



*PFC Device Corporation*

**PTB3L100**

**3A 100V HPTR® Schottky Rectifier**

### Major ratings and characteristics

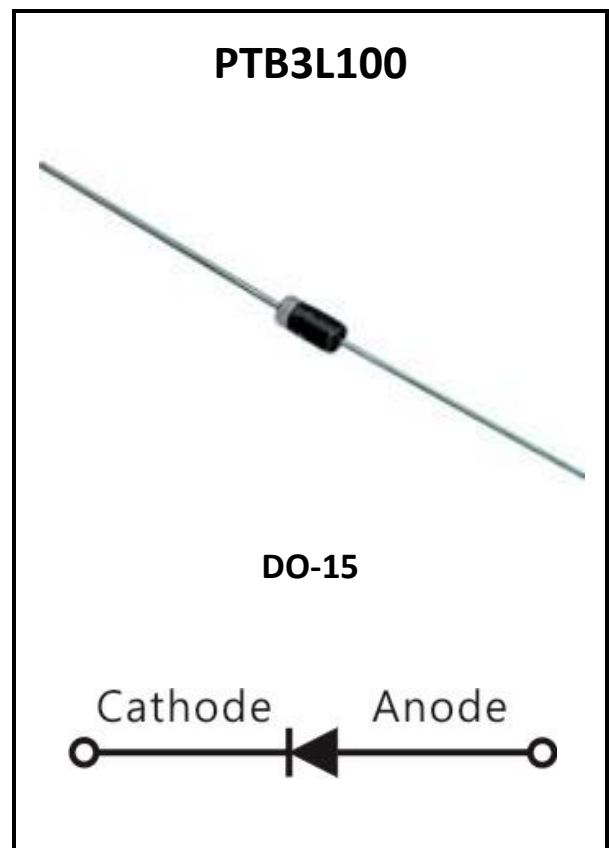
Characteristics	Values	Units
$I_{F(AV)}$ Rectangular Waveform	3	A
$V_{RRM}$	100	V
$V_F$ @ 3A , $T_j=125^\circ\text{C}$	0.65	V, typ.
$T_j$ Operating Junction Temperature	-40 to +150	$^\circ\text{C}$

### Features

- Super Low Forward Voltage ( SLVF® ) Drop
- Reliable High Temperature Operation
- Softest, fast switching capability
- $150^\circ\text{C}$  Operating Junction Temperature
- Lead Free Finish, RoHS Compliant

### Typical Applications

Device optimized for low forward voltage drop to maximize efficiency in Power Supply applications



## 1. Characteristics

### Maximum Ratings Characteristics

(  $T_A = 25^{\circ}\text{C}$  unless otherwise specified )

Parameter	Symbol	Values	Units
DC Blocking Voltage	$V_{RM}$	100	Volts
Working Peak Reverse Voltage	$V_{RWM}$		
Peak Repetitive Reverse Voltage	$V_{RRM}$		
Average Rectified Forward Current (Rated VR-20Khz Square Wave) - 50% duty cycle	$I_o$	3	Amps
Peak Forward Surge Current - 1/2 60hz	$I_{FSM}$	80	Amps
Peak Repetitive Reverse Surge Current (2uS-1Khz)	$I_{RRM}$	1	Amps
Typical Thermal Resistance	$R\theta_{JC}$	22	$^{\circ}\text{C} / \text{W}$
Maximum Rate of Voltage Change ( at Rated VR )	$dv/dt$	10000	$\text{V}/\mu\text{S}$
Operating Junction Temperature	$T_J$	- 40 to +150	$^{\circ}\text{C}$
Storage Junction Temperature	$T_{STG}$	- 40 to +150	

### Electrical Characteristics

(  $T_A = 25^{\circ}\text{C}$  unless otherwise specified )

Parameter	Test Conditions		Symbol	Typ.	Max.	Units
Instantaneous Forward Voltage	IF = 3 A	$T_J = 25^{\circ}\text{C}$	$V_F^*$	-----	0.78	Volts
		$T_J = 125^{\circ}\text{C}$		0.65	0.69	
Instantaneous Reverse Current	At $V_{RM}$	$T_J = 25^{\circ}\text{C}$	$I_R^*$	-----	200	$\mu\text{A}$
		$T_J = 125^{\circ}\text{C}$		5	30	mA

