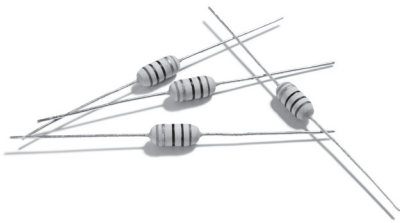


Wirewound Resistors

Fusible & Anti-Explosion Type

Normal & Miniature Style [FAE Series]



INTRODUCTION

FAE series is wirewound resistor capable of acting both as a regular resistor, and as a fuse when an abnormal current is received. There will be no flames, no explosion, no sound and no arc happened when fusing. FAE series offers space saving and a cost advantage, and is specifically designed to meet customer's requirements.

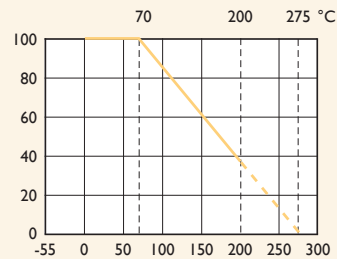
FEATURES

Power Rating	1/2W, 1W, 2W, 3W
Resistance Tolerance	±1%, ±5%
T.C.R.	±300ppm/°C
Flameproof Multi-layer Coating Meets	UL-94V-0
Flameproof Feature Meets Overload Test	UL-1412

DERATING CURVE

For resistors operated in ambient temperatures above 70°C, power rating must be derated in accordance with the curve below.

Rated Load (%)



Ambient Temperature (°C)

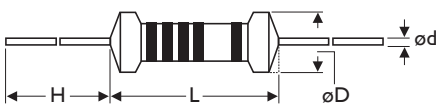
FUSING CHARACTERISTICS

Fuse within 60 seconds when receiving 25 times the power rating.
(Fusing power and time can be designed on customer's request)

Fusing residual resistive value at least 100 times of rated resistance. No flames, no explosion, no sound and no arc occur when fusing.

DIMENSIONS

Unit: mm



STYLE		DIMENSION			
Normal	Miniature	L	øD	H	ød
-	FAE50S/FAE1SS	6.3±0.5	3.0±0.5	28±2.0	0.55±0.05
FAE-50	FAE1WS	9.0±0.5	3.8±0.5	26±2.0	0.55±0.05
FAE100	FAE2WS	11.5±1.0	5.5±0.5	35±2.0	0.8±0.05
FAE200	FAE3WS	15.5±1.0	6.0±0.5	33±2.0	0.8±0.05

Note:

ELECTRICAL CHARACTERISTICS

STYLE	FAE50S	FAEISS	FAE-50	FAEIWS	FAEI00	FAE2WS	FAE200	FAE3WS
Power Rating at 70°C	1/2W	1W	1/2W	1W		2W		3W
Maximum Working Voltage	$\sqrt{P \times R}$							
Voltage Proof on Insulation	300V		400V	500V				
Resistance Range	3.3Ω - 100Ω for E24 & E96 series value							
Operating Temp. Range	-55°C to +200°C							
Temperature Coefficient	±300ppm/°C							

Note: Special value is available on request

ENVIRONMENTAL CHARACTERISTICS

PERFORMANCE TEST	TEST METHOD		APPRAISE
Short Time Overload	IEC 60115-1 4.13	10 times rated power for 5 Sec.	±2.0%+0.05Ω
Voltage Proof on Insulation	IEC 60115-1 4.7	In V-Block for 60 sec., test voltage as above table	No Breakdown
Temperature Coefficient	IEC 60115-1 4.8	Between -40°C to +155°C	By type
Insulation Resistance	IEC 60115-1 4.6	in V-block for 60 Sec.	> 100M
Solderability	IEC 60115-1 4.17	245±5°C for 3±0.5 Sec.	95% Min. coverage
Solvent Resistance of Marking	IEC 60115-1 4.30	IPA for 5±0.5 Min. with ultrasonic	No deterioration of coatings and markings
Robustness of Terminations	IEC 60115-1 4.16	Direct load for 10 Sec. in the direction of the terminal leads	≥2.5kg (24.5N)
Periodic-pulse Overload	IEC 60115-1 4.39	4 times RCWV 10,000 cycles (1 Sec. on, 25 Sec. off)	±1.0%+0.05Ω
Damp Heat Steady State	IEC 60115-1 4.24	40±2°C, 90-95% RH for 56 days, loaded with 0.1 times RCWV	±5.0%+0.05Ω
Endurance at 70°C	IEC 60115-1 4.25	70±2°C at RCWV (or Umax., Whichever less) for 1,000 Hr. (1.5Hr: on, 0.5Hr: Off)	±5.0%+0.05Ω
Temperature Cycling	IEC 60115-1 4.19	-55°C ⇌ Room Temp. ⇌ +155°C ⇌ Room Temp. (5 cycles)	±2.0%+0.05Ω
Resistance to Soldering Heat	IEC 60115-1 4.18	260±3°C for 10±1 Sec., immersed to a point 3±0.5mm from the body	±1.0%+0.05Ω
Accidental overload test	IEC 60115-1 4.26	4 times RCWV for 1 Min.	No evidence of flaming or arcing

Note: RCWV(Rated Continuous Working Voltage) = $\sqrt{\text{Power Rating} \times \text{Resistance Value}}$ or Max. working voltage listed above, whichever less.

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Yageo:

[FAE1WSJR-52-10R](#) [FAE3SSJR-73-22R](#)