



Discrete POWER & Signal Technologies

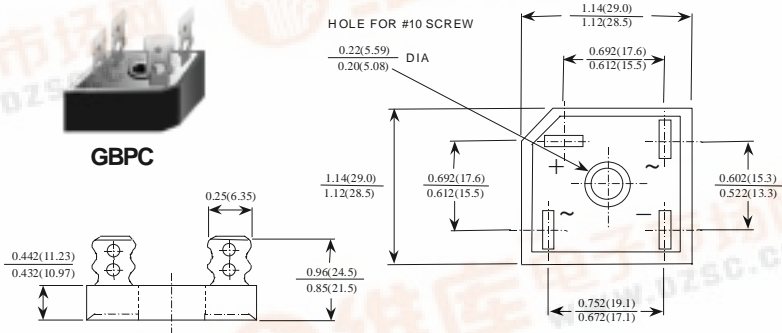
GBPC 12, 15, 25, 35 SERIES

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.



GBPC

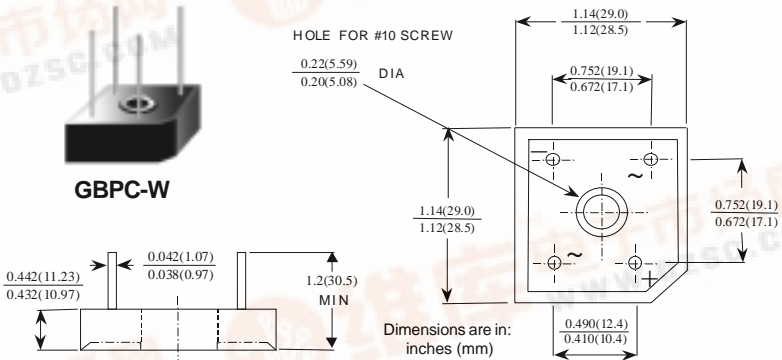


Suffix "W"

Wire Lead Structure

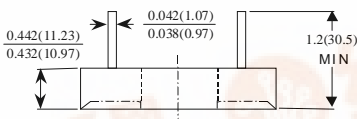


GBPC-W



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)

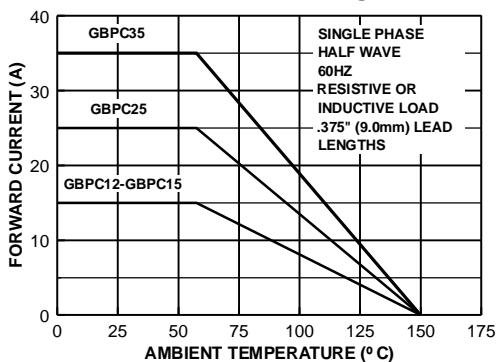
Electrical Characteristics

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

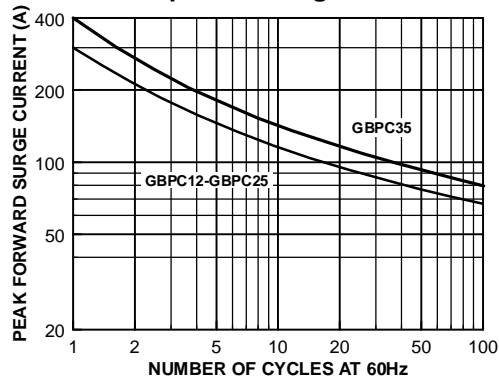
Parameter	Device							Units
	005	01	02	04	06	08	10	
Peak Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Bridge Input Voltage	35	70	140	280	420	560	700	V
DC Reverse Voltage (Rated V_R)	50	100	200	400	600	800	1000	V
Maximum Reverse Leakage, total bridge @ rated V_R								μA
$T_A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

Typical Characteristics

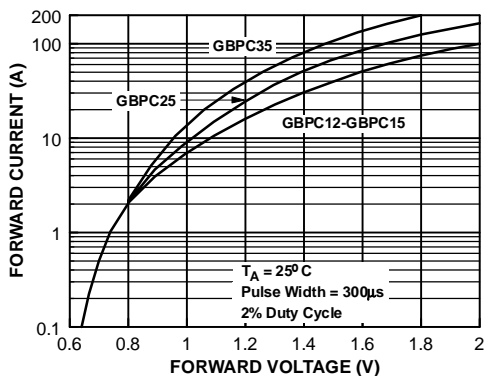
Forward Current Derating Curve



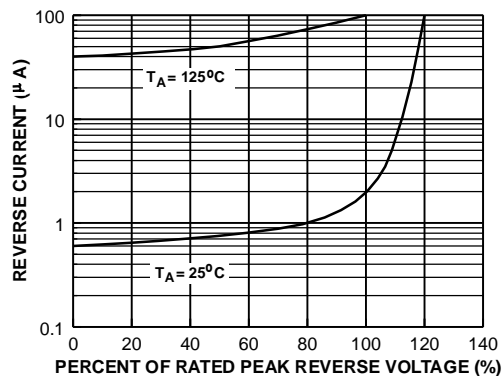
Non-Repetitive Surge Current



Forward Characteristics



Reverse Characteristics



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FAST®	SuperSOT™-3
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