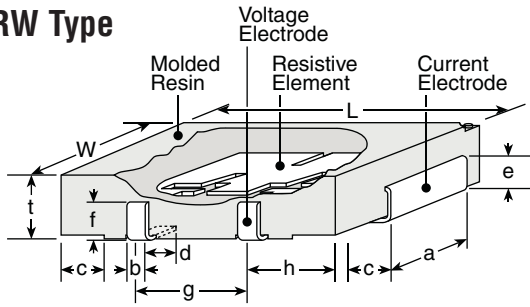


# Four-terminal Current Sense Resistor

## RW Type



Type	Power Rating (watts)	Resistance Range E-12 (mΩ)	Resistance Tolerance	Dielectric Withstanding Voltage	TCR (ppm/°C) Max.
RW1S0CK	1	5mΩ - 50mΩ	1%	500V	±50
RW2S0DK	2	5mΩ - 50mΩ	1%	500V	±50

## DIMENSIONS inches (mm)

Type	L	W	t	a	b	c	d	e	f	g	h
RW1S0CK	0.425±.02 (10.8±0.5)	0.244±.012 (6.2±0.3)	0.083±.008 (2.1±0.2)	0.118±.012 (3.0±0.3)	0.031±.008 (0.8±0.2)	0.055±.02 (1.4±0.5)	0.047±.02 (1.2±0.5)	0.051±.012 (1.3±0.3)	0.051±.012 (1.3±0.3)	0.197±.004 (5.0±0.1)	0.098±.004 (2.5±0.1)
RW2S0DK	0.504±.02 (12.8±0.5)	0.323±.012 (8.2±0.3)	0.122±.008 (3.1±0.2)	0.197±.012 (5.0±0.3)	0.039±.008 (1.0±0.2)	0.079±.02 (2.0±0.5)	0.079±.02 (2.0±0.5)	0.087±.012 (2.2±0.3)	0.087±.012 (2.2±0.3)	0.236±.004 (6.0±0.1)	0.118±.004 (3.0±0.1)

## PERFORMANCE CHARACTERISTICS

Parameter	Requirement Limit	ΔR Typical	Test Method
Resistance	Within regulated tolerance	—	25°C
T.C.R.	Within specified T.C.R.	—	+25°C/-55°C and +25°C/+125°C
Overload	±1.0%	±1.0%	Rated power x 5 for 5 seconds
Resistance to Solder Heat	±1.0%	±1.0%	260°C ± 5°C, 10 seconds ± 1 second
Rapid Change of Temperature	±1.0%	±0.5%	-55°C (30 minutes), +125°C (30 minutes), 500 cycles
Moisture Resistance	±2.0%	±0.5%	40°C ± 2°C, 90 - 95% RH, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
Endurance at 70°C	±1.0%	±0.5%	70°C ± 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
Low Temperature Operation	±0.5%	±0.25%	-55°C, 1 hour
High Temperature Exposure	±0.5%	±0.25%	+125°C, 100 hours

## STOCK PART NUMBERS AVAILABLE

Wattage:	1 watt		2 watt	
Tolerance:	1%	0.5%	1%	
Ohms	Series:	RW1S0CK---FT	RW1S0CK---DT	RW2S0DK---FT
0.00500	RW1S0CKR005FT	RW1S0CKR005DT	RW2S0DKR005FT	
0.01000	RW1S0CKR010FT	RW1S0CKR010DT	RW2S0DKR010FT	
0.02500	RW1S0CKR025FT	RW1S0CKR025DT	RW2S0DKR025FT	
0.05000	RW1S0CKR050FT	RW1S0CKR050DT	RW2S0DKR050FT	

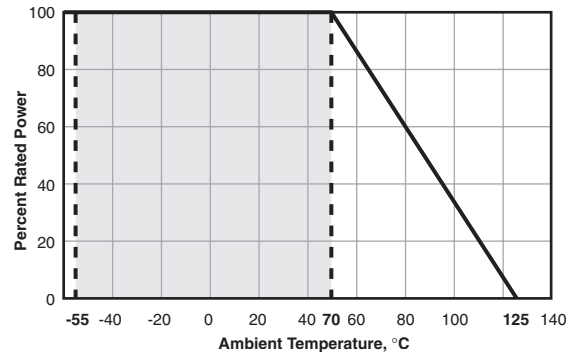
## FEATURES

- Extremely low resistance and high precision tolerance
- Low T.C.R. achieved (±50ppm/°C)
- Flameproof UL94-V-0
- Marking: Black body color with white marking

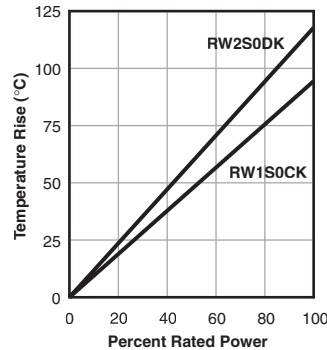
## SPECIFICATIONS

TCR max.: ±50 ppm/°C  
 Rated Ambient Temp: +70°C  
 Oper. Temp. Range:  
 -55°C - +125°C

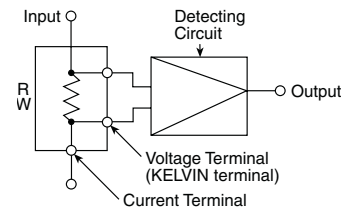
## DERATING



## SURFACE TEMP. RISE



## TYPICAL SCHEMATIC



## ORDERING INFORMATION

E = RoHS compliant Available Jan. 2006

**RW1S0CKR005FE-T**

Type & Power Rating	Ohms	Tolerance	Terminal Type
R005 = 0.005Ω	F = 1%	T = tape and reel (optional)	
R050 = 0.05Ω	D = 0.5%		

The part itself will be marked as follows:

**CSR1**  
**10m ohms D** — Tolerance  
 F = 1%  
 D = 0.5%

Ohms  
 10m ohms = 0.01Ω