

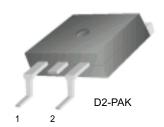
FFB05U120S

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. Cathode 2. Anode

ULTRA FAST RECOVERY POWER RECTIFIER

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V _{RRM}	Peak Repetitive Reverse Voltage	1200	V
I _{F(AV)}	Average Rectified Forward Current @ T _C = 100°C	5	Α
I _{FSM}	Non-repetitive Peak Surge Current 60Hz Single Half-Sine Wave	30	Α
T _{J,} T _{STG}	Operating Junction and Storage Temperature	- 65 to +150	°C

Thermal Characteristics

Symbol Parameter		Value	Units	
Reic	R _{AJC} Maximum Thermal Resistance, Junction to Case		°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 = 5A	T _C = 25 °C	-	-	3.5	
	I _F = 5A	$T_C = 25 ^{\circ}C$ $T_C = 100 ^{\circ}C$	-	-	3.2	
RM *	Maximum Instantaneous Reverse Current					μΑ
	@ rated V _R	T _C = 25 °C T _C = 100 °C	-	-	5	
		T _C = 100 °C	-	-	600	
rr	Maximum Reverse Recovery Time		-	-	100	ns
rr	Maximum Reverse Recovery Current		-	-	7	Α
Q _{rr}	Maximum Reverse Recovery Charge		-	-	280	nC
**	(I _F =5A, di/dt = 200A/μs)					
N _{AVL}	Avalanche Energy		1.0	-	-	mJ

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

Typical Characteristics

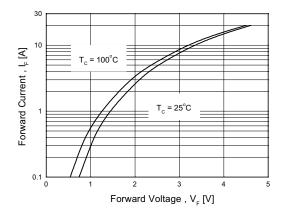


Figure 1. Typical Forward Voltage Drop vs. Forward Current

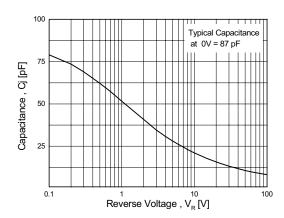


Figure 3. Typical Junction Capacitance

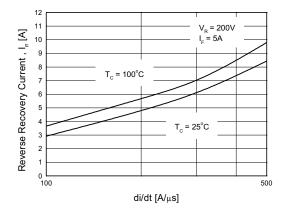


Figure 5. Typical Reverse Recovery Current vs. di/dt

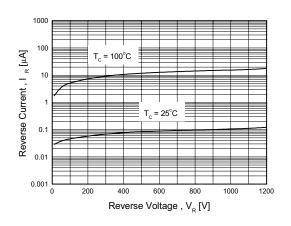


Figure 2. Typical Reverse Current vs. Reverse Voltage

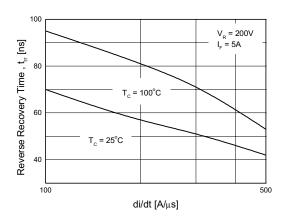


Figure 4. Typical Reverse Recovery Time vs. di/dt

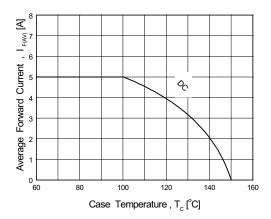
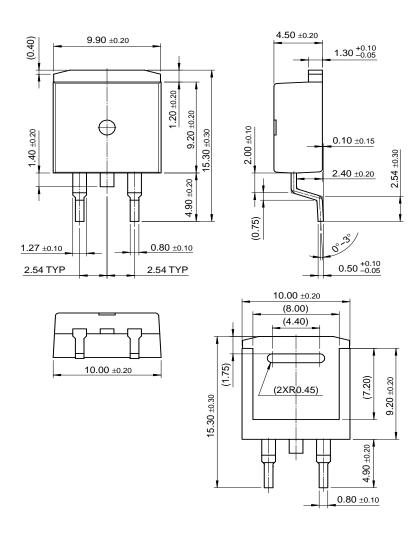


Figure 6. Forward Current Derating Curve

Package Dimensions

D²-PAK



Dimensions in Millimeters

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