



Features

- Carbon element
- Ganging up to 8 sections available
- Knurled and flatted shaft styles
- Audio taper option
- Tracking error within 3 dB
- RoHS compliant*



PTD90 Series - 9 mm Multi-Ganged Potentiometer

Electrical Characteristics

Standard Resistance Range 1 K ohms to 1 M ohms
 Total Resistance Tolerance $\pm 10\%$ or $\pm 20\%$
 Standard Tapers Linear & audio
 Maximum Operating Voltage 150 VAC, 20 VDC
 Rated Power
 Linear Taper 0.05 watts
 Audio Taper 0.025 watts
 Noise 100 mV max.
 Insulation Resistance @ 250 VDC 100 M ohms
 Dielectric Withstanding Voltage 300 VAC
 End Resistance 20 ohms max.
 Tracking Error (-40 dB to 0 dB) ± 3 dB

Environmental Characteristics

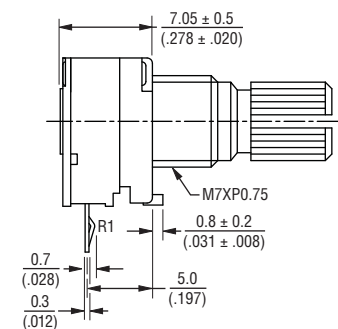
Operating Temperature -10°C to $+50^{\circ}\text{C}$
 Rotational Life 15,000 cycles
 IP Rating IP 40

Mechanical Characteristics

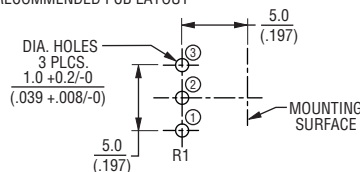
Mechanical Angle $300^{\circ} \pm 10^{\circ}$
 Running Torque 10 to 250 g-cm
 Stop Strength 4.0 kg-cm
 Shaft Push/Pull Strength 5.0 kgf min.
 Shaft Wobble $0.6 \times L/20$ mm p-p max.
 Mounting Torque 7.0 kg-cm min.
 Soldering Condition
 Manual Soldering
 96.5 Sn/3.0 Ag/0.5 Cu solid wire
 or no-clean rosin cored wire
 270 $^{\circ}\text{C}$ max. for 3 seconds
 Wave Soldering
 96.5 Sn/3.0 Ag/0.5 Cu solder
 with no-clean flux
 260 $^{\circ}\text{C}$ max. for 5 seconds
 Wash Process Not recommended
 Mounting Hardware One flat washer
 and one mounting nut supplied
 per potentiometer

Product Dimensions

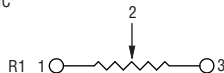
PTD901



RECOMMENDED PCB LAYOUT

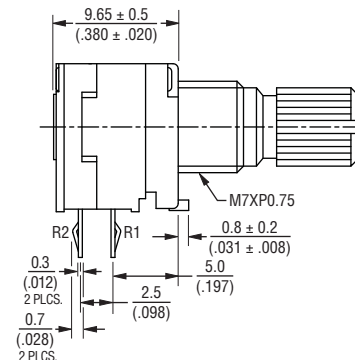


SCHEMATIC

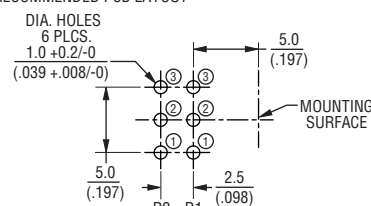


DIMENSIONS: $\frac{\text{MM}}{(\text{INCHES})}$

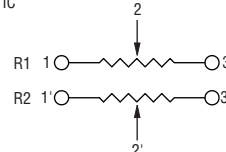
PTD902



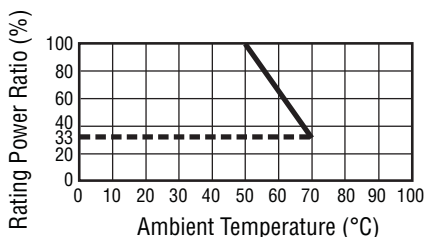
RECOMMENDED PCB LAYOUT



SCHEMATIC



Derating Curve



Standard Resistance Table

Resistance (Ohms)	Resistance Code
1,000	102
2,000	202
5,000	502
10,000	103
20,000	203
50,000	503
100,000	104
200,000	204
500,000	504
1,000,000	105

*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

Applications

- Audio/TV sets
- Automotive sound systems
- Amplifiers/mixers/drum machines/synthesizers/DJ equipment
- Multimedia sound systems
- Portable electronics

