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

Pb-Free

RoHS COMPLIANT

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_A=25°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 GBPC40 GBPC50	$I_{F(AV)}$	40 50							A
Peak forward surge current,8.3 ms single half sine-wave superimposed on rated load GBPC40 GBPC50	I_{FSM}	400							A
Maximum instantaneous forward voltage drop per element at specified current GBPC40 20 A GBPC50 25 A (Note 1)	V_F	1.1							V
Maximum reverse current @ Rated VR @ T_J=25°C	I_R	10							μA
Typical thermal resistance	$R_{\theta JC}$	1.5							°C/W
Operating junction temperature range	T_J	- 55 to +150							°C
Storage temperature range	T_{STG}	- 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°C unless otherwise noted)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

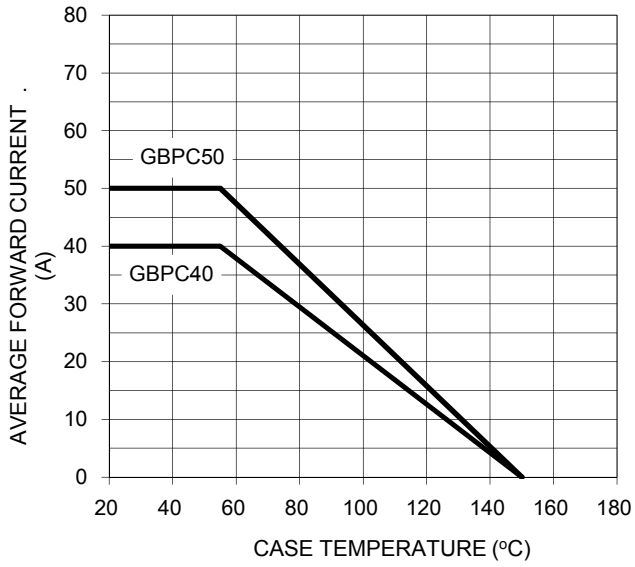


FIG. 2- TYPICAL REVERSE CHARACTERISTICS

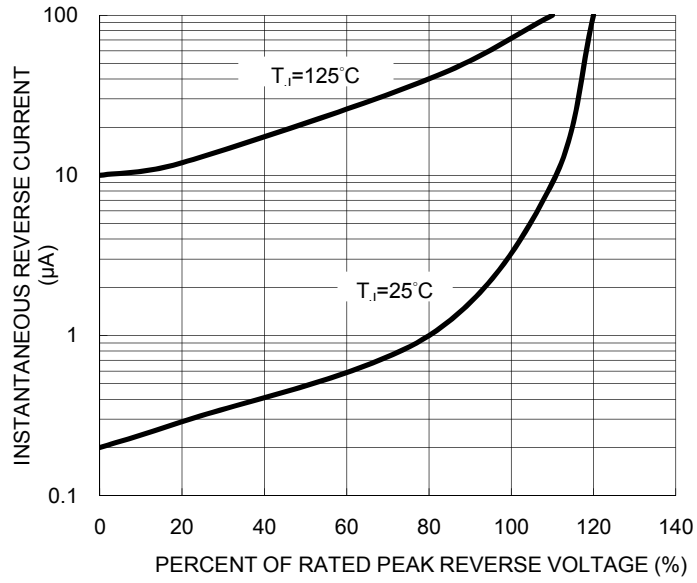


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

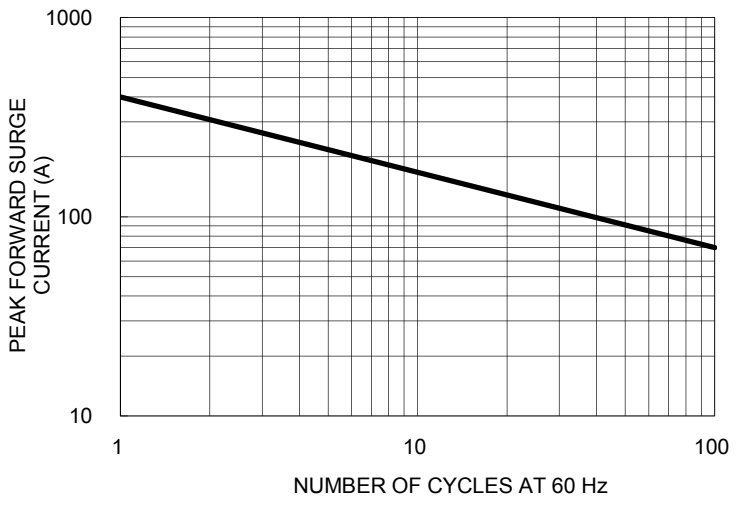


FIG. 4- TYPICAL FORWARD CHARACTERISTICS

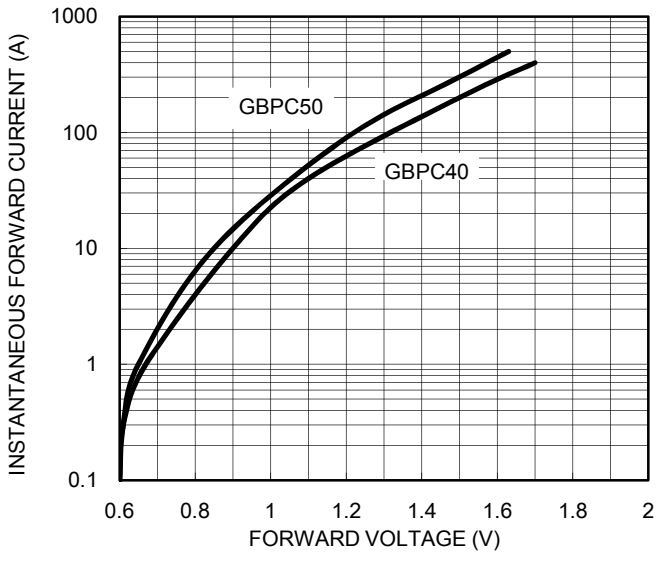
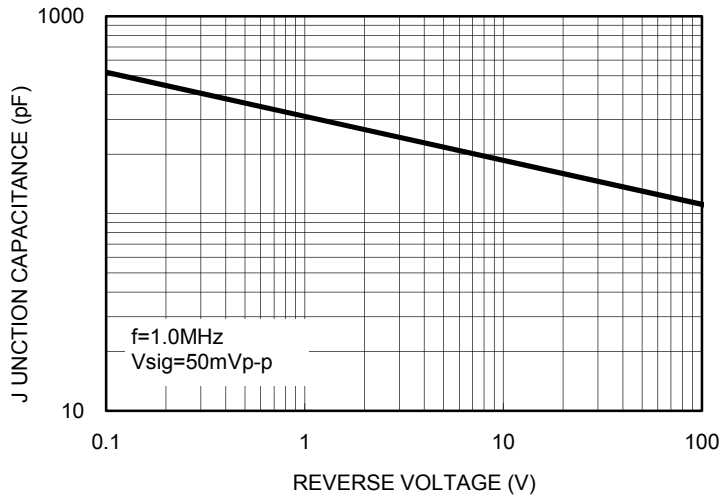
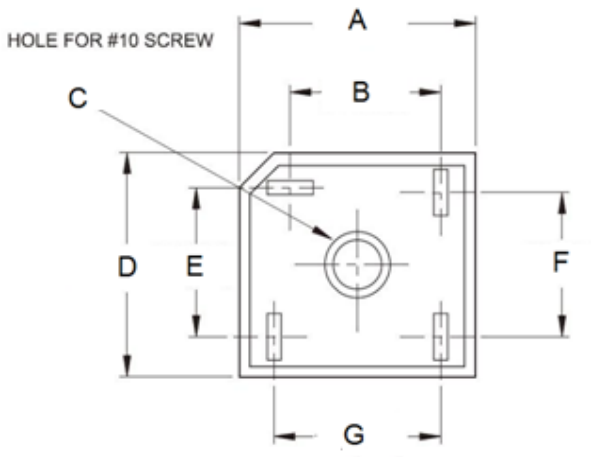
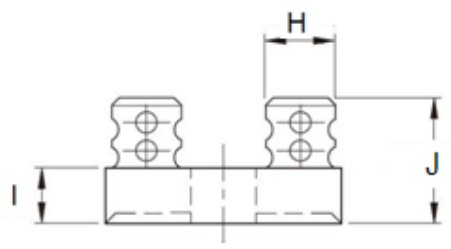


FIG. 5 TYPICAL JUNCTION CAPACITANCE

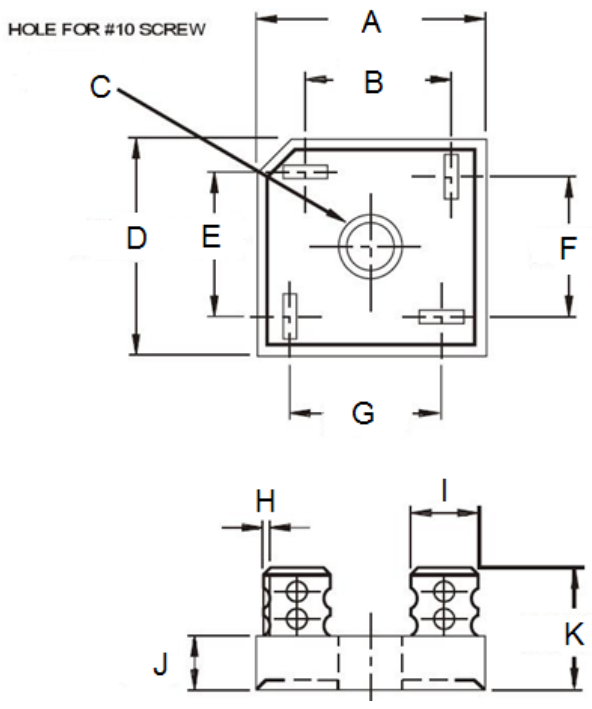


PACKAGE OUTLINE DIMENSIONS





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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