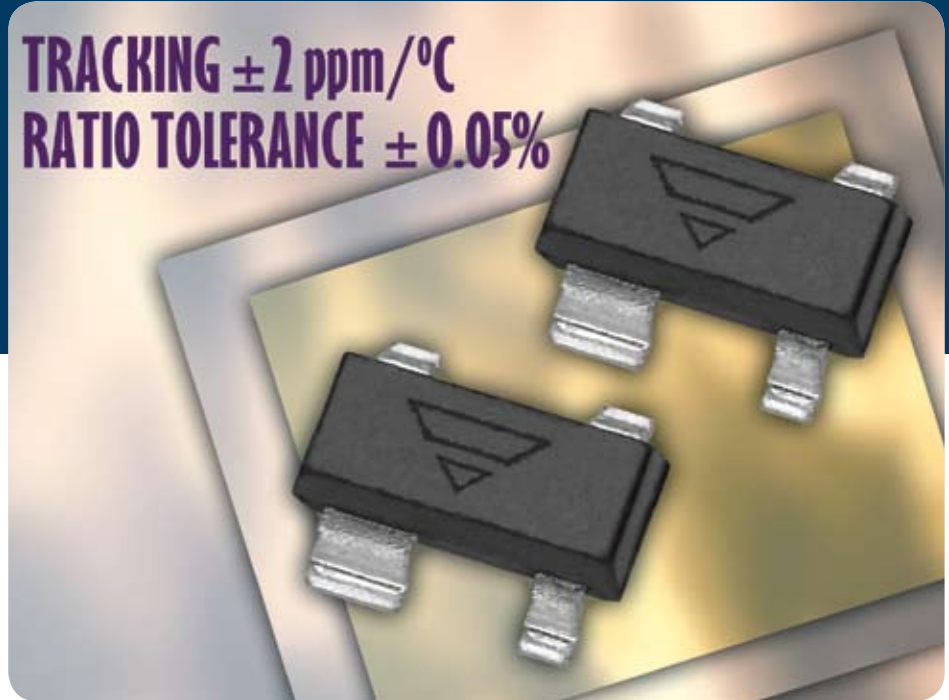




RESISTIVE PRODUCTS

Model MPD/MPDA

TRACKING ± 2 ppm/ $^{\circ}$ C
RATIO TOLERANCE $\pm 0.05\%$



Isolated Matched Resistor Pair

KEY BENEFITS

- 1:1 Resistance ratio 1 K to 100 K standard offering
- **Ratio Match:** $\pm 0.05\%$
- **Ratio Tracking:** ± 2 ppm/ $^{\circ}$ C
- **Current Noise:** < -30 dB
- **Voltage Coefficient:** < 0.1 ppm/V
- Three resistor series connected customs available
- Custom resistance ratios and resistance values available
- Standard SOT-143 footprint

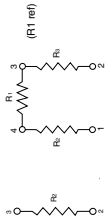
APPLICATIONS

- Instrumentation amplifiers
- Measurement bridges
- Precision voltage dividers
- OP Amp gain control

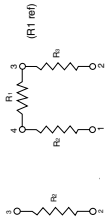
Datasheet is available on our web site at www.vishay.com
www.vishay.com/doc?60016

Molded, SOT-143 Resistor Network

MPD SCHEMATIC



MPDA SCHEMATIC



TYPICAL PERFORMANCE

TCR	ABS	TRACKING	2
TOL	0.1	RATIO	0.05

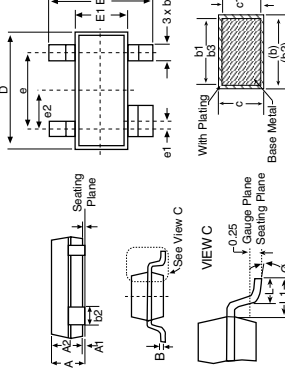
STANDARD VALUES			
MODEL	R ₁ (Ω)	R ₂ (Ω)	R ₃ (Ω)
MPD	100K	100K	-
	50K	50K	-
	25K	25K	-
	20K	20K	-
	10K	10K	-
	5K	5K	-
MPDA	1K	1K	-
	10K	10K	10K
	10K	10K	10K

