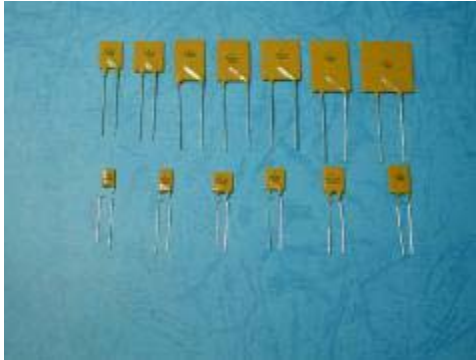


# Radial Leaded PTC FRG Series



**FUZETEC**



**Application:**

Wide variety of electronic equipment

**Product Features:**

Very high hold current, Solid state

Radial-leaded product ideal for up to 16Vdc

**Operation Current:** 3 A~14A

**Maximum Voltage:** 16V

**Temperature Range:** -40°C to 85°C

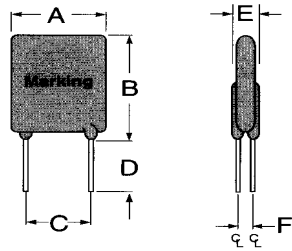
**Agency Approvals:** UL(E211981),  
C-UL(E211981),  
TÜV(R3-5000-4084)

**Electrical Characteristics(23°C)**

Part Number	Hold Current I <sub>H</sub> , A	Trip Current I <sub>T</sub> , A	Max.time to trip at 5x I <sub>H</sub>	Maximum Current I <sub>MAX</sub> , A	Rated Voltage V <sub>MAX</sub> , V <sub>dc</sub>	Typical Power Pd, W	Resistance Tolerance	
							R <sub>MIN</sub> Ω	R <sub>1MAX</sub> Ω
<b>FRG300-16</b>	3.0	5.1	2.0	100	16	2.3	0.034	0.105
<b>FRG400-16</b>	4.0	6.8	3.5	100	16	2.4	0.020	0.063
<b>FRG500-16</b>	5.0	8.5	3.6	100	16	2.6	0.014	0.044
<b>FRG600-16</b>	6.0	10.2	5.8	100	16	2.8	0.009	0.033
<b>FRG700-16</b>	7.0	11.9	8.0	100	16	3.0	0.006	0.021
<b>FRG800-16</b>	8.0	13.6	9.0	100	16	3.0	0.005	0.018
<b>FRG900-16</b>	9.0	15.3	12.0	100	16	3.3	0.004	0.015
<b>FRG1000-16</b>	10.0	17.0	12.5	100	16	3.3	0.003	0.012
<b>FRG1100-16</b>	11.0	18.7	13.5	100	16	3.7	0.003	0.010
<b>FRG1200-16</b>	12.0	20.4	16.0	100	16	4.2	0.002	0.009
<b>FRG1400-16</b>	14.0	23.8	20.0	100	16	4.6	0.002	0.008

I<sub>H</sub>=Hold current-maximum current at which the device will not trip at 23°C still air.  
 I<sub>T</sub>=Trip current-minimum current at which the device will always trip at 23°C still air.  
 V<sub>MAX</sub>=Maximum voltage device can withstand without damage at its rated current.  
 I<sub>MAX</sub>= Maximum fault current device can withstand without damage at rated voltage (V max).  
 Pd=Typical power dissipated from device when in the tripped state in 23°C still air environment.  
 R<sub>MIN</sub>=Minimum device resistance at 23°C.  
 R<sub>1MAX</sub>=Maximum device resistance at 23°C, 1 hour after tripping .  
 Physical specifications:  
 Lead material: FRG300~FRG1100 Tin plated copper,20 AWG.  
 FRG1200~FRG1400 Tin plated copper,18 AWG.  
 Soldering characteristics:MIL-STD-202, Method 208E.  
 Insulating coating:Flame retardant epoxy ,meet UL-94V-O requirement.

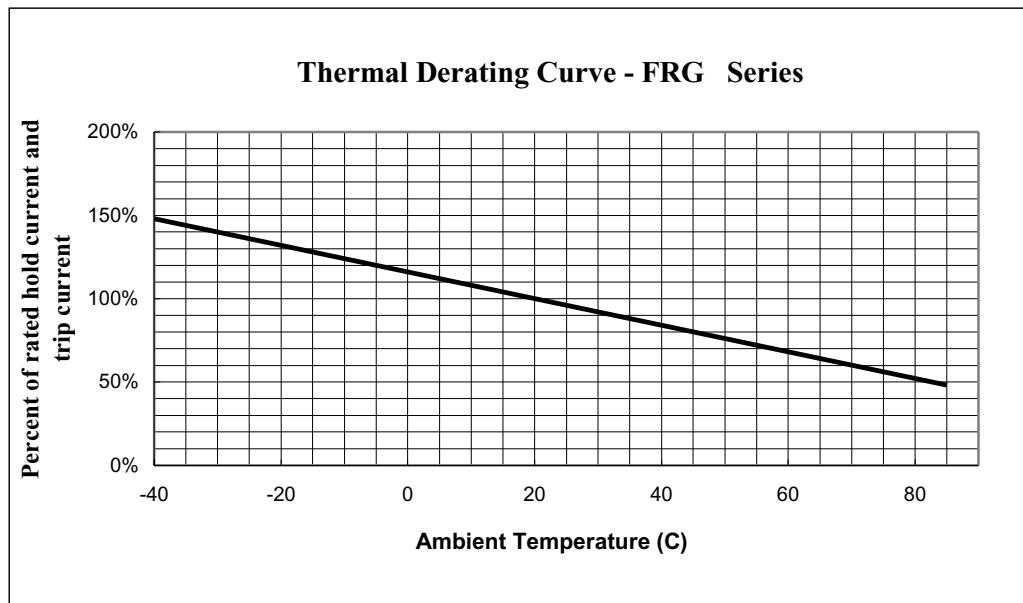
## FRG Product Dimensions (millimeters)



