

FRG Series



Application

Wide variety of electronic equipment

Product Features

Very high hold current, Solid state Radial-leaded product ideal for up to 16V_{DC}



Operation Current

2.50 A~14.00A

Maximum Voltage

16V_{DC}



Temperature Range

-40°C to 85°C

Agency Recognition

AGENCY	AGENCY FILE NUMBER
	UL(E211981)
	C-UL(E211981)
	TÜV (R50004084)



SVHC Compliant

Electrical Characteristics (23°C)

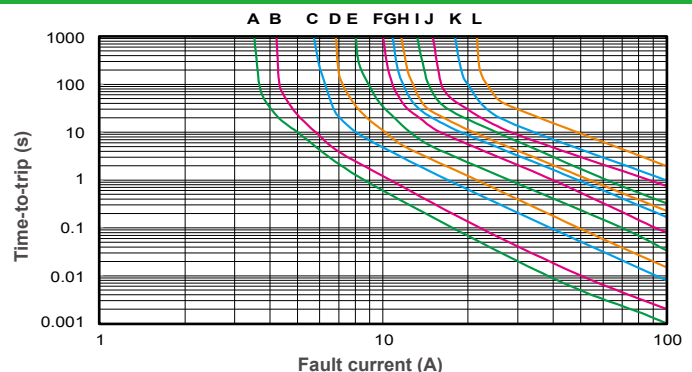
Part Number	Hold Current	Trip Current	Max. Time to trip	Max. Current	Rated Voltage	Typ. Power	Resistance	
							R _{MIN}	R _{1MAX}
	I _H , A	I _T , A	at 5xI _H , s	I _{MAX} , A	V _{MAX} , V _{DC}	P _d , W	Ohms	Ohms
FRG250-16F	2.5	4.7	5.0	100	16	1.0	0.022	0.053
FRG300-16F	3.0	5.1	2.0	100	16	2.3	0.034	0.105
FRG400-16F	4.0	6.8	3.5	100	16	2.4	0.020	0.063
FRG500-16F	5.0	8.5	3.6	100	16	2.6	0.014	0.044
FRG600-16F	6.0	10.2	5.8	100	16	2.8	0.009	0.033
FRG700-16F	7.0	11.9	8.0	100	16	3.0	0.006	0.021
FRG800-16F	8.0	13.6	9.0	100	16	3.0	0.005	0.018
FRG900-16F	9.0	15.3	12.0	100	16	3.3	0.004	0.015
FRG1000-16F	10.0	17.0	12.5	100	16	3.3	0.003	0.012
FRG1100-16F	11.0	18.7	13.5	100	16	3.7	0.003	0.010
FRG1200-16F	12.0	20.4	16.0	100	16	4.2	0.002	0.009
FRG1400-16F	14.0	23.8	20.0	100	16	4.6	0.002	0.008

Thermal Derating for PPTC Device at Various Ambient Temperatures

TEMPERATURE	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	85°C
DERATING %	148%	132%	116%	100%	91%	84%	76%	69%	60%	48%

Typical Time-To-Trip at 23°C

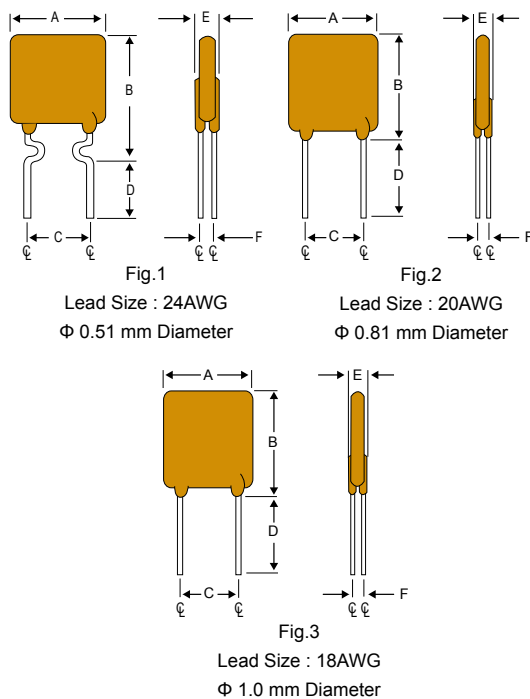
- | | |
|----------------|-----------------|
| A = FRG250-16F | G = FRG800-16F |
| B = FRG300-16F | H = FRG900-16F |
| C = FRG400-16F | I = FRG1000-16F |
| D = FRG500-16F | J = FRG1100-16F |
| E = FRG600-16F | K = FRG1200-16F |
| F = FRG700-16F | L = FRG1400-16F |



NOTE : All Specifications subject to change without notice.

