

# Thin Film Chip Resistors

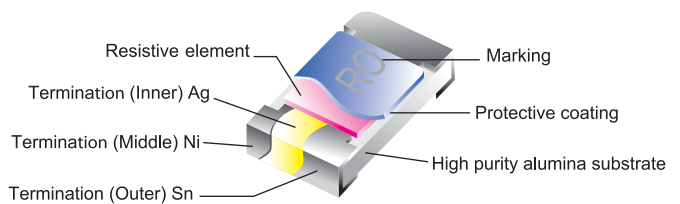
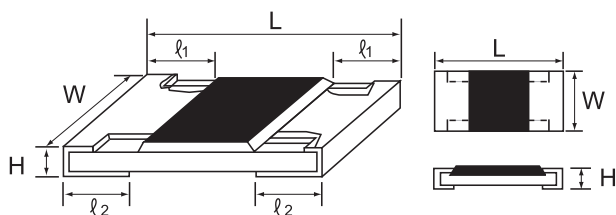
## Performance Specification

Short Time Overload	±0.5% Max
Insulation Resistance	Min. 1,000 Mega Ohm
Humidity (Steady State)	±0.3% Max
Load Life	±0.2%; >7KΩ ± 0.5% Max
Terminal Bending	±0.2% Max
Solderability	Min. 95% coverage
Resistance to Soldering Heat	±0.2% Max

Ordering Procedure: Ex.: 1206, 1/4W-S, +/-0.25%, 10Ω T/R-5000 25 PPM

<p><b>T C 0 6</b></p> <p>Resistor Size:                  TC02 = 0402    TC03 = 0603                  TC05 = 0805    TC06 = 1206                  TC10 = 2010    TC12 = 2512                  TC07 = 1210</p>	<p><b>2 5 C</b></p> <p>Temperature Coefficient:                  05 = 5PPM    25 = 25PPM                  10 = 10PPM    50 = 50PPM                  15 = 15PPM    A0 = 100PPM</p>	<p><b>1 0 0 J</b></p> <p>Resistance value:                  • E-24 series:                  1<sup>st</sup> digit is "0"                  2<sup>nd</sup> &amp; 3<sup>rd</sup> digits are significant figures of the resistance                  4<sup>th</sup> indicates the number of zeros                  • E-96 series:                  1<sup>st</sup> to 3<sup>rd</sup> digits are significant figures of the resistance                  4<sup>th</sup> digit indicates the number of zeros.                  "J" ~ 0.1, "K" ~ 0.01, "L" ~ 0.001  <b>Ex. 012J ~ 1Ω2, 226K ~ 2Ω26</b></p>	<p><b>T 5 E</b></p> <p>Packing Type:                  T = Paper Tape/Reel                  E = Plastic Tape/Reel</p> <p>Packing Qty:                  4 = 4,000 pcs    5 = 5,000 pcs.    C = 10,000 pcs.</p> <p>Special Feature:                  E = Lead (Pb) Free Plating Type/                  RoHS compliant</p>
<p><b>Tolerance:</b>                  T = ±0.01%                  A = ±0.05%                  B = ±0.10%                  C = ±0.25%                  D = ±0.5%                  F = ±1%                  G = ±2%                  J = ±5%</p>			

## Dimension

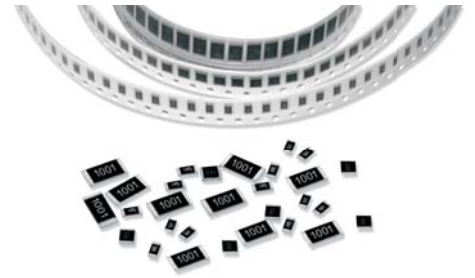


Type	Dimension (mm)				
	L	W	H	l1	l2
TC02 (0402)	1.00±0.10	0.50±0.05	0.32±0.08	0.20±0.10	0.23±0.13
TC03 (0603)	1.60±0.15	0.80±0.15	0.45±0.10	0.30±0.20	0.30±0.20
TC05 (0805)	2.00±0.15	1.25±0.15	0.55±0.10	0.35±0.25	0.40±0.25
TC06 (1206)	3.10±0.20	1.55±0.15	0.55±0.10	0.45±0.25	0.45±0.25
TC07 (1210)	3.10±0.15	2.50±0.25	0.55±0.10	0.50±0.30	0.55±0.25
TC10 (2010)	4.95±0.20	2.45±0.20	0.55±0.10	0.60±0.30	0.50±0.25
TC12 (2512)	6.35±0.20	3.15±0.20	0.55±0.10	0.60±0.30	0.50±0.25

