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version	formulate	Revised content	Reason for revision	date
V1.0	Liu bin		add	20230708
V1.1	Liu bin	performance optimization	Whole machine matching	20230715
V1.2	Liu bin		Change the outlet direction	20230814

1 、 Product picture



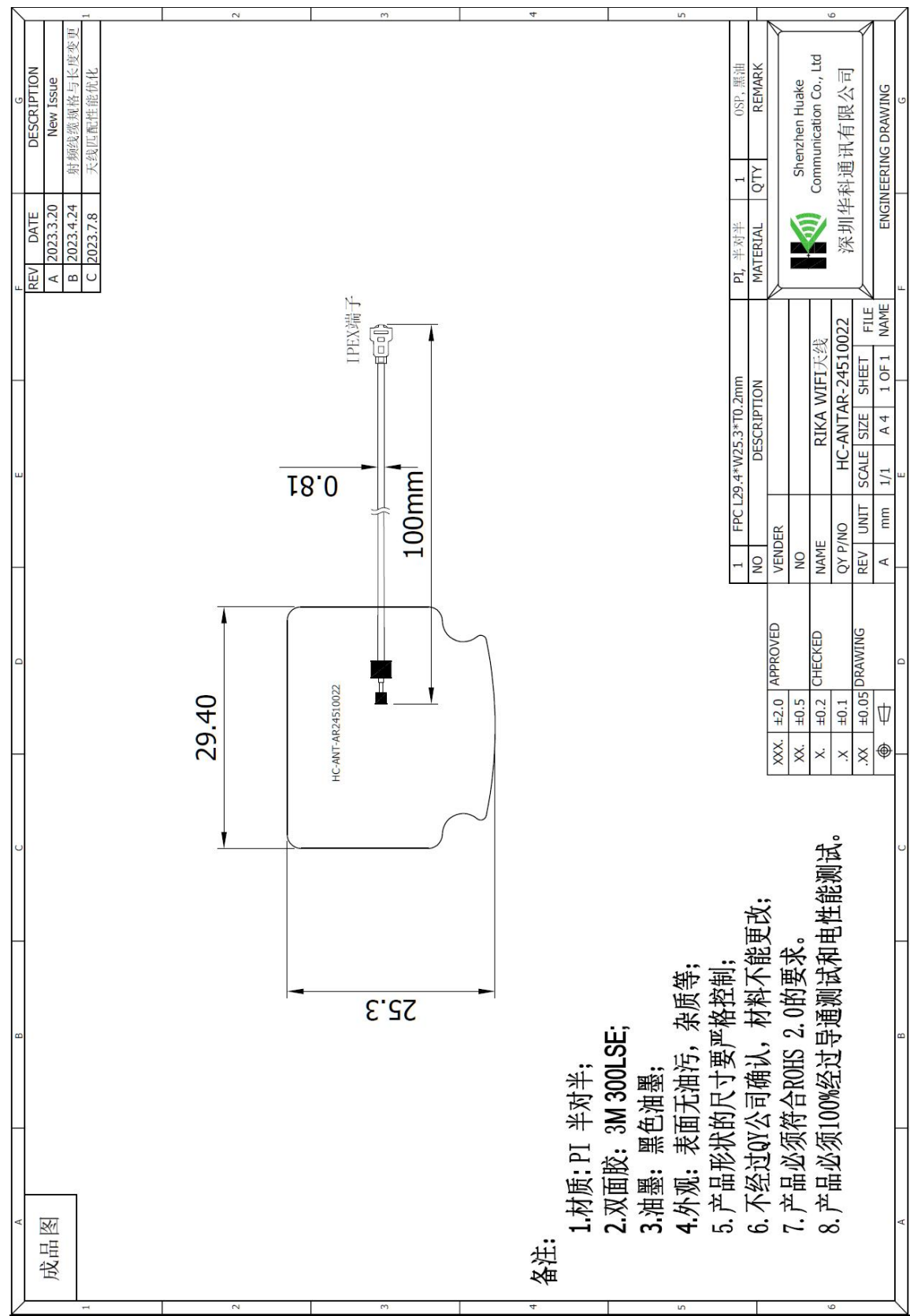
2 、 Main components and composition

Product name: WiFi antenna		Model Part no: HC-ANT-AR24510022
1	Connector Type	IPEX
2	Connector Coating	Gild
3	Cable Type	0.81
6	Technology	
7	Radiating Element	FPC Soft board
8	Coating	Black plating

