



NANJING SHIHENG ELECTRONICS CO., LTD.

## APPROVAL SHEET

No. JK/JXC190117026-A

CUSTOMER

PART NAME

MF72 POWER NTC THERMISTOR

PART NUMBER

MF72 12D20 (UL)

DATE

2019-01-17

CONFIRM

### CLIENT

Quality

Dep.: \_\_\_\_\_

Production

Dep.: \_\_\_\_\_

Engineering

Dep.: \_\_\_\_\_

### MANUFACTOR

Design: Sophia shao

Check by sales: \_\_\_\_\_

Check by R&D: Pong. CH.

Check by QA: Lishao yuan

NANJING SHIHENG ELECTRONICS CO., LTD.

Address: No.18 Jinyang Road Hushu Town Jiangning District Nanjing China

Postcode: 211121 TEL: +86 25 52121868 FAX: +86 25 52122373

Http://www.shiheng.com.cn

E-mail: sales@shiheng.com.cn





# MF72 POWER NTC THERMISTOR

版本 2.0

Part No.:MF72 12D20

NANJING SHIHENG ELECTRONICS CO., LTD.

This detailed specification provide MF72 series NTC Thermistor's structure size、 product performance、 test conditions、 use requirement and other parameters, please confirm.  
If you have any doubt with this specification, please contact us (025-52121868). If no doubt, please confirm back. If you don't confirm back, we think you accept it.  
Your company if change product application and usage method, please contact us.

Customer:		
customer confirm	Confirm:	Date:
	Approve:	Date:

## 1、Electrical Characteristics

	Item	Symbol	Test conditions	Unit	Specification
1.1	Zero Power Resistance at 25℃	R <sub>25</sub>	T <sub>a</sub> =25±0.5℃ Test Power≤0.1mW, test in the air	Ω	12Ω±20%
1.2	B-value	B <sub>25/50</sub>	$B=[(T_a \times T_b)/(T_b - T_a)] \times \ln(R_a/R_b)$ T <sub>a</sub> =25℃±0.01℃ T <sub>b</sub> =50℃±0.01℃	K	3200±10%
1.3	Maximum steady-state current	I max	/	A	5
1.4	The maximum allowable capacity value	C <sub>T</sub>	240Vac	μ F	680
1.5	Thermal dissipation Coefficient	δ	/	mW/℃	≥25
1.6	Thermal time constant	τ	/	sec	≤100
1.7	Withstand voltage	/	500V/AC 1min	/	No breakdown or flashover
1.8	Insulation resistance	/	500V/DC 1min	MΩ	≥500
1.9	Operating temperature	/	/	℃	-40℃ ~ 200℃
1.10	Maximum rated power	Pmax	/	W	6
1.11	R&T-table	/	/	/	See attached table
1.12	Volt-Ampere curve	/	/	/	See attached curve

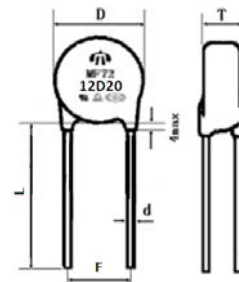
## 2、Reliability

	Item	Test conditions and methods	Technical requirements
2.1	Terminal strength	pulling force(N) 0.5<d≤0.8 10, 0.8<d≤1.25 20 time: 10±1 sec	No obvious damage, R25 ΔR/R≤±25%
2.2	Solderability	temperature : 245±5℃ for 2-3sec	the coverage area should be more than 95%.
2.3	Welding heat resistant	Tin pan temperature: 260±5℃, immersion depth is apart from the body resistance 6mm, time:10±1sec	R25 ΔR/R≤±25%.
2.4	Steady humidity and heat	Temp: 40℃±2℃, humidity: 93±2%RH, Time : 1000hrs	R25 ΔR/R≤±25%.
2.5	Rapid changes in temperature	-40℃30min→25℃5min→200℃30min→25℃5min, 5cycles	R25 ΔR/R≤±25%
2.6	High temperature storage	Temp : 200℃±5℃, Time :1000hrs	R25 ΔR/R≤±25%
2.7	The largest steady current durability	Continue to exert maximum static electricity thermistor at room temperature to 1000 ± 24 h	R25 ΔR/R≤±25%
2.8	Maximum capacitance	Exert Max allowable electric capacity, 5 times intermittently make 50 ms, break the thermal time constant of a loop, toward a thermistor 1000 - cycle.	R25 ΔR/R≤±25%

## 5. Certificate

- 5.1 Quality Management System ISO9001:2015  
IATF16949:2016  
5.2 Environment Management System ISO14001:2015  
5.3 Environment Test Report RoHS  
5.4 CQC Safe Certification  
5.5 The Hi&Tech Product of Jiangsu Province  
5.6 TUV Approval  
5.7 UL&CUL Approval (File # E241319)

## 6、Dimensions(mm)



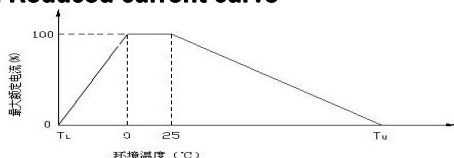
Coating material	Wire material
Black silicone resin	Tin plated copper wire

D	L	F	T	d
Max 22.5	Min25	10±1	Max 7.0	1.0±0.05

## 3、Matters need attention

- 3.1 This product uses: Inhibition of surge current;  
3.2 When the soldering iron welding, the welding place at least 2 mm space from coating layer and the welding temperature should be lower than 360℃, welding time < 3 ses  
3.3 Storage temp: -10℃ ~ 40℃; storage humidity : ≤75% RH;  
3.4 Avoid air corrosion or sunlight  
3.5 Remake sealed storage after package opening. The storage life is 1 year. Exceed storage period, can re-inspect per as the items stipulated in the standard. If it meets the requirements, it can still be used.

## 4. Reduced current curve



备注: T<sub>L</sub>-最低温度 (℃)  
T<sub>u</sub>-最高温度 (℃)

## 7、Product model specification

① MF72 ② 12 ③ D ④ 20

- ① : Shiheng Brand  
② MF72: Power NTC Thermistor  
③ 12: Zero Power Resistance at 25℃ is 12Ω  
④ 20: Diameter of body is D20



# MF72 POWER NTC THERMISTOR

版本 2.0

Part No.:MF72 12D20

NANJING SHIHENG ELECTRONICS CO., LTD.

This detailed specification provide MF72 series NTC Thermistor's structure size、product performance、test conditions、use requirement and other parameters, please confirm.  
If you have any doubt with this specification, please contact us (025-52121868). If no doubt, please confirm back. If you don't confirm back, we think you accept it.  
Your company if change product application and usage method, please contact us.

Customer:		
customer confirm	Confirm:	Date:
	Approve:	Date:

## R&T Chart

