



# PR9542-SERIES

## CHIP SHUNT RESISTOR

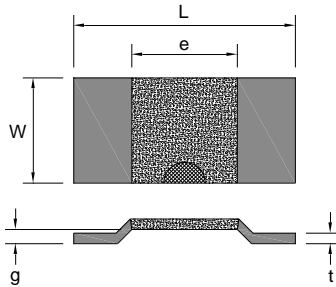
PRECISION RESISTIVE PRODUCTS, INC.  
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 E-Mail [info@prpinc.com](mailto:info@prpinc.com)  
 PRP HOME PAGE <http://www.prpinc.com>

### Features:

- Excellent long-term Stability and Low Inductance
- Power Rating 2.5W to 7W
- Resistance Tolerances  $\pm 1\%$ ,  $\pm 2\%$  &  $\pm 5\%$
- Resistance Range ( 0.2m $\Omega$  – 4m $\Omega$  )
- Current Sensors
- Temperature Coefficient  $\pm 50$ PPM thru  $\pm 120$ PPM/ $^{\circ}$ C
- Heavy Copper Connectors
- Packaging is Tape and Reel

### Applications:

- Frequency Converters
- High Current Automotive
- Power Management
- Chargers
- Switching Power Supplies



### Dimensions Inches (mm)

Style	L	W	e	g
PR9542 1050	0.413 $\pm$ 0.012 (10.50 $\pm$ 0.30)	0.197 $\pm$ 0.012 (5.0 $\pm$ 0.30)	0.197 $\pm$ 0.012 (5.0 $\pm$ 0.30)	0.020 (0.50)
PR9542 1575	0.598 $\pm$ 0.012 (15.2 $\pm$ 0.30)	0.295 $\pm$ 0.012 (7.5 $\pm$ 0.30)	0.197 $\pm$ 0.012 (5.0 $\pm$ 0.30)	0.020 (0.50)

Operating Temperature Range is  $-55^{\circ}$ C to  $170^{\circ}$ C

### Specifications

Style	Wattage @ 85 $^{\circ}$ C	Resistance Range	TCR PPM/ $^{\circ}$ C	Tolerance	t
PR9542 1050	5	0.5 m $\Omega$	$\pm 75$	$\pm 1\%$ , $\pm 2\%$ , $\pm 5\%$	0.035 $\pm$ 0.002 (0.88 $\pm$ 0.05)
	4	1m $\Omega$	$\pm 60$		0.017 $\pm$ 0.002 (0.43 $\pm$ 0.05)
	4	2m $\Omega$	$\pm 100$		0.025 $\pm$ 0.002 (0.64 $\pm$ 0.05)
	3	3m $\Omega$	$\pm 100$		0.017 $\pm$ 0.002 (0.43 $\pm$ 0.05)
	2.5	4m $\Omega$	$\pm 100$		0.013 $\pm$ 0.002 (0.32 $\pm$ 0.05)
Style	Wattage @ 65 $^{\circ}$ C	Resistance Range	TCR PPM/ $^{\circ}$ C	Tolerance	t
PR9542 1575	7	0.2m $\Omega$	$\pm 50$	$\pm 1\%$ , $\pm 2\%$ , $\pm 5\%$	0.059 $\pm$ 0.002 (1.50 $\pm$ 0.05)
	6	0.5m $\Omega$	$\pm 100$		0.022 $\pm$ 0.002 (0.56 $\pm$ 0.05)
	6	1m $\Omega$	$\pm 120$		0.035 $\pm$ 0.002 (0.90 $\pm$ 0.05)
	4	2m $\Omega$	$\pm 120$		0.018 $\pm$ 0.002 (0.45 $\pm$ 0.05)
	3.5	3m $\Omega$	$\pm 120$		0.012 $\pm$ 0.002 (0.30 $\pm$ 0.05)



DEDICATION TO EXCELLENCE

## Performance Data

Requirements	Performance	Test Method
Load Life	±1.0%	90 min. ON, 30 min. OFF for 2000 Hrs.
Humidity	±0.2%	90~98%RH +25°C, +65°C, -10°C 10 cycles
Resistance to solder heat	±0.2%	350°C for 30 Sec. or 250°C for 10min.
Short Time Overload	±0.2%	5 X Rated Power 5 Sec.
Thermal Shock	±0.1%	5 Cycles -55°C to 155°C
High Temp Exposure	±0.2%	140°C for 250 Hrs.
Vibration High Frequency	±0.2%	15g 10~2000Hz, 36 cycles
Inductance	<3nH	—

## Derating Curve

For resistors operated in ambient above 85°C for 1050 & 65°C for 1575, power dissipation must be derated in accordance with curve in figure 1 & 2.

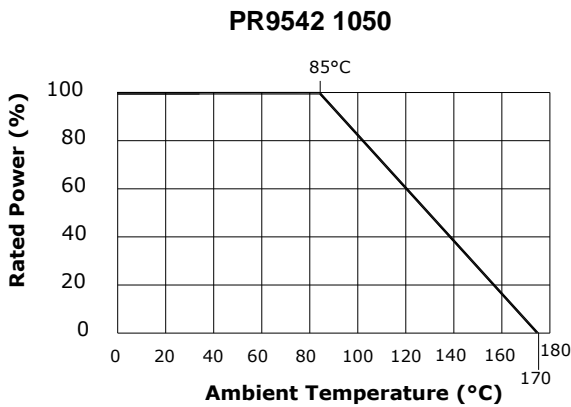


Figure 1

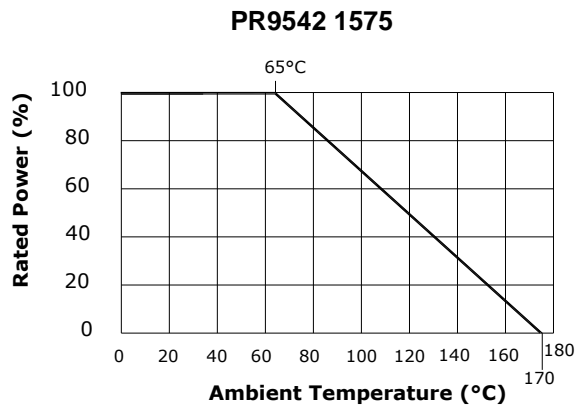
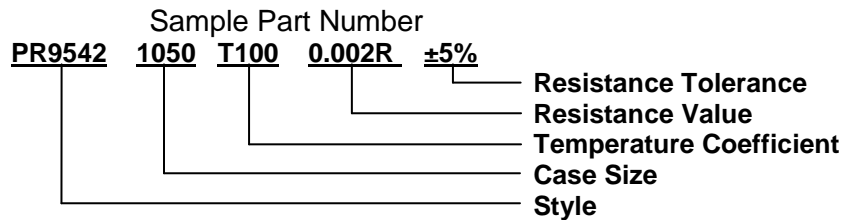


Figure 2

## How to Order



*Add "T" at the end of the Case Size portion of the part number for lead free termination.*