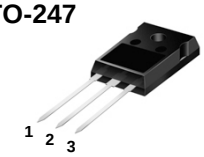
July 2015

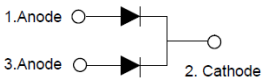
SemiHow
Know-How for Semiconductor

HDA80U40GW
Ultra Fast Recovery Diode

V_{RRM} = 400 V
I_F = 2 x 40A
t_{rr} = 33nS

TO-247





General Description

With excellent performance in reverse recovery time, switching speed and rated current, HDA80U40GW can be utilized with high voltage power switches for voltage limitation and high-frequency current rectification.

Features

- ❑ High Breakdown Voltage
- ❑ High Speed Switching

Absolute Maximum Ratings T_C=25˚C unless otherwise noted

Symbol	Parameter		Value	Unit
V_{RRM}	Peak Repetitive Reverse Voltage		400	V
V_R	DC Blocking Voltage			
$I_{F(AV)}$	Average Rectifier Forward Current	(Per Diode) (Total Diode)	40 80	A
I_{FSM}	Non-Rectifier Peak Surge Current @8.3ms	(Per Diode)	300	A
T_J, T_{STG}	Operating and Storage Temperature Range		-55 to +150	℃

Electrical Characteristics (Per Diode)

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
V_{BR}	Breakdown Voltage	I_R = 50uA	400	--	--	V
V_F	Forward Voltage	I_F = 40A, T_C = 25℃	--	1.2	1.4	V
I_R	Reverse Current	V_R = 400V, T_C = 25℃	--	--	10	uA
t_{rr}	Reverse Recovery Time	I_F = 1A, di/dt = 200A/μs	--	33	--	ns

Thermal Resistance Characteristics

Symbol	Parameter	Typ.	Max.	Unit
$R_{\theta JC}$	Junction-to-Case (Per Diode)	--	1.0	℃/W

Typical Characteristics (Per Diode)

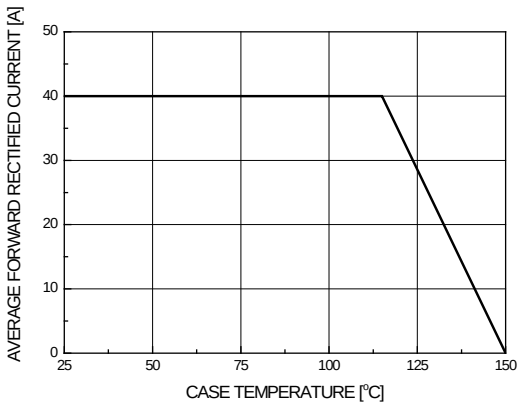


Figure 1. Forward Current Derating Curve

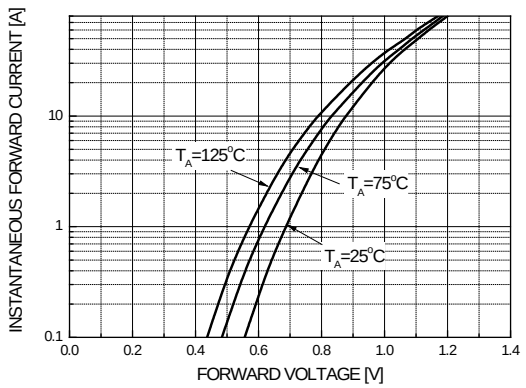


Figure 2. Typical Forward Characterisitics

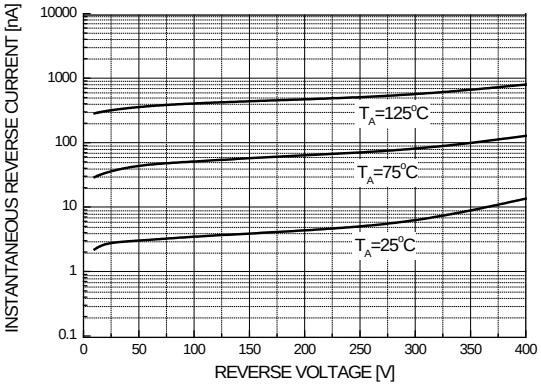


Figure 3. Typical Reverse Characteristics

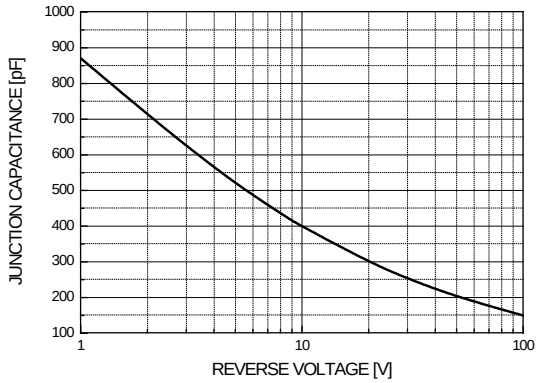


Figure 4. Typical Junction Capacitance

Package Dimension

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