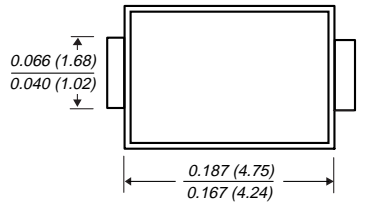




Surface Mount Glass Passivated Rectifier

DO-214BA (GF1)

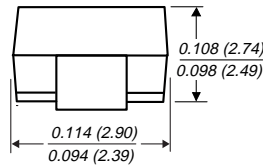
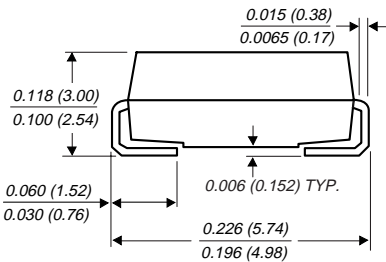
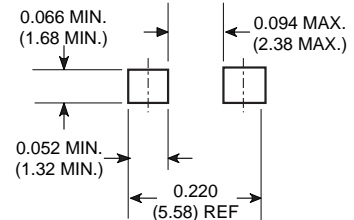
Reverse Voltage 50 to 1000V
Forward Current 1.0A



Dimensions in inches and (millimeters)

Glass-plastic encapsulation technique is covered by Patent No. 3,996,602, brazen-lead assembly by Patent No. 3,930,306 and lead forming by Patent No. 5,151,846

Mounting Pad Layout



Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Ideal for surface mount automotive applications
- High temperature metallurgically bonded construction
- Cavity-free glass passivated junction
- Capable of meeting environmental standards of MIL-S-19500
- Built-in strain relief • Easy pick and place
- High temperature soldering guaranteed: 450°C/5 seconds at terminals.
- Complete device submersible temperature of 265°C for 10 seconds in solder bath

Mechanical Data

Case: JEDEC DO-214BA, molded plastic over glass body

Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.0048 oz, 0.120 g

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	GF1A	GF1B	GF1D	GF1G	GF1J	GF1K	GF1M	Unit	
Device marking code		GA	GB	GD	GG	GJ	GK	GM		
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	V	
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V	
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	V	
Maximum average forward rectified current at T _L = 125°C	I _{F(AV)}	1.0								A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	30								A
Typical thermal resistance ⁽¹⁾	R _{θJA} R _{θJL}	80 26								°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +175								°C

Electrical Characteristics (T_J = 25°C unless otherwise noted)

Parameter	Symbol	GF1A	GF1B	GF1D	GF1G	GF1J	GF1K	GF1M	Unit
Maximum instantaneous forward voltage at 1.0A	V _F	1.10				1.20			V
Maximum DC reverse current at rated DC blocking voltage	I _R	5.0				50			μA
Typical reverse recovery time at I _F = 0.5A, I _R = 1.0A, I _{rr} = 0.25 A	t _{rr}	3.0							μs
Typical junction capacitance at 4.0V, 1MHz	C _J	15							pF

Note: (1) Thermal resistance from junction to ambient and from junction to lead, P.C.B. mounted on 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 – Forward Current Derating Curve

