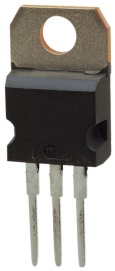
Super Fast Recovery Rectifier



Features:

- Fred chip planar construction
- Super fast switching, high efficiency
- Low forward voltage drop
- Low forward voltage current
- High surge current capacity
- Plastic package has UL flammability classification 94V-0

Mechanical Data:

Case	: TO-220AB Type, Molded Plastic
Terminals	: Pure Tin plated, Lead free Solderable Per MIL-STD-750, method 2026
Polarity	: As marked
Weight	: 1.2 grams
Mounting Position	: Any
Reverse Voltage	: 200Volts
Forward Current	: 8 Amperes

Typical Application:

For use in High Frequency Rectifier of Switching Mode Power Supplies,Freewheeling Diode, DC/DC Converters or polarity Protection Application

Maximum Ratings and Electrical Characteristics:

Rating at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristics	Symbol	Values	Unit
Max. Recurrent Peak Reverse Voltage	V_{RRM}	200	V
Max. RMS Voltage	V_{RMS}	140	
Max. DC Blocking Voltage	V_{DC}	200	
Maximum Average Forward Rectified Current	$I_{(AV)}$	8	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Super Imposed on Rated Load (JEDEC method)	I_{FSM}	100	
Peak Forward Voltage at 4A per leg	V_F	0.95	V
Max. DC Reverse Current at T_J = 25°C Rated DC Blocking Voltage T_J = 100°C	I_R	10 250	μA
Max. Reverse Recovery Time (Note 1)	T_{RR}	35	nS
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	2	°C/W
Operating Temperature Range	T_J	-55 to +150	°C
Storage Temperature Range	T_{STG}		

Notes:

1. Measured with I_F = 0.5A, I_R = 1A, I_{RR} = 0.25A.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3. The typical data above is for reference only

Ratings and Characteristic Curves

FIG. 1 – FORWARD CURRENT DERATING CURVE

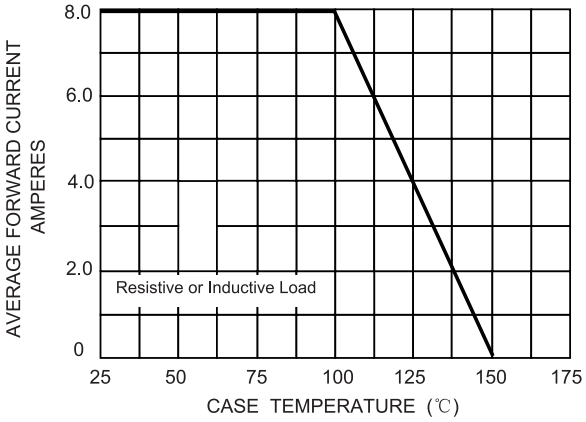


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

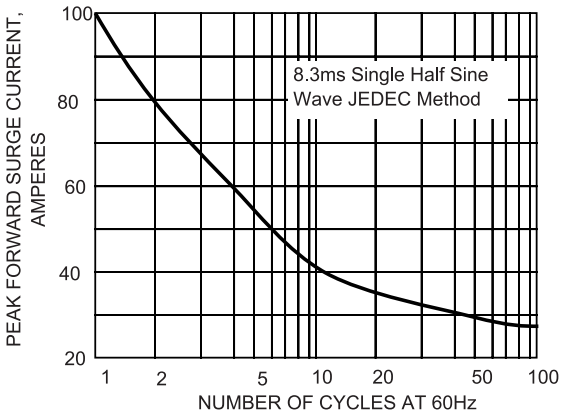


FIG.3-TYPICAL REVER CHARACTERISTICS

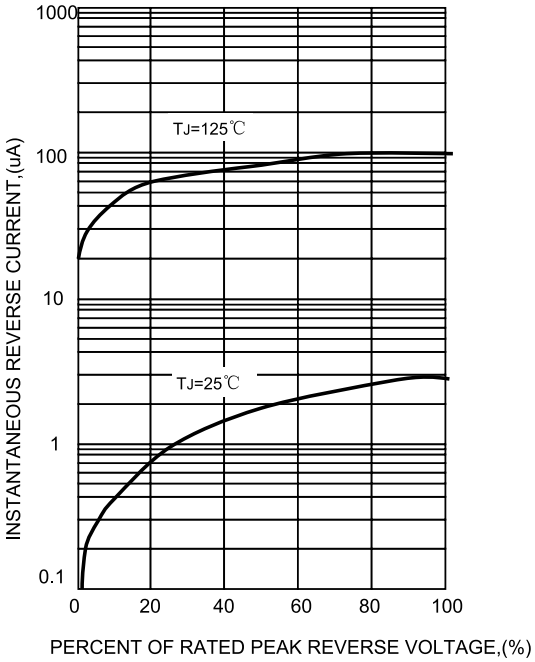
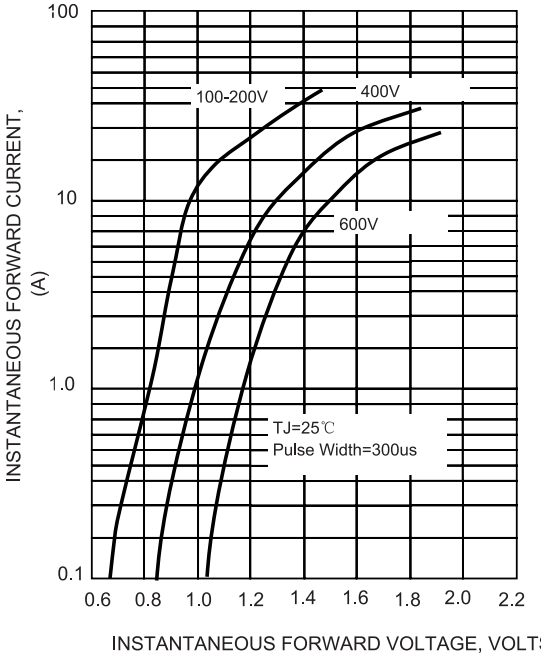
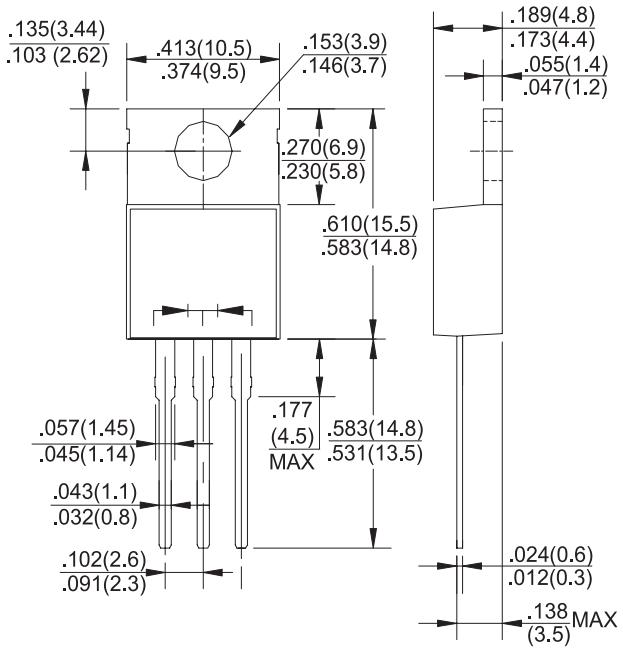


FIG.4-TYPICAL FORWARD CHARACTERISTICS



Dimensions:

TO-220AB



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Super Fast Recovery Rectifier	SF804CT