



PFC Device Corporation

**PT10100E**  
**PT10100D**

## 10A 1000V HPTR<sup>®</sup> Schottky Rectifier

### Major ratings and characteristics

Characteristics	Values	Units
$I_{F(AV)}$ Rectangular Waveform	5 × 2	A
$V_{RRM}$	100	V
$V_F@ 5A, T_J=125^\circ C$	0.65	V, typ.
$T_J$ Operating Junction Temperature	-40 to +150	$^\circ C$

### Features

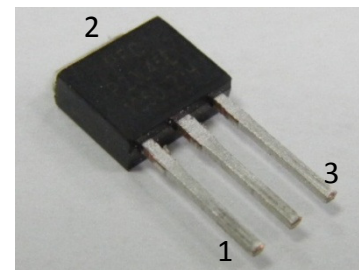
- Super Low Forward Voltage ( SLVF<sup>®</sup> ) Drop
- Reliable High Temperature Operation
- Softest, fast switching capability
- 150 $^\circ C$  Operating Junction Temperature
- Lead Free Finish, RoHS Compliant

### Typical Applications

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

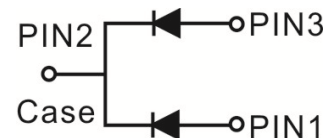
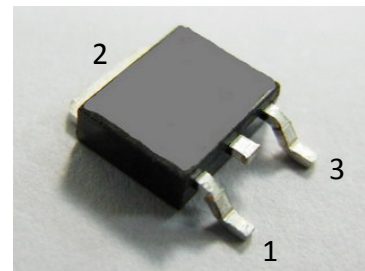
TO-251 (I-PAK)

PT10100E



TO-252 (D-PAK)

PT10100D



## 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 Per device (Rated VR-20Khz Square Wave) - 50% duty cycle	$I_o$	10	Amps
Peak Forward Surge Current - 1/2 60hz	$I_{FSM}$	100	Amps
Peak Repetitive Reverse Surge Current (2uS-1Khz)	$I_{RRM}$	2	Amps
Typical Thermal Resistance (per leg) Package = I-PAK TO-251 Package D-PAK TO-252	$R\theta_{JC}$	3 3	$^\circ\text{C} / \text{W}$
Maximum Rate of Voltage Change ( at Rated $V_R$ )	$dv/dt$	10000	V/uS
Operating Junction Temperature	$T_J$	- 40 to +150	$^\circ\text{C}$
Storage Junction Temperature	$T_{STG}$	- 40 to +150	

### Electrical Characteristics - (per leg) ( $T_A = 25^\circ\text{C}$ unless otherwise specified )

Parameter	Test Conditions	Symbol	Typ.	Max.	Units	
Instantaneous Forward Voltage	IF = 3 A	$T_J = 25^\circ\text{C}$	VF*	0.62	-----	Volts
	IF = 5 A			0.75	0.79	
	IF = 3 A	$T_J = 125^\circ\text{C}$		0.58	-----	
	IF = 5 A			0.65	0.69	
Instantaneous Reverse Current	At $V_{RM}$	$T_J = 25^\circ\text{C}$	IR*	-----	100	$\mu\text{A}$
		$T_J = 125^\circ\text{C}$		-----	20	mA

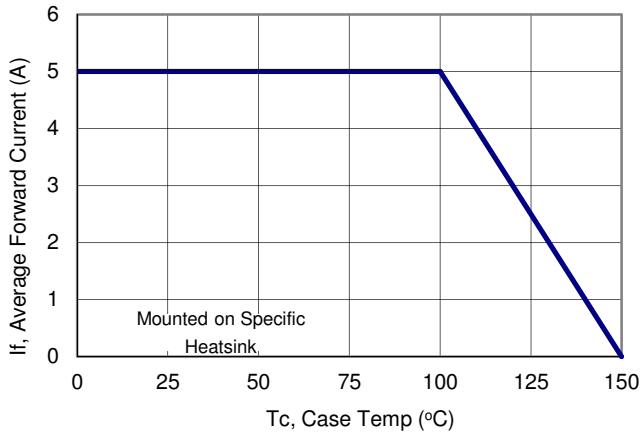
\* Pulse width < 300 uS, Duty cycle < 2%

