

## Glass Passivated Bridge Rectifiers

### FEATURES

- Glass passivated junction
- Integrally molded heatsink provide very low thermal resistance for maximum heat dissipation
- Typical  $I_R$  less than 0.2 $\mu$ A
- High surge current capability
- UL Recognized File # E-326243
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC



**GBPC**



**GBPC-W**



**GBPC-M**



### MECHANICAL DATA

**Case:** GBPC

GBPC-W: Wire structure

GBPC-M: Terminal cathode parallel to anode

Molding compound, UL flammability classification rating 94V-0

**Terminal:** Matte tin plated leads, solderable per JESD22-B102  
Meet JESD 201 class 1A whisker test

**Polarity:** Polarity as marked on the body

**Mounting torque:** 20 in-lbs maximum

**Weight:** 16.95 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ unless otherwise noted)									
PARAMETER	SYMBOL	005	01	02	04	06	08	10	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current GBPC15 GBPC25 GBPC35	$I_{F(AV)}$				15 25 35				A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$				300 300 400				A
Maximum instantaneous forward voltage drop per element at specified current (Note 1)	$V_F$	GBPC15 7.5A GBPC25 12.5A GBPC35 17.5A			1.1				V
Maximum reverse current @ Rated VR @ $T_J=25^\circ\text{C}$	$I_R$				5				$\mu$ A
Typical thermal resistance	$R_{\theta JC}$				1.5				$^\circ\text{C/W}$
Operating junction temperature range	$T_J$				- 55 to +150				$^\circ\text{C}$
Storage temperature range	$T_{STG}$				- 55 to +150				$^\circ\text{C}$

Note 1: Pulse test with PW=300 $\mu$ s, 1% duty cycle

**ORDERING INFORMATION**

PART NO.	PACKING CODE	PACKAGE	PACKING
GBPC*5xx (Note 1)	T0	GBPC	Tray

Note 1: "\*" defines current from 15A (GBPC15xx) to 35A (GBPC35xx),  
"xx" defines voltage from 50V (GBPC\*5005) to 1000V (GBPC\*510)

