# 14A Series

## Alumina Body Current Sense

14AFR Current Sense resistors feature a high temperature ceramic body which affords the user a product with densities than similar products which utilize silicone based epoxy molding compounds. The internal construction involves a straight, low inductance, 3-piece welded metal element at 1% tolerance. This series is stocked in 9 popular resistance values for easy accessibility.



## FEATURES

- Ideal for current sensing applications
- 1% Tolerance standard
- Fixed resistance measuring point
- Low inductance
- RoHS compliant

## SPECIFICATIONS

**Material**

**Terminals:** Solder-plated copper terminals or copper clad steel depending on ohmic value.

**Encapsulation:** Ceramic cased body

**Derating:** Linearly from 4W@70°C to 0W@250°C

**Electrical**

**Max.Voltage:** $\sqrt{(PxR)}$ RMS

**Climatic Category:** 55/200/56

**TCR:** Varies from +150 to +1100ppm/°C based on resistance value. TCR increases as resistance value reduces from 51 to 4milliohms. TCR is tested as per IEC Specification 115-1 Clause 4.8.4.2

**Tolerance:** ±1% standard. Others available.

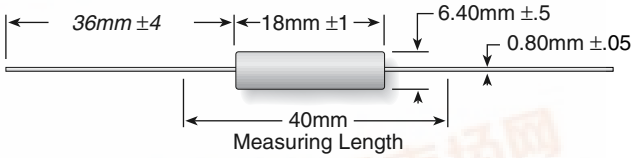
**Power rating:** 4W@70°C

**Dielectric withstanding voltage:** 1000 VRMS for 3 and 5 watt; 500 VRMS for 2 watt.

**Insulation resistance:** Not less than 1000MΩ.

**Thermal EMF:** Less than ±2µV/°C.

**Temperature range:** -55°C to 275°C.




| Series | Wattage | Ohms | Dimensions (in. / *mm*) Length | Diam. | "M" | Lead |
|---|---|---|---|---|---|---|
| 14A | 4 | 0.004-0.051 | 0.709 / 18 | 0.252 / 6.40 | 1.575 / 40 | 0.031/0.80 |

## ORDERING INFORMATION

Wattage | A = Alumina Molded Body | RoHS Compliant

**1 4 A F R 0 5 1 E**

10 Series | Tolerance F = 1% | Ohm Value Example: R050= 0.05Ω

Check product availability at **www.ohmite.com**

## PERFORMANCE CHARACTERISTICS

| Test | Condition | Maximum ΔR |
|---|---|---|
| Endurance at Rated Power | 1000hrs Test | ΔR <5% |
| Terminal Strength | Pull Strength of 50N for 10sec, IEC115-1, Clause 4.16 Test Ua1 | |
| Solderability | 95% Coverage as per MIL STD 202F, Test 208 | |
| Resistance to Solder Heat | -260°C for 10sec as per IEC115-1, Clause 4.18 | ΔR <0.5% |
| Long Term Damp Heat | -90-95% RH @40°C for 56 Days, IEC115-1, Clause 4.24 | ΔR <5% |
| Climatic Sequence | As per IEC 115-1, Clause 4.23 | ΔR <5% |
| Overload | 5 times rated wattage for 5 seconds | |

## STD. PART NUMBERS

| Ohmic value | Part Number |
|---|---|
| 0.004 | 14AFR004E |
| 0.005 | 14AFR005E |
| 0.008 | 14AFR008E |
| 0.010 | 14AFR010E |
| 0.015 | 14AFR015E |
| 0.022 | 14AFR022E |
| 0.033 | 14AFR033E |
| 0.047 | 14AFR047E |
| 0.051 | 14AFR051E |