Data Sheet

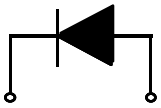
10 AMP SUPER FAST RECOVERY ISOLATION POWER RECTIFIERS

Description



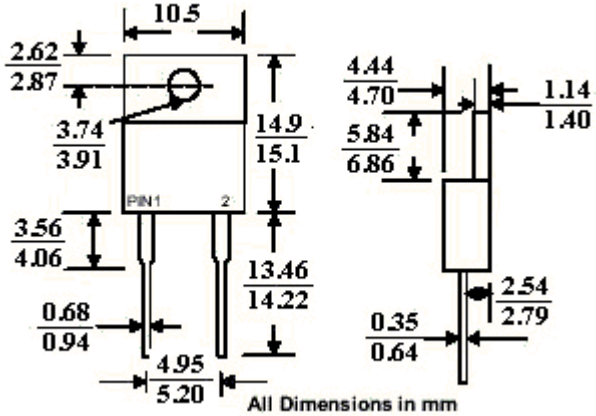
TO-220F

1 2



1. Cathode 2. Anode

Mechanical Dimensions



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

Absolute Maximum Ratings* Ta=25 unless otherwise note

Symbol	Parameter	SFF1000~1006 SERIES								Units
		1000	1010	1010A	1020	1030	1040	1050	1060	
V_{RRM}	Maximum Repetitive Reverse Voltage	50	100	150	200	300	400	500	600	V
$I_{F(AV)}$	Average Rectified Forward Current, .375 " lead length @ T_A = 100°C	10								A
I_{FSM}	Non-repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave	60								A
T_{stg}	Storage Temperature Range	-65 to +150								C
T_J	Operating Junction Temperature	-65 to +150								C

Thermal Characteristics

Symbol	Parameter	SFF1000~1060 SERIES	Units
$R_{\theta JC}$	Thermal Resistance, Junction to Case	2.4	°C/W

Electrical Characteristics Ta=25 unless otherwise note

Symbol	Parameter	SFF1000~1060 SERIES								Units
		1000	1010	1010A	1020	1030	1040	1050	1060	
V_F	Forward Voltage @ 10A	0.97				1.3		1.5		V
t_{rr}	Reverse Recovery Time I_F = 0.5 A, I_R = 1.0 A, I_{RR} = 0.25 A	35				50				ns
I_R	Reverse Current @ rated V_R T_A = 25°C T_A = 100°C	5.0 50								µA µA

Typical Characteristics

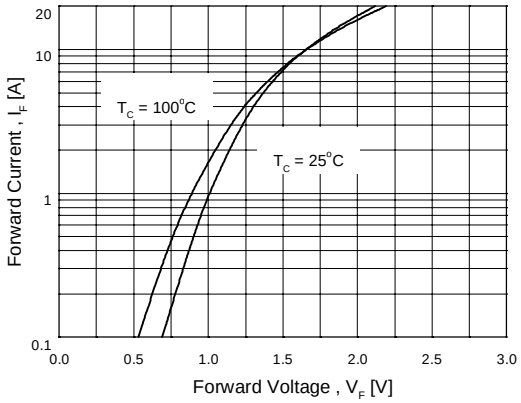


Figure 1. Typical Forward Voltage Drop vs. Forward Current

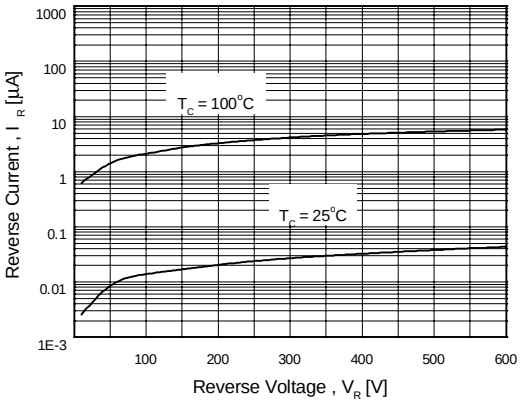


Figure 2. Typical Reverse Current vs. Reverse Voltage

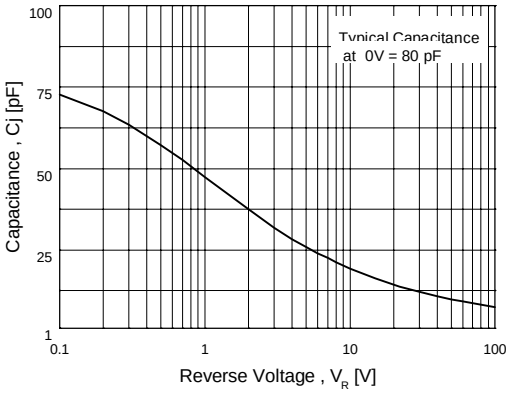


Figure 3. Typical Junction Capacitance

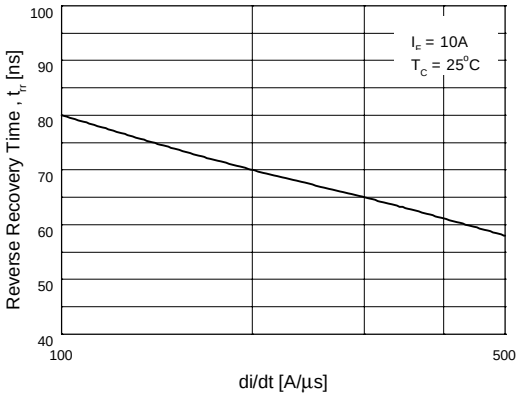


Figure 4. Typical Reverse Recovery Time vs. di/dt

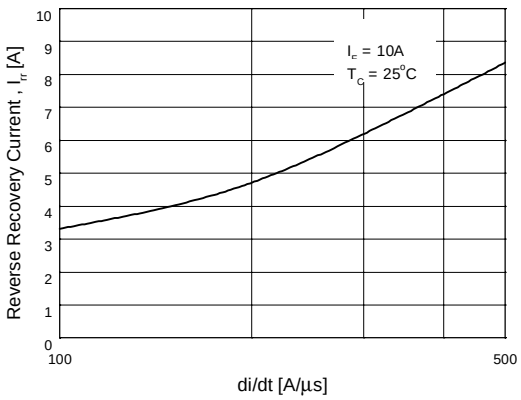


Figure 5. Typical Reverse Recovery Current vs. di/dt

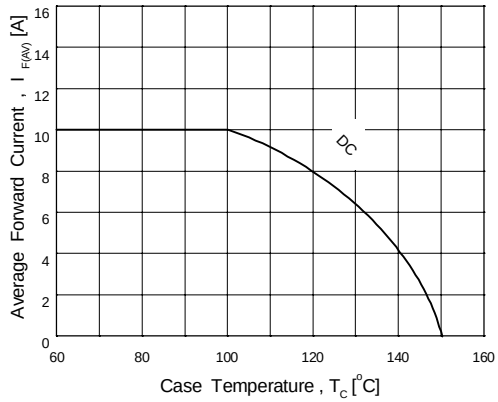


Figure 6. Forward Current Derating Curve