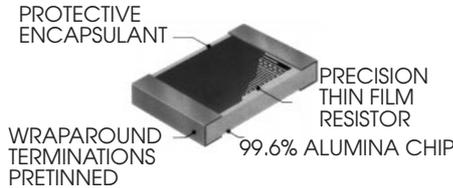


# State of the Art, Inc.

## M55342/06 Thin Film Chip Resistor

0705 Size, Surface Mount, Solderable



### FEATURES

- Tolerances to  $\pm 0.1\%$
- Operating temperature range :  $-55^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- Pretinned (Sn60) nickel barrier terminations
- TCR's to  $\pm 25$  ppm
- Suitable for solder reflow, vapor phase, or wave solder attachment

### PERFORMANCE CHARACTERISTICS

Resistance Range	5.6 $\Omega$ - 1M $\Omega$
Tolerances	0.1%, 1%, 2%, 5%, 10%
Maximum Power	100 mW
Maximum Voltage	50 Volts

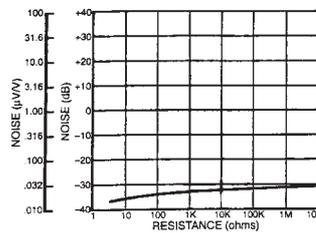
#### ENVIRONMENTAL PERFORMANCE (3)

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

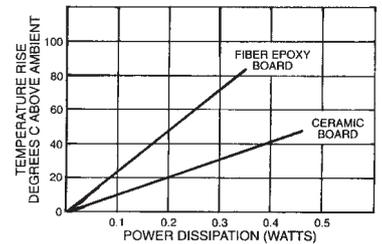
- (1) Resistance range for 0.1% tolerance is 100 ohms to 1 M ohm.
- (2) Maximum Power for E and H TCR is 50 mW.
- (3) Typical Resistance change, the maximum is the same as MIL-PRF-55342. Test methods are per MIL-PRF-55342.

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.

CURRENT NOISE



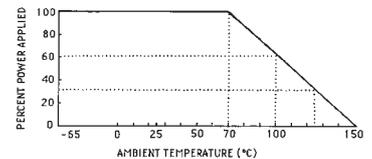
POWER DISSIPATION



TYPICAL LIFE TEST PERFORMANCE



POWER DERATING



### PART NUMBERING

#### M55342 H 06B 100D R



#### PRODUCT LEVEL DESIGNATOR\*

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

#### 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 $\Omega$ )

A: 0.1% $\Omega$  D: 1% $\Omega$  G: 2% $\Omega$  J: 5% $\Omega$  M: 10% $\Omega$   
B: 0.1%K $\Omega$  E: 1%K $\Omega$  H: 2%K $\Omega$  K: 5%K $\Omega$  N: 10%K $\Omega$   
C: 0.1%M $\Omega$  F: 1%M $\Omega$  T: 2%M $\Omega$  L: 5%M $\Omega$  P: 10%M $\Omega$

#### TCR

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

### MECHANICAL

	INCHES	MM
Length	.080 (+.006/-.006)	2.03 (+.15/-.15)
Width	.050 ( $\pm 0.005$ )	1.27 ( $\pm .13$ )
Thickness	.015 - .033	.38 - .84
Top Term.	.010 - .020	.25 - .51
Bottom Term.	.010 - .020	.25 - .51

Approx. Weight .0045 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 "R" 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, and R 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 wraparound style (pretinned with a Ni barrier), and type W (wire bondable) are available. Also available in thick film MIL-PRF-55342 characteristic K & M. SOTA offers a full line of component parts in the 0705 size including Standard Grade, High-Reliability (customer specified testing), and zero-ohm jumpers. Custom part marking is also available.

STATE OF THE ART, INC. 2470 Fox Hill Road, State College, PA 16803-1797  
Phone (814) 355-8004 Fax (814) 355-2714 Toll Free 1-800-458-3401

10/01/97

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