3 、 Characteristic parameter

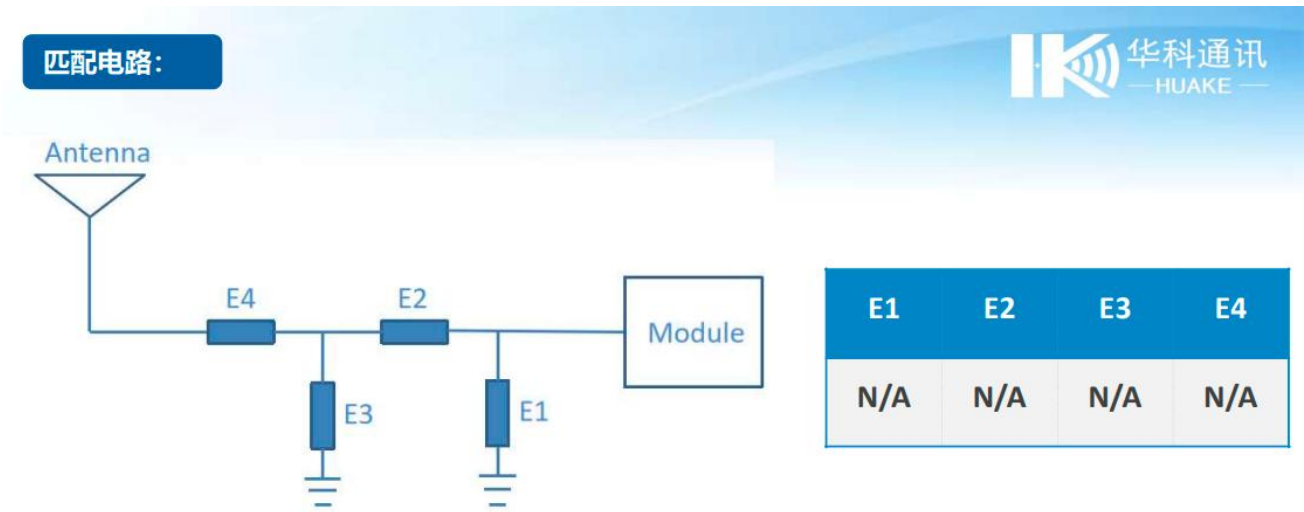
Frenquency Rang	2400-2500MHz
Impedance	50Ω
Radiation	Omnidirection
Polarization	Perpendicular
Coating	Black plating
Height	29.4*25.3mm
Cable Length	100mm
working Temperature	-45- + 85℃
Storage Temperature	-45- + 85℃
Applicable Band	WiFi
Humidity	< 95%
Installation mode	Paste and snap

