14A Series

Alumina Body Current Sense

FEATURES

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

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.

SERIES SPECIFICATIONS

Series	Wattage	Ohms
14A	4	0.004-0.051

CHARACTERISTICS

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
Max.Voltage	√(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.

(continued)

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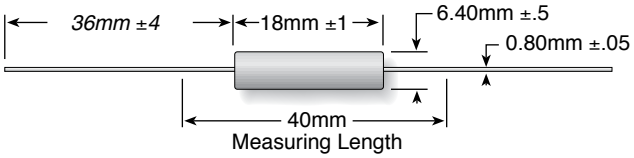
DIMENSIONS

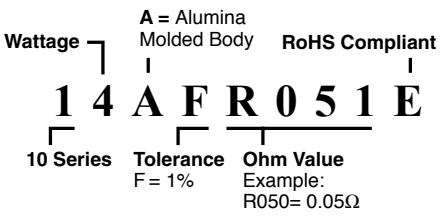


Series	Wattage	Length	Diam.	"M"	Lead
14A	4	0.709 / 18	0.252 / 6.40	1.575 / 40	0.031/0.80

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	

ORDERING INFORMATION



Standard 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