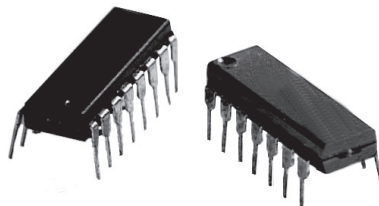


## Molded, Dual-In-Line Resistor, Through Hole Network



Actual Size

Vishay Thin Film offers two standard circuits in a 14 pins and 16 pins molded dual-in-line over a 100  $\Omega$  to 100 k $\Omega$  resistance range. The networks feature ratio tolerance to 0.05 % with a TCR tracking of 5 ppm/ $^{\circ}$ C.

### FEATURES

- Standard rugged, molded case construction (14 pins and 16 pins)
- Highly stable thin film (500 ppm at + 70  $^{\circ}$ C at 2000 h)
- Low temperature coefficient ( $\pm$  25 ppm/ $^{\circ}$ C)
- Compatible with automatic insertion equipment
- Standard isolated pin one common schematic
- Compliant to RoHS directive 2002/95/EC



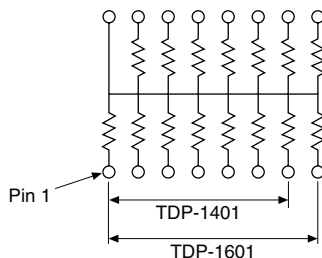
**RoHS\***  
COMPLIANT

### TYPICAL PERFORMANCE

	ABSOLUTE	TRACKING
TCR	25	5
	ABSOLUTE	RATIO
TOL.	0.1	0.05

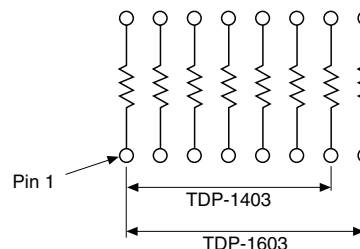
### SCHEMATIC

#### Schematic TDP01



Models: TDP1401 and TDP1601  
13 or 15 resistors with one pin common

#### Schematic TDP03

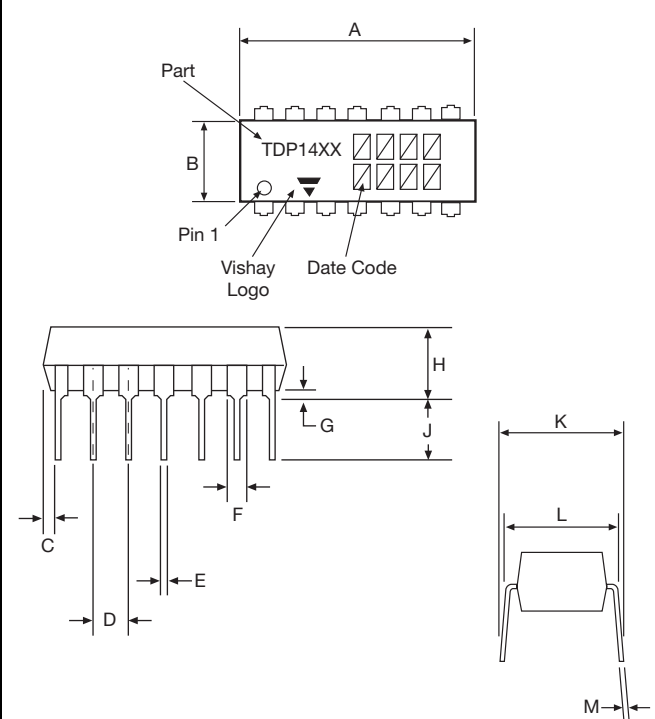
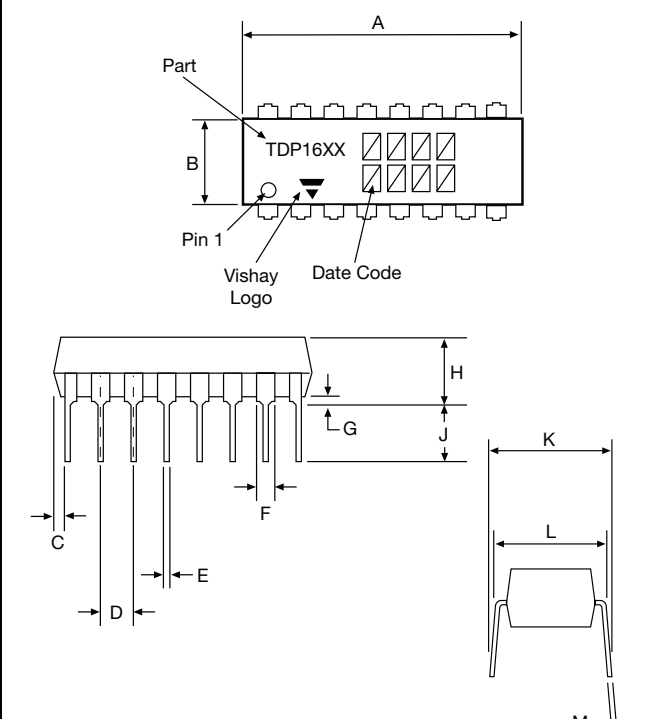


