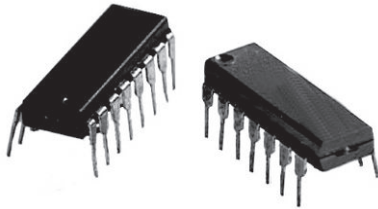


# Molded, Dual-In-Line Thin Film Resistor, Through Hole Network



Actual Size

Vishay Dale Thin Film offers two standard circuits in a 14 pins and 16 pins molded dual-in-line over a 100 Ω to 100 kΩ resistance range. The networks feature ratio tolerance to 0.05 % with a TCR tracking of 5 ppm/°C.

## FEATURES

- Standard rugged, molded case construction (14 pins and 16 pins)
- Highly stable thin film (500 ppm at +70 °C at 2000 h)
- Low temperature coefficient ( $\pm 25$  ppm/°C)
- Compatible with automatic insertion equipment
- Standard isolated pin one common schematic
- Isolated and bussed schematics
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



## Note

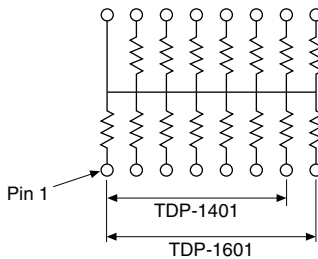
\* This datasheet provides information about parts that are RoHS-compliant and/or parts that are non-RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant. Please see the information/tables in this datasheet for details.

## TYPICAL PERFORMANCE

	ABSOLUTE	TRACKING
TCR	25	5
	ABSOLUTE	RATIO
TOL.	0.1	0.05

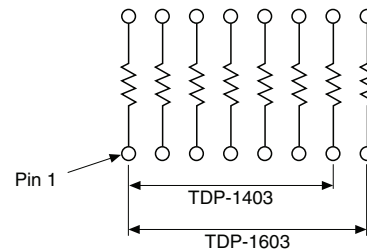
## SCHEMATIC

### 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 Ω to 100 kΩ	-
TCR: Absolute	$\pm 25$ ppm/°C	-55 °C to +125 °C
TCR: Tracking	$\pm 5$ ppm/°C	-55 °C to +125 °C
Tolerance: Absolute	$\pm 0.1$ %	+25 °C
Tolerance: Ratio	$\pm 0.05$ % to $\pm 0.5$ %	+25 °C
Power Rating: Resistor	0.05 W/resistor = 01 circuit 0.10 W/resistor = 03 circuit	at +25 °C
Power Rating: Package	0.8 W/package	Maximum at +70 °C
Stability: Absolute	$\Delta R \pm 0.05$ %	2000 h at +70 °C
Stability: Ratio	$\Delta R \pm 0.015$ %	2000 h at +70 °C
Voltage Coefficient	< 1 ppm/V (typical)	-
Working Voltage	100 V	-
Operating Temperature Range	-55 °C to +125 °C	-
Storage Temperature Range	-55 °C to +150 °C	-
Noise	< -30 dB	-
Thermal EMF	0.08 μV/°C	-
Shelf Life Stability: Absolute	$\Delta R \pm 0.01$ %	1 year at +25 °C
Shelf Life Stability: Ratio	$\Delta R \pm 0.002$ %	1 year at +25 °C

**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
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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	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)  <b>TDPT</b> (Lead (Pb)-free) (e3)	<b>14</b>  <b>16</b>	<b>01</b> = 13 or 15 resistors with 1 common pin  <b>03</b> = 7 or 8 isolated resistors	First 3 digits are significant figures and the last digit specifies the number of zeroes to follow.  e.g.: 1001 = 1K 1002 = 10K	<table border="1"> <thead> <tr> <th>Absolute</th> <th>Ratio</th> </tr> </thead> <tbody> <tr> <td><b>A</b> = ± 0.1 % <sup>(1)</sup></td> <td>± 0.05 %</td> </tr> <tr> <td><b>B</b> = ± 0.1 %</td> <td>± 0.1 %</td> </tr> <tr> <td><b>C</b> = ± 0.25 %</td> <td>± 0.1 %</td> </tr> <tr> <td><b>D</b> = ± 0.5 %</td> <td>± 0.1 %</td> </tr> <tr> <td><b>F</b> = ± 1.0 %</td> <td>± 0.5 %</td> </tr> </tbody> </table>	Absolute	Ratio	<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 %	<b>UF</b> = Tubed
Absolute	Ratio																
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<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

**Note**

<sup>(1)</sup> A tolerance on 250 Ω up



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