# High Precision Detection NTC Thermistor MF52 5K 10K 15K 20K 30K Ohm Low Resistance

## **Basic Information**

Place of Origin: China Dong Guan

Brand Name: lin kunCertification: ROHS,UL

Model Number: MF52 5ΚΩ/10ΚΩ/15ΚΩ/20ΚΩ/30ΚΩ

5000 PCS

Minimum Order

Quantity:

• Price:

0.045 USD/ PCS

Packaging Details:
 Bulk,500pcs per polybag

• Delivery Time: 7 workdays

• Payment Terms: T/T

• Supply Ability: 20,000,000PCS per week



## **Product Specification**

Product Name: MF58 NTC Type Thermistor
 Resistance Value: M5ΚΩ/10ΚΩ/15ΚΩ/20ΚΩ/30ΚΩ
 B-Value 25/50: 3470/3435/3380/3950/4100/4200

• Accuracy: ±1%

Size: 2mm-3mmInsulation Resistance: ≥100

Thermal Dissipation ≥2

Constant:

 Response Time: 1s To 10s
 Operating Temperature -40~120°C Range:

Dissipation Constant: ≤2mW/K
 Insulation Resistance: >100MΩ



## More Images







## **Product Description**

<u>High Precision Detection NTC Thermistor MF52 5K 10K 15K 20K 30K Ohm Low Resistance</u>

Features
Rohs compliant small size, fast response excellent thermal cycle endurance

superior solderadility and resistance to soldering heat shock moisture resistant wide resistance range

high stability steady good quality of coherence and interchange -40 ~125 °C operating temperature range

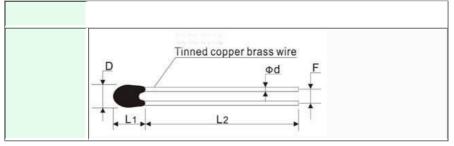
## Application:

- 1. Air-condition Equipment
- 2. Heating Apparatus
- 3. Electric Thermometer
- 4. Liquid Level Sensor
- 5. Automotive electronics
- 6. Electronic calendar
- 7. Battery of Mobile Telephone

#### **Parameters**

envelope material	epoxide, silicone or bakelite
resistance at 25 °C	from 1Kohm to 330Kohm
tolerance of resistance	± 1%, ± 2%, ± 3%, ± 5%, ± 10%
B(25/50)	from 3100K to 4300K
tolerance of B value	± 1%, ± 2%, ± 3%, ± 5%
head color	black

1. Overall dimensions



Dmax	L1max	L2 ± 3	F d ± 0.05	F ± 0.5
2.6	4.5	30	0.35	2.0

## 2. Materials

Encapsulating material	colour	Lead material
modified resin	black	Tinned steel wire

## 3. Model description

MF52	<b>A</b> 1	103	F	3950
Bead temperature		Resistance value	Resistance tolerance	B value (25/50)
measuring NTC thermistor	Lead tinned steel wire	1 0 K	±1%	3950K

#### 4. Electrical performance

	project	symbol	test condition	unit	performanc e requirement
4 . 1	Zero power resistance at 25°C	R25	Ta=25±0.05°C Test power ≤0.1mW in flowing liquid.	ΚΩ	10±1%
4 . 2	B value	25/50	B=[(T a 'Tb)/(Tb-T a)]× ln(Ra /Rb) $Tb = 50 \text{ °C} \pm 0.1 \text{ °C}$	к	3950±1%
4.	dissipation factor	d	In still air	mW/°C	≥2
4. 4	characteristic time	t	In still air	sec	≤7
4. 5	insulance	/	100V/DC1min	ΜΩ	≥100
4. 6	operating temperature range	/	/	°C	-40~120
4. 7	Resistance- temperature characteristic	/	/	/	
4. 8	Resistance error	/	/	/	

