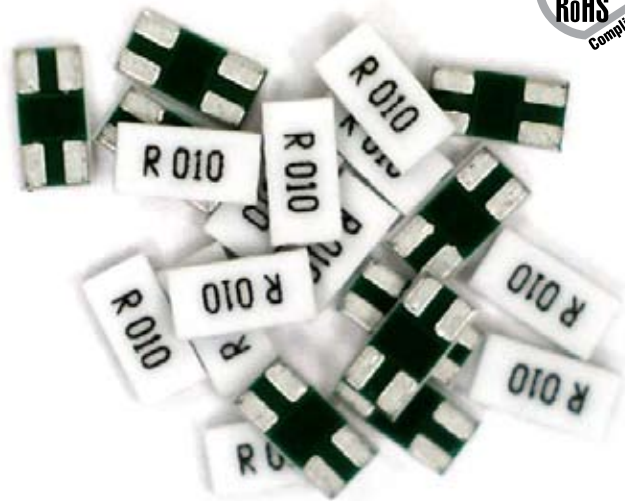


# FC4T Series

## 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).



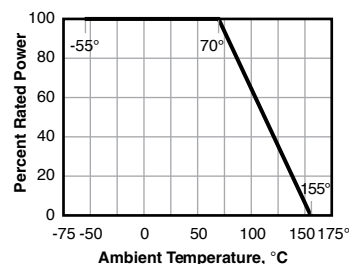
### SERIES SPECIFICATIONS

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%

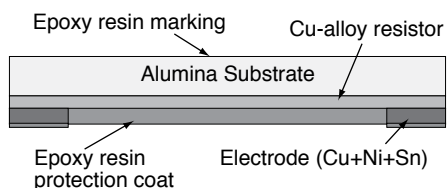
### CHARACTERISTICS

<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

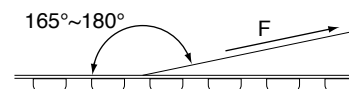


#### Construction



#### Peeling Strength of Seal Tape

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



(continued)

# FC4T Series

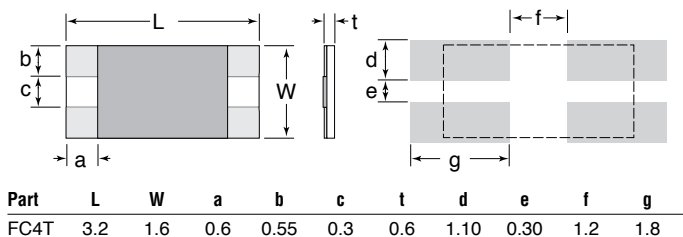
## Metal Foil Low Value Chip

### PERFORMANCE CHARACTERISTICS

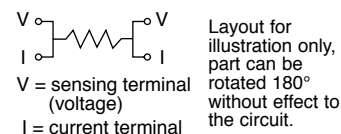
Test Items	Performance	Test Methods
Short time overload	$\pm(1.0\%+0.5m\Omega)$	$P=2.5Pr$ ; $T=25 \pm 2^\circ C$ ; $t=5sec.$ ; IEC60115-1 4.13
High Temp. Exposure	$\pm(1.0\%+0.5m\Omega)$	$T=+170 \pm 2^\circ C$ ; $t=1000h$ ; IEC60115-1 4.25
Low Temp. Storage	$\pm(1.0\%+0.5m\Omega)$	$T=-55 \pm 2^\circ C$ ; $t=1000h$ ; 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

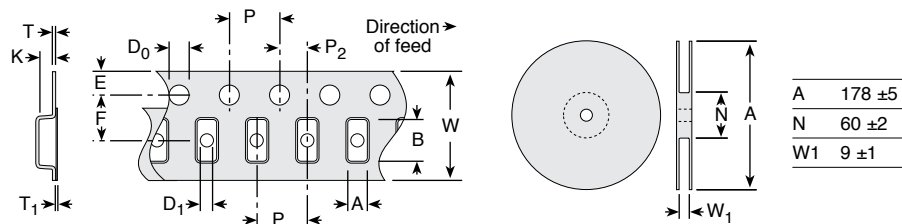
(mm  $\pm 0.2$ )



#### 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	

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Ohmite:](#)

[FC4TR010DER](#) [FC4TR005FER](#) [FC4TR050FER](#) [FC4TR010FER](#) [FC4TR050DER](#) [FC4TR015DER](#) [FC4TR015FER](#)  
[FC4TR100FER](#) [FC4TR100DER](#)