



Specification

CUSTOMER:

CUSTOMER P/N:

DESCRIPTION:

P/N:

C168-JL-3774

PART NO:

WIFI Antenna; V1.1

Approved	Check	Edition
Frank	WenSen	Sean
2019. 08. 12	2019. 08. 12	2019. 08. 12

© 2019-2020Fu Zhou Jie Lei Corporation. All rights reserved.

All content, materials, and programs in this document, including all code, text, graphics, and logos, unless otherwise noted, are the property of Jie Lei Corporation and cannot be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without the express written permission of Jie Lei Corporation.

Jie Lei Corporation may have patents or pending patent applications, trademarks, copyrights, or other intellectual property rights covering subject matter in this document. The furnishing of this document does not give you any license to these patents, trademarks, copyrights, or other intellectual property rights except expressly provided in any written license agreement from Jie Lei.



Contents

1. Electrical Performance

2. Measurement Setup

2.1 Test Equipment

3. Mechanical Dimension Drawing

4. BOM

5. Sample Test Report

6. Reliability Test Report

6.1 Test Equipment

6.2 Test Index 6.3 Test

Result

7. Packing

Version

Date	Approved	Version	Description
2019-08-12		V1.1	
2019-07-05		V1.0	Original



1. Electrical Performance

A.Electrical Characteristics	
S.W.R	$\leq 2.5@2400\sim 2500\text{MHz}$
Frequency Range(MHz)	2400~2500MHz
Impedance	50 Ohm
Gain	MAX: ANT1 --3.3 dBi@2400~2500MHz ANT2 --2.64dBi@2400~2500MHz
B.Material	
Connector	
Cable Length	
Cable	
C.Environmental	
Operation Temperature	-30℃~+85℃
Storage Temperature	-30℃~+85℃

2. Measurement Setup

(1) Reflection coefficient Measurement:

(a) **Instrument:** Network Analyzer

(b) Setup:

- (I) Calibrate the Network Analyzer by one port calibration using Agilent calibration kits.
- (II) Connect the antenna under test to the Network Analyzer
- (III) Measure the S11 (reflection coefficient) shown in Fig.1

