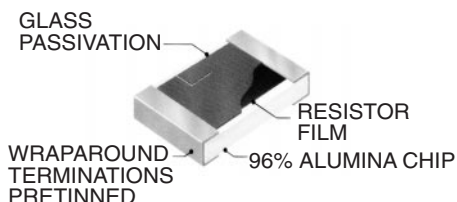


# State of the Art, Inc.

## M55342/03 Thick Film Chip Resistor

### 1005 Size, Surface Mount, Solderable



## FEATURES

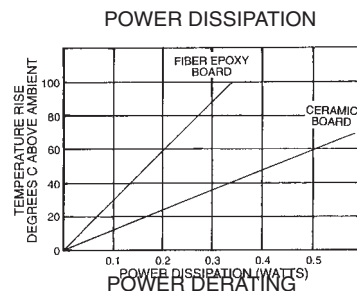
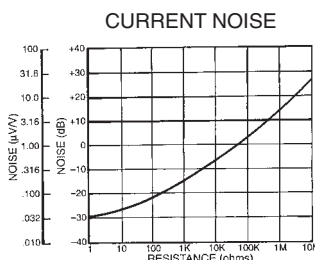
- Tolerances to  $\pm 1\%$
- Operating temperature range :  $-55^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- Pretinned (Sn60) nickel barrier terminations
- TCR's to  $\pm 100$  ppm
- "S" level qualified manufacturer
- Suitable for solder reflow, vapor phase, or wave solder attachment

## PERFORMANCE CHARACTERISTICS

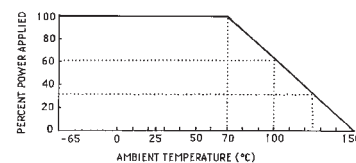
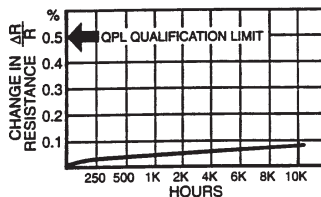
Resistance Range	5.6 $\Omega$ - 1M $\Omega$
Tolerances	1%, 2%, 5% 10%
Maximum Power	50mW
Maximum Voltage	40 Volts
TCR ( $-55$ to $+125^{\circ}\text{C}$ in ppm/ $^{\circ}\text{C}$ )	$< 100$ ppm
Thermal Shock	$\pm 0.03\%$
Low Temperature Operation	$\pm 0.02\%$
Short-time Overload	$\pm 0.02\%$
Resistance 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**

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

### 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  $\Omega$

## 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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