## 2. Characteristics Curves

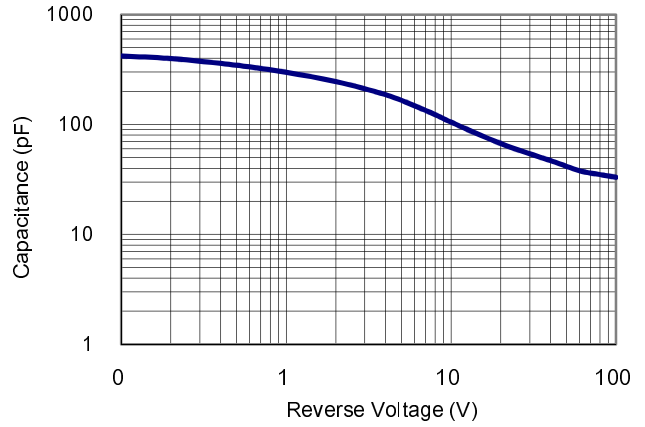


## Ratings and Characteristics Curves

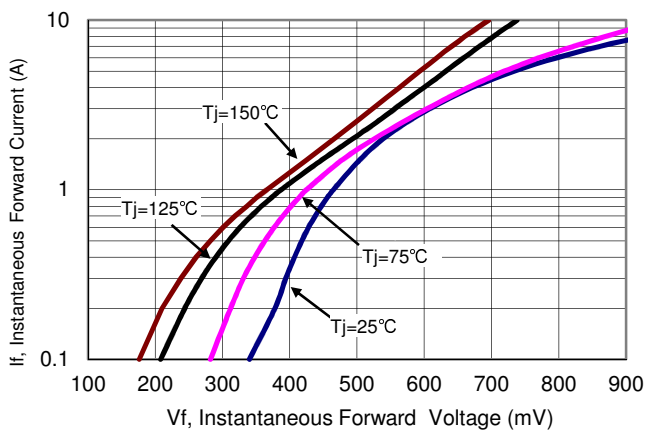
( TA = 25°C unless otherwise specified )



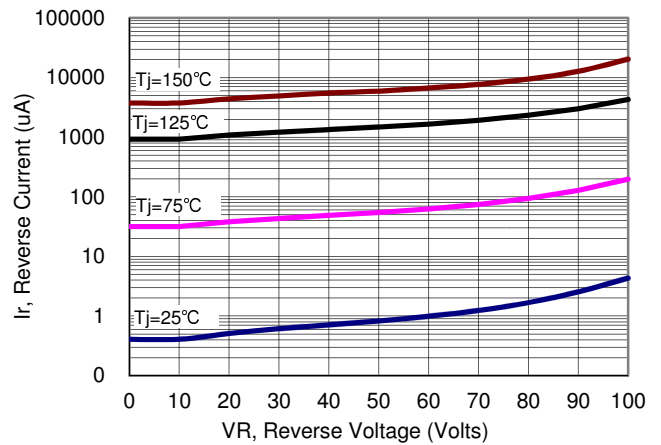
**Figure 1: Current Derating, Case**



**Figure 2: Typical Junction Capacitance**



**Figure 3: Typical Forward Voltage**



**Figure 4: Typical Reverse Current**



### 3. Marking information

#### Top Marking Rule

**PFC**  
**PT10100E**  
**YYWW ABH**

PT10100E = Product Type Marking Code  
 YYWW = Date Code  
 YY = Last two digits of year  
 WW = Week code  
 AB = Assembly code  
 H = Halogen Free (N/A = common molding compound)

