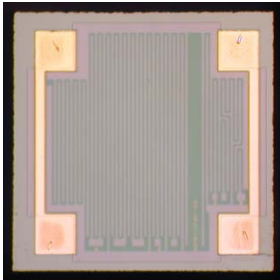


Thin Film Single-Tap Chip Resistors (.030 x .030 Series)

Chip resistors provide variations in resistor material, temperature coefficient of resistance, resistance and tolerance.



Features

- Chip Size: .030" x .030"
- Silicon Substrate
- Wire bond pads

Available Options Include:

- Resistor Tolerance to 0.1%
- Nickel Chrome or Tantalum Nitride Resistor Materials
- TCR options available

API Technologies **thin film single-tapped chip resistors .030 x .030 series** are available in a wide range of resistances and tolerances with values available from 10 ohms to 1 megohm. The thin film resistor layer is made of Nickel-Chromium or 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.

Single-tapped chip resistors are available with either passivated nickel chrome or tantalum-nitride resistor metalization.

- Nickel chrome provides excellent stability and temperature coefficient in hermetic applications
- Tantalum-nitride provides superior moisture-resistance for non-hermetic applications.

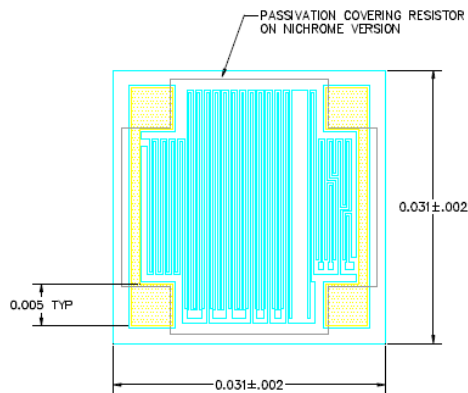
Electrical Specifications

Parameter	Limit	Test conditions
Power Rating	200 mW	(70 C derated to 0 mW @ 150 C)
Life	+/-0.2% max	1000 hours @ 125 degrees C
Noise	-35 dB typ	MIL-STD-202 method 308
High Temp Exposure	+/-0.2% max	100 hours at 150 degrees C
TCR (Nickel Chrome)	+/-50 ppm/C	-55 to 125 degrees C
TCR (Tantalum Nitride)	0 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	+/-0.5% max	MIL-STD-202 method 107

Mechanical Specifications

Substrate	Silicon with thermal oxide
Bond pad metalization	Bondable Gold
Size	.031 x .031 +/- .002 (0.78 x 0.78 mm +/- .05mm)
Thickness	.012 +/- .003"
Bond pad dimensions	.004 x .004 minimum (0.1 x 0.1 mm)
Protective overcoat (passivation)	Silox glass on NiCr versions only
Back side	Lapped silicon

Typical Configuration



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.

Base part code	Ohm value (total of both halves)	Tolerance letter
61AL- (NiCr on Silicon)	NNNE	X
61ALT- (TaN on Silicon)	NNNE	X

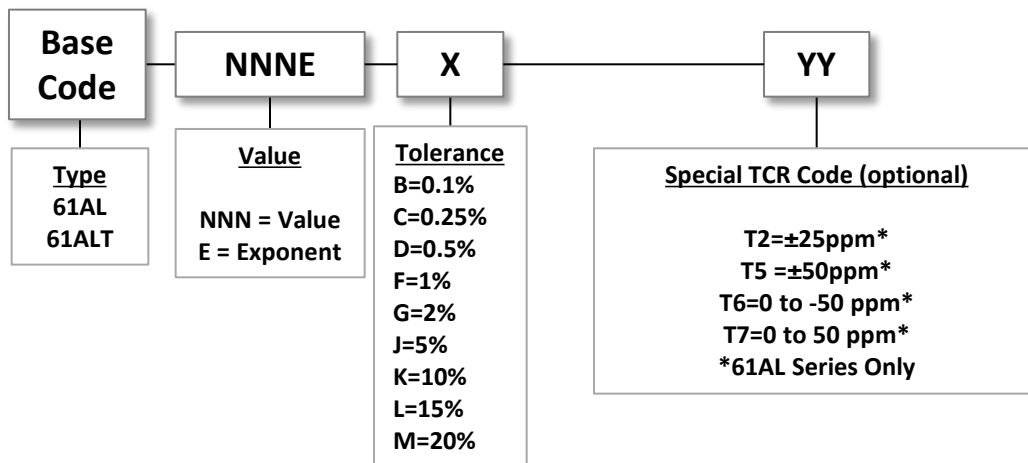
Availability

- 61AL series is available from 25 ohms to 1 Mohm
- 61AT series is available from 10 ohms to 500 kohm
- B tolerance is available above 250 ohms
- C tolerance is available above 100 ohms
- D tolerance is available above 50 ohms
- F tolerance is available above 25 ohms
- G tolerance is available above 12 ohms
- J tolerance is available above 5 ohms

