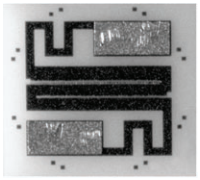
Thin Film 0202 Size Resistor on Alumina



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 kΩ
- 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

Pb-free

RoHS COMPLIANT

HALOGEN FREE GREEN (5-2008)

APPLICATIONS

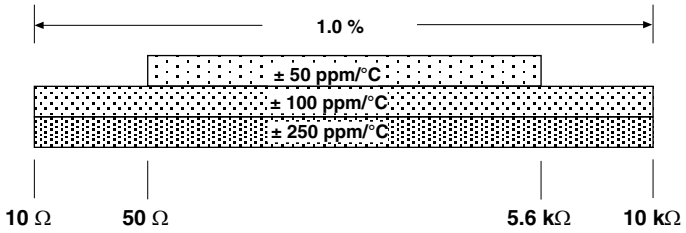
Vishay EFI SFC chip resistors provide excellent high-frequency response and are ideally suited for prototyping.

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	± 50, ± 100, ± 250	ppm/°C

Tightest Standard Tolerance Available



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 °C, 25 mW	± 0.5 max. $\Delta R/R$	%
Operating Temperature Range	-55 to +125	°C
Thermal Shock, MIL-STD-202, Method 107, Test Condition F	± 0.25 max. $\Delta R/R$	%
High Temperature Exposure, +150 °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 °C (Derated to zero at +150 °C)	0.062 max.	W
5 x Rated Power Short-Time Overload, +25 °C, 5 s	± 0.25 max. $\Delta R/R$	%

For technical questions, contact: efi@vishay.com

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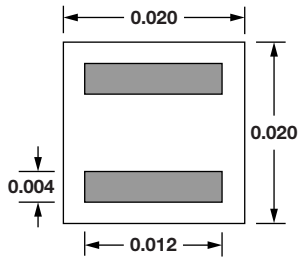
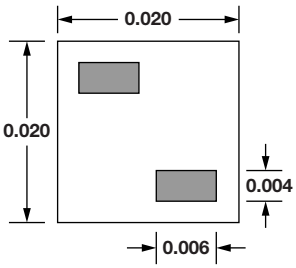
DIMENSIONS in inches



TYPICAL RANGE
10 Ω TO 49 Ω



TYPICAL RANGE
50 Ω TO 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: SFC12500KKSGNHWS

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	G	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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