## 5. Reliability performance test

project Test conditions and methods	technical requirement
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1	soldering resistance	235+/-5°C, with the tin surface 6mm away from the lower end of the body for 2-3 seconds.	smoothly coated on the surface of the immersed part of the lead, and the area is over 95%.
5 2	Welding heat resistance	Immerse the lead in tin liquid at 265°C 5, with the liquid level 6mm away from the resistor, and the time is 5 1 second.	No visible damage, <i>R25</i> D R∕R≤±2%
5 3	Lead-out strength	Tension: 5N, time: 10s-	No visible damage, <i>R25</i> D R∕R≤±2%
5 4	Rapid temperature change	55°C30min→25°Cmin→125°C30min→ 25°Cmin, repeated 5 times, and recovered for 4 hours.	No visible damage, <i>R25</i> D R∕R≤±2%
5 5	high- temperature	Temperature: 125°C, time: 16 hours.	No visible damage, <i>R25</i> D R∕R≤±2%

5 6	cold	Temperature: -55°C, time: 2 hours.	No visible damage, R25 D R/R≤±2%
5 7	low pressure	Air pressure: 40 0.1kpa for 4 hours.	No visible damage, R25 D R/R≤±2%
5 8	Steady state warming	Temperature: 40°C, humidity: 93%, time: 500 12 hours.	No visible damage, R25 D R/R≤±2%, Withstand voltage ≥700V/AC1min insulation resistance ≥ 100 kω.
5 9	Alternating damp heat	Temperature: 25~40°C, humidity: 90%, time: 24 hours.	No visible damage,  R25 D R/R≤±2%,  Withstand voltage  ≥700V/AC1min insulation resistance ≥ 100 kω.
5 1	Endurance of zero power consumption at upper limit temperature Persistence	Temperature: 125°C 2°C Time: 1000 24 hours.	No visible damage, <i>R25</i> D R⁄R≤±2%
5 1 1	vibrate	Frequency range: 10~500HZ, amplitude: 0.75mm or 98m/S 2 time 2 hours,	No visible damage, R25 D R/R≤±2%
5 1 2	collide	Acceleration: 250m/S 2, pulse duration: 6Ms, 4000 collisions.	No visible damage, R25 D R⁄R≤±2%

#### 6, welding conditions

When welding, the welding place should be 6mm away from the root of the resistor, the welding temperature should be lower than  $350^{\circ}$ C, and the welding time should be as short as possible.

#### 7. Storage conditions

Company Simple Introduction:
20 years experience on PTC/NTC thermistor field
Mainly market are Europe, North America, Asia
Competitive price
On time handle over
Competitive price
Inquiry answered in 24hrs
Good team waiting here to serve for you
RoHS &UL compatible
OEM & ODM business accept

#### MF5A NTC Thermistor Description:

MF5A-103F /503F/104F R25=(50K) B25/50=3950±1% High-precision small-volume negative temperature coefficient thermistor powder preparation to NTC chip coating full-set manufacturer Dongguan Linkun Electronic Technology Co., Ltd. NTC (Negative Temperature Coefficient) thermistor is a resistor with high temperature coefficient and is also a semiconductor element that is extremely sensitive to temperature. It is made of metal oxides such as manganese, cobalt, nickel, and copper, and is manufactured by ceramic technology. It is formed, because its conduction method is completely similar to semiconductor materials such as germanium and silicon. When the temperature is low, the number of carriers (electrons and holes) in these oxide materials is small, so the resistance value is high. As the temperature rises, the carrier As the number of carriers increases, the resistance value decreases.

