

**APPROVAL DRAWING**

<b>Surge's product name</b>
<b>GBPC25xx/W series (RoHS compliant)</b>

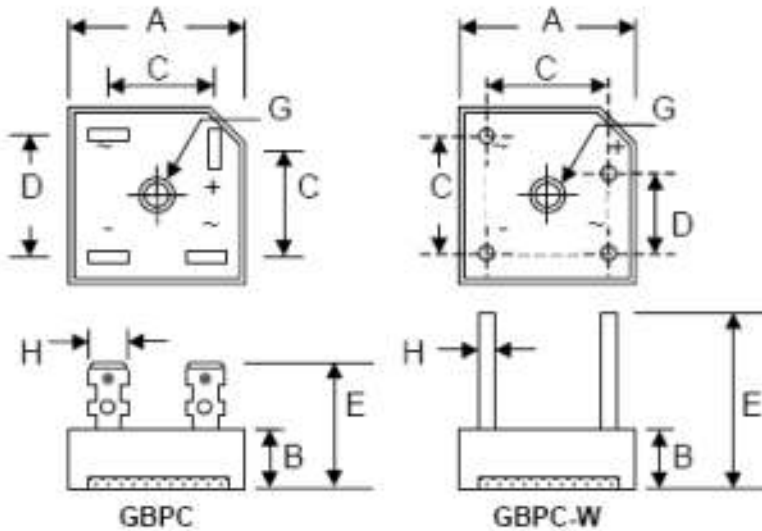
**CONTENTS**

1. CASE DIMENTION
2. MARKING
3. ABSOLUTE MAXIMUM RATING and ELECTRICAL CHARACTERISTICS
4. PACKAGING SPECIFICATION
5. DESCRIPTION OF BOX LABEL
6. TNONE-USE OF OZONE DEPLETING SUBSTANCES

Customer Acknowledgement
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2010-06-09
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## 1. CASE DIMENSION



Dim	GBPC Low Profile / Standard		GBPC-W Low Profile / Standard	
	Min	Max	Min	Max
A	28.40	28.70	28.40	28.70
B	7.50 / 10.97	8.50 / 11.23	7.50 / 10.97	8.50 / 11.23
C	15.70	16.70	17.10	19.10
D	17.50	18.50	10.90	11.90
E	19.08 / 22.86	21.58 / 25.40	30.50	—
G	Hole for #10 screw, 5.08Ø Nominal			
H	6.35 Typical		0.97Ø	1.07Ø
All Dimension in mm				

## 2. MARKING

### MARKING INFORMATION

GBPC	GBPC-W
<b>GBPC25xx</b> = Device Number xx = 005, 01, 02, 04, 06, 08, 10 Polarity = As Marked on Body	<b>GBPC25xxW</b> = Device Number xx = 005, 01, 02, 04, 06, 08, 10 Polarity = As Marked on Body

### 3. ABSOLUTE MAXIMUM RATING and ELECTRICAL CHARACTERISTIC

Single phase, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristic	Symbol	GBPC25 005/W	GBPC25 01/W	GBPC25 02/W	GBPC25 04/W	GBPC25 06/W	GBPC25 08/W	GBPC25 10/W	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current @ $T_C = 60^\circ\text{C}$	$I_o$	25							A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	300							A
Forward Voltage (per element) @ $I_F = 12.5\text{A}$	$V_{FM}$	1.1							V
Peak Reverse Current at Rated DC Blocking Voltage @ $T_C = 25^\circ\text{C}$ @ $T_C = 125^\circ\text{C}$	$I_R$	5.0 500							$\mu\text{A}$
$I^2t$ Rating for Fusing (Note 1)	$I^2t$	374							$\text{A}^2\text{s}$
Typical Junction Capacitance (Note 2)	$C_j$	300							pF
Typical Thermal Resistance per leg (Note 3)	$R_{\theta JC}$	1.3							$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +150							$^\circ\text{C}$

- Notes:
1. Non-repetitive, for  $t > 1.0\text{ms}$  and  $t < 8.3\text{ms}$ .
  2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
  3. Thermal resistance junction to case mounted on heatsink.

