

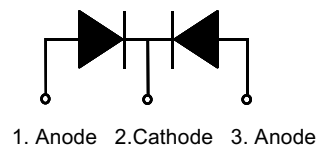
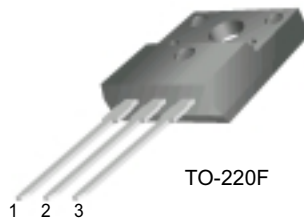
FFPF06U20DN

Features

- Ultrafast with soft recovery.
- Low forward voltage.

Applications

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



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 @ $T_C = 100^\circ\text{C}$	6	A
I_{FSM}	Non-repetitive Peak Surge Current 60Hz Single Half-Sine Wave	60	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	8.0	$^\circ\text{C}/\text{W}$

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 $I_F = 6\text{A}$ $I_F = 6\text{A}$	$T_C = 25^\circ\text{C}$	-	-	1.2	V
		$T_C = 100^\circ\text{C}$	-	-	1.0	
I_{RM}^*	Maximum Instantaneous Reverse Current @ rated V_R	$T_C = 25^\circ\text{C}$	-	-	6	μA
		$T_C = 100^\circ\text{C}$	-	-	60	
t_{rr}	Maximum Reverse Recovery Time	-	-	35	ns	
I_{rr}	Maximum Reverse Recovery Current	-	-	2.5	A	
Q_{rr}	Maximum Reverse Recovery Charge ($I_F = 6\text{A}$, $di/dt = 200\text{A}/\mu\text{s}$)	-	-	45	nC	
W_{AVL}	Avalanche Energy	0.5	-	-	mJ	

