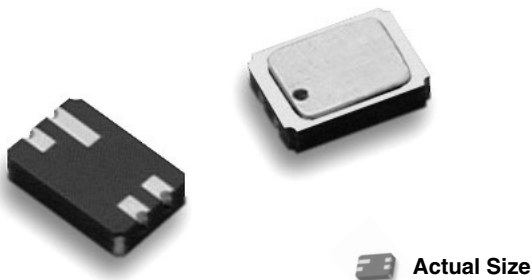


Hermetic, 50 Mil Pitch, Leadless Chip Resistor Network



Vishay Thin film offers a four terminal hermetic leadless chip carrier package with precision matched pair elements. The network features tight ratio tolerance and close tracking over a 100 Ω to 100 kΩ resistance range. For custom schematics and values contact applications engineering.

FEATURES

- Lead (Pb)-free available
- True hermetic construction
- Exceptional stability and performance characteristics (500 ppm at + 70 °C, 10 000 h)
- Nickel barrier terminations
- Stable thin film resistor element (500 ppm at + 70 °C, 10 000 h)
- Military/Aerospace
- Hermetically sealed

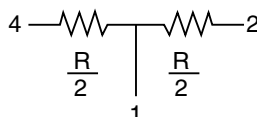


RoHS*
COMPLIANT

TYPICAL PERFORMANCE

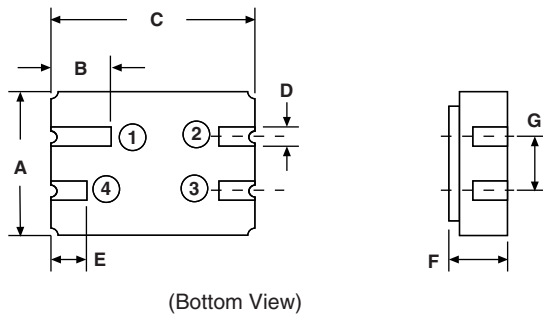
	ABS	TRACKING
TCR	25	5
	ABS	RATIO
TOL	0.1	0.05

SCHEMATIC



STANDARD ELECTRICAL SPECIFICATIONS			
TEST		SPECIFICATIONS	CONDITIONS
Material		Passivated nichrome	
Resistance Range		100 Ω to 100 kΩ	
TCR:	Tracking	± 2 ppm/°C (typical < 1 ppm/°C equal values)	- 55 °C to + 125 °C
	Absolute	± 25 ppm/°C standard	- 55 °C to + 125 °C
Tolerance:	Ratio	± 0.1 % to ± 0.05 %	+ 25 °C
	Absolute	± 1.0 % to ± 0.1 %	+ 25 °C
Power Rating:	Resistor	1000 mW per element	Max. at + 70 °C
	Package	250 mW	Max. at + 70 °C
Stability:	ΔR Absolute	0.10 %	2000 h at + 70 °C
	ΔR Ratio	0.03 %	2000 h at + 70 °C
Voltage Coefficient		< 0.1 ppm/V	
Working Voltage		50 V	
Operating Temperature Range		- 55 °C to + 125 °C	
Storage Temperature Range		- 55 °C to + 125 °C	
Noise		< - 30 dB	
Thermal EMF		0.08 μV/°C	
Shelf Life Stability:	Absolute	< 100 ppm	1 year at + 25 °C
	Ratio	< 20 ppm	1 year at + 25 °C

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

DIMENSIONS in inches and millimeters


DIMENSIONS	INCHES	MM
A	0.155	3.937
B	0.080	2.032
C	0.225	5.715
D	0.025 typical	0.635
E	0.040	1.016
F	0.070	1.778
G	0.050	1.27

MECHANICAL SPECIFICATIONS	
Resistive Element	Passivated nichrome
Substrate Material	Alumina
Body	Ceramic
Terminals	Gold over nickel
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: MPHK1003BUF (preferred part number format)				
M	P	H	K	1 0 0 3 B U F
M	P	H	T	K 1 0 0 3 A U F
GLOBAL MODEL (3 or 4 digits) MPH (Tin lead) MPHT (Lead (Pb)-free) (e1)	TCR CHARACTERISTIC E = 25 ppm/°C H = 50 ppm/°C K = 100 ppm/°C	RESISTANCE First 3 digits are significant figures and the last digit specifies the number of zeroes to follow. Example: 1001 = 1K 1002 = 10K	TOLERANCE AND RATIO TOLERANCE Abs. Tol. Ratio A = 0.1 % 0.05 % B = 0.1 % 0.1 % C = 0.25 % 0.1 % D = 0.5 % 0.1 % F = 1 % 0.5 %	PACKAGING TAPE AND REEL T0 = 100 min. 100 mult T1 = 1000 min. 1000 mult T3 = 300 min. 300 mult T5 = 500 min. 500 mult TF = Full reel 2500 TS = 100 min. 1 mult UF = TUBED
Historical Part Number example: MPHR1001B (will continue to be accepted)				
MPH	R	1001	B	
SERIES	TCR CHARACTERISTIC	RESISTANCE	TOLERANCE AND RATIO TOLERANCE	



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