



Ningbo Joysun Product Testing Service Co., Ltd.

TEST REPORT

Test Report No: NST/GW1600607-1-R
Sample Name: Flashlight waste bags* GOGS HELPER
Model: HL6060
Date (s) of Tests: 2016.03.24~2016.03.29
Manufacturer:



EMC TEST REPORT

Test Report No:	NST/GW160437-E-R		
Compiled By:	Bao Jiawei	signature:	<i>Andy</i>
Checked By:	Le Mingjun	signature:	<i>Le Mingjun</i>
Approved By:	He Peng	signature:	<i>He Peng</i>
Date of Issue :	2016.03.30		
Laboratory:	Ningbo Joysun Product Testing Service Co., Ltd. (Electrical Safety Testing Subject of Export Processing Zone Photoelectricity Testing Lab)		
Address:	No. 5-9, Zhufeng Road, Export Processing Zone, Ningbo, Zhejiang, China		
Tel:	+86 574 8681 3876		
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Client Name:			
Address:			
Manufacturer:			
Address:			
Test Specification:	EN55015:2013 EN61547:2009		
Procedure Deviation:	N/A		
Non-Standard Test Method:	N/A		
Sampling Institution :	N/A		
Date of Receipt of Test Item:	2016.03.24		
Test Verdict:	All test item passed		
Remark:	This report is modified from the report numbered as: NST/GW160437-E, the original report numbered as NST/GW160437-E is invalid.		

General Remarks:

1. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.
2. The test results presented in this report relate only to the object tested.
3. If you have any objection to the test result, please explain in detail by written in ten days after receiving the report.
4. Please take the samples back in 30 days after receiving the report.

Possible Test Case Verdicts:

1. (N/A) - test case does not apply to the test object,
2. (P) - test object does meet the requirement,
3. (F) - test object does not meet the requirement.

Test item and Test verdict

No.	Test Item	Test Standard	Result
1	Radiated Disturbance 30MHz~300MHz	EN55015:2013	Pass
2	Electrostatic Discharge	EN61547:2009	Pass
3	Radiated, radio-frequency, electromagnetic field immunity	EN61547:2009	Pass
Remark	—		

Description of Equipment Under Test(EUT)					
EUT	Flashlight w.waste bags GOGS HELPER				
Trademark	—				
Model	HL6060				
Rating	Input voltage: 3 × 1.5V (Battery)				
Remark	—				
Test Field					
No.	Designation	Type	Serial No.	Manufacturer	Next Cal. Date
1	Shielding Room1	8.5m×4.2m×3m	—	Albatross	2017-03-05
2	Semi -Anechoic Chamber	12.1×7.3×6m	—	Albatross	2017-03-05
Test Instrument					
No.	Designation	Type	Serial No.	Manufacturer	Next Cal. Date
1	EMI receiver	ESU26	100224	R&S	2016-04-28
2	Combined antenna	VULB 9163	9163-560	SCHWARZB ECK	2016-04-28
3	Log-Periodic Antenna	AT1080	0325189	AR	2016-04-28
4	Power Amplifier	250W1000A	0327579	AR	2016-04-28
5	Integrated test system	IMS	100012	R&S	2016-04-28
6	Smart sensor technology	NRP-Z91	100520	R&S	2016-04-28
7	Dual Directional Coupler	DC6180M1	0328058	AR	2016-04-28
8	ESD Simulator	dito	B07040	EM TEST	2016-04-28
9	Hygrothermograph	WS508CL	07054646	Baolima	2016-04-28

