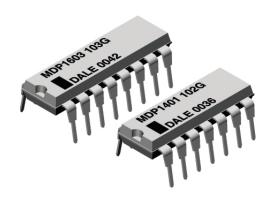
Vishay Dale

Thick Film Resistor Networks, Dual-In-Line, Molded DIP, 01, 03, 05 Schematics





FEATURES

- 0.160" [4.06mm] maximum seated height and rugged, molded case construction.
- · Highly stable thick film
- Low temperature coefficient (- 55°C to + 125°C) ± 100ppm/°C
- · Reduces total assembly costs
- · Compatible with automatic inserting equipment
- Wide resistance range
- · Uniform performance characteristics
- · Available in tube pack

STANDARD ELECTRICAL SPECIFICATIONS							
MODEL/ NO. OF PINS	SCHEMATIC	RESISTOR POWER RATING Max. @ 70°C*	RESISTANCE RANGE	STANDARD TOLERANCE		TCR TRACKING** (- 55°C to + 125°C)	WEIGHT
		W	Ω	%	ppm/°C	ppm/°C	g
MDP 14	01 03	0.125 0.250	10 - 2.2M 10 - 2.2M	± 1, ± 2, ± 5 ± 1, ± 2, ± 5	± 100	± 50 ± 50	1.3
	05	0.125	Consult factory	\pm 1, \pm 2, \pm 5		± 100	
MDP 16	01 03 05	0.125 0.250 0.125	10 - 2.2M 10 - 2.2M Consult factory	\pm 1, \pm 2, \pm 5 \pm 1, \pm 2, \pm 5 \pm 1, \pm 2, \pm 5	± 100	± 50 ± 50 ± 100	1.5

^{*} For resistor power ratings @ + 25°C see derating curves.

ORDERING INFORMATION

01	and	03	Schematics
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MDP1403101GMODELNUMBER OF PINSSCHEMATICRESISTANCE VALUETOLERANCE

First 2 digits (3 for "F" $F = \pm 1\%$ tolerance) are significant figures. Last digit $J = \pm 5\%$ specifies number of zeros to follow.

05 Schematic

MDP1405221271GMODELNUMBER OF PINSSCHEMATICRESISTANCE VALUE R, RESISTANCE VALUE R, TOLERANCE

First two digits (3 for "F" tolerance) are significant figures. The last digit specifies the number $G=\pm\,2\%$ of zeros to follow. $J=\pm\,5\%$

EXAMPLE:

www.vishay.com

MDP14-03-101G = A dual-in-line thick film resistor network with 14 pins on 0.100" [2.54mm] centers, 03 Schematic, resistance of 100 ohm and a tolerance of \pm 2%.

EXAMPLE:

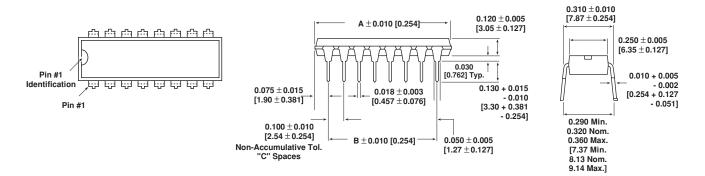
MDP14-05-221/271G = A 14 pin dual-in-line thick film resistor network with 12 series pair of resistors of 220 ohm and 270 ohm per pair and a tolerance of $\pm\,2\%$.

^{**} Tighter tracking available

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DIMENSIONS in inches [millimeters]



MODEL	Α	В	С
MDP 14	0.750 [19.05]	0.600 [15.24]	6
MDP 16	0.850 [21.59]	0.700 [17.78]	7

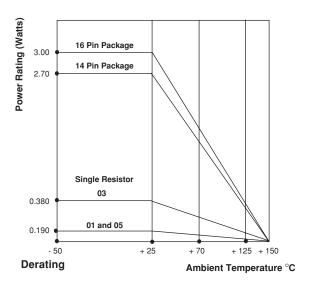
TECHNICAL SPECIFICATIONS					
PARAMETER	UNIT	MDP-14	MDP-16		
Package Power Rating (Maximum at + 70°C)	W	1.73	1.92		
Voltage Coefficient of Resistance	V _{eff}	< 50ppm typical			
Dielectric Strength	VAC		200		
Insulation Resistance	Ω	> 10,000M minimum			
Operating Temperature Range	°C	- 55 to + 125			
Storage Temperature Range:	°C	- 55 to + 150			

