Power Amplifier For New Energy Vehicles CWF1 103F3950 NTC Thermistor Temperature Sensor Automotive Grade

Our Product Introduction

Basic Information

- Place of Origin: China Dong Guan
- Brand Name: lin kun
- Certification: ROHS,UL
- Model Number: CWF1 103F3950
- Minimum Order Quantity: 5000 PCS
- Price: 0.45-0.5/PCS
- Packaging Details: Bulk,500pcs per polybag
- Delivery Time: 10workdays
- Payment Terms: T/T, Western Union, L/C, MoneyGram
- Supply Ability: 20,000,000PCS per week

Product Specification

- Tolerance: 2mw/°C
- Operating Temperature: -55°C To +125°C
- B Value At 25/50°C: 3470,3600,3950,4050,4250
- Shape: Axial Leaded
- Resistance Tolerance: F±1%,G±2%,H±3,J±5%,K±10%
- Thermal Time Constant: 20S
- Resistance Range: 1KΩ To 500KΩ
- Product Name: Epoxy Resin NTC Thermistor 10KF3950
- High Light: 10k Power NTC Thermistor, 3950Power NTC Thermistor, Epoxy Resin Negative Temperature Coefficient Sensor
- Highlight: **Automotive Grade NTC Thermistor**, **CWF1 103F3950 NTC Thermistor**, **New Energy Vehicles NTC Thermistor**

More Images

Product Description

Product Description:

Power amplifier for new energy vehicles CWF1 103F3950 NTC thermistor temperature sensor automotive grade

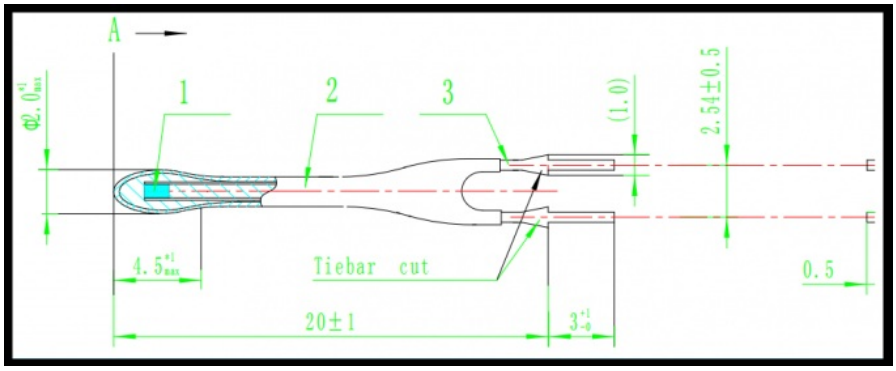
I Features Of The Epoxy Resin NTC Thermistor 10K 3950

* Highly responsive temperature sensor that has been dipped in epoxy resin
* Chip from Shibaura NTC thermistor
* Epoxy-coated so it can resist humidity
* Good coherence and stability, high humidity and durability
* Enjoys a large sale in China, the US and Japan

II Advantage Of The Epoxy Resin NTC Thermistor 10K 3950

1. Novel structure, superior performance and high quality
2. High sensitivity and fast response time
3. Good sealing performance, strong adhesion, moisture-proof and anti-corrosion
4. Large-scale production, high cost performance, high quality and low price

III Dimensional Drawing Of The Epoxy Resin NTC Thermistor 10K 3950 (Unit:mm)



NO	Material Name	Item/PN
2-1.	Element	R25=10KΩ±1% B25/50=3950K±1% DC
2-2.	Coating	Resin (Black)
2-3.	Lead Wire	Stents

IV Electrical Performances Of The Epoxy Resin NTC Thermistor 10K 3950

NO	Item	Sign	Test Conditions	Min.	Normal value	Max.	Unit
4-1.	Resistance at 25℃	R25	Ta=25±0.05℃ PT≦0.1mw	9.9	10.0	10.1	kΩ
4-2.	B Value	B25/50		/	3950	/	k
4-3.	Dissipation factor	σ	Ta=25±0.5℃	≧0.9			mW/℃
4-4.	Time constant	τ	Ta=25±0.5℃	≦15			sec
4-5.	Maximum rated power	P	/	≦25			mW
4-6.	Operating temp.range	/	/	-40	/	+125	℃

V Thermistor application example Of The Epoxy Resin NTC Thermistor 10K 3950

Thermistors serve a crucial role in temperature detection. For /example, thermistor temperature detection

