

- Free-wheeling diode for motor application
- Power switching circuits

# **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	600	V	
I <sub>F(AV)</sub>	Average Rectified Forward Current $@T_{C} = 100^{\circ}C$	40	A	
I <sub>FSM</sub>	Non-repetitive Peak Surge Current 60Hz Single Half-Sine Wave	240	A	
T <sub>J,</sub> T <sub>STG</sub>	Operating Junction and StorageTemperature	- 65 to +150	°C	

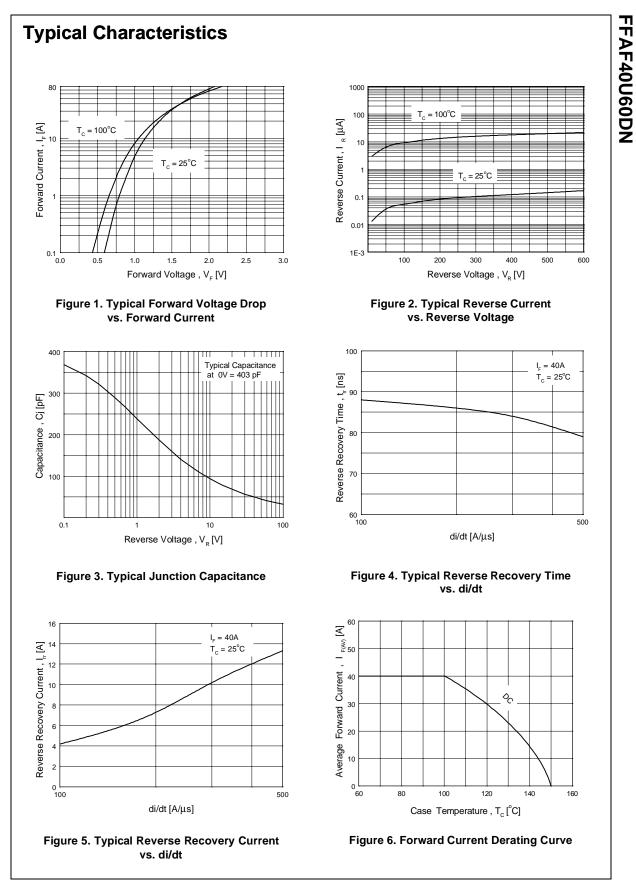
## **Thermal Characteristics**

Symbol	Parameter	Value	Units	
$R_{\theta JC}$	Maximum Thermal Resistance, Junction to Case	0.7	°C/W	

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

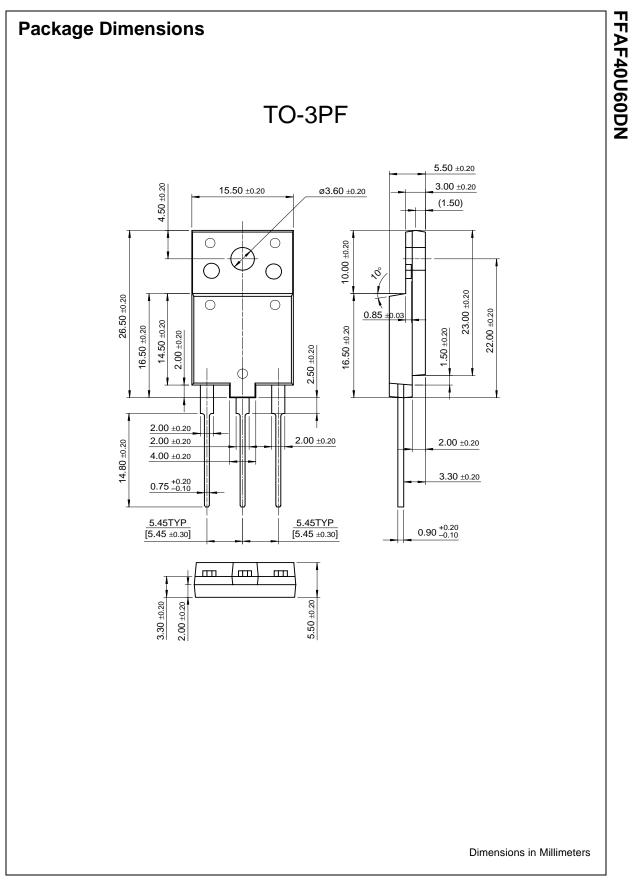
Symbol	Parameter		Min.	Тур.	Max.	Units
V <sub>FM</sub> *	Maximum Instantaneous Forward Voltage					V
	I <sub>F</sub> = 40A	T <sub>C</sub> = 25 °C	-	-	2.1	
	I <sub>F</sub> = 40A	T <sub>C</sub> = 25 °C T <sub>C</sub> = 100 °C	-	-	1.9	
RM *	Maximum Instantaneous Reverse Current					μΑ
	@ rated V <sub>R</sub>	T <sub>C</sub> = 25 °C	-	-	20	
		T <sub>C</sub> = 25 °C T <sub>C</sub> = 100 °C	-	-	200	
rr	Maximum Reverse Recovery Time		-	-	110	ns
rr	Maximum Reverse Recovery Current		-	-	10	Α
Q <sup>rr</sup>	Maximum Reverse Recovery Charge (I <sub>F</sub> =40A, di/dt = 200A/μs)		-	-	550	nC
W <sub>AVL</sub>	Avalanche Energy		1.0	-	-	mJ

FFAF40U60DN



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