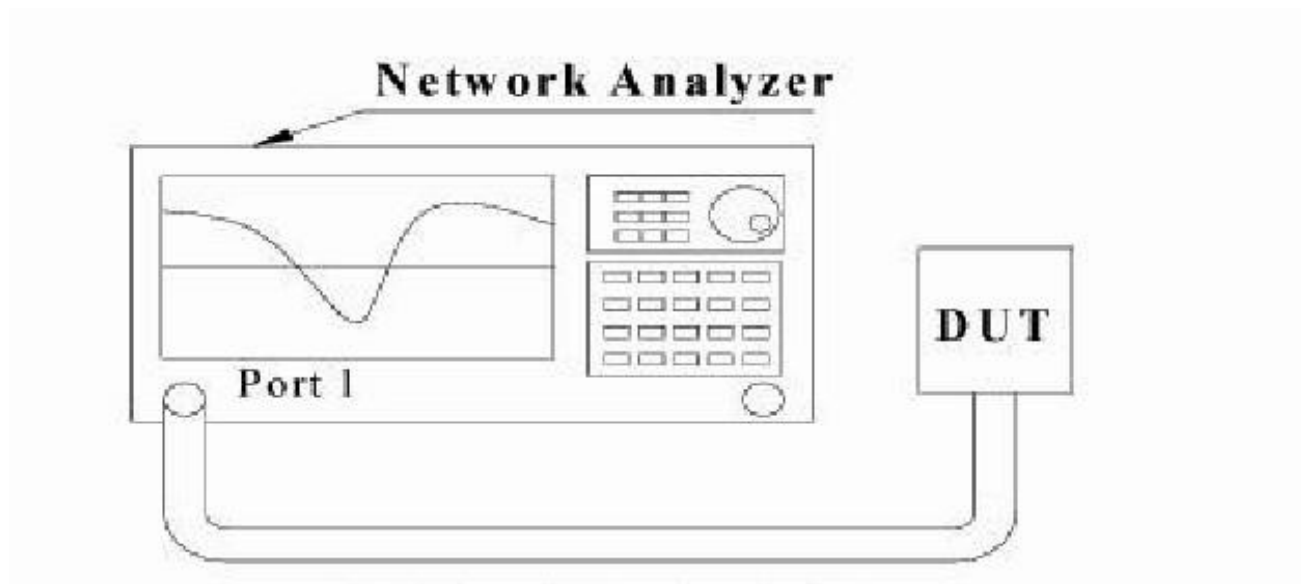


Fig. 1 Measure S11 on Network Analyze



2.1 Test equipment

Standing wave test equipment

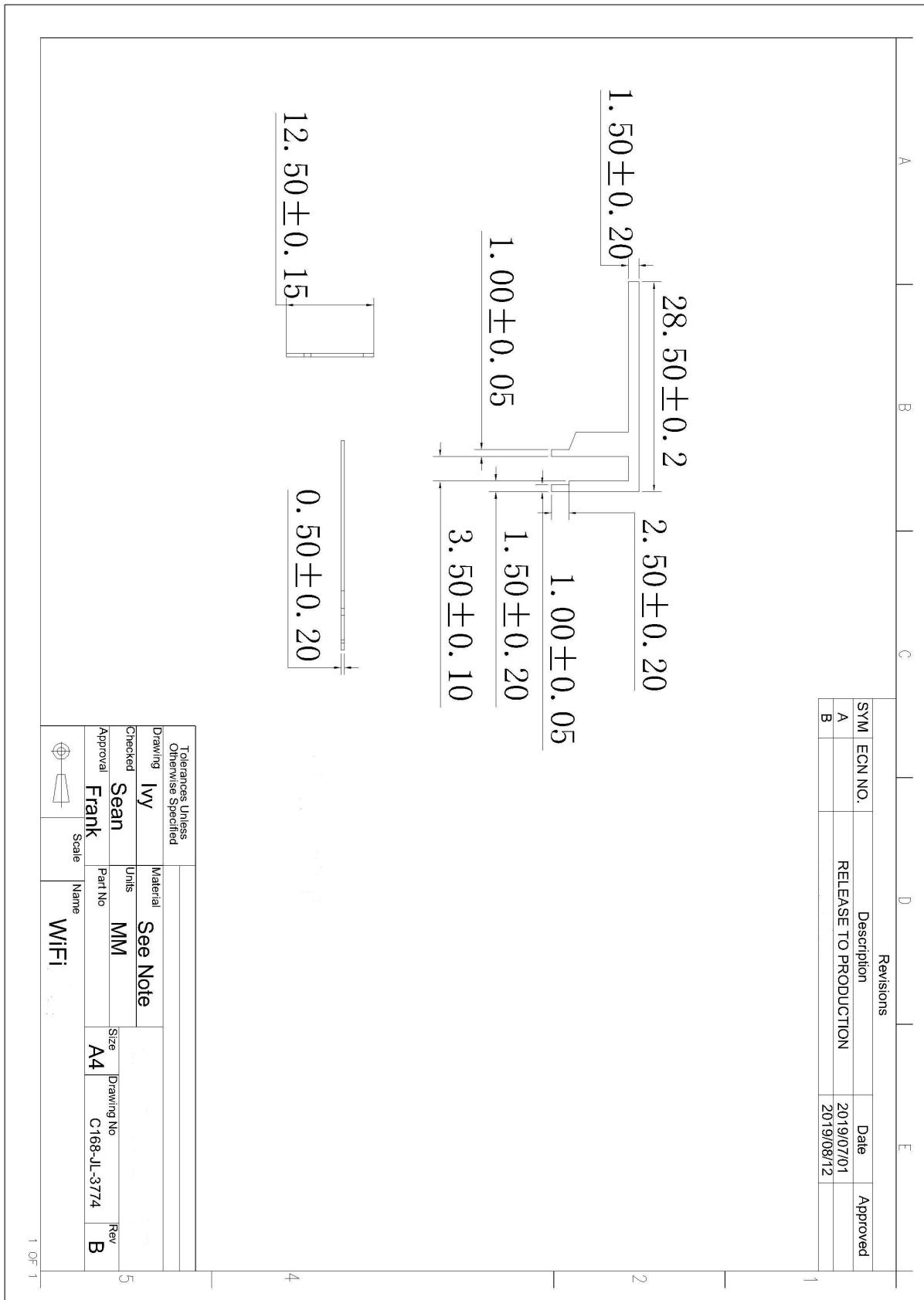
VSWR is tested with Agilent's lossy network analyzer E5071C. The object to be measured is placed on a non-conductive material with a small dielectric constant or suspended in the air.

