

## Specifications Per

- IEC 60115-1
- EN140401-803

## Features

- SMD enabled structure
- Excellent solderability termination
- RoHS and REACH compliant

## DIMENSIONS

| Type | Body Length (L, mm) | Cap Diameter (D1, mm) | Body Diameter (D2, mm) | Soldering Spot (B, mm) | Net Weight Per 1000 pcs |
|------|---------------------|-----------------------|------------------------|------------------------|-------------------------|
| FM26 | $5.90 \pm 0.2$      | $2.20 \pm 0.1$        | $D1+0.02/-0.2$         | 1.0 Min.               | 66 grams                |
| FM53 | $5.90 \pm 0.2$      | $2.20 \pm 0.1$        | $D1+0.02/-0.2$         | 1.0 Min.               | 66 grams                |

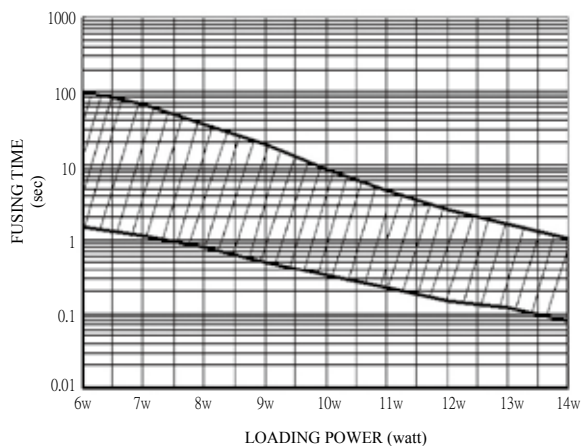
## GENERAL SPECIFICATIONS

| Type | Power Rating (at 70°C) | Max. Working Voltage | Minimum Resistance | Maximum Resistance | Resistance Tolerance | Available Resistance Value |
|------|------------------------|----------------------|--------------------|--------------------|----------------------|----------------------------|
| FM26 | 1/3W                   | 250V                 | $2.2\Omega$        | 10K $\Omega$       | $\pm 5\%$            | E-24                       |
| FM53 | 1/2W                   | 300V                 | $2.2\Omega$        | 10K $\Omega$       | $\pm 5\%$            | E-24                       |

Special sizes, values, and specifications not listed available on special order.

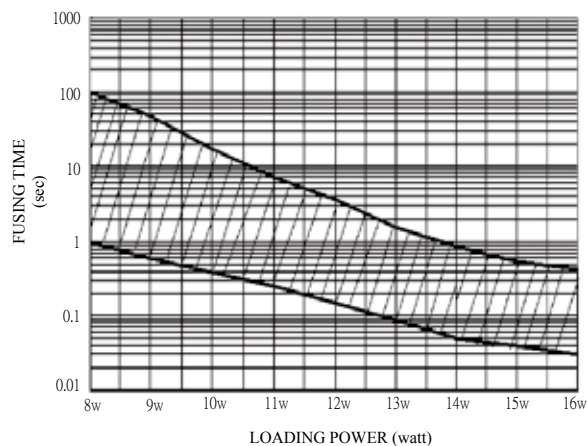
### FM26

FUSING CHARACTERISTICS  
USING CONSTANT VOLTAGE



### FM53

FUSING CHARACTERISTICS  
USING CONSTANT VOLTAGE



## PART NUMBER

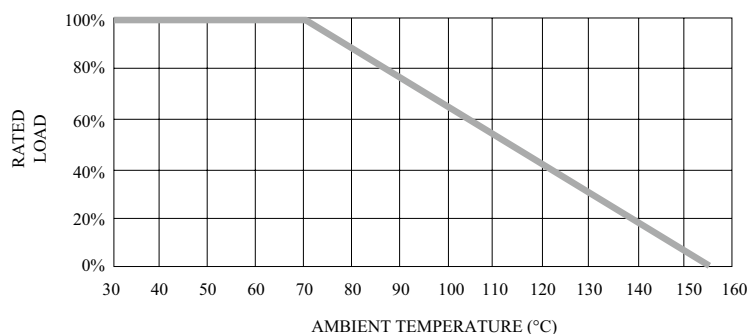
Example: FM53J10K0TKZTR2K0

| FM53 | J         | 10K0                                                                                                                                                                                                  | TKZ                                                                                                                                                                                                                 | TR2K0                                                                                                                                |
|------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Type | Tolerance | Resistance                                                                                                                                                                                            | TCR                                                                                                                                                                                                                 | Packaging                                                                                                                            |
|      | J (5%)    | 10KΩ<br><b>4-character code</b><br>containing -<br>3 significant digits<br>1 letter multiplier<br><u>OHM MULTIPLIER</u><br>R = 1<br>K = 10 <sup>3</sup><br>M = 10 <sup>6</sup><br>G = 10 <sup>9</sup> | <b>3-character code</b><br>TKZ = Default Product<br>Temperature Coefficient.<br>Information of typical<br>product temperature<br>coefficient can be found<br>in the Technical Summary<br>section of the datasheet.* | <b>5-character code</b><br>TR = Tape Reel<br>(pieces per reel)<br><u>FM26/FM53</u><br>2K0 = 2,000<br>6K0 = 6,000**<br>10K = 10,000** |