4 、Size structure diagram



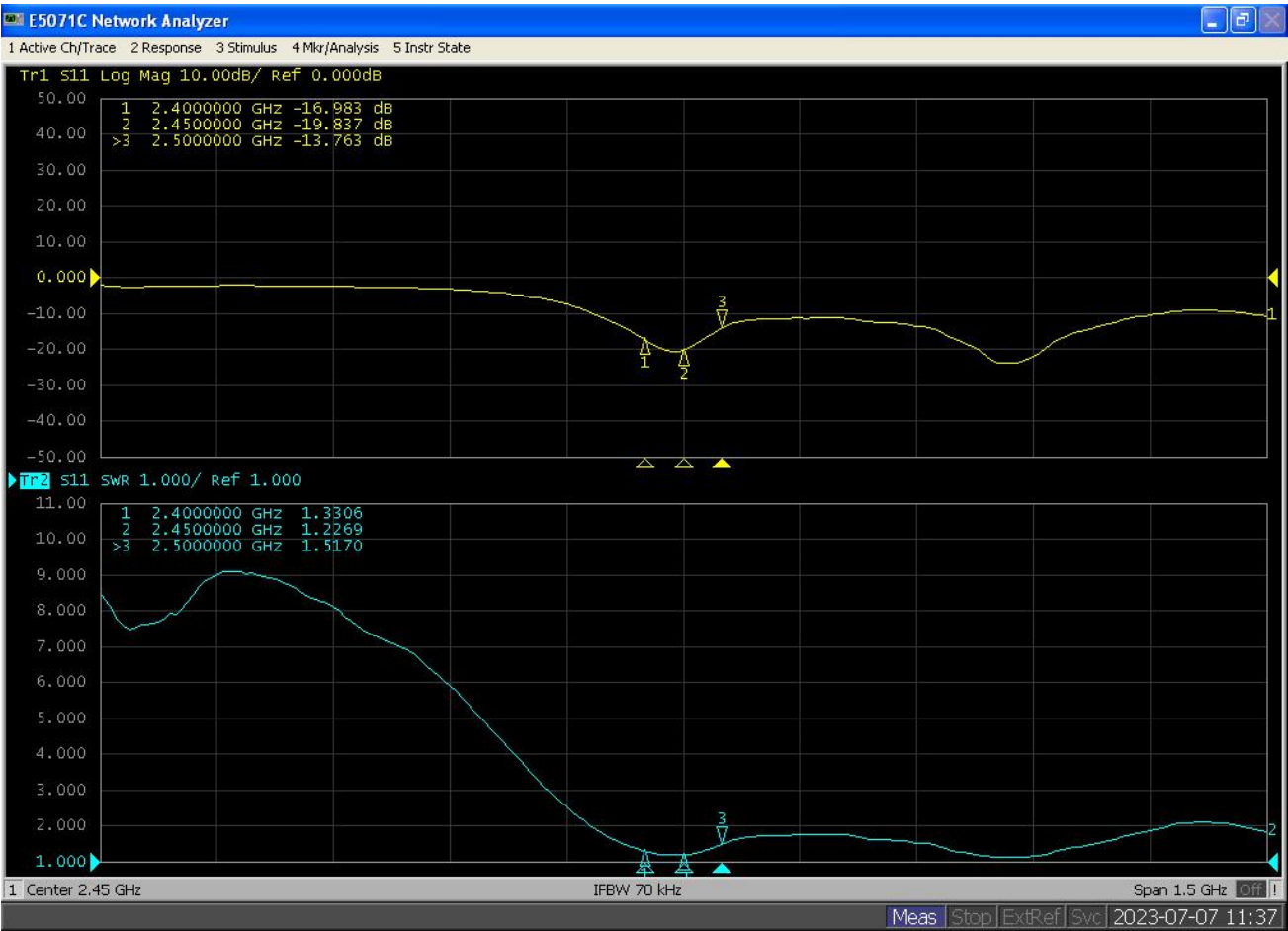
5 、Circuit matching

No matching was added to the client board
end.



6 、Electrical performance test chart

6.1, Standing wave test chart



Fill:

