

## Glass Passivated Bridge Rectifiers

### FEATURES

- Glass passivated junction
- Integrally molded heatsink provide very low thermal resistance for maximum heat dissipation
- Universal 4-way terminals: snap-on, wrap-around, solder or P.C. board mounting
- High surge current capability
- UL Recognized File # E-326243
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC



**GBPC40**



**GBPC40-M**



### MECHANICAL DATA

**Case:** GBPC40

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:** 17.3 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)										
PARAMETER	SYMBOL	005	01	02	04	06	08	10	UNIT	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V	
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V	
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V	
Maximum average forward rectified current GBPC40 GBPC50	I <sub>F(AV)</sub>	40 50							A	
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	400							A	
Maximum instantaneous forward voltage drop per element at specified current	V <sub>F</sub>	GBPC40 20 A GBPC50 25 A (Note 1)	1.1							V
Maximum reverse current @ Rated VR @ T <sub>J</sub> =25°C	I <sub>R</sub>	10							μA	
Typical thermal resistance	R <sub>θJC</sub>	1.5							°C/W	
Operating junction temperature range	T <sub>J</sub>	- 55 to +150							°C	
Storage temperature range	T <sub>STG</sub>	- 55 to +150							°C	

Note 1: Pulse test with PW=300μs, 1% duty cycle

Note 2: Suffix "M" - Terminal Location Face to Face

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

Note 1: "\*\*" defines current from 40A (GBPC40xx) to 50A (GBPC50xx),  
"xx" defines voltage from 50V (GBPC\*\*005) to 1000V (GBPC\*\*10)

