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).



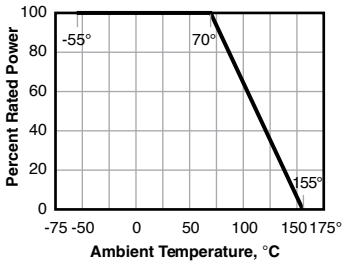
SERIES SPECIFICATIONS

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

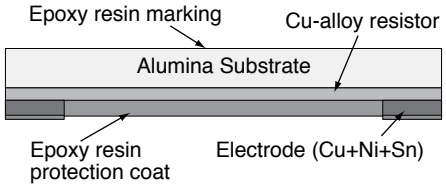
CHARACTERISTICS

Resistance	0.005-0.100
Operating Temp. Range	-55°C to +155°C
Rated Power	0.5 watt
Resistance Tolerance	0.5% and 1% standard
Temperature Coefficient	within ±50ppm, ±100ppm for 5mΩ
Coating Material	Epoxy resin
Terminals	Cu/Ni/Sn
Max. Current	√(Max. power÷ Resistance value)
Res. of Electrodes	<5mΩ

Derating

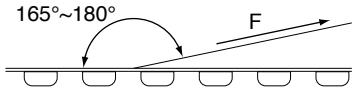


Construction



Peeling Strength of Seal Tape

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



(continued)

FC4T Series

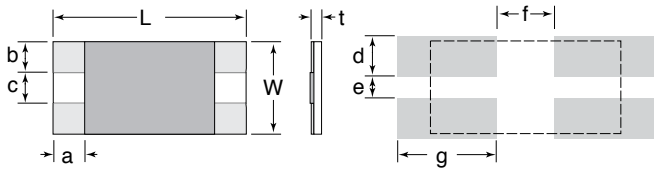
Metal Foil Low Value Chip

PERFORMANCE CHARACTERISTICS

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

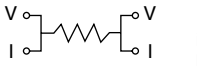
DIMENSIONS

(mm ±0.2)



Part	L	W	a	b	c	t	d	e	f	g
FC4T	3.2	1.6	0.6	0.55	0.3	0.6	1.10	0.30	1.2	1.8

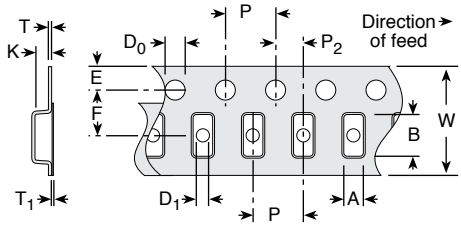
Schematic

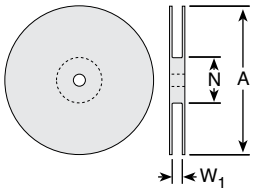


V = sensing terminal (voltage)
I = current terminal

Layout for illustration only, part can be rotated 180° without effect to the circuit.

Tape and Reel





A	178 ±5
N	60 ±2
W1	9 ±1

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

ORDERING INFORMATION

RoHS Compliant

F C 4 T R 0 1 0 D E R

Series	Ohms	Tolerance	Tape & Reel
		F = 1%	5000/reel
		D = 0.5%	

Standard Part Numbers

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

rev 1/18-3

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Authorized Distributor

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