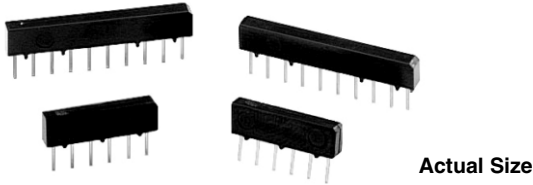


Molded, Commercial, Single In-Line Resistor Network (Standard)



Actual Size

Designed To Meet MIL-PRF-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 VISHAY Thin Film’s patented Passivated Nichrome film to give superior performance on temperature coefficient of resistance, thermal stability, noise, voltage coefficient, power handling and resistance stability. The leads are attached to the metallized alumina substrates by Thermo-Compression bonding. The body is molded thermoset plastic with gold plated copper alloy leads. This product will outperform all of the requirements of characteristic “V” and “H” of MIL-PRF-83401.

FEATURES

- Lead (Pb)-free available
- Rugged molded case 6, 8, 10 pins
- Thin Film element
- Excellent TCR characteristics (± 25 ppm/ $^{\circ}$ C)
- Gold to gold terminations (no internal solder)
- Exceptional stability over time and temperature (500 ppm at + 70 $^{\circ}$ C at 2000 hours)
- Internally passivated elements
- Compatible with automatic insertion equipment
- Standard circuit designs

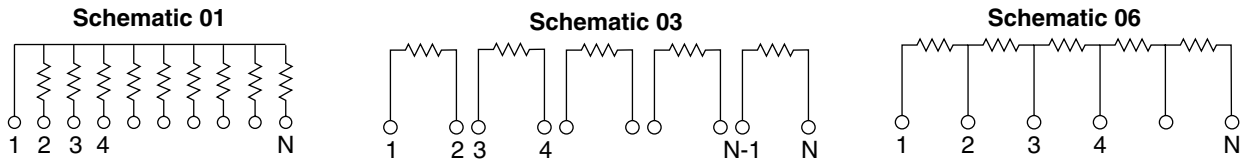


RoHS* COMPLIANT

TYPICAL PERFORMANCE

	ABS	TRACKING
TCR	25	2
	ABS	RATIO
TOL	0.1	0.05

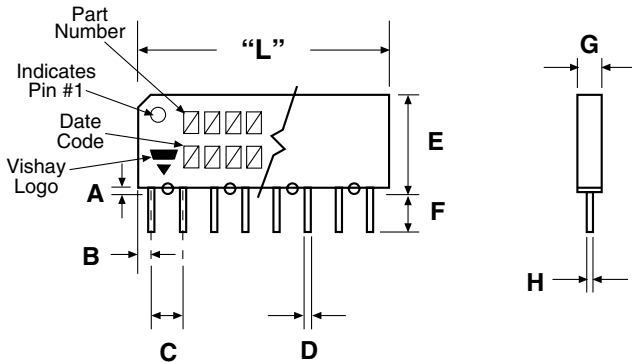
SCHEMATIC



THROUGH HOLE

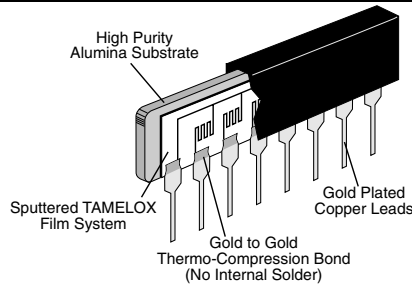
STANDARD ELECTRICAL SPECIFICATIONS		
TEST	SPECIFICATIONS	CONDITIONS
Material	Passivated Nichrome	
Resistance Range	100 Ω to 200 k Ω	
TCR:	Tracking	± 2 ppm/ $^{\circ}$ C (typical less 1 ppm/ $^{\circ}$ C equal values)
	Absolute	± 25 ppm/ $^{\circ}$ C standard
Tolerance:	Ratio	± 0.05 % to ± 0.1 % to R1
	Absolute	± 0.1 % to ± 1.0 %
Power Rating:	Resistor	100 mW per element typical at + 25 $^{\circ}$ C
	Package	0.5 W
Stability:	ΔR Absolute	500 ppm
	ΔR Ratio	150 ppm
Voltage Coefficient	< 0.1 ppm/V	
Working Voltage	100 V	
Operating Temperature Range	- 55 $^{\circ}$ C to + 125 $^{\circ}$ C	
Storage Temperature Range	- 55 $^{\circ}$ C to + 125 $^{\circ}$ C	
Noise	< - 30 dB	
Thermal EMF	< 0.08 μ V/ $^{\circ}$ C	
Shelf Life Stability:	Absolute	< 100 ppm
	Ratio	20 ppm
		1 year at + 25 $^{\circ}$ C
		1 year at + 25 $^{\circ}$ C