PTD90 Series - 9 mm Multi-Ganged Potentiometer

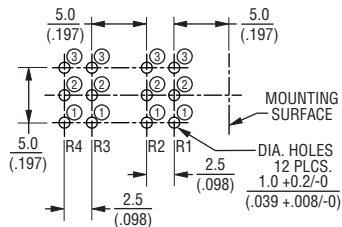
BOURNS®

Product Dimensions

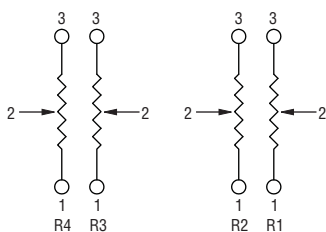
PTD904



RECOMMENDED PCB LAYOUT



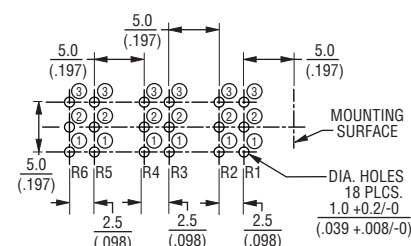
SCHEMATIC



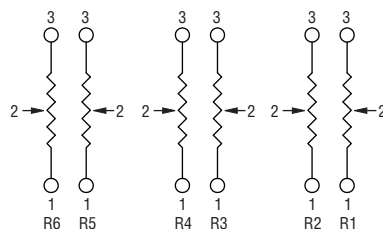
PTD906



RECOMMENDED PCB LAYOUT

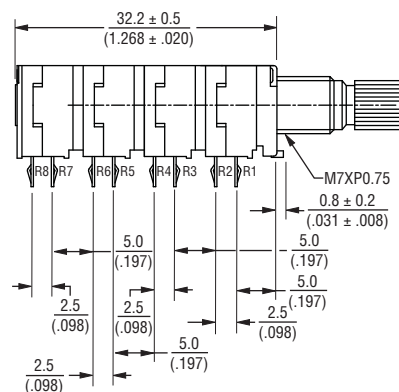


SCHEMATIC

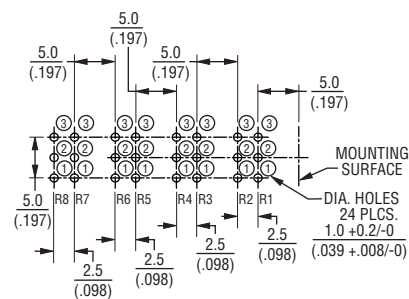


DIMENSIONS: $\frac{\text{MM}}{(\text{INCHES})}$

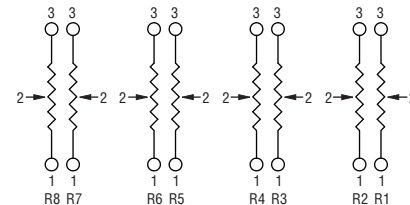
PTD908



RECOMMENDED PCB LAYOUT



SCHEMATIC

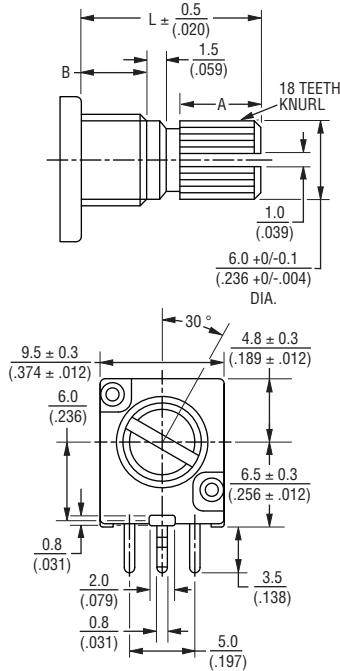


PTD90 Series - 9 mm Multi-Ganged Potentiometer

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Product Dimensions

SHAFT STYLE "K"

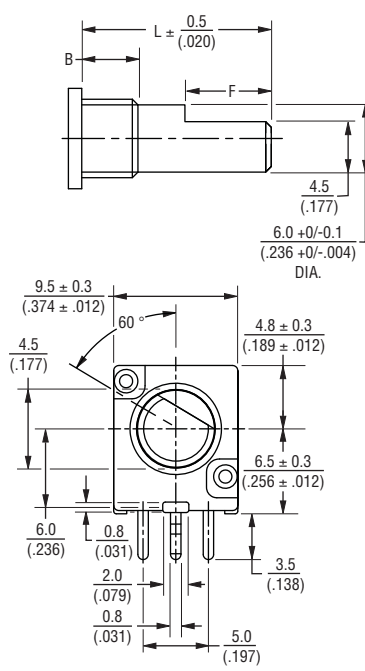


SHAFT SHOWN IN CCW POSITION

L	15 (.591)	20 (.787)	25 (.984)
B	5 (.197)	7 (.276)	10 (.394)
A	6 (.236)	10 (.394)	12 (.472)

DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

SHAFT STYLE "F"



