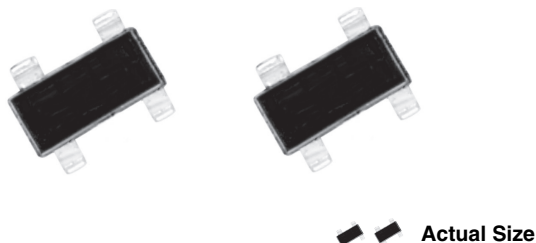
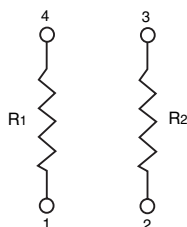


Molded, SOT-143 Resistor Network



VISHAY Thin Film MPD Series Dividers provide ± 2 ppm/ $^{\circ}\text{C}$ tracking and a ratio tolerance as tight as ± 0.05 %, small size, and exceptional stability for all surface mount applications. The standard SOT-143 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 convenience, 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.

MPD SCHEMATIC



FEATURES

- Lead (Pb)-free available
- Tight Ratio Tolerances to 0.05 %
- ± 2 ppm Tracking
- Standard Values Stocked
- Standard SOT-143 Footprint



RoHS*
COMPLIANT

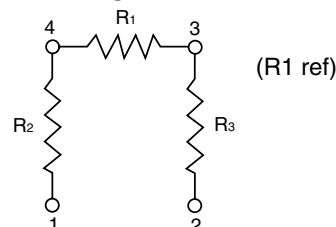
TYPICAL PERFORMANCE

	ABS	TRACKING
TCR	25	2
	ABS	RATIO
TOL	0.1	0.05

STANDARD VALUES

MODEL	R_2 (Ω)	R_1 (Ω)	R_3 (Ω)
MPD	100K	100K	-
	50K	50K	-
	25K	25K	-
	20K	20K	-
	10K	10K	-
	5K	5K	-
	2K	2K	-
	1K	1K	-
MPDA	10K	10K	10K

MPDA SCHEMATIC



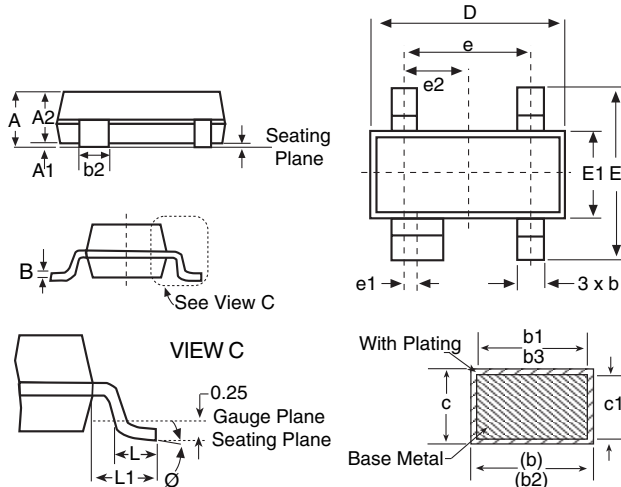
STANDARD ELECTRICAL SPECIFICATIONS

TEST	SPECIFICATIONS	CONDITIONS
Material	Passivated Nichrome	
TCR:	Tracking	± 2 ppm/ $^{\circ}\text{C}$ (typical)
	Absolute	± 25 ppm/ $^{\circ}\text{C}$
Tolerance:	Ratio	± 0.5 % to ± 0.05 %
	Absolute	± 1.0 % to ± 0.1 %
Power Rating:	Resistor	100 mW
	Package	200 mW
Stability:	ΔR Absolute	0.10 %
	ΔR Ratio	0.03 %
Voltage Coefficient	0.1 ppm/V	
Working Voltage	100 V Max.	
Operating Temperature Range	- 55 $^{\circ}\text{C}$ to + 125 $^{\circ}\text{C}$	
Storage Temperature Range	- 55 $^{\circ}\text{C}$ to + 125 $^{\circ}\text{C}$	
Noise	< - 25 dB	
Thermal EMF	0.2 $\mu\text{V}/^{\circ}\text{C}$	
Shelf Life Stability (Ratio)	50 ppm Max.	1 year at + 25 $^{\circ}\text{C}$

