

Vatronics Technologies Limited

*** Introduction:**

•MF52 is a small size resin encapsulated NTC thermistor that is produced with new materials and new techniques. It is characterized by high precision and quick response.

*** Applications:**

•Vatronics is Suitable for the use in air conditioning, central heating equipment, electronic clinical thermometer, liquid level sensor, automobile electronics and electronic calendar.

*** Features:**

- 1.High precision;
- 2.Small size, quick response;
- 3.Long-time stable operation allowable;
- 4.Good interchangeability, high consistency.



*** Vatronics Part Number System**

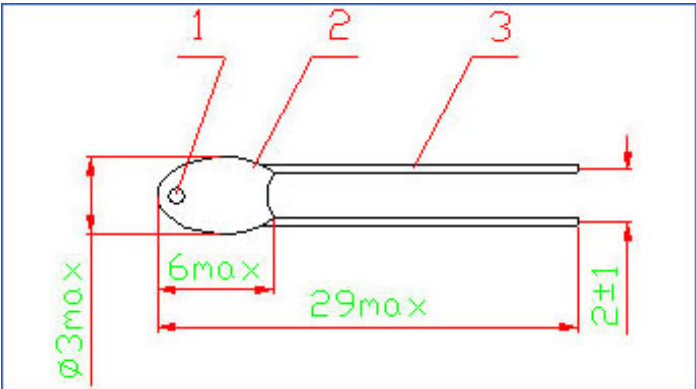
MF52 E 103 H L 347

① Chip NTC thermistor ② E•Epoxy resin encapsulation S•Silicone encapsulation ③ Normal resistance: R25 10K Ω -103

④ Resistance tolerance: F• $\pm 1\%$ G• $\pm 2\%$ H• $\pm 30\%$ J• $\pm 5\%$ K• $\pm 10\%$ ⑤ L•B25/50 H•B25/85 T•Special temperature range

⑥ B value: 347•3470 338•3380 (First three digits are significant.)

Dimensions: (mm)•



* Specifications

| Model Number | Normal Resistance | B Value | Dissipation Coefficient | Time Constant | Operating Temperature Range |
|--------------|-------------------|---------|------------------------------|-------------------------|-----------------------------|
| MF52 | 100Ω-10KΩ | 3100K | ≥2.5mW/• in still air | ≤7S in still air | -40•~+120• |
| MF52 | 200Ω-10KΩ | 3270K | | | |
| MF52 | 500Ω-15KΩ | 3470K | | | |
| MF52 | 1KΩ-50KΩ | 3600K | | | |
| MF52 | 5KΩ-50KΩ | 3950K | | | |
| MF52 | 10KΩ-100KΩ | 4050K | | | |
| MF52 | 10KΩ-100KΩ | 4150K | | | |
| MF52 | 20KΩ-500KΩ | 4300K | | | |

Note:

- 1. Resistance tolerance: F•±1% G•±2% H•±3% J•±5% K•±10% •
- 2. B value (25/50oC) tolerance: ±1% when normal resistance tolerance is ±1%; ±2% for others.
- 3. We can design and produce new models and products according to customer's requirements.

* Points for Attention:

- 1•Vatronics MF52 series cannot withstand too large tensile force between two terminals of the lead wire due to small size and small solder joint.
- 2•You are recommended to solder where 5mm is away from the end of lead wire as soon as possible.
- 3•MF52E series thermistor cannot be used directly in water.

MF52 Common Type Resistance-Temperature Contrast (Unit: KΩ)

| | | | | | | | | |
|--|--------|--------|---------|-------|-------|--------|--------|--------|
|  | 10 KΩ | 50 KΩ | 100 KΩ | 50 KΩ | 50 KΩ | 100 KΩ | 100 KΩ | 150 KΩ |
| | 3950 | 3950 | 4000 | 4050 | 4150 | 4150 | 4300 | 4500 |
| -30 | 181.70 | 908.30 | 1790.00 | | | | | |
| -25 | 133.30 | 666.50 | 1321.00 | | | | | |
| -20 | 98.88 | 494.50 | 984.70 | | | | | |
| -15 | 74.10 | 370.50 | 740.80 | | | | | |
| -10 | 56.06 | 280.30 | 562.30 | | | | | |
| -5 | 42.80 | 214.00 | 430.50 | | | | | |

| | | | | | | | | |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|
| 0 | 98.96 | 164.80 | 332.30 | 168.80 | 172.00 | 344.10 | 352.40 | 576.70 |
| 5 | 25.58 | 127.90 | 257.50 | 131.30 | 132.20 | 264.30 | 270.00 | 433.20 |
| 10 | 20.00 | 99.98 | 201.10 | 101.00 | 102.40 | 204.80 | 208.30 | 328.40 |
| 15 | 15.76 | 78.79 | 158.20 | 79.28 | 80.03 | 160.10 | 161.90 | 250.90 |
| 20 | 12.51 | 62.55 | 125.40 | 62.78 | 63.00 | 125.00 | 136.70 | 193.30 |
| 25 | 10.00 | 50.00 | 100.00 | 50.00 | 50.00 | 100.00 | 100.00 | 150.00 |
| 30 | 8.048 | 40.24 | 80.29 | 39.98 | 39.76 | 79.51 | 78.35 | 117.30 |
| 35 | 6.518 | 32.59 | 64.87 | 32.16 | 31.89 | 63.77 | 62.37 | 92.28 |
| 40 | 5.312 | 26.56 | 57.72 | 26.10 | 25.73 | 51.45 | 49.94 | 73.11 |
| 45 | 4.354 | 21.77 | 43.10 | 21.35 | 20.88 | 41.76 | 40.22 | 58.28 |
| 50 | 3.588 | 17.94 | 35.42 | 17.72 | 17.04 | 34.08 | 32.56 | 46.74 |
| 55 | 2.974 | 14.87 | 29.26 | 14.36 | 13.99 | 27.97 | 26.40 | 37.71 |
| 60 | 2.476 | 12.38 | 24.30 | 11.92 | 11.53 | 23.06 | 21.53 | 30.58 |
| 65 | 2.072 | 10.36 | 20.27 | 9.938 | 9.541 | 19.08 | 17.69 | 24.94 |
| 70 | 1.743 | 8.717 | 16.99 | 8.317 | 7.929 | 15.86 | 14.62 | 20.45 |
| 75 | 1.473 | 7.364 | 14.31 | 6.991 | 6.621 | 13.24 | 12.20 | 16.85 |
| 80 | 1.250 | 6.248 | 12.10 | 5.906 | 5.552 | 11.10 | 10.05 | 13.94 |
| 85 | 1.065 | 5.324 | 10.27 | 5.012 | 4.674 | 9.348 | 8.376 | 11.60 |
| 90 | 0.911 | 4.555 | 8.758 | 4.271 | 3.950 | 7.900 | 7.004 | 9.680 |
| 95 | 0.7824 | 3.912 | 7.495 | 3.654 | 3.349 | 6.698 | 5.894 | 8.118 |
| 100 | 0.6744 | 3.372 | 6.438 | 3.316 | 2.849 | 5.698 | 4.978 | 6.836 |
| 105 | 0.5836 | 2.918 | 5.550 | 2.701 | 2.438 | 4.875 | 4.215 | 5.780 |
| 110 | 0.5066 | 2.533 | 4.801 | 2.336 | 2.093 | 4.186 | 3.580 | 4.904 |

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