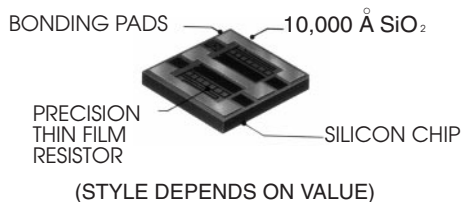


State of the Art, Inc.

0303 Thin Film On Silicon Resistor

Surface Mount, Top-Side Termination/Bottom Isolated



FEATURES

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

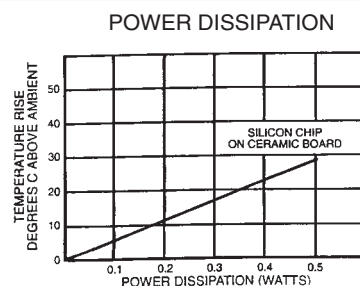
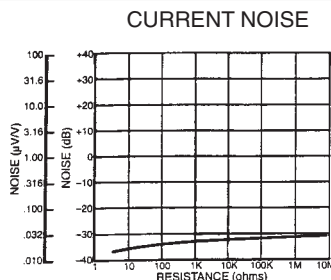
PERFORMANCE CHARACTERISTICS

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

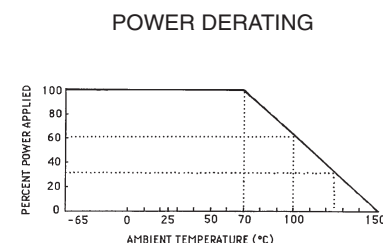
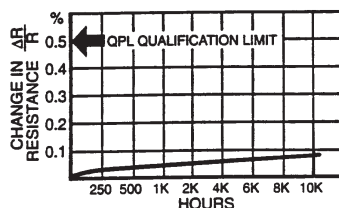
ENVIRONMENTAL PERFORMANCE

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



S0303AS 150 J H W

TERMINATION MATERIAL
 W: Gold A: Aluminum

TCR
 E: ± 25 ppm H: ± 50 ppm K: ± 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.

MECHANICAL

	INCHES	MM
Length	.030 (+.002/- .002)	.76 (+.05/- .05)
Width	.030 (+.002/- .002)	.76 (+.05/- .05)
Thickness	.009 - .012	.23 - .30
Termination	.004 - .006	.10 - .15

Approx. Weight .00042 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 0303 size including termination style D (top-side termination with isolated metalized bottom) and style F (Back Contact Resistor - BCR). Also offered are multi-tap and center-tap configurations.

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