

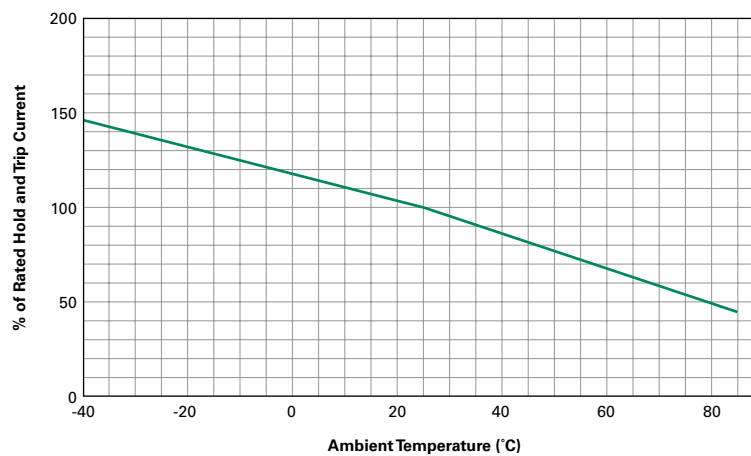
RGEF Series

Radial Leaded

Temperature Derating

Maximum Ambient Temperature										
	-40°C	-20°C	0°C	20°C	25°C	40°C	50°C	60°C	70°C	85°C
Hold Current (A)										
RGEF – 16V										
RGEF250	3.7	3.3	3.0	2.6	2.50	2.2	2.0	1.8	1.6	1.2
RGEF300	4.4	4.0	3.6	3.1	3.00	2.6	2.4	2.1	1.9	1.4
RGEF400	5.9	5.3	4.8	4.1	4.00	3.5	3.2	2.8	2.5	1.9
RGEF500	7.3	6.6	6.0	5.2	5.00	4.4	4.0	3.6	3.1	2.4
RGEF600	8.8	8.0	7.2	6.2	6.00	5.2	4.8	4.2	3.8	2.8
RGEF700	10.3	9.3	8.4	7.3	7.00	6.2	5.6	5.0	4.4	3.3
RGEF800	11.7	10.7	9.6	8.3	8.00	6.9	6.4	5.6	5.1	3.7
RGEF900	13.2	11.9	10.7	9.4	9.00	7.9	7.2	6.4	5.6	4.2
RGEF1000	14.7	13.3	12.0	10.3	10.00	8.7	8.0	7.0	6.3	4.7
RGEF1100	16.1	14.6	13.1	11.5	11.00	9.7	8.8	7.8	6.9	5.2
RGEF1200	17.6	16.0	14.4	12.4	12.00	10.4	9.6	8.4	7.6	5.6
RGEF1400	20.5	18.7	16.8	14.5	14.00	12.1	11.2	9.8	8.9	6.5

Temperature Derating Curve



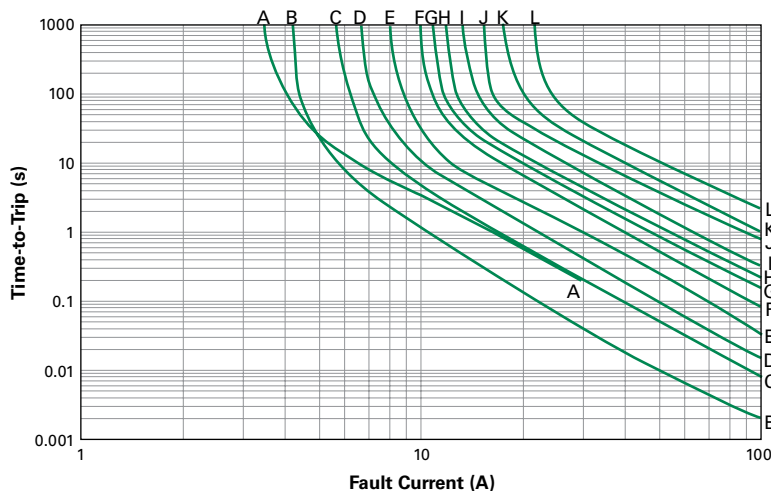
RGEF Series

Radial Leaded

Typical Time-to-Trip Curves at 20°C

RGEF (data at 25°C)