STANDARD ELECTRICAL SPECIFICATIONS

TEST	SPECIFICATIONS	CONDITIONS
Material	Passivated Nichrome	
TCR:	Tracking Absolute	-55 °C to +125 °C ±2 ppm/°C (typical) ±25 ppm/°C
Tolerance:	Ratio Absolute	±0.5% to ±0.05% ±25 °C
Power Rating:	Resistor Package	Max. at +70 °C 2000 hours at +70 °C 2000 hours at +70 °C
Stability:	ΔR Absolute ΔR Ratio	0.10% 0.03% 0.1 ppm/°C
Voltage Coefficient		100 V Max.
Working Voltage		-55 °C to +125 °C
Operating Temperature Range		-55 °C to +125 °C
Storage Temperature Range		-55 °C to +125 °C
Noise		< -25 dB
Thermal EMF		0.2 μV/°C
Shear Life Stability (Ratio)		50 ppm Max.

Note: Tantalum nitride film is available on special orders
* Pb containing terminations are not RoHS compliant, exemptions may apply

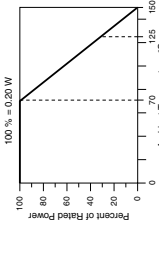
DIMENSIONS AND IMPRINTING in millimeters



MECHANICAL SPECIFICATIONS

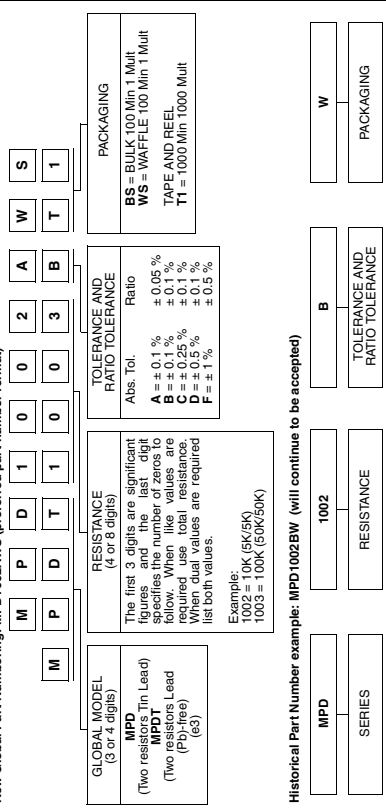
Resistive Element	Passivated Nichrome
Substrate Material	Silicon
Body	Molded epoxy
Terminals	Copper alloy #42 Sn/Pb plated
Lead Coplanarity	3 Mils Max.
Lead (Pb)-free Option	100% Sn Matte
Lead (Pb)-free Finish	Plated

DERATING CURVE



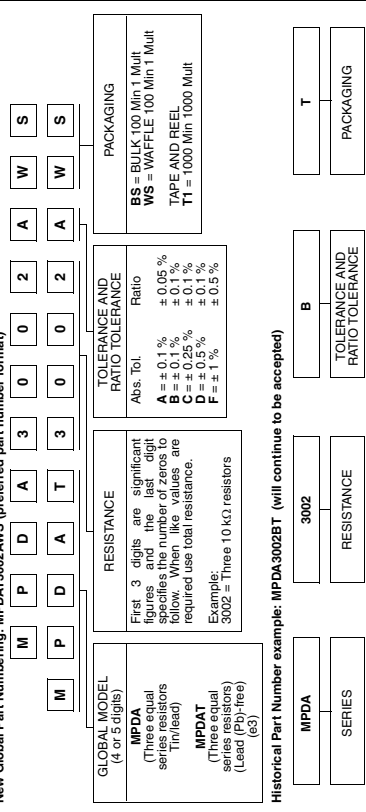
GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: MPD1002AWS (preferred part number format)



GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: MPDA3002AWS (preferred part number format)



Revision 17-Sep-07

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For technical questions, contact thin-film@vishay.com