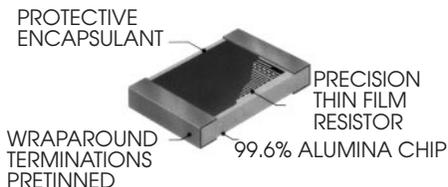


State of the Art, Inc.

M55342/02 Thin Film Chip Resistor

0505 Size, Surface Mount, Solderable



FEATURES

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

PERFORMANCE CHARACTERISTICS

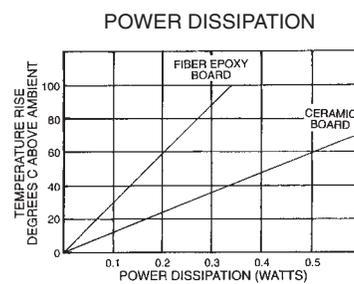
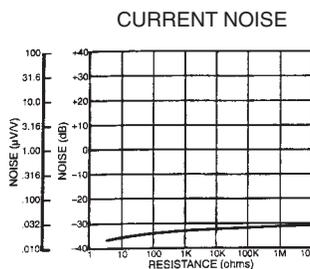
Resistance Range	5.6 Ω - 470K Ω
Tolerances	0.1%, 1%, 2%, 5%, 10%
Maximum Power	50 mW
Maximum Voltage	40 Volts

ENVIRONMENTAL PERFORMANCE (3)

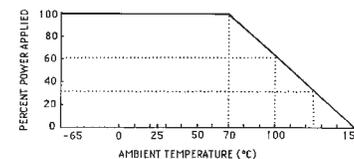
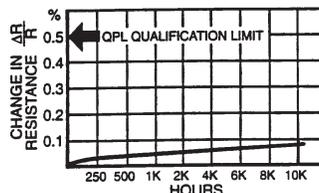
TCR (-55 to $+125^{\circ}\text{C}$ in ppm/ $^{\circ}\text{C}$)	< 25 ppm
Thermal Shock	$\pm 0.02\%$
Low Temperature Operation	$\pm 0.02\%$
Short-time Overload	$\pm 0.02\%$
Resistance to Bonding Exposure	$\pm 0.02\%$
Moisture Resistance	$\pm 0.02\%$
High Temperature Exposure	$\pm 0.03\%$
Life	$\pm 0.03\%$

- See Chart
- (1) Resistance range for 0.1% tolerance is 100 ohms to 470K ohms.
 - (2) Maximum Power for E and H TCR is 50mW.
 - (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.



TYPICAL LIFE TEST PERFORMANCE



PART NUMBERING

M55342 H 02B 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 (Ω , K Ω , M Ω)

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

TCR

E: ± 25 ppm H: ± 50 ppm K: ± 100 ppm

MECHANICAL

	INCHES	MM
Length	.055 (+.006/-.006)	1.40 (+.15/-.15)
Width	.050 (± 0.005)	1.27 ($\pm .13$)
Thickness	.012 - .033	.30 - .84
Top Term.	.005 - .015	.13 - .38
Bottom Term.	.010 - .020	.25 - .51

Approx. Weight .0032 grams

PACKAGING

Two packaging options are available:

- Waffle Pack - (400 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 0505 size including Standard Grade, High-Reliability (customer specified testing), and zero-ohm jumpers. Custom part marking is also available.