MF5A small leather wire thermistor features:

- NTC temperature sensor is small in size and fast in response
- NTC leads are insulated, and the wires are soft and can be bent moderately
- •Thermistor resistance value B has high precision and accurate temperature measurement
- $\bullet$  NTC chip products are lead-free and comply with the EU ROHS directive

Application scope of thermistor and NTC temperature sensor:

- , vacuum gauge, temperature and humidity gauge, beauty equipment, power supply, electronic toys
- Cell phone batteries, NB batteries, electric vehicle batteries, medical instruments for gas analyzers
- Solar water heaters, refrigerators, cars, copiers, fax machines

- Electronic thermometer, electronic stove, electric cooker, electric thermos
- Clothes dryer, electric iron, gas water heater, electric blanket, air conditioner
- 3C home appliances, petroleum heaters, microwave ovens

MF5A small leather wire thermistor series main technical parameters:

		esistance e(R25)	B value	Work	Dissipation	thermal time
Model	Resista nce(KΩ)	Allowable deviation(± %)	nominal value (K)	temperatu re	coefficient( mW/°C)	constant (S)
MF5A-102-3435	1		3435			
MF5A-202-3435	2		3435			
MF5A-2.252-3950	2.252		3950			
MF5A-472-3950	4.7		3950			
MF5A-502-3470	5		3470			
MF5A-502-3950	5		3950			
MF5A-682-3950	6.8		3950			
MF5A-103-3435	10		3435			
MF5A-103-3470	10		3470			
MF5A-103-3600	10		3600			
MF5A-103-3380	10		3380			
MF5A-103-3977	10		3977		≥3.0	
MF5A-103-4100	10		4100			≤6
MF5A-153-3950	15	±1% ±2%	3950	-40°C		
MF5A-203-3950	20	±3% ±5%	3950	+120°C		
MF5A-233-3950	23		3950			
MF5A-303-3950	30		3950			
MF5A-333-3977	33		3977			
MF5A-40.27-3950	40.27		3950			
MF5A-473-4013	47		3950			
MF5A-503-3977	50		3977			
MF5A-503-3990	50		3990			
MF5A-503-4050	50		4050			
MF5A-104-3950	100		3950			
MF5A-104-3990	100		3990			
MF5A-104-4200	100		4200			
MF5A-204-3892	200		3892			
MF5A-204-3917	200		3917			

Precautions for the use of small leather wire thermistors:

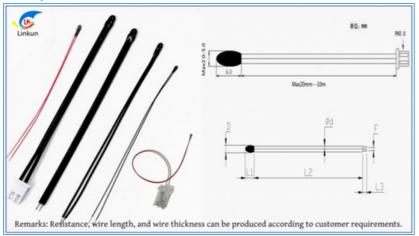
Be sure to use within the specified temperature range to avoid deterioration of the material and characteristics.

Thermistors are designed based on transformers used in general (indoors at room temperature, humidity, and pressure).

Therefore, if they are used in the following environments, they will fail (or burn out) when the characteristics are worst. ), please do not use in such an environment.

- ① Corrosive reducing gases (Cl2, HXS, NH3, SOX, NOX, etc.).
   ② Among volatile and flammable gases.
- 3 Places with a lot of dust.
- ④ A place where pressure has been reduced or increased.

- ⑤ Places in direct contact with water or places that are prone to condensation due to high humidity.
- © Place in salt water, oil, liquid medicine, organic solution.
- Telegraphic Places with excessive vibration.
- ® Other places similar to ①—⑦.



A:(Tin. nickle Cu or Cp wire) Normal dimension table

Code	Dmax	L1max	L2min	d ±0.05	F ±0.5
A1	2.5	4	25	0.3	1.7
A2	3	4.5	25	0.45	2.2

B:(Enamelled cu wire) Normal dimension table

Code	Dmax	L1max	L2min	L3 ±1	d±0.05
B1	2	3.5	by user determine	3	0.2
B2	3	4	by user determine	3	0.3

C:(High-temperature wire)
Normal dimension table

Code	Dmax	L1max	L2min	L3 ±1	Wire AWG
C1	3	7.5	by user determine	5	30#
C2	4	7.5	by user determine	5	28#

#### D:(Normal temperature wire) Normal dimension table

Code	Dmax	L1max	L2min	L3 ±1	Wire AWG
D1	3	7.5	by user determine	5	30#
D2	4	7.5	by user determine	5	28#