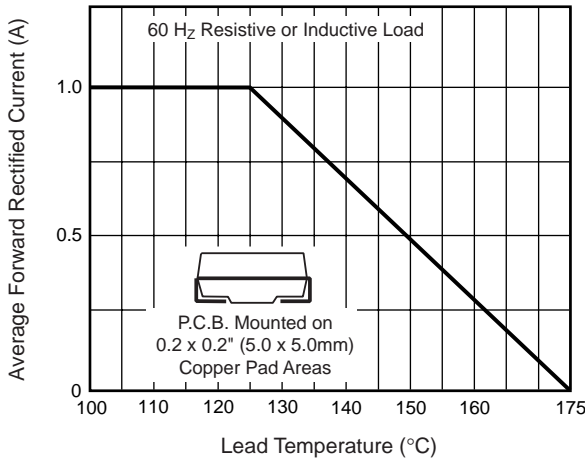


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

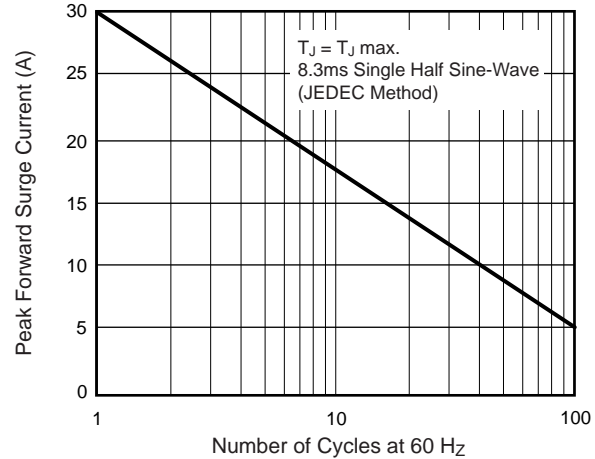


Fig. 3 – Typical Instantaneous Forward Characteristics

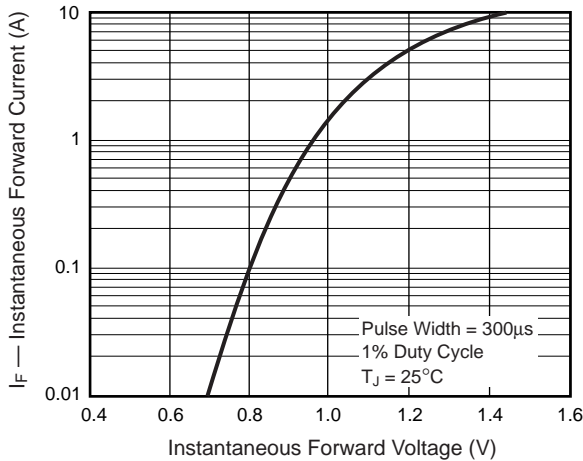


Fig. 4 – Typical Reverse Characteristics

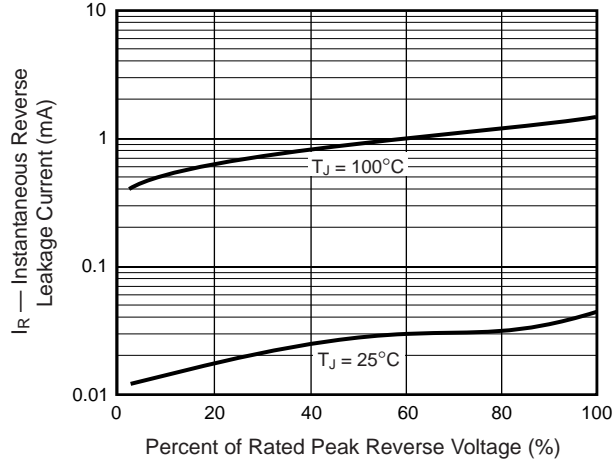


Fig. 5 – Typical Junction Capacitance

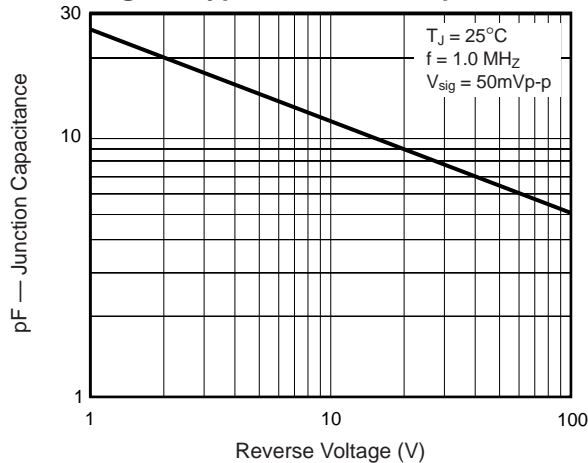


Fig. 6 – Typical Transient Thermal Impedance

