	-35.31	34.22	-1.09	22.00	-23.09	QP
2	5.8110	-34.18	34.67	0.49	22.00	-21.51	QP
3	9.9781	-34.25	34.92	0.67	22.00	-21.33	QP
4	12.6555	-34.46	34.89	0.43	22.00	-21.57	QP
5	18.0826	-31.43	34.87	3.44	22.00	-18.56	QP
6	27.9556	-33.99	35.10	1.11	22.00	-20.89	QP

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7.2 Radiated Emissions (30MHz-1000MHz)

Test Requirement: EN IEC 55015 Test Method: EN IEC 55015 30MHz to 1000MHz **Test Frequency Range: Measurement Distance:** 3m Frequency range(MHz) Limit (dBuV/m) Limit: 30 to 230 40.00 230 to 1000 47.00 Test setup: The radiated emissions test was conducted in a semi-anechoic Test procedure chamber. 2. The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, but separated from metallic contact with the ground reference plane by 0.1m of insulation. Before final measurements of radiated emissions, a pre-scan was performed in the spectrum mode with the peak detector to find out the maximum emissions spectrum plots of the EUT. 4. The frequencies of maximum emission were determined in the final radiated emissions measurement. At each frequency, the EUT was rotated 360°, and the antenna was raised and lowered from 1 to 4 meters in order to determine the maximum disturbance. Measurements were performed for both horizontal and vertical antenna polarization. **Test Instruments:** Temp.: 25 °C Humid.: 50% Press.: 1012mbar **Measurement Record:** Uncertainty: ± 4.50dB **Test Instruments:** Refer to section 6 for details Refer to section 5.3 for details. Test mode: Test results: **Pass**



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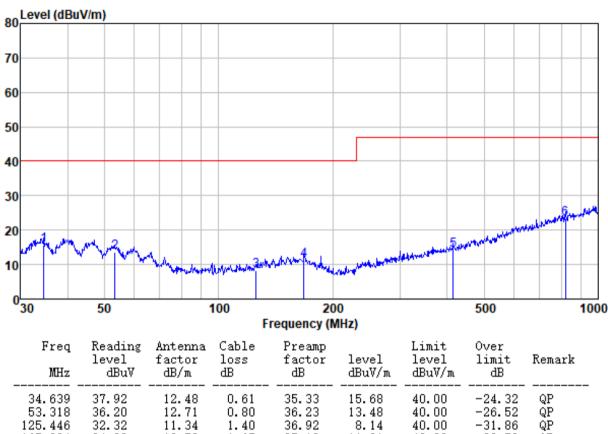
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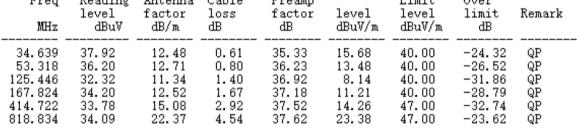
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Measurement Data

Test mode: On + Charging mode Antenna Polarity: Horizontal		l
--	--	---







435.590

675.208

31.69

33.36

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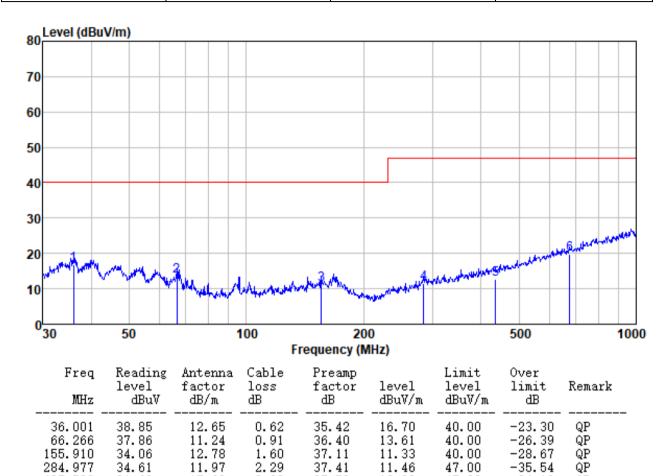
QΡ

