



RESISTOR NETWORKS

MPM Series



Precision Matched Pair Resistor Networks

KEY BENEFITS

- 1:1 to 100:1 ratio range
- Ratio tolerances to $\pm 0.01\%$
- Tight TCR tracking to ± 2 ppm/ $^{\circ}\text{C}$
- Low noise to < -30 dB
- Small size (SOT-23 format)

APPLICATIONS

- Instrumentation amplifiers
- Measurement bridges
- Precision voltage dividers
- Signal process controls

Datasheet is available on our web site at www.vishay.com
for MPM Series - <http://www.vishay.com/doc?60001>

Molded, SOT-23 Resistor Network

FEATURES

- Lead (Pb)-free available
- Stocked
- Standard Footprint

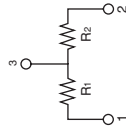
TYPICAL PERFORMANCE

TCR	ABS TRACKING	
	25	0.1
TOL	0.05	



Vishay Thin Film MPM Series Dividers provide ± 2 ppm/ $^{\circ}$ C tracking and a ratio tolerance as tight as 0.01 %, small size, and exceptional stability for all surface mount applications. The standard SOT-23 package format with unity and common standard resistance divider ratios provide easy selection for most applications requiring matched pair resistor elements. The ratios listed are available for off the shelf delivery. If you require a non-standard ratio, consult the applications engineering group as we may be able to meet your requirements with a custom design.

SCHEMATIC

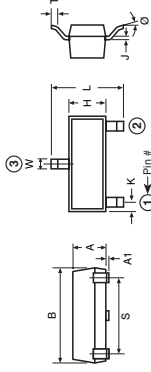


STANDARD ELECTRICAL SPECIFICATIONS

TEST	SPECIFICATIONS	CONDITIONS
Material	Passivated Nichrome	
TCR:	± 2 ppm/ $^{\circ}$ C (typical)	-55 $^{\circ}$ C to +125 $^{\circ}$ C
Tolerance:	± 25 ppm/ $^{\circ}$ C	-55 $^{\circ}$ C to +125 $^{\circ}$ C
Power Rating:	100 mW	+25 $^{\circ}$ C
Stability:	0.10 %	Max. at +70 $^{\circ}$ C
Voltage Coefficient:	0.03%	2000 h at +70 $^{\circ}$ C
Working Voltage 100 Volts Max.		2000 h at +70 $^{\circ}$ C
Operating Temperature Range		
Storage Temperature Range		
Noise		
Thermal EMF		
Self Life Stability (Ratio)	0.2 μ V/ $^{\circ}$ C	
	50 ppm Max.	1 year at +25 $^{\circ}$ C

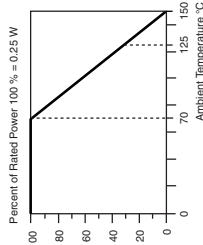
* Pb containing terminations are not RoHS compliant, exemptions may apply

DIMENSIONS AND IMPRINTING in inches and millimeters



DIMENSION	INCHES		MM	
	MIN.	MAX.	MIN.	MAX.
A	0.031	0.040	0.79	1.02
A1	0.001	0.004	0.02	0.10
B	0.105	0.120	2.67	3.05
S	0.071	0.079	1.80	2.00
W	0.015	0.021	0.38	0.54
L	0.083	0.088	2.10	2.50
H	0.047	0.055	1.20	1.40
T	0.005	0.010	0.13	0.25
J	0.0035	0.0059	0.089	0.15
K	0.017	0.022	0.44	0.55
O	0	8"	0	8"

DERATING CURVE



MECHANICAL SPECIFICATIONS	
Resistive Element	Passivated Nichrome
Substrate Material	Silicon
Body	Molded epoxy
Terminals	Copper alloy #42 Sn62 plated
Lead Coplanarity	3 Mils Max.
Lead (Pb)-free Option	100 % Sn Matte
Lead (Pb)-free Finish	Plated

GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: MPM1002AWS (preferred part number format)

M	M	P	M	T	1	0	0	1	0	0	0	1	A	W	S	1
GLOBAL MODEL (3 or 4 digits)			RESISTANCE (3 or 4 digits)			TOLERANCE AND RATIO TOLERANCE			PACKAGING							
MPM (Thin Lead)			First 3 digits are significant figures and the last digit specifies the number of zeros to follow. When like values are indicated, the last value listed both values.			Ratio			BS = Bulk 100 Min 1 Mult WS = Waffle 100 Min 1 Mult							
MPMT (Lead (Pb)-free) (6S)			Example: 1002 = 10K (5K/5K) 1003 = 100K (50K/50K) 1001002 = 1K/10K divider			Abs. Tol			TAPE AND REEL W = 1000 Min 1 Mult T = 1000 Min 1000 Mult TS = 300 Min 300 Mult TF = 500 Min 500 Mult TS = Full Reel /500 TS = 100 Min 1 Mult							
Historical Part Number example: MPM1002BW (will continue to be accepted)			Tol. Available 1K and up equal values only			TOLERANCE AND RATIO TOLERANCE			PACKAGING							
MPM			1002			B			W							
SERIES			RESISTANCE			TOLERANCE AND RATIO TOLERANCE			PACKAGING							

Revision 04-Apr-07

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