

# Thin Film Multi-Tap Chip Resistor $(.030 \times .030)$

Chip resistors provide options resistor values, tolerance, style and gold backing option.



### **Features**

- Chip Size: .030" x .030"
- Silicon Substrate
- Resistor material of tantalum nitride.
- Optimal for hybrid prototyping
- Standard resistor ranges
- Selectable values by wire bond

#### **Available Options Include:**

- · Gold backing
- Two styles available

API Technologies **thin film multi-tapped chip resistor (.030 x .030)** are available in a wide range of resistances and tolerances with values available from 800 ohms to 24 kiloohm. Chip resistors are standard for values up to 24K, on an oxidized silicon substrate. The thin film resistor layer is made of Tantalum Nitride (TaN), with a gold conductor layer.

Applications for thin film center-tapped chip resistors include military and industrial hybrids, and medical, aerospace and communications equipment.

**Multi-tapped Chip Resistors** are available with tantalum-nitride resistor metalization.

• Tantalum-nitride provides superior moisture-resistance for non-hermetic applications.

#### **Electrical Specifications**

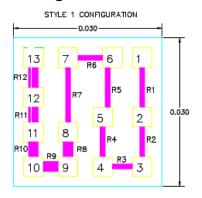
Parameter	Limit	Test conditions
Power Rating	250 mW	(at 70 C derated to 0 mW @ 150 C)
Life	+/-1% max	1000 hours @ 125 degrees C
Noise	-35 dB typ	MIL-STD-202 method 308
High Temp Exposure	+/-0.5% max	100 hours at 150 degrees C
TCR	+100 to -125 ppm/C	-55 to 125 degrees C
Operating voltage	100 VDC max	
Moisture resistance	+/-0.5% max	MIL-STD-202 method 106
Thermal shock	+/-0.25% max	MIL-STD-202 method 107

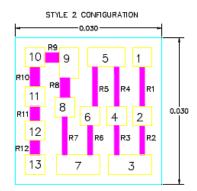
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# **Mechanical Specifications**

Substrate	Silicon with thermal oxide
Bond pad metalization	Gold 100 microinches
Size	.030 x .030 +/003 (0.762 x 0.762 mm +/08mm)
Thickness	.013 +/003 (0.33 +/-0.07 mm)
Bond pad dimensions	.004 x .004 minimum (0.1 x 0.1 mm)
Back side	Lapped silicon or 3000 Angstroms gold

## **Typical Configurations**





# **Packaging Options**

- Waffle Pack (400 resistors per pack) standard
- Waffle Pack (50 resistors per pack)
- Waffle Pack (100 resistors per pack)
- Tape and reel

#### **Ordering Information**

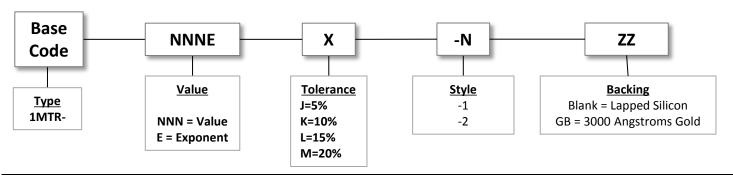
All parts are 100% electrically tested, sample tested per MIL-STD-38534 section 3.4, and visually inspected to MIL-STD-883 requirements. Chips are supplied in standard 2"x 2" matrix tray packaging.

#### **Resistor Tap Information**

Resistors R1 – R7 are each 12.5% of the total resistor value.

Resistors R8 – R12 are each 2.5% of the total resistor value.

# **Part Number Breakout/Designation**



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