

HDPE8U60G

Ultra Fast Recovery Diode

General Description

With excellent performance in reverse recovery time, switching speed and rated current, HDPE8U60G can be utilized with high voltage power switches for voltage limitation and high-frequency current rectification.

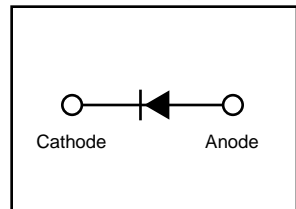
Features

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

Applications

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

$V_{RRM} = 600\text{ V}$
$I_F = 8\text{ A}$
$t_{rr(Typ)} = 27\text{ nS}$



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	8	A
I_{FSM}	Non-Rectifier Peak Surge Current @8.3ms	80	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	$I_F = 8\text{A}, T_C = 25^\circ\text{C}$		1.40	1.70	V
		$I_F = 8\text{A}, T_C = 125^\circ\text{C}$		1.25	1.50	
I_R	Reverse Current	$V_R = 600\text{V}, T_C = 25^\circ\text{C}$			10	μA
t_{rr}	Reverse Recovery Time	$I_F = 1\text{A}, di/dt = 200\text{A}/\mu\text{s}$	--	27	--	ns
		$I_F = 8\text{A}, di/dt = 200\text{A}/\mu\text{s}$	--	52	--	ns

Thermal Resistance Characteristics

Symbol	Parameter	Typ.	Max.	Unit
$R_{\theta JC}$	Junction-to-Case	--	2.0	$^\circ\text{C}/\text{W}$

Typical Characteristics

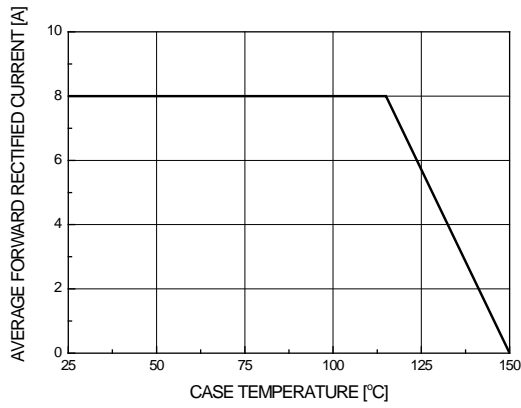


Figure 1. Forward Current Derating Curve

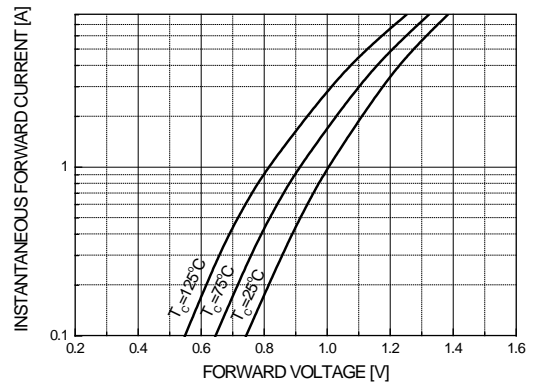


Figure 2. Typical Forward Characteristics

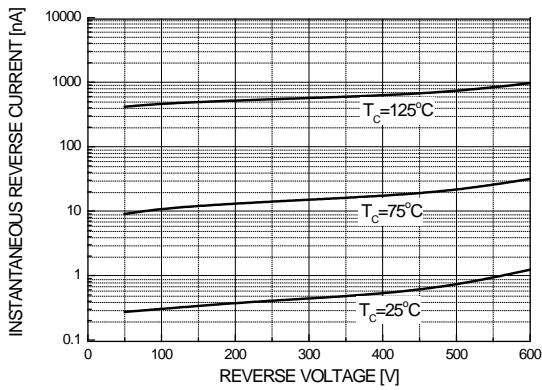


Figure 3. Typical Reverse Characteristics

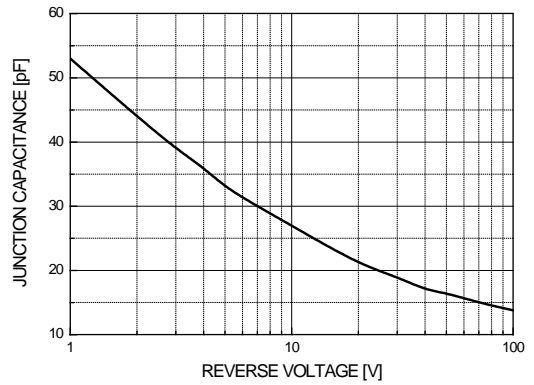
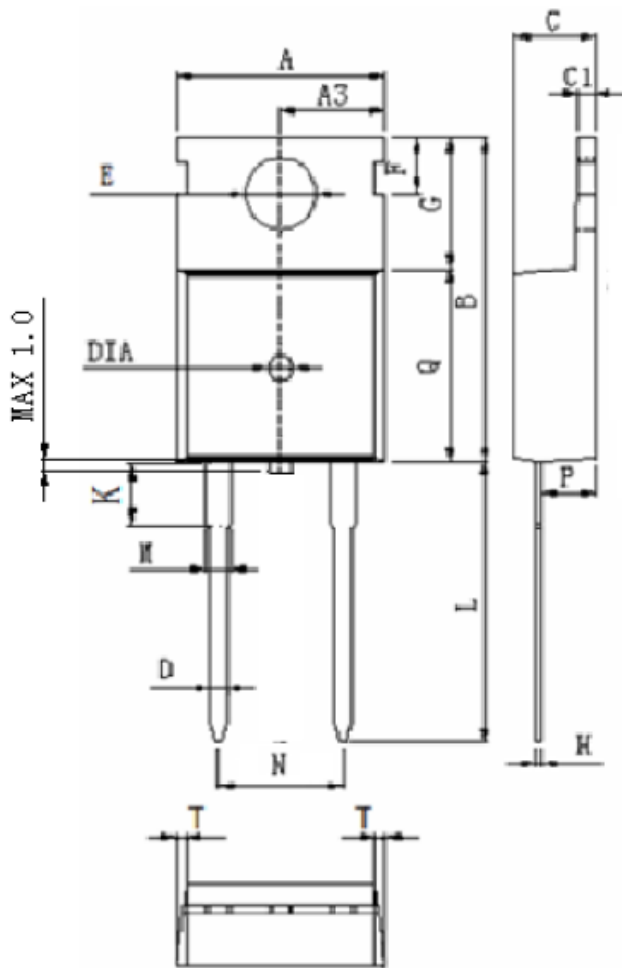


Figure 4. Typical Junction Capacitance

Package Dimension

TO-220-2L



DIM	MILLIMETERS
A	10.0±0.3
A3	5.0±0.2
B	15.8±0.4
C	4.48±0.2
C1	1.3±0.2
D	0.8±0.2
E	3.6±0.2
F	2.95±0.3
G	5.5±0.3
H	0.5±0.1
K	3.1±0.2
L	13.2±0.4
L1	3.0±0.3
M	1.25±0.1
N	5.08±0.05
P	2.4±0.3
Q	9.0±0.3
T	W:0.35
DIA	⊙1.5 (deep 0.2)

Unit :mm