Efficiency Test Equipment

Efficiency testing equipment is tested in a dark room established by Jielei Company. Including active and passive testing of antenna 3D performance, OTA performance testing (TRP&TIS) in compliance with CTIA standards. The external structure size of the darkroom is 7m×5m×3 m (L×W×H), which can test antennas in the frequency range from 700MHz to 6GHz. During the test, the test to be tested is stably fixed on the turntable.



3. Mechanical Dimension Drawing

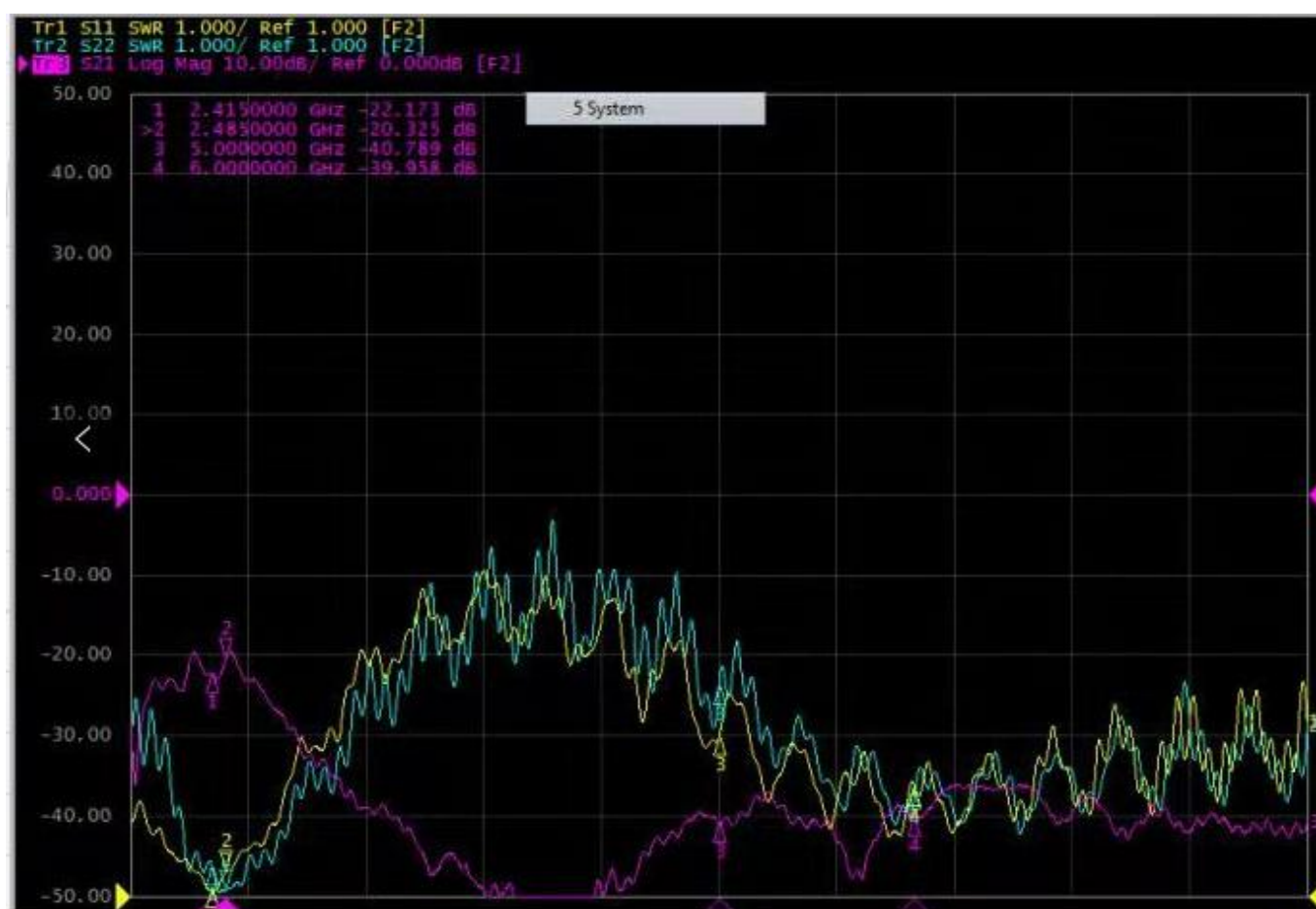




4. BOM

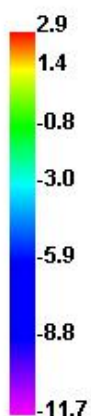
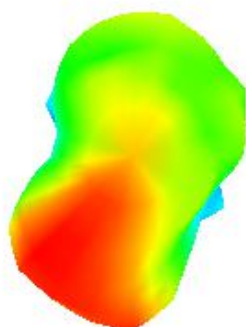
Fuzhou JieLei Electronic Technology Co.,Ltd.			Products:	C168-JL-3774				
Bill of Material (BOM)			Date:	2019.08.12				
