



E502650

## Features

- Halogen Free. "Green" Device (Note 1)
- Glass Passivated Chip Junction
- Superior Thermal Conductivity
- High Surge Forward Current Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note 2) ("P" Suffix Designates RoHS Compliant. See Ordering Information)

## Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	600	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Blocking Voltage	$V_R$		
RMS Reverse Voltage	$V_{RMS}$	420	V
Average Rectified Forward Current @ $T_C=110^\circ\text{C}$ (With Heatsink)	$I_{F(AV)}$	25	A
Average Rectified Forward Current @ $T_A=25^\circ\text{C}$ (Without Heatsink)		3.5	
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	$I_{FSM}$	220	A
Non-Repetitive Peak Surge Current @ 1ms Square Wave		440	
$I^2t$ Rating for Fusing @ $1\text{ms} \leq t \leq 8.3\text{ms}$	$I^2t$	201	$\text{A}^2\text{s}$
Dielectric strength @ Terminals to Case, AC 1 Minute	$V_{dis}$	2.5	KV

## Internal Structure

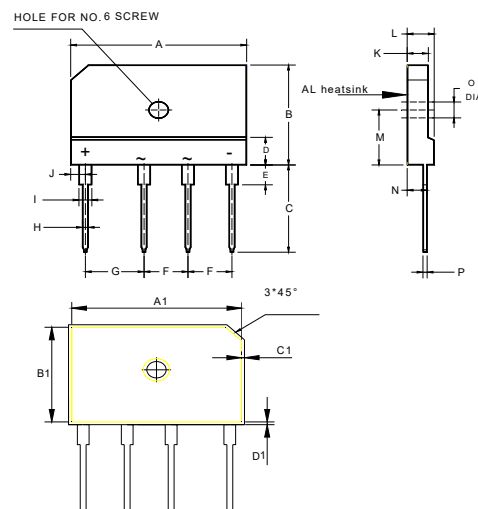
Simplified Outline	Graphic Symbol

Note:

1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.

# 25 Amp Super Fast Recovery Bridge Rectifiers 600 Volts

PB



## DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	1.169	1.193	29.70	30.30	
B	0.776	0.799	19.70	20.30	
C	0.669	0.709	17.00	18.00	
D	0.189	0.228	4.80	5.80	
E	0.150	0.165	3.80	4.20	
F	0.287	0.303	7.30	7.70	
G	0.386	0.402	9.80	10.20	
H	0.035	0.043	0.90	1.10	
I	0.079	0.094	2.00	2.40	
J	0.091	0.106	2.30	2.70	
K	0.134	0.150	3.40	3.80	
L	0.173	0.189	4.40	4.80	
M	0.425	0.441	10.80	11.20	
N	0.122	0.146	3.10	3.70	
O	0.122	0.134	3.10	3.40	
P	0.024	0.031	0.60	0.80	
A1	1.136	1.144	28.85	29.05	
B1	0.742	0.750	18.85	19.05	
C1	0.016	0.024	0.40	0.60	
D1	0.016	0.024	0.40	0.60	

## Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
$T_J$	Operating Junction Temperature Range		-55		150	°C
$T_{stg}$	Storage Temperature Range		-55		150	°C
$R_{th(J-C)}$	Thermal Resistance from Junction to Case	Note 1		0.8		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Without Heatsink		17		°C/W

Note:

1.Device mounted on 75mm x 45mm x 5.5mm Aluminum Plate Heatsink.

## Mechanical Data

Recommended Mounting Torque: 5 in·lbs

## Electrical Characteristics @ 25°C Unless Otherwise Specified(Per Diode)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	$V_F$	$I_F=12.5A; T_J=25^{\circ}C$			2.0	V
Reverse Current	$I_R$	at Rated $V_R; T_J=25^{\circ}C$ at Rated $V_R; T_J=125^{\circ}C$			5 200	$\mu A$
Reverse Recovery Time	$t_{rr}$	$I_F=0.5A; I_R=1.0A; I_{RR}=0.25A; T_J=25^{\circ}C$			35	nS
Junction Capacitance	$C_J$	$V_R=4V; f=1MHz; T_J=25^{\circ}C$		90		pF

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

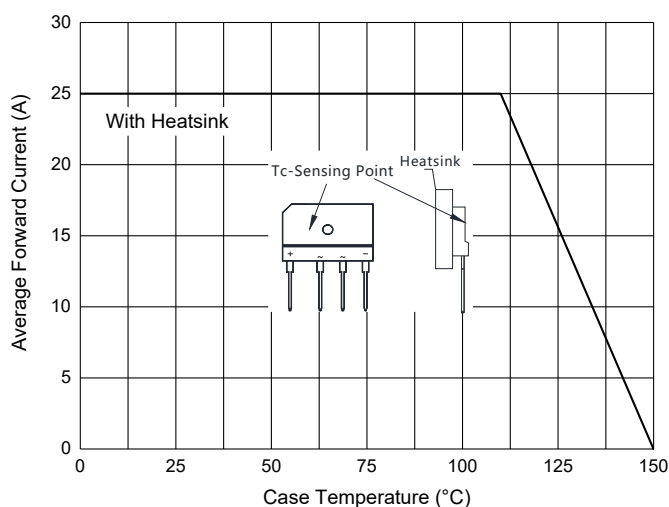


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current (Per Diode)