## E:Lead and head are all special specification) Normal dimension table

Code	Dmax	L1max	L2min	L3 ±1	Wire AWG	
E1	by user determine	by user determine	by user determine	5	by user determine	
E2	by user determine	by user determine	by user determine	5	by user determine	

## DE:(Cp Lead Coated with epoxy resin)

Normal dimension table

Code	Dmax	L1max	L21max	L3	d±0.05	F±0.05
DE1	3	6.0	55	By user determine	0.3	/
DE2	4	7.5	35	by user determine	0.45	/

F:(Tinned steel wire) Normal dimension table

Code	Dmax	L1max	L2±1.5	d±0.01	f±0.05	T max
F	3.8	9.5	17	0.6	2.5	3.5

Small leather wire thermistor abnormal handling:

When the thermistor is abnormal, short-circuit current will pass through, and there may be abnormal smell, abnormal sound, smoke, etc., please be sure to connect the thermistor in series with the current protection as another protection device.

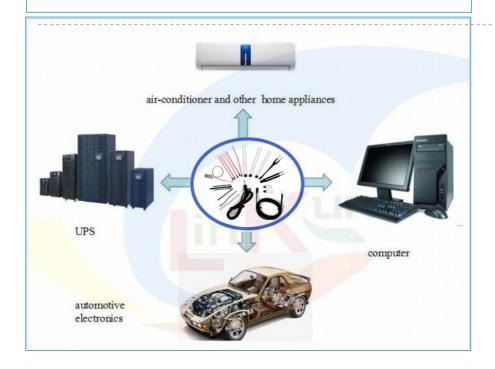
When the thermistor is working, depending on the site (environment) conditions, it may exceed 110°C. Please confirm whether it affects surrounding parts or materials.

Abnormalities in thermistors not only affect parts or materials and cause them to deteriorate, but gas emitted from parts or materials often becomes the cause of component deterioration.

### **Product Description:**







#### Full range of thermistors displayed:



NTC Type Thermistor is a widely used temperature measuring thermistor which is specially designed for temperature measurement and compensation. It is usually made of a MF52 single-ended glass sealed thermistor or MF11 temperature compensated thermistor. It is featured by high insulation resistance ( $\geq$ 100M $\Omega$ ), high precision (tolerance of +/-1%) and wide range of B-value (25/50: 3950±1%).

The NTC Type Thermistor is mainly used in temperature measurement, compensation and control. It is widely used in a variety of applications such as computer, consumer electronics, medical equipment, automotive, aviation and other industries. It can also be used in more demanding applications like food, aerospace and military applications. It is an ideal choice for temperature compensation and measurement.

NTC Type Thermistor has been extensively tested and certified to guarantee its superior quality. It is also well-known for its long-term stability, reliability and durability. Therefore, it is a great choice for temperature measurement and compensation.

#### Features:

Product Name: NTC Type Thermistor

Thermal time constant: ≤7
Response Time: 1s To 10s
Thermal dissipation constant: ≥2

Accuracy: ±1% MF55 film thermistor

MF58 glass sealed thermistor

MF5 Single-ended glass sealed thermistor MF52 dual-ended glass sealed thermistor

#### **Technical Parameters:**

Property	MF5 Single- ended glass sealed thermistor	MF55 film thermi stor	MF52 temperature measuring thermistor	MF6 single- ended glass sealed thermistor	MF62 temperature measuring thermistor
Tolerance	+/-1%	+/-1%	+/-1%	+/-1%	+/-1%
B-Value 25/50	3950±1%	3950±1 %	3950±1%	3950±1%	3950±1%
Thermal Dissipation Constant	≥2	≥2	≥2	≥2	≥2
Size	2mm To 3mm	2mm To 3mm	2mm To 3mm	2mm To 3mm	2mm To 3mm
Insulation Resistance	>100ΜΩ	>100M Ω	>100ΜΩ	>100ΜΩ	>100MΩ
Resistance Range	1Ω Το 100ΚΩ	1Ω To 100KΩ	1Ω Το 100ΚΩ	1Ω Το 100ΚΩ	1Ω Το 100ΚΩ
Accuracy	±1%	±1%	±1%	±1%	±1%
Thermal Time Constant	≤7	≤7	≤7	≤7	≤7
Response Time	1s To 10s	1s To 10s	1s To 10s	1s To 10s	1s To 10s
Insulation Resistance	>100	>100	>100	>100	>100