QP

-34.18

-27.14

Test mode: On + Charging mode Antenna Polarity: Vertical



37.52

37.61

12.82

19.86

47.00

47.00

3.03

4.00

15.62

20.11

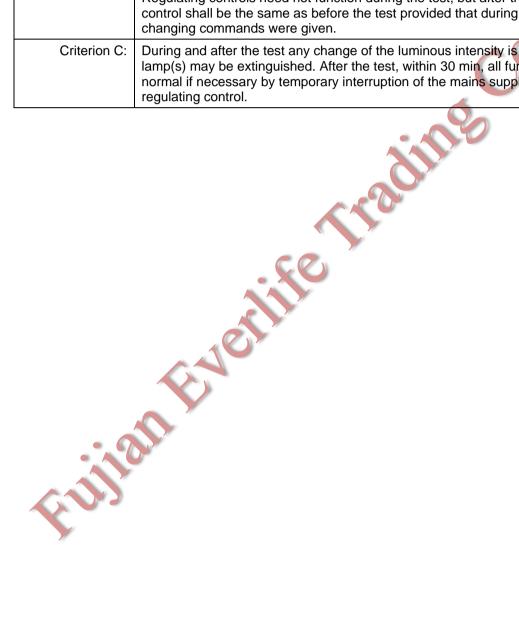
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8 Immunity Test Results

8.1 Performance Criteria Description of EN 61547

Criterion A:	During the test no change of the luminous intensity shall be observed and the regulating control, if any, shall operate during the test as intended.
Criterion B:	During the test the luminous intensity may change to any value. After the test the luminous intensity shall be restored to its initial value within 1 min.
	Regulating controls need not function during the test, but after the test the mode of the control shall be the same as before the test provided that during the test no mode changing commands were given.
Criterion C:	During and after the test any change of the luminous intensity is allowed and the lamp(s) may be extinguished. After the test, within 30 min, all functions shall return to normal if necessary by temporary interruption of the mains supply and/or operating the regulating control.



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8.2 Electrostatic Discharge

Test Requirement:	EN 61547				
Test Method:	EN 61000-4-2				
Discharge Voltage:	Contact Discharge: ±4kV				
	Air Discharge: ±8kV				
	HCP/VCP: ±4kV				
Polarity:	Positive & Negative				
Number of Discharge:	Minimum 10 times at each test point.				
Discharge Mode:	Single Discharge				
Discharge Period:	1 second minimum				
Performance Criterion:	В				
Test setup:	Electrostatic Discharge EUT VCP(0.5m*0.5m) 470K ohm Non-Conducted Table 470K ohm Ground Reference Plane				
Test Procedure:	1. Air discharge: The test was applied on non-conductive surfaces of EUT. The round discharge tip of the discharge electrode was approached as fast as possible to touch the EUT. After each discharge, the discharge electrode was removed from the EUT. The generator was re-triggered for a new single discharge and repeated 10 times for each pre-selected test point. This procedure was repeated until all the air discharge completed 2. Contact Discharge: The test was applied on conductive surfaces of EUT. the generator was re-triggered for a new single discharge and repeated 10 times for each pre-selected test point. the tip of the discharge electrode was touch the EUT before the discharge switch was operated. 3. Indirect discharge for horizontal coupling plane At least 10 single discharges shall be applied at the front edge of each HCP opposite the centre point of each unit of the EUT and 0.1m from				

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discharge.

the front of the EUT. The long axis of the discharge electrode shall be in the plane of the HCP and perpendicular to its front edge during the

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	Consideration should be given to exposing all sides of the EUT.					
	Indirect discharge for vertical coupling plane					
	At least 10 single discharges were applied to the center of one vertical edge of the coupling plane. The coupling plane, of dimensions 0.5m X 0.5m, was placed parallel to, and positioned at a distance of 0.1m from the EUT. Discharges were applied to the coupling plane, with this plane in sufficient different positions that the four faces of the EUT are completely illuminated.					
Test environment:	Temp.: 24 °C	Humid.: 51%	Press.: 1012mbar			
Test mode:	Refer to section 5.2 for detail					
Test Instruments:	Refer to section 6 for details					
Test results:	Pass					

Measurement Record	<u>d:</u>				
Toot points:	I: N/A	• 6			
Test points:	II: N/A		7		
Direct discharge					
Discharge			Observations		
Voltage (KV)	Type of discharge	Test points	(Performance Criterion)	Result	
± 4	Contact		N/A	N/A	
± 8	Air	II	N/A	N/A	
Indirect discharge					
Discharge	Type of discharge	Test points	Observation	Result	
Voltage (KV)	Type of discharge	rest points	Performance	Result	
	HCP-Bottom/Top/	Edge of the UCD	Λ	Pass	
± 4	Front/Back/Left/Right	Edge of the HCP	A	Pass	
1.4	VCP-Front/Back	Center of the VCP	Λ.	Door	
± 4	/Left/Right	Center of the VCP	A	Pass	

Remark:

