

**BOURNS®**

## Features

- Low TCR
- Low electrical noise
- Low inductance/capacitance
- High power rating
- Low ohmic values

## Applications

- Power supplies
- Motor drives
- Test and measurement
- Electricity meters

## PWR220 S Series Shunt Resistor

### General Information

The Bourns® PWR220 S Series is a TO220 style Shunt Resistor. Manufactured using foil on alumina ceramic, it is used in applications such as power supplies, motor drives and measurements.

### Electrical & Thermal Characteristics

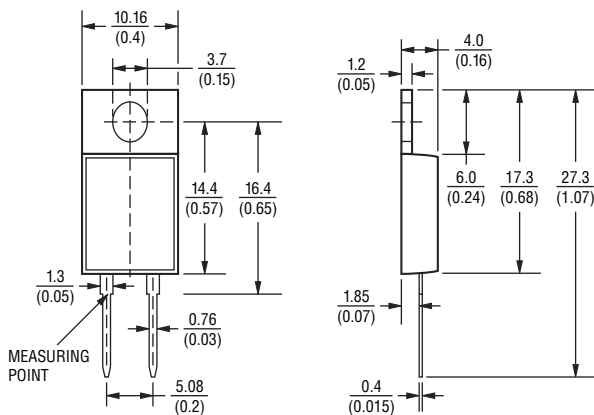
Parameter	Symbol	Min.	Nom.	Max.	Unit
Resistance	R	0.002		50	
Power Rating					W
@ 70 °C without heat sink				1.50	
@ 70 °C with heat sink		10		15	
Tolerance					%
0.002 < R < 0.01		2.0*		5.0	
0.01 < R < 0.10		1.0**		5.0	
0.10 < R < 50.0		0.5**		5.0	
TCR					PPM/°C
20 °C < T < 60 °C				±15.0	
-40 °C < T < +130 °C				±50.0	
Thermal Resistance – Rthj (Max @ R < 50 )				4.8	°C/W
Stability		0.1		0.5	%
Thermal EMF				1.0	µV/°C
Dielectric Withstanding Voltage				300	VDC
Operating Temperature	T <sub>J</sub>	-40		+130	°C Ž 602

# PWR220 S Series Shunt Resistor

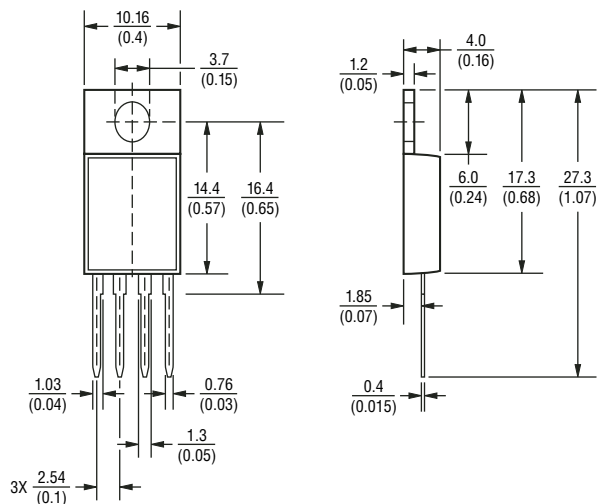
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## Product Dimensions