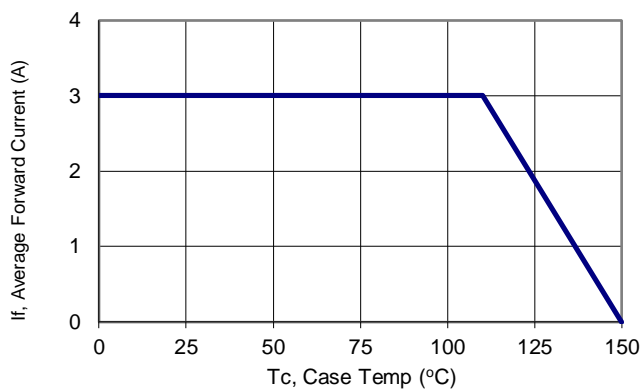
\* Pulse width < 300  $\mu\text{S}$ , Duty cycle < 2%



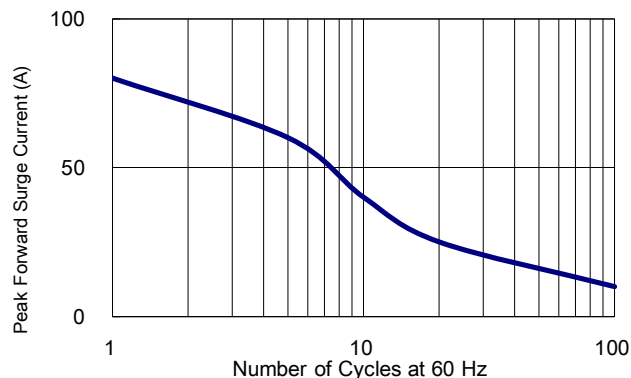
## 2. Characteristics Curves

### Ratings and Characteristics Curves

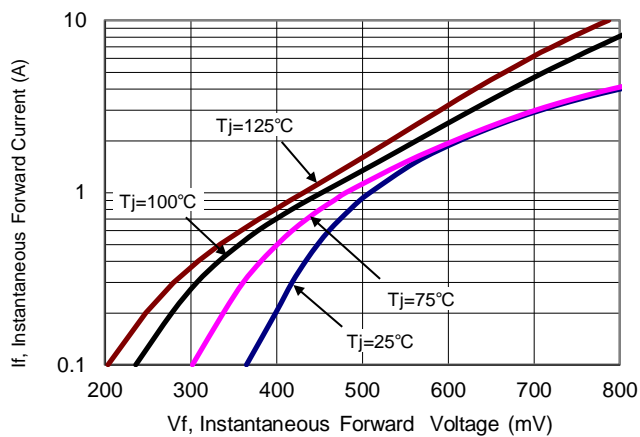
(  $T_A = 25^{\circ}\text{C}$  unless otherwise specified )



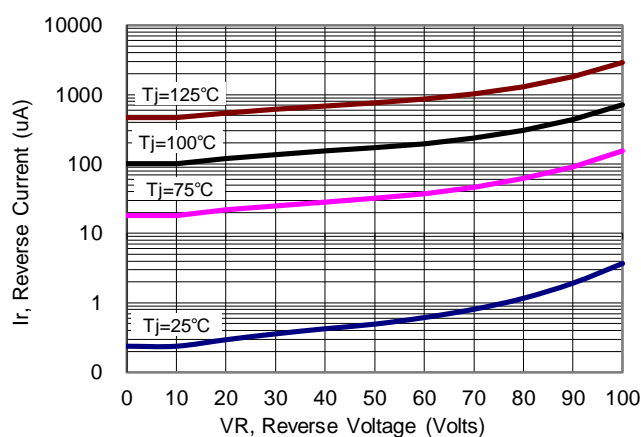
**Figure 1: Current Derating, Case**



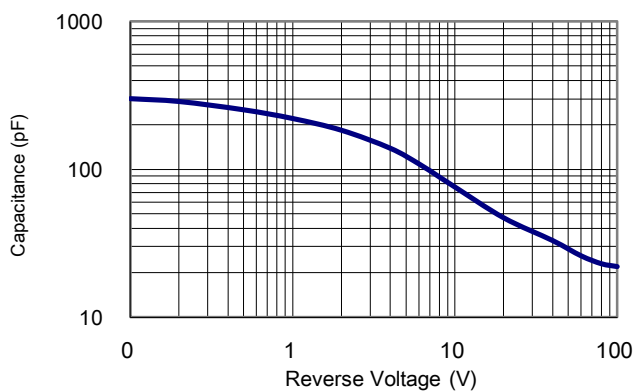
**Figure 2: Maximum Repetitive Surge Current**