Customer:			Customer P/N:					
Item	Part No.	Description	Size&Model	Performance requirements	Attrition rate (%)	Supplier	Suppliers of material	QTY.Per Part
1		Metal	PIFA, nickel, thickness 0.5mm, 28.5*12.5mm		0.3	JY		1

5. Sample Test Report

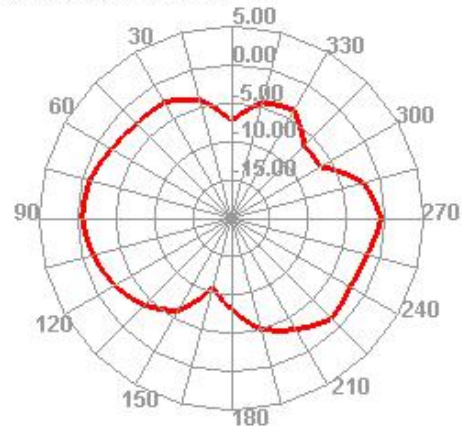


Freq (MHz)	Effi (%)	Max (dB)	Freq (MHz)	Effi (%)	Max (dB)
2400	58.48	2.22	2400	54.16	1.31
2410	57.65	2.21	2410	53.13	1.22
2420	59.77	2.26	2420	55.73	1.39
2430	60.81	2.53	2430	57.34	1.55
2440	63.58	2.81	2440	60.37	1.97
2450	64.64	2.88	2450	61.07	2.27
2460	64.53	2.96	2460	60.84	2.42
2470	65.03	3.14	2470	61.61	2.53
2480	64.83	3.33	2480	61.38	2.64
2490	67.11	3.58	2490	64.06	3.02
2500	66.71	3.53	2500	64.53	3.42
2.4G1			2.4G2		

