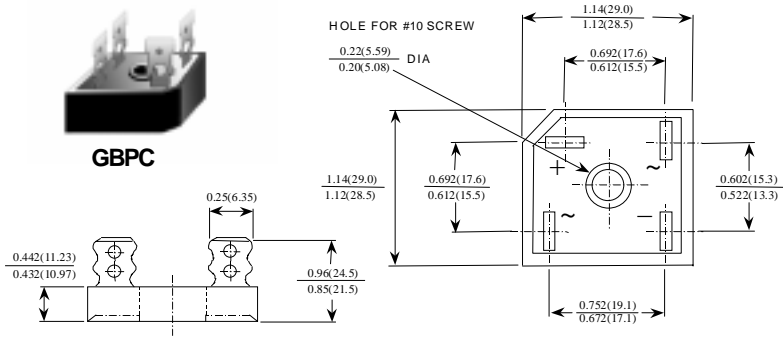


GBPC 12, 15, 25, 35 SERIES

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.

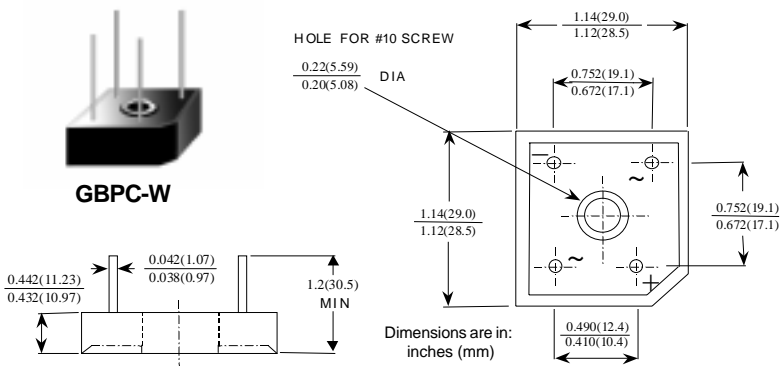


Suffix "W"

Wire Lead Structure

Suffix "M"

Terminal Location
Face to Face



12, 15, 25, 35 Ampere Glass Passivated Bridge Rectifiers

Absolute Maximum Ratings*

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

Symbol	Parameter	Value	Units
I_o	Average Rectified Current @ $T_A = 55^\circ\text{C}$	GBPC12 12 GBPC15 15 GBPC25 25 GBPC35 35	A
$i_{f(\text{surge})}$	Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method)	GBPC12, 15, 25 300 GBPC35 400	A
P_D	Total Device Dissipation Derate above 25°C	83.3 666	W mW/°C
$R_{\theta JL}$	Thermal Resistance, Junction to Lead	1.5	°C/W
T_{stg}	Storage Temperature Range	-55 to +150	°C
T_J	Operating Junction Temperature	-55 to +150	°C

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

Glass Passivated Bridge Rectifiers

(continued)

GBPC 12, 15, 25, 35 SERIES

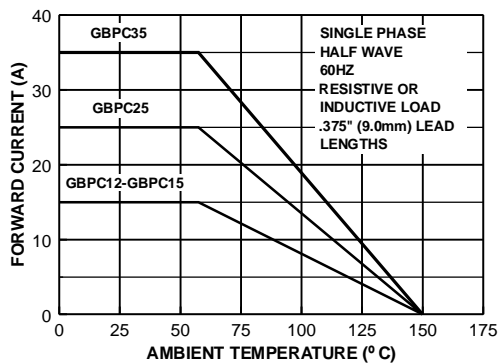
Electrical Characteristics

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

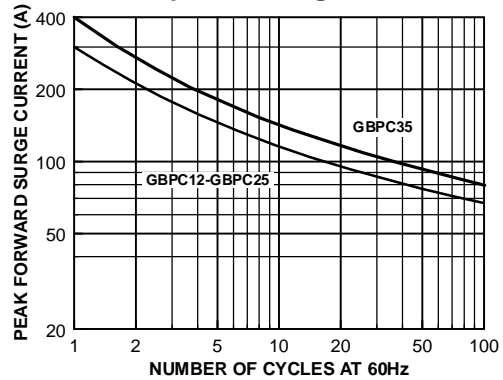
Parameter	Device							Units
	005	01	02	04	06	08	10	
Peak Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Bridge Input Voltage	35	70	140	280	420	560	700	V
DC Reverse Voltage (Rated V_R)	50	100	200	400	600	800	1000	V
Maximum Reverse Leakage, total bridge @ rated V_R $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	5.0 500							μA μA
Maximum Forward Voltage Drop, per bridge @ 6.0 A @ 7.5 A @ 12.5 A @ 17.5 A	GBPC12 GBPC15 GBPC25 GBPC35 1.1							V
I^2t rating for fusing $t < 8.3$ ms	GBPC12,15,25 GBPC35 375 660							A^2Sec A^2Sec
Typical Junction Capacitance, per leg $V_R = 4.0\text{V}$, $f = 1.0$ MHz	GBPC12,15,25 GBPC35 180 200							pF pF

Typical Characteristics

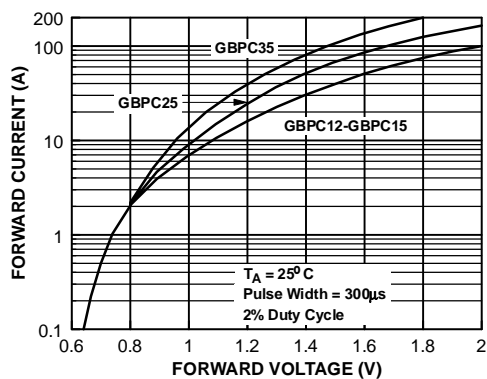
Forward Current Derating Curve



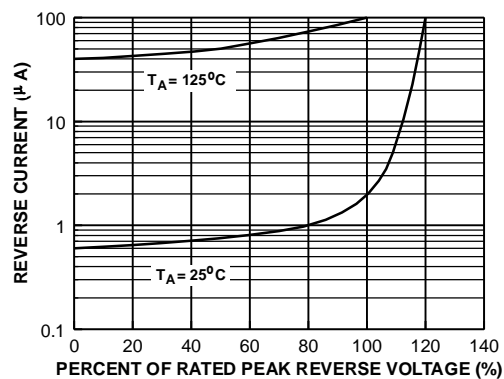
Non-Repetitive Surge Current



Forward Characteristics



Reverse Characteristics



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FACT™	QS™
FACT Quiet Series™	Quiet Series™
FAST®	SuperSOT™-3
FASTr™	SuperSOT™-6
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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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