

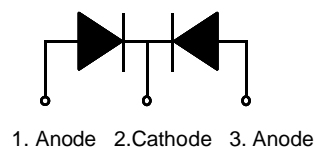
## FFA30U20DN

### Features

- Ultrafast with soft recovery
- Low forward voltage

### Applications

- Power switching circuits
- Output rectifiers
- Freewheeling diodes
- Switching mode power supply



## ULTRA FAST RECOVERY POWER RECTIFIER

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

Symbol	Parameter	Value	Units
$V_{RRM}$	Peak Repetitive Reverse Voltage	200	V
$I_{F(AV)}$	Average Rectified Forward Current @ $T_C = 100^\circ\text{C}$	30	A
$I_{FSM}$	Non-repetitive Peak Surge Current 60Hz Single Half-Sine Wave	300	A
$T_J, T_{STG}$	Operating Junction and Storage Temperature	- 65 to +150	$^\circ\text{C}$

### Thermal Characteristics

Symbol	Parameter	Value	Units
$R_{\theta JC}$	Maximum Thermal Resistance, Junction to Case	1.4	$^\circ\text{C}/\text{W}$

### Electrical Characteristics (per diode) $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Min.	Typ.	Max.	Units	
$V_{FM}^*$	Maximum Instantaneous Forward Voltage $I_F = 30\text{A}$	$T_C = 25^\circ\text{C}$	-	-	1.2	V
		$T_C = 100^\circ\text{C}$	-	-	1.0	
$I_{RM}^*$	Maximum Instantaneous Reverse Current @ rated $V_R$	$T_C = 25^\circ\text{C}$	-	-	30	$\mu\text{A}$
		$T_C = 100^\circ\text{C}$	-	-	300	
$t_{rr}$	Maximum Reverse Recovery Time	-	-	40	ns	
$I_{rr}$	Maximum Reverse Recovery Current	-	-	4.0	A	
$Q_{rr}$	Maximum Reverse Recovery Charge ( $I_F = 30\text{A}$ , $di/dt = 200\text{A}/\mu\text{s}$ )	-	-	80	nC	
$W_{AVL}$	Avalanche Energy	0.5	-	-	mJ	

