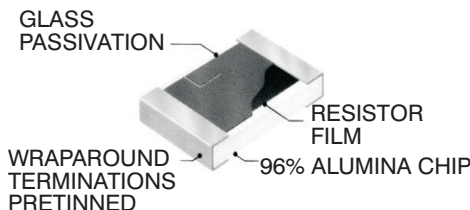


# State of the Art, Inc.

## M55342/03 Thick Film Chip Resistor

1005 Size, Surface Mount, Solderable



### FEATURES

- Tolerances to  $\pm 1\%$
- Operating temperature range :  $-55^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- Pretinned (Sn60) nickel barrier terminations
- TCR's to  $\pm 100$  ppm
- "S" level qualified manufacturer
- Suitable for solder reflow, vapor phase, or wave solder attachment

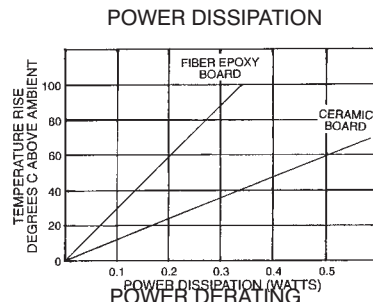
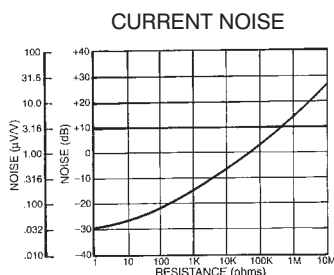
### PERFORMANCE CHARACTERISTICS

Resistance Range 5.6 $\Omega$  - 1M $\Omega$   
 Tolerances 1%, 2%, 5% 10%  
 Maximum Power 100mW  
 Maximum Voltage 40 Volts

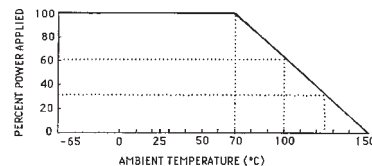
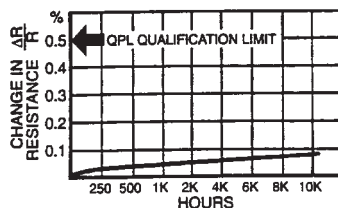
TCR ( $-55$  to  $+125^{\circ}\text{C}$  in ppm/ $^{\circ}\text{C}$ )  $< 100$  ppm  
 Thermal Shock  $\pm 0.03\%$   
 Low Temperature Operation  $\pm 0.02\%$   
 Short-time Overload  $\pm 0.02\%$   
 Resistance to Bonding Exposure  $\pm 0.03\%$   
 Moisture Resistance  $\pm 0.05\%$   
 High Temperature Exposure  $\pm 0.05\%$   
 Life See Chart

(1) Typical resistance change, the maximum is the same as MIL-PRF-55342. Test methods are per MIL-PRF-55342.

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.



TYPICAL LIFE TEST PERFORMANCE



### PART NUMBERING

M55342 K 03B 100D S

#### PRODUCT LEVEL DESIGNATOR\*

M: 1% per 1000 hrs. R: 0.01% per 1000 hrs.  
 P: 0.1% per 1000 hrs S: 0.001% per 1000 hrs.  
 C: Non - ER T: Space Level

#### RESISTANCE AND TOLERANCE CODE

Three significant digits, with a letter indicating the decimal location, and the tolerance, and the value range ( $\Omega$ , K  $\Omega$ , M  $\Omega$ )

D: 1%  $\Omega$  G: 2%  $\Omega$  J: 5%  $\Omega$  M: 10%  $\Omega$   
 E: 1%K  $\Omega$  H: 2%K  $\Omega$  K: 5%K  $\Omega$  N: 10%K  $\Omega$   
 F: 1%M  $\Omega$  T: 2%M  $\Omega$  L: 5%M  $\Omega$  P: 10%M  $\Omega$

TCR

K:  $\pm 100$  ppm M:  $\pm 300$  ppm

### MECHANICAL

|              | INCHES              | MM                 |
|--------------|---------------------|--------------------|
| Length       | .105 (+.007/-.007)  | 2.67 (+.18/-.18)   |
| Width        | .050 ( $\pm .005$ ) | 1.27 ( $\pm .13$ ) |
| Thickness    | .015 - .033         | .38 - .84          |
| Top Term.    | .010 - .020         | .25 - .51          |
| Bottom Term. | .010 - .020         | .25 - .51          |

Approx. Weight .0054 grams

### PACKAGING

Two packaging options are available:

Waffle Pack - (170 per Tray Max.)  
 Tape & Reel - (5000 per 8" Inch Reel Max.)

### \* PRODUCT LEVELS

All product levels are based on the same design as our "S" level failure rate Established Reliability part. Level C is a Non-Established Reliability part requiring no group A, B or C testing. Established Reliability (failure rates based on life testing) product levels M, P, R and S are subject to group A, B and C testing per MIL-PRF-55342. Space product level T requires group A and B tests including 100% power conditioning.

### OPTIONS

Termination type C & U (epoxy bondable), wraparound style, and type W (wire bondable) are available. Also available in thin film MIL-PRF-55342 characteristic E & H. SOTA offers a full line of component parts in the 1005 size including Standard Grade, High-Reliability (customer specified testing), and zero-ohm jumpers. Custom part marking is available.

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08/09/06

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