A = RGEF250	G = RGEF800
B = RGEF300	H = RGEF900
C = RGEF400	I = RGEF1000
D = RGEF500	J = RGEF1100
E = RGEF600	K = RGEF1200
F = RGEF700	L = RGEF1400



Physical Specifications

Lead Material	RGEF250 : Tin-plated Copper-clad Steel, 0.205mm ² (24AWG), ø0.51mm/0.020in RGEF300 to RGEF1100 : Tin-plated Copper, 0.52mm ² (20AWG), ø0.81mm/0.032in RGEF1200 to RGEF1400 : Tin-plated Copper, 0.82mm ² (18AWG), ø1.0mm/0.04in
Soldering Characteristics	Solderability per ANSI/J-STD-002 Category 3
Solder Heat Withstand	RGEF250 and RGEF400 : per IEC 60068-2-20, Test Tb, Method 1; Can withstand 5s at 260°C ±5°C RGEF500 to RGEF1400 : per IEC 60068-2-20, Test Tb, Method 1; Can withstand 10s at 260°C ±5°C
Insulating Material	Cured, Flame-retardant Epoxy Polymer; Meets UL 94V-0
Operation Temperature	-40°C~85°C

Note: Devices are not designed to be placed through a reflow process.

Environmental Specifications

Test	Conditions	Resistance Change
Passive Aging	-40°C, 1000 hrs	±5%
	85°C, 1000 hrs	±5%
Humidity Aging	85°C, 85% R.H., 1000 hrs	±5%
Thermal Shock	85°C, -40°C (10 Times)	±5%
Solvent Resistance	MIL-STD-202, Method 215F	No change
Moisture Resistance Level	Level 1, J-STD-020	
Storage Conditions	40°C max, 70% RH max; devices should remain in original sealed bags prior to use. Devices may not meet specified values if these storage conditions are exceeded.	