Models: TDP1403 and TDP1603  
7 or 8 isolated resistors

### STANDARD ELECTRICAL SPECIFICATIONS

TEST	SPECIFICATIONS	CONDITIONS
Material	Passivated nichrome	-
Pin/Lead Number	14, 16	-
Resistance Range	100 $\Omega$ to 100 k $\Omega$	-
TCR: Absolute	$\pm$ 25 ppm/ $^{\circ}$ C	- 55 $^{\circ}$ C to + 125 $^{\circ}$ C
TCR: Tracking	$\pm$ 5 ppm/ $^{\circ}$ C	- 55 $^{\circ}$ C to + 125 $^{\circ}$ C
Tolerance: Absolute	$\pm$ 0.1 %	+ 25 $^{\circ}$ C
Tolerance: Ratio	$\pm$ 0.05 % to $\pm$ 0.5 %	+ 25 $^{\circ}$ C
Power Rating: Resistor	0.05 W/resistor = 01 circuit 0.10 W/resistor = 03 circuit	at + 25 $^{\circ}$ C
Power Rating: Package	0.8 W/package	Maximum at + 70 $^{\circ}$ C
Stability: Absolute	$\Delta R \pm$ 0.05 %	2000 h at + 70 $^{\circ}$ C
Stability: Ratio	$\Delta R \pm$ 0.015 %	2000 h at + 70 $^{\circ}$ C
Voltage Coefficient	< 1 ppm/V (typical)	-
Working Voltage	100 V	-
Operating Temperature Range	- 55 $^{\circ}$ C to + 125 $^{\circ}$ C	-
Storage Temperature Range	- 55 $^{\circ}$ C to + 150 $^{\circ}$ C	-
Noise	< - 30 dB	-
Thermal EMF	0.08 $\mu$ V/ $^{\circ}$ C	-
Shelf Life Stability: Absolute	$\Delta R \pm$ 0.01 %	1 year at + 25 $^{\circ}$ C
Shelf Life Stability: Ratio	$\Delta R \pm$ 0.002 %	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	MILLIMETERS
	A	0.755	19.18
	B	0.250	6.35
	C	0.075	1.91
	D	0.100	2.54
	E	0.018	0.46
	F	0.060	1.52
	G	0.025	0.64
	H	0.190	4.83
	J	0.130	3.30
	K	0.320	8.13
	L	0.310	7.87
	M	0.010	0.25
	A	0.755	19.18
	B	0.250	6.35
	C	0.025	0.64
	D	0.100	2.54
	E	0.018	0.46
	F	0.060	1.52
	G	0.025	0.64
	H	0.190	4.83
	J	0.130	3.30
	K	0.320	8.13
	L	0.310	7.87
	M	0.010	0.25

**MECHANICAL SPECIFICATIONS**

Resistive Element	Passivated nichrome
Substrate Material	Alumina
Body	Conformal coated
Terminals	Copper alloy
Tin/Lead Option	Sn90
Lead (Pb)-free Option	100 % matte tin
Tin/Lead and Lead (Pb)-free Finish	Hot solder dip

**GLOBAL PART NUMBER INFORMATION**

New Global Part Numbering: TDP14031002BUF

T	T	D	P	1	4	0	3	1	0	0	2	B	U	F
T	D	P	T	1	6	0	3	1	0	0	3	A	U	F
GLOBAL MODEL (3 or 4 digits)				PINS	SCHEMATICS			RESISTANCE			TOLERANCE AND RATIO TOLERANCE		PACKAGING	
<b>TDP</b> (Tin lead)				14	<b>01</b> = 13 or 15 resistors with 1 common pin			First 3 digits are significant figures and the last digit specifies the number of zeroes to follow.  e.g.: 1001 = 1K 1002 = 10K			Absolute      Ratio		UF = Tubed	
<b>TDPT</b> (Lead (Pb)-free) (e3)				16	<b>03</b> = 7 or 8 isolated resistors						<b>A</b> = ± 0.1 % <sup>(1)</sup> ± 0.05 %			
											<b>B</b> = ± 0.1 %        ± 0.1 %			
											<b>C</b> = ± 0.25 %      ± 0.1 %			
											<b>D</b> = ± 0.5 %        ± 0.1 %			
											<b>F</b> = ± 1.0 %        ± 0.5 %			

Historical Part Number example: TDP14031001F (for reference purposes only)

TDP	14	03	1001	F
SERIES	PINS	SCHEMATIC	RESISTANCE	TOLERANCE AND RATIO TOLERANCE



### 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.