

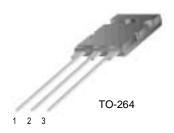
## FFL25U120DN

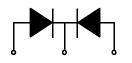
### **Features**

- High voltage and high reliability
- · High speed switching
- Low forward voltage

## **Applications**

- General purpose
- Switching mode power supply
- · Free-wheeling diode for motor application
- · Power switching circuits





1. Anode 2. Cathode 3. Anode

## **ULTRA FAST RECOVERY POWER RECTIFIER**

## Absolute Maximum Ratings (per diode) T<sub>C</sub>=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V <sub>RRM</sub>	Peak Repetitive Reverse Voltage	1200	V
I <sub>F(AV)</sub>	Average Rectified Forward Current @ T <sub>C</sub> = 100°C	25	А
I <sub>FSM</sub>	Non-repetitive Peak Surge Current 60Hz Single Half-Sine Wave	150	А
T <sub>J,</sub> T <sub>STG</sub>	Operating Junction and StorageTemperature	- 65 to +150	°C

## **Thermal Characteristics**

Symbol		Parameter	Value	Units	
	R <sub>e.IC</sub>	Maximum Thermal Resistance, Junction to Case	0.72	°C/W	

## Electrical Characteristics (per diode) T<sub>C</sub>=25 °C unless otherwise noted

Symbol	Parameter		Parameter M		Parameter Min.	Тур.	Max.	Units
V <sub>FM</sub> *	Maximum Instantaneous Forward Voltage					V		
	I <sub>F</sub> = 25A	T <sub>C</sub> = 25 °C	-	-	3.5			
	I <sub>F</sub> = 25A	$T_C = 25 ^{\circ}C$ $T_C = 100 ^{\circ}C$	-	-	3.2			
I <sub>RM</sub> *	Maximum Instantaneous Reverse Current							
	@ rated V <sub>R</sub>	$T_C = 25  ^{\circ}C$	-	-	25	μΑ		
		$T_C = 25  ^{\circ}C$ $T_C = 100  ^{\circ}C$	-	-	1.5	mA		
t <sub>rr</sub>	Maximum Reverse Recovery Time		-	-	120	ns		
I <sub>rr</sub>	Maximum Reverse Recovery Current		-	-	11	Α		
Q <sub>rr</sub>	Maximum Reverse Recovery Charge		-	-	550	nC		
••	$(I_F = 25A, di/dt = 200A/\mu s)$							
W <sub>AVL</sub>	Avalanche Energy		1.0	-	-	mJ		

<sup>\*</sup> Pulse Test: Pulse Width=300μs, Duty Cycle=2%

## **Typical Characteristics**

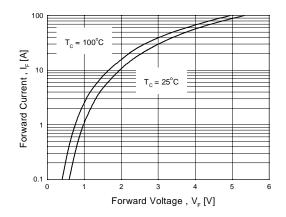


Figure 1. Typical Forward Voltage Drop vs. Forward Current

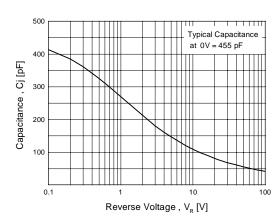


Figure 3. Typical Junction Capacitance

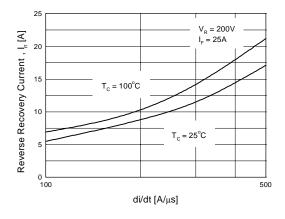


Figure 5. Typical Reverse Recovery Current vs. di/dt

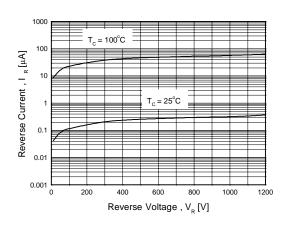


Figure 2. Typical Reverse Current vs. Reverse Voltage

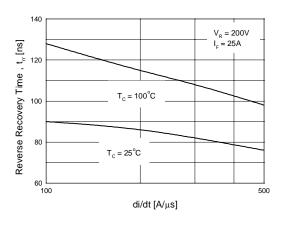


Figure 4. Typical Reverse Recovery Time vs. di/dt

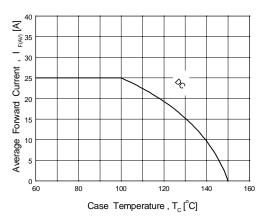
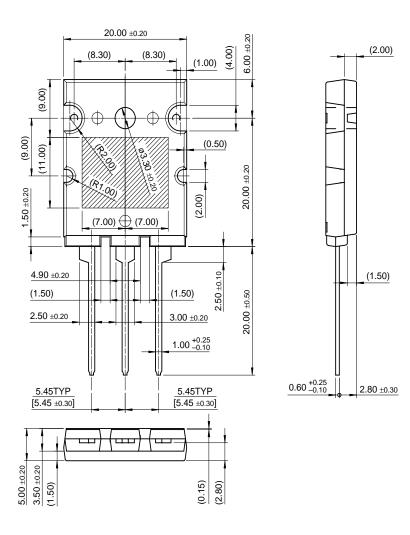


Figure 6. Forward Current Derating Curve

# **Package Dimensions**

# TO-264



Dimensions in Millimeters

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