

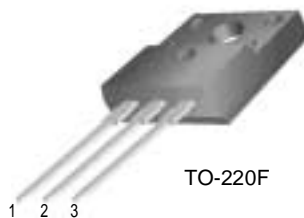
## FFPF06U40DP

### Features

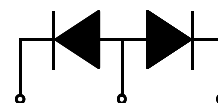
- Ultrafast with soft recovery
- Low forward voltage

### Applications

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



TO-220F



1. Cathode 2. Anode 3. Cathode

## 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	400	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	7.0	$^\circ\text{C}/\text{W}$

### 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 $I_F = 6\text{A}$ $I_F = 6\text{A}$	$T_C = 25^\circ\text{C}$	-	-	1.4	V
		$T_C = 100^\circ\text{C}$	-	-	1.3	
$I_{RM}^*$	Maximum Instantaneous Reverse Current @ rated $V_R$	$T_C = 25^\circ\text{C}$	-	-	20	$\mu\text{A}$
		$T_C = 100^\circ\text{C}$	-	-	200	
$t_{rr}$	Maximum Reverse Recovery Time	-	-	50	ns	
$I_{rr}$	Maximum Reverse Recovery Current	-	-	4.0	A	
$Q_{rr}$	Maximum Reverse Recovery Charge ( $I_F = 6\text{A}$ , $di/dt = 200\text{A}/\mu\text{s}$ )	-	-	100	nC	
$W_{AVL}$	Avalanche Energy	1.0	-	-	mJ	

