

# Thin Film Chip Resistors

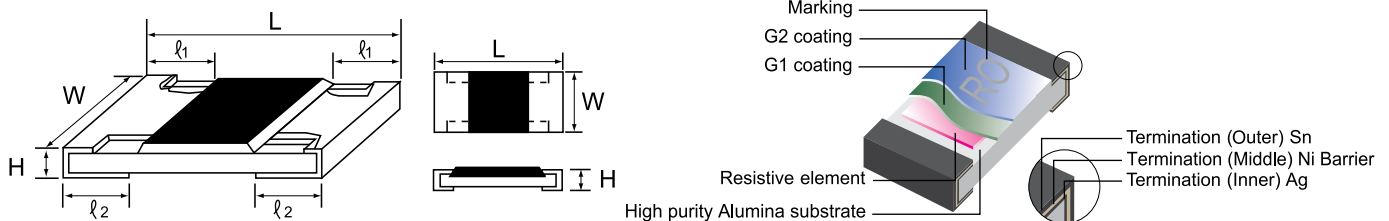
## Performance Specification

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
Dielectric Withstanding Voltage	No evidence of flashover, mechanical damage, arcing or insulation breakdown.

## Ordering Procedure: Ex.: TC06, 1/8W, 25PPM, +/-0.25%, 10Ω T/R-5000

T	C	0	6	2	5	C	1	0	0	J	T	5	E		
<b>Resistor Size:</b> TC02 = 0402    TC03 = 0603 TC05 = 0805    TC06 = 1206 TC07 = 1210    TC10 = 2010 TC12 = 2512				<b>Temperature Coefficient:</b> 05 = 5PPM    25 = 25PPM 10 = 10PPM    50 = 50PPM 15 = 15PPM    A0 = 100PPM				<b>Resistance Value:</b> <ul style="list-style-type: none"> <li>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</li> <li>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 Ex. 012J ~ 1Ω2, 226K ~ 2Ω26</li> </ul>				<b>Packing Type:</b> T = Paper Tape/Reel E = Plastic Tape/Reel			
<b>Tolerance:</b> A = ±0.05% B = ±0.10% C = ±0.25% D = ±0.5% F = ±1%						<b>Packing Qty:</b> 4 = 4,000 pcs.    5 = 5,000 pcs.    C = 10,000 pcs.									
<b>Special Feature:</b> E = Lead (Pb) Free Plating Type/ RoHS compliant															

## Dimension



Type	Dimension (mm)				
	L	W	H	l <sub>1</sub>	l <sub>2</sub>
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

Note:  
 1.) Standard Operating Temp (°C) : -55 --+155  
 2.) Standard : All Tolerance use E-96 Series  
 Only 2% & 5% use E-24 Series



## Thin Film Chip Resistors

### Features

- Thin Film NiCr resistance element
- Precision tolerance from  $\pm 0.01\%$ ,  $\pm 0.05\%$ ,  $\pm 0.10\%$ ,  $\pm 0.25\%$ ,  $\pm 0.50\%$ ,  $\pm 1\%$
- Extremely low TCR from  $\pm 5 \sim \pm 50\text{PPM}/^\circ\text{C}$
- Special packaging 1,000 pcs. / 2,000 pcs. per reel available



### Application

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

### Standard

Type	Power Rating at 70°C	Max Working Voltage	Max Overload Voltage	T.C.R. (PPM/°C)	Tolerance %	Resistance Range (Special low)	Resistance Range	Resistance Range (Special high)
TC02 (0402)	1/16W	25V	50V	$\pm 25$ $\pm 50$	$\pm 0.10\%$ $\pm 0.25\%$ $\pm 0.50\%$ $\pm 1.00\%$		10Ω ~ 332KΩ	
TC03 (0603)	1/16W	50V	100V	$\pm 25$ $\pm 50$	$\pm 0.05\%$	4.7Ω ~ 9.76Ω	10Ω ~ 332KΩ	
					$\pm 0.10\%$	4.7Ω ~ 9.76Ω	10Ω ~ 1MΩ	
					$\pm 0.25\%$ $\pm 0.50\%$ $\pm 1.00\%$	1.5Ω ~ 9.76Ω	10Ω ~ 1MΩ	
TC05 (0805)	1/10W	100V	200V	$\pm 25$ $\pm 50$	$\pm 0.05\%$	4.7Ω ~ 9.76Ω	10Ω ~ 511KΩ	
					$\pm 0.10\%$	4.7Ω ~ 9.76Ω	10Ω ~ 1MΩ	1.1MΩ ~ 2MΩ
					$\pm 0.25\%$ $\pm 0.50\%$ $\pm 1.00\%$	1Ω ~ 9.76Ω	10Ω ~ 1MΩ	1.1MΩ ~ 2MΩ
TC06 (1206)	1/8W	150V	300V	$\pm 25$ $\pm 50$	$\pm 0.05\%$	4.7Ω ~ 9.76Ω	10Ω ~ 1MΩ	
					$\pm 0.10\%$	4.7Ω ~ 9.76Ω	10Ω ~ 1MΩ	1.1MΩ ~ 2.5MΩ
					$\pm 0.25\%$ $\pm 0.50\%$ $\pm 1.00\%$	1Ω ~ 9.76Ω	10Ω ~ 1MΩ	1.1MΩ ~ 2.5MΩ
TC07 (1210)	1/5W	150V	300V	$\pm 25$ $\pm 50$	$\pm 0.05\%$	4.7Ω ~ 9.76Ω	10Ω ~ 1MΩ	
					$\pm 0.10\%$	4.7Ω ~ 9.76Ω	10Ω ~ 1MΩ	1.1MΩ ~ 2.5MΩ
					$\pm 0.25\%$ $\pm 0.50\%$ $\pm 1.00\%$	1Ω ~ 9.76Ω	10Ω ~ 1MΩ	1.1MΩ ~ 2.5MΩ
TC10 (2010)	1/4W	150V	300V	$\pm 25$ $\pm 50$	$\pm 0.05\%$	4.7Ω ~ 9.76Ω	10Ω ~ 1MΩ	
					$\pm 0.10\%$	4.7Ω ~ 9.76Ω	10Ω ~ 1MΩ	1.1MΩ ~ 3MΩ
TC12 (2512)	1/2W			$\pm 25$ $\pm 50$	$\pm 0.25\%$ $\pm 0.50\%$ $\pm 1.00\%$	1Ω ~ 9.76Ω	10Ω ~ 1MΩ	1.1MΩ ~ 3MΩ