RGEF Series

Radial Leaded

Dimension Figures

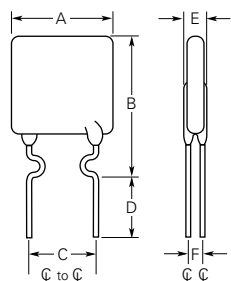


Figure 1

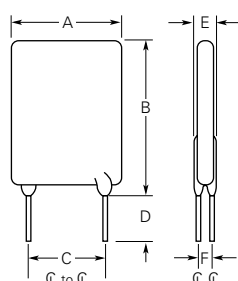


Figure 2

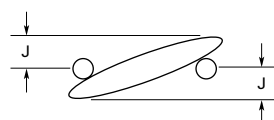


Figure 3

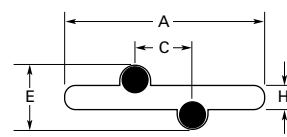


Figure 4

Dimensions and Weights

Part Number	Dimensions in Millimeters (Inches)													Figure	Device Mass (g) (Only for Reference)
	A		B		C		D		E		F	H	J		
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Typ	Typ	Typ		
RGEF – 16V															
RGEF250	—	8.9	—	12.8	4.3	5.8	3.18	6.18	—	3.0	1.2	1.24	1.2	1,3,4	0.277
		(0.35)		(0.50)	(0.17)	(0.23)	(0.13)	(0.24)		(0.12)	(0.05)	(0.049)	(0.05)		
RGEF300	6.1	7.1	6.1	11.0	4.3	5.8	7.6	—	2.0	3.0	1.2	1.24	1.2	2,3,4	0.323
	(0.24)	(0.28)	(0.24)	(0.43)	(0.17)	(0.23)	(0.30)		(0.08)	(0.12)	(0.05)	(0.049)	(0.05)		
RGEF400	7.9	8.9	7.9	12.8	4.3	5.8	7.6	—	2.0	3.0	1.2	1.24	1.4	2,3,4	0.417
	(0.31)	(0.35)	(0.31)	(0.50)	(0.17)	(0.23)	(0.30)		(0.08)	(0.12)	(0.05)	(0.049)	(0.06)		
RGEF500	9.4	10.4	9.4	14.3	4.3	5.8	7.6	—	2.0	3.0	1.2	1.24	1.6	2,3,4	0.540
	(0.37)	(0.41)	(0.37)	(0.56)	(0.17)	(0.23)	(0.30)		(0.08)	(0.12)	(0.05)	(0.049)	(0.06)		
RGEF600	9.7	10.7	12.2	17.1	4.3	5.8	7.6	—	2.0	3.0	1.2	1.24	1.6	2,3,4	0.604
	(0.38)	(0.42)	(0.48)	(0.67)	(0.17)	(0.23)	(0.30)		(0.08)	(0.12)	(0.05)	(0.049)	(0.06)		
RGEF700	10.2	11.2	14.7	19.7	4.3	5.8	7.6	—	2.0	3.0	1.2	1.24	1.7	2,3,4	0.701
	(0.40)	(0.44)	(0.58)	(0.78)	(0.17)	(0.23)	(0.30)		(0.08)	(0.12)	(0.05)	(0.049)	(0.07)		
RGEF800	11.7	12.7	16.0	20.9	4.3	5.8	7.6	—	2.0	3.0	1.2	1.24	1.8	2,3,4	0.829
	(0.46)	(0.50)	(0.63)	(0.82)	(0.17)	(0.23)	(0.30)		(0.08)	(0.12)	(0.05)	(0.049)	(0.07)		
RGEF900	13.0	14.0	16.8	21.7	4.3	5.8	7.6	—	2.0	3.0	1.2	1.24	2.0	2,3,4	0.887
	(0.51)	(0.55)	(0.66)	(0.85)	(0.17)	(0.23)	(0.30)		(0.08)	(0.12)	(0.05)	(0.049)	(0.08)		
RGEF1000	—	16.5	21.1	25.2	4.3	5.8	7.6	—	2.0	3.0	1.2	1.24	2.0	2,3,4	1.219
		(0.65)	(0.83)	(0.99)	(0.17)	(0.23)	(0.30)		(0.08)	(0.12)	(0.05)	(0.049)	(0.08)		
RGEF1100	16.5	17.5	21.1	26.0	4.3	5.8	7.6	—	2.0	3.0	1.2	1.24	2.4	2,3,4	1.408
	(0.65)	(0.69)	(0.83)	(1.02)	(0.17)	(0.23)	(0.30)		(0.08)	(0.12)	(0.05)	(0.049)	(0.09)		
RGEF1200	16.4	17.5	22.6	28.0	9.4	10.9	7.6	—	2.3	3.5	1.4	1.45	1.5	2,3,4	1.650
	(0.65)	(0.69)	(0.89)	(1.10)	(0.37)	(0.43)	(0.30)		(0.09)	(0.14)	(0.06)	(0.057)	(0.06)		
RGEF1400	—	23.5	22.6	27.9	9.4	10.9	7.6	—	2.3	3.5	1.4	1.45	1.9	2,3,4	2.146
		(0.925)	(0.89)	(1.10)	(0.37)	(0.43)	(0.30)		(0.09)	(0.14)	(0.06)	(0.057)	(0.08)		

