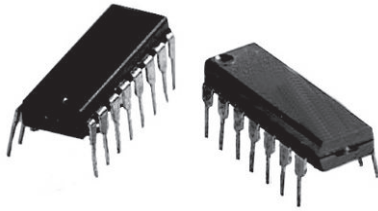


Molded, Dual-In-Line Thin Film Resistor, Through Hole Network



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 (± 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



Note

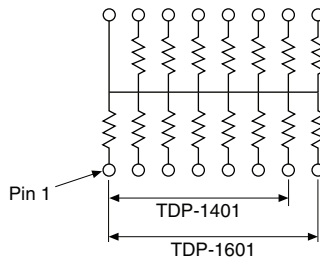
* This datasheet provides information about parts that are RoHS-compliant and/or parts that are non-RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant. Please see the information/tables in this datasheet for details.

TYPICAL PERFORMANCE

	ABSOLUTE	TRACKING
TCR	25	5
	ABSOLUTE	RATIO
TOL.	0.1	0.05

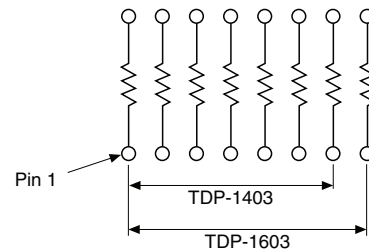
SCHEMATIC

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	± 25 ppm/°C	-55 °C to +125 °C
TCR: Tracking	± 5 ppm/°C	-55 °C to +125 °C
Tolerance: Absolute	± 0.1 %	+25 °C
Tolerance: Ratio	± 0.05 % to ± 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
B		0.250	6.35
C		0.025	0.64
D		0.100	2.54
E		0.018	0.46
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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	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												
TDP (Tin lead) TDPT (Lead (Pb)-free) (e3)	14 16	01 = 13 or 15 resistors with 1 common pin 03 = 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>A = ± 0.1 % ⁽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 = ± 1.0 %</td> <td>± 0.5 %</td> </tr> </tbody> </table>	Absolute	Ratio	A = ± 0.1 % ⁽¹⁾	± 0.05 %	B = ± 0.1 %	± 0.1 %	C = ± 0.25 %	± 0.1 %	D = ± 0.5 %	± 0.1 %	F = ± 1.0 %	± 0.5 %	UF = Tubed
Absolute	Ratio																
A = ± 0.1 % ⁽¹⁾	± 0.05 %																
B = ± 0.1 %	± 0.1 %																
C = ± 0.25 %	± 0.1 %																
D = ± 0.5 %	± 0.1 %																
F = ± 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

⁽¹⁾ A tolerance on 250 Ω up



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