

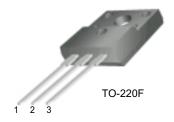
FFPF15U20DN

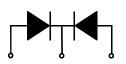
Features

- · Ultrafast with soft recovery.
- · Low forward voltage.

Applications

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





1. Anode 2. Cathode 3. Anode

FAST RECOVERY POWER RECTIFIER

Absolute Maximum Ratings (per diode) T_C=25°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°C	15	Α
I _{FSM}	Non-repetitive Peak Surge Current 60Hz Single Half-Sine Wave	150	Α
T _{J,} T _{STG}	Operating Junction and Storage Temperature	- 65 to +150	°C

Thermal Characteristics

Symbol	Parameter	Value	Units
$R_{\theta JC}$	Maximum Thermal Resistance, Junction to Case	3.5	°C/W

Electrical Characteristics (per diode) T_C=25 °C unless otherwise noted

Symbol	Parameter		Min.	Тур.	Max.	Units
V _{FM} *	Maximum Instantaneous Forward Voltage	T - 05 00			4.0	V
	I _F = 15A I _F = 15A	T _C = 25 °C T _C = 100 °C	-	-	1.2 1.0	
		1 _C = 100 °C	-	-	1.0	
I _{RM} *	Maximum Instantaneous Reverse Current					μΑ
	@ rated V _R	T _C = 25 °C T _C = 100 °C	-	-	15	
		T _C = 100 °C	-	-	150	
t _{rr}	Maximum Reverse Recovery Time		-	-	40	ns
I _{rr}	Maximum Reverse Recovery Current		-	-	3.5	Α
Q_{rr}	Maximum Reverse Recovery Charge		-	-	70	nC
	$(I_F = 15A, di/dt = 200A/\mu s)$					
W_{AVL}	Avalanche Energy		0.5	-	-	mJ

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

Typical Characteristics

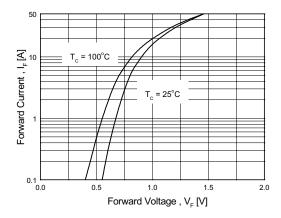


Figure 1. Typical Forward Voltage Drop vs. Forward Current

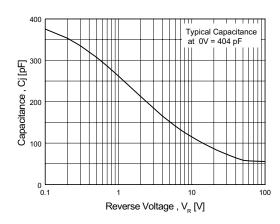


Figure 3. Typical Junction Capacitance

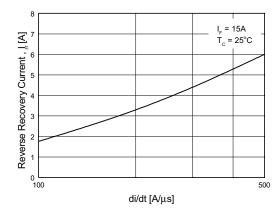


Figure 5. Typical Reverse Recovery Current vs. di/dt

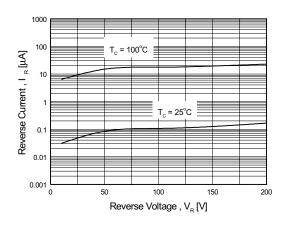


Figure 2. Typical Reverse Current vs. Reverse Voltage

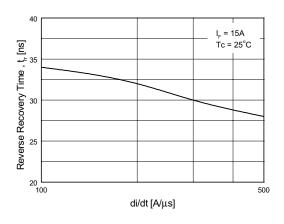


Figure 4. Typical Reverse Recovery Time vs. di/dt

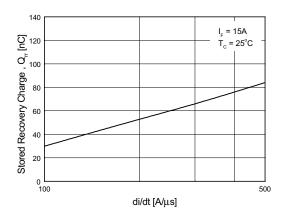
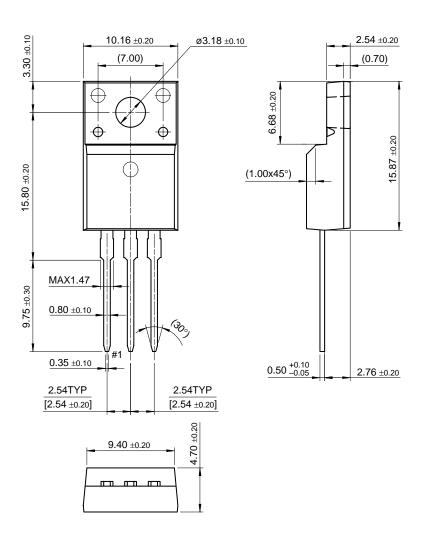


Figure 6. Typical Stored Charge vs. di/dt

Rev. A, May 2000

Package Dimensions

TO-220F



Dimensions in Millimeters

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