

## KBPC25.10BY

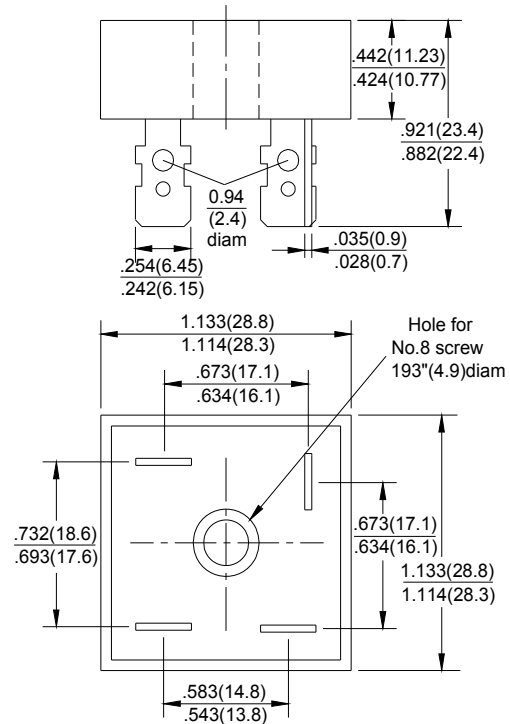
### 1PH POWER RECTIFIER BRIDGE 25A 1000V

#### Features

- Diffused Junction
- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- Electrically Isolated Metal Case for Maximum Heat Dissipation
- Low Thermal Resistance
- High Surge Current Capability

#### Mechanical Data

- Case: KBPC (Metal Case with Faston Lugs)
- Terminals: Plated Faston Lugs or Wire Leads, Add "W" Suffix to Indicate Wire Leads
- Polarity: As Marked on Case
- Mounting: Through Hole with #10 Screw
- Mounting Torque: 2.0 N.m Max.
- Weight: 30 grams
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version**



#### Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

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

Characteristic	Symbol	KBPC25.10BY	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	1000	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	700	V
Average Rectified Output Current @T <sub>C</sub> = 55°C	I <sub>O</sub>	25	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	300	A
Forward Voltage per leg @I <sub>F</sub> = 12.5A	V <sub>FM</sub>	1.1	V
Peak Reverse Current @T <sub>C</sub> = 25°C At Rated DC Blocking Voltage @T <sub>C</sub> = 125°C	I <sub>RM</sub>	10 500	μA
I <sup>2</sup> t Rating for Fusing (t < 8.3ms)	I <sup>2</sup> t	375	A <sup>2</sup> s
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	200	pF
Typical Thermal Resistance (Note 2)	R <sub>θ JC</sub>	1.7	°C/W
RMS Isolation Voltage, t = 1min	V <sub>ISO</sub>	2500	V
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance junction to case, mounted on 127 x 152 x 124mm Al. heatsink.

