



# PR9477-SERIES

## THIN FILM CURRENT SENSE

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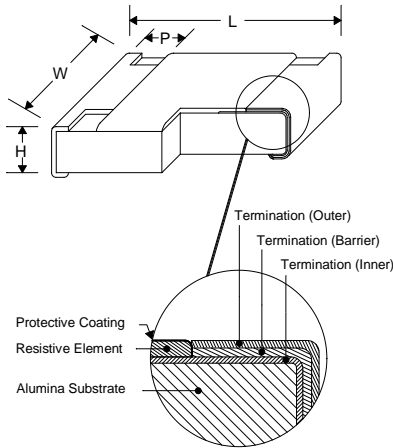
### Features:

- Thin Film
- Standard Industry Case Sizes  
0402, 0603, 0805, 1206, 2010 & 2512
- Power Ratings 1/16W, 1/10W, 1/8W, 1/4W,  
3/4W, 1W & 3W
- Resistance Values from 50mΩ to 999mΩ
- Packaging is Tape & Reel
- Resistance Tolerance  $\pm 0.5$  &  $\pm 1\%$
- Low TCR  $\pm 50$  to  $\pm 200$  PPM/°C

### Applications:

- Voltage Regulation
- Switching Power Supply
- Portable Devices
- Over Current Protection in Audio Application
- Automotive Engine Control
- Power Management

### Dimensions Inches (mm)



Style	L	W	H	P
PR9477 0402	0.039 $\pm$ 0.002 (1.00 $\pm$ 0.05)	0.020 $\pm$ 0.002 (0.50 $\pm$ 0.05)	0.013 $\pm$ 0.004 (0.32 $\pm$ 0.10)	0.008 $\pm$ 0.004 (0.20 $\pm$ 0.10)
PR9477 0603	0.063 $\pm$ 0.004 (1.6 $\pm$ 0.10)	0.031 $\pm$ 0.004 (0.80 $\pm$ 0.10)	0.018 $\pm$ 0.004 (0.45 $\pm$ 0.10)	0.012 $\pm$ 0.008 (0.30 $\pm$ 0.20)
PR9477 0805	0.079 $\pm$ 0.006 (2.0 $\pm$ 0.15)	0.049 $\pm$ 0.006 (1.25 $\pm$ 0.15)	0.022 $\pm$ 0.004 (0.55 $\pm$ 0.10)	0.016 $\pm$ 0.010 (0.40 $\pm$ 0.25)
PR9477 1206	0.120 $\pm$ 0.006 (3.05 $\pm$ 0.15)	0.061 $\pm$ 0.006 (1.55 $\pm$ 0.15)	0.022 $\pm$ 0.004 (0.55 $\pm$ 0.10)	0.016 $\pm$ 0.010 (0.40 $\pm$ 0.25)
PR9477 2010	0.200 $\pm$ 0.008 (5.00 $\pm$ 0.20)	0.096 $\pm$ 0.006 (2.45 $\pm$ 0.15)	0.024 $\pm$ 0.006 (0.60 $\pm$ 0.15)	0.020 $\pm$ 0.010 (0.50 $\pm$ 0.25)
PR9477 2512	0.250 $\pm$ 0.008 (6.35 $\pm$ 0.20)	0.124 $\pm$ 0.006 (3.15 $\pm$ 0.15)	0.024 $\pm$ 0.004 (0.60 $\pm$ 0.10)	0.022 $\pm$ 0.010 (0.55 $\pm$ 0.25)

Operating Temperature Range is -55°C to 155°C

### Specifications

Style	Wattage	Resistance Range (mΩ)	TCR PPM/°C	Tolerance
PR9477 0402	1/16W	500 - 1000	$\pm 50$ , $\pm 100$	$\pm 0.5\%$ , $\pm 1\%$
PR9477 0603	1/10W	200 - 300	$\pm 100$	$\pm 0.5\%$ , $\pm 1\%$
		301 - 1000	$\pm 50$	
PR9477 0805	1/8W	200 - 300	$\pm 100$	$\pm 0.5\%$ , $\pm 1\%$
		301 - 1000	$\pm 50$	
PR9477 1206	1/4W	50 - 100	$\pm 200$	$\pm 1\%$
		101 - 300	$\pm 100$	$\pm 0.5\%$ , $\pm 1\%$
		301 - 1000	$\pm 50$	
PR9477 2010	3/4W	50 - 100	$\pm 200$	$\pm 0.5\%$ , $\pm 1\%$
		101 - 300	$\pm 100$	
		301 - 1000	$\pm 50$	
PR9477 2512	1W	50 - 100	$\pm 200$	$\pm 0.5\%$ , $\pm 1\%$
		101 - 300	$\pm 100$	
		301 - 1000	$\pm 50$	
		100 - 1000	$\pm 100$	