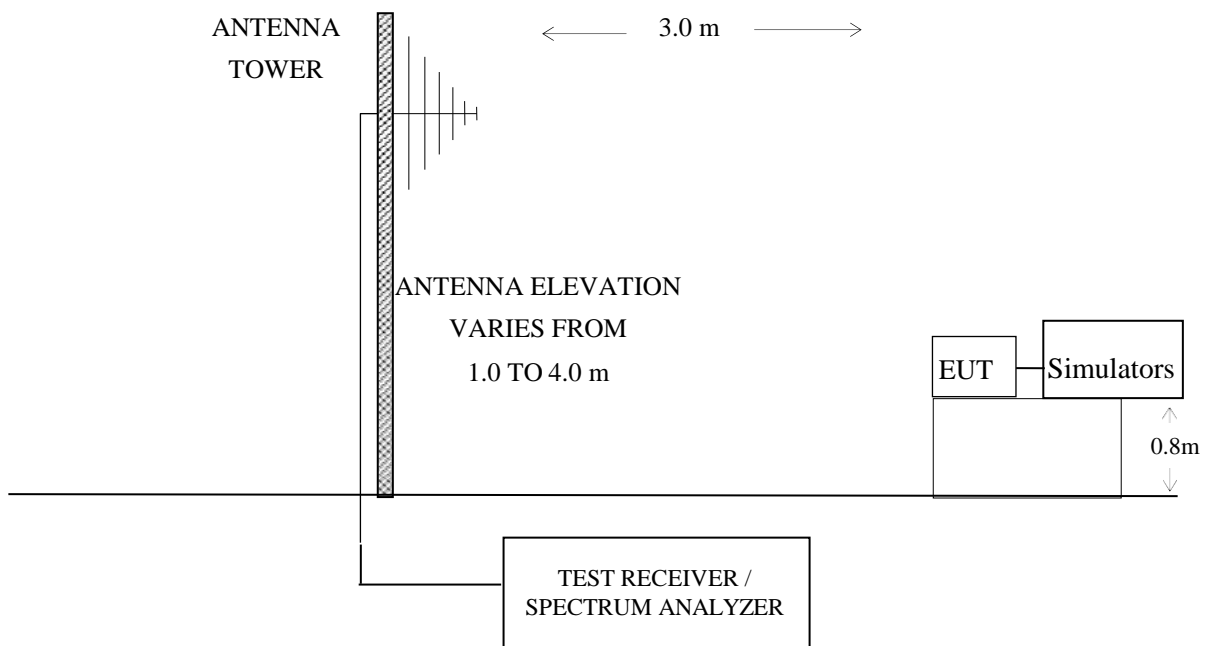
Radiated Disturbance 30MHz~300MHz

Measuring arrangement

Test standard: EN55015:2013

Frequency range : 30MHz-300MHz

Block Diagram of measuring arrangement:



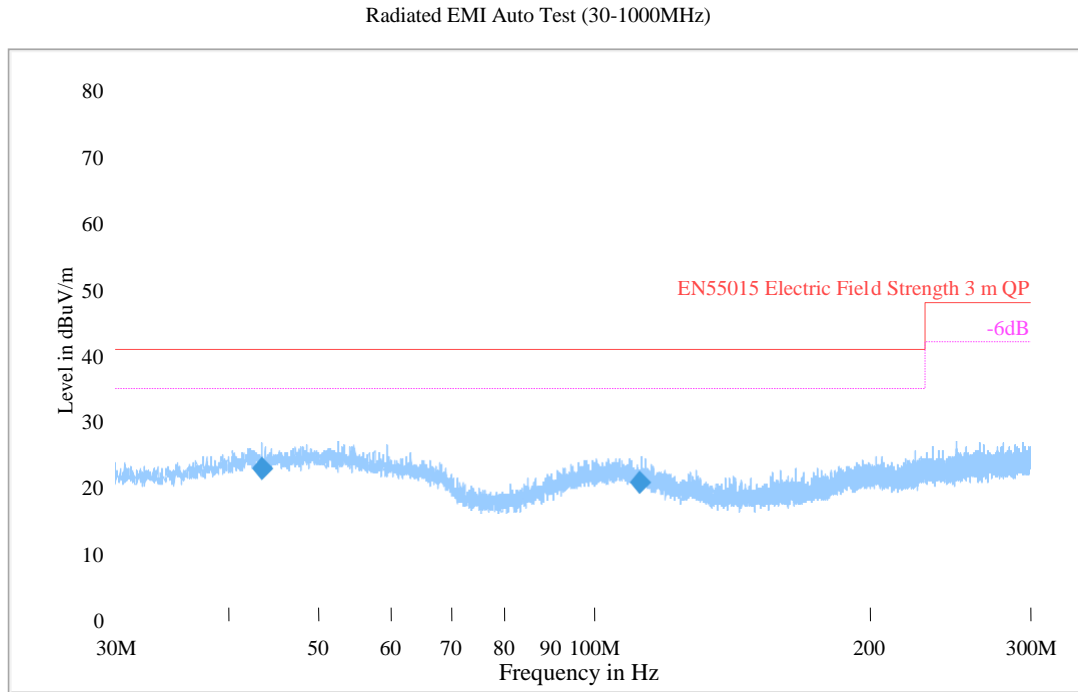
Test result :Pass

Ambient Temperature: 22°C Relative humidity: 50% Atmospheric Pressure: 101.3 kPa

Test Data

Measurement results of disturbance radiation (Horizontal polarization)

Radiated EMI Auto Test (30-300MHz)

