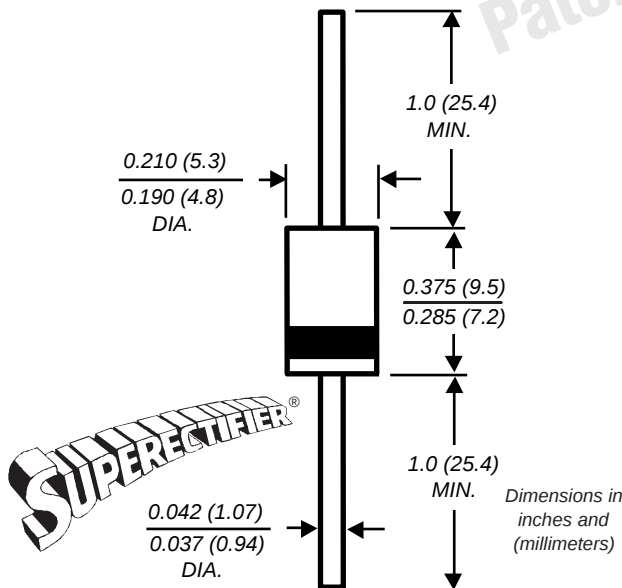


Glass Passivated Ultrafast Rectifier

Reverse Voltage 50 to 400 V
Forward Current 5.0 A

GP20



*Glass Encapsulation technique is covered by
Patent No. 3,996,602, brazed-lead assembly to Patent No. 3,930,306

Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Cavity-free glass passivated junction
- Ultrafast recovery time for high efficiency
- Low forward voltage, high current capability
- Low leakage current
- High surge current capability
- High temperature metallurgically bonded construction
- High temperature soldering guaranteed:
300°C/10 seconds, 0.375" (9.5mm) lead length,
5 lbs. (2.3kg) tension

Mechanical Data

Case: Molded plastic over solid glass body**Terminals:** Axial leads, solderable per MIL-STD-750, Method 2026**Polarity:** Color band denotes cathode end**Mounting Position:** Any**Weight:** 0.03 oz., 0.8 g

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	EGP50A	EGP50B	EGP50C	EGP50D	EGP50F	EGP50G	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_L = 55^\circ\text{C}$	$I_{F(AV)}$	5.0						A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	150						A
Typical thermal resistance (Note 1)	$R_{\theta JA}$ $R_{\theta JL}$	20 5.0						$^\circ\text{C/W}$
Operating and storage temperature range	T_J, T_{STG}	-65 to +150						$^\circ\text{C}$

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	EGP50A	EGP50B	EGP50C	EGP50D	EGP50F	EGP50G	Unit
Maximum instantaneous forward voltage at 5.0A	V _F	0.95				1.25		V
Maximum DC reverse current at rated DC blocking voltage	I _R	5.0						μA
T _A = 25°C T _A = 125°C		50						
Maximum reverse recovery time at I _F = 0.5A, I _R = 1.0A, I _{rr} = 0.25A	t _{rr}	50						ns
Typical junction capacitance at 4.0V, 1MHz	C _J	95				75		pF

Note: (1) Thermal resistance from junction to ambient, and from junction to lead at 0.375" (9.5mm) lead length, P.C.B. mounted

