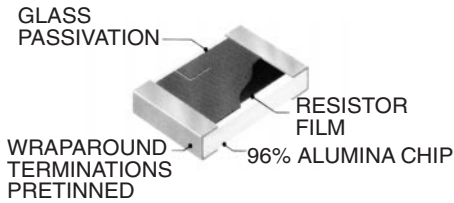


# State of the Art, Inc.

## 0404 Thick Film Chip Resistor

### Standard Grade, Surface Mount, Solderable



### FEATURES

- Tolerances to  $\pm 0.5\%$
- Operating temperature range :  $-55^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- Pretinned (Sn60) nickel barrier terminations
- TCR's to  $\pm 100$  ppm
- Made with the same materials and process as our MIL-PRF-55342 "S" level qualified chips
- Suitable for solder reflow, vapor phase, or wave solder attachment

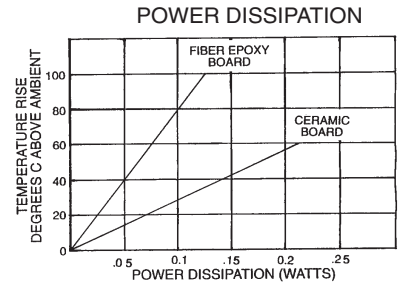
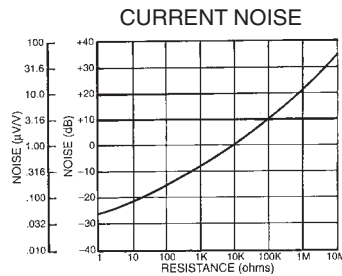
### PERFORMANCE CHARACTERISTICS

Resistance Range (1)	$1\Omega - 40M\Omega$
Tolerances (2)	1%, 2%, 5%, 10%
Maximum Power	50 mW
Maximum Voltage	25 Volts

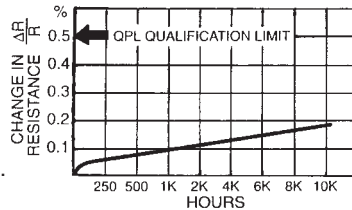
#### ENVIRONMENTAL PERFORMANCE (3)

TCR ( $-55$ to $+125^{\circ}\text{C}$ in ppm/ $^{\circ}\text{C}$ )	< 100 ppm
Thermal Shock	$\pm 0.03\%$
Low Temperature Operation	$\pm 0.03\%$
Short-time Overload	$\pm 0.03\%$
Resistance to Bonding Exposure	$\pm 0.03\%$
Moisture Resistance	$\pm 0.05\%$
High Temperature Exposure	$\pm 0.05\%$
Life	See Chart

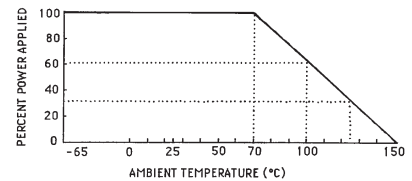
- (1) SOTA offers milliohm and high megohm resistors with excellent performance.
- (2)  $\pm 0.5\%$  in limited availability
- (3) Typical resistance change, the maximum is the same as MIL-PRF-55342. Test methods are per MIL-PRF-55342.



#### TYPICAL LIFE TEST PERFORMANCE

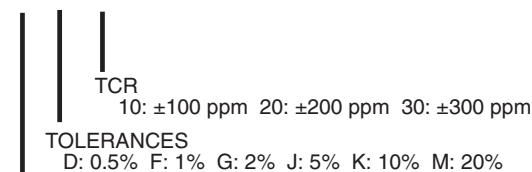


#### POWER DERATING



### PART NUMBERING

#### S0404CPX 150 J 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	.035 (+.005/- .002)	.89 (+.13/- .05)
Width	.035 ( $\pm .003$ )	.89 ( $\pm .08$ )
Thickness	.008 - .020	.20 - .51
Top Term.	.004 - .015	.10 - .38
Bottom Term.	.008 - .015	.20 - .38

Approx. Weight .00118 grams

**Solderability:** Solder coating compatible with Sn60, 62 or 63 solders, provides good wetting with all types of solder attachment. All product is tested IAW Mil-Std-202, method 208, including 8 hour steam aging.

### PACKAGING

Three packaging options are available:

- Bulk Packaging - (5000 per Bag Max.)
- Waffle Pack - (400 per Tray Max.)

### OPTIONS

SOTA offers a full line of component parts in the 0402 size including High-Reliability (customer specified testing). Available options are epoxy bondable and wire bondable terminations, custom part marking, and untrimmed resistors.