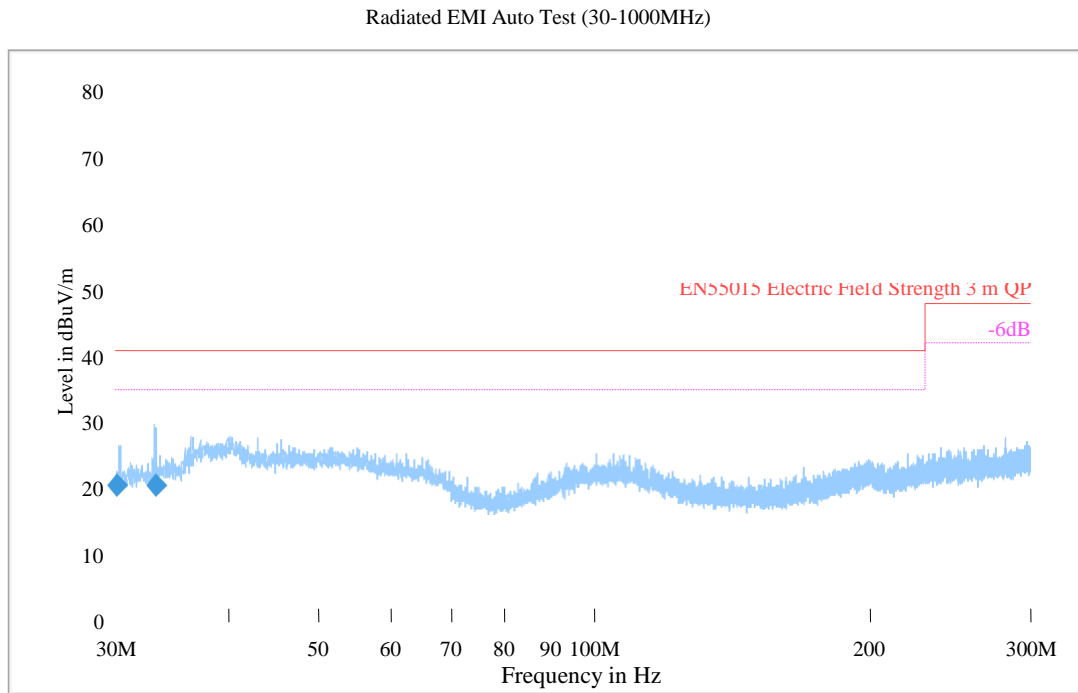


Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB μ V/m)
43.492000	21.8	1000.0	120.000	191.0	H	266.0	15.1	18.2	40.0
112.318000	19.8	1000.0	120.000	134.0	H	132.0	13.0	20.2	40.0

Measurement results of disturbance radiation (Vertical polarization)

Radiated EMI Auto Test (30-300MHz)



Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dB μ V/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dB μ V/m)
30.191000	19.4	1000.0	120.000	100.0	V	61.0	12.2	20.6	40.0
33.279000	19.4	1000.0	120.000	100.0	V	56.0	12.2	20.6	40.0

