HALOGEN

FREE





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

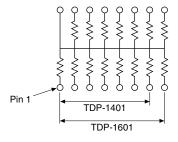


**Actual Size** 

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

### **SCHEMATIC**

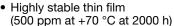
#### **Schematic TDP01**



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

#### **FEATURES**

 Standard rugged, molded case construction (14 pins and 16 pins)



- 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 <a href="https://www.vishay.com/doc?99912"><u>www.vishay.com/doc?99912</u></a>

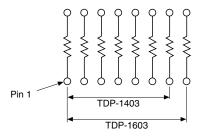
#### Note

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
	<b>ABSOLUTE</b>	RATIO
TOL.	0.1	0.05

#### **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	± 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	ΔR ± 0.05 %	2000 h at +70 °C		
Stability: Ratio	ΔR ± 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	ΔR ± 0.01 %	1 year at +25 °C		
Shelf Life Stability: Ratio	$\Delta R \pm 0.002 \%$	1 year at +25 °C		

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# Vishay Dale Thin Film

DIMENSIONS AND IMPRINTING in inches and milling	meters		
	DIMENSION	INCHES	MILLIMETERS
<mark>√ Α</mark> Part	А	0.755	19.18
TDP14XX Date Code Logo	В	0.250	6.35
	С	0.075	1.91
	D	0.100	2.54
	E	0.018	0.46
	F	0.060	1.52
	G	0.025	0.64
	Н	0.190	4.83
C → ←E	J	0.130	3.30
→ D ← "	К	0.320	8.13
И Ц Ц М→	L	0.310	7.87
"	М	0.010	0.25
<u> </u>	А	0.755	19.18
Part (-) (-) (-) (-) (-) (-) (-)	В	0.250	6.35
TDP16XX	С	0.025	0.64
	D	0.100	2.54
	E	0.018	0.46
<u> </u>	F	0.060	1.52
t <sub>G</sub> t k	G	0.025	0.64
	Н	0.190	4.83
→   ←	J	0.130	3.30
→   ← E	К	0.320	8.13
	L	0.310	7.87
M→ -	М	0.010	0.25





# Vishay Dale Thin Film

MECHANICAL SPECIFICATIONS		
Resistive Element	Passivated nichrome	
Substrate Material	Silicon	
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	GLOBAL PART NUMBER INFORMATION					
New Global Part Num	nbering: TDP14	1031002BUF				
TD	D P	1 4	0 3 1	0 0 2 B U F 0 0 3 A U F		
GLOBAL MODEL (3 or 4 digits)	PINS	SCHEMATICS	RESISTANCE	TOLERANCE AND RATIO TOLERANCE PACKAGING		
TDP (Tin lead)	14	<b>01</b> = 13 or 15 resistors with 1 common pin	First 3 digits are significant figures and the last digit	Absolute Ratio <b>A</b> = ± 0.1 % (1) ± 0.05 % <b>B</b> = ± 0.1 % ± 0.1 %		
(Lead (Pb)-free)	16	03 = 7 or 8 isolated resistors	specifies the number of zeroes to follow.			
			e.g.: 1001 = 1K 1002 = 10K			
Historical Part Numb	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  $\Omega$  up



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