



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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# CS5 Series

## High Power Precision Current Sense



The CS5 is a high power precision current sensing resistor designed with four terminals. This resistor series is distinguished by excellent long term stability & TCR. The Kelvin connections allow high precision measurements even with low resistance values. The CS5 series has a non-inductive copper manganin element inserted into a cement sealed ceramic case.

### FEATURES

- Values beginning at one milliohm
- Non Inductive Design
- Four terminal Kelvin connection

### APPLICATIONS

- Power modules
- Frequency converters
- Switch mode power supplies

### SERIES SPECIFICATIONS

Series	Power Rating (W)*	Resistance Range (mΩ)	Resistance Tolerance (%)	TCR (ppm/°C)
CS5	5W	1m, 2m, 3m, 4m	±0.5, ±1	±30ppm/°C

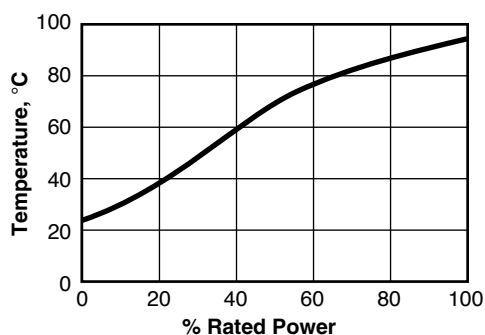
\* Max.current 60A at 1mΩ

### CHARACTERISTICS

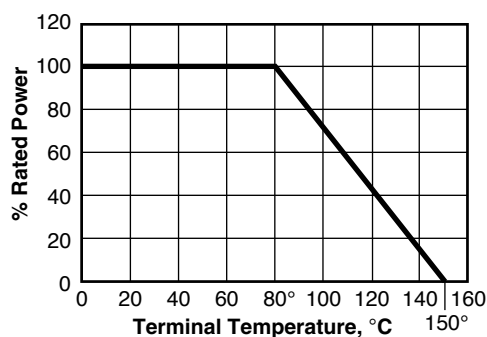
Temperature Range	-25°C~+150°C
Insulation Resistance	20MΩ min. at DC500V
Temp. Coefficient	30ppm/°C max.
Dielectric Withstanding Voltage	AV 1500V for 1 minute

Test Method	Max. ΔR
Load Life (1,000 hours at rated power at 70°C)	1.0%+0.05Ω max.
Short Time Overload (Mil-Std-202, Method 106, Cond. A)	0.5%+0.05Ω max.
Stability (Mil-Std-202, Method 107)	0.1%+0.05Ω max.

### Surface Temperature Increase Versus Power Load



### Derating



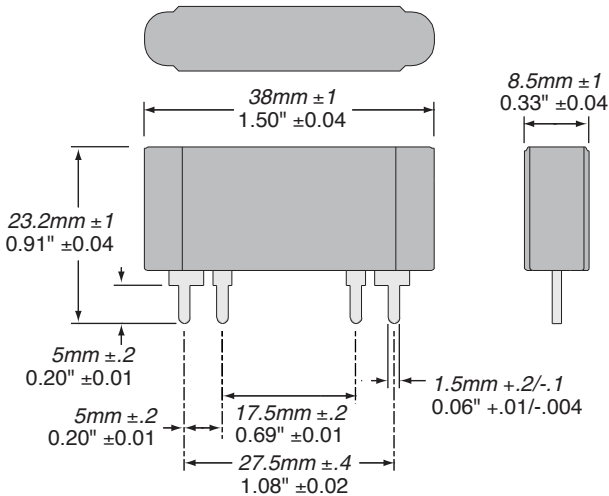
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# CS5 Series

## High Power Precision Current Sensing

DIMENSIONS

(mm/in.)



ORDERING INFORMATION

CS5FR001E

Series Wattage Tolerance Resistance RoHS compliant

D = 0.5% F = 1%

Standard part numbers for CS5 series	
1%	0.5%
CS5FR001E	CS5DR001E
CS5FR002E	CS5DR002E
CS5FR003E	CS5DR003E
CS5FR004E	CS5DR004E