EXAMPLE			
PREFERRED P/N	PART NO.	PACKING CODE	DESCRIPTION
GBPC4010 T0	GBPC4010	T0	

**RATINGS AND CHARACTERISTICS CURVES**

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

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

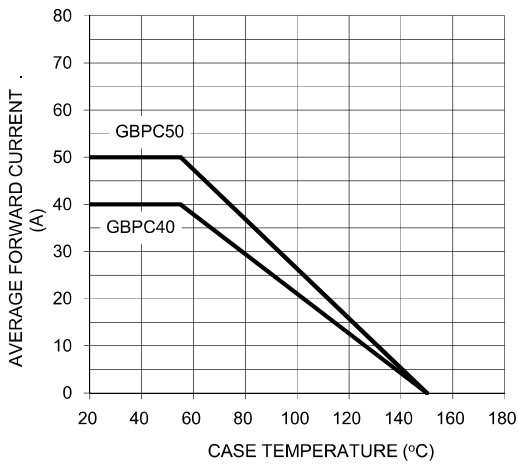


FIG. 2- TYPICAL REVERSE CHARACTERISTICS

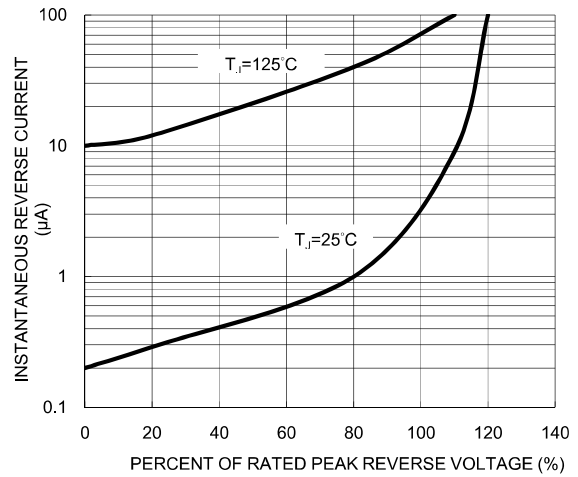


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

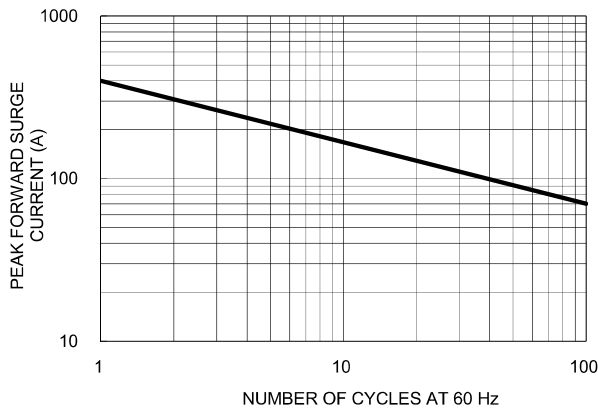


FIG. 4- TYPICAL FORWARD CHARACTERISTICS

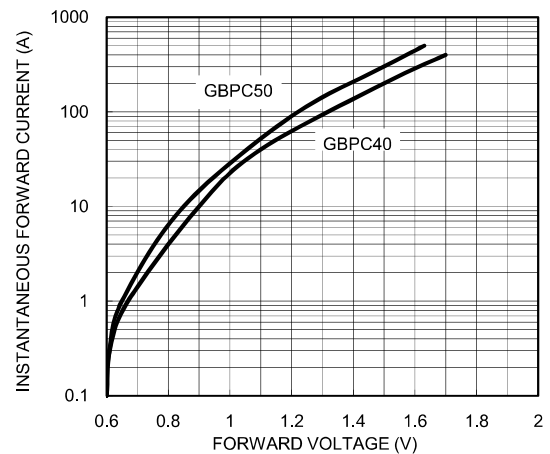
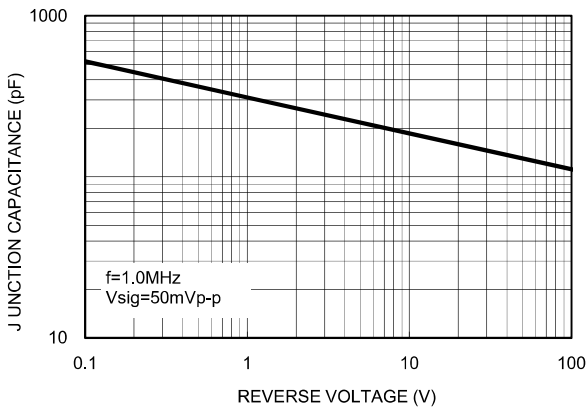
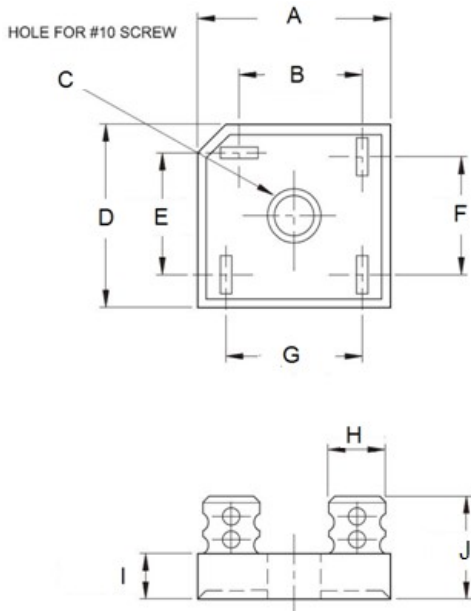


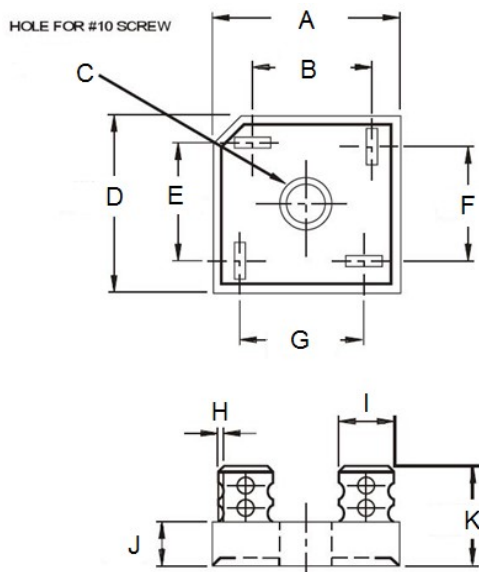
FIG. 5 TYPICAL JUNCTION CAPACITANCE



**PACKAGE OUTLINE DIMENSIONS**

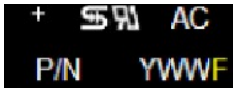


GBPC40				
DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	28.50	29.00	1.122	1.142
B	15.50	17.60	0.610	0.693
C	5.08	5.59	0.200	0.220
D	28.50	29.00	1.122	1.142
E	15.50	17.60	0.610	0.693
F	13.30	15.30	0.524	0.602
G	17.10	19.10	0.673	0.752
H	6.60 (TYP)		0.26 (TYP)	
I	7.36	7.87	0.290	0.310
J	21.26	24.57	0.837	0.967



GBPC40-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	6.60 (TYP)		0.26 (TYP)	
J	7.36	7.87	0.290	0.310
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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