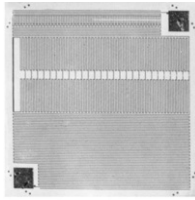


## Thin Film, Top-Contact Megohm Resistor



Product may not be to scale

### FEATURES

- Wire bondable
- Chip size: 0.050 inches square
- Resistance range: 500 kΩ to 10 MΩ
- Quartz substrate: < 0.1 pF shunt capacitance
- Resistor material: Tantalum nitride, self-passivating

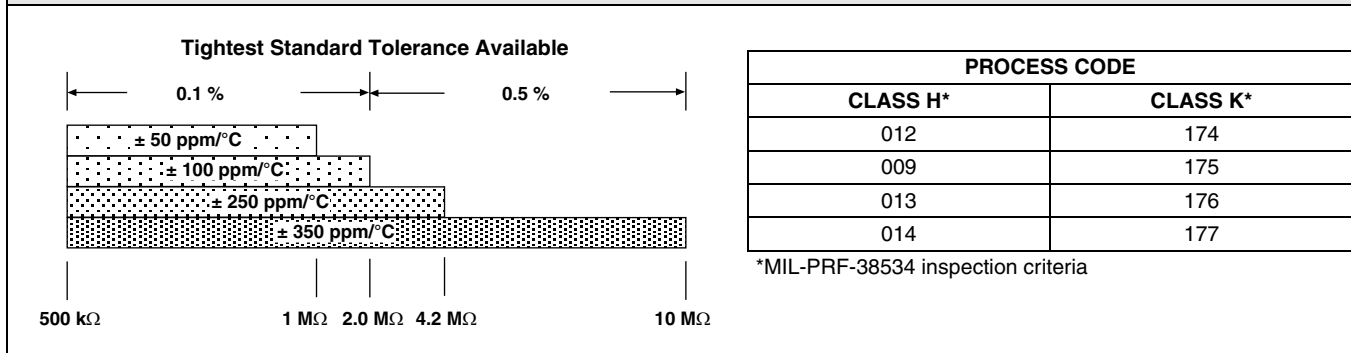
The QFX series, tantalum nitride on quartz resistor chips combine high resistance with low shunt capacitance. These offer one of the best combinations of small size, frequency response and high value available.

The QFXs are manufactured using Vishay Electro-Films (EFI) sophisticated thin film equipment and manufacturing technology. The QFXs are 100 % electrically tested and visually inspected to MIL-STD-883.

### APPLICATIONS

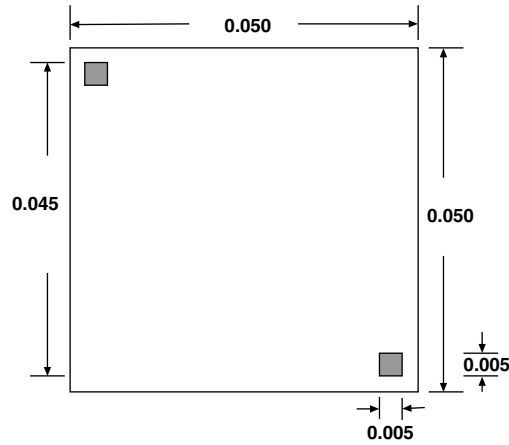
The QFX series resistor chips are designed for circuits requiring high values with lower shunt capacitance for higher frequency of operation.

### TEMPERATURE COEFFICIENT OF RESISTANCE, VALUES AND TOLERANCES



### STANDARD ELECTRICAL SPECIFICATIONS

PARAMETER	
Noise, MIL-STD-202, Method 308	- 12 dB typ.
Moisture Resistance, MIL-STD-202 Method 106	± 0.5 % max. ΔR/R
Stability, 1000 h, + 125 °C, 10 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 <sup>12</sup> min.
Operating Voltage	400 V max.
DC Power Rating at + 70 °C (Derated to Zero at + 175 °C)	20 mW
5 x Rated Power Short-Time Overload, + 25 °C, 5 s	± 0.25 % max. ΔR/R

**DIMENSIONS** in inches

**SCHEMATIC**


<b>MECHANICAL SPECIFICATIONS</b> in inches	
PARAMETER	
Chip Size	0.050 x 0.050 ± 0.003 (1.25 x 1.25 ± 0.75 mm)
Chip Thickness	0.010 ± 0.002 (0.254 ± 0.05 mm)
Chip Substrate Material	Quartz
Resistor Material	Tantalum nitride, self-passivating
Bonding Pad size	0.005 x 0.005 (0.127 x 0.127 mm)
Number of Pads	2
Pad Material	10 kÅ minimum aluminum
Backing	None, lapped quartz

**Options:** Gold bonding pads, 15 kÅ minimum  
Consult Applications Engineer

<b>ORDERING INFORMATION</b>					
Example: 100 % visual, 5 MΩ, ± 1 %, ± 350 ppm/°C TCR, 50 mil, aluminum pads, class H visual inspection					
W	QFX	014	5000	3	F
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, commercial visually inspected parts loaded in matrix trays (4 % AQL)		See Process Code table	Use the first 4 digits significant digits of the resistance	1 = 10 2 = 100 3 = 1000 4 = 10 000	B = 0.1 % C = 0.2 % D = 0.5 % F = 1.0 % G = 2.0 % H = 2.5 % J = 5.0 % K = 10 % M = 20 % L = 25 %



## Disclaimer

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

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