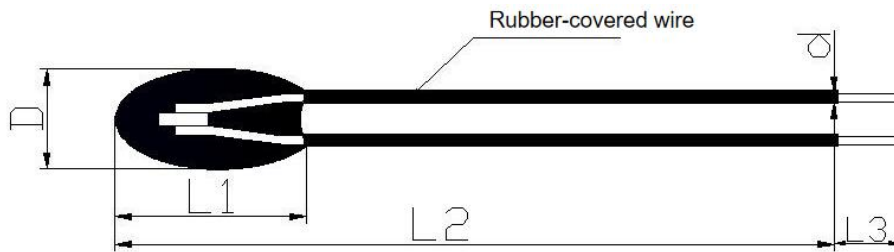


## MF52 Pearl-Shape Temperature Measurement NTC Thermistor

### MF52-BH Series

#### Structure and Dimensions (Unit: mm)



D (Max)	L1 (Max)	L2	d	L3
3.5	6.5	customizable	customizable	customizable

#### Part Number Code

**MF52 - 103 F 3950 F B 1 BH 050 X 20**  
 (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11)

- (1) MF52: NTC Thermistor.
- (2) 103: Nominal Zero-Power Resistance at 25°C: 222=2.2kΩ; 103=10kΩ.
- (3) F: Tolerance of Resistance: F: ±1%; H: ±3%; J: ±5%.
- (4) 3950: B Constant: 3950=3950K.
- (5) F: Tolerance of B Constant: F: ±1%.
- (6) B: B Constant Calculation Method: A: 25°C & 85°C; B: 25°C & 50°C.
- (7) 1: Wire Color: 1: Red; 2: Black.
- (8) BH: Rubber-covered Wire.
- (9) 050: 50mm, Overall Length.
- (10) X: Solder Dip of Wire Tail: X: Tinning; N: Non-tinning.
- (11) 20: 2.0mm, Tail Length.

## MF52 Pearl-Shape Temperature Measurement NTC Thermistor

### MF52-BH Series

#### Electrical Characteristics

Part Number	Resistance (25°C) (kΩ)	B Constant (25/50°C) (K)	B Constant (25/85°C) (K)	Dissipation Factor (mW/°C)	Thermal Time Constant (s)	Operating Ambient Temperature (°C)
MF52-202F3470FB2BH	2±1%	3470±1%	--	3	12	-40~+125
MF52-202F3550FB2BH	2±1%	3550±1%	--	3	12	-40~+125
MF52-202F3580FB2BH	2±1%	3580±1%	--	3	12	-40~+125
MF52-202F3950FB2BH	2±1%	3950±1%	--	3	12	-40~+125
MF52-502F3470FB2BH	5±1%	3470±1%	--	3	12	-40~+125
MF52-502F3950FB2BH	5±1%	3950±1%	--	3	12	-40~+125
MF52-103F3380FB2BH	10±1%	3380±1%	--	3	12	-40~+125
MF52-103F3435FA2BH	10±1%	--	3435±1%	3	12	-40~+125
MF52-103F3470FB2BH	10±1%	3470±1%	--	3	12	-40~+125
MF52-103F3450FA2BH	10±1%	--	3450±1%	3	12	-40~+125
MF52-103F3950FB2BH	10±1%	3950±1%	--	3	12	-40~+125
MF52-103F3977FA2BH	10±1%	--	3977±1%	3	12	-40~+125
MF52-103F4100FB2BH	10±1%	4100±1%	--	3	12	-40~+125
MF52-153F3950FB2BH	15±1%	3950±1%	--	3	12	-40~+125
MF52-203F3950FB2BH	20±1%	3950±1%	--	3	12	-40~+125
MF52-503F3950FB2BH	50±1%	3950±1%	--	3	12	-40~+125
MF52-503F3990FB2BH	50±1%	3990±1%	--	3	12	-40~+125
MF52-503F4050FB2BH	50±1%	4050±1%	--	3	12	-40~+125
MF52-104F3950FB2BH	100±1%	3950±1%	--	3	12	-40~+125
MF52-104F3990FB2BH	100±1%	3990±1%	--	3	12	-40~+125
MF52-104F4200FB2BH	100±1%	4200±1%	--	3	12	-40~+125

