



E502650

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 1600 Volts

Maximum Ratings @ 25°C (Unless Otherwise Specified)

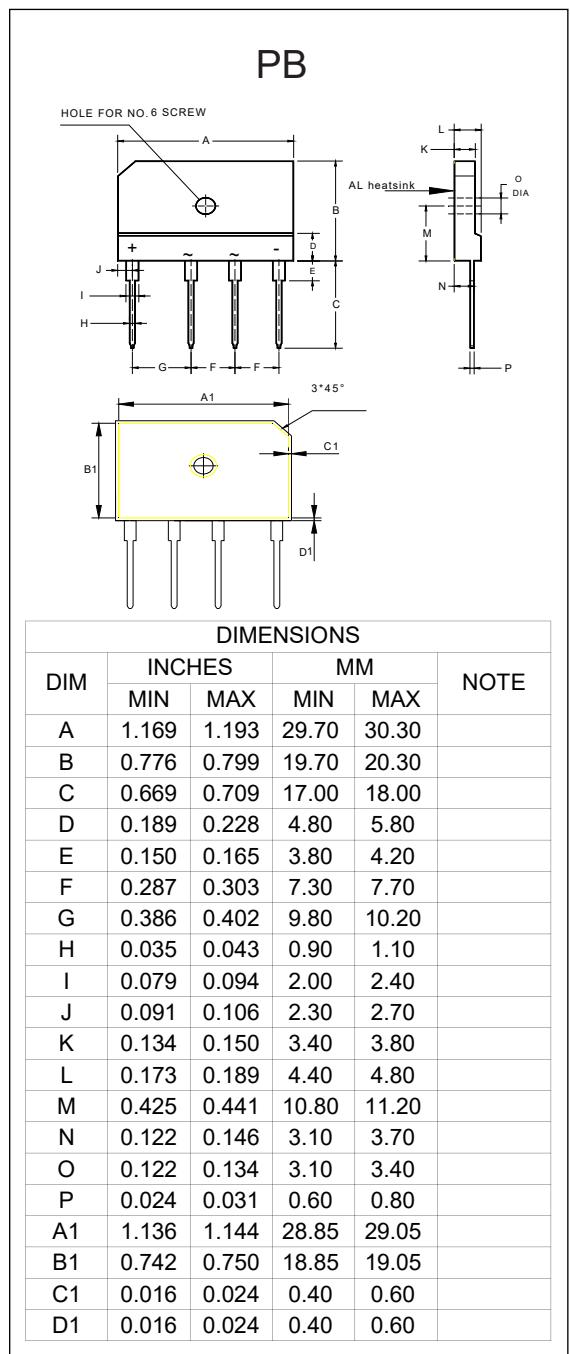
Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}		V
Working Peak Reverse Voltage	V_{RWM}	1600	V
DC Blocking Voltage	V_R		
RMS Reverse Voltage	V_{RMS}	1120	V
Average Rectified Forward Current @ $T_C=110^\circ\text{C}$ (With Heatsink)	$I_{F(AV)}$	50	A
Average Rectified Forward Current @ $T_A=25^\circ\text{C}$ (Without Heatsink)		4.5	A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I_{FSM}	500	A
Non-Repetitive Peak Surge Current @ 1ms Square Wave		1000	A
I^2t Rating for Fusing @1ms $\leq t \leq$ 8.3ms	I^2t	1037.5	A^2s
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



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		0.7		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Without Heatsink		18		°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	$I_F=25A; T_J=25°C$			1.1	V
Reverse Current	I_R	at Rated $V_R; T_J=25°C$ at Rated $V_R; T_J=125°C$			5 1000	µA
Junction Capacitance	C_J	$V_R=4V; f=1MHz; T_J=25°C$		195		pF

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

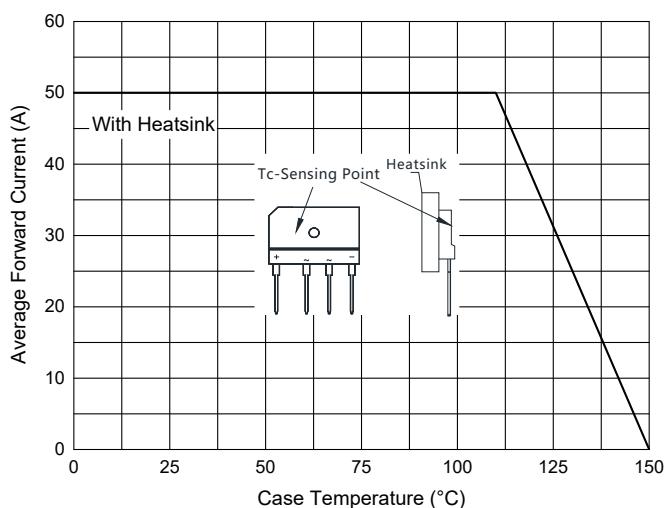


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current(Per Diode)

