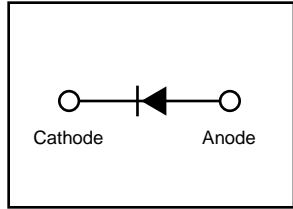


# HDPE15U60G

## Ultra Fast Recovery Diode

$V_{RRM} = 600\text{ V}$
$I_F = 15\text{ A}$
$t_{rr(Typ)} = 28\text{ nS}$



### General Description

With excellent performance in reverse recovery time, switching speed and rated current, HDPE15U60G can be utilized with high voltage power switches for voltage limitation and high-frequency current rectification.

### Features

- High breakdown voltage
- High speed switching
- Avalanche Energy Rated
- Planar Construction

### Applications

- LED Power & Other Charger SMPS
- PFC
- General Purpose

### Absolute Maximum Ratings $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Unit
$V_{RRM}$	Peak Repetitive Reverse Voltage	600	V
$V_R$	DC Blocking Voltage		
$I_{F(AV)}$	Average Rectifier Forward Current ( $T_C=125^\circ\text{C}$ )	15	A
$I_{FSM}$	Non-Rectifier Peak Surge Current @8.3ms	150	A
$T_J, T_{STG}$	Operating and Storage Temperature Range	-55 to +150	$^\circ\text{C}$

### Electrical Characteristics

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
$V_{BR}$	Breakdown Voltage	$I_R = 50\mu\text{A}$	600	--	--	V
$V_F$	Forward Voltage	$I_F = 15\text{A}, T_C = 25^\circ\text{C}$	--	1.25	1.50	V
		$I_F = 15\text{A}, T_C = 125^\circ\text{C}$	--	1.10	1.30	
$I_R$	Reverse Current	$V_R = 600\text{V}, T_C = 25^\circ\text{C}$	--	--	10	$\mu\text{A}$
$t_{rr}$	Reverse Recovery Time	$I_F = 1\text{A}, di/dt = 200\text{A}/\mu\text{s}$	--	28	--	ns
		$I_F = 15\text{A}, di/dt = 200\text{A}/\mu\text{s}$	--	53	--	ns

### Thermal Resistance Characteristics

Symbol	Parameter	Typ.	Max.	Unit
$R_{\theta JC}$	Junction-to-Case	--	1.5	$^\circ\text{C}/\text{W}$

# Typical Characteristics

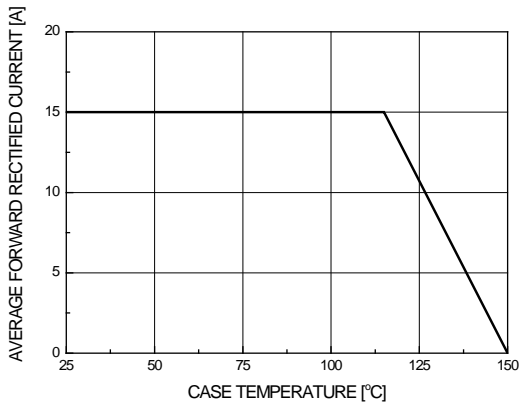


Figure 1. Forward Current Derating Curve

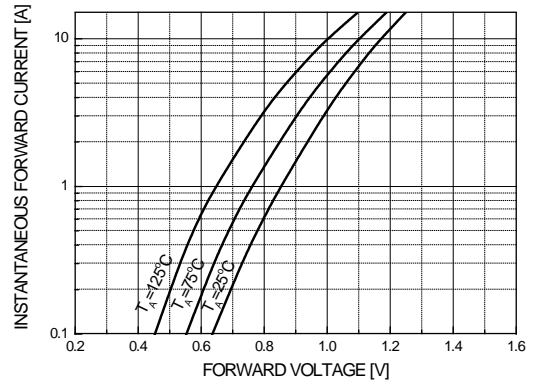


Figure 2. Typical Forward Characteristics

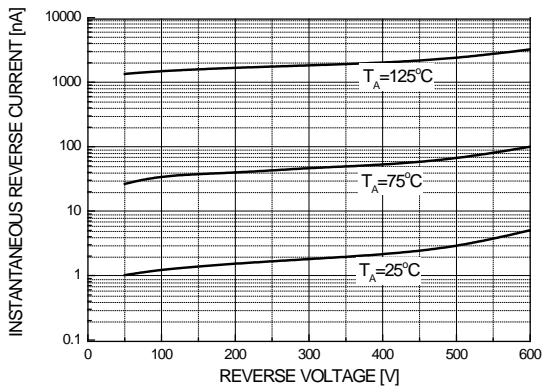


Figure 3. Typical Reverse Characteristics

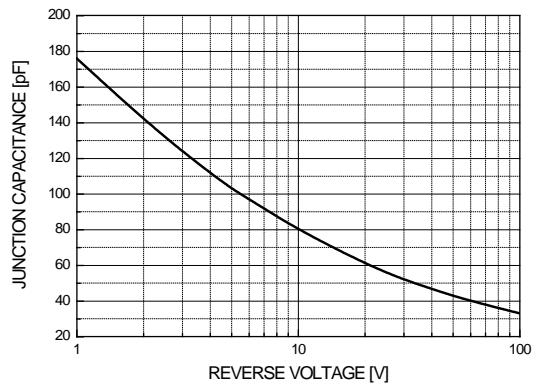


Figure 4. Typical Junction Capacitance

Package Dimension

TO-220-2L