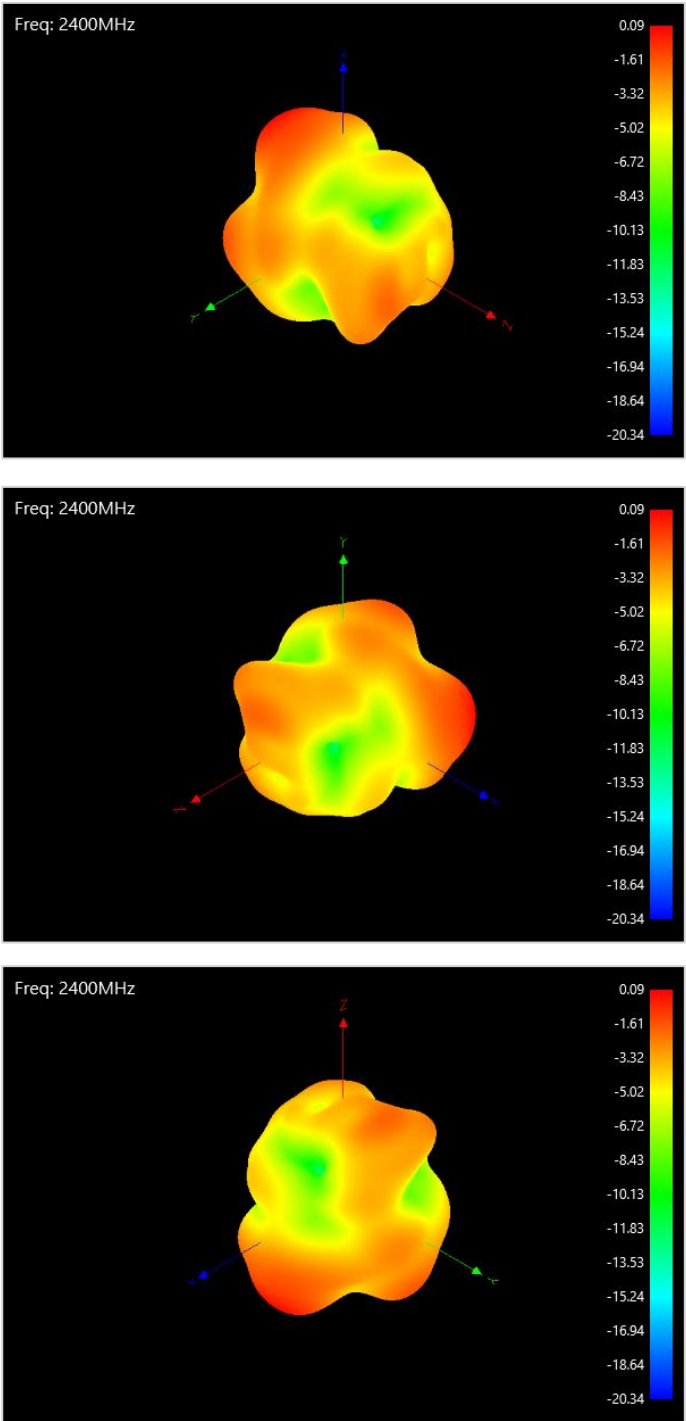
- 1.The antenna and prototype are matched, debugged and verified.
- 2.For the installation location and detailed test report, see the adjustment report RAKI antenna complete machine matching adjustment report 20230708.

