

## MM Series LL-31 MicroMELF Thermistors



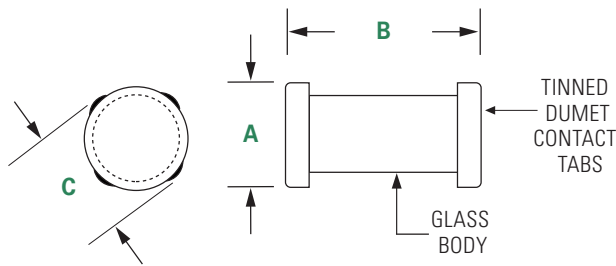
### Description

Littelfuse LL-31 “MicroMELF” style glass encapsulated surface mount thermistors are manufactured using super stable NTC chips which are hermetically sealed in a glass package. The result is a device which exhibits excellent long-term reliability and stability even when subjected to severe environmental or thermal conditions. Their uniform dimensions make them especially suitable for use with automatic insertion equipment.

### Options

- Non-standard resistance values and tolerances
- Point matched at specified temperatures
- Tape and Reel Packaging

### Dimensions



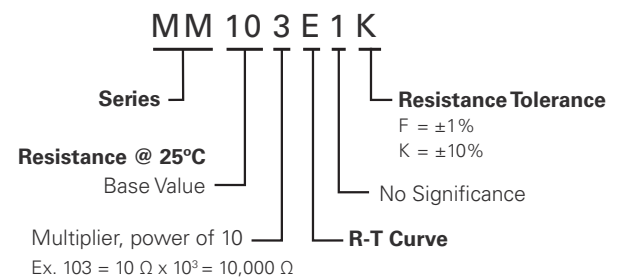
Dimensions shown in inches.

A	B	C
0.049" ± 0.004"	0.075" ± 0.008"	0.053" Nom

### Features

- High temperature capability to +220°C
- Surface mountable
- Hermetically sealed glass package
- Low cost
- Excellent long-term stability

### Part Numbering System



**Note:** Not all combinations of Part Number codes are available. Contact Littelfuse for details.

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### Specifications

Part Number	Resistance Ohms @25°C	*Resistance Tol. ± % @ 25°C	Accuracy (±°C) 0-50°C	R-T Curve	Temperature Coefficient (% / °C) @ 25°C	Beta (K) 0-50°C	Dissipation Constant, Nominal (mW/°C)	Thermal Time Constant, Max. - Still Air (seconds)	Temperature Rating (°C)
MM222E1K	2186	10	±0.5°C	E1	-3.82	3320	1	5	-55 to +220
MM302F1K	3000	10	±0.5°C	F	-3.86	3419	1	5	-55 to +220
MM502F1K	5000	10	±0.5°C	F	-3.86	3419	1	5	-55 to +220
MM103E1K	10000	10	—	E1	-3.82	3320	1	5	-55 to +220
MM103G1K	10000	10	—	G	-4.03	3575	1	5	-55 to +220
MM103J1F	10000	1	—	J	-4.4	3892	1	5	-55 to +220
MM103J1K	10000	10	—	J	-4.4	3892	1	5	-55 to +220
MM153J1K	15000	10	—	J	-4.4	3892	1	5	-55 to +220
MM203J1F	20000	1	—	J	-4.4	3892	1	5	-55 to +220
MM203J1K	20000	10	±0.5°C	J	-4.4	3892	1	5	-55 to +220
MM104J1F	100000	1	—	J	-4.4	3892	1	5	-55 to +220
MM104J1K	100000	10	—	J	-4.4	3892	1	5	-55 to +220
MM104R1K	100000	10	—	R	-4.68	4140	1	5	-55 to +220
MM254R1K	250000	10	±0.5°C	R	-4.68	4140	1	5	-55 to +220

\*Resistance tolerances of ± 1%, 2%, and 5% are available upon request

### Packaging

Packaging Option	Packaging Code	Standard Quantity	Standard
Tape and Reel	-TR	2500	EIA-481

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