#### **Applications:**

The NTC type thermistor from Lin.Kun has the model number MF52 10K 1% 3950, is ROHS and UL certified, and originates from China Dong Guan. It has a minimum order quantity of 5000 PCS, with a price of 0.045 USD/ PCS, and is packaged in bulk with 500pcs per polybag. The delivery time is 7 workdays, and the payment terms are T/T. The supply ability is 20,000,000PCS per week. It has a thermal time constant of  $\leq$ 7, an insulation resistance of  $\geq$ 100, and a thermal dissipation constant of  $\geq$ 2. In terms of resistance range, it goes from 1 $\Omega$  to 100K $\Omega$ . This thermistor is especially suitable for temperature measuring, and is specifically the MF52 single-ended glass sealed thermistor and MF58 glass sealed thermistor.

#### **Customization:**

Customized NTC Type Thermistor from Lin Kun

Lin Kun offers a wide selection of MF5 Single-ended glass sealed thermistor, MF52 temperature measuring thermistor and MF5 Single-ended glass sealed thermistor 10K 1% 3950, for NTC Type thermistor.

Brand Name: Lin Kun

**Model Number:** MF52 10K 1% 3950 **Place of Origin:** China Dong Guan

Certification: ROHS,UL

Minimum Order Quantity: 5000 PCS

Price: 0.045 USD/ PCS

Packaging Details: Bulk,500pcs per polybag

**Delivery Time:** 7 workdays **Payment Terms:** T/T

**Supply Ability:** 20,000,000PCS per week **Thermal dissipation constant:** ≥2

Size: 2mm To 3mm

Resistance Range:  $1\Omega \text{ To } 100\text{K}\Omega$ Insulation Resistance:  $>100\text{M}\Omega$ 

Tolerance: +/-1%

### **Product Description:**

NTC Type Thermistor is a temperature measuring device which comes in various sizes, ranging from 2mm to 3mm. It is specially designed to detect and measure temperature accurately with its resistance range of  $1\Omega$  to  $100K\Omega$ . The product also has a high insulation resistance of  $\geq 100$  and thermal dissipation constant  $\geq 2$  to ensure its excellent performance.

It is available in three types, namely the MF52 temperature measuring thermistor, MF55 film thermistor and MF58 glass sealed thermistor. The MF52 temperature measuring thermistor is a high-precision device that can be used to measure temperature accurately. The MF55 film thermistor has a low temperature coefficient of resistance and is suitable for high temperature applications. The MF58 glass sealed thermistor is encapsulated in glass and is suitable for temperature compensation.

NTC Type Thermistor is a reliable and durable product with excellent performance and is a great choice for temperature measuring applications. It is designed for easy installation and maintenance and is suitable for industrial and commercial applications.

#### Features:

Product Name: NTC Type Thermistor

B-Value 25/50: 3950±1% Size: 2mm To 3mm Response Time: 1s To 10s

Accuracy: ±1%

MF58 glass sealed thermistor

MF52 temperature measuring thermistor MF55 temperature measuring thermistor MF51 temperature sensing thermistor

#### **Technical Parameters:**

Parameter	Value
B-Value	25/50: 3950 ±1%
Insulation Resistance	>100ΜΩ
Accuracy	±1%
Operating Temperature	-55°C To +125°C
Insulation Resistance	>100ΜΩ
Response Time	1s To 10s
Product Name	NTC Type Thermistor
Tolerance	±1%
Size	2mm To 3mm
Thermal Time Constant	≤7
Main Types	MF11 temperature compensated thermistor, MF55 film thermistor, MF5 Single-ended glass sealed thermistor

## **Applications:**

Lin Kun's MF52 10K 1% 3950 NTC. Type Thermistor is a high quality, reliable single-ended glass sealed thermistor. With its thermal dissipation constant of greater than 2, resistance range of  $1\Omega$  to  $100 \mathrm{K}\Omega$ , size of 2mm to 3mm and tolerance of +/-1%, it is great for a variety of applications. It is RoHS and UL certified and available in quantities of 5000pcs per polybag. With a price of 0.045 USD/PCS and delivery time of 7 workdays, it is an excellent choice for those seeking cost-effective solutions.