6.2, Darkroom test data

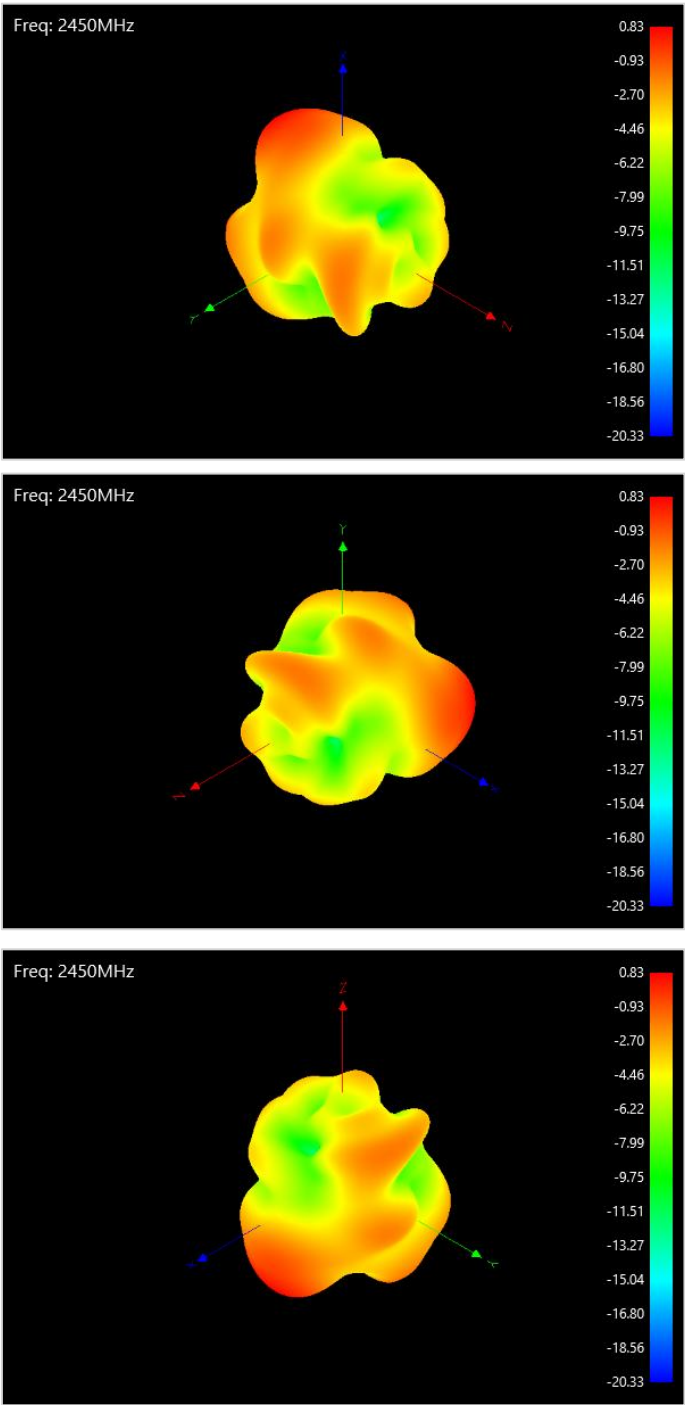
Efficiency & gain (2.4WiFi2400-2500MHz)

Frequency(MHz)	Gain(dbi)	Efficiency(db)	Efficiency(%)
2400	0.09	-5.12	30.74
2410	0.35	-4.99	31.69
2420	0.32	-5.07	31.15
2430	0.46	-5.01	31.58
2440	0.62	-4.95	31.96
2450	0.83	-5.01	31.58
2460	0.69	-5.19	30.28
2470	0.56	-5.24	29.94
2480	0.59	-5.12	30.75
2490	0.16	-5.44	28.58
2500	0.26	-5.27	29.71