# MF52 Pearl-Shape Temperature Measurement NTC Thermistor

## MF52-BH Series

### Storage Conditions of Products

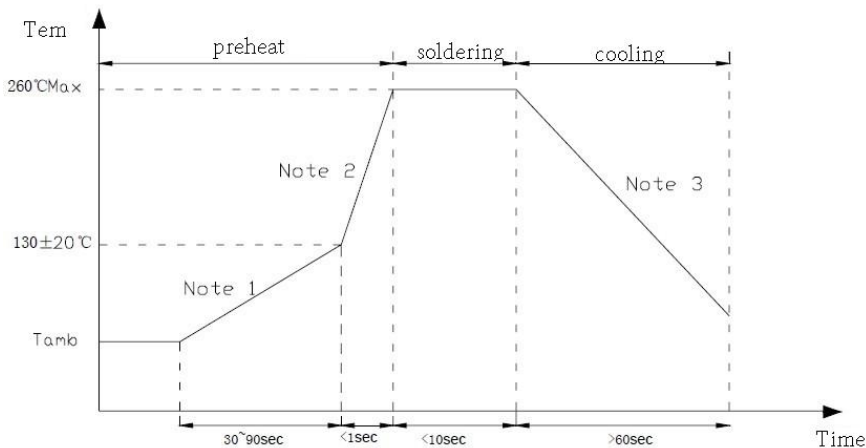
- ◆ Storage Conditions:
  - Storage Temperature:  $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$ .
  - Relative Humidity:  $\leq 75\% \text{RH}$ .
  - Keep Away From Corrosive Atmosphere and Sunlight.
- ◆ Period of Storage: 1 Year.

### Reliability

Test Description	Standard	Test Condition	Test Requirement
Solder Ability	IEC 60068-2-20	$245 \pm 3^{\circ}\text{C}$ , $3 \pm 0.3$ secs.	Above 95% in the terminal surface shall be with new solder
Resistance to Soldering Heat	IEC 60068-2-20	$260 \pm 5^{\circ}\text{C}$ , $10 \pm 1$ secs.	No visible damage $\Delta R_{25}/R_{25} \cong \pm 3\%$
Low Temperature Storage	IEC 60068-2-1	$-40 \pm 5^{\circ}\text{C}$ , $1000 \pm 24$ hrs.	No visible damage $\Delta R_{25}/R_{25} \cong \pm 3\%$
High Temperature Storage	IEC 60068-2-2	$125 \pm 5^{\circ}\text{C}$ , $1000 \pm 24$ hrs.	No visible damage $\Delta R_{25}/R_{25} \cong \pm 3\%$
Damp Heat, Steady State	IEC 60068-2-78	$40 \pm 2^{\circ}\text{C}$ , $90 \sim 95\% \text{RH}$ , $1000 \pm 24$ hrs.	No visible damage $\Delta R_{25}/R_{25} \cong \pm 3\%$

### Recommended Welding Conditions

Wave Soldering Curve



- Note 1:  $(1 \sim 3)^{\circ}\text{C}/\text{sec}$ .
- Note 2:  $200^{\circ}\text{C}/\text{sec}$ .
- Note 3:  $5^{\circ}\text{C}/\text{sec max}$ .

## MF52 Pearl-Shape Temperature Measurement NTC Thermistor

### MF52-BH Series

#### Heavy Soldering Conditions

Project	Condition
Soldering Iron Head Temperature	360°C (max)
Weld Time	3 secs. (max)
Distance Between Welding Position and Coating Layer	2 mm (min)

#### Packing Specification

Part Number	Quantity
MF52-BH Series	500 pcs/bag

#### Warning



- ◆ SOCAY owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property.
- ◆ SOCAY reserves the right to make changes without further notice to any products herein.
- ◆ SOCAY makes no warranties, representations or warranties as to the fitness of its products for any particular purpose, and disclaims any liability.
- ◆ The parameters provided in the SOCAY datasheet specification may vary from application to application, and the actual performance may vary over time. All operating parameters must be verified by the customer's technical expert before application.
- ◆ Any and all responsibilities and liabilities are disclaimed if any item under this notice of warning is not complied with.