

MF52 Series bead temperature thermistor is made of new materials, new technology of production of small type epoxy resin coating of NTC thermistor, has the advantages of high precision and fast response. It is subdivided into various sub-series according to the difference in lead wire configuration.



| Typical Applications | Features |
|---|--|
| <ul style="list-style-type: none"> ● Air conditioning equipment ● Heating equipment ● Medical equipment ● Temperature control instruments ● Electronic gifts ● Electronic temperature and humidity meter ● Auto temperature measurement ● Electronic calendar ● Rechargeable batteries and charger | <ul style="list-style-type: none"> ● Tin plating steel wire radial type epoxy resin encapsulation ● Wide range of resistance ● High precision ● Small size and fast response ● High stability |

Technical Data

| Item | Temperature |
|-----------------------|--|
| Temperature range | -55°C to +125°C |
| Response time | Water (0.4m/s) T0.63 ≤ 7s |
| Dissipation factor | ≥ 2mW/°C |
| Long-term stability | Drift ≤ 3% after 1000h heat or cold store (80°C / -30°C) |
| Dielectric Strength | 1500VAC |
| Insulation Resistance | ≥200MΩ 500VDC |

Dimensions (mm)

| Part No. | Figure | Dimensions | | | | | | | | | | | | | | | | | | | | | |
|----------|-----------------|---|------------------|-------------------|-------------------|-------------------|------------------|------------------|------------------|----|-----------------|-----------------|-----------------|-----|-----------------|-----|----|----|------|-----------------|---|------|-----|
| MF52A | | A. Tin. Plated copper wire <table border="1"> <thead> <tr> <th>Code</th> <th>D_{MAX}</th> <th>L1_{MAX}</th> <th>L2_{MIN}</th> <th>d ± 0.05</th> <th>F ± 0.05</th> </tr> </thead> <tbody> <tr> <td>A1</td> <td>2</td> <td>3</td> <td>25</td> <td>0.3</td> <td>2</td> </tr> <tr> <td>A2</td> <td>3</td> <td>4</td> <td>25</td> <td>0.45</td> <td>2</td> </tr> </tbody> </table> | Code | D _{MAX} | L1 _{MAX} | L2 _{MIN} | d ± 0.05 | F ± 0.05 | A1 | 2 | 3 | 25 | 0.3 | 2 | A2 | 3 | 4 | 25 | 0.45 | 2 | | | |
| | | Code | D _{MAX} | L1 _{MAX} | L2 _{MIN} | d ± 0.05 | F ± 0.05 | | | | | | | | | | | | | | | | |
| A1 | 2 | 3 | 25 | 0.3 | 2 | | | | | | | | | | | | | | | | | | |
| A2 | 3 | 4 | 25 | 0.45 | 2 | | | | | | | | | | | | | | | | | | |
| MF52B | | B. Enameled wire <table border="1"> <thead> <tr> <th>Code</th> <th>D_{MAX}</th> <th>L1_{MAX}</th> <th>L2_{MIN}</th> <th>L 3 ± 1</th> <th>d ± 0.05</th> <th>F ± 0.05</th> </tr> </thead> <tbody> <tr> <td>B1</td> <td>2</td> <td>3</td> <td>decided by user</td> <td>5</td> <td>0.2</td> <td>2</td> </tr> <tr> <td>B2</td> <td>3</td> <td>4</td> <td>decided by user</td> <td>5</td> <td>0.3</td> <td>2</td> </tr> </tbody> </table> | Code | D _{MAX} | L1 _{MAX} | L2 _{MIN} | L 3 ± 1 | d ± 0.05 | F ± 0.05 | B1 | 2 | 3 | decided by user | 5 | 0.2 | 2 | B2 | 3 | 4 | decided by user | 5 | 0.3 | 2 |
| | | Code | D _{MAX} | L1 _{MAX} | L2 _{MIN} | L 3 ± 1 | d ± 0.05 | F ± 0.05 | | | | | | | | | | | | | | | |
| B1 | 2 | 3 | decided by user | 5 | 0.2 | 2 | | | | | | | | | | | | | | | | | |
| B2 | 3 | 4 | decided by user | 5 | 0.3 | 2 | | | | | | | | | | | | | | | | | |