RGEF Series

Radial Leaded

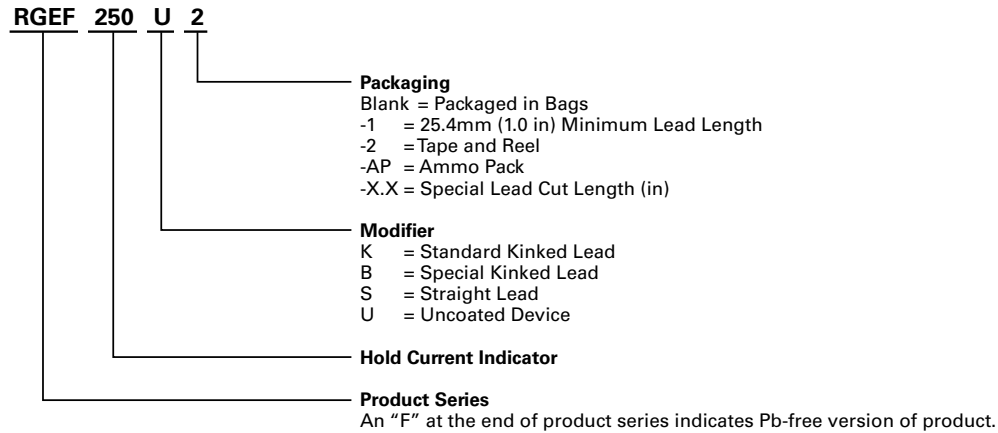
Packaging and Marking Information

Part Number	Bag Quantity	Tape and Reel Quantity	Ammo Pack Quantity	Standard Package Quantity	Part Marking	Agency Recognition
RGEF – 16V						
RGEF250	500	—	—	10,000	G2.5	UL, CSA, TÜV
RGEF250-2	—	3,000	—	15,000	G2.5	UL, CSA, TÜV
RGEF250-AP	—	—	2,000	10,000	G2.5	UL, CSA, TÜV
RGEF300	500	—	—	10,000	G3	UL, CSA, TÜV
RGEF300-2	—	2,500	—	12,500	G3	UL, CSA, TÜV
RGEF300-AP	—	—	2,000	10,000	G3	UL, CSA, TÜV
RGEF400	500	—	—	10,000	G4	UL, CSA, TÜV
RGEF400-2	—	2,500	—	12,500	G4	UL, CSA, TÜV
RGEF400-AP	—	—	2,000	10,000	G4	UL, CSA, TÜV
RGEF500	500	—	—	10,000	G5	UL, CSA, TÜV
RGEF500-2	—	2,000	—	10,000	G5	UL, CSA, TÜV
RGEF500-AP	—	—	2,000	10,000	G5	UL, CSA, TÜV
RGEF600	500	—	—	10,000	G6	UL, CSA, TÜV
RGEF600-2	—	2,000	—	10,000	G6	UL, CSA, TÜV
RGEF600-AP	—	—	2,000	10,000	G6	UL, CSA, TÜV
RGEF700	500	—	—	10,000	G7	UL, CSA, TÜV
RGEF700-2	—	1,500	—	7,500	G7	UL, CSA, TÜV
RGEF700-AP	—	—	1,500	7,500	G7	UL, CSA, TÜV
RGEF800	500	—	—	10,000	G8	UL, CSA, TÜV
RGEF800-2	—	1,500	—	7,500	G8	UL, CSA, TÜV
RGEF800-AP	—	—	1,500	7,500	G8	UL, CSA, TÜV
RGEF900	500	—	—	10,000	G9	UL, CSA, TÜV
RGEF900-2	—	1,000	—	5,000	G9	UL, CSA, TÜV
RGEF900-AP	—	—	1,000	5,000	G9	UL, CSA, TÜV
RGEF1000	250	—	—	5,000	G10	UL, CSA, TÜV
RGEF1000-2	—	1,000	—	5,000	G10	UL, CSA, TÜV
RGEF1000-AP	—	—	1,000	5,000	G10	UL, CSA, TÜV
RGEF1100	250	—	—	5,000	G11	UL, CSA, TÜV
RGEF1100-2	—	1,000	—	5,000	G11	UL, CSA, TÜV
RGEF1100-AP	—	—	1,000	5,000	G11	UL, CSA, TÜV
RGEF1200	250	—	—	5,000	G12	UL, CSA, TÜV
RGEF1200-2	—	1,000	—	5,000	G12	UL, CSA, TÜV
RGEF1200-AP	—	—	1,000	5,000	G12	UL, CSA, TÜV
RGEF1400	250	—	—	5,000	G14	UL, CSA, TÜV
RGEF1400-2	—	1,000	—	5,000	G14	UL, CSA, TÜV
RGEF1400-AP	—	—	1,000	5,000	G14	UL, CSA, TÜV

RGEF Series

Radial Leaded

Part Ordering Number System



Note: Kinked parts are recommended to control the height of the part on the PCB in non-auto PCB applications.