Performance Criteria: A, B, C: Refer to section 8.1 for details

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8.3 Radiated Immunity

Test Requirement:	EN 61547
Test Method:	EN 61000-4-3
Frequency range:	80MHz to 1GHz
Test Level:	3V/m
Modulation:	80%, 1kHz Amplitude Modulation
Performance Criterion:	A
Test setup:	Camera Antenna Tower Ground Reference Plane Generator Monitor Power Amplifier
Test Procedure:	 For table-top equipment, the EUT was placed in the chamber on a non-conductive table 0.8m high. For arrangement of floor-standing equipment, the EUT was mounted on a non-conductive support 0.1m above the supporting plane. For human body-mounted equipment, the EUT may be tested in the same manner as table top items. If possible, a minimum of 1 m of cable is exposed to the electromagnetic field. Excess length of cables interconnecting units of the EUT shall be bundled low-inductively in the approximate center of the cable to form a bundle 30 cm to 40 cm in length. The EUT was initially placed with one face coincident with the calibration plane. The EUT face being illuminated was contained within the UFA (Uniform Field Area). The frequency ranges to be considered were swept with the signal modulated and pausing to adjust the RF signal level or to switch oscillators and antennas as necessary. Where the frequency range was swept incrementally, the step size was not exceed 1 % of the preceding frequency value. The dwell time of the amplitude modulated carrier at each frequency was not be less than the time necessary for the EUT to be exercised and to respond, and was not less than 0,5 s.

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	each side of the EUT.				
	7. The polarization of the field generated by each antenna necessitates testing each selected side twice, once with the antenna positioned vertically and again with the antenna positioned horizontally.				
	8. The EUT was performed in a configuration to actual installation conditions, a video camera and/or a audio monitor were used to monitor the performance of the EUT.				
Test environment:	Temp.: 25 °C	Humid.: 52%	Press.: 1012mbar		
Test Instruments:	Refer to section 6 for details				
Test mode:	Refer to section 5.2 for details				
Test results:	Pass				

Measurement Record:

Frequency	Level	Modulation	Antenna Polarization	EUT Face	Observations (Performance Criterion)
			V	Front	A
		1 kHz, 80 % Amp. Mod, 1 % increment, dwell time=3seconds	H	FIOIIL	А
80 MHz-1 GHz	3 V/m		V	Rear	А
			Н	Neai	А
			V	Left Right	Α
			Н		Α
			V		А
			Н		А
			V		А
			Н	Тор	Α
			V	Bottom	А
			Н	Bottom	А

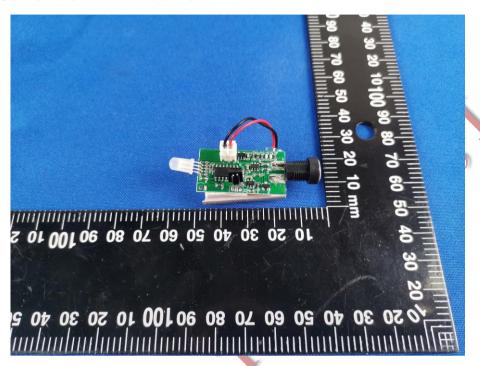
Remarks:

Performance Criteria: A, B, C: Refer to section 8.1 for details

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9 EUT Constructional Details







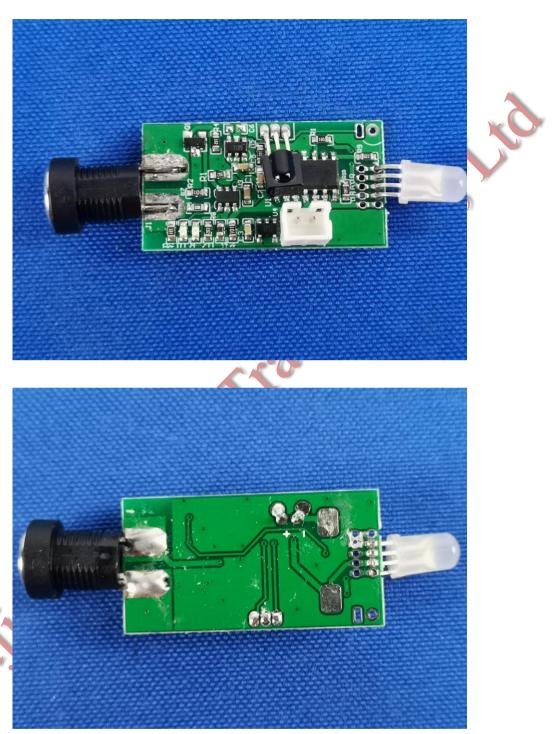
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