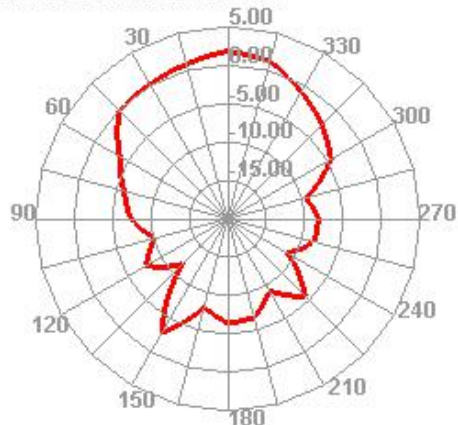
2450.000MHz



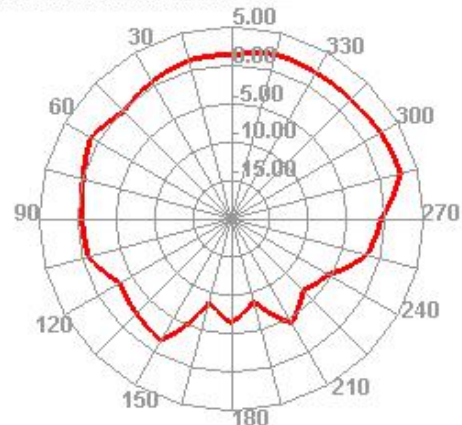
2450.000MHz H



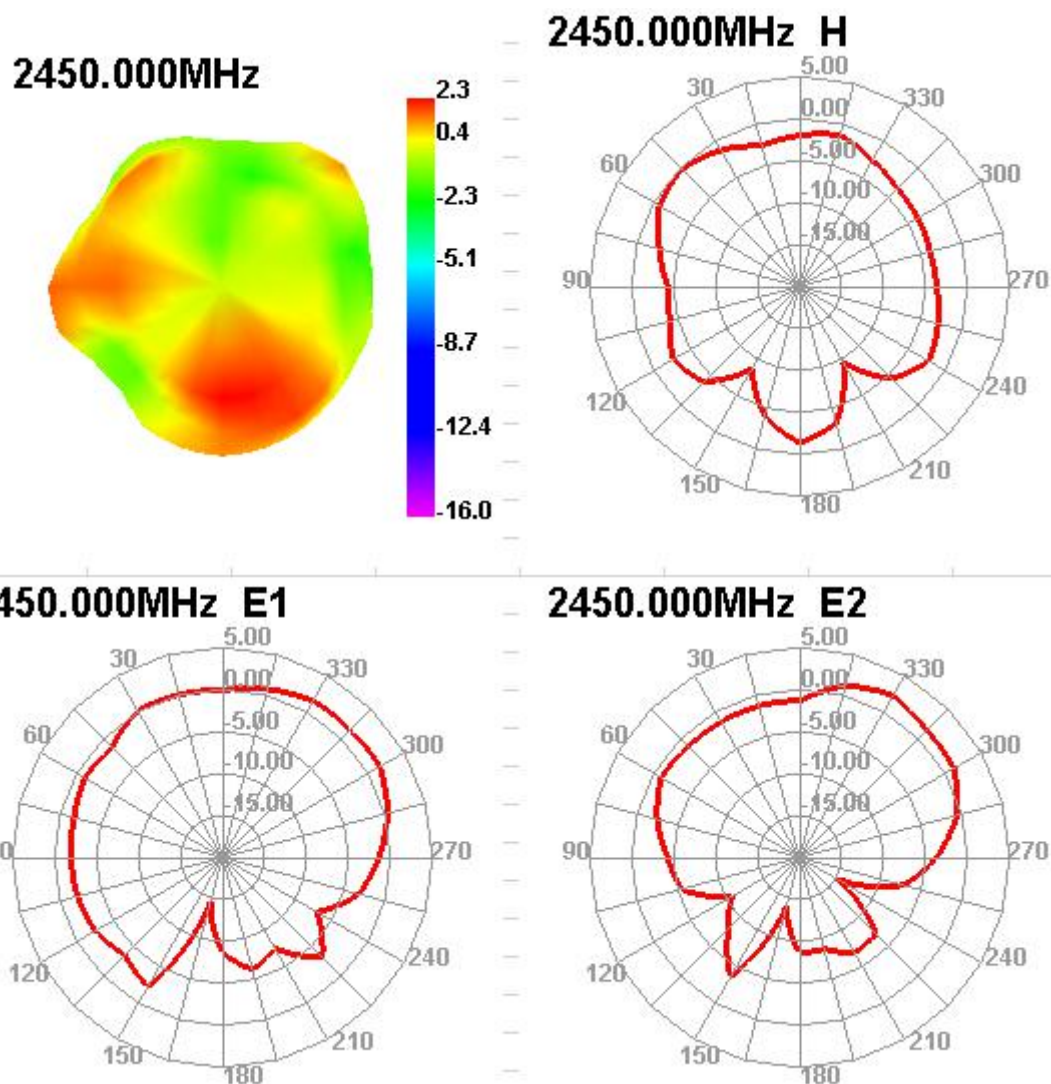
2450.000MHz E1



2450.000MHz E2



2.4G1



2.4G2

6. Reliability Test Report

6.1 Test equipment



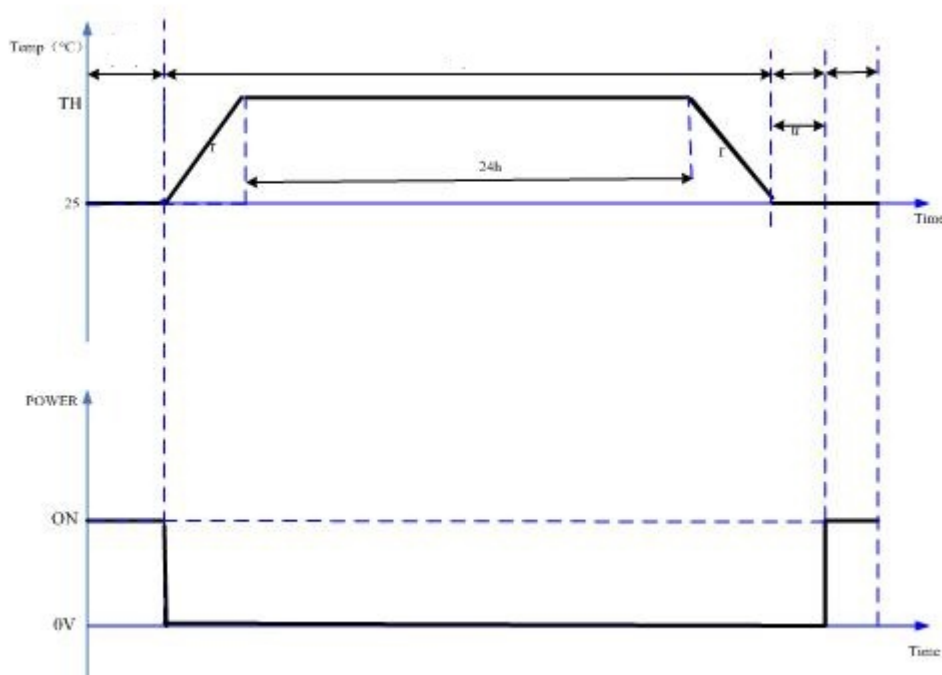
6.2 Test indicators

The test indicators are as follows:

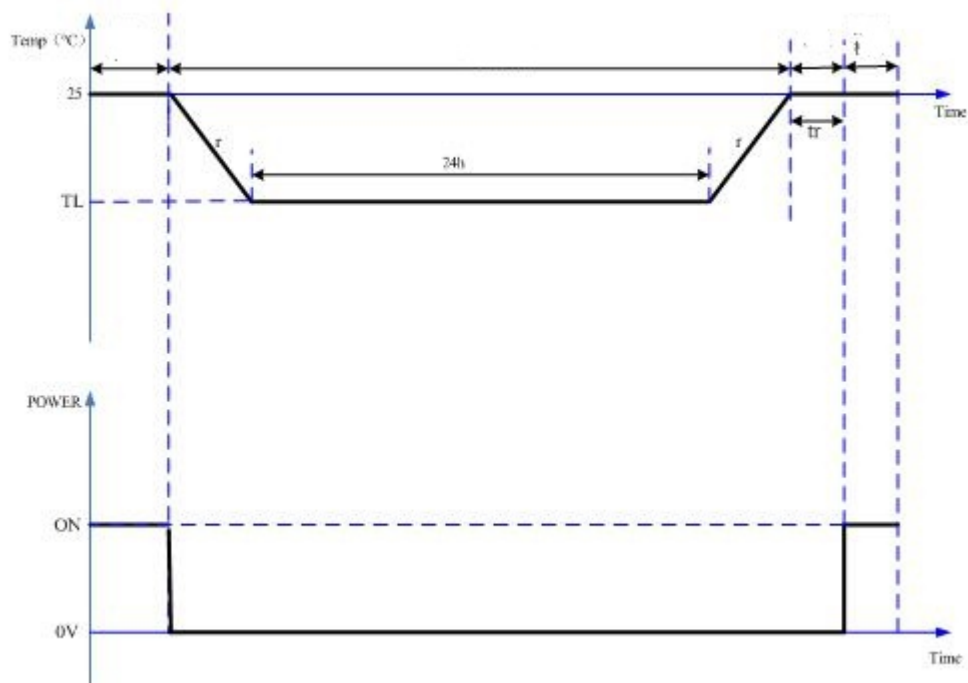
Storage test:

- 1) High ambient temperature 85°C, time 24H
- 2) Low ambient temperature -40°C, time 24H
- 3) Hot and humid environment: temperature 50°C % humidity 95% time 24H

High temperature storage: +85 degrees



Low temperature storage: -40 degrees



Constant temperature and humidity: 50 plus or minus 2; 95 humidity

6.3 Test results

At the end of the test period, take it out of the incubator and cool it under normal atmospheric conditions for 1 hour.



Test results

Test Conditions	Performance	Result
High temperature storage: +85 degrees 24H	OK	OK
Low temperature storage: -40 degrees 24H	OK	OK
Constant temperature and humidity: 40 plus or minus 2; 95 humidity 24H	OK	OK



7.Packing



200PCS for each package;