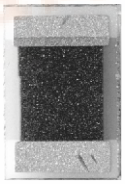
查询MIF供应商

Thin Film Microwave Resistor



Product may not be to scale

The MIF resistor chips on alumina are designed with low shunt capacitance. Resistor geometrics are compatible with strip lines, making them ideally suited for microwave circuits. These chips are manufactured using Vishay Electro-Films (EFI) sophisticated thin film equipment and manufacturing technology. The MIFs are 100 % electrically tested and visually inspected to MIL-STD-883.

FEATURES

- Wire bondable
- Small single chip size: 0.016 x 0.020 inches
- Microwave resistance range: 20 Ω to 100 Ω
- Overall resistance range: 20 Ω to 2 kΩ
- Alumina substrate
- Low stray capacitance: < 0.2 pF
- Resistor material: Tantalum nitride, self passivating
- Moisture resistant
- Power: 50 mW
- High frequency

APPLICATIONS

Vishay EFI MIF 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	
Resistance Range	20 Ω to 100 Ω
Tolerance	± 1 %, ± 5 %, ± 10 %, ± 20 % standard
TCR	± 100 ppm/°C

STANDARD ELECTRICAL SPECIFICATIONS	
PARAMETER	
Noise, MIL-STD-202, Method 308	- 20 dB typ.
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 °C to + 125 °C
Thermal Shock, MIL-STD-202, Method 107, Test Condition F	± 0.25 % max. $\Delta R/R$
High Temperature Exposure, + 150 °C, 1000 h	± 0.5 % max. $\Delta R/R$
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)	50 mW max.
5 x Rated Power Short-Time Overload, + 25 °C, 5 s	± 0.25 % max. $\Delta R/R$

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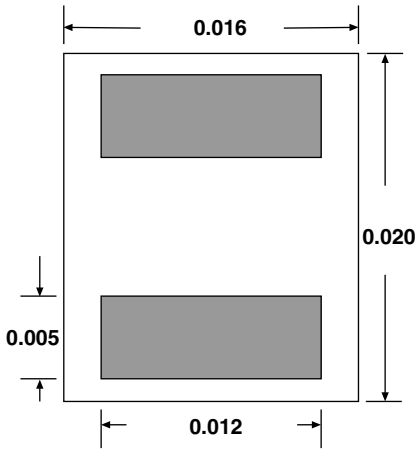
DIMENSIONS in inches



SCHEMATIC

MECHANICAL SPECIFICATIONS in inches	
PARAMETER	
Chip Size	0.016 x 0.020 ± 0.003 (0.40 x 0.5 ± 0.076 mm)
Chip Thickness	0.010 ± 0.001 (0.25 ± 0.025 mm)
Chip Substrate Material	99.6 % alumina, 2 - 4 microinch finish
Resistor Material	Tantalum nitride, self passivating
Bonding Pad Size	0.005 x 0.012 (0.125 x 0.30 mm)
Number of Pads	2
Pad Material	25 kÅ minimum gold standard
Backing	None

Options: Terminations: Aluminum/solder
Gold back for solder die attach
5 mil chip thickness
Contact Applications Engineer

ORDERING INFORMATION

Example: 100 % visualled, 50 Ω, ± 10 %, ± 100 ppm/°C TCR, gold pads, class H visual inspection

W	**MIF**	**002**	**5000**	**B**	**K**
INSPECTION/ PACKAGING	PRODUCT FAMILY	PROCESS CODE	RESISTANCE VALUE	MULTIPLIER CODE	TOLERANCE CODE
W = 100 % visually inspected parts in matrix trays per MIL-STD-883 X = Sample, visually inspected parts loaded in matrix trays (4 % AQL)			Use first 4 digits significant digits of the resistance	**B** = 0.01 **A** = 0.1 **0** = 1	**F** = 1.0 % **G** = 2.0 % **H** = 2.5 % **J** = 5.0 % **K** = 10 % **M** = 20 %

Disclaimer

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

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