



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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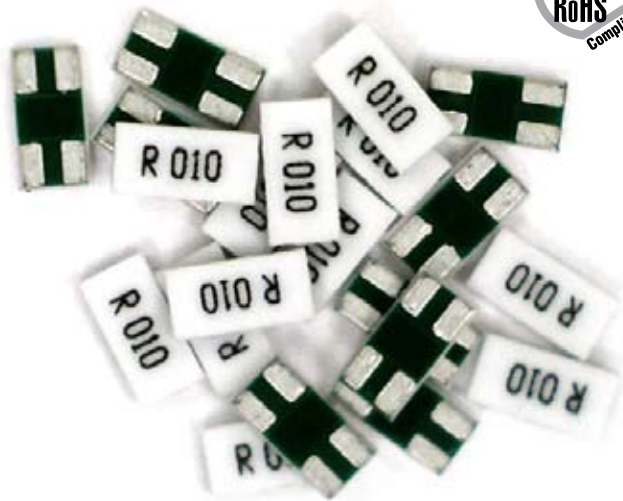
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# FC4T Series

## Metal Foil Low Value Chip

The FC4T chip features four terminals, also known as a “Kelvin” configuration. This configuration enables current to be applied through two opposite terminals and a sensing voltage to be measured across the other two terminals, eliminating the resistance and temperature coefficient of the terminals for a more accurate current measurement. Ohmite’s proprietary Metal Foil technology offers an excellent Temperature Coefficient of Resistance (TCR) even for very low resistance values (down to 50ppm).



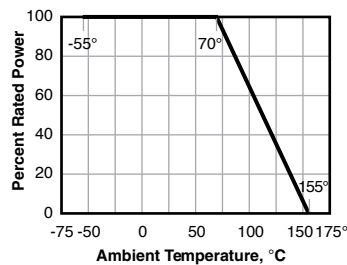
### SERIES SPECIFICATIONS

Series	Pkg. Size	Power Rating (W @70°C)	Resistance Range ( $\Omega$ )	TCR (ppm/°C)	Tolerance
FC4T	1206	0.5W	0.005-0.100	50ppm	0.5%, 1%

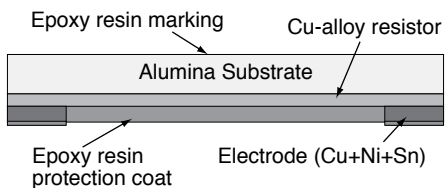
### CHARACTERISTICS

<b>Resistance</b>	0.005-0.100
<b>Operating Temp. Range</b>	-55°C to +155°C
<b>Rated Power</b>	0.5 watt
<b>Resistance Tolerance</b>	0.5% and 1% standard
<b>Temperature Coefficient</b>	within $\pm 50$ ppm, $\pm 100$ ppm for 5m $\Omega$
<b>Coating Material</b>	Epoxy resin
<b>Terminals</b>	Cu/Ni/Sn
<b>Max. Current</b>	$\sqrt{(\text{Max. power} \div \text{Resistance value})}$
<b>Res. of Electrodes</b>	<5m $\Omega$

#### Derating

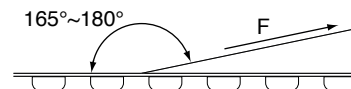


#### Construction



#### Peeling Strength of Seal Tape

F = Peel-back force: 0.1 - 0.7N (10 - 71gf)



(continued)