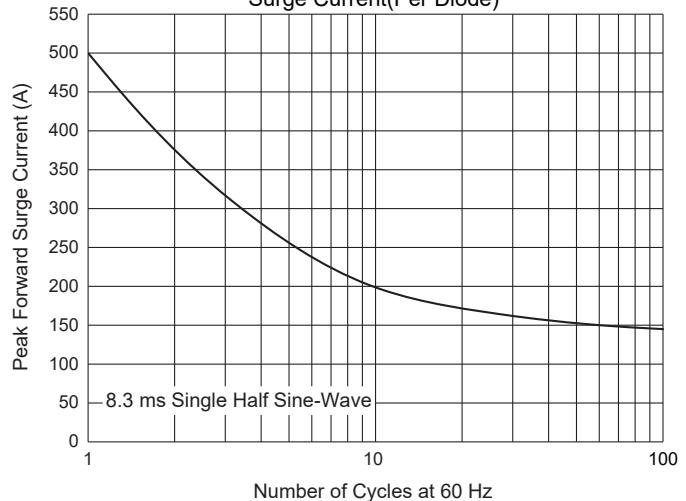


Fig. 3 - Typical Forward Characteristics (Per Diode)

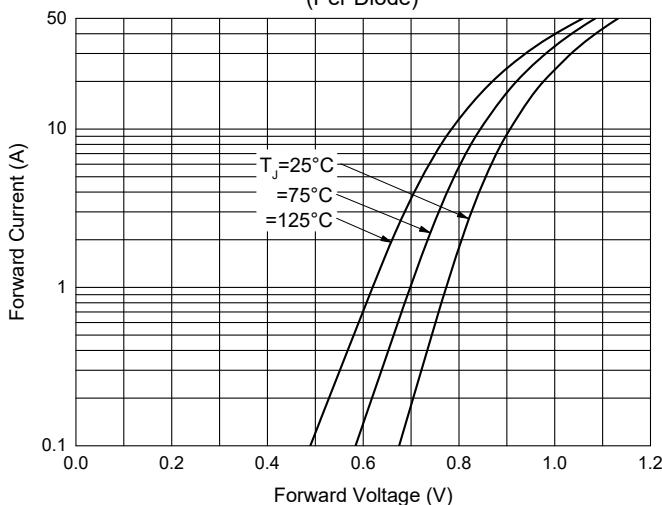


Fig. 4 - Typical Reverse Leakage Characteristics (Per Diode)

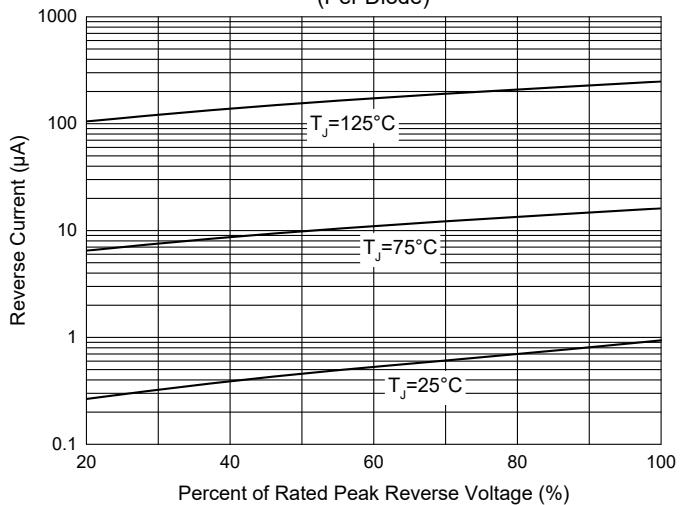
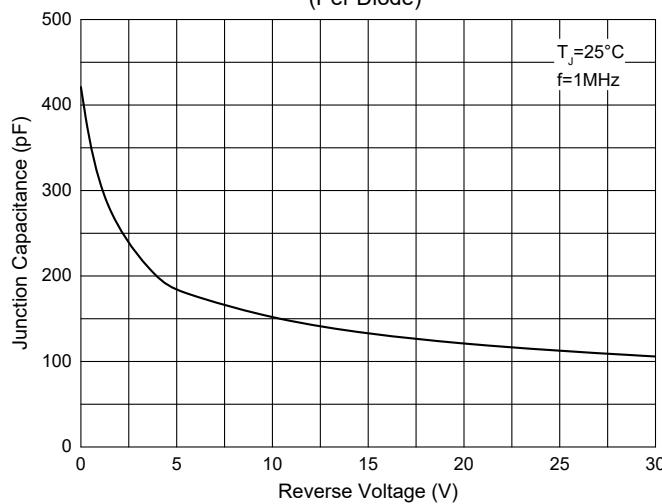


Fig. 5 - Typical Capacitance Characteristics (Per Diode)



Ordering Information

Device	Packing
PB5016-BP	Bulk:15pcs/Tube,750pcs/Box,1500pcs/Carton

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