* Pb containing terminations are not RoHS compliant, exemptions may apply

DIMENSIONS AND IMPRINTING in inches and millimeters


"L" DIMENSION	INCHES	MM
A	0.035	0.89
B	0.040	1.02
C	0.100 ± 0.005 non-accum.	2.54 ± 0.13
D	0.019 ± 0.006 typical	0.48 ± 0.15
E	0.187 ± 0.010	4.75 ± 0.25
F	0.135	3.43
G	0.095	2.41
H	0.012 ± 0.004	0.31 ± 0.10

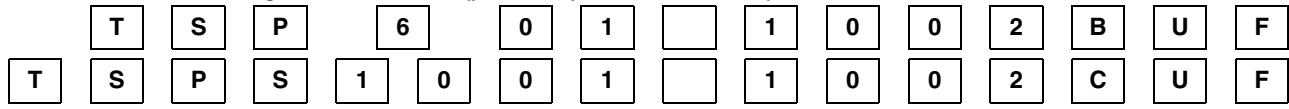
NUMBER OF PINS	6	8	10
"L" Dimensions	0.583 ± 0.015	0.783 ± 0.015	0.983 ± 0.015
(mm)	(14.81 ± 0.38)	(19.89 ± 0.38)	(24.97 ± 0.38)

CONSTRUCTION

MECHANICAL SPECIFICATIONS

Resistive Element	Passivated Nichrome
Substrate Material	Alumina
Body Molded Epoxy	Terminals Copper Alloy
Plating	Nickel/Gold
Marking Resistance to Solvents	per MIL-PRF-83401
Lead (Pb)-free Option	96.5 % Sn, 3.0 % Ag, 0.5 % Cu
Lead (Pb)-free Finish	Hot Solder Dip

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: TSP6011002BUF (preferred part number format)



GLOBAL MODEL (3 or 4 digits)	PIN COUNT (1 or 2 digits)	SCHEMATICS	TCR CHARACTERISTICS	RESISTANCE	TOLERANCE AND RATIO TOLERANCE	PACKAGING
TSP (Tin Lead)	6	01 = 5, 7 or 9 resistors with Pin 1 common	*R = ± 25 ppm/°C H = ± 50 ppm/°C K = ± 100 ppm/°C	First 3 digits are significant figures and the last digit specifies the number of zeroes to follow. e.g: 1001 = 1K 1002 = 10K	Absolute *A = 0.1 % B = 0.1 % C = 0.25 % D = 0.5 % F = 1.0 % *Z = 0.1 % Ratio 0.05 % 0.1 % 0.1 % 0.1 % 0.5 % 0.025 %	UF = Tubed
TSPS (Lead (Pb)-free) (e1)	10	03 = 3, 4 or 5 isolated resistors 06 = 5, 7 or 9 series connected	*01 Schematic greater than 250 Ω only		* Tol. available on 1K and up only. R1 is reference resistor.	

Historical Part Number example: TSP803R1001F (will continue to be accepted)

TSP	8	03	R	1001	F
SERIES	PINS	SCHEMATIC	TCR CHARACTERISTIC	RESISTANCE	TOLERANCE AND RATIO TOLERANCE



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