

	E502650
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Features

- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix Designates Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- With Heat Sink On Top Vacuum Soldering Process Minimize The Solder Voids, Typical Voids Are 2% And Max Voids Less Than 8%
- Any Mounting Position

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 1.0°C/W Junction to Case

Mechanical Data

- Mounting Torque: 20 in-lbs Maximum
- Mounting Hole For #10 Screw

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
GBPC50005	GBPC50005	50V	35V	50V
GBPC5001	GBPC5001	100V	70V	100V
GBPC5002	GBPC5002	200V	140V	200V
GBPC5004	GBPC5004	400V	280V	400V
GBPC5006	GBPC5006	600V	420V	600V
GBPC5008	GBPC5008	800V	560V	800V
GBPC5010	GBPC5010	1000V	700V	1000V

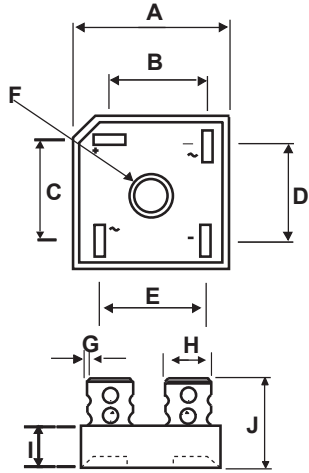
Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	50A	$T_C = 55^\circ\text{C}$ With Heatsink
Peak Forward Surge Current	I_{FSM}	500A	8.3ms, Half Sine
Maximum Forward Voltage Drop Per Element	V_F	1.1V	$I_{FM} = 25\text{A}$ Per Element; $T_J = 25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5 μA 500 μA	$T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$
Current Squared Time	I^2t	1040A ² S	1ms $\leq t \leq$ 8.3ms, Per Diode
Dielectric Strength	V_{dis}	2.5KV	Terminals to case, AC 1 minute

Note: 1. High Temperature Solder Exemption Applied, See EU Directive Annex Notes 7a.

**50 Amp Glass
Passivated Single
Phase Bridge
Rectifier
50 to 1000 Volts**

GBPC



DIMENSIONS					NOTE
DIM	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	1.114	1.134	28.30	28.80	
B	0.634	0.673	16.10	17.10	
C	0.634	0.673	16.10	17.10	
D	0.543	0.583	13.80	14.80	
E	0.693	0.732	17.60	18.60	
F	0.197	Nominal	5.00	Nominal	ϕ
G	0.030	0.034	0.76	0.86	
H	0.244	0.256	6.20	6.50	
I	0.291	0.335	7.40	8.50	
J	0.740	0.850	18.80	21.60	

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

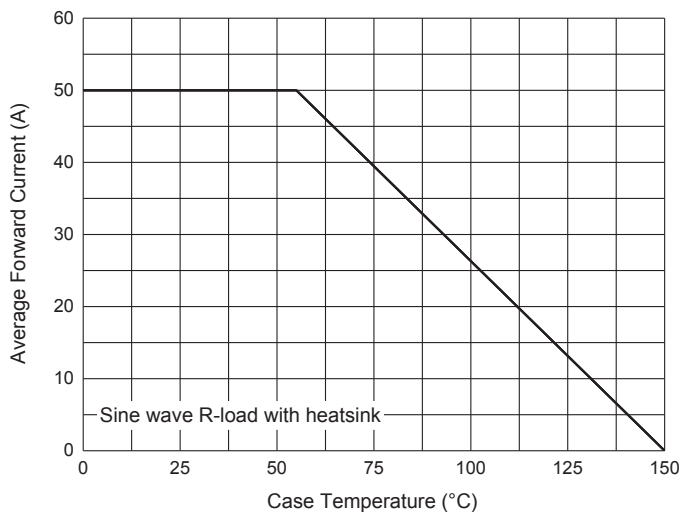


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

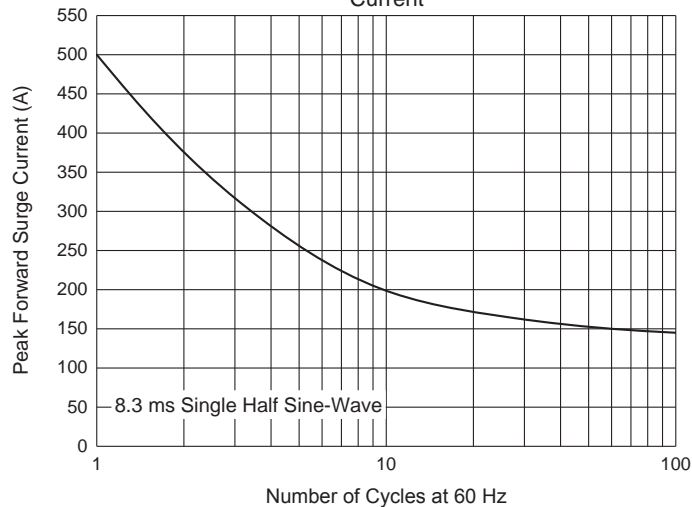


Fig. 3 - Typical Instantaneous Forward Characteristics

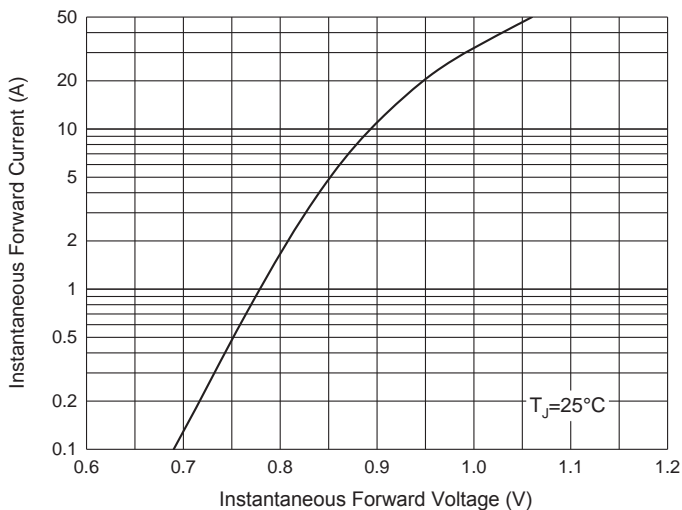


Fig. 4 - Typical Reverse Leakage Characteristics