# FC4T Series

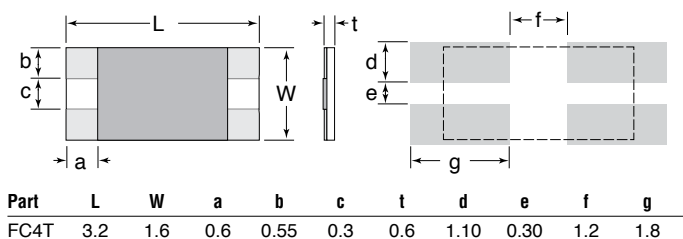
## Metal Foil Low Value Chip

### PERFORMANCE CHARACTERISTICS

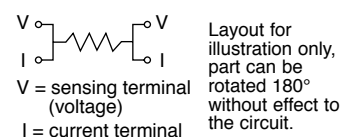
Test Items	Performance	Test Methods
Short time overload	$\pm(1.0\%+0.5m\Omega)$	$P=2.5Pr$ ; $T=25 \pm 2^\circ C$ , $t=5sec.$ ; IEC60115-1 4.13
High Temp. Exposure	$\pm(1.0\%+0.5m\Omega)$	$T=+170 \pm 2^\circ C$ ; $t=1000h$ ; IEC60115-1 4.25
Low Temp. Storage	$\pm(1.0\%+0.5m\Omega)$	$T=-55 \pm 2^\circ C$ ; $t=1000h$ ; IEC60115-1 4.25
Moisture Load Life	$\pm(2.0\%+0.5m\Omega)$	$V_{test}=V_{max}$ ; $T=60 \pm 2^\circ C$ ; $RH=95\%$ ; $t=90min$ ON, 30min OFF, 1000h; IEC60115-1 4.25 (60°C, 95%RH)
Thermal Shock	$\pm(1.0\%+0.5m\Omega)$	$-55^\circ C$ 30min. / R.T. 3min. / $+150^\circ C$ 30min. / R.T. 3min ], 100cycles; IEC60115-1 4.19
Load Life at 70°C	$\pm(2\%+0.5m\Omega)$	$V_{test}=V_{max}$ ; $T=70 \pm 2^\circ C$ ; $t=90min$ ON; IEC60115-1 4.25
Solderability	The covered area >95%	Dip into solder at $T=245 \pm 5^\circ C$ , $t=3 \pm 0.5sec.$ ; IEC60115-1 4.17
Resistance to Solder Heat	$\pm(1.0\%+0.5m\Omega)$	Through Reflow $T=275 \pm 5^\circ C$ , $t=20 \pm 1sec.$ ; IEC60115-1 4.18
Mechanical Shock	$\pm(1.0\%+0.5m\Omega)$	$a=100G$ , $t=11ms$ , 5 times shock; IEC60115-1 4.21
Substrate Bending	$\pm(1.0\%+0.5m\Omega)$	Span between fulcrums 90mm; bend width 2mm; test board glass-epoxy; Thickness=1.6mm; IEC60115-1 4.33

### DIMENSIONS

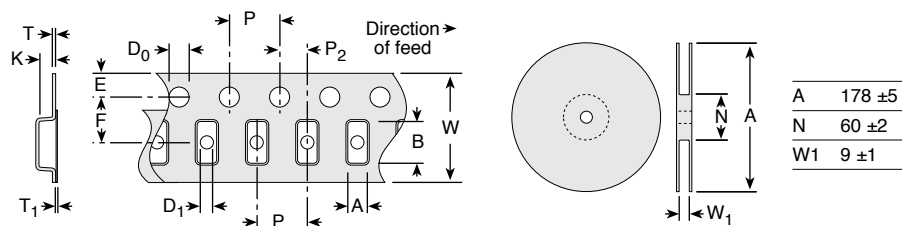
(mm  $\pm 0.2$ )



#### Schematic



#### Tape and Reel



Part	W	P	P2	A	B	D0	F	E	T	T1	K
FC4T	8.00 $\pm 0.30$	4.00 $\pm 0.10$	2.00 $\pm 0.10$	2.05 $\pm 0.20$	3.65 $\pm 0.20$	1.50 $\pm 0.10$	3.50 $\pm 0.10$	1.75 $\pm 0.10$	0.20 $\pm 0.10$	Max. 0.1	0.85 $\pm 0.20$

### ORDERING INFORMATION

RoHS Compliant

**FC4TR010DER**

Series      Ohms      Tolerance      Tape & Reel

F = 1%      D = 0.5%      5000/reel

#### Standard Part Numbers

1%	0.5%
FC4TR005FER	FC4TR010DER
FC4TR010FER	FC4TR015DER
FC4TR015FER	FC4TR050DER
FC4TR050FER	FC4TR100DER
FC4TR100FER	