

# GBPC 12, 15, 25, 35 SERIES

## Bridge Rectifiers (Glass Passivated)

### Features

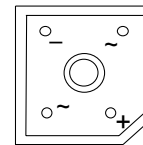
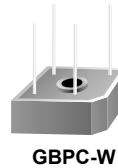
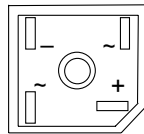
- Integrally molded heatsink provided very low thermal resistance for maximum heat dissipation.
- Surge Overload Ratings from 300 amperes to 400 amperes.
- Isolated voltage from case to lead over 2500 volts.
- UL certified, UL #E326243
- Terminals Finish Material - Silver (solderable per MIL-STD-202, Method 208 for the wire type GBPC-W package)  
- Nickel for GBPC package.

### Suffix "W"

Wire Lead Structure

### Suffix "M"

Terminal Location Face to Face



### Absolute Maximum Ratings \* $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value							Units	
		005	01	02	04	06	08	10		
$V_{RRM}$	Maximum Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V	
$V_{RMS}$	Maximum RMS Bridge Input Voltage	35	70	140	280	420	560	700	V	
$V_R$	DC Reverse Voltage (Rated $V_R$ )	50	100	200	400	600	800	1000	V	
$I_{F(AV)}$	Average Rectified Forward Current @ $T_C = 55^\circ\text{C}$	GBPC12							12	A
		GBPC15							15	A
		GBPC25							25	A
		GBPC35							35	A
$I_{FSM}$	Non-Repetitive Peak Forward Surge Current 8.3ms Single Half-Sine-Wave	GBPC12, 25, 25							300	A
		GBPC35							400	A
$T_{STG}$	Storage Temperature Range	-55 to +150							$^\circ\text{C}$	
$T_J$	Operating Junction Temperature	-55 to +150							$^\circ\text{C}$	

\* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

### Thermal Characteristics

Symbol	Parameter	Value	Units
$P_D$	Power Dissipation	83.3	W
$R_{\theta JC}$	Thermal Resistance, Junction to Case *	1.5	°C/W

\* With Heatsink

### Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$V_F$	Forward Voltage Drop, per bridge @6.0A GBPC12 @7.5A GBPC15 @12.5A GBPC25 @17.5A GBPC35	1.1 (Max.)	V
$I_R$	Reverse Current, per element @ Rated $V_R$ $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	5.0 (Max.) 500 (Max.)	$\mu\text{A}$ $\mu\text{A}$
$I^2t$	Rating for Fusing $t < 8.35\text{ms}$ GBPC12, 15, 25 GBPC35	375 660	$\text{A}^2\text{Sec}$ $\text{A}^2\text{Sec}$
$C_T$	Total Capacitance, per leg $V_R = 4.0\text{V}$ $f = 1.0\text{MHz}$ GBPC12, 15, 25 GBPC35	180 200	pF pF

## Typical Performance Characteristics

Figure 1. Forward Current Derating Curve

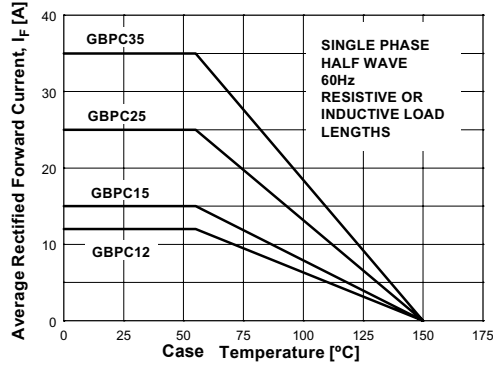


Figure 2. Non-Repetitive Surge Current

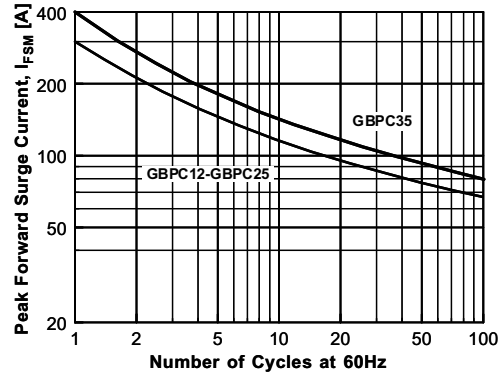


Figure 3. Forward Voltage Characteristics

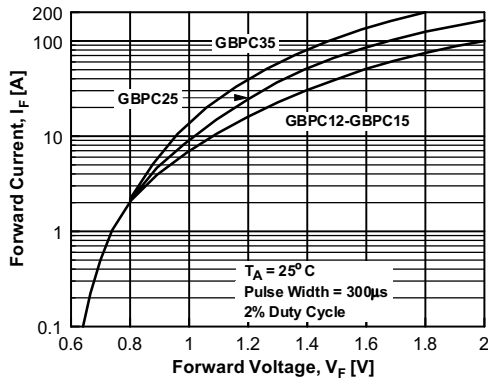
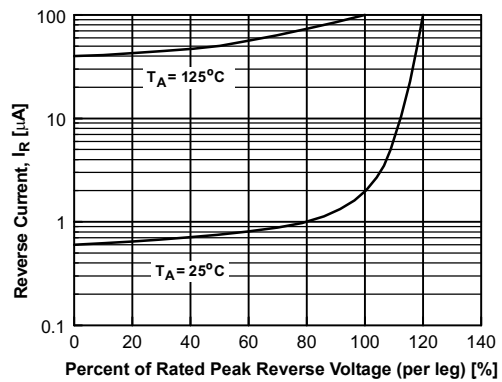


Figure 4. Reverse Current vs Reverse Voltage





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| CorePOWER™               | Green FPS™ e-Series™                | QFET®                                 |  |
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