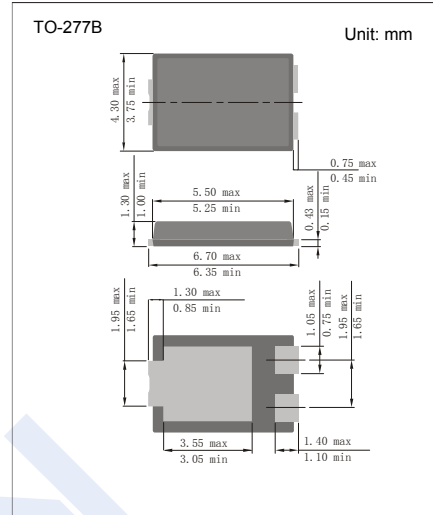


## Rectifier Diodes

### KBE12U100P5

#### ■ Features

- Ultra Low Forward Voltage Drop
- Excellent High Temperature Stability
- Patented Super Barrier Rectifier Technology  
Soft, Fast Switching Capability
- Lead-Free Finish; RoHS Compliant
- Halogen and Antimony Free. "Green" Device



LEFT PIN ○  
RIGHT PIN ○

BOTTOMSIDE HEAT SINK

#### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	100	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Blocking Voltage	$V_R$		
Average Rectified Output Current	$I_O$	12	A
Non-Repetitive Peak Forward Surge Current @ 8.3ms	$I_{FSM}$	250	
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	27	$^\circ\text{C}/\text{W}$
Thermal Resistance Junction to Lead	$R_{\theta JL}$	3	
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature range	$T_{stg}$	-65 to 150	

#### ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	$V_R$	$I_R = 100 \mu\text{A}$	100			V
Forward voltage	$V_{F1}$	$I_F = 5 \text{ A}, T_J = 25^\circ\text{C}$		0.49		
	$V_{F2}$	$I_F = 5 \text{ A}, T_J = 125^\circ\text{C}$			0.51	
	$V_{F3}$	$I_F = 12 \text{ A}, T_J = 25^\circ\text{C}$			0.71	
Reverse voltage leakage current	$I_{R1}$	$V_R = 100 \text{ V}, T_J = 25^\circ\text{C}$			0.25	mA
	$I_{R2}$	$V_R = 100 \text{ V}, T_J = 125^\circ\text{C}$			40	