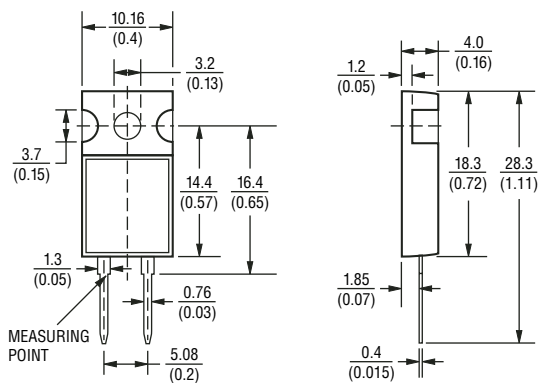
**T0220 Housing: 2-Pin**



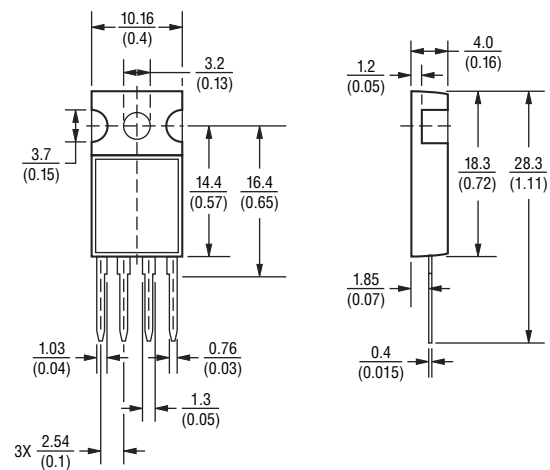
**T0220 Housing: 4-Pin**



**T0221 Casing: 2-Pin**



**T0221 Casing: 4-Pin**

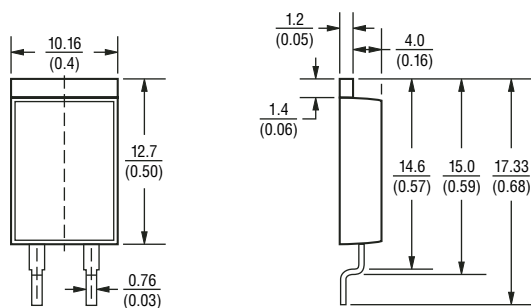


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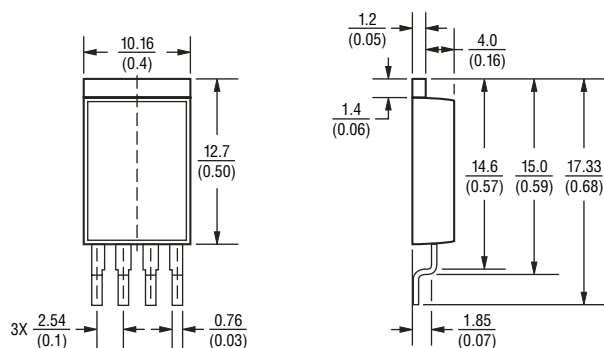


## Product Dimensions

T0220 Casing: 2-Pin (Surface Mount)



T0220 Casing: 4-Pin (Surface Mount)



## How to Order

**PWR 220 - 2 S A R0400 J E**

Model \_\_\_\_\_  
 PWR = Power Resistor

Package \_\_\_\_\_  
 220 = T0220  
 221 = T0221

Number of Pins \_\_\_\_\_  
 2 = 2    4 = 4

Function \_\_\_\_\_  
 S = Shunt

Version \_\_\_\_\_  
 A = Surface Mount  
 B = Through Hole

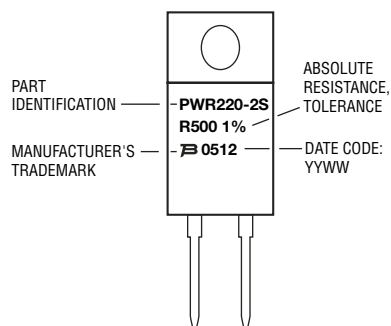
Resistor Value \_\_\_\_\_  
 R (4 Digits)

Absolute Tolerance \_\_\_\_\_  
 J = 5 %    G = 2 %    F = 1 %  
 D = 0.5 %    \*C = 0.25 %    \*B = 0.1 %

Packaging \_\_\_\_\_  
 E = Tape & Reel  
 \_\_\_ = Tubes

\*Available only with 4-pin versions.

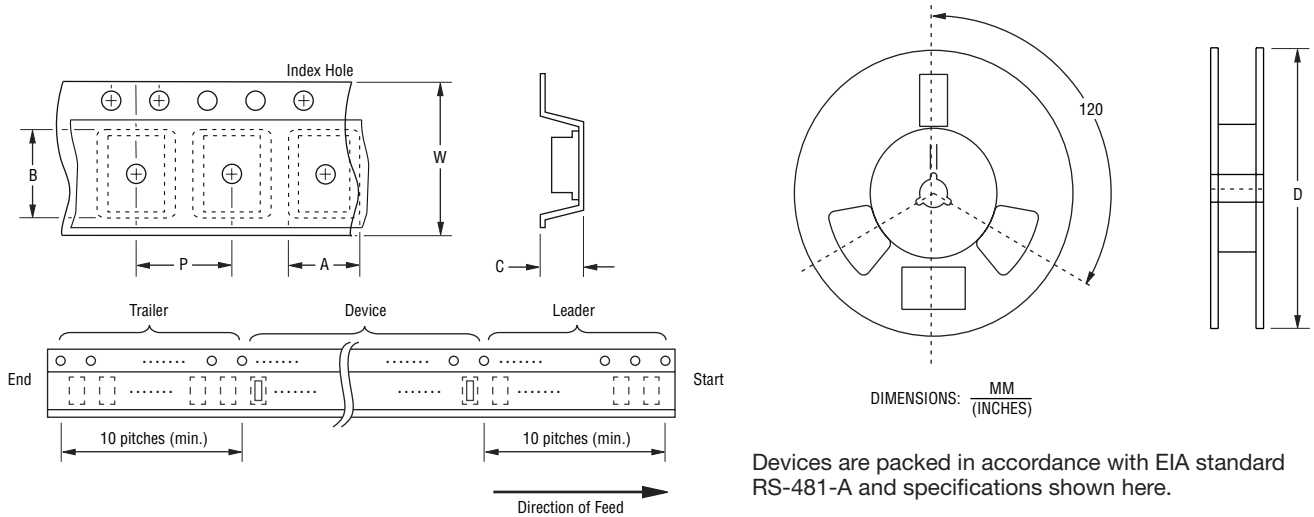
## Typical Part Marking



# PWR220 S Series Shunt Resistor

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## Packaging Dimensions



Devices are packed in accordance with EIA standard RS-481-A and specifications shown here.



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