| MF52C | | C. High temperature Teflon wire <table border="1"> <thead> <tr> <th>Code</th> <th>D_{MAX}</th> <th>L1_{MAX}</th> <th>L2_{MIN}</th> <th>L 3 ± 1</th> <th>d ± 0.05</th> <th>F ± 0.05</th> </tr> </thead> <tbody> <tr> <td>C1</td> <td>3</td> <td>5</td> <td>decided by user</td> <td>5</td> <td>0.25</td> <td>2.0</td> </tr> <tr> <td>C2</td> <td>4</td> <td>5.5</td> <td>decided by user</td> <td>5</td> <td>0.32</td> <td>2.5</td> </tr> </tbody> </table> | Code | D _{MAX} | L1 _{MAX} | L2 _{MIN} | L 3 ± 1 | d ± 0.05 | F ± 0.05 | C1 | 3 | 5 | decided by user | 5 | 0.25 | 2.0 | C2 | 4 | 5.5 | decided by user | 5 | 0.32 | 2.5 |
| | | Code | D _{MAX} | L1 _{MAX} | L2 _{MIN} | L 3 ± 1 | d ± 0.05 | F ± 0.05 | | | | | | | | | | | | | | | |
| C1 | 3 | 5 | decided by user | 5 | 0.25 | 2.0 | | | | | | | | | | | | | | | | | |
| C2 | 4 | 5.5 | decided by user | 5 | 0.32 | 2.5 | | | | | | | | | | | | | | | | | |
| MF52D | | D. PVC wire <table border="1"> <thead> <tr> <th>Code</th> <th>D_{MAX}</th> <th>L1_{MAX}</th> <th>L2_{MIN}</th> <th>L 3 ± 1</th> <th>d ± 0.05</th> <th>F ± 0.05</th> </tr> </thead> <tbody> <tr> <td>D1</td> <td>3</td> <td>5</td> <td>decided by user</td> <td>5</td> <td>0.26</td> <td>2.0</td> </tr> <tr> <td>D2</td> <td>4</td> <td>5.5</td> <td>decided by user</td> <td>5</td> <td>0.26</td> <td>2.5</td> </tr> </tbody> </table> | Code | D _{MAX} | L1 _{MAX} | L2 _{MIN} | L 3 ± 1 | d ± 0.05 | F ± 0.05 | D1 | 3 | 5 | decided by user | 5 | 0.26 | 2.0 | D2 | 4 | 5.5 | decided by user | 5 | 0.26 | 2.5 |
| | | Code | D _{MAX} | L1 _{MAX} | L2 _{MIN} | L 3 ± 1 | d ± 0.05 | F ± 0.05 | | | | | | | | | | | | | | | |
| D1 | 3 | 5 | decided by user | 5 | 0.26 | 2.0 | | | | | | | | | | | | | | | | | |
| D2 | 4 | 5.5 | decided by user | 5 | 0.26 | 2.5 | | | | | | | | | | | | | | | | | |
| MF52E | | E. Tinned steel wire <table border="1"> <thead> <tr> <th>Code</th> <th>D_{MAX}</th> <th>L1_{MAX}</th> <th>L2 ± 1.5</th> <th>d_{MAX}</th> <th>F ± 0.5</th> <th>T_{MAX}</th> </tr> </thead> <tbody> <tr> <td>E</td> <td>3.8</td> <td>9.5</td> <td>17</td> <td>5.0</td> <td>2.5</td> <td>3.5</td> </tr> </tbody> </table> | Code | D _{MAX} | L1 _{MAX} | L2 ± 1.5 | d _{MAX} | F ± 0.5 | T _{MAX} | E | 3.8 | 9.5 | 17 | 5.0 | 2.5 | 3.5 | | | | | | | |
| | | Code | D _{MAX} | L1 _{MAX} | L2 ± 1.5 | d _{MAX} | F ± 0.5 | T _{MAX} | | | | | | | | | | | | | | | |
| E | 3.8 | 9.5 | 17 | 5.0 | 2.5 | 3.5 | | | | | | | | | | | | | | | | | |
| MF52F | | F. Customer required <table border="1"> <thead> <tr> <th>Code</th> <th>D_{MAX}</th> <th>L1_{MAX}</th> <th>L2_{MIN}</th> <th>L 3 ± 1</th> <th>D1 ± 0.05</th> <th>F ± 0.05</th> </tr> </thead> <tbody> <tr> <td>F1</td> <td>decided by user</td> <td>decided by user</td> <td>decided by user</td> <td>5</td> <td>decided by user</td> <td>2.5</td> </tr> </tbody> </table> | Code | D _{MAX} | L1 _{MAX} | L2 _{MIN} | L 3 ± 1 | D1 ± 0.05 | F ± 0.05 | F1 | decided by user | decided by user | decided by user | 5 | decided by user | 2.5 | | | | | | | |
| | | Code | D _{MAX} | L1 _{MAX} | L2 _{MIN} | L 3 ± 1 | D1 ± 0.05 | F ± 0.05 | | | | | | | | | | | | | | | |
| F1 | decided by user | decided by user | decided by user | 5 | decided by user | 2.5 | | | | | | | | | | | | | | | | | |