# Rectifier Diodes

## KBE12U100P5

### Typical Characteristics

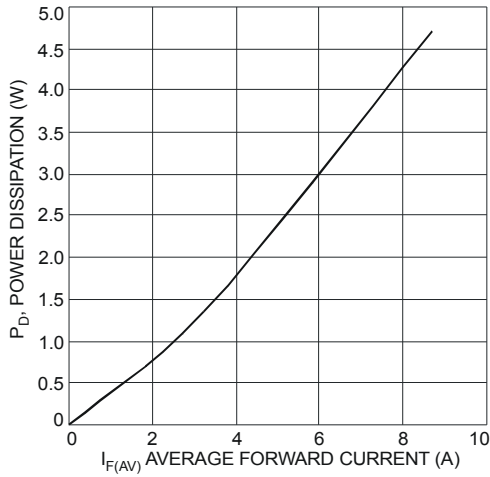


Fig. 1 Forward Power Dissipation

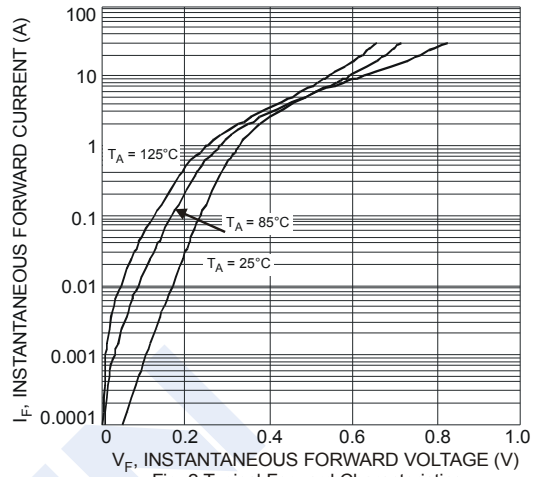


Fig. 2 Typical Forward Characteristics

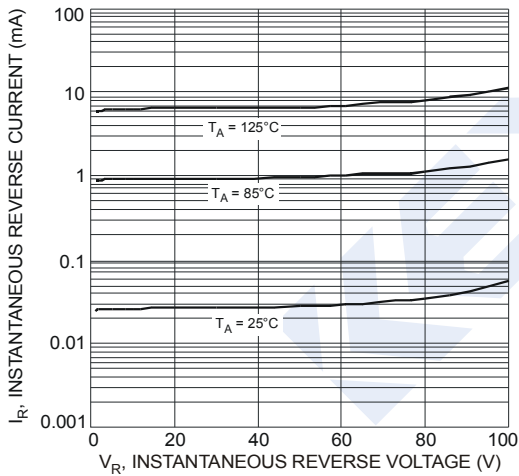


Fig. 3 Typical Reverse Characteristics

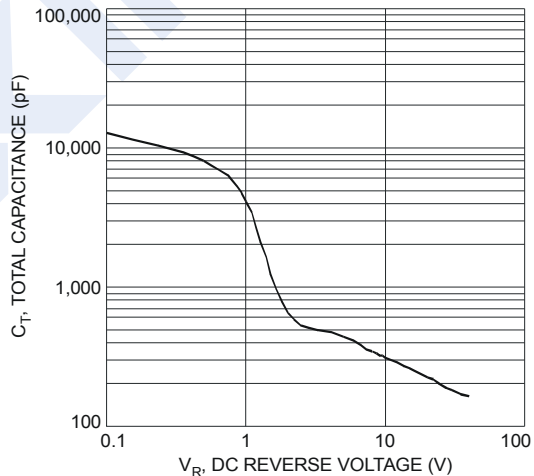


Fig. 4 Total Capacitance vs. Reverse Voltage

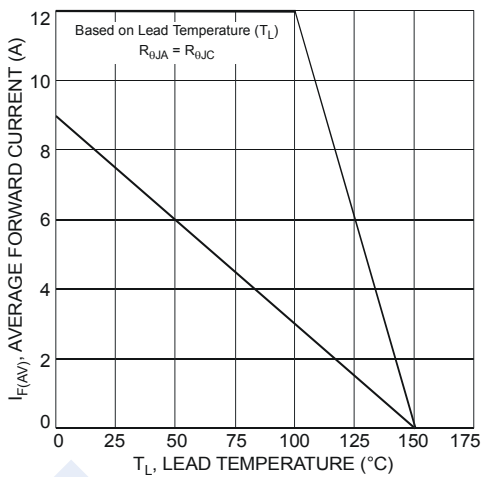


Fig. 5 Forward Current Derating Curve

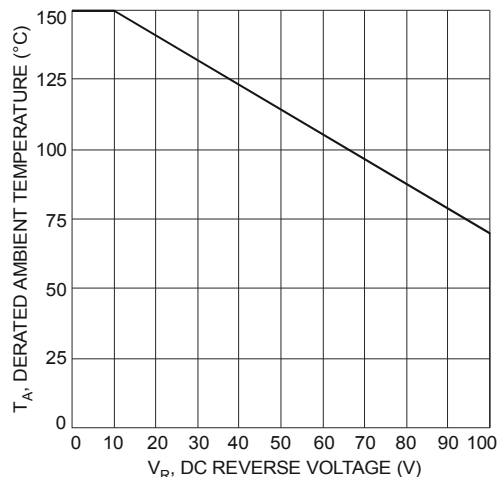


Fig. 6 Operating Temperature Derating