DEDICATION TO EXCELLENCE

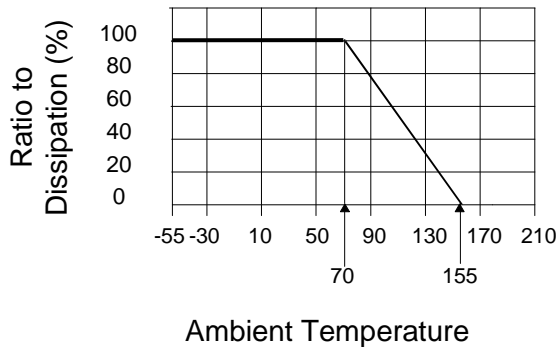
## Performance Data

Test Item	Performance	Test Method
Load Life	±1%	<b>MIL-STD-202F Method 108A</b> RCWV, 70°C, 1.5 hours ON, 0.5 hours OFF, total 1000 hours
Humidity	±0.5%	<b>MIL-STD-202F Method 103B</b> 40°C, 90~95% RH, RCWV 1.5 hours ON, 0.5 hours OFF, total 1000 hours
Thermal Shock	±0.5%	<b>MIL-STD-202F Method 107G</b> -55°C~150°C, 100 cycles
Short Time Overload	±1%	<b>JIS-C-5202-5.5</b> RCWV*2.5 or Max Overload Voltage, 5 sec.
Effects of Soldering Heat	±0.5%	<b>MIL-STD-202F Method 210E</b> 260°C ±5°C, 10 ±1 sec.
Solderability	95% min. coverage	<b>MIL-STD-202F Method 208H</b> 245°C ±5°C, 3 sec.
Resistance to Dry Heat	±0.5%	<b>JIS-C-5202-7.2</b> 96 hours @ +155°C without load

Operating Temperature Range is -55°C to + 155°C

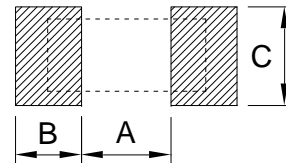
### Derating Curve

For resistors operated in ambient above 70°C, power dissipation must be derated in accordance with curve in the below chart.

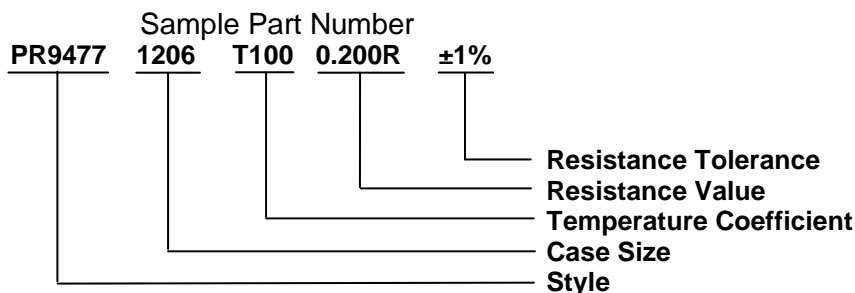


### Pad Dimensions Inches (mm)

Style	A	B	C
PR9477 0402	0.020 (0.50)	0.020 (0.50)	0.024 ±0.008 (0.60 ±0.2)
PR9477 0603	0.031 (0.80)	0.039 (1.00)	0.035 ±0.008 (0.90 ±0.2)
PR9477 0805	0.039 (1.00)	0.039 (1.00)	0.053 ±0.008 (1.35 ±0.2)
PR9477 1206	0.079 (2.00)	0.045 (1.15)	0.067 ±0.008 (1.70 ±0.2)
PR9477 2010	0.142 (3.60)	0.055 (1.40)	0.098 ±0.008 (2.50 ±0.2)
PR9477 2512	0.193 (4.90)	0.063 (1.60)	0.122 ±0.008 (3.10 ±0.2)



### How to Order



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