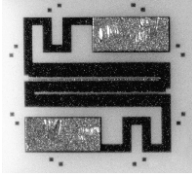


Thin Film 0202 Size Resistor on Alumina



Product may not be to scale

The SFC series resistor chips offer a combination of low shunt capacitance and small size. The SFCs tantalum nitride resistor material offers excellent resistance to high moisture environments.

The SFCs are manufactured using Vishay Electro-Films (EFI) sophisticated thin film equipment and manufacturing technology.

The SFCs are 100 % electrically tested and visually inspected to MIL-STD-883.

FEATURES

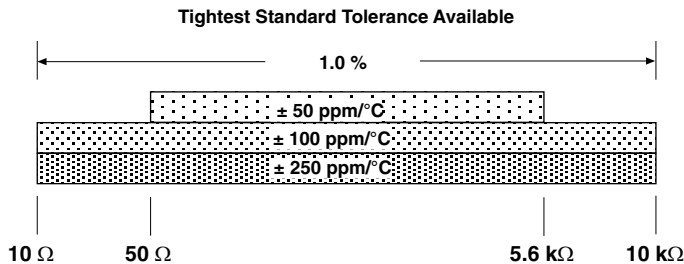
- Wire bondable
- Small size: 0.020 inches square
- Resistance range: 10 Ω to 10 kΩ
- Alumina substrate
- Low shunt capacitance: < 0.2 pF
- Resistor material: Tantalum nitride
- Moisture resistant

APPLICATIONS

Vishay EFI SFC chip resistors provide excellent high-frequency response and are ideally suited for prototyping. Typical application areas are:

- Amplifiers
- Oscillators
- Attenuators
- Couplers
- Filters

TEMPERATURE COEFFICIENT OF RESISTANCE, VALUES AND TOLERANCES

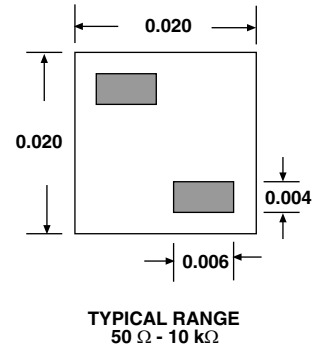
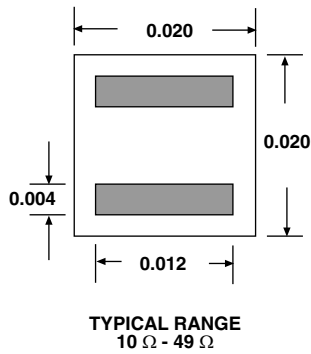


PROCESS CODE	
CLASS H*	CLASS K*
002	122
001	121
000	120

*MIL-PRF-38534 inspection criteria

STANDARD ELECTRICAL SPECIFICATIONS

PARAMETER	
Noise, MIL-STD-202, Method 308	- 20 dB typ.
Moisture Resistance, MIL-STD-202 Method 106	± 0.5 % max. ΔR/R
Stability, 1000 h, + 125 °C, 25 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 h	± 0.5 % max. ΔR/R
Dielectric Voltage Breakdown	400 V
Insulation Resistance	10 ¹² min.
Operating Voltage	100 V max.
DC Power Rating at + 70 °C (Derated to Zero at + 150 °C)	62 mW max.
5 x Rated Power Short-Time Overload, + 25 °C, 5 s	± 0.25 % max. ΔR/R

DIMENSIONS in inches

CHIP RESISTORS
SCHEMATIC


MECHANICAL SPECIFICATIONS in inches	
PARAMETER	
Chip Size	0.020 x 0.020 ± 0.003 (0.5 x 0.5 ± 0.768 mm)
Chip Thickness	0.010 ± 0.002 (0.25 ± 0.05 mm)
Chip Substrate Material	99.6 % alumina, 2 - 4 microinch finish
Resistor Material	Tantalum nitride, self-passivating
Bonding Pad Size	0.004 x 0.006 (0.10 x 0.15 mm) minimum
Number of Pads	2
Pad Material	25 kÅ minimum gold standard
Backing	None

Options: Gold back for solder die attach
Contact Applications Engineer

ORDERING INFORMATION					
Example: 100 % visual, 50 Ω, ± 10 %, ± 250 ppm/°C TCR, gold pads, class H visual inspection					
W	SFC	000	5000	B	K
INSPECTION /PACKAGING	PRODUCT FAMILY	PROCESS CODE	RESISTANCE VALUE	MULTIPLIER CODE	TOLERANCE CODE
W = 100 % visually inspected parts in matrix tray per MIL-STD-883 X = Sample visually inspected parts loaded in matrix trays (4 % AQL)		See Process Code table	Use first 4 significant digits of resistance	B = 0.01 A = 0.1 0 = 1 1 = 10	F = 1.0 % G = 2.0 % H = 2.5 % J = 5.0 % K = 10 % *Coating standard



Disclaimer

All product specifications and data are subject to change without notice.

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