**EXAMPLE**

PREFERRED P/N	PART NO.	PACKING CODE	DESCRIPTION
GBPC1510 T0	GBPC1510	T0	

**RATINGS AND CHARACTERISTICS CURVES**

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

FIG. 1 FORWARD CURRENT DERATING CURVE



FIG. 2 TYPICAL REVERSE CHARACTERISTICS

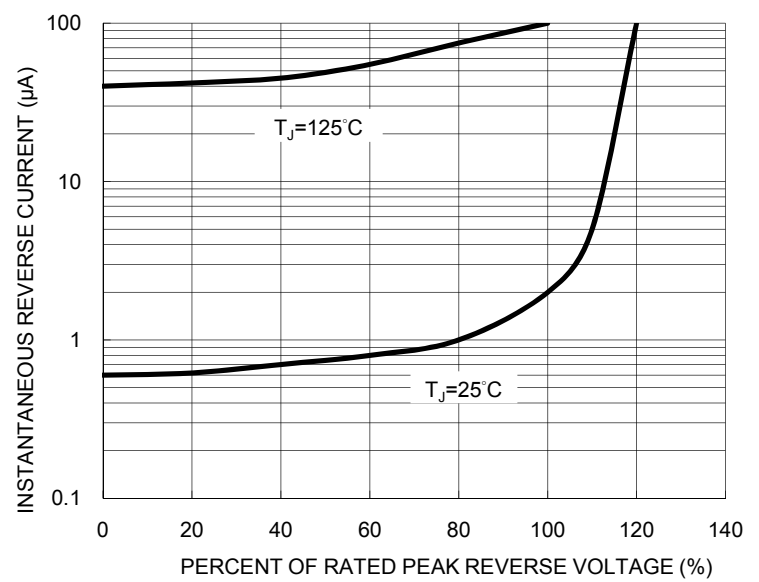


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



FIG. 4 TYPICAL FORWARD CHARACTERISTICS

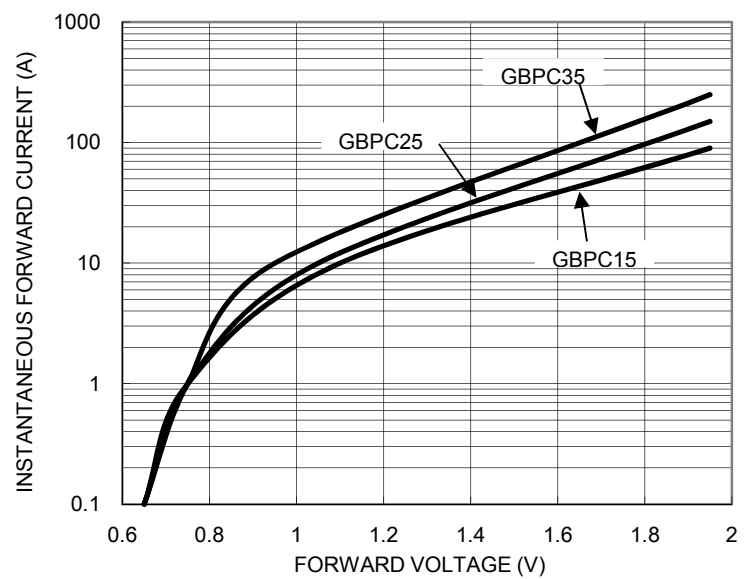


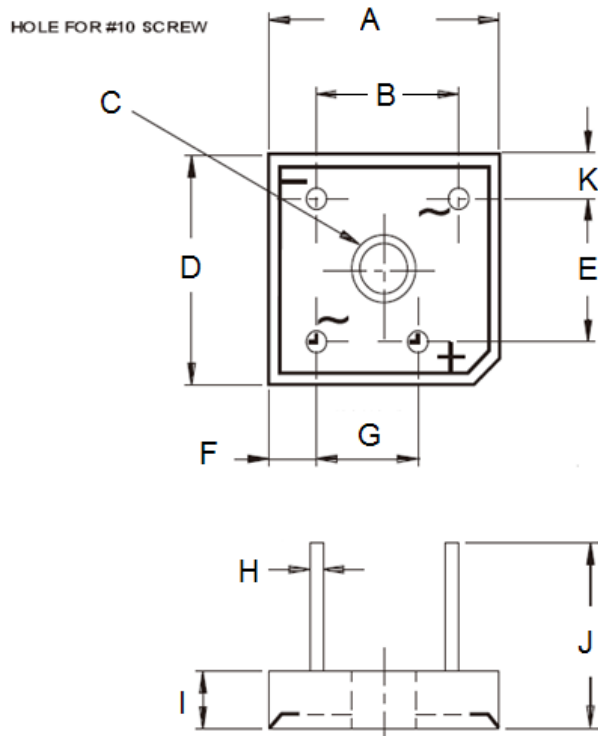
FIG. 5 TYPICAL JUNCTION CAPACITANCE



PACKAGE OUTLINE DIMENSIONS



GBPC				
DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	28.50	29.00	1.122	1.142
B	15.50	17.60	0.610	0.693
C	5.08	5.59	0.200	0.220
D	28.50	29.00	1.122	1.142
E	15.50	17.60	0.610	0.693
F	13.30	15.30	0.524	0.602
G	17.10	19.10	0.673	0.752
H	6.35 (TYP)		0.25 (TYP)	
I	10.97	11.23	0.432	0.442
J	21.50	24.50	0.846	0.965



GBPC-W				
DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	28.50	29.00	1.122	1.142
B	17.10	19.10	0.673	0.752
C	5.08	5.59	0.200	0.220
D	28.50	29.00	1.122	1.142
E	17.10	19.10	0.673	0.752
F	4.40	6.20	0.173	0.244
G	10.40	12.40	0.409	0.488
H	0.97	1.07	0.038	0.042
I	10.97	11.23	0.432	0.442
J	30.50	-	1.201	-
K	4.40	6.20	0.173	0.244

PACKAGE OUTLINE DIMENSIONS



GBPC-M				
DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	28.50	29.00	1.122	1.142
B	15.50	17.60	0.610	0.693
C	5.08	5.59	0.200	0.220
D	28.50	29.00	1.122	1.142
E	15.50	17.60	0.610	0.693
F	15.50	17.60	0.610	0.693
G	15.50	17.60	0.610	0.693
H	0.76	0.86	0.030	0.034
I	6.6 (TYP)		0.26 (TYP)	
J	10.97	11.23	0.432	0.442
K	21.26	24.57	0.837	0.967

MARKING DIAGRAM



P/N = Specific Device Code  
 YWW = Date Code  
 F = Factory Code

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