



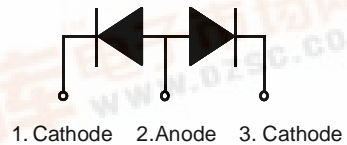
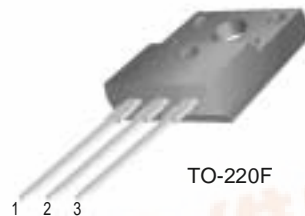
FFPF06U40DP

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	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	$^\circ\text{C}$

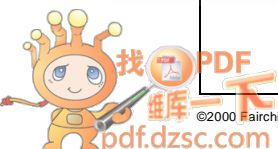
Thermal Characteristics

Symbol	Parameter	Value	Units
$R_{\theta JC}$	Maximum Thermal Resistance, Junction to Case	7.0	$^\circ\text{C/W}$

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				V
	$I_F = 6\text{A}$ $T_C = 25^\circ\text{C}$	-	-	1.4	
	$I_F = 6\text{A}$ $T_C = 100^\circ\text{C}$	-	-	1.3	
I_{RM}^*	Maximum Instantaneous Reverse Current				μA
	@ rated V_R $T_C = 25^\circ\text{C}$	-	-	20	
	$T_C = 100^\circ\text{C}$	-	-	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 μs , Duty Cycle=2%



Typical Characteristics

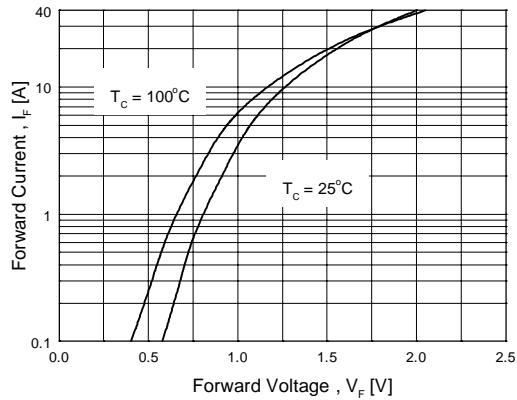


Figure 1. Typical Forward Voltage Drop vs. Forward Current

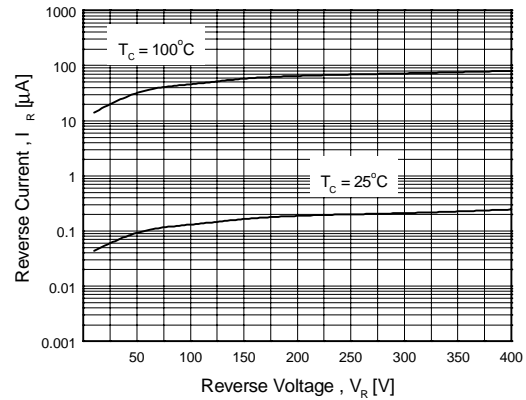


Figure 2. Typical Reverse Current vs. Reverse Voltage

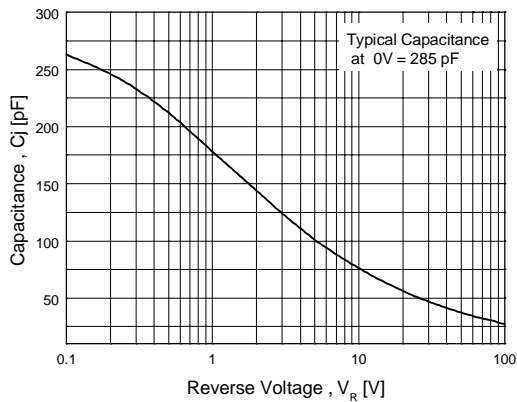


Figure 3. Typical Junction Capacitance

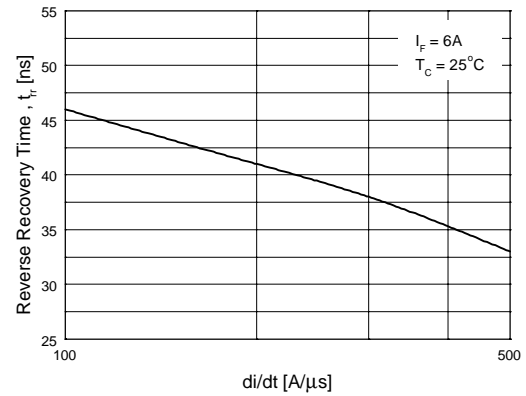


Figure 4. Typical Reverse Recovery Time vs. di/dt

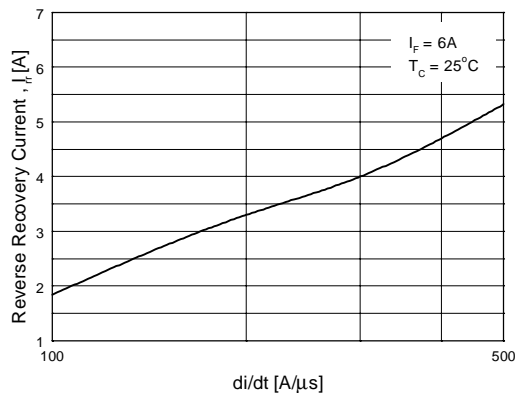


Figure 5. Typical Reverse Recovery Current vs. di/dt

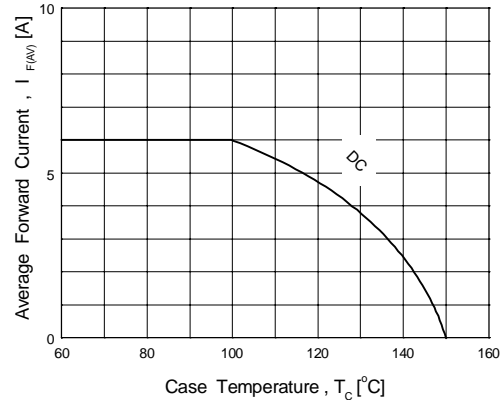


Figure 6. Forward Current Derating Curve

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Technical drawing of a 2.54TYP connector, showing three views: front, side, and end views. The drawing includes the following dimensions and specifications:

- Front View:**
 - Overall width: 10.16 ± 0.20
 - Distance between mounting holes: (7.00)
 - Mounting hole diameter: $\varnothing 3.18 \pm 0.10$
 - Top flange height: 3.30 ± 0.10
 - Overall height: 15.80 ± 0.20
 - Bottom flange height: 9.75 ± 0.30
 - Pin pitch: 2.54 TYP [2.54 ± 0.20]
 - Pin diameter: 0.35 ± 0.10
 - Pin length: 0.80 ± 0.10
 - Pin angle: 30°
 - Pin material: MAX1.47
 - Pin quantity: #1
- Side View:**
 - Overall height: 15.87 ± 0.20
 - Top flange height: 6.68 ± 0.20
 - Pin diameter: $0.50^{+0.10}_{-0.05}$
 - Pin length: 2.76 ± 0.20
 - Pin angle: $(1.00 \times 45^\circ)$
- End View:**
 - Overall width: 9.40 ± 0.20
 - Overall height: 4.70 ± 0.20

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