Note: Tantalum Nitride film is available on special orders

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

DIMENSIONS AND IMPRINTING in millimeters

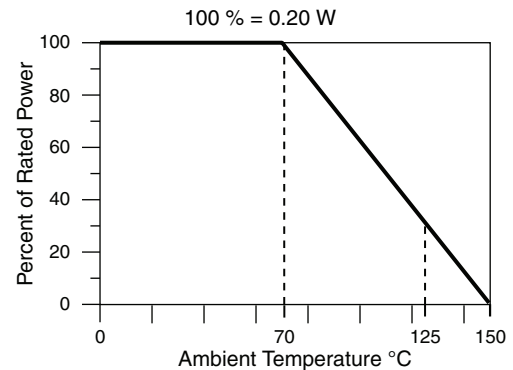


DIMENSION	MIN.	NOM.	MAX.
A	0.80	-	1.22
A1	0.05	-	0.15
A2	0.75	0.90	1.07
b	0.30	-	0.50
b1	0.30	0.40	0.45
b2	0.76	-	0.89
b3	0.76	0.80	0.84
c	0.08	-	0.20
c1	0.08	0.10	0.16
D	2.80	2.90	3.04
E	2.10	-	2.64
E1	1.20	1.30	1.40
e	1.92 BSC		
e1	0.20 BSC		
L	0.40	0.50	0.60
L1	0.54 REF.		
N	4		
Ø	0"	-	8"

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

DERATING CURVE



GLOBAL PART NUMBER INFORMATION

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

	M	P	D	1	0	0	2	A	W	S
M	P	D	T	1	0	0	3	B	T	1

GLOBAL MODEL (3 or 4 digits)	RESISTANCE (4 or 8 digits)	TOLERANCE AND RATIO TOLERANCE	PACKAGING
MPD (Two resistors Tin Lead) MPDT (Two resistors Lead (Pb)-free) (e3)	The first 3 digits are significant figures and the last digit specifies the number of zeros to follow. When like values are required use total resistance. When dual values are required list both values. Example: 1002 = 10K (5K/5K) 1003 = 100K (50K/50K)	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 %	BS = BULK 100 Min 1 Mult WS = WAFFLE 100 Min 1 Mult TAPE AND REEL T1 = 1000 Min 1000 Mult

Historical Part Number example: MPD1002BW (will continue to be accepted)

MPD	1002	B	W
SERIES	RESISTANCE	TOLERANCE AND RATIO TOLERANCE	PACKAGING

MPD/MPDA

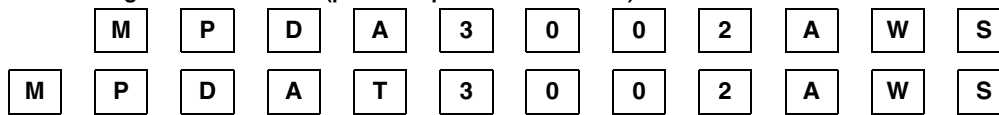
Vishay Thin Film

Molded, SOT-143 Resistor Network



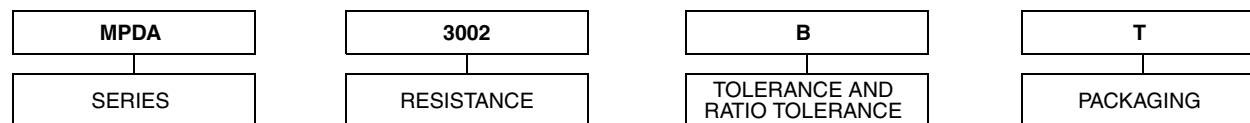
GLOBAL PART NUMBER INFORMATION

New Global Part Numbering: MPDAT3002AWS (preferred part number format)



GLOBAL MODEL (4 or 5 digits)	RESISTANCE	TOLERANCE AND RATIO TOLERANCE	PACKAGING												
MPDA (Three equal series resistors Tin/lead) MPDAT (Three equal series resistors) (Lead (Pb)-free) (e3)	First 3 digits are significant figures and the last digit specifies the number of zeros to follow. When like values are required use total resistance. Example: 3002 = Three 10 kΩ resistors	<table><tr><th>Abs. Tol.</th><th>Ratio</th></tr><tr><td>A = ± 0.1 %</td><td>± 0.05 %</td></tr><tr><td>B = ± 0.1 %</td><td>± 0.1 %</td></tr><tr><td>C = ± 0.25 %</td><td>± 0.1 %</td></tr><tr><td>D = ± 0.5 %</td><td>± 0.1 %</td></tr><tr><td>F = ± 1 %</td><td>± 0.5 %</td></tr></table>	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 %	BS = BULK 100 Min 1 Mult WS = WAFFLE 100 Min 1 Mult TAPE AND REEL T1 = 1000 Min 1000 Mult
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 %														

Historical Part Number example: MPDA3002BT (will continue to be accepted)





Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.