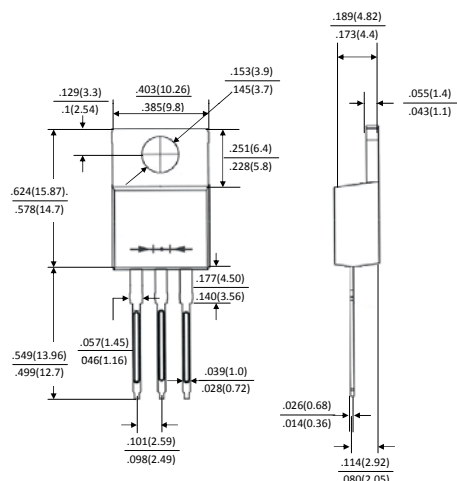


Super Fast Recovery Rectifiers Glass Passivation Junction



TO-220AB

Dimensions in inches and (millimeters)

Ordering Information	
Part Number	Remark
SF100xC	General
SF100xC-H	Halogen Free
SF100xC-Q	Automotive



PRIMARY CHARACTERISTICS	
I_F	10A
V_{RRM}	50~600V
I_{FSM}	100A
V_F	1.0V, 1.35V, 1.75V
$T_J \text{ max}$	150°C

Features

- Guardring for overvoltage protection
- Very small conduction losses
- Low forward voltage drop
- Component in accordance to RoHS 2002/95/EC
- AEC-Q101 qualified

Mechanical Data

- Cases: TO-220AB
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Lead free Plating (Tin Finish)
Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 1.948 grams (approximate)

MAXIMUM RATINGS (TA=25°C unless otherwise noted)

PARAMETER	SYMBOL	SF10 01C	SF10 02C	SF10 03C	SF10 04C	SF10 05C	SF10 06C	SF10 08C	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum average forward rectified current (Total) (Per Leg)	I_F	10 5							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	100.0							A
Maximum Instantaneous Forward Voltage $I_F=5A @ 25^\circ C$	V_F	1.00				1.35	1.75		V
Maximum DC Reverse Current @ $T_c=25^\circ C$ at Rated DC Blocking Voltage @ $T_c=100^\circ C$	I_R	5 100							uA
Typical Junction Capacitance (NOTE1)	C_j	130							pF
Maximum Reverse Recovery Time (NOTE2)	T_{rr}	35							nS
Typical thermal resistance	$R_{\theta JA}$	3							°C/W
Operating Temperature Range	T_J	150							°C
Storage Temperature Range	T_{STG}	-55 ~ 150							°C

NOTES: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC

2. Measured with $I_F=0.5A$, $I_R=1A$, $IRR=0.25A$

Super Fast Recovery Rectifiers Glass Passivation Junction

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

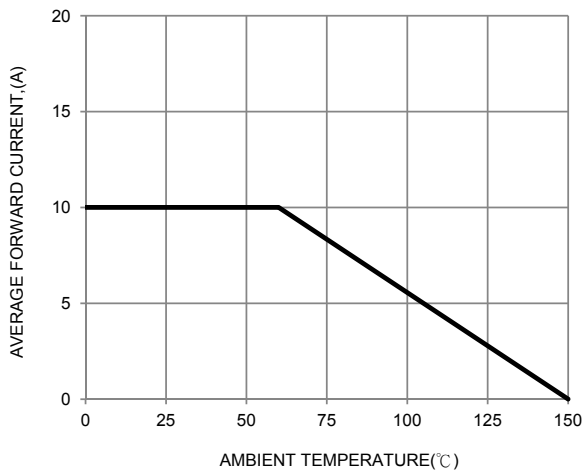


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

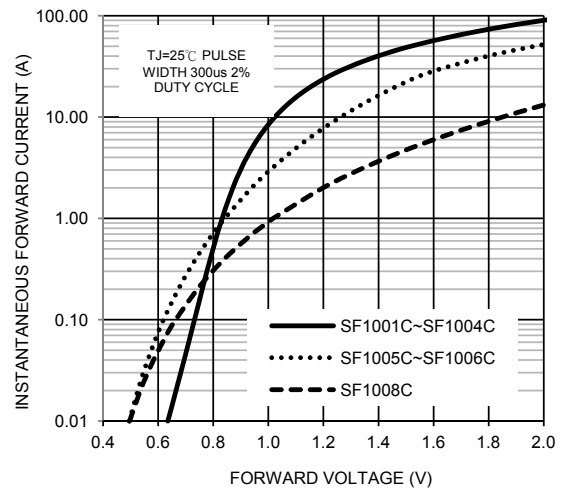


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

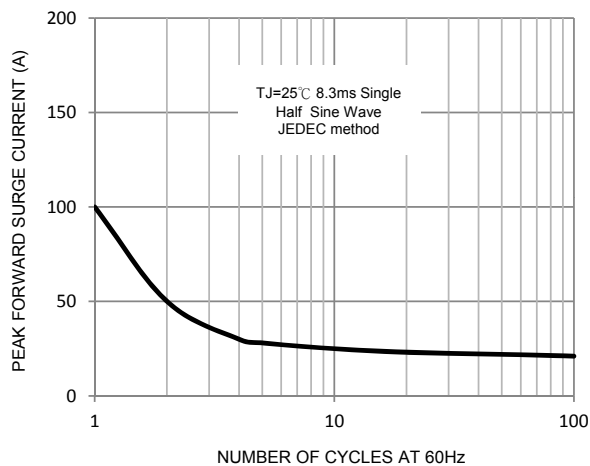


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

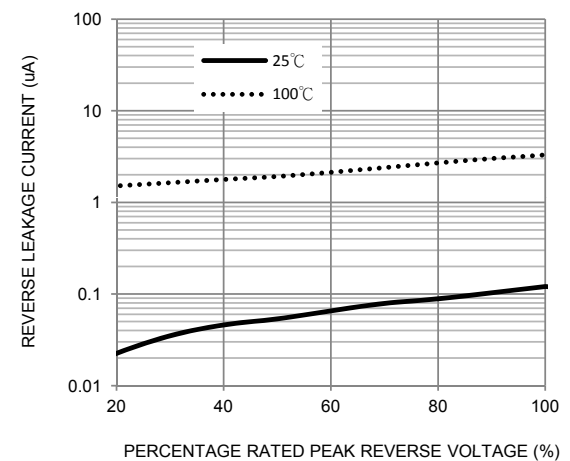


FIG. 5-TYPICAL JUNCTION CAPACITANCE

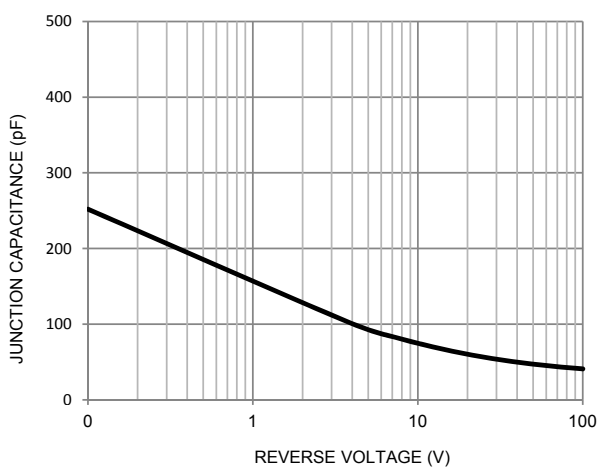


FIG. 6-Reverse Recovery Time Characteristic and Test Circuit