Standard Operating Temp (°C): -55~+155



## Thin Film Chip Resistors



### Features

- Thin Film NiCr resistance element
- Precision tolerance from  $\pm 0.01\%$ ,  $\pm 0.05\%$ ,  $\pm 0.10\%$ ,  $\pm 0.25\%$
- Extremely low TCR from  $\pm 5 \sim \pm 50$  PPM/ $^{\circ}\text{C}$

### Application

- Medical equipment
- Testing / Measuring equipment
- Communication device, cellphone, GPS, PDA
- Automatic equipment controller
- Printer equipment
- Converters

### Standard

Type	Power Rating at 70 $^{\circ}\text{C}$	Max Working Voltage	Max Overload Voltage	T.C.R. PPM/ $^{\circ}\text{C}$	Tolerance %	Resistance Range (Special low)	Resistance Range	Resistance Range (Special high)
TC02 (0402)	1/16W	25V	50V	$\pm 25$ $\pm 50$	$\pm 0.10\%$ $\pm 0.25\%$ $\pm 0.50\%$		10 $\Omega$ ~ 205K $\Omega$	
TC03 (0603)	1/16W	50V	100V	$\pm 25$ $\pm 50$	$\pm 0.05\%$	4.7 $\Omega$ ~ 9.76 $\Omega$	10 $\Omega$ ~ 150K $\Omega$	
					$\pm 0.10\%$	4.7 $\Omega$ ~ 9.76 $\Omega$	10 $\Omega$ ~ 1M $\Omega$	
					$\pm 0.25\%$ $\pm 0.50\%$	2 $\Omega$ ~ 9.76 $\Omega$	10 $\Omega$ ~ 1M $\Omega$	
TC05 (0805)	1/10W	100V	200V	$\pm 25$ $\pm 50$	$\pm 0.05\%$	4.7 $\Omega$ ~ 9.76 $\Omega$	10 $\Omega$ ~ 500K $\Omega$	
					$\pm 0.10\%$	4.7 $\Omega$ ~ 9.76 $\Omega$	10 $\Omega$ ~ 1M $\Omega$	1.1M $\Omega$ ~ 2M $\Omega$
					$\pm 0.25\%$ $\pm 0.50\%$	1 $\Omega$ ~ 9.76 $\Omega$	10 $\Omega$ ~ 1M $\Omega$	1.1M $\Omega$ ~ 2M $\Omega$
TC06 (1206)	1/8W	150V	300V	$\pm 25$ $\pm 50$	$\pm 0.05\%$	4.7 $\Omega$ ~ 9.76 $\Omega$	10 $\Omega$ ~ 1M $\Omega$	
					$\pm 0.10\%$	4.7 $\Omega$ ~ 9.76 $\Omega$	10 $\Omega$ ~ 1M $\Omega$	1.1M $\Omega$ ~ 2.5M $\Omega$
					$\pm 0.25\%$ $\pm 0.50\%$	1 $\Omega$ ~ 9.76 $\Omega$	10 $\Omega$ ~ 1M $\Omega$	1.1M $\Omega$ ~ 2.5M $\Omega$
TC07 (1210)	1/5W	150V	300V	$\pm 25$ $\pm 50$	$\pm 0.05\%$	4.7 $\Omega$ ~ 9.76 $\Omega$	10 $\Omega$ ~ 1M $\Omega$	
					$\pm 0.10\%$	4.7 $\Omega$ ~ 9.76 $\Omega$	10 $\Omega$ ~ 1M $\Omega$	1.1M $\Omega$ ~ 2.5M $\Omega$
					$\pm 0.25\%$ $\pm 0.50\%$	1 $\Omega$ ~ 9.76 $\Omega$	10 $\Omega$ ~ 1M $\Omega$	1.1M $\Omega$ ~ 2.5M $\Omega$
TC10 (2010)	1/4W	150V	300V	$\pm 25$ $\pm 50$	$\pm 0.05\%$	4.7 $\Omega$ ~ 9.76 $\Omega$	10 $\Omega$ ~ 1M $\Omega$	
TC12 (2512)	1/2W				$\pm 0.10\%$	4.7 $\Omega$ ~ 9.76 $\Omega$	10 $\Omega$ ~ 1M $\Omega$	1.1M $\Omega$ ~ 3M $\Omega$
					$\pm 0.25\%$ $\pm 0.50\%$	1 $\Omega$ ~ 9.76 $\Omega$	10 $\Omega$ ~ 1M $\Omega$	1.10 $\Omega$ ~ 3M $\Omega$

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