

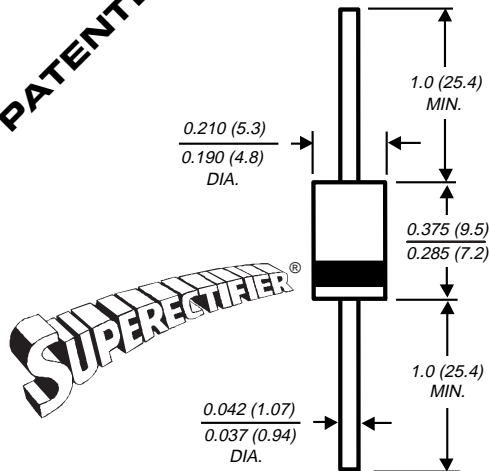
# EGP50A THRU EGP50G

## GLASS PASSIVATED FAST EFFICIENT RECTIFIER

Reverse Voltage - 50 to 400 Volts Forward Current - 5.0 Amperes

**PATENTED \***

### Case Style GP20



Dimensions in inches and (millimeters)

\* Glass-plastic encapsulation technique is covered by Patent No. 3,996,602, brazed-lead assembly by Patent No. 3,930,306

### FEATURES

- ◆ Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- ◆ Glass passivated cavity-free junction
- ◆ Superfast 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 ounce, 0.8 gram

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

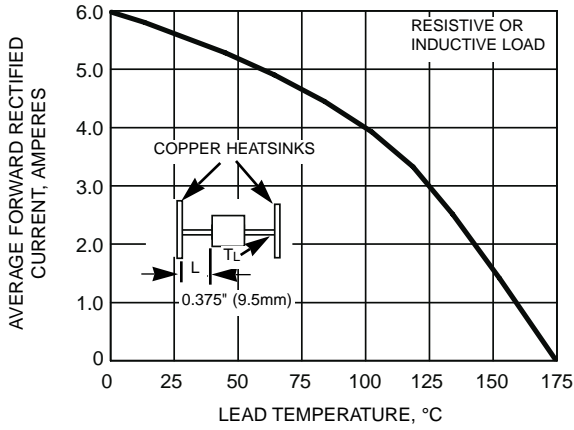
	SYMBOLS	EGP 50A	EGP 50B	EGP 50C	EGP 50D	EGP 50F	EGP 50G	UNITS	
Maximum recurrent peak reverse voltage	V <sub>RRM</sub>	50	100	150	200	300	400	Volts	
Maximum RMS voltage	V <sub>RMS</sub>	35	70	105	140	210	280	Volts	
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	150	200	300	400	Volts	
Maximum average forward rectified current 0.375" (9.5mm) lead length at T <sub>L</sub> =55°C	I <sub>(AV)</sub>	5.0						Amps	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	150.0						Amps	
Maximum instantaneous forward voltage at 5.0A	V <sub>F</sub>	0.95				1.25		Volts	
Maximum DC reverse current at rated DC blocking voltage	I <sub>R</sub>	T <sub>A</sub> =25°C		5.0		T <sub>A</sub> =125°C		50.0	μA
Maximum reverse recovery time (NOTE 1)	t <sub>rr</sub>	50.0						ns	
Typical thermal resistance (NOTE 2)	R <sub>θJA</sub> R <sub>θJL</sub>	20.0				5.0		°C/W	
Typical junction capacitance (NOTE 3)	C <sub>J</sub>	95				75		pF	
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150						°C	

### NOTES:

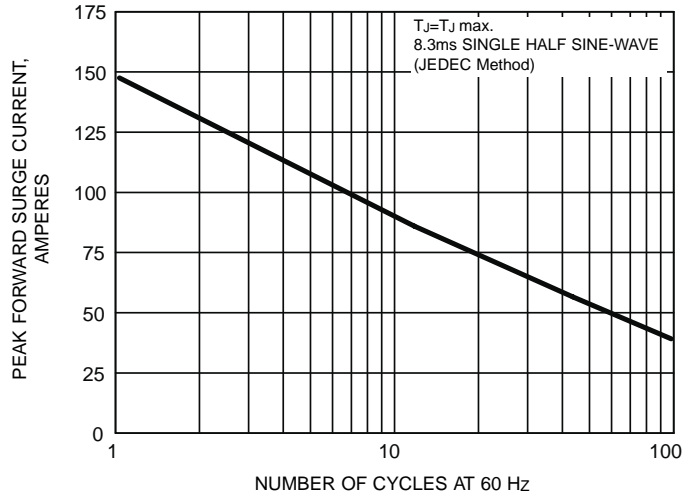
- (1) Reverse recovery test conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>rr</sub>=0.25A
- (2) Thermal resistance from junction to ambient and from junction of lead at 0.375" (9.5mm) lead length, both leads measured attached to heat sinks
- (3) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