RGEF Series

Radial Leaded

Tape and Reel Specifications

RGEF devices are available in tape and reel packaging per EIA468-B/IEC60286-2 standards. See Figures 1 and 2 for details.

Description	EIA Mark	Dimension (mm)	Tolerance
Carrier Tape Width	W	18	-0.5/+1.0
Hold-Down Tape Width	W ₄	11	Minimum
Top Distance between Tape Edges	W ₆	3	Maximum
Sprocket Hole Position	W ₅	9	-0.5/+0.75
Sprocket Hole Diameter	D ₀	4	± 0.2
Abscissa to Plane (Straight Lead) (RGEF250 to RGEF1400)	H	18.5	± 2.5
Abscissa to Plane (Kinked Lead)	H ₀	16.0	± 0.5
Abscissa to Top (RGEF250 to RGEF500)	H ₁	32.2	Maximum
Abscissa to Top* (RGEF600 to RGEF1400)	H ₁	45.0	Maximum
Overall Width with Lead Protrusion (RGEF250 to RGEF600)	C ₁	43.2	Maximum
Overall Width with Lead Protrusion (RGEF700 to RGEF1400)	C ₁	55	Maximum
Overall Width without Lead Protrusion (RGEF250 to RGEF600)	C ₂	42.5	Maximum
Overall Width without Lead Protrusion (RGEF700 to RGEF1400)	C ₂	54	Maximum
Lead Protrusion	L ₁	1.0	Maximum
Protrusion of Cut-out	L	11	Maximum
Protrusion beyond Hold-down Tape	I ₂	Not Specified	—
Sprocket Hole Pitch	P ₀	12.7	± 0.3
Device Pitch (RGEF250 to RGEF700)	—	25.4	± 0.61
Device Pitch (RGEF800 to RGEF1400)	—	25.4	± 0.6
Pitch Tolerance	—	20 Consecutive	± 1
Tape Thickness	T	0.9	Maximum
Overall Tape and Lead Thickness* (RGEF250 to RGEF1100)	T ₁	2.0	Maximum
Overall Tape and Lead Thickness* (RGEF1200 to RGEF1400)	T ₁	2.3	Maximum
Splice Sprocket Hole Alignment	—	0	± 0.3
Body Lateral Deviation	Δh	0	± 1.0
Body Tape Plane Deviation	Δp	0	± 1.3
Ordinate to Adjacent Component Lead (RGEF250 to RGEF1100)	P ₁	3.81	± 0.7
Ordinate to Adjacent Component Lead (RGEF1200 to RGEF1400)	P ₁	7.62	± 0.7
Lead Spacing* (RGEF250 to RGEF1100)	F	5.05	± 0.75
Lead Spacing* (RGEF1200 to RGEF1400)	F	10.15	± 0.75
Reel Width (RGEF250 to RGEF600)	W ₂	56.0	Maximum
Reel Width* (RGEF700 to RGEF1400)	W ₂	63.5	Maximum
Reel Diameter	A	370.0	Maximum
Space between Flanges* (RGEF250 to RGEF600)	W ₁	48.0	Maximum
Space between Flanges* (RGEF700 to RGEF400)	W ₁	55.0	Maximum
Arbor Hold Diameter	C	26.0	± 12.0
Core Diameter*	N	91.0	Maximum
Box	—	64/372/362	Maximum
Consecutive Missing Places	—	None	—
Empty Places per Reel	—	0.1%	Maximum

*Differs from EIA specification.