**Figure 3: Typical Forward Voltage**



**Figure 4: Typical Reverse Current**

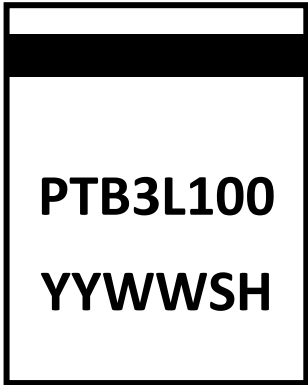


**Figure 5: Typical Junction Capacitance**



3. Marking information

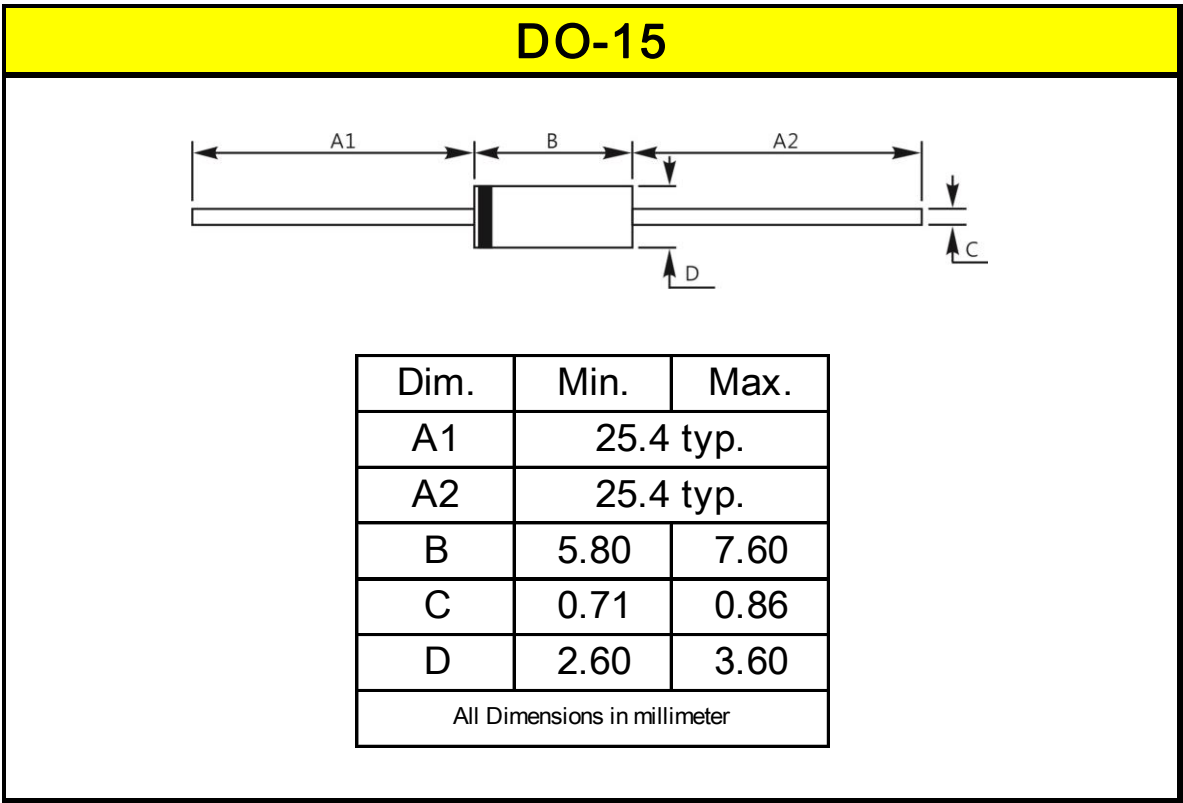
Top Marking Rule



PTB3L100 = Product Type Marking Code  
YYWW = Date Code  
YY = Last two digits of year  
WW = Week code  
S = Series Number  
H = Halogen Free (N/A = common molding compound)

4. Package information

Package Outline Dimensions    millimeters



## 5. Ordering information

Part Number	Package	Delivery mode
PTB3L100	DO-15	2000 pieces / ammo-pack

Note: For Halogen Free molding compound, add "H" suffix to part number above.

### Mechanical

- Molder Plastic: UL Flammability Classification Rating 94V-0
- Device Weight : 0.014 ounces (0.397grams) – DO-15

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