<b>Lead Size</b>	<b>Lead Size</b>
<b>FRG300-16~FRG1100-16</b>	<b>FRG1200-16~FRG1400-16</b>
$\Phi 0.81$ mm Diameter	$\Phi 1.0$ mm Diameter
<b>20AWG</b>	<b>18AWG</b>

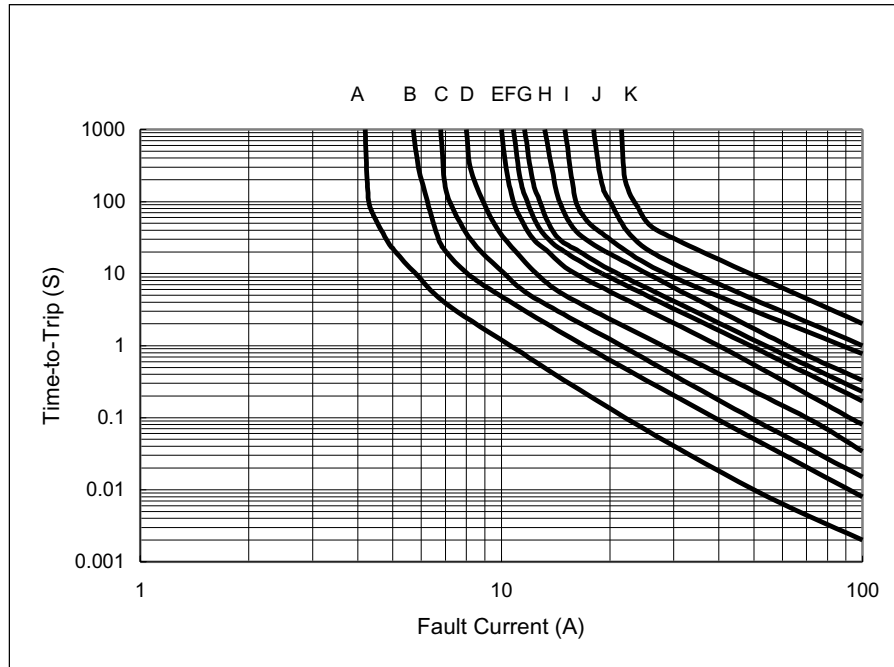
Part Number	A	B	C	D	E	F
	Maximum	Maximum	Typical	Minimum	Maximum	Typical
<b>FRG300-16</b>	7.1	11.0	5.1	7.6	3.0	1.2
<b>FRG400-16</b>	8.9	12.8	5.1	7.6	3.0	1.2
<b>FRG500-16</b>	10.4	14.3	5.1	7.6	3.0	1.2
<b>FRG600-16</b>	10.7	17.1	5.1	7.6	3.0	1.2
<b>FRG700-16</b>	11.2	19.7	5.1	7.6	3.0	1.2
<b>FRG800-16</b>	12.7	20.9	5.1	7.6	3.0	1.2
<b>FRG900-16</b>	14.0	21.7	5.1	7.6	3.0	1.2
<b>FRG1000-16</b>	16.5	24.1	5.1	7.6	3.0	1.2
<b>FRG1100-16</b>	17.5	26.0	5.1	7.6	3.0	1.2
<b>FRG1200-16</b>	17.5	28.0	10.2	7.6	3.6	1.4
<b>FRG1400-16</b>	27.9	27.9	10.2	7.6	3.4	1.4

## Thermal Derating Curve



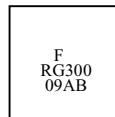
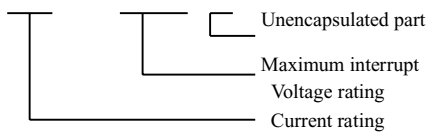
## Typical Time-To-Trip at 23°C

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



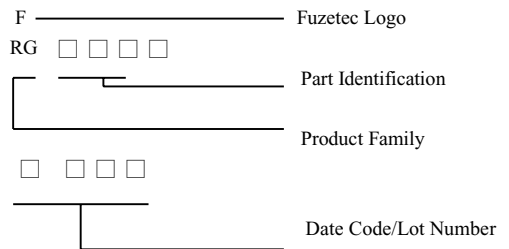
### Part Numbering System

FRG □ □ □ □ - □ □ □



Example

### Part Marking System



### Standard Package

P/N	Pcs /Bag	Reel/Tape
FRG300-16	500	3k
FRG400-16	300	3k
FRG500-16	300	3k
FRG600-16	300	3k
FRG700-16	200	1.5k
FRG800-16	200	-----

P/N	Pcs /Bag	Reel/Tape
FRG900-16	200	-----
FRG1000-16	100	-----
FRG1100-16	100	-----
FRG1200-16	100	-----
FRG1400-16	100	-----