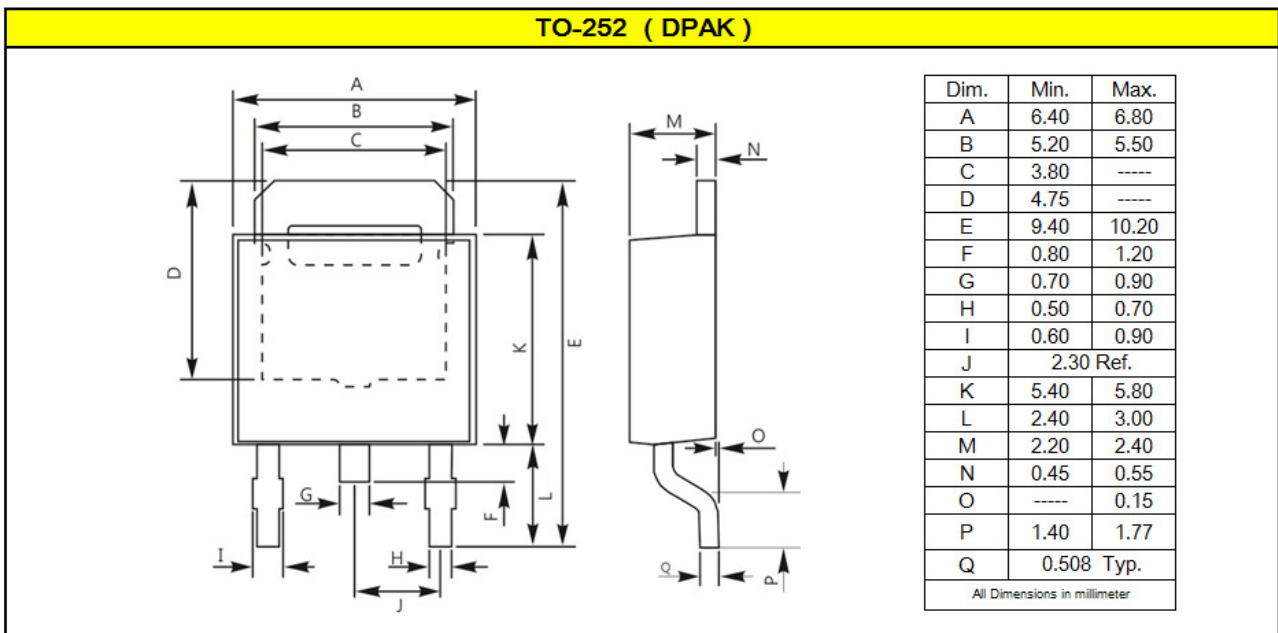
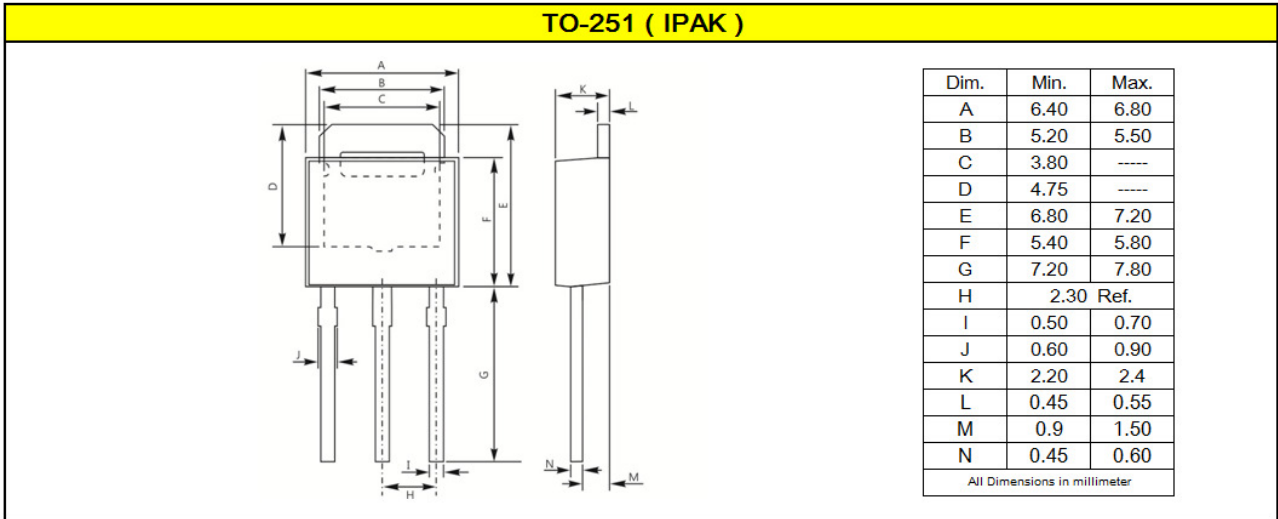
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4. Package information

Package Outline Dimensions millimeters



**5. Ordering information**

Part Number	Package	Delivery mode
PT10100E	TO-251 (I-PAK)	80 pieces / tube
PT10100D	TO-252 (D-PAK)	2500 pcs / 13" diameter reel

Mechanical

- Molder Plastic: UL Flammability Classification Rating 94V-0
- Device Weight : 0.01 ounces (0.3grams) - TO-251 (I-PAK)  
0.01 ounces (0.3grams) - TO-252 (D-PAK)

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