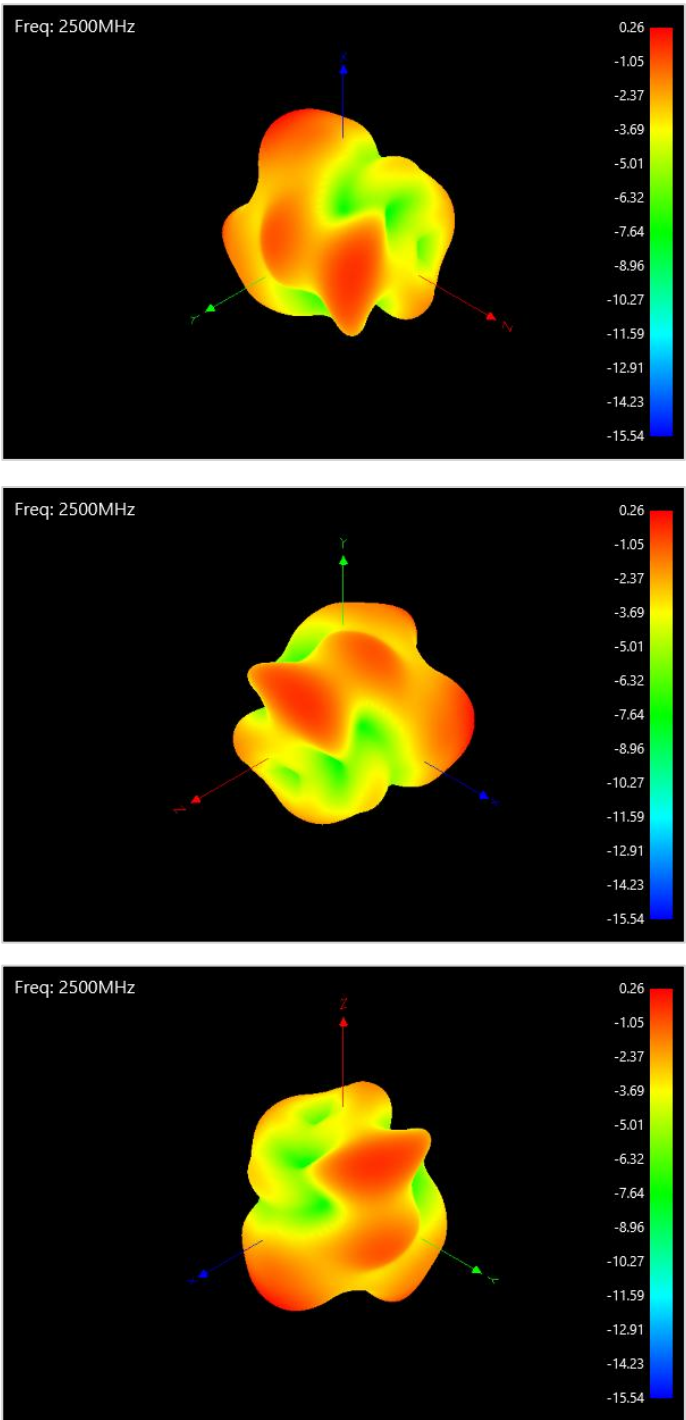
directional diagram 2400MHz



directional diagram 2450MHz



directional diagram 2500MHz



7 、 Environmental reliability test

7.1、 Salt spray test

Salt spray test report			
Testing part:	QC	Testers: Yu Fei	Date: 2023.07.08
Name of test sample:	Connector	Type: HC-ANTAR-24510022 (IPEX)	Number: 3PCS
Test item:	Salt spray test	Device name:	Salt spray corrosion test chamber
test method:	The test samples were put into the modulated salt solution test chamber and salt spray corrosion chamber for continuous spray test.		
Concentration of salt solution:	52g/L	PH: 6.7	Test cycle: 50h
Test standard:	The test shall be carried out in accordance with GB / t10125 corrosion test in artificial atmosphere and salt spray test; the results shall be rated in accordance with GB / t6461-2002 corrosion test of metal and other inorganic coatings on metal substrate and the rating of test pieces and test pieces		
Result			
NO	Grade	Result	Remarks
1	Rp/Ra=10/10vsB	OK	
2	Rp/Ra=10/10vsB	OK	
3	Rp/Ra=10/10vsB	OK	

7.2 High and low temperature test

Environmental Performance		
Test Description	Test Procedures & Condition	Requirements
Humidity Temperature Cycling	Decay Test Conditions: Temperature : 25 ~ 65°C Humidity : 90 ~ 95% (R.H) Duration : 24 hours	1, No evidence of damage 2, The electrical performances should meet the spec. specified
High temperature test	Decay Test Conditions: Temperature:90°C Duration:10 Minute	1. No evidence of damage 2. The electrical performances should meet the spec. specified
Low Temperature test	Decay Test Conditions: Temperature:-60±2°C Duration : 10 Minute	1.No evidence of damage 2.The electrical performances should meet the spec.specified