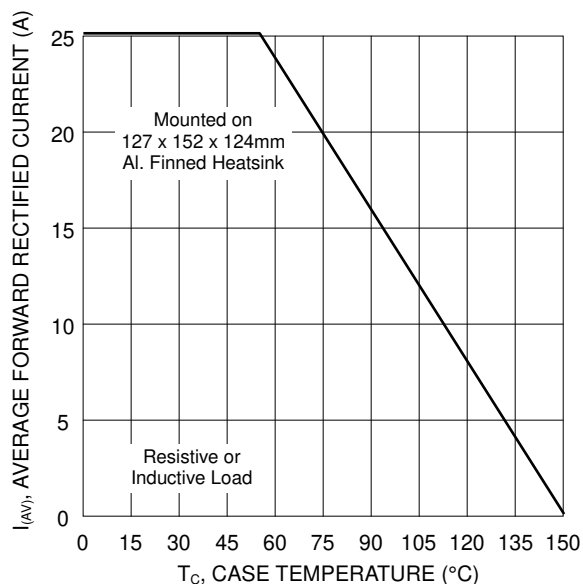


Fig. 1 Forward Current Derating Curve

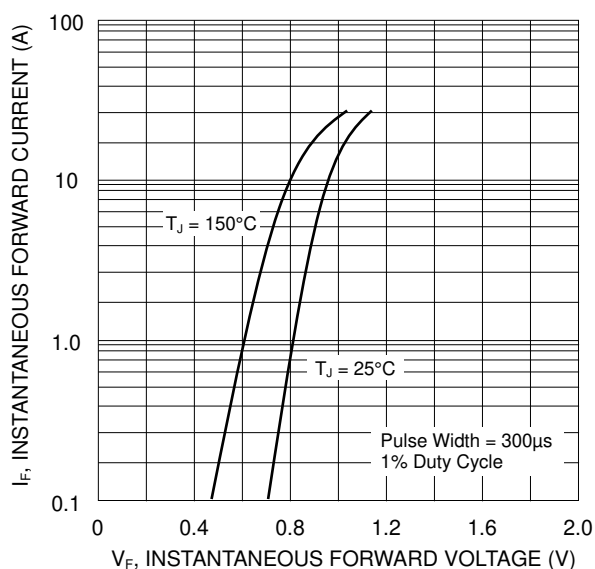


Fig. 2 Typical Forward Characteristics

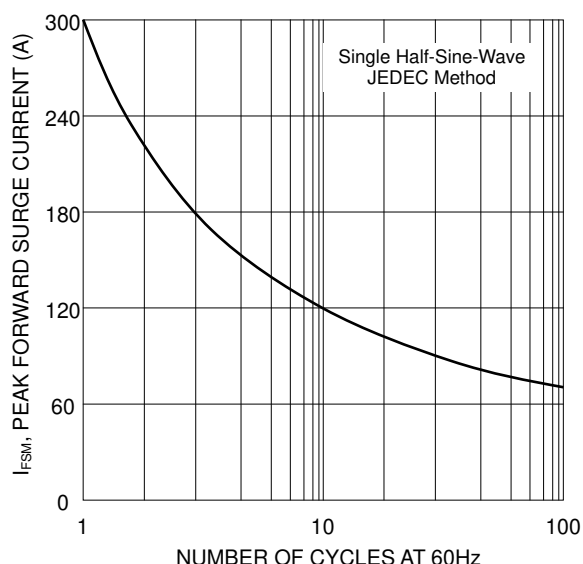


Fig. 3 Forward Surge Current Derating Curve

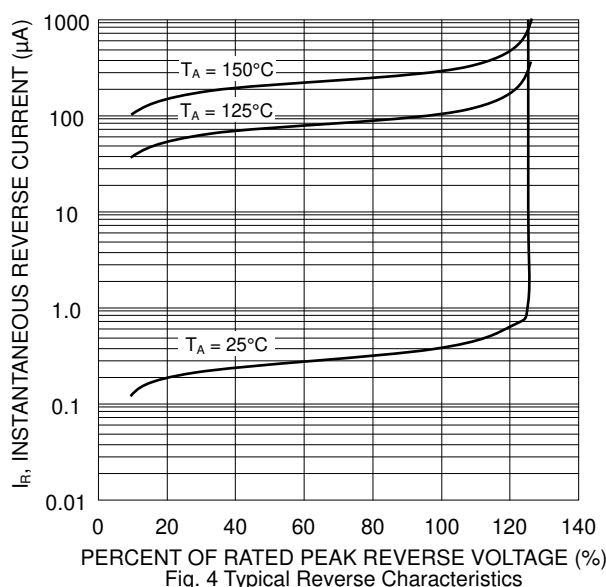


Fig. 4 Typical Reverse Characteristics

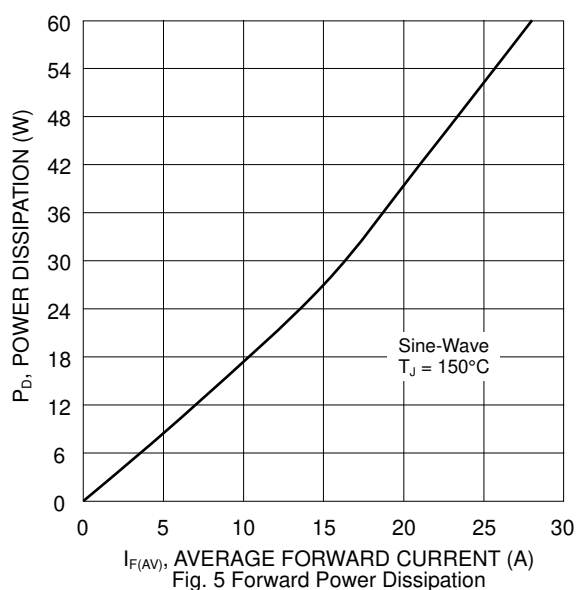


Fig. 5 Forward Power Dissipation

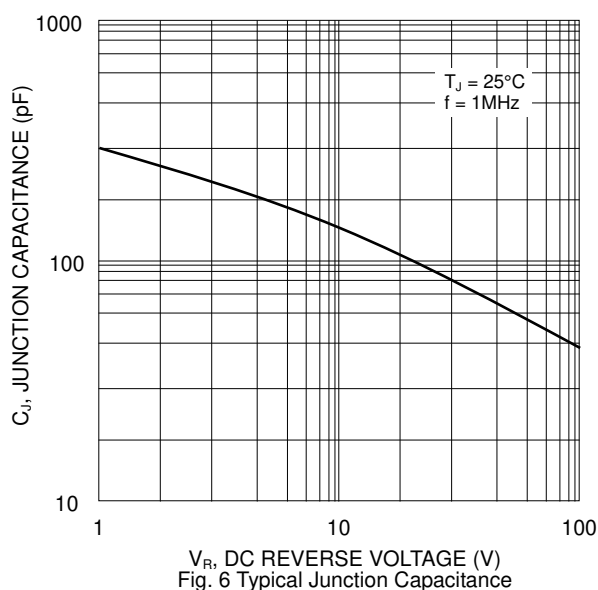


Fig. 6 Typical Junction Capacitance