



**THE DATASHEET OF  
MF58503F3950**



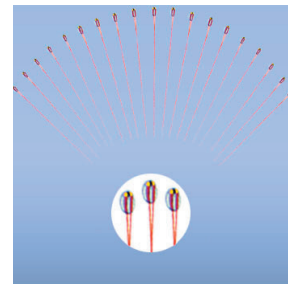
# MF58 MF51



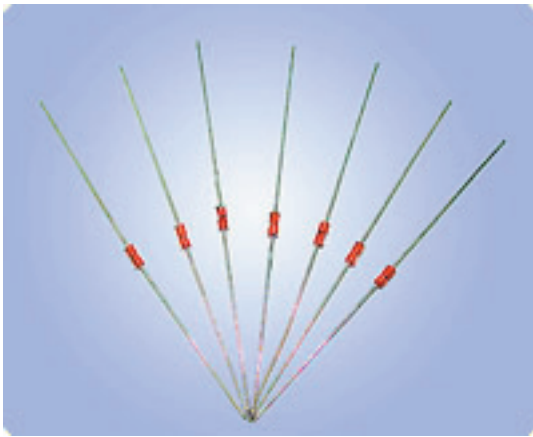
**CANTHERM**

*Supplying high-quality bimetal and thermal sensor products.*

PRECISION GLASS ENCAPSULATED  
NTC THERMISTORS (MF58 & MF51)



# MF58



## Glass Shell Precision NTC Thermistors

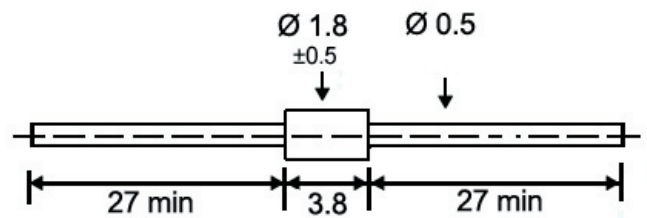
The MF58 is a NTC thermistor which is manufactured using a combination of ceramic and semiconductor techniques. It is equipped with tinned axial leads and then wrapped with purified glass.

### Applications

Temperature compensation and detection for:

- Household appliances (air conditioners, microwave ovens, electric fans, electric heaters etc.)
- Office equipment (copiers, printers etc.)
- Industrial, medical, environmental, weather and food processing equipment
- Liquid level detection and flow rate measurement
- Mobile phone battery
- Apparatus coils, integrated circuits, quartz crystal oscillators and thermocouples.

### Dimensions (mm)



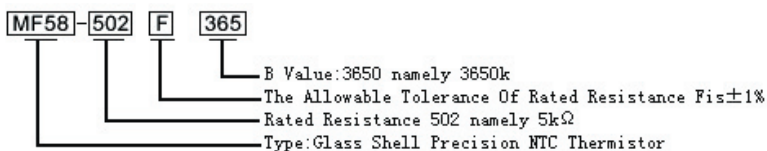
### Features

- Good stability and repeatability
- High reliability
- Wide range of resistance: 0.1~1000K $\Omega$
- Tight tolerance on resistance and Beta values
- Usable in high-temperature and high-moisture environments
- Small, light, strong package,
- Suitable for automatic insertion on thru-hole PCBs
- Rapid response
- High sensitivity

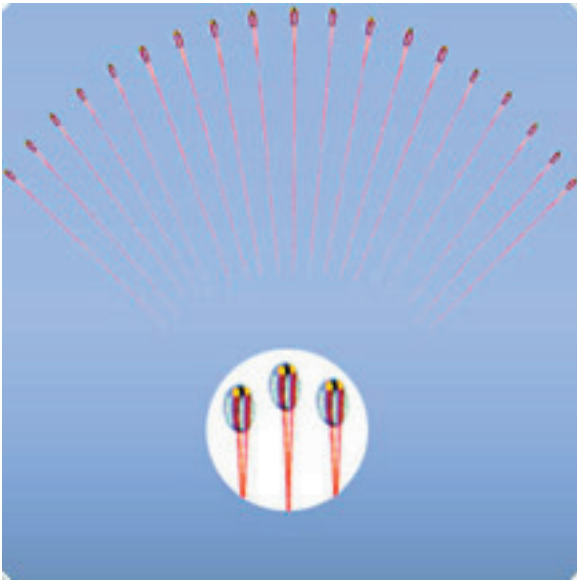
### Main Techno-Parameter

- Zero power resistance range (R25): 0.1~1000K $\Omega$
- Available tolerances of R25:  
F=±1% G=±2% H=±3% J=±5% K=±10%
- B value (B25/50°C) range: 3100~4500K
- Available tolerances of B value: ±0.5%, ±1%, ±2%
- Dissipation factor:  $\geq 2\text{mW}/^\circ\text{C}$  (In Still Air)
- Thermal time constant:  $\leq 20\text{S}$  (In Still Air)
- Operating temperature range:  $-55^\circ\text{C} \sim +200^\circ\text{C}$
- Rated Power:  $\leq 50\text{mW}$

### Specifications



# MF51-B



## Precision Glass Encapsulated NTC Thermistor for Temperature Measurement

The MF51 NTC thermistor is a small chip thermistor encased in glass with bare radial copper leads. The chip is made from a new material using new techniques which provide benefits such as high precision, fast response, reliable stability, no aging effect and improved moisture resistance.

### Applications

It can be used in applications such as refrigeration, HVAC, heating equipment, electronic thermostats, liquid level sensing, automotive electronics, electronic dashboards, etc.

### Dimensions (mm)



### Specifications

MF51 B 103 F 3380

F = ±1%  
G = ±2%  
H = ±3%  
J = ±5%

- The first pane holds the dimensional code.
  - The second pane shows the rated resistance at 25C (R25).
  - The third pane shows the tolerance code of rated resistance.
  - The fourth pane shows the Beta value (B25/50C)
- Type high precision temp. measurement chip in glass NTC thermistor

Note: Specifications can change without notice.

MF51 Continued >



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## MF51-B Physical Characteristics

Model	Dissi. Coef (mW/°C)	Thermal Time Constant (S)
	In still air	In still air
MF51-B	≥ 1.0	≤ 12

Model	Rated Resistance R25		B Value (25/50°C)		Operating Temp. (°C)
	KΩ	Tolerance	K	Tolerance	
MF51B __3380	2 - 10	± 1% ± 2% ± 3% ± 5%	3380	* ± 2% ± 3%	-50°C–260°C
MF51B __3950	10 - 50		3950		
MF51B __3950	50 - 100		3950		
MF51B __4150	100 - 350		4150		

\* If the tolerance of R25 is ±1%, the tolerance of B25/50 = ±1%.

If the tolerance of R25 is ±2% or greater, the tolerance of B25/50 = ±2%.



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