14A Series
Alumina Body Current Sense

14AFR Current Sense resistors feature a high temperature ceramic body which affords the user higher power 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.

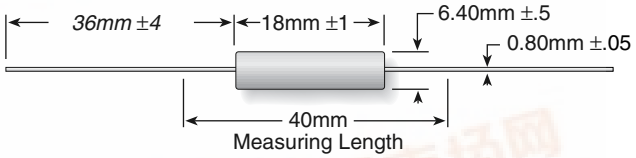
Power rating: 4W@70°C

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