RGEF Series

Radial Leaded

Tape and Reel Diagrams

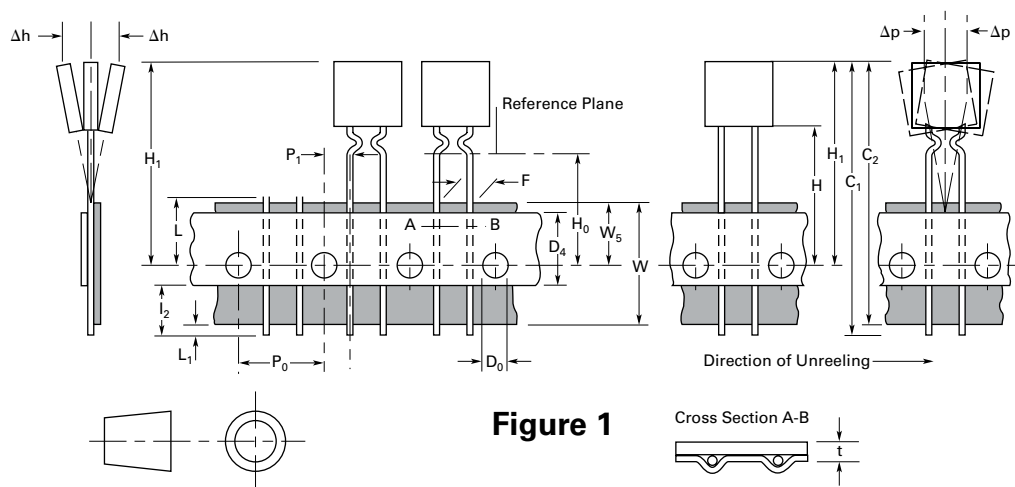


Figure 1

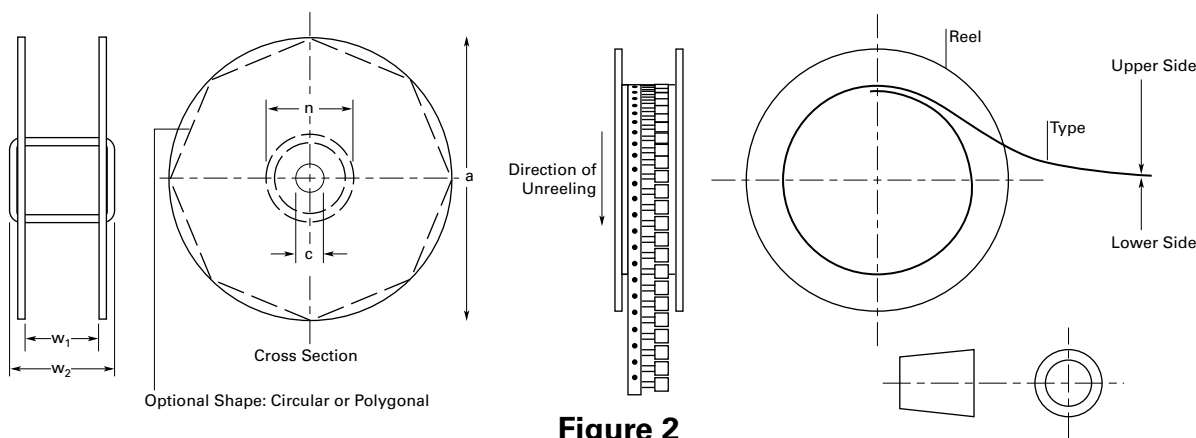


Figure 2

Warning

- Users should independently evaluate the suitability of and test each product selected for their own application.
- Operation beyond the maximum ratings or improper use may result in device damage and possible electrical arcing and flame.
- These devices are intended for protection against damage caused by occasional overcurrent or overtemperature fault conditions and should not be used when repeated fault conditions or prolonged trip events are anticipated.
- Contamination of the PPTC material with certain silicone-based oils or some aggressive solvents can adversely impact the performance of the devices.
- Device performance can be impacted negatively if devices are handled in a manner inconsistent with recommended electronic, thermal, and mechanical procedures for electronic components.
- PPTC devices are not recommended for installation in applications where the device is constrained such that its PTC properties are inhibited, for example in rigid potting materials or in rigid housings, which lack adequate clearance to accommodate device expansion.
- Operation in circuits with a large inductance can generate a circuit voltage ($L di/dt$) above the rated voltage of the device.

Disclaimer Notice - Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at www.littelfuse.com/disclaimer-electronics.