\* Pulse Test: Pulse Width=300 $\mu\text{s}$ , Duty Cycle=2%

# Typical Characteristics

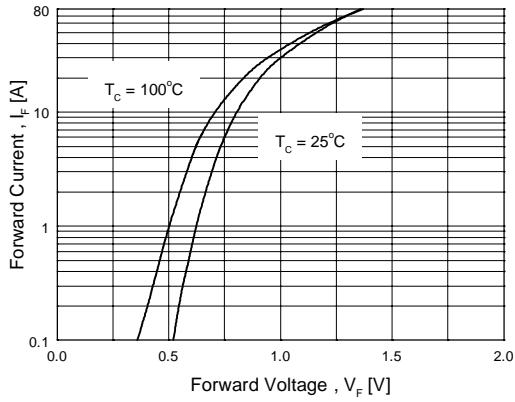


Figure 1. Typical Forward Voltage Drop vs. Forward Current

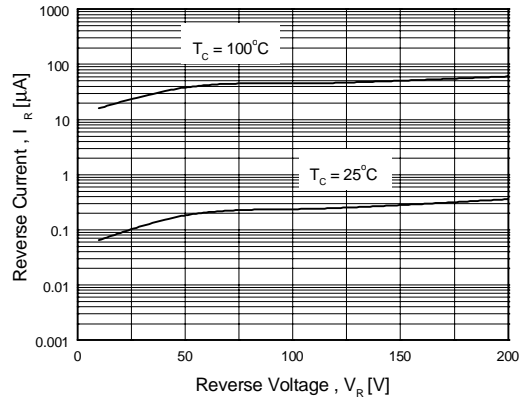


Figure 2. Typical Reverse Current vs. Reverse Voltage

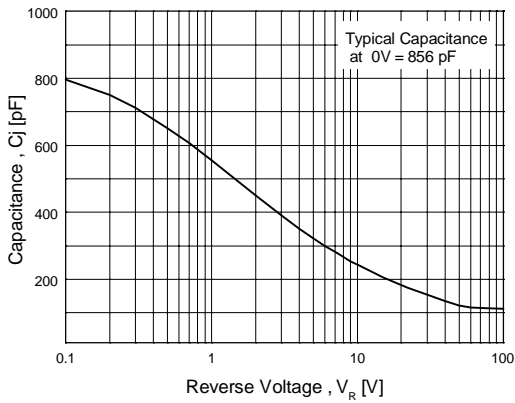


Figure 3. Typical Junction Capacitance

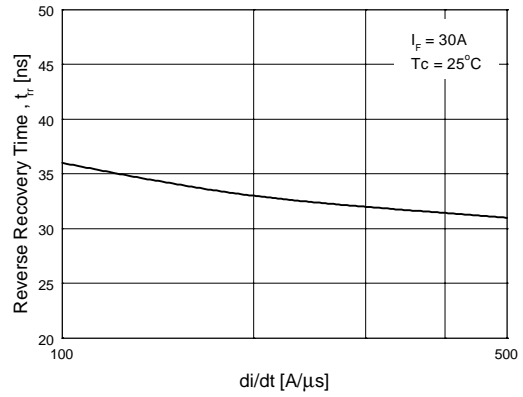


Figure 4. Typical Reverse Recovery Time vs. di/dt

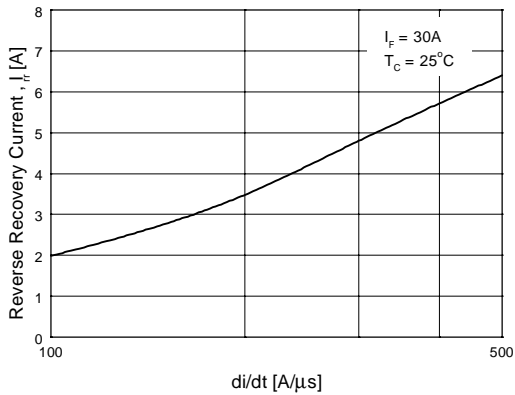


Figure 5. Typical Reverse Recovery Current vs. di/dt

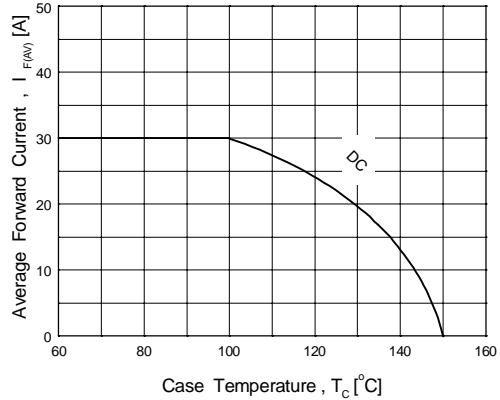
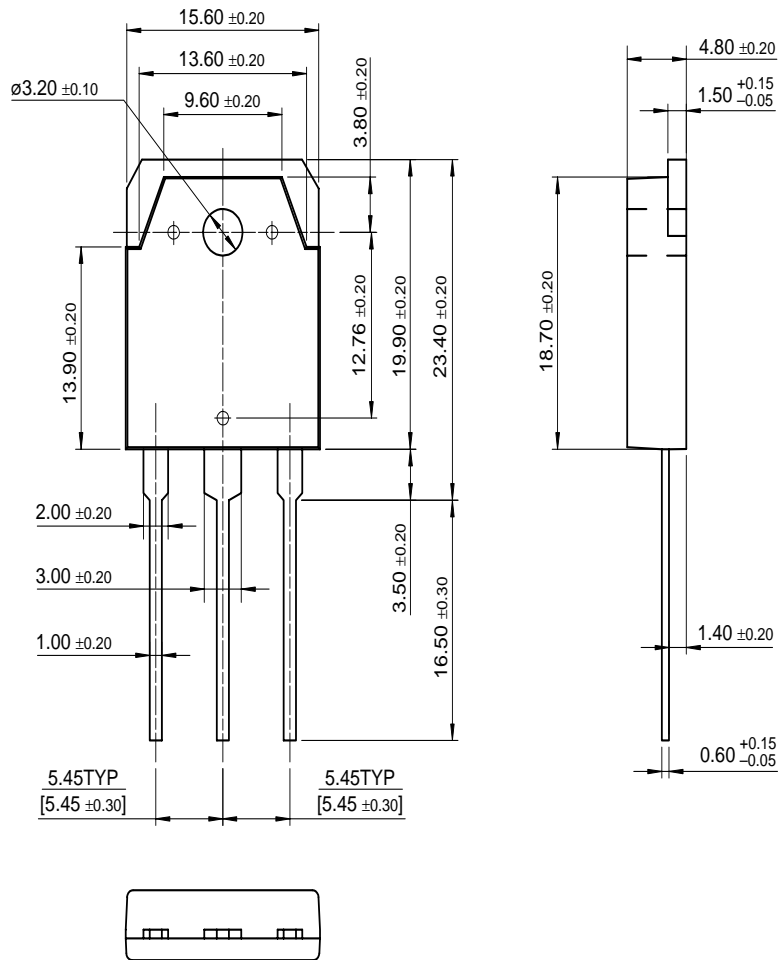


Figure 6. Forward Current Derating Curve

# Package Dimensions

## TO-3P

FFA30U20DN



Dimensions in Millimeters

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[search](#)

FFA30U20DN  
30A/200V Ultra Fast Recovery Rectifiers

Contents

[Features](#) | [Applications](#) | [Product status/pricing/packaging](#)

Features

- Ultrafast with Soft Recovery
- Low Forward Voltage

[back to top](#)

Applications

- Power Switching Circuits
- Output rectifiers
- Freewheeling Diodes
- Switching Mode Power Supply

[back to top](#)

Product status/pricing/packaging

Product	Product status	Pricing*	Package type	Leads	Packing method
FFA30U20DNTU	Full Production	\$1.82	TO-3P	3	RAIL

\* 1,000 piece Budgetary Pricing

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