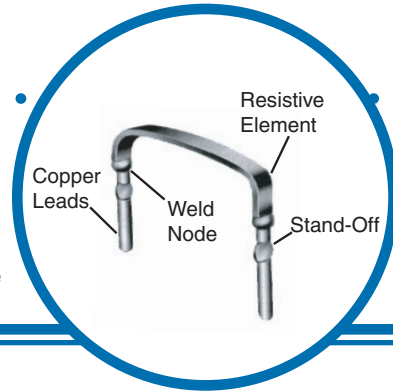


# Open Air Current Sense Resistors

## OAR Series

- TCR's to  $\pm 20\text{ppm}/^\circ\text{C}$
- Power ratings of 1, 3, & 5W @  $85^\circ\text{C}$
- Resistance range from  $2.5\text{m}\Omega$  to  $100\text{m}\Omega$
- Open air design maximizes thermal performance
- Welded copper leads minimize effects from solder wicking and provide true 1% performance



### Features:

- Welded construction
- Flameproof
- Inductance less than 10 nanohenries
- Solderable copper leads (60/40)

### Applications:

- Current sensing
- Feedback
- Low inductance
- Surge and pulse

## Electrical Data

Part Number	Power Rating @ $85^\circ\text{C}$ (watts)	Resistance Range ( $\text{m}\Omega$ )	Tolerance ( $\pm\%$ )	TCR ( $\pm\text{ppm}/^\circ\text{C}$ )	Inductance (nH)
OAR-1	1.0	3, 5, 10, *20, *25, 50	1, 2 <sup>1</sup> , 5	20	<10
OAR-3	3.0	2.5, 5, 10, 15, 20, 25, *30, 50, 100			
OAR-5	5.0	3, 5, 10, *15, *20, *25, *50			

#### Notes:

<sup>1</sup>  $\pm 2\%$  tolerance available  $<0.005\text{m}\Omega$

\* denotes resistance values that may have longer lead times than other values listed

\* Please contact factory for resistance values not listed

## Environmental Data

Load Life (1000 hours @ $25^\circ\text{C}$ )	$\Delta R/R < 1\%$
Moisture (no load for 1000 hours)	$\Delta R/R < 1\%$
Temperature Cycling ( $-40^\circ\text{C}$ to $+125^\circ\text{C}$ for 1000 cycles)	$\Delta R/R < 1\%$
Operating Temperature	$-40^\circ\text{C}$ to $+125^\circ\text{C}$

### General Note

IRC reserves the right to make changes in product specification without notice or liability. All information is subject to IRC's own data and is considered accurate at time of going to print.

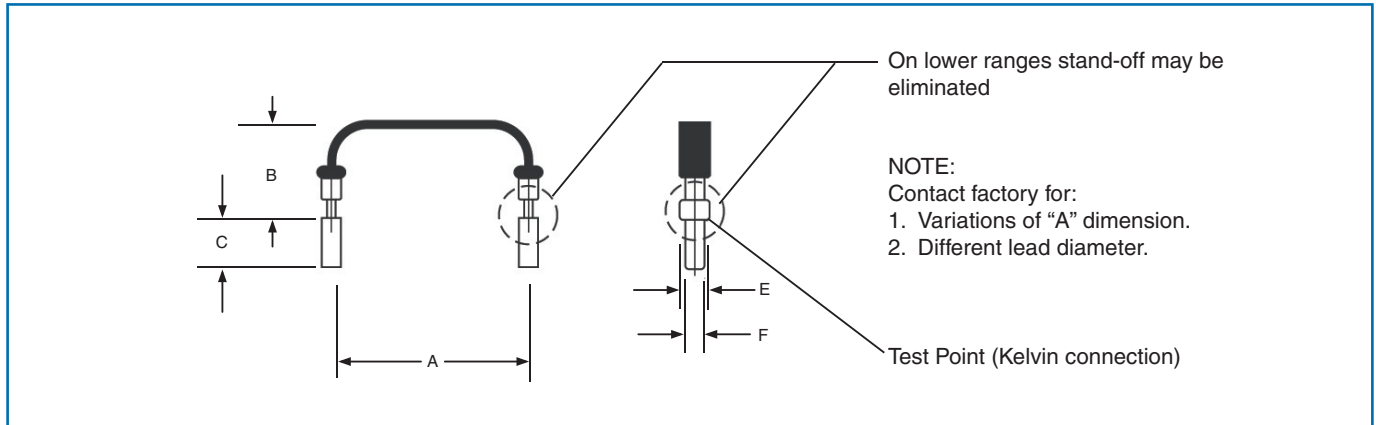
Wire and Film Technologies Division • 4222 South Staples Street • Corpus Christi Texas 78411 USA  
Telephone: 361 992 7900 • Facsimile: 361 992 3377 • Website: www.irc-tt.com



A subsidiary of  
TT electronics plc

# Open Air Current Sense Resistors

## Physical Data



Dimensions (Inches and (mm))

IRC Type	A	B	C	E	F
OAR-1	0.450 +0.040/-0.020 (11.43 +1.020/-0.508)	0.200 ±0.100 (5.08 ±2.54)	0.125 ±0.030 (3.18 ±0.762)	0.065 +0.010/-0.005 (1.65 +0.254/-0.127)	0.040 ±0.002 (1.02 ±0.051)
OAR-3	0.600 +0.040/-0.020 (15.24 +1.020/0.508)	0.600 Typ (15.3 max.)	0.125 ±0.030 (3.18 ±0.762)	0.065 +0.010/-0.005 (1.65 +0.254/-0.127)	0.040 ±0.002 (1.02 ±0.051)
OAR-5	0.800 +0.040/-0.020 (20.32 +1.020/-0.508)	0.350 Typ (8.9 max.)	0.125 ±0.030 (3.18 ±0.762)	0.065 +0.010/-0.005 (1.65 +0.254/-0.127)	0.040 ±0.002 (1.02 ±0.051)

## Ordering Data

Sample Part No. .... **OAR** **1** **R100** **F** **LF**

IRC Style • .....  
OAR

Power Rating in Watts • .....  
1 = 1W  
3 = 3W  
5 = 5W

Resistance Range • .....  
'R' indicates decimal point location

Tolerance • .....  
F = ±1%, G = ±2%, J = ±5%

RoHS Indicator • .....  
LF indicates RoHS compliance  
Blank indicates Sn/Pb terminal  
tinning; available on special request