

# HDA40U20GW

## Ultra Fast Recovery Diode

### General Description

With excellent performance in reverse recovery time, switching speed and rated current, HDA40U20GW can be utilized with high voltage power switches for voltage limitation and high-frequency current rectification.

### Features

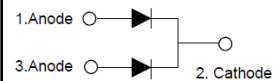
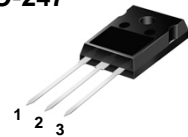
- High Breakdown Voltage
- High Speed Switching

$$V_{RRM} = 200 \text{ V}$$

$$I_F = 2 \times 20 \text{ A}$$

$$t_{rr} = 20 \text{ nS}$$

TO-247



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

Symbol	Parameter	Value	Unit
$V_{RRM}$	Peak Repetitive Reverse Voltage	200	V
$V_R$	DC Blocking Voltage		
$I_{F(AV)}$	Average Rectifier Forward Current (Per Diode) (Total Diode)	20 40	A
$I_{FSM}$	Non-Rectifier Peak Surge Current @8.3ms (Per Diode)	200	A
$T_J, T_{STG}$	Operating and Storage Temperature Range	-55 to +150	$^\circ\text{C}$

### Electrical Characteristics (Per Diode)

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
$V_{BR}$	Breakdown Voltage	$I_R = 50\mu\text{A}$	200	--	--	V
$V_F$	Forward Voltage	$I_F = 20\text{A}, T_C = 25^\circ\text{C}$	--	0.95	1.05	V
$I_R$	Reverse Current	$V_R = 200\text{V}, T_C = 25^\circ\text{C}$	--	--	10	$\mu\text{A}$
$t_{rr}$	Reverse Recovery Time	$I_F = 1\text{A}, di/dt = 200\text{A}/\mu\text{s}$	--	20	--	ns
		$I_F = 20\text{A}, di/dt = 200\text{A}/\mu\text{s}$	--	26	--	ns

### Thermal Resistance Characteristics

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

Typical Characteristics (Per Diode)

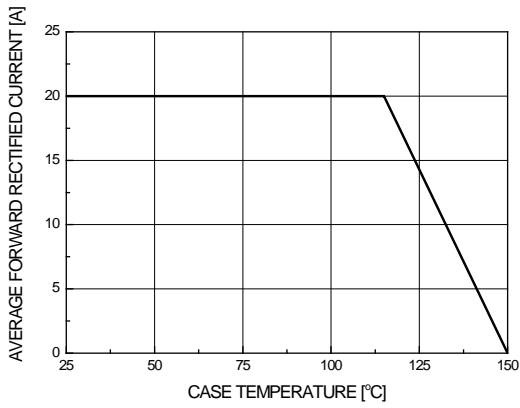


Figure 1. Forward Current Derating Curve

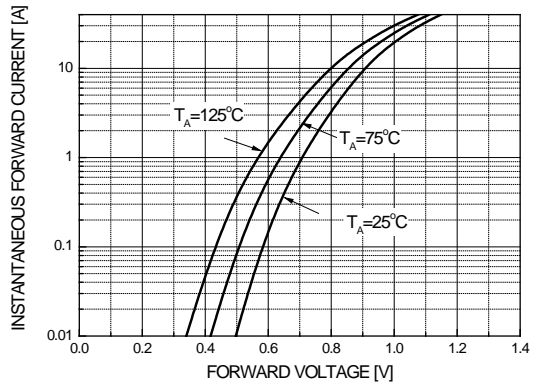


Figure 2. Typical Forward Characteristics

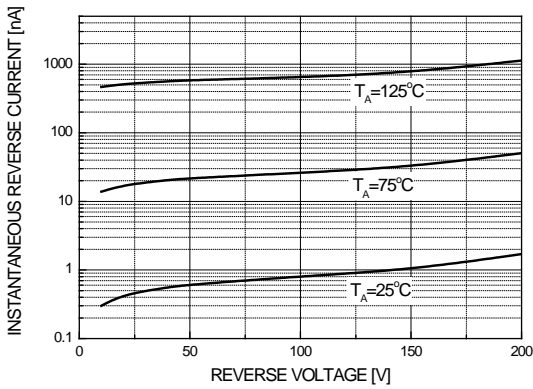


Figure 3. Typical Reverse Characteristics

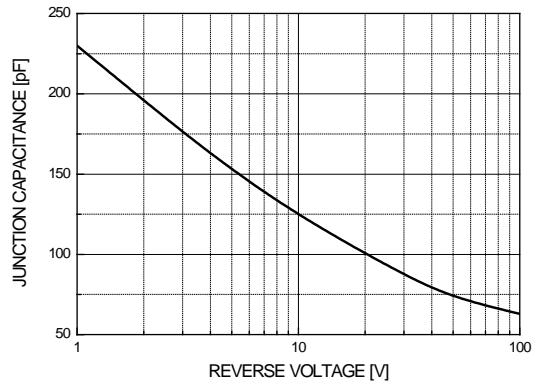


Figure 4. Typical Junction Capacitance