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

# Typical Characteristics

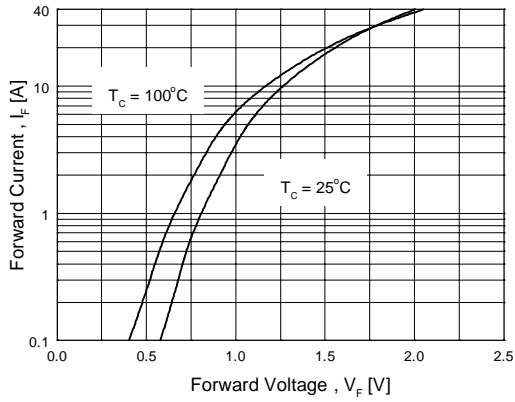


Figure 1. Typical Forward Voltage Drop vs. Forward Current

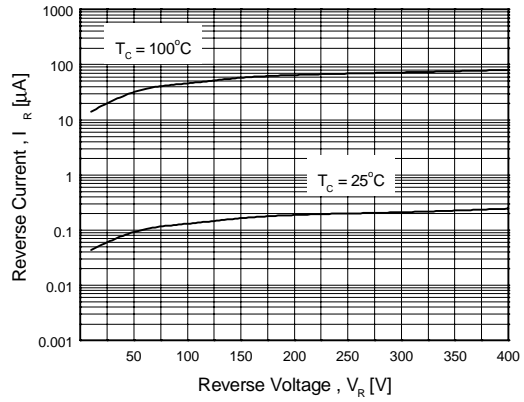


Figure 2. Typical Reverse Current vs. Reverse Voltage

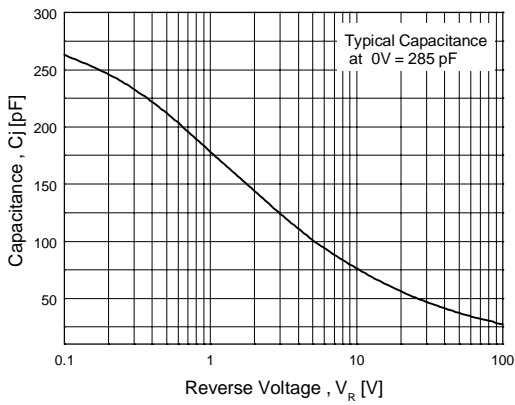


Figure 3. Typical Junction Capacitance

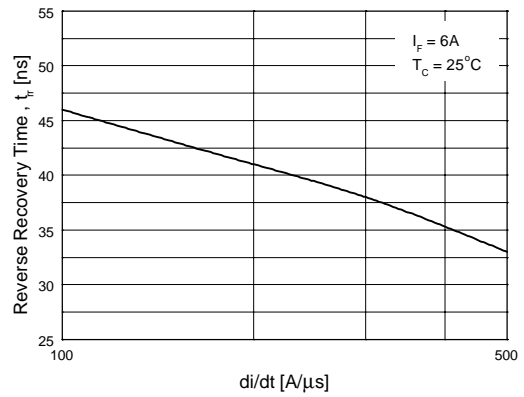


Figure 4. Typical Reverse Recovery Time vs. di/dt

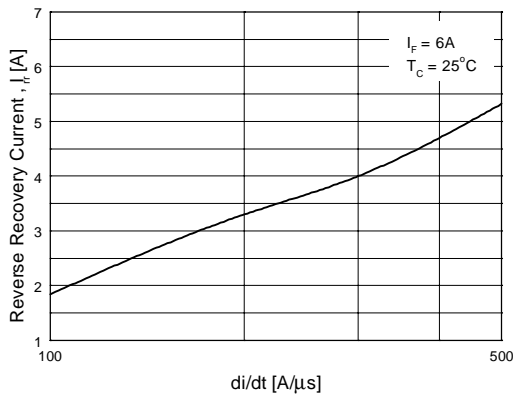


Figure 5. Typical Reverse Recovery Current vs. di/dt

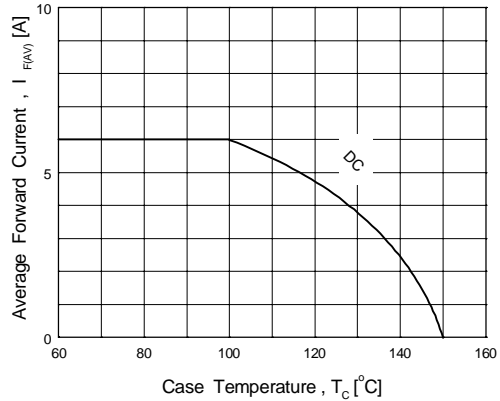
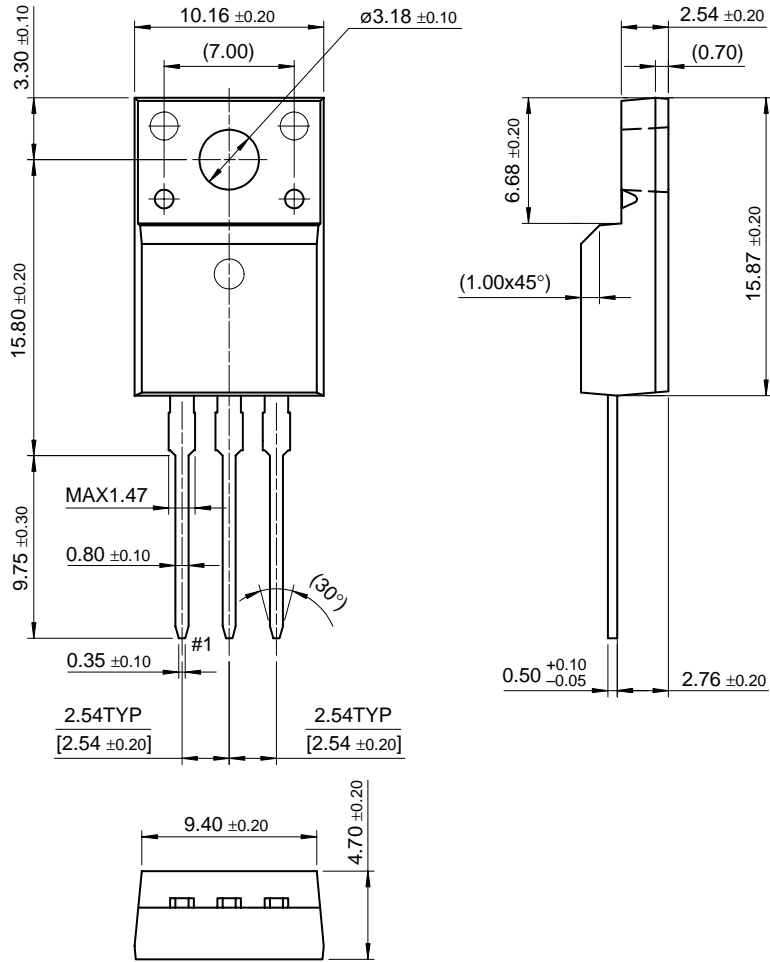


Figure 6. Forward Current Derating Curve

# Package Dimensions

FFPF06U40DP

## TO-220F



Dimensions in Millimeters

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FFPF06U40DP

6A/400V Ultra Fast Recovery Rectifiers

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Features

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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/package

Product	Product status	Pricing*	Package type	Leads	Packing method
FFPF06U40DPTU	Full Production	\$0.91	<a href="#">TO-220F</a>	3	RAIL

\* 1,000 piece Budgetary Pricing

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