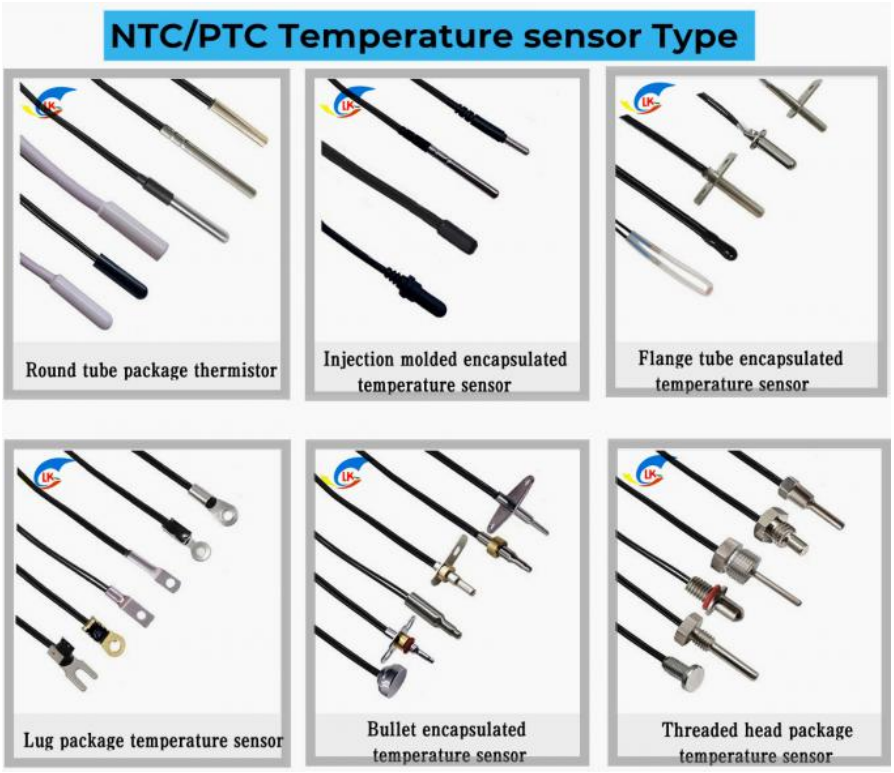
can be used in fire alarms to detect fires based on a sudden change in temperature. Unlike photoelectric detectors or ionization alarms, thermistors only require heat to activate.

1. Upscale hotel room
2. Smart home products
Temperature measurement for home electronics (fire alarm)

VI Thermistor Temperature Detection in Fire Alarms

The thermistor method, unlike the previous examples, uses heat detection to activate. The alarm activates once the thermistor detects a high temperature. Thermistor temperature detection doesn't require smoke to activate and has fewer false alarms. The thermistor uses the ambient temperature of a building and will only activate when that temperature increases exponentially. The thermistor method is reliable in this fire alarm example as there would be few false alarms and a quicker alert rate, but the thermistor method is also versatile.

Sensing element-NTC thermistor used



Workshop of high quality and high performance NTC Thermistor

We have the unique process and leader core technology with proprietary intellectual property rights of ceramic powder equipment,made of chips,high performance NTC Automatic batch production.

We have more than 12 series of high performance NTC thermistors automatic production line,products have the advantages of large production,high quality,good coherence,high reliability,besides it can be made of many kinds of NTC temperature sensors,it also can be supplied to other factories of NTC sensors,and exported in large quantities to overseas.

NTC Temperature sensor -- a glance at workshop

Advantages and characteristics of Auto Temperature Sensor

We have the heart of NTC temperature sensor--full sets of production line and core technology of pro-prietary intellectual property rights for high performance temperature measurement NTC thermistor.

We have all kinds of NTC core element of NTC Temperature sensor--high performance temperature measurement thermistors are own production,complete series,structural diversity. Our products can meet the requirements of prevision measurement in different temperature area from low temperature,medium and low temperature to medium-high temperature.These products have passed many safety certifications of domestic and foreign.

Resistance and temperature characteristics can meet customer's requirements entirely,and support best convenience to customers.

Mature manufacturing technique of NTC temperature sensor,Large-scale mass production,product have the best ability of insulation sealing,Mechanical collision,resistance to bending,well-set.

Small thermal time,fast response

Multi category,complete series,many kinds of housing he configuration,easy to assemble

We have high lavel inspection equipments which carrry out strict and normative inspection process.

Our products with high precision,high reliability,high stability,high interchangeable,high commonality are advanced in industry.