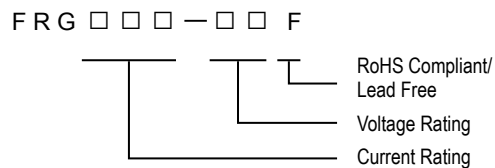
IV - Radial Leaded PPTC

FRG Product Dimensions (mm)

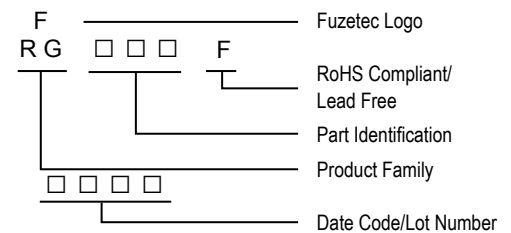


Part Number	Fig.	A	B	C	D	E	F
		Max.	Max.	Typ.	Min.	Max.	Typ.
FRG250-16F	1	8.9	12.8	5.1	7.6	3.0	1.2
FRG300-16F	2	7.1	11.0	5.1	7.6	3.0	1.2
FRG400-16F	2	8.9	12.8	5.1	7.6	3.0	1.2
FRG500-16F	2	10.4	14.3	5.1	7.6	3.0	1.2
FRG600-16F	2	10.7	17.1	5.1	7.6	3.0	1.2
FRG700-16F	2	11.2	19.7	5.1	7.6	3.0	1.2
FRG800-16F	2	12.7	20.9	5.1	7.6	3.0	1.2
FRG900-16F	2	14.0	21.7	5.1	7.6	3.0	1.2
FRG1000-16F	2	16.5	24.1	5.1	7.6	3.0	1.2
FRG1100-16F	2	17.5	26.0	5.1	7.6	3.0	1.2
FRG1200-16F	3	17.5	28.0	10.2	7.6	3.6	1.4
FRG1400-16F	3	27.9	27.9	10.2	7.6	3.6	1.4

Part Numbering System



Part Marking System



Package Information

Part Number	Standard Package
FRG250-16F~FRG300-16F	500 Pcs/Bag, 2.5K Reel/Tape
FRG400-16F~FRG600-16F	300 Pcs/Bag, 2.5K Reel/Tape
FRG700-16F	200 Pcs/Bag, 1.5K Reel/Tape
FRG800-16F~FRG900-16F	200 Pcs/Bag
FRG1000-16F~FRG1400-16F	100 Pcs/Bag

Physical specifications

Lead material	FRG250-16F Tin plated copper clad steel, 24 AWG.
	FRG300-16F~FRG1100-16F Tin plated copper, 20 AWG.
	FRG1200-16F~FRG1400-16F Tin plated copper, 18 AWG.
Soldering characteristics	MIL-STD-202, Method 208E.
Insulating coating	Flame retardant epoxy, meets UL-94V-0 requirement.

Warning :



- Each product should be carefully evaluated and tested for their suitability of application.
- Operation beyond the specified maximum ratings or improper use may result in damage and possible electrical arcing and/or flame.
- PPTC device are intended for occasional overcurrent protection. Application for repeated overcurrent condition and/or prolonged trip are not anticipated.
- Avoid contact of PPTC device with chemical solvent, including some inert material such as silicone based oil, lubricant and etc. Prolonged contact will damage the device performance.
- Additional protection mechanism are strongly recommended to be used in conjunction with the PPTC device for protection against abnormal or failure conditions.
- Avoid use of PPTC device in a constrained space such as potting material, housing and containers where have limited space to accommodate device thermal expansion and/or contraction.