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

Fig. 1 – Maximum Forward Current Derating Curve

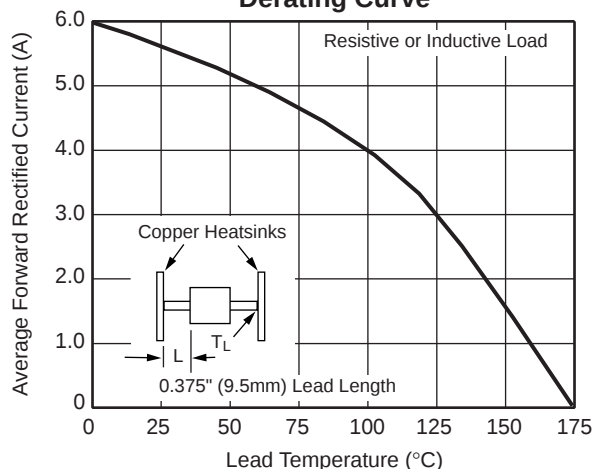


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

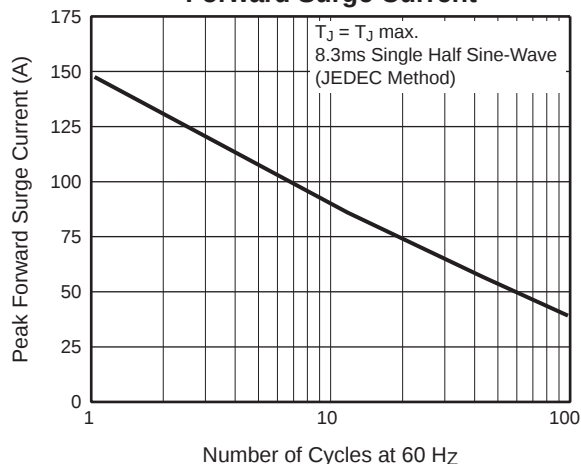


Fig. 3 – Typical Instantaneous Forward Characteristics

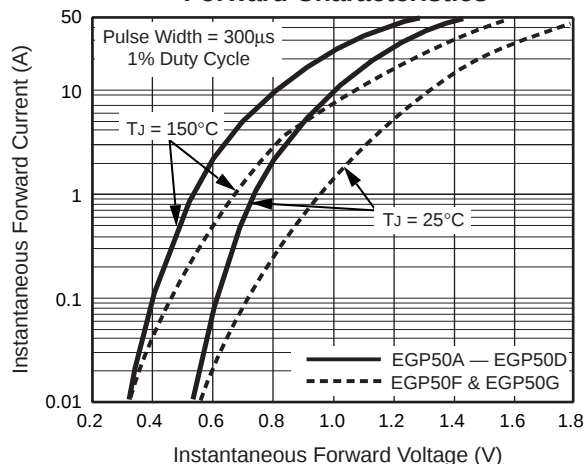


Fig. 4 – Typical Reverse Leakage Characteristics

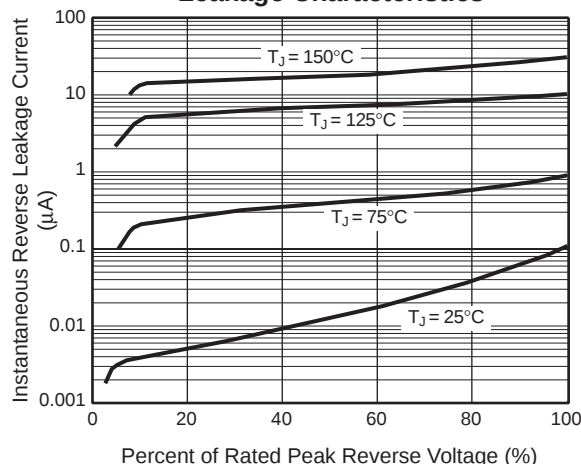


Fig. 5 – Typical Junction Capacitance

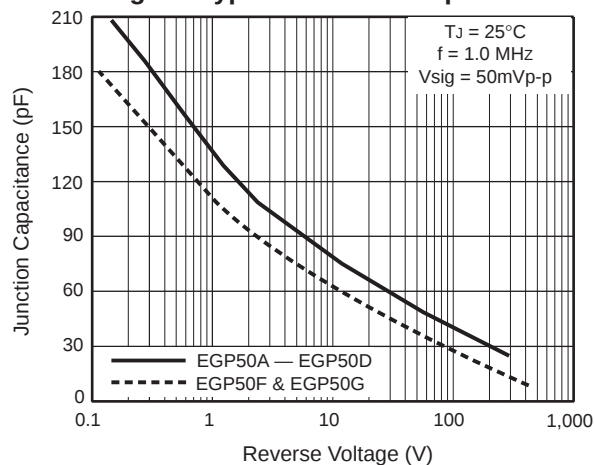


Fig. 6 – Typical Transient Thermal Impedance