(Highest tolerance can be reach ±0.02℃) (Years of drif rate ≤1‰)

Operating temperature and environment of NTC temperature sensor depend on specific performance of its core element and lead wire:

►Different NTC thermistor using in the NTC temperature sensors with the following different operating temperature:

Chip or MF52A,MF51E,MF55: temperature resist grade 125℃,actual temperature resist grade 150℃

MF58: temperature resist grade 200℃,actual temperature resist grade 250℃

MF51: temperature resist grade 200℃,actual temperature resist grade 250℃

Special MF51: temperature resist grade 250℃,actual temperature resist grade 300℃

Weldless chip:temperature resist grade 450℃,actual temperature resist grade 500℃

►Operating environment

In the environment of high temperature,high humidty and high corrosion,we suggest to use glass sealed type thermistor as the core element.And MF51 type will be the best NTC thermistor in high humidity environment.

►Design considerations and procedure of temperature sensor:

1. Choose the shape acoording to customer's design or assemble requirements, and confirm the thermistor.
2. Confirm the thermistor element and other materials according to customers' requirement
3. Choose the suitable resistance,B value and tolerance
4. Choose suitable moisture-proof and insulation technology to meet customer's requirement
5. Choose suitable encapsulation structure to meet performance requirements of mechanical shock resistance
6. Meet customer's special requirements.

Reliability Test

Test Item Test Standard Test method Performance requirements

Zero Power Resistance IEC 60539-1 Immerse samples in the constant temperature bath at 25℃±0.005℃,test steady resistance Resistance tol ±1%

B value IEC60539-1 Immerse samples in the constant temperature bath at 25℃,50℃(or 85℃), test steady resistance,and calculate B value Resistance tol ±1%

Free fall IEC60068-2-32

Fall height: 1.5±0.1m,Surface: Cement , 1 time No obvious damage, R25 △R/R≤±1%

Insulation IEC60539-1

500V pressure on insulation shell test insulation resistance >500MOhm

Withstand voltage IEC60539-1 Withstand voltage: 1500V/AC ,Leakage current:2mA Lasting: 60sec

No obvious damage

Tension IEC60068-2-21 Pull uniform speed at the end, F>4.0KG(requested by customer)

No obvious damage, R25 △R/R≤±1%

Vibration Q/HBm 108-94 Test frequency: 10~500Hz,swing: 1.2mm acceleration: 30m/s2 Direction X,Y,Z Time:8Hour/direction No obvious damage, R25 △R/R≤±1%

Steady humidity and heat IEC60068-2-78 Temp:40±2℃ Humidity:92-95%RH Time:1000±24Hour No obvious damage, R25 △R/R≤±1%

Thermal time constant EC60539-1 Immerse in 25℃ water,after thermal balance,immerse in 85℃,resistance arrives 63.2%,calculate total time <10 sec

High temperature storage IEC60068-2-2 Temp:125℃±5℃ Time: 1000±24Hour No obvious damage, R25 △R/R≤±1%

Cold and thermal shock IEC60068-2-14 -40℃~+125℃ T1:30min Cycle time:1000

No obvious damage, R25 △R/R≤±1%

Knock experiment IEC60068-2-77 Acceleration:250m/s2 Pulse lasting: 6ms Knock times: 1000 Recovery time: 2 Hour

No obvious damage, R25 △R/R≤±1%

Low temperature storage IEC60068-2-1 Temp: 40±2℃ Time: 1000±24Hour

No obvious damage, R25 △R/R≤±1%

Salt spray IEC60068-2-11 Temp: 35±2℃ Collection hour : 1.0mL~2.0mL Time: determine per as actual demand No obvious damage, R25 △R/R≤±1%

The NTC Thermistor is available in different models and specifications such as the MF58 glass sealed thermistor and the MF55 film thermistor. The MF58 glass sealed thermistor is a popular choice for temperature measurement applications due to its reliability and accuracy. The MF58 glass sealed thermistor has a B-value of 25/50: 3100K-4750K ±1%, resistance tolerance of F±1%, G±2%, H±3%, J±5%, and K±10%. It has a resistance value of 2K-200K and a tolerance of 2mw/°C. The dissipation factor of the MF58 glass sealed thermistor is 22mW/C (In Still Air).
The MF55 film thermistor is another type of NTC Thermistor that is widely used for temperature measurement applications. The MF55 film thermistor has a high sensitivity and fast response time. It has a B-value of 25/50: 3100K-4750K ±1%, resistance tolerance of F±1%, G±2%, H±3%, J±5%, and K±10%. It has a resistance value of 2K-200K and a tolerance of 2mw/°C. The dissipation factor of the MF55

