Thermal Cut-offs Resistors

Cement Resistors with Thermal Cut-offs - FKU/FRU Series

Ultimate Protection Thermal Cutoffs for High Power Applications

Preview

Fast-acting protection device for high-power applications combines thermal fuse element and resistor on a single substrate.

Token offers FKU (Wirewound Resistor + Thermal Cut-offs) and FRU (Metal Oxide Film Resistor + Thermal Cut-offs) two Series, both are a new concept in thermal fuse technology and are designed to protect against over-heating in electrical products.

The two active components, a thermal cutoff is a fusible alloy and a resistor is a voltage divider, both are surrounded by a ceramic cement with special resin. Under normal operating temperatures the fusible alloy joins the two lead wires within the body of the cutoff and the power resistor acts as a normal function resistor. When the preset temperature of the cutoff is reached, the fusible alloy melts and with the aid of the special resin, complete cutoff is ensured.

By combining a thermal fuse element and resistor on a single substrate, Token has created a fast-acting ultimate protection device for high power applications up to 10A/250V.

Resistance range of FKU Wirewound Type Thermal Cut-offs is 1Ω~100Ω and FRU Metal Oxide Film Type Thermal Cut-offs is 110Ω~10KΩ. Both standard precision tolerance is J(±5%).

Our custom solutions are designed to address your need for technical and economic success in a timely manner. Contact us with your specific needs.

Features

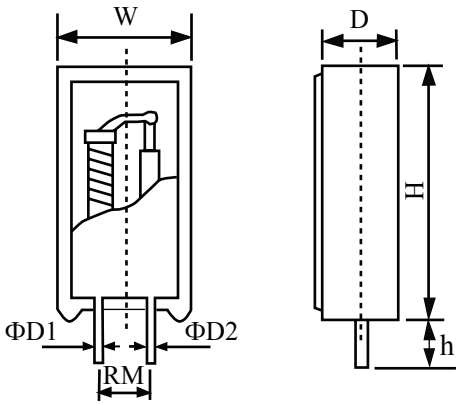
- Miniature size
- Radial leaded form
- Accurate fusing temperature
- Various temperature settings
- Current Rating: Up to 10Amp
- Products with Pb-free Terminations and RoHS compliant
- Economical by combining both function of a thermal fuse and a pulse resistor

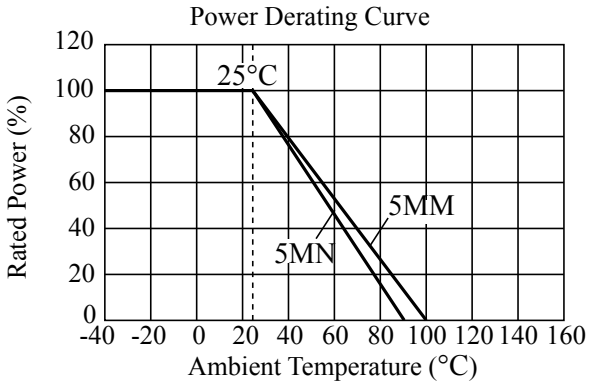


Applications

- Motors - fans, copiers, washing machines, air conditioners, compressors.
- Electronics - TVs, tape recorders, stereos, video recorders, fluorescent lamps, transformers, surge suppressors, computers, telecommunication equipment.
- Appliances - electric blankets, space heaters, stoves, irons, hair dryers, cookers, toaster ovens, clothes dryers, toasters, mixers, microwave ovens, crock pots.

General Specifications (Unit: mm)





Type	Dimension (mm)						
	W ± 1	D ± 1	H ± 1.5	RM+2/-1	h	D1(R terminal)	D2(F terminal)
FKU/FRU-5M	13	9	25	5	4.5 ±1	0.8±0.1	2A:0.6 ±0.1 10A:1.0 ±0.1
FKU/FRU-7M	13	9	38	5			
FKU/FRU-10M	16	12	35	7.5			

Electrical Performance

Fusing Temperature Protector				Rated Power at 25°C (W)			Resistance Range(Ω)		Tolerance(%)	
MARK	Fusing Temperature(°C)	Standard Current(A)	Standard Voltage(V)	5M	7M	10M	FKU	FRU	FKU	FRU
A	109+1/-3	10	250	1.2	1.4	2.0	1~100	110~10K	J(±5) K(±10)	J(±5)
B	129±4			1.6	2.0	2.5				
C	152±4			1.6	2.0	2.5				
D	188+3/-1			2.0	2.4	3.5				
E	226+1/-3			2.0	2.4	3.5				
F	95+3/-0	2		0.8	1.2					
G	110±4			1.2	1.4					
H	126±4			1.4	1.6					
N	130±4			1.6	2.0					
M	145±4			2.1	2.4					

How to Order

FRU	5M	A	10R	K	P
❶	❷	❸	❹	❺	❻

❶ Part Number

Code	Resistance Value
FRU	Metal Oxide type Thermal Cut-offs
FKU	Wirewound type Thermal Cut-offs

❷ Rated Power (W): 5M, 7M, 10M

❸ Thermal Cut-offs (Ω)

Code	Thermal Cut-offs
A	109+1/-3°C
B	129±4°C
C	152±4°C
D	188+3/-1°C
E	226+1/-3°C
F	95+3/-0°C
G	110±4°C
H	126±4°C
N	130±4°C
M	145±4°C

❹ Resistance Value (Ω)

Code	Resistance Value (Ω)
1R	1Ω
10R	10Ω
100R	100RΩ
1K	1000Ω

❹ Resistance Tolerance (%)

Code	Resistance Tolerance (%)
J	±5%
K	±10%

❺ Package

Code	Package
P	Bulk

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