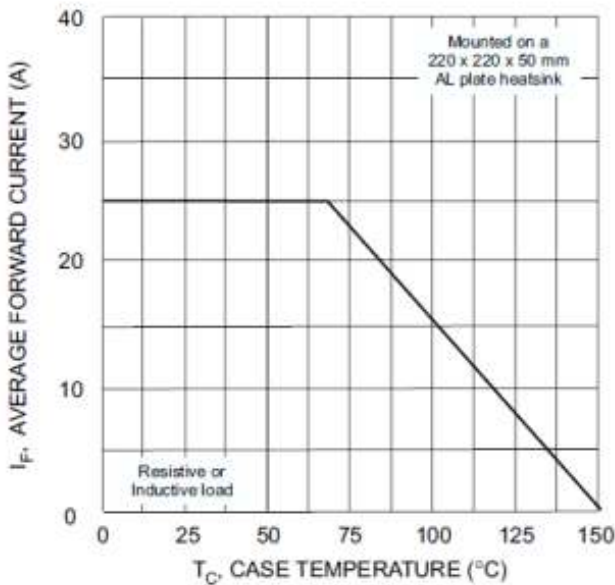


Fig. 1 Forward Current Derating Curve

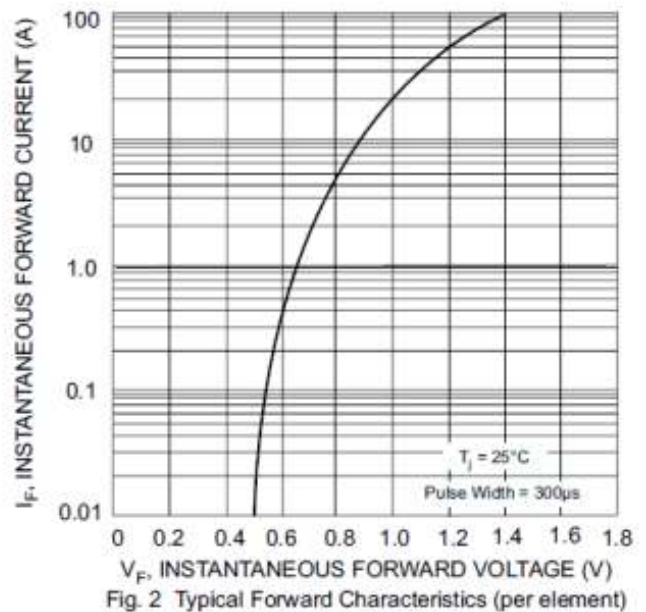


Fig. 2 Typical Forward Characteristics (per element)

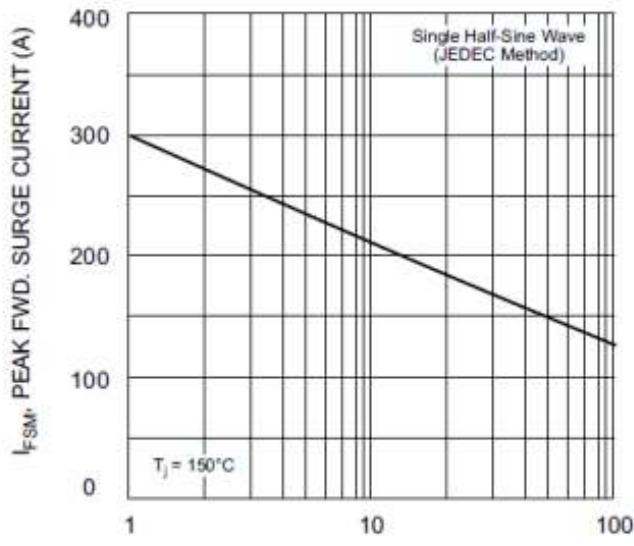


Fig. 3 Max Non-Repetitive Surge Current

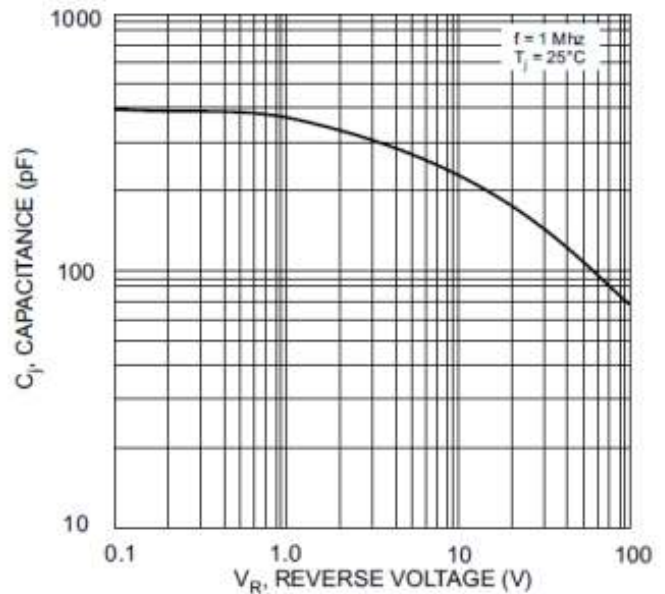


Fig. 4 Typical Junction Capacitance (per element)

