

	E502650
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Features

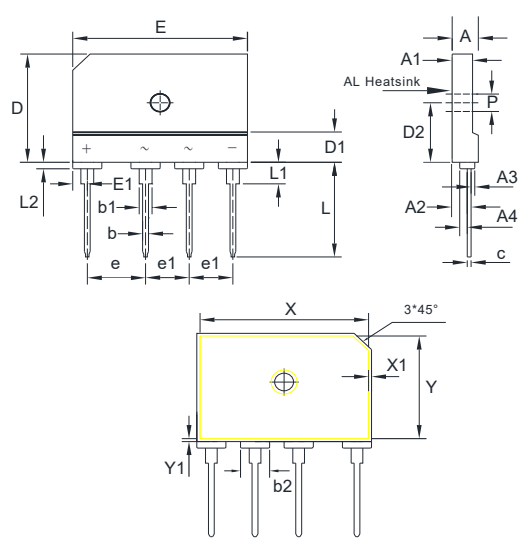
- Halogen Free. "Green" Device (Note 1)
- Glass Passivated Chip Junction
- Superior Thermal Conductivity
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note 2)("P" Suffix Designates RoHS Compliant. See Ordering Information)

50 Amp Bridge Rectifiers 1000 Volts

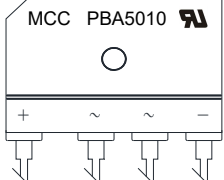
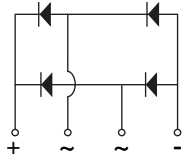
Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	1000	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	V_{RMS}	700	V
Average Rectified Forward Current @ $T_C=90^\circ\text{C}$ (With Heatsink)	$I_{F(AV)}$	50	A
Average Rectified Forward Current @ $T_A=25^\circ\text{C}$ (Without Heatsink)		4.5	
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I_{FSM}	500	A
Non-Repetitive Peak Surge Current @ 1ms Square Wave		1000	
I^2t Rating for Fusing @ $1\text{ms} \leq t \leq 8.3\text{ms}$	I^2t	1037.5	A^2s
Dielectric strength @ Terminals to Case, AC 1 Minute	V_{dis}	2.5	KV

PB-A



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.181	0.197	4.60	5.00	
A1	0.142	0.157	3.60	4.00	
A2	0.122	0.146	3.10	3.70	
A3	0.018	0.033	0.45	0.85	
A4	0.043	0.059	1.10	1.50	
b	0.035	0.043	0.90	1.10	
b1	0.079	0.094	2.00	2.40	
b2	0.189	0.205	4.80	5.20	
c	0.016	0.031	0.40	0.80	
D	0.776	0.799	19.70	20.30	
D1	0.189	0.228	4.80	5.80	
D2	0.425	0.441	10.80	11.20	
E	1.169	1.193	29.70	30.30	
E1	0.091	0.106	2.30	2.70	
e	0.386	0.402	9.80	10.20	
e1	0.287	0.303	7.30	7.70	
L	0.669	0.709	17.00	18.00	
L1	0.150	0.165	3.80	4.20	
L2	0.039	0.055	1.00	1.40	
P	0.122	0.134	3.10	3.40	ϕ
X	1.132	1.148	28.75	29.15	
X1	0.012	0.028	0.30	0.70	
Y	0.738	0.754	18.75	19.15	
Y1	0.012	0.028	0.30	0.70	

Marking Diagram	Internal Structure
	

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

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		0.6		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Without Heatsink		15		°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	$I_F=25A; T_J=25^\circ C$			1.1	V
Reverse Current	I_R	at Rated $V_R; T_J=25^\circ C$ at Rated $V_R; T_J=125^\circ C$			5 500	μA
Junction Capacitance	C_J	$V_R=4V; f=1MHz; T_J=25^\circ C$		270		pF

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

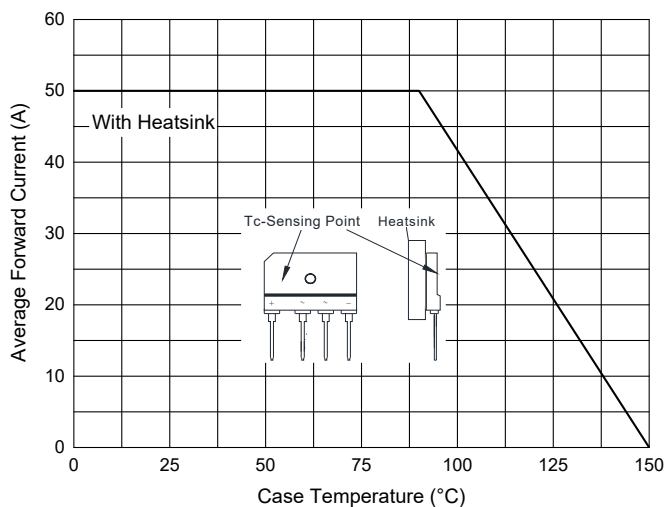


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current (Per Diode)

