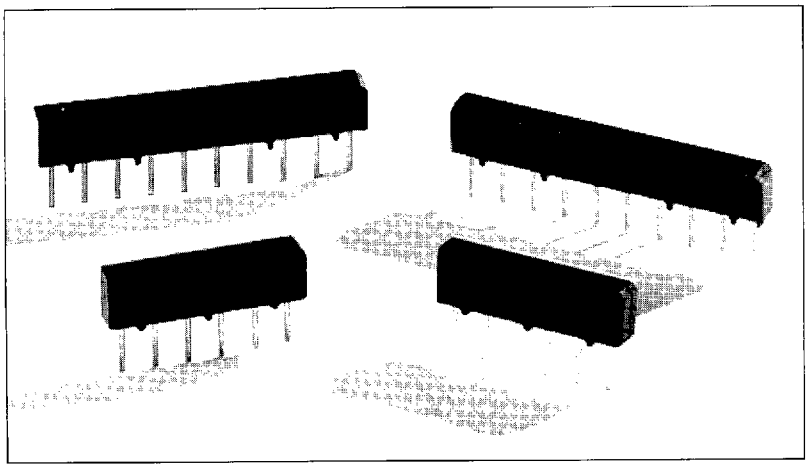
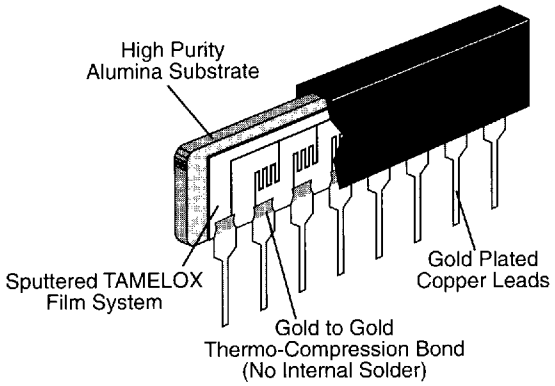
A COMPANY OF VISHAY OHMTEK

Standard Precision Resistor Networks Single-In-Line (Molded) TSP Series



Designed To Meet MIL-R-83401 Characteristic "V" and "H"



These resistor networks are available in 6, 8 and 10 pin styles in both standard and custom circuits. They incorporate Ohmtek's patented TAMELOX film to give superior performance on temperature coefficient of resistance, thermal stability, noise, voltage coefficient, power handling and rtesistance stability. The leads are attached to the metallized alumina substrates by Thermo-Compression bonding. The body is molded thermo-set plastic with gold plated copper alloy leads. This product will outperform all of the requirements of characteristic "R" of Mil-R-83401.

Features

- ▲ **High purity alumina substrates**
- ▲ **High stability TAMELOX film**
- ▲ **Excellent TCR characteristics**
- ▲ **Gold to gold terminations** (no internal solder)
- ▲ **Exceptional stability over time and temperature**
- ▲ **Internally passivated elements**
- ▲ **Compatible with automatic insertion equipment**
- ▲ **Standard and custom circuit designs**

▼ Table 6 Typical Performance

Resistance Range	100 ohms to 100K ohms
Absolute Tolerance	1.0% to 0.1%
Ratio Tolerance	0.1% to 0.05%
Absolute TCR	±25 ppm/°C standard
TCR Tracking	±2 ppm/°C (typical less 1 ppm/°C equal values)
Temp Range Operating	–55 to +125°C
Temp Range Storage	–55 to +125°C
Low Voltage Coefficient	< 0.0015 ppm/V
Low Noise	< –35 dB
Low Thermal EMF	< 0.08 µV/°C
Shelf Stability	< 100 ppm/yr absolute; < 20 ppm/yr ratio Max
Power Rating	100 mW per element typical at +25°C

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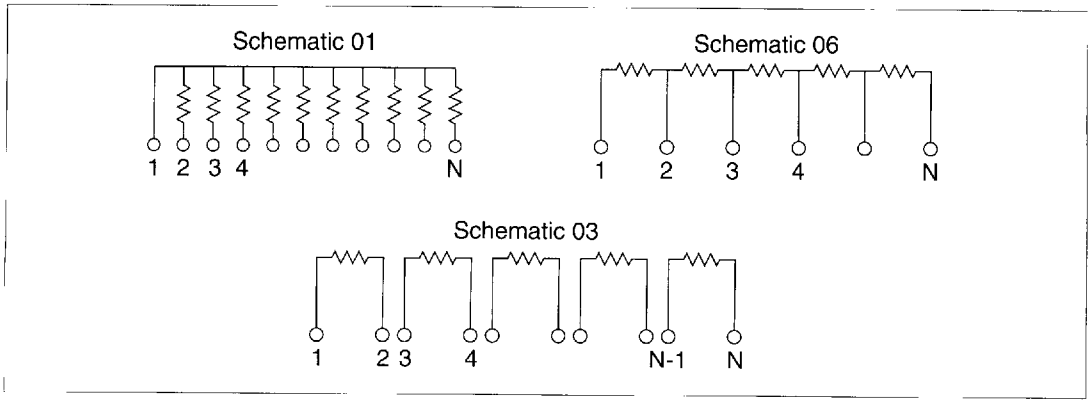
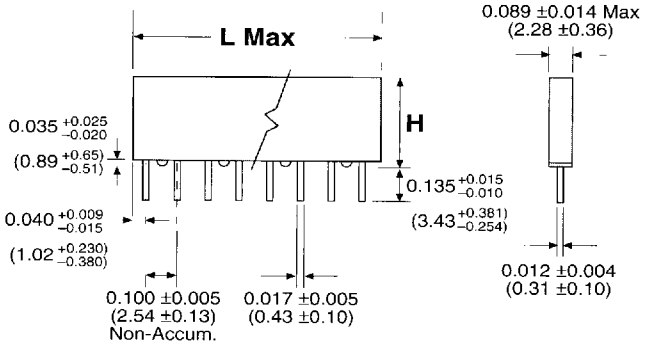
▼ Figure 32 TSP Standard Circuits



▼ Figure 33 Mechanical Specifications



Number of Pins	Length "L" Dimensions	H (Low Profile)
6	0.583 ±0.015 (14.81 ±0.38)	0.187 ±0.010 (4.75 ±0.254)
8	0.783 ±0.015 (19.89 ±0.38)	
10	0.983 ±0.015 (24.97 ±0.38)	

Dimensions in parenthesis indicate millimeters.

▼ Table 7 Ordering Information

TSP SERIES	8 NUMBER OF PINS	03 SCHEMATIC	R TCR	1001 RESISTANCE VALUE	F TOLERANCE AND RATIO TOLERANCE
TSP (Tamelox)	6 8 10	01 = 5, 7 or 9 resistors with 1 common pin 03 = 3, 4 or 5 isolated resistors 06 = 5, 7, 9 series connected	R = 25 H = 50 K = 100	First 3 digits are significant figures. Last digit specifies the number of zeros to follow. Eg. 1K = 1001 10K = 1002	Ratio Tolerance * A = ±0.1%, A = ±0.05% B = ±0.1%, B = ±0.1% C = ±0.25%, C = ±0.1% D = ±0.5%, D = ±0.1% F = ±1.0%, F = ±0.5% * Tolerance available on 1K Ω and up only.

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