

FEATURES

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

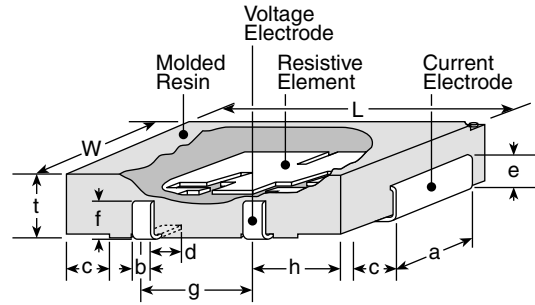
SPECIFICATIONS

TCR max.: ± 50 ppm/ $^{\circ}$ C
 Rated Ambient Temp: $+70^{\circ}$ C
 Oper. Temp. Range:
 -55° C - $+125^{\circ}$ C

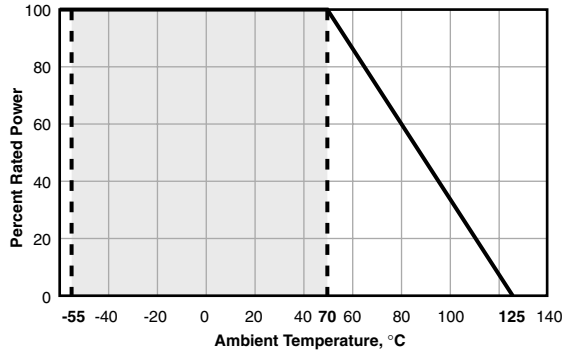


RW1/RW2 Series

Surface Mount Four Terminal Current Sense

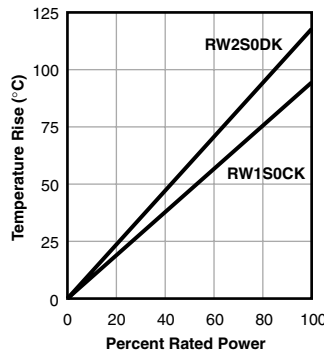
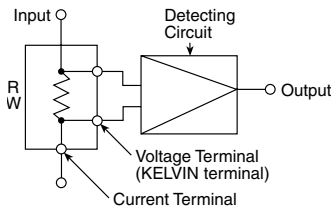


DERATING



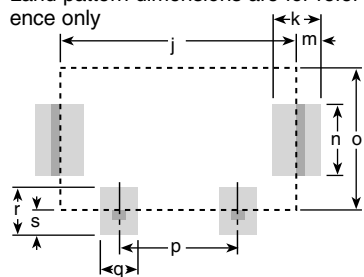
Type	Power Rating (watts)	Resistance Range E-12 (m Ω)	Resistance Tolerance	Dielectric Withstanding Voltage	TCR (ppm/ $^{\circ}$ C) Max.	Qty./Reel
RW1S0CK	1	5m Ω - 50m Ω	1%	500V	± 50	1000
RW2S0DK	2	5m Ω - 50m Ω	1%	500V	± 50	1000

TYPICAL SCHEMATIC SURFACE TEMP. RISE



LAND PATTERN

Land pattern dimensions are for reference only



DIMENSIONS inches (mm)

	RW1S0CK	RW2S0DK
L	0.425 \pm 0.02 (10.8 \pm 0.5)	0.504 \pm 0.02 (12.8 \pm 0.5)
W	0.244 \pm 0.012 (6.2 \pm 0.3)	0.323 \pm 0.012 (8.2 \pm 0.3)
t	0.083 \pm 0.008 (2.1 \pm 0.2)	0.122 \pm 0.008 (3.1 \pm 0.2)
a	0.118 \pm 0.012 (3.0 \pm 0.3)	0.197 \pm 0.012 (5.0 \pm 0.3)
b	0.031 \pm 0.008 (0.8 \pm 0.2)	0.039 \pm 0.008 (1.0 \pm 0.2)
c	0.055 \pm 0.02 (1.4 \pm 0.5)	0.079 \pm 0.02 (2.0 \pm 0.5)
d	0.047 \pm 0.02 (1.2 \pm 0.5)	0.079 \pm 0.02 (2.0 \pm 0.5)
e	0.051 \pm 0.012 (1.3 \pm 0.3)	0.087 \pm 0.012 (2.2 \pm 0.3)
f	0.051 \pm 0.012 (1.3 \pm 0.3)	0.087 \pm 0.012 (2.2 \pm 0.3)
g	0.197 \pm 0.004 (5.0 \pm 0.1)	0.236 \pm 0.004 (6.0 \pm 0.1)
h	0.098 \pm 0.004 (2.5 \pm 0.1)	0.118 \pm 0.004 (3.0 \pm 0.1)
j	0.39 (10.0)	0.47 (12.0)
k	0.08 (2.0)	0.09 (2.3)
m	0.04 (1.0)	0.05 (1.15)
n	0.12 (3.0)	0.21 (5.3)
o	0.24 (6.0)	0.31 (8.0)
p	0.20 (5.0)	0.24 (6.0)
q	0.06 (1.6)	0.09 (2.2)
r	0.08 (2.0)	0.13 (3.2)
s	0.04 (1.0)	0.06 (1.6)

PERFORMANCE CHARACTERISTICS

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

ORDERING INFORMATION

RoHS Compliant

RW1S0CKR005FET

Type & Power Rating	Ohms	Tolerance	Packaging
RW1S0CK = 1 watt	R005 = 0.005 Ω	F = 1%	T = tape and reel (optional)
RW2S0DK = 2 watt	R050 = 0.05 Ω	D = 0.5%	

The part itself will be marked as follows:

Current Sense Resistor Power Rating (watts)

CSR1

10m ohms D — Tolerance

Ohms 10m ohms = 0.01 Ω

F = 1% D = 0.5%

STANDARD PART NUMBERS FOR RW SERIES

Wattage:	1 watt	2 watt	
Tolerance:	1%	0.5%	1%
Ohms Series:	RW1S0CK----FET	RW1S0CK----DET	RW2S0DK----FET
0.00500	RW1S0CKR005FET	RW1S0CKR005DET	RW2S0DKR005FET
0.01000	RW1S0CKR010FET	RW1S0CKR010DET	RW2S0DKR010FET
0.02500	RW1S0CKR025FET	RW1S0CKR025DET	RW2S0DKR025FET
0.05000	RW1S0CKR050FET	RW1S0CKR050DET	RW2S0DKR050FET

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