

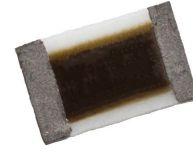
TPI Series

0402 0603 0805 1206 2010 2512

Thin Film Wraparound Surface Mount Chip Resistors

Features

- Precision nicrome thin film resistor element
- 99.5% Al₂O₃ substrate material
- Nickel barrier layer provides excellent solder leach resistance
- Tolerances to ±0.01%
- Ultra low noise resistor film
- Passivated resistor element
- Available on tape and reel

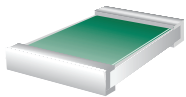


Thin Film

Part Number	Length	Width	Height	Terminal	Max Working Voltage	Rated Power @ 70°C
TPI-0402	0.039±.002	0.020±.002	0.016max.	0.008±.004	25 VDC	63mW
TPI-0603	0.063±.008	0.031±.008	0.022max.	0.012±.008	50 VDC	63mW
TPI-0805*	0.079±.008	0.049±.008	0.026max.	0.014±.010	100 VDC	100mW
TPI-1206	0.124±.010	0.063±.008	0.026max.	0.020±.012	150 VDC	125mW
TPI-2010	0.200±.006	0.100±.006	0.026max.	0.020±.010	150 VDC	250mW
TPI-2512	0.250±.006	0.122±.006	0.026max.	0.020±.010	150 VDC	500mW

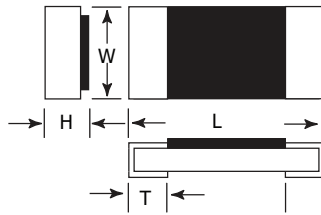
*0805 (low ohms) Max. Working Voltage $\sqrt{P \cdot R}$, Rated power 250mW

Terminations



Full wraparound termination
Nickel Barrier layer terminals with a 100% Matte Tin finish

Dimensional Outline



Item	Specification
Operating temperature	-55°C to + 125°C
Short time overload	± 0.5% + 0.05Ω Max.
Terminal strength	± 0.5% + 0.05Ω Max.
Solder heat resistance	± 0.5% + 0.05Ω Max.
Solderability	95% minimum coverage
Temperature cycle	± 0.5% + 0.05Ω Max.
Load life	± 0.5% + 0.05Ω Max.
Current noise	-38dB to -30dB typical

Ordering Information

Example: 97.6Ω, 0.5%, 1206 resistor

TPI - 1206 -97R6 D

<p>Thin Film </p> <p>Wraparound</p> <p>Nickel Barrier</p> <p>100% Matte Tin</p>	<p>Tolerance</p> <p>T = 0.01%†</p> <p>A = 0.05%†</p> <p>B = 0.1%</p>	<p>D</p> <p>D = 0.5%</p> <p>F = 1%</p>
<p>Form Factor </p> <p>0402* 1206*</p> <p>0603* 2010*</p> <p>0805* 2512*</p>	<p>Resistance Value</p> <p>The first three digits are significant values. The fourth is the number of zeroes following. The R indicates a decimal point when resistance value is less than 10Ω.</p>	

*Add "V" for 5PPM†

*Add "N" for 10PPM†

†Available as Special Order Only

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Resistance Ranges

Standard

PN	0.01%†	0.05%†	0.1%	0.5%
TPI-0402	49.9Ω to 12KΩ	49.9Ω to 12KΩ	1Ω to 205KΩ	1Ω to 205KΩ
TPI-0603	24.9Ω to 100KΩ	4.7Ω to 100KΩ	4.7Ω to 1MΩ	2Ω to 1MΩ
TPI-0805	24.9Ω to 200KΩ	4.7Ω to 500KΩ	4.7Ω to 2MΩ	1Ω to 2MΩ
TPI-1206	24.9Ω to 500KΩ	24.9Ω to 500KΩ	1Ω to 2.5MΩ	1Ω to 2.5MΩ
TPI-2010	24.9Ω to 500KΩ	24.9Ω to 500KΩ	4.7Ω to 3MΩ	1Ω to 3MΩ
TPI-2512	24.9Ω to 500KΩ	24.9Ω to 500KΩ	4.7Ω to 3MΩ	1Ω to 3MΩ

Low Ohms**

PN	1%
TPI-0805	0.2Ω to 8.2Ω

†Available as a special order only.

**Additional values, sizes and tolerances available. Please consult factory.

TCR

TPI-0402

25 ppm/°C	10Ω to 205KΩ
10 ppm/°C	49.9Ω to 12KΩ*
5 ppm/°C	49.9Ω to 3KΩ*

TPI-0603

25 ppm/°C	2Ω to 1MΩ
10 ppm/°C	4.7Ω to 332KΩ*
5 ppm/°C	24.9Ω to 15KΩ*

TPI-0805

25 ppm/°C	1Ω to 2MΩ
10 ppm/°C	4.7Ω to 500KΩ*
5 ppm/°C	24.9Ω to 30KΩ*

TPI-1206

25 ppm /°C	1Ω to 2.5MΩ
10 ppm/°C	4.7Ω to 1MΩ*
5 ppm/°C	24.9Ω to 50KΩ*

TPI-2010

25 ppm /°C	1Ω to 3MΩ
10 ppm/°C	4.7Ω to 1MΩ*
5 ppm/°C	24.9Ω to 100KΩ*

TPI-2512

25 ppm /°C	1Ω to 3MΩ
10 ppm/°C	4.7Ω to 1MΩ*
5 ppm/°C	24.9Ω to 100KΩ*