* Pulse Test: Pulse Width=300 μs , Duty Cycle=2%

Typical Characteristics

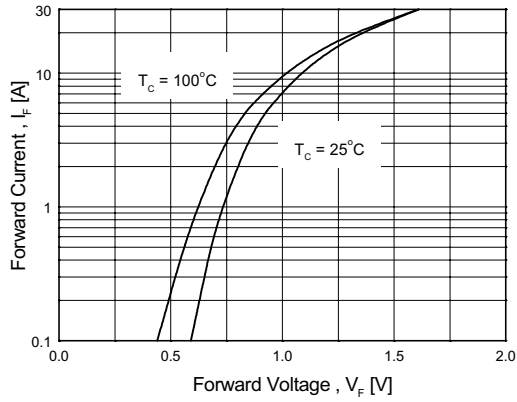


Figure 1. Typical Forward Voltage Drop vs. Forward Current

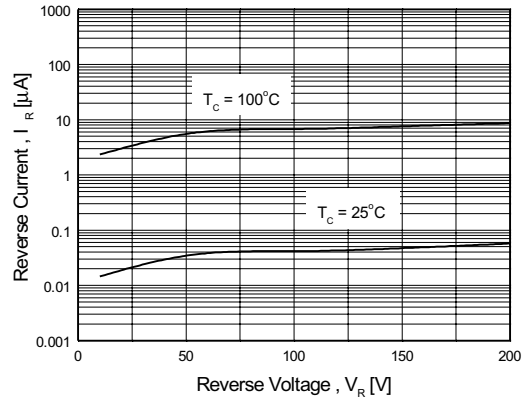


Figure 2. Typical Reverse Current vs. Reverse Voltage

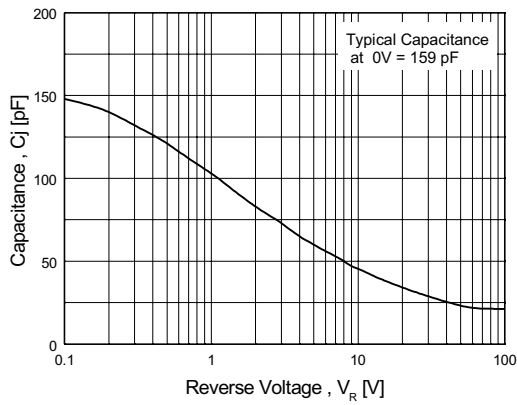


Figure 3. Typical Junction Capacitance

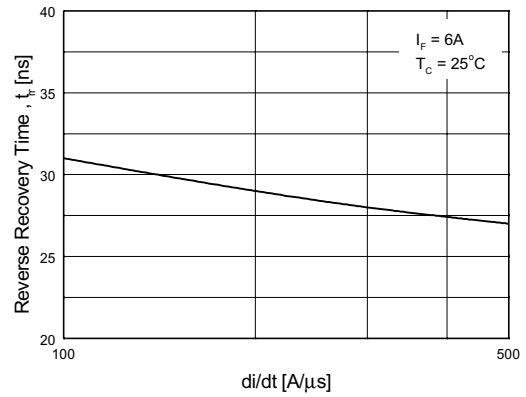


Figure 4. Typical Reverse Recovery Time vs. di/dt

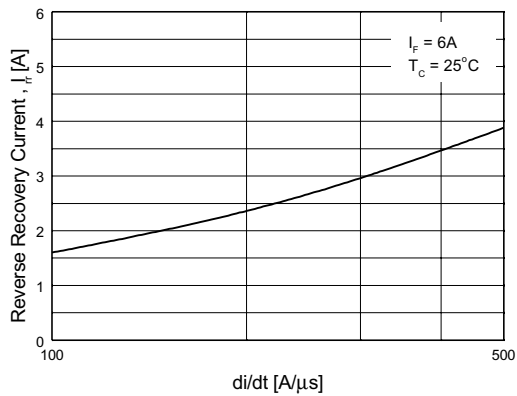


Figure 5. Typical Reverse Recovery Current vs. di/dt

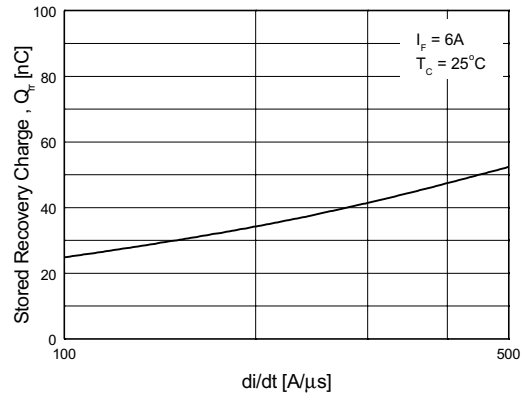
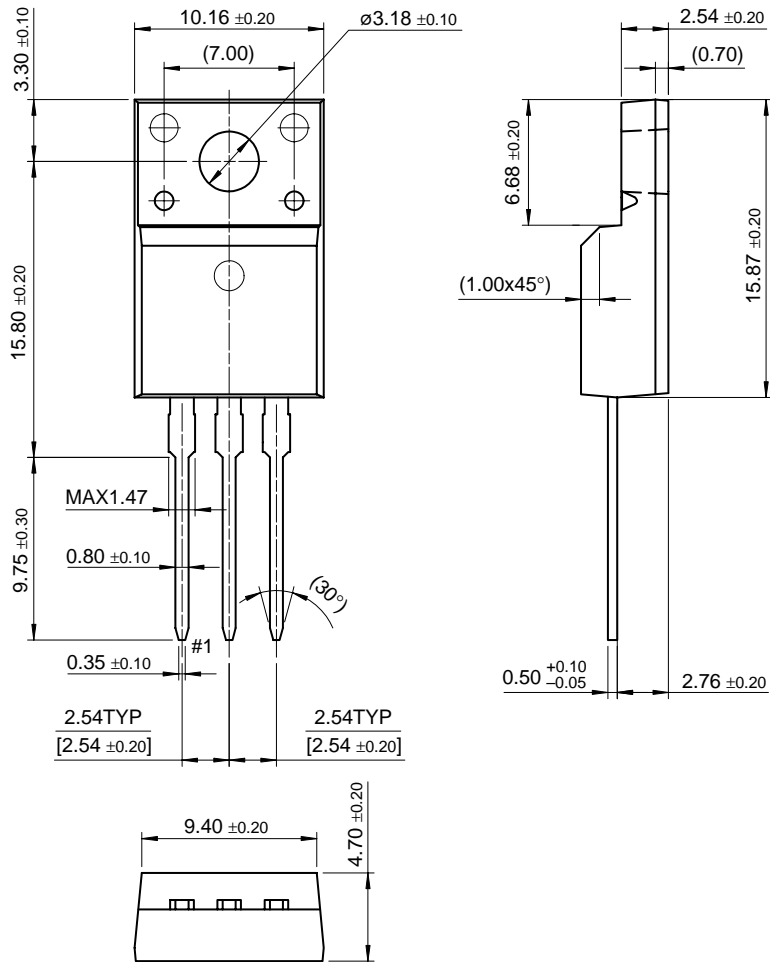


Figure 6. Typical Stored Charge vs. di/dt

Package Dimensions

FFPF06U20DN

TO-220F



Dimensions in Millimeters

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PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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FFPF06U20DN

6.0A/200V Ultra Fast Recovery Rectifier

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- Low Forward Voltage

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Applications

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

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Product status/pricing/packaging

Product	Product status	Pricing*	Package type	Leads	Packing method
FFPF06U20DNTU	Full Production	\$0.55	TO-220F	3	RAIL

* 1,000 piece Budgetary Pricing

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