film thermistor is 22mW/C (In Still Air).
In summary, the NTC Thermistor is a reliable and accurate temperature sensing device that is available in different models and specifications such as the MF58 glass sealed thermistor and the MF55 film thermistor. The MF58 glass sealed thermistor has a B-value of 25/50: 3100K-4750K ±1%, resistance tolerance of F±1%, G±2%, H±3%, J±5%, and K±10%. It has a resistance value of 2K-200K and a tolerance of 2mw/°C. The dissipation factor of the MF58 glass sealed thermistor is 22mW/C (In Still Air). The MF55 film thermistor has a high sensitivity and fast response time. It has a B-value of 25/50: 3100K-4750K ±1%, resistance tolerance of F±1%, G±2%, H±3%, J±5%, and K±10%. It has a resistance value of 2K-200K and a tolerance of 2mw/°C. The dissipation factor of the MF55 film thermistor is 22mW/C (In Still Air).

Features:

Product Name: NTC Thermistor

Resistance Value: 2K-200K

Shape: Axial Leaded

Tolerance: 2mw/°C

Resistance Tolerance: F±1%,G±2%,H±3,J±5%,K±10%

Rated Power: ≤50mW

MF11 temperature compensated thermistor

Advantages and characteristics of Auto Temperature Sensor

· We have the heart of NTC temperature sensor--full sets of production line and core technology of pro-prietary intellectual property rights for high performance temperature measurement NTC thermistor.
· We have all kinds of NTC core element of NTC Temperature sensor--high performance temperature measurement thermistors are own production,complete series,structural diversity. Our products can meet the requirements of prevision measurement in different temperature area from low temperature,medium and low temperature to medium-high temperature.These products have passed many safety certifications of domestic and foreign.
· Resistance and temperature characteristics can meet customer's requirements entirely,and support best convenience to customers.
· Mature manufacturing technique of NTC temperature sensor,Large-scale mass production,product have the best ability of insulation sealing,Mechanical collision,resistance to bending,well-set.
· Small thermal time,fast response
· Multi category,complete series,many kinds of housing he configuration,easy to assemble
· We have high lavel inspection equipments which carrry out strict and normative inspection process.
· Our products with high precision,high reliability,high stability,high interchangeable,high commonality are advanced in industry. (Highest tolerance can be reach ±0.02℃) (Years of drif rate ≤1‰)

Operating temperature and environment of NTC temperature sensor depend on specific performance of its core element and lead wire:

►Different NTC thermistor using in the NTC temperature sensors with the following different operating temperature:

Chip or MF52A,MF51E,MF55: temperature resist grade 125℃,actual temperature resist grade 150℃
MF58: temperature resist grade 200℃,actual temperature resist grade 250℃
MF51: temperature resist grade 200℃,actual temperature resist grade 250℃
Special MF51: temperature resist grade 250℃,actual temperature resist grade 300℃
Weldless chip:temperature resist grade 450℃,actual temperature resist grade 500℃

►Operating environment

In the environment of high temperature,high humidty and high corrosion,we suggest to use glass sealed type thermistor as the core element.And MF51 type will be the best NTC thermistor in high humidity environment.

►Design considerations and procedure of temperature sensor:

1. Choose the shape acoording to customer's design or assemble requirements, and confirm the thermistor.
2. Confirm the thermistor element and other materials according to customers' requirement
3. Choose the suitable resistance,B value and tolerance
4. Choose suitable moisture-proof and insulation technology to meet customer's requirement
5. Choose suitable encapsulation structure to meet performance requirements of mechanical shock resistance
6. Meet customer's special requirements.

Reliability Test

Test Item	Test Standard	Test method	Performance requirements
Zero Power Resistance	IEC 60539-1	Immerse samples in the constant temperature bath at 25℃±0.005℃,test steady resistance	Resistance tol ±1%
B value	IEC60539-1	Immerse samples in the constant temperature bath at 25℃,50℃(or 85℃), test steady resistance,and calculate B value	Resistance tol ±1%
Free fall	IEC60068-2-32	Fall height: 1.5±0.1m,Surface: Cement , 1 time	No obvious damage, R25 △R/R≤±1%