SHAFT SHOWN IN CCW POSITION

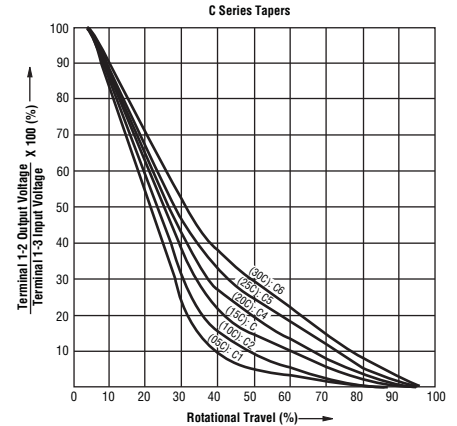
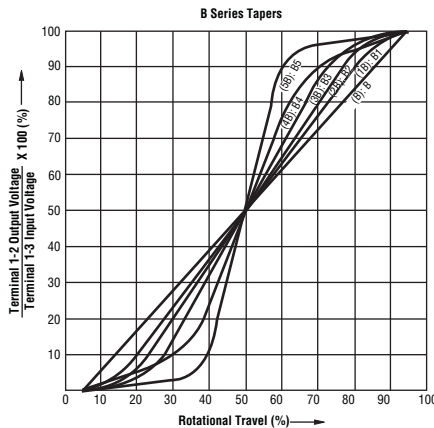
L	15 (.591)	20 (.787)	25 (.984)
B	5 (.197)	7 (.276)	10 (.394)
F	7 (.276)	12 (.472)	12 (.472)

How To Order

PTD90 1 - 2 0 20 K - B 203

- Model _____
- PTD90 = No Switch
- No. of Sections _____
- 1 = 1 Section
 - 2 = 2 Sections
 - 3 = 3 Sections
 - 4 = 4 Sections
 - 5 = 5 Sections
 - 6 = 6 Sections
 - 8 = 8 Sections
- Pin Style _____
- 1 = PC Pins vertical/down facing and $\pm 10\%$ Total Resistance Tolerance
 - 2 = PC Pins vertical/down facing and $\pm 20\%$ Total Resistance Tolerance
- Center Detent Option _____
- 0 = No Detent
 - 2 = Center Detent
- Standard Shaft Length _____
- 15 = 15 mm
 - 20 = 20 mm
 - 25 = 25 mm
- Shaft Styles _____
- K = Knurled Type Shaft (Metal)
 - 18 Toothed Serration Type
 - F = Flatted Metal Shaft
- Resistance Taper (See Taper Charts) _____
- Taper Series followed by Curve Number
- Resistance Code (See Table) _____
- Other shaft styles available.

Tapers



REV. 12/14

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Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Bourns:

PTD902-10BAP-B203	PTD902-10C5P-A203	PTD902-10DAP-B203	PTD902-20BAP-B504	PTD902-20BAP-C203
PTD904-20BAP-C203	PTD904-20CAP-C203	PTD906-20BAP-C203	PTD908-20BAP-C203	PTD901-2020K-B503
PTD901-2025K-B102	PTD902-2015F-A103	PTD902-2015F-B103	PTD902-2015K-B503	PTD904-1015K-B103
PTD904-1215K-B203	PTD908-1215K-B203	PTD901-2220F-B502	PTD902-2215K-B104	PTD901-2015F-B503
PTD901-2015K-A102	PTD901-2015K-A103	PTD901-2015K-A104	PTD901-2015K-A502	PTD901-2015K-A503
PTD901-2015K-B102	PTD901-2015K-B103	PTD901-2015K-B104	PTD901-2015K-B203	PTD901-2015K-B502
PTD901-2015K-B503	PTD901-2015K-C104	PTD901-2015P-B203	PTD901-2020K-A102	PTD901-2020K-B102
PTD901-2020K-B104	PTD901-20AAG-B203	PTD902-1015K-A102	PTD902-1015K-B102	PTD902-1015P-B203
PTD902-1015P-B502	PTD902-10AAP-B203	PTD902-2015K-A104	PTD902-2015K-A502	PTD902-2015K-A503
PTD902-2015K-B103	PTD902-2015K-B502	PTD902-2015P-A203	PTD902-2015P-B203	PTD902-2015P-B502
PTD902-2015P-C504	PTD902-2020K-A103	PTD902-2020K-B103	PTD902-2215K-B203	PTD902-2215K-B204
PTD902-2215K-B502	PTD903-2015P-A203	PTD903-2015P-B203	PTD904-1015P-B203	PTD904-2015K-A203
PTD904-2015K-B203	PTD904-2015P-B203	PTD904-2015P-C203	PTD904-2015P-C204	PTD904-2020K-B103
PTD905-2015P-A203	PTD905-2015P-B203	PTD906-2015P-C203	PTD908-1015P-B203	PTD908-10AAP-B203
PTD908-2015P-C203	PTD908-2015P-C504	PTD901-1015F-B103	PTD901-1015K-B103	PTD901-1015K-B503
PTD901-1025K-B503	PTD901-1215F-B103	PTD902-1010K-B203	PTD902-1015F-B103	PTD902-1020K-B203
PTD902-1025K-A103	PTD902-1025K-B503	PTD904-1015F-A104	PTD904-2220K-B203	PTD908-1020F-B103
PTD908-1020F-B502	PTD904-1020K-A103	PTD901-1015F-B203	PTD902-1215K-B503	PTD902-1215F-B104
PTD901-1025K-B203	PTD902-2015F-A203	PTD901-2015F-C103	PTD902-1215K-A502	PTD901-2015F-A105
PTD901-2215F-B103	PTD901-2025K-A203	PTD902-2020K-A104	PTD902-1020K-A103	PTD908-1020K-A103