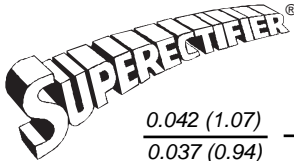
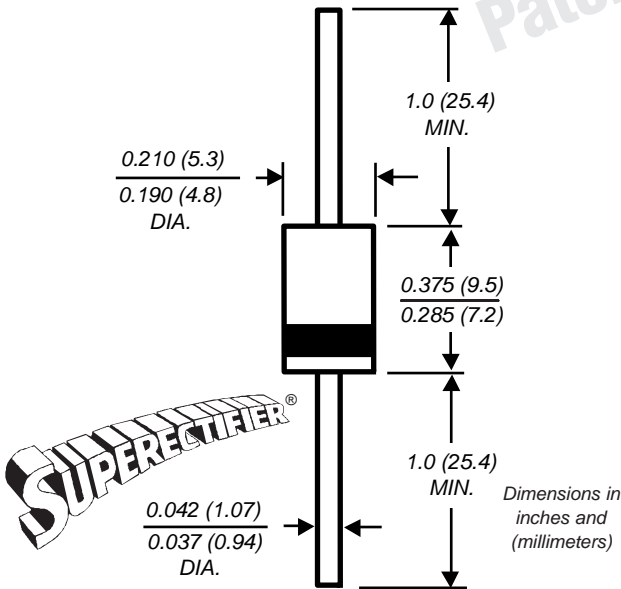


Glass Passivated Ultrafast Rectifier

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°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 _{θJA} R _{θJL}	20 5.0						°C/W
Operating and storage temperature range	T _J , T _{STG}	-65 to +150						°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 50						μA
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

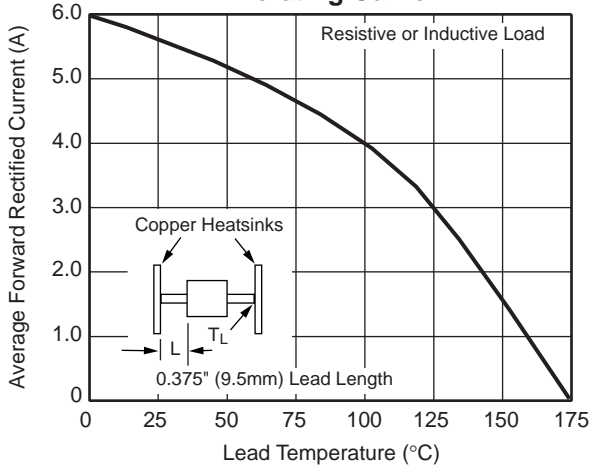


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

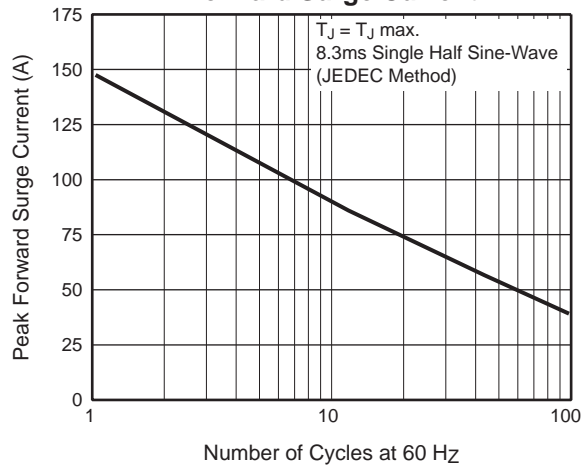


Fig. 3 – Typical Instantaneous Forward Characteristics

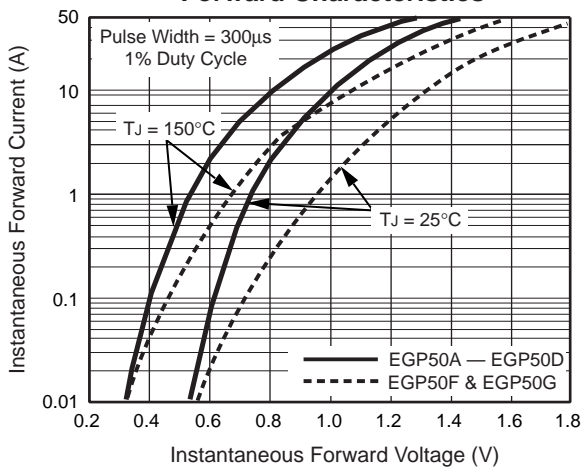


Fig. 4 – Typical Reverse Leakage Characteristics

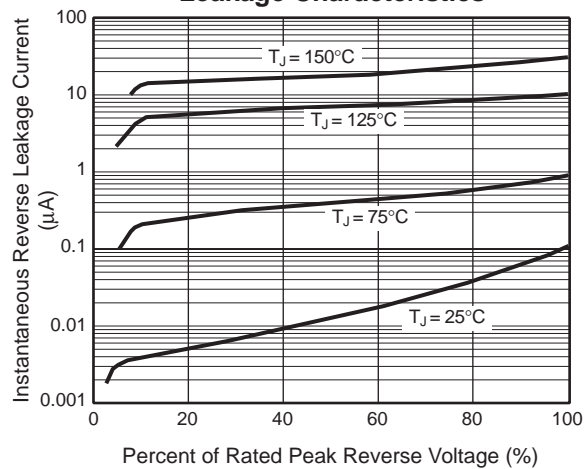


Fig. 5 – Typical Junction Capacitance

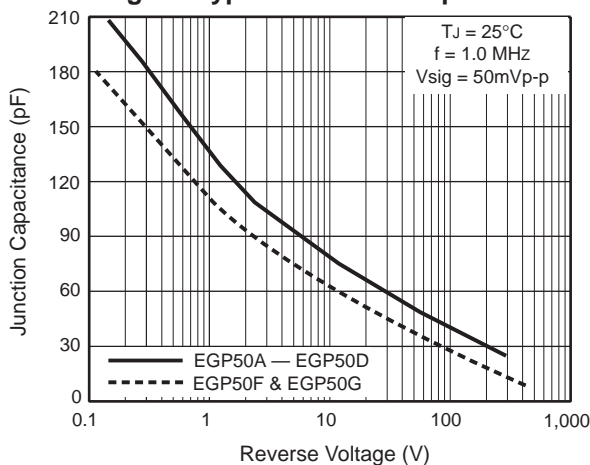


Fig. 6 – Typical Transient Thermal Impedance