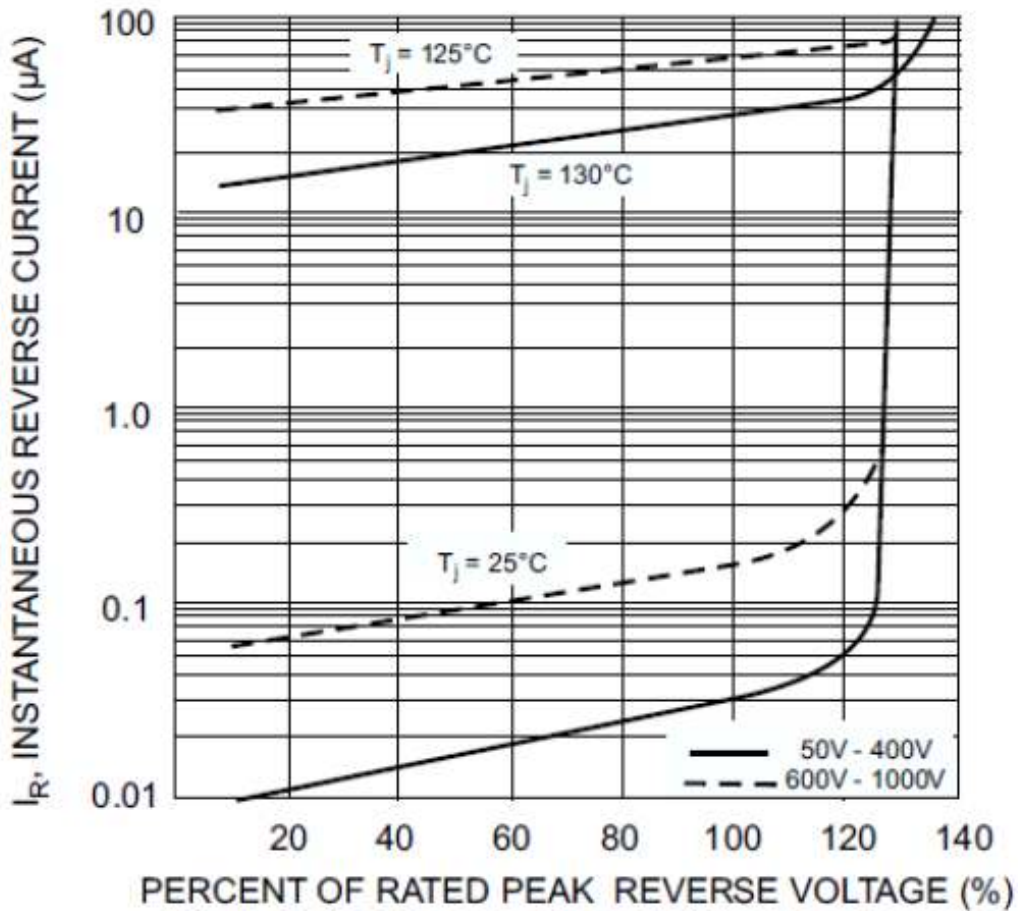


Fig. 5 Typical Reverse Characteristics (per element)

#### 4. PACKAGING SPECIFICATION

##### 1) 52mm Ammo Packaging

###### (1) Primary Packaging

Quantity     50pcs/box

###### (2) Secondary Packaging

Quantity     500pcs/Carton

#### 5. DESCRIPTION of BOX LABEL

##### 1) Box Packaging

(1) Part No.

(2) Quantity

(3) Lot No.

##### 2) Carton Packaging

(1) Customer Name

(2) Type

(3) Quantity

(4) Carton No

(5) Lot No.

(6) Net Weight

(7) Gross Weight

(8) Q.A.

**6. NONE-USE OF OZONE DEPLETING SUBSTANCE**

Substance under control: CFCs, Halon, Carbontetracloride  
and Trichloroethane (Methylchloroform)

It is confirmed that:

- 1) This product does not contain any controlled substances above cited.
- 2) The manufacturing process of this product does not use any controlled substance above cited