\* For the availabilities of non-default temperature coefficient, please check with us. Reference for TCR letter codes can be found in section (4) of Part Number Construction in the Appendices.

\*\* upon request

## POWER DERATING CURVE



## TECHNICAL SUMMARY

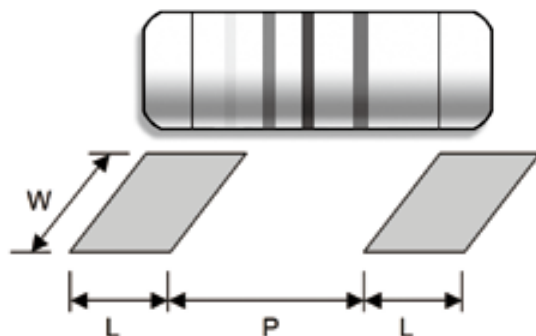
| Characteristics                            | Limits           |                |
|--------------------------------------------|------------------|----------------|
| Dielectric Withstanding Voltage, VAC or DC | FM26<br>FM53     | 300            |
| Temperature Coefficient, PPM / °C*         | FM26<br>FM53     | Typically ±200 |
| Operating Temperature Range, °C            | -55 ~ +155       |                |
| Insulation Resistance, MΩ                  | >10 <sup>4</sup> |                |

\* Not applicable to all resistance values. Please check with us regarding the PPM of specific resistance value(s).

## ■ PERFORMANCE SPECIFICATIONS

| Characteristics              | Test Conditions                                                                                                                                         | Limits           |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| Short Time Overload          | <b>IEC 60115-1 4.13</b><br>2 seconds 2.5x rated voltage (not over max. overload voltage)                                                                | ±5%              |
| Load Life In Humidity        | <b>IEC 60115-1 4.24</b><br>56 days rated load (not over max. working voltage) at (40±2)°C and (93±3)% relative humidity                                 | ±5%              |
| Load Life                    | <b>IEC 60115-1 4.25.1</b><br>Rated load (not over max. working voltage) 1,000 hours with 1.5 hours ON, 0.5 hours OFF, at (70±2)°C                       | ±5%              |
| Resistance To Soldering Heat | <b>IEC 60115-1 4.18.2</b><br>Dip the resistor into a solder bath measured of (260±5)°C and hold it for a 10±1 seconds                                   | ±1%              |
| Solderability                | <b>IEC 60115-1 4.17.2</b><br>Solder area covered after (235±3)°C/(2±0.2) seconds with flux applied                                                      | 95% min.coverage |
| Vibration                    | <b>IEC 60115-1 4.22</b><br>Six hours in each parallel and axial direction with a simple harmonic motion having an amplitude of 0.75mm and 10 to 500 Hz. | ±1%              |
| Thermal Endurance            | <b>IEC 60115-1 4.25.3</b><br>1000 hours at 155°C without load                                                                                           | ±1%              |
| Thermal Shock                | <b>IEC 60115-1 4.19</b><br>-55°C 30minutes, +155°C 30minutes, 5 cycles                                                                                  | ±1%              |

### ■ SUGGESTED PAD LAYOUT



| Type | Soldering Mode | Pad Length<br>(L, mm, Min.) | Pad Spacing<br>(P, mm) | Pad Width<br>(W, mm, Min.) |
|------|----------------|-----------------------------|------------------------|----------------------------|
| FM26 | Reflow         | 2.0                         | $3.0 \pm 0.1$          | 3.0                        |
|      | Wave           | 2.5                         | $3.0 \pm 0.1$          | 3.0                        |
| FM53 | Reflow         | 2.0                         | $3.0 \pm 0.1$          | 3.0                        |
|      | Wave           | 2.5                         | $3.0 \pm 0.1$          | 3.0                        |

For better heat dissipation / lower heat resistance, increase W & L.

### ■ COVER TAPE PEELING SPECIFICATION

Recommended peeling force:  $50 \pm 5$ gf