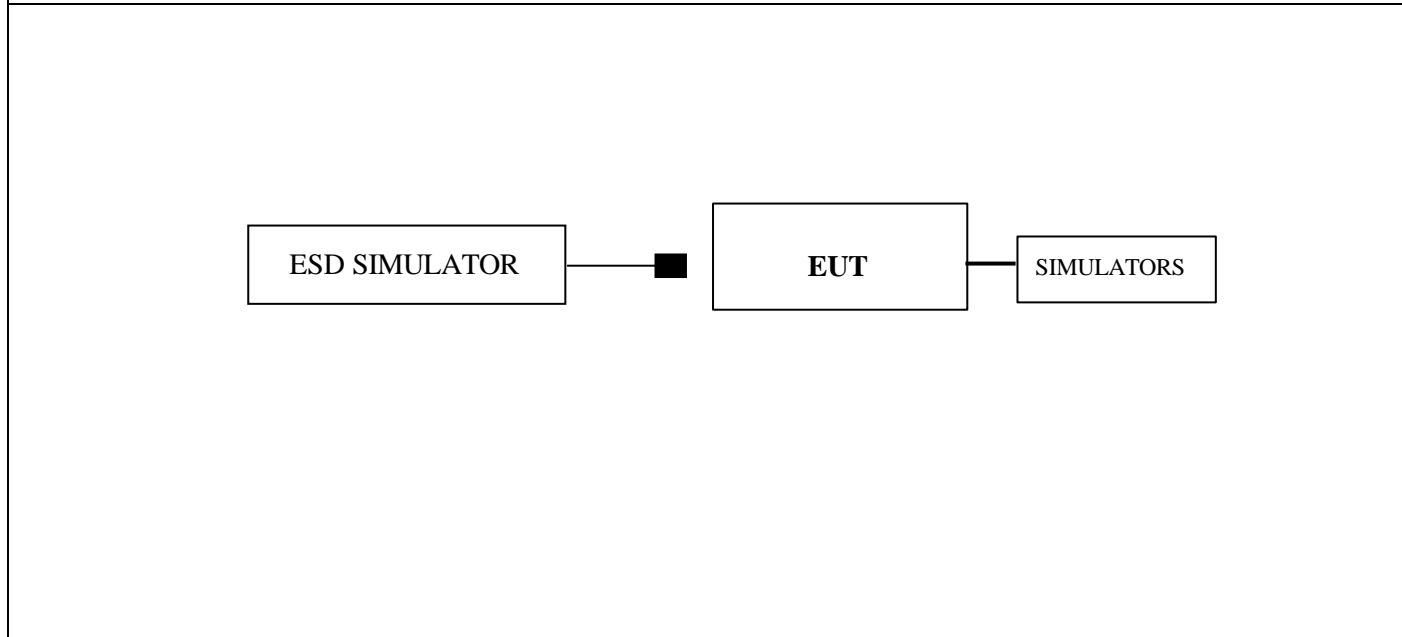
Electrostatic Discharge Immunity Test

Measuring arrangement

Test standard: EN61547:2009	Power Supply: Battery
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Charge voltage: $\pm 4.0\text{kV}$ (Contact Discharge),
 $\pm 8.0\text{kV}$ (Air Discharge)

Block diagram of measuring arrangement



Test result : Pass

Ambient	Temperature: 22°C Relative humidity: 50% Atmospheric Pressure: 101.3 kPa
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Test Data

Location	Kind of Discharge	Result
Coupling plane (VCP/HCP)	Contact discharge $\pm 4.0\text{kV}$	pass
Slots, seams, non-metallic part of the enclosure	Air discharge $\pm 8.0\text{kV}$	pass

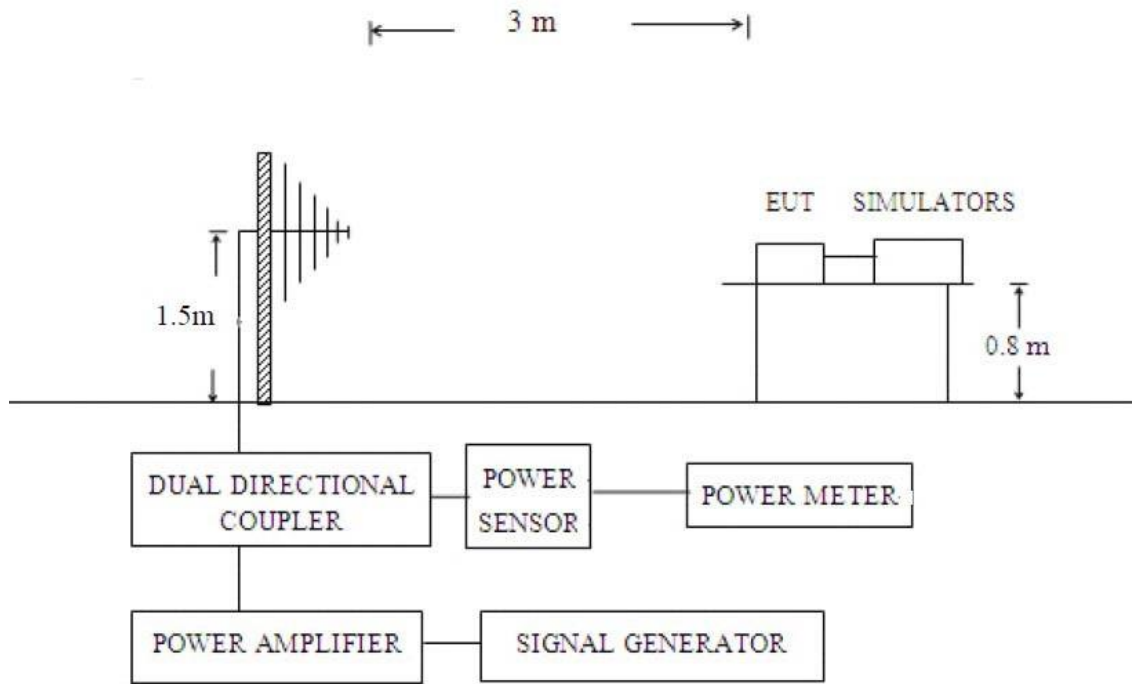
RF Electromagnetic Field Immunity

Measuring arrangement

Test standard: EN61547:2009

Power Supply: Battery

Block Diagram of measuring arrangement:



Ambient

Temperature: 22°C Relative humidity: 50% Atmospheric Pressure: 101.3 kPa

RF Electromagnetic Field immunity

Field Strength: 3 V/m

Frequency range: 80MHz-1GHz

Antenna Polarization		Horizontal	Vertical
EUT Position	Front	Pass	Pass
	Rear	Pass	Pass
	Right	Pass	Pass
	Left	Pass	Pass
	Floor		
	Top		

NOTE - "N/A" means the item is not applicable.

Test result: Pass

Photograph of EUT







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