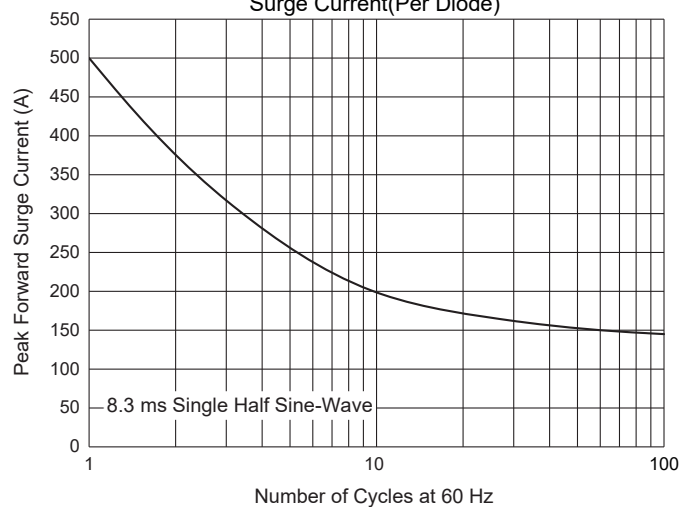


Fig. 3 - Typical Forward Characteristics (Per Diode)

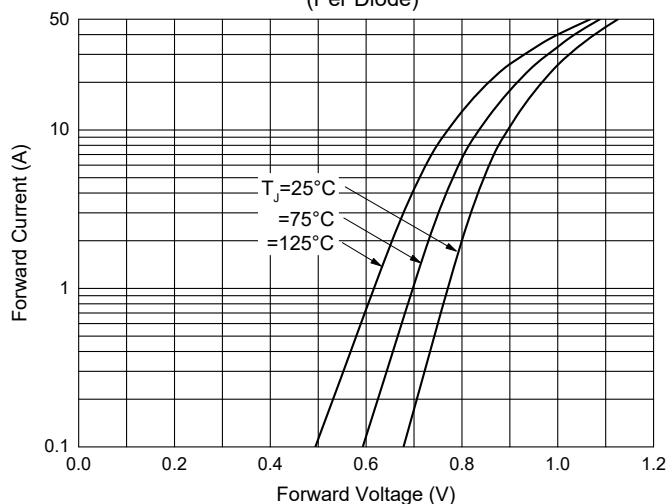


Fig. 4 - Typical Reverse Leakage Characteristics (Per Diode)

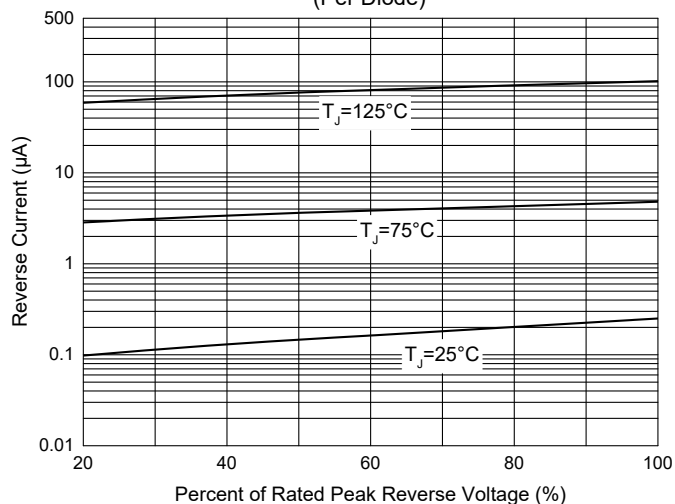
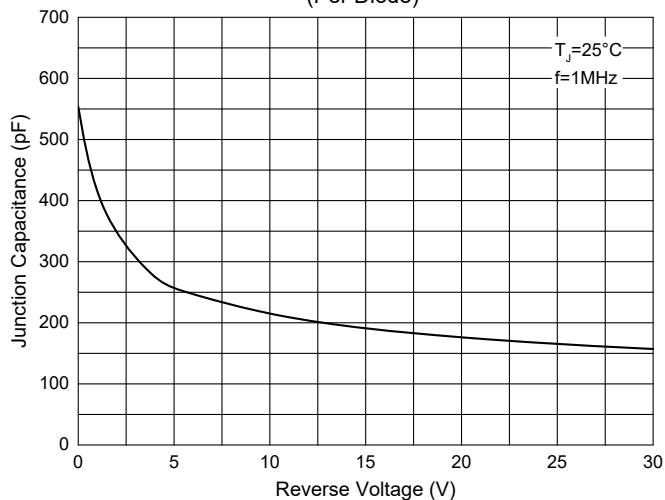


Fig. 5 - Typical Capacitance Characteristics (Per Diode)



Ordering Information

Device	Packing
PBA5010-BP	Bulk: 15pcs/Tube, 750pcs/Box, 1500pcs/Carton

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