

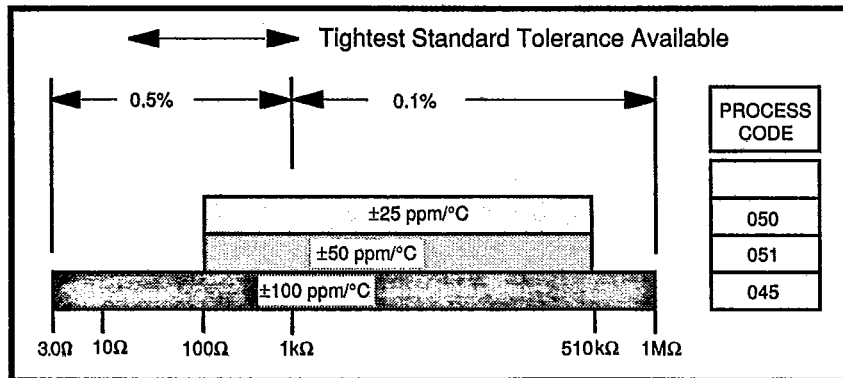
## FEATURES

The SFM series are single-value resistor chips, provide excellent long-term stability and power-handling capacity in a small size.

These chips are manufactured using state-of-the-art thin-film techniques, are 100% electrically tested and visually inspected to MIL-STD-883.

- Small size, 20 mil square
- Resistance range 3.0Ω to 1 MΩ
- Resistor material tantalum nitride, self-passivating
- Oxidized silicon substrate for good power dissipation
- Low component cost
- Quick delivery
- Reduced hybrid size

## TCR VALUES AND TOLERANCES

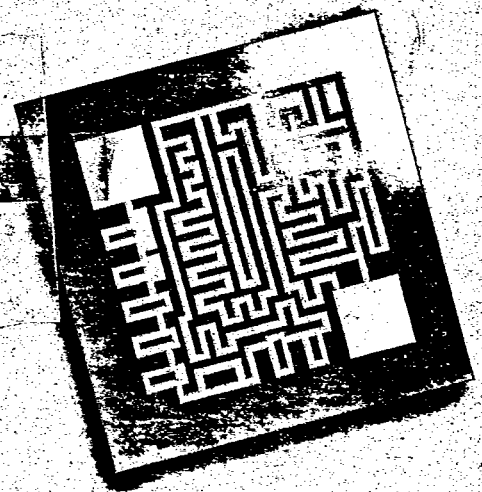
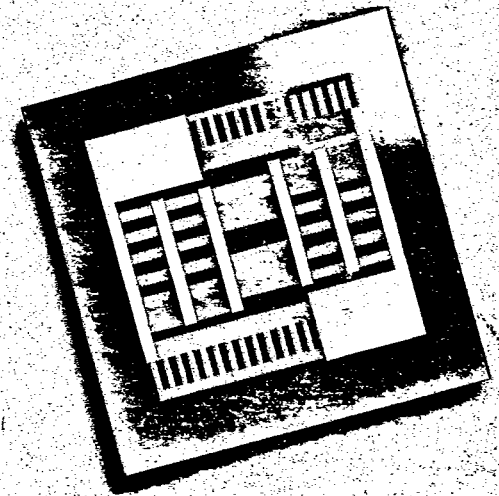


Contact our Marketing Department for values not shown above

## ELECTRICAL CHARACTERISTICS

Noise, MIL-STD-202, Method 308 100Ω - 250 kΩ <100Ω or >251 kΩ	-35 dB max. -20 dB max.
Moisture resistance, MIL-STD-202, Method 106	±0.5% max. ΔR/R
Stability, 1000 hr., +125 °C, 125 mw	±0.5% max. ΔR/R
Operating temperature range	-55 °C to +125 °C
Thermal shock, MIL-STD-202, Method 107, Test Condition F	±0.25% max. ΔR/R
High temperature exposure, +150 °C, 100 hr.	±0.5% max. ΔR/R
Dielectric voltage breakdown	400 V
Insulation resistance	10 <sup>12</sup> Ω min.
Operating voltage	100 V max.
DC power rating at +70 °C (derated to zero at +175 °C)	250 mw
5 x rated power short-time overload, +25 °C, 5 seconds	±0.25% max. ΔR/R

# T-62-05 SFM SERIES THIN-FILM TOP-CONTACT RESISTORS



Semi  Films  
Division

P.O. Box 188  
West Hurley, NY 12491  
Tel. (914) 338-7714  
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 **Electro-Films Inc.**

# MECHANICAL DATA

Chip size	20 x 20 ±2 mil (0.50 x 0.50 ±0.05 mm)
Chip thickness	8 ±3 mil (0.203 ±0.08 mm)
Chip substrate material	Oxidized silicon, 10 kÅ min. SiO <sub>2</sub>
Resistor material	Tantalum nitride, self-passivating
Bonding pads	4 x 4 mil (0.100 x 0.100 mm)
No. of pads	2
Pad material	10 kÅ min. aluminum
Backing	None, lapped semiconductor silicon

**OPTIONS:** Gold backing for eutectic die attach  
Gold bonding pads, 15 kÅ min. thickness

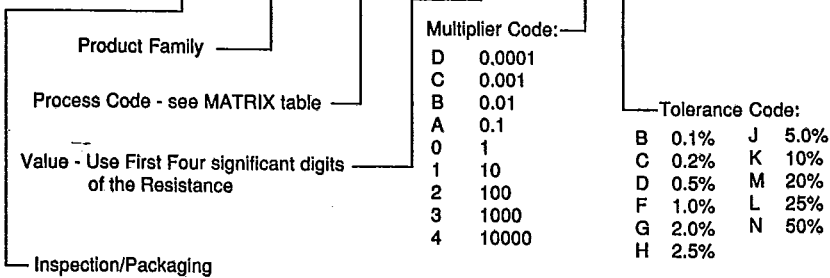
# APPLICATIONS

The SFM series of top-contact resistor chips are designed to handle substantial power loads in many types of hybrid packages. They are ideally suited for this purpose because of their excellent stability and small size.

# PART NUMBER DESIGNATION

Example: 100% visualled, 10 kΩ ±1%, ±100 ppm TCR

P/N: **W** **SFM** - **045** - **1000** **1** **F**



Use - W for 100% visually inspected parts  
X for sample, visually inspected loaded in matrix trays (4% AQL)  
Y for sample, visually inspected die loaded in vials (4% AQL)