Insulation	IEC60539-1	500V pressure on insulation shell test insulation resistance	>500MOhm
Withstand voltage	IEC60539-1	Withstand voltage: 1500V/AC ,Leakage current:2mA Lasting: 60sec	No obvious damage
Tension	IEC60068-2-21	Pull uniform speed at the end, F>4.0KG(requested by customer)	No obvious damage, R25 △R/R≤±1%
Vibration	Q/HBm 108-94	Test frequency: 10~500Hz,swing: 1.2mm acceleration: 30m/s2 Direction X,Y,Z Time:8Hour/direction	No obvious damage, R25 △R/R≤±1%
Steady humidity and heat	IEC60068-2-78	Temp:40±2℃ Humidity:92-95%RH Time:1000±24Hour	No obvious damage, R25 △R/R≤±1%
Thermal time constant	EC60539-1	Immerse in 25℃ water,after thermal balance,immerse in 85℃,resistance arrives 63.2%,calculate total time	<10 sec
High temperature storage	IEC60068-2-2	Temp:125℃±5℃ Time: 1000±24Hour	No obvious damage, R25 △R/R≤±1%
Cold and thermal shock	IEC60068-2-14	-40℃~+125℃ T1:30min Cycle time:1000	No obvious damage, R25 △R/R≤±1%
Knock experiment	IEC60068-2-77	Acceleration:250m/s2 Pulse lasting: 6ms Knock times: 1000 Recovery time: 2 Hour	No obvious damage, R25 △R/R≤±1%
Low temperature storage	IEC60068-2-1	Temp: 40±2℃ Time: 1000±24Hour	No obvious damage, R25 △R/R≤±1%
Salt spray	IEC60068-2-11	Temp: 35±2℃ Collection hour : 1.0mL~2.0mL Time: determine per as actual demand	No obvious damage, R25 △R/R≤±1%

MF52 temperature measuring thermistor
MF58 glass sealed thermistor

Technical Parameters:

Product Attribute	Value
Product Type	NTC Thermistor
Rated Power	≤50mW
Resistance Value	2K-200K
Shape	Axial Leaded
Resistance Range	1KΩ To 500KΩ
Operating Temperature	-55°C To +125°C
Dissipation Factor	22mW/C (In Still Air)
B Value at 25/50°C	3470, 3600, 3950, 4050, 4250
Thermal Time Constant	20S
Resistance Tolerance	F±1%, G±2%, H±3%, J±5%, K±10%
B-Value 25/50	3100K-4750K ±1%

This NTC Thermistor product is an MF11 temperature compensated thermistor and an MF52 temperature measuring thermistor.

Applications:

The NTC thermistor has a resistance range of 1KΩ to 500KΩ and is shaped into an axial leaded form. The product has five B values at 25/50°C, which include 3470, 3600, 3950, 4050, and 4250. Additionally, it has a thermal time constant of 20 seconds and offers resistance tolerances of F±1%, G±2%, H±3%, J±5%, and K±10%.

The NTC thermistor product has various applications and can be used in many scenarios. For instance, it is ideal for temperature measurement and control in household appliances such as air conditioners, refrigerators, and ovens. It is also useful in automotive temperature control systems and power supplies. The MF58 glass sealed thermistor is perfect for temperature compensation circuits and temperature detection in electronic equipment. The MF55 film thermistor can be utilized for temperature measurement and control in the medical industry, as well as in environmental monitoring devices.
In conclusion, Lin Kun's NTC thermistor product is a reliable and cost-effective option for temperature measurement and control in various industries. Its different B values, thermal time constant, and resistance tolerances make it suitable for different applications. The product's shape and resistance range also give it versatility, and its certifications assure clients of its safety and quality.

Customization:

Model Number: NTC thermistor
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
Product Name: MF5Q Enameled Wire Type NTC Thermistor
Operating Temperature: -55°C To +125°C
Resistance Tolerance: F±1%,G±2%,H±3,J±5%,K±10%
Thermal Time Constant: 20S
Dissipation Factor: 22mW/C(In Still Air)
Product Customization Services:
Customized MF58 glass sealed thermistor
Customized MF52 temperature measuring thermistor
Customized MF58 glass sealed thermistor

Packing and Shipping:

Product Packaging:
The NTC Thermistor product will be securely packed using bubble wrap and shipped in a cardboard box that is labeled with the product name and specifications.
Shipping:
Shipping will be handled by a reliable courier service that offers tracking information for customers. The estimated delivery time will depend on the destination and the selected shipping method.

Dongguan Linkun Electronic Technology Co., Ltd.

13423305709 huangju@lk-ptc.com lk-thermistor.com

Room 101, No. 21, Huayuanzai Road, Chongmei, Chashan Town, Dongguan City, Guangdong Province