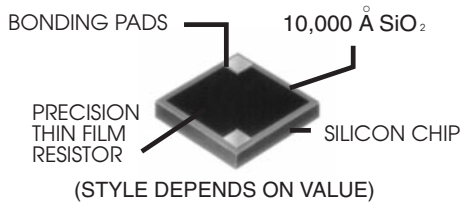


# State of the Art, Inc.

## 0202 Thin Film On Silicon Resistor

### Surface Mount, Top-Side Termination/Bottom Isolated



### FEATURES

- Tolerances to  $\pm 0.1\%$
- Operating temperature range :  $-55^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- For high-density hybrid circuits where space is at a premium.
- TCR's to  $\pm 25$  ppm
- Delivers greater power handling capability and lighter weight for the size than chips constructed on alumina.

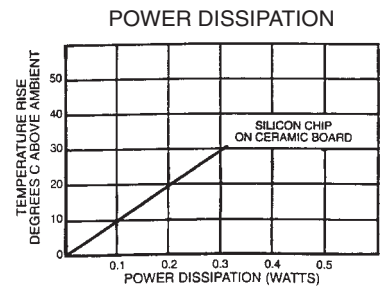
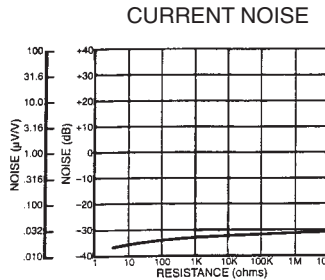
### PERFORMANCE CHARACTERISTICS

Resistance Range (1)	$5\Omega - 250\text{K}\Omega$
Tolerances (2)	0.1%, 0.25%, 0.5%, 1%, 2%, 5%, 10%
Maximum Power	100 mW
Maximum Voltage	100 Volts

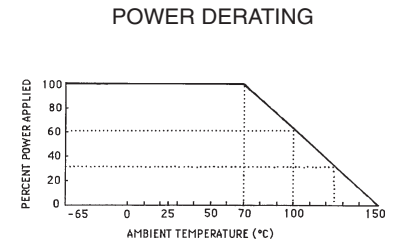
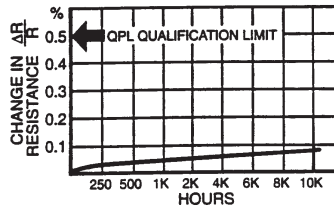
### ENVIRONMENTAL PERFORMANCE

TCR ( $-55$ to $+125^{\circ}\text{C}$ in ppm/ $^{\circ}\text{C}$ )	$< 25$ ppm
Thermal Shock	$\pm 0.02\%$
Low Temperature Operation	$\pm 0.02\%$
Short-time Overload	$\pm 0.02\%$
Resistance to Bonding Exposure	$\pm 0.03\%$
Moisture Resistance	$\pm 0.05\%$
High Temperature Exposure	$\pm 0.05\%$
Life	See Chart

- (1) Minimum resistance range at 0.1% tolerance is 100 ohms.  
 (2)  $\pm 0.05\%$  in limited availability - consult factory



### TYPICAL LIFE TEST PERFORMANCE



### MECHANICAL

### S0202AS 150 J H W

TERMINATION MATERIAL  
W: Gold A: Aluminum

TCR  
E:  $\pm 25$  ppm H:  $\pm 50$  ppm K:  $\pm 100$  ppm

TOLERANCES  
B: 0.1% C: 0.25% D: 0.5% F: 1% G: 2% J: 5% K: 10% M: 20%

RESISTANCE VALUE  
Three or four digits are used with all leading digits significant. Four digits are used for 1% tolerance or lower, otherwise three digits are used. 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.

	INCHES	MM
Length	.020 (+.002/-0.002)	.51 (+.05/-0.05)
Width	.020 (+.002/-0.002)	.51 (+.05/-0.05)
Thickness	.009 - .012	.23 - .30
Termination	.004 - .006	.10 - .15

Approx. Weight .00018 grams

### PACKAGING

Silicon chips are only packaged in waffle pack at a maximum of 400 per tray.

### OPTIONS

SOTA offers a full line of component parts in the 0202 size including termination style D (top-side termination with isolated metalized bottom) and style F (Back Contact Resistor - BCR).

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Where Quality Isn't a Goal...It's Our Tradition