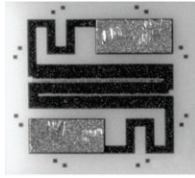


Thin Film 0202 Size Resistor on Alumina



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, method 2032 class H or K.

FEATURES

- Wire bondable
- Small size: 0.020 inches square
- Case: 0202
- Resistance range: 10 Ω to 10 k Ω
- Alumina substrate
- Low shunt capacitance: < 0.2 pF
- Resistor material: Tantalum nitride
- Moisture resistant
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



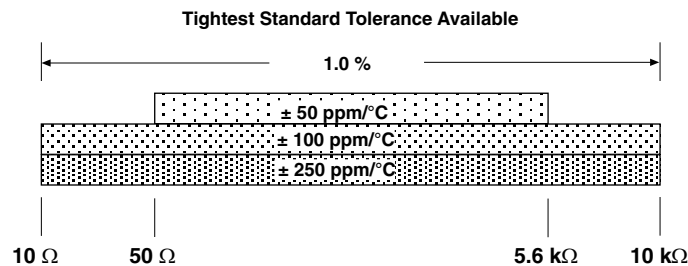
APPLICATIONS

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

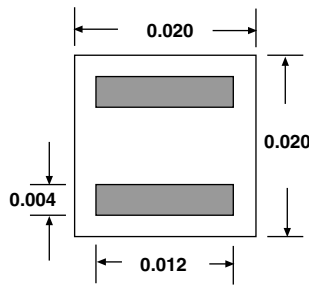
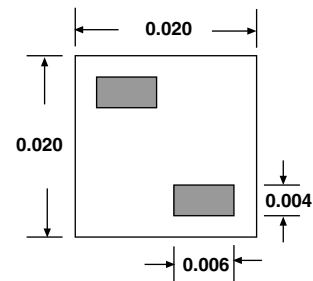
Typical application areas are:

- Amplifiers
- Oscillators
- Attenuators
- Couplers
- Filters

TEMPERATURE COEFFICIENT OF RESISTANCE, VALUES, AND TOLERANCES		
PARAMETER	VALUE	UNIT
Total Resistance Range	10 to 10K	Ω
Standard Tolerances	± 1	%
TCR	$\pm 50, \pm 100, \pm 250$	ppm/ $^{\circ}$ C



STANDARD ELECTRICAL SPECIFICATIONS		
PARAMETER	VALUE	UNIT
Noise, MIL-STD-202, Method 308	-20 typ.	dB
Moisture Resistance, MIL-STD-202, Method 106	± 0.5 max. $\Delta R/R$	%
Stability, 1000 h, +125 $^{\circ}$ C, 25 mW	± 0.5 max. $\Delta R/R$	%
Operating Temperature Range	-55 to +125	$^{\circ}$ C
Thermal Shock, MIL-STD-202, Method 107, Test Condition F	± 0.25 max. $\Delta R/R$	%
High Temperature Exposure, +150 $^{\circ}$ C, 100 h	± 0.5 max. $\Delta R/R$	%
Dielectric Voltage Breakdown	400	V
Insulation Resistance	10^{12} min.	Ω
Operating Voltage	100 max.	V
DC Power Rating at +70 $^{\circ}$ C (Derated to zero at +150 $^{\circ}$ C)	0.062 max.	W
5x Rated Power Short-Time Overload, +25 $^{\circ}$ C, 5 s	± 0.25 max. $\Delta R/R$	%

DIMENSIONS in inches

TYPICAL RANGE
10 Ω - 49 Ω

TYPICAL RANGE
50 Ω - 10 kΩ

SCHEMATIC


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

GLOBAL PART NUMBER INFORMATION															
Global Part Number: SFC12500KKSNGHWS															
Global Part Number Description: SFC 1.25K 10 % 100 ppm/°C Std Au none H WS															
S	F	C	1	2	5	0	0	K	K	S	S	N	H	W	S
MODEL	RESISTANCE	RESISTANCE MULTIPLIER CODE	TOL. CODE (%)	TCR (ppm/°C)	TRIM STYLE	TERMINATION	BACK METAL	VISUAL CLASS	PACKAGING CODE						
SFC 20 x 20 size Ta2N on alumina	First 4 digits are significant figures of resistance	B = 0.01 A = 0.1 0 = 1 1 = 10	F = 1.0 G = 2.0 J = 5.0 K = 10.0	C = ± 50 K = ± 100 M = ± 250	E = edg S = std U = usr	G = Au A = Al	G = Au N = none	H = class H K = class K	WS = waffle pack 100 min., 1 mult						



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