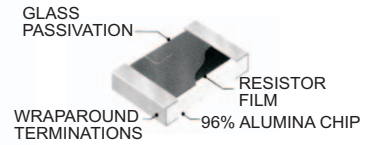




# State of the Art, Inc.

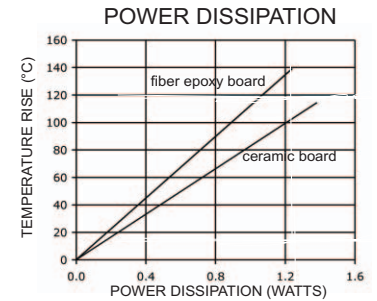
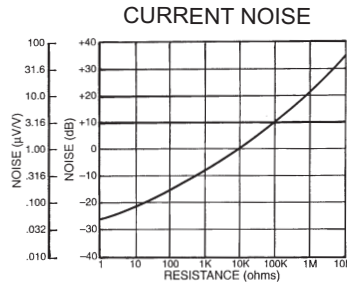
## 0402 Thick Film Chip Resistor

Standard Grade, Wraparound



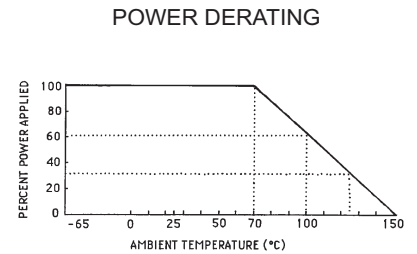
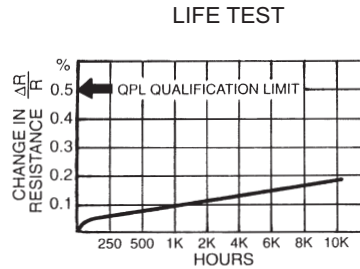
### PERFORMANCE CHARACTERISTICS

Resistance Range	1Ω–40MΩ
Tolerances (1)	1%, 2%, 5%, 10%
TCR	±100, ±200, ±300 ppm
Thermal Resistance	83.2°C/W
Maximum Power	50 mW
Maximum Voltage	30 Volts



### ENVIRONMENTAL PERFORMANCE (1)

Thermal Shock	±0.03%
Low Temperature Operation	±0.03%
Short-time Overload	±0.03%
Resistance to Bonding Exposure	±0.03%
Moisture Resistance	±0.05%
High Temperature Exposure	±0.05%
Life Test	See Chart



(1) Typical resistance change, test methods and criteria per MIL-PRF-55342.

### PART NUMBERING

**S 0402 C P X 150 J 20 - TR**

PACKAGING CODE: - TR = Tape/Reel - W = Waffle Carrier (Default packaging is Bulk)

TEMPERATURE CHARACTERISTIC: 10: ±100 ppm 20: ±200 ppm 30: ±300 ppm

TOLERANCE: F: 1% G: 2% J: 5% K: 10% M: 20%

**RESISTANCE VALUE:**

Four digits are used for tolerances of 1% or lower, three digits are used above 1%. Leading digits are significant while the last digit specifies the number of zeros to add. The letter "R" is used to represent the decimal for fractional ohmic values. Example: 5R6 is 5.6 ohms.

TERMINATION FINISH: X: Sn60 over Nickel (Solderable) C: Silver bearing (Epoxy bondable-RoHS) G: Gold (Epoxy bondable-RoHS) Y: Silver over Nickel (Solderable -RoHS) Z: Gold over Nickel (Solderable-RoHS)

PRODUCT DESIGNATION: P: Thick film on alumina U: Untrimmed alumina (10% & 20% tolerance only)

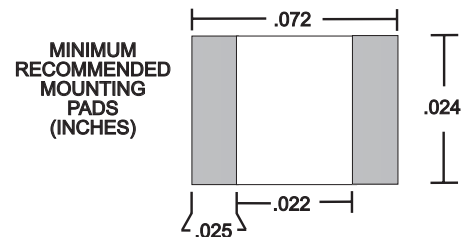
TERMINATION TYPE: C: Wraparound termination

SIZE CODE

GRADE: S: Standard Production H: High Reliability (For Screening options, contact the factory)

### MECHANICAL

	INCHES	MILLIMETERS
Length	.042 (.040 - .048)	1.07 (1.02 - 1.22)
Width	.022 (.020 - .024)	0.56 (0.51 - 0.61)
Thickness	.018 (.013 - .023)	0.46 (0.33 - 0.58)
Top Term	.008 (.005 - .015)	0.20 (0.13 - 0.38)
Bottom Term	.008 (.005 - .015)	0.20 (0.13 - 0.38)
Gap	.026 (.022 - .030)	0.66 (0.56 - 0.76)
Approx. Weight	.00108 grams	



\*Specifications subject to change without notice.\*

STATE OF THE ART, INC. 2470 Fox Hill Road, State College, PA 16803-1797

Phone (814) 355-8004 Fax (814) 355-2714 Toll Free 1-800-458-3401

[www.resistor.com](http://www.resistor.com)

02/08/08