

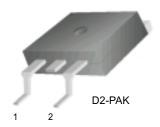
FFB06U40S

Features

- · Ultrafast with soft recovery
- · Low forward voltage

Applications

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





1. Cathode 2. Anode

ULTRA FAST RECOVERY RECTIFIER

Absolute Maximum Ratings T_C=25°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°C	6	Α
I _{FSM}	Non-repetitive Peak Surge Current 60Hz Single Half-Sine Wave	60	Α
T _{J,} T _{STG}	Operating Junction and Storage Temperature	- 65 to +150	°C

Thermal Characteristics

Symbol Parameter		Value	Units
Reic	Maximum Thermal Resistance, Junction to Case	7.0	°C/W

Electrical Characteristics T_C=25 °C unless otherwise noted

Symbol	Parameter		Min.	Тур.	Max.	Units
V _{FM} *	Maximum Instantaneous Forward Voltage					V
	I _F = 6A	T _C = 25 °C	-	-	1.4	
	I _F = 6A	T _C = 25 °C T _C = 100 °C	-	-	1.3	
I _{RM} *	Maximum Instantaneous Reverse Current					μΑ
	@ rated V _R	T _C = 25 °C	-	-	20	
		T _C = 25 °C T _C = 100 °C	-	-	200	
t _{rr}	Maximum Reverse Recovery Time		-	-	50	ns
I _{rr}	Maximum Reverse Recovery Current		-	-	4.0	Α
Q _{rr}	Maximum Reverse Recovery Charge		-	-	100	nC
••	$(I_F = 6A, di/dt = 200A/\mu s)$					
W _{AVL}	Avalanche Energy		1.0	-	-	mJ

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

Typical Characteristics

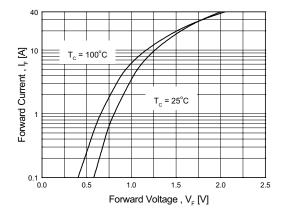


Figure 1. Typical Forward Voltage Drop vs. Forward Current

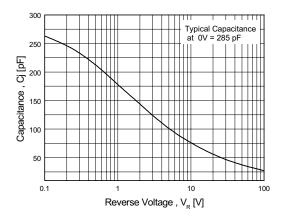


Figure 3. Typical Junction Capacitance

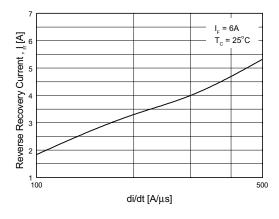


Figure 5. Typical Reverse Recovery Current vs. di/dt

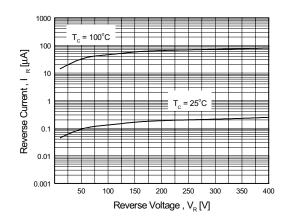


Figure 2. Typical Reverse Current vs. Reverse Voltage

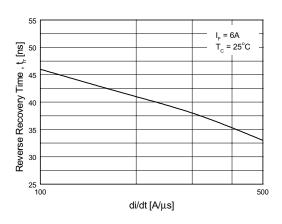


Figure 4. Typical Reverse Recovery Time vs. di/dt

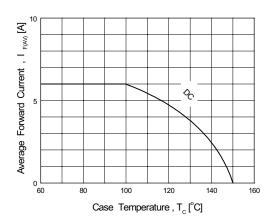
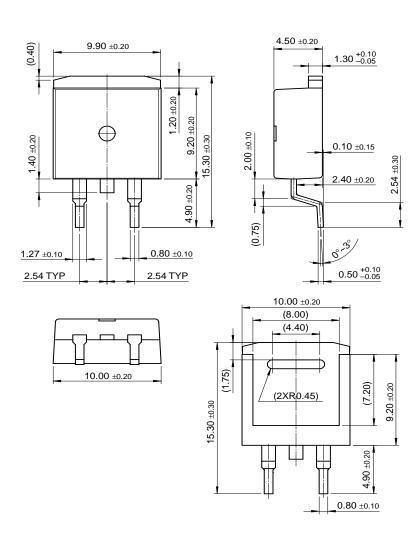


Figure 6. Forward Current Derating Curve

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Package Dimensions

D²-PAK



Dimensions in Millimeters

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