MECHANICAL SPECIFICATIONS				
Marking Resistance to Solvents:	Permanency testing per MIL-STD-202, Method 215.			
Solderability:	Per MIL-STD-202, Method 208E.			
Body:	Molded epoxy.			
Terminals:	Copper alloy, tin-lead plated.			
Weight:	14 pin = 1.3 grams; 16 pin = 1.5 grams			

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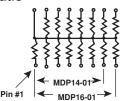
Thick Film Resistor Networks, DIP, Molded





CIRCUIT APPLICATIONS

01 Schematic

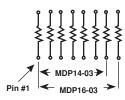


13 and 15 resistors with one pin common

The MDPXX-01 circuit provides a choice of 13 and 15 nominally equal resistors, each connected between a common pin (14 and 16) and a discrete PC board pin. Commonly used in the following applications:

- MOS/ROM Pull-up/Pull-down
- Open Collector Pull-up
- "Wired OR" Pull-up
- Power Driven Pull-up
- TTL Input Pull-down
- Digital Pulse Squaring
- TTL Unused Gate Pull-up
- High Speed Parallel Pull-up

03 Schematic



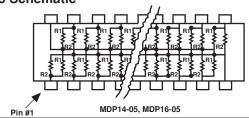
7 and 8 isolated resistors

The MDPXX-03 provides a choice of 7 and 8 nominally equal resistors, each resistor isolated from all others and wired directly across. Commonly used in the following applications:

- "Wired OR" Pull-up
- Power Driven Pull-up
- · Powergate Pull-up
- Line Termination

- · Long-line Impedance Balancing
- LED Current Limiting
- ECL Output Pull-down
- TTL Input Pull-down

05 Schematic



TTL dual-line terminator; pulse squaring

The MDPXX-05 circuit contains 12 and 14 series pair of resistors. Each series pair is connected between ground and a common line. The junction of these resistor pairs is connected to the input terminals. The 05 circuits are designed for TTL dual-line termination and pulse squaring.

Standard E-24 resistance values stocked. Consult factory



Thick Film Resistor Networks, DIP, Molded

PERFORMANCE					
TEST	CONDITIONS	MAX. ∆R (Typical Test Lots)			
Power Conditioning	1.5 rated power, applied 1.5 hours "ON" and 0.5 hour "OFF" for 100 hours ±4 hours at + 25°C ambient temperature	± 0.50% ΔR			
Thermal Shock	5 cycles between - 65°C and + 125°C	± 0.50% ΔR			
Short Time Overload	2.5 x rated working voltage 5 seconds	± 0.25% ΔR			
Low Temperature Operation	45 minutes at full rated working voltage at - 65°C	± 0.25% ΔR			
Moisture Resistance	240 hours with humidity ranging from 80% RH to 98% RH	± 0.50% ΔR			
Resistance to Soldering Heat	Leads immersed in + 350°C solder to within 1/16" of device body for 3 seconds	± 0.25% ΔR			
Shock	Total of 18 shocks at 100 G's	± 0.25% ΔR			
Vibration	12 hours at maximum of 20 G's between 10 and 2,000 Hz	± 0.25% ΔR			
Load Life	1000 hours at + 70°C, rated power applied 1.5 hours "ON, 0.5 hour "OFF" for full 1000 hour period. Derated according to the curve.	± 1.00% ΔR			
Terminal Strength	4.5 pound pull for 30 seconds	± 0.25% ΔR			
Insulation Resistance	10,000 Megohm (minimum)	_			
Dielectric Withstanding Voltage	No evidence of arcing or damage (200 VRMS for 1 minute)	_			