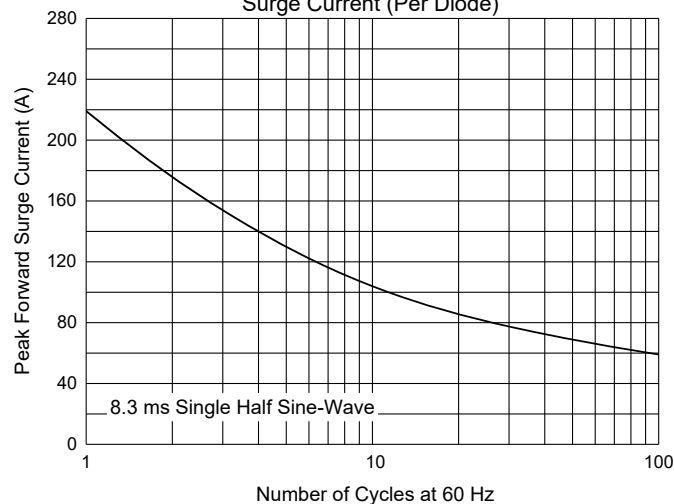


Fig. 3 - Typical Forward Characteristics(Per Diode)

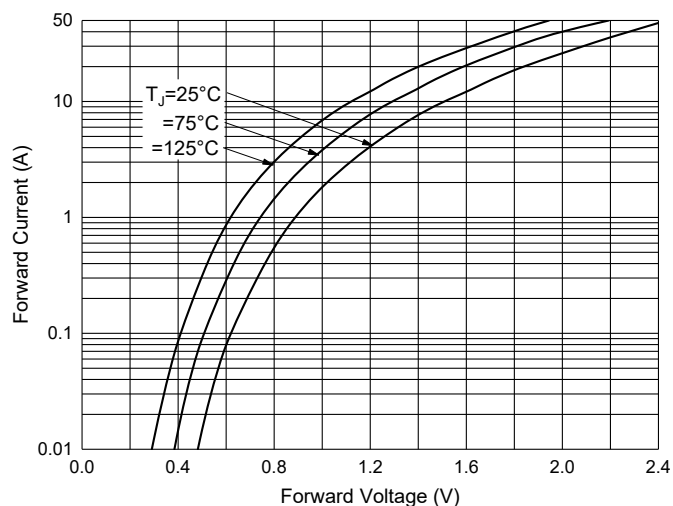


Fig. 4 - Typical Reverse Leakage Characteristics(Per Diode)

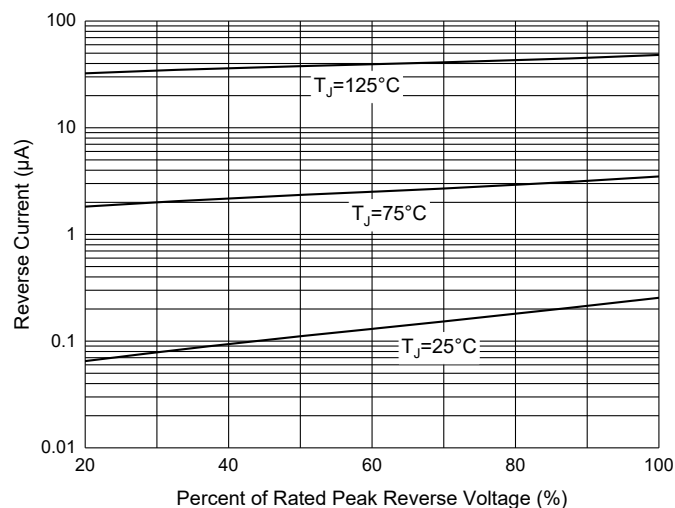
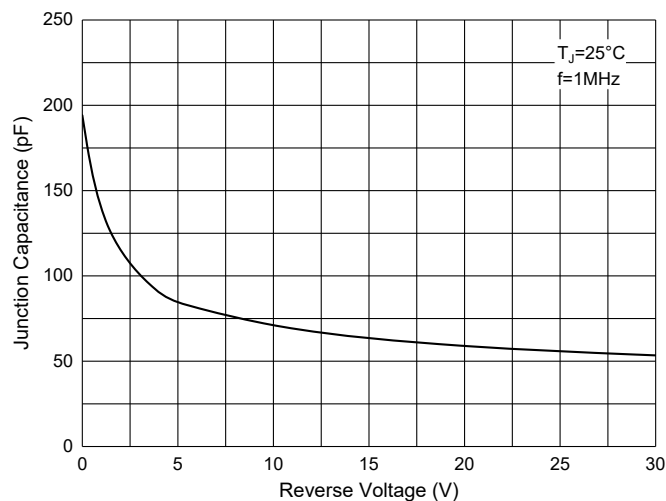


Fig. 5 - Typical Capacitance Characteristics(Per Diode)



## Ordering Information

Device	Packing
EPB2506-BP	Bulk:15pcs/Tube,750pcs/Box,1500pcs/Carton

Note : Adding "-HF" Suffix For Halogen Free, eg. EPB2506-BP-HF

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