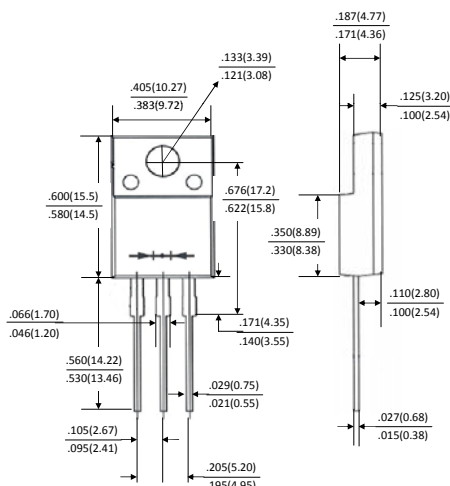


Super Fast Recovery Rectifiers Glass Passivation Junction



TO-220AB

Dimensions in inches and (millimeters)

Ordering Information	
Part Number	Remark
SF160xC	General
SF160xC-H	Halogen Free
SF160xC-Q	Automotive



PRIMARY CHARACTERISTICS	
I_F	16A
V_{RRM}	50~600V
I_{FSM}	125A
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: 2.015 grams (approximate)

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

PARAMETER	SYMBOL	SF16 01C	SF16 02C	SF16 03C	SF16 04C	SF16 05C	SF16 06C	SF16 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	16 8							A	
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	125.0							A	
Maximum Instantaneous Forward Voltage IF=8A @ 25°C	V _F	1.00				1.35		1.75	V	
Maximum DC Reverse Current @ Tc=25°C at Rated DC Blocking Voltage @ Tc=100°C	I _R	5 100							uA	
Typical Junction Capacitance(NOTE1)	C _j	130							pF	
Maximum Reverse Recovery Time (NOTE2)	T _{rr}	35				50				nS
Typical thermal resistance	R _{θJC}	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 $I_F=0.5A, I_R=1A, I_{RR}=0.25A$

Super Fast Recovery Rectifiers Glass Passivation Junction

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

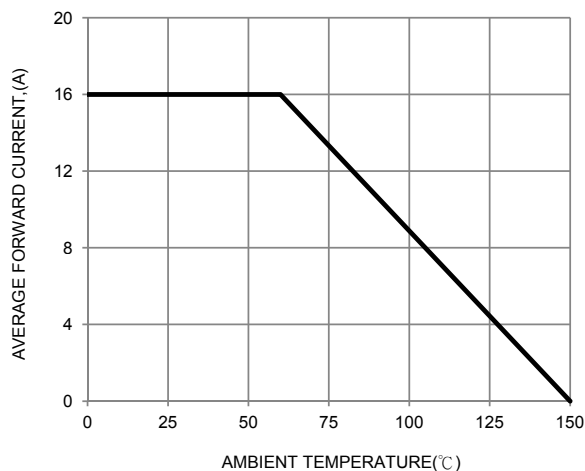


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

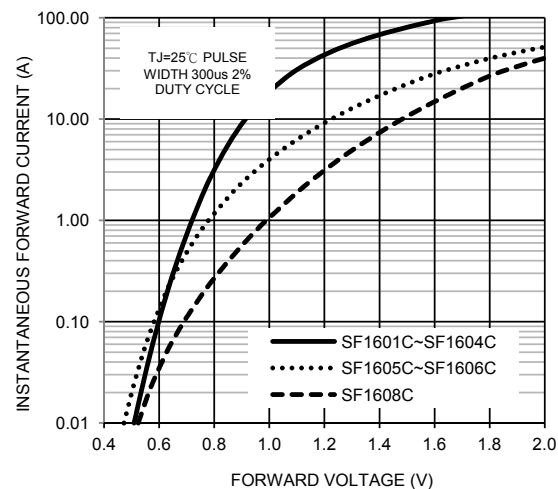


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

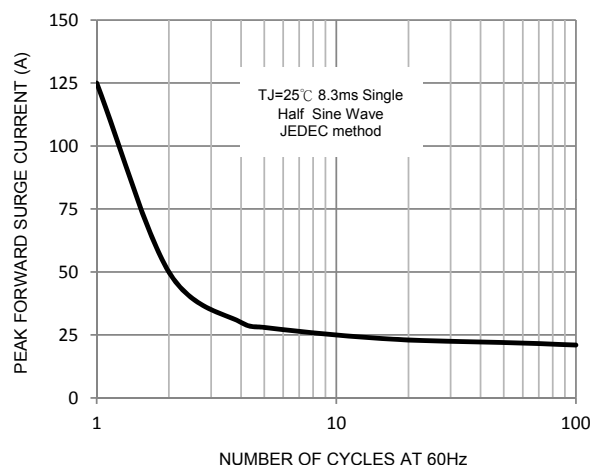


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

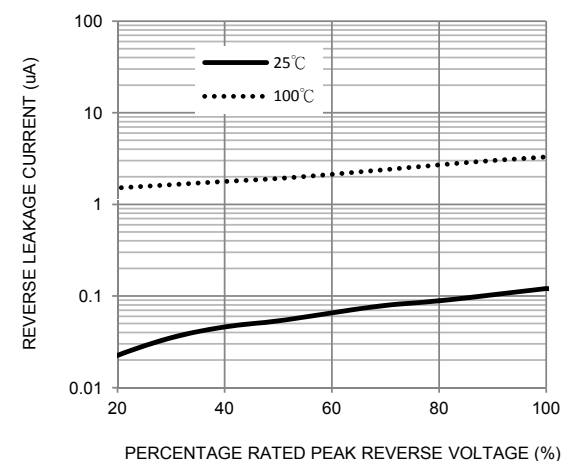


FIG. 5-TYPICAL JUNCTION CAPACITANCE

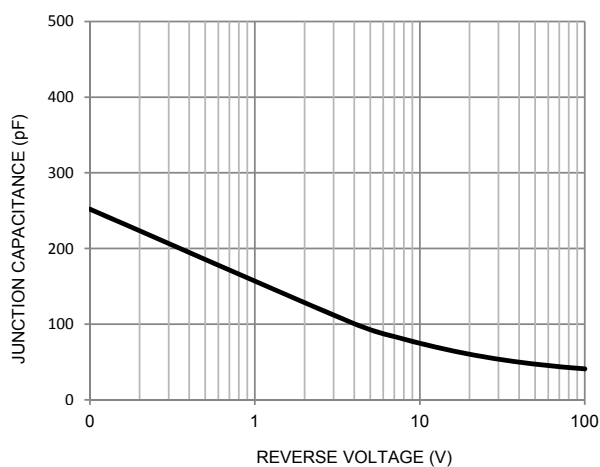


FIG. 6-Reverse Recovery Time Characteristic and Test Circuit