The MF52 10K 1% 3950 NTC Type Thermistor is ideal for temperature sensing and compensation applications, such as temperature detection, temperature compensation, temperature switch, temperature control, temperature measurement and temperature detection. It can be used in air conditioners, electric fans, electric ovens, lamps, induction cookers, water heaters, electric water heaters, refrigerators and other home appliances, as well as industrial instrumentation, automotive electronics, etc. Its B-Value of 25/50: 3950±1% makes it perfect for temperature detection and compensation.

Lin Kun's MF52 10K 1% 3950 NTC Type Thermistor is a great choice for anyone looking for a cost-effective, reliable, high quality thermistor solution. With its RoHS and UL certification, resistance range of  $1\Omega$  to  $100K\Omega$ , size of 2mm to 3mm and tolerance of +/-1%, it is ideal for a variety of temperature sensing and compensation applications. With a price of 0.045 USD/PCS and delivery time of 7 workdays, it is an excellent choice for those seeking cost-effective solutions.

#### **Customization:**

MF52 10K 1% 3950 NTC Type Thermistor --

Brand Name: Lin Kun

Model Number: MF52 10K 1% 3950 Place of Origin: China Dong Guan Certification: ROHS, UL

Minimum Order Quantity: 5000 PCS

Price: 0.045 USD/ PCS

Packaging Details: Bulk, 500pcs per polybag

Delivery Time: 7 workdays Payment Terms: T/T

Supply Ability: 20,000,000PCS per week

Tolerance: +/-1% Accuracy: ±1%

Response Time: 1s To 10s **B-Value**: 25/50: 3950±1% Thermal time constant: ≤7

Special Features: Our MF52 temperature measuring thermistor, MF11 temperature compensated thermistor, MF55 film thermistor are

manufactured with high-grade materials, ensuring excellent stability, accuracy and reliability.

## Support and Services:

NTC Type Thermistor Technical Support and Service

We offer complete technical support and service for NTC type thermistors. Our staff of experienced engineers is available to provide assistance with product selection, installation and troubleshooting.

Our technical support team is available to answer questions and provide guidance on usage, care, and maintenance. We also offer professional installation services to ensure that your thermistors are properly installed and functioning properly.

We also provide warranty and repair services for any products that may be defective. We are committed to providing the highest quality service for all our customers.

#### Packing and Shipping:

NTC Type Thermistor Packaging and Shipping:

NTC Type Thermistor products are packaged in sturdy protecting boxes and shipped in sealed bags. The packages are then placed in heavy-duty cardboard boxes, which are then sealed with tape and securely labeled. A signature is required upon delivery.

#### FAQ:

#### Q: What is NTC Type Thermistor?

A: NTC Type Thermistor is a type of thermistor, which is a type of resistor whose resistance changes significantly with

#### Q: What is the Brand Name, Model Number, and Place of Origin of this product?

A: The Brand Name is lin kun, the Model Number is MF52 10K 1% 3950, and the Place of Origin is China Dong Guan.

#### Q: Does this product have any certifications?

A: Yes, this product has ROHS and UL certifications.

#### Q: What is the Minimum Order Quantity and Price?

A: The Minimum Order Quantity is 5000 PCS and the Price is 0.045 USD/ PCS.

#### Q: How is this product packaged and what is the Delivery Time?

A: This product is packaged in Bulk, with 500pcs per polybag. The Delivery Time is 7 workdays.



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