Ordering code

MF52 A xxx x xxxx
 (1) (2) (3) (4) (5)

- (1) Epoxy coating thermistor MF52 series
- (2) Lead wire style code :
 - Model A: Tin. Plated copper wire
 - Model B: Enameled wire
 - Model C: High temperature Teflon wire
 - Model D: PVC insulation wire
 - Model E: Tinned steel wire
 - Model F: Customer require
- (3) Resistance value at 25°C
- (4) Resistance tolerance code : (F : ±1%, G : ±2%, H : ±3%, J : ±5%, K : ±10%)
- (5) Beta value

Electrical characteristics

| Part No. | Rated Resistance R ₂₅ | B Value (25/50°C) | Rated Power (mW) | Disst. Coef. (mW/°C) | Thermal time Constant (S) | Operating Temp. (°C) |
|-------------|-------------------------------------|----------------------|---------------------|-------------------------|------------------------------|----------------------------|
| MF52□□□3100 | 0.1 ~ 20 | 3100 | ≤50 | ≥2.0 In Still Air | ≤7 In Still Air | -55 ~ +125°C |
| MF52□□□3270 | 0.2 ~ 20 | 3270 | | | | |
| MF52□□□3380 | 0.5 ~ 50 | 3380 | | | | |
| MF52□□□3470 | 0.5 ~ 50 | 3470 | | | | |
| MF52□□□3600 | 1 ~ 100 | 3600 | | | | |
| MF52□□□3950 | 5 ~ 100 | 3950 | | | | |
| MF52□□□4000 | 5 ~ 100 | 4000 | | | | |
| MF52□□□4050 | 5 ~ 200 | 4050 | | | | |
| MF52□□□4150 | 10 ~ 250 | 4150 | | | | |
| MF52□□□4300 | 20 ~ 500 | 4300 | | | | |
| MF52□□□4500 | 20 ~ 500 | 4500 | | | | |

Notes:

1. The 1st □ fills with code of dimension.
2. The 2nd □ fills with rated resistance.
3. The 3rd □ fills with its precision symbol.
4. B value (25/50°C) tolerance: ±1%.
5. Default resistance tolerance: ±1%.
6. We will be able to supply products according to client's demands.