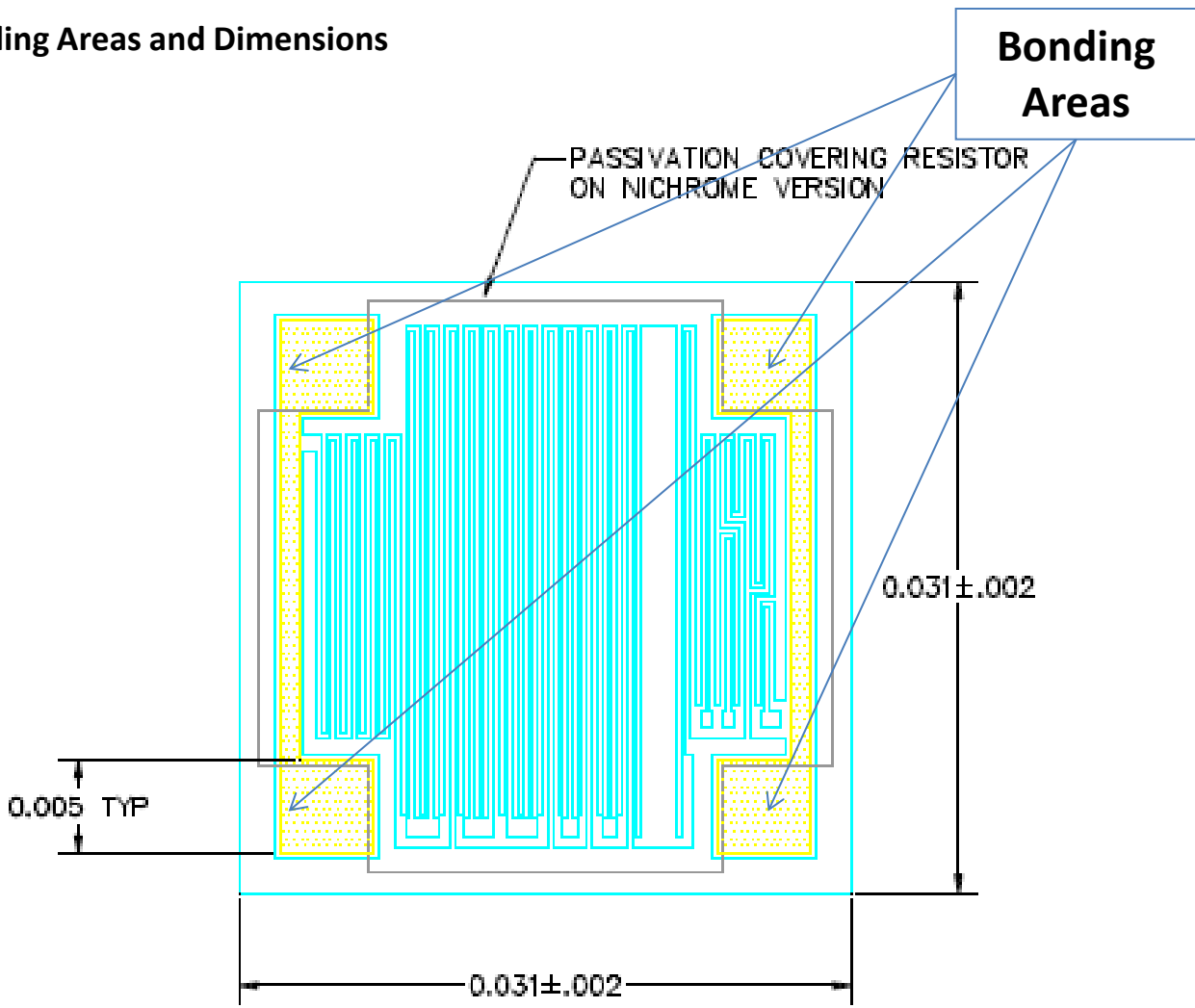
Ordering Examples

- 61AL-1004J is a 1 megohm 5% resistor with nickel chrome metalization.

Part Number Breakout/Designation



Bonding Areas and Dimensions



Factory Information

API Technologies, 400 Nickerson Road, Marlborough, MA 01752
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FAX: 508-251-6401
http://micro.apitech.com/thin_film.aspx