# RATINGS AND CHARACTERISTIC CURVES EGP50A THRU EGP50G

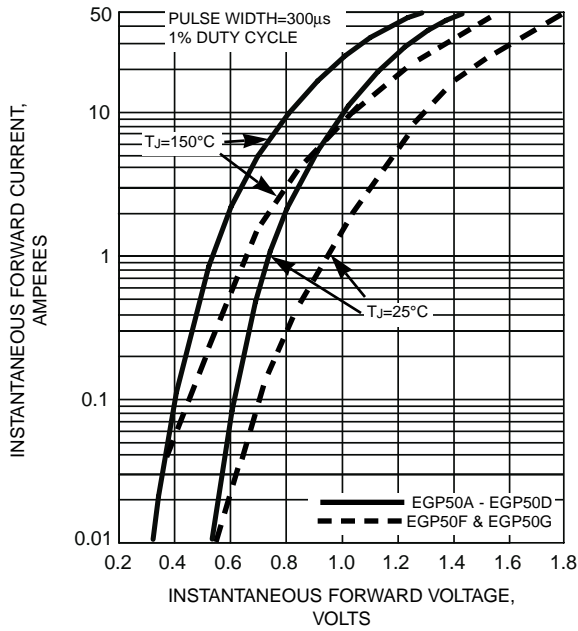
**FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVE**



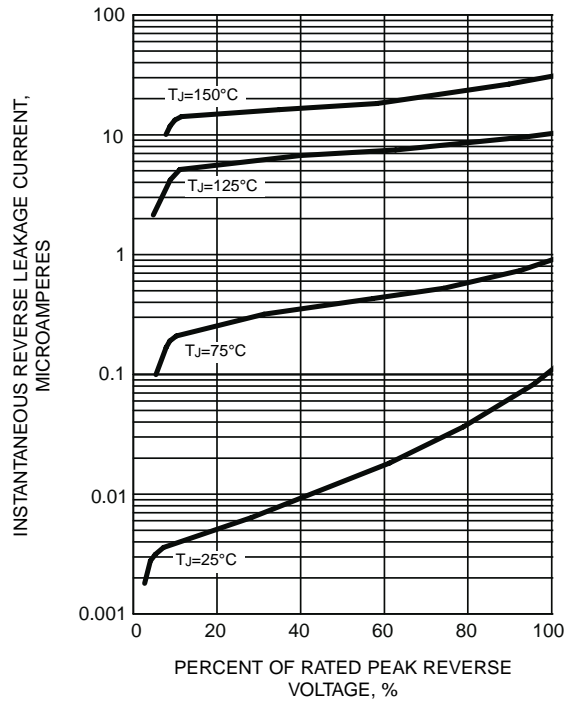
**FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



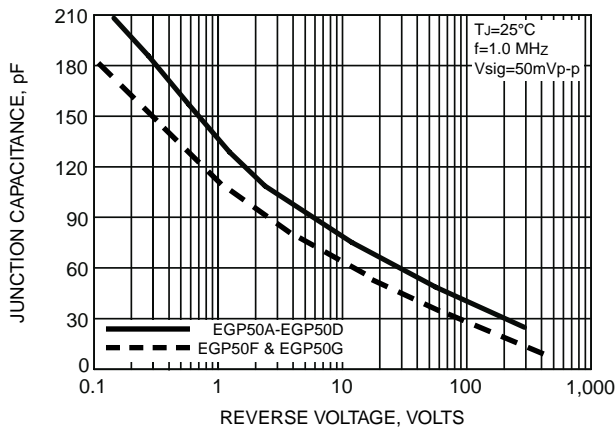
**FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**



**FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE**

