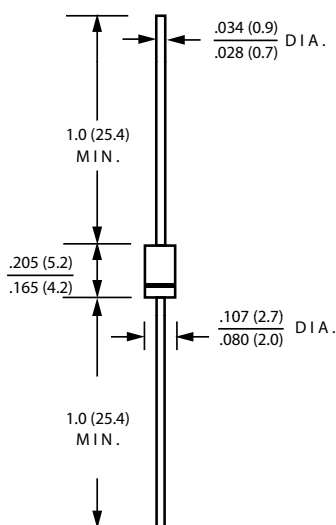


Super Fast Recovery Rectifiers Plastic Passivation Junction



DO-41

Dimensions in inches and (millimeters)



Ordering Information

Part Number	Remark
SF1x	General
SF1x-H	Halogen Free

PRIMARY CHARACTERISTICS

I_F	1A
V_{RRM}	50~600V
I_{FSM}	30
V_F	0.98V, 1.30V, 1.75V
$T_J \text{ max}$	125°C

Features

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

Mechanical Data

- Cases: DO-41
- 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: 0.318 grams (approximate)

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

PARAMETER	SYMBOL	SF11	SF12	SF13	SF14	SF15	SF16	SF18	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	I _F	1.0							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	30.0							A
Maximum Instantaneous Forward Voltage IF=1A @ 25°C	V _F	0.98				1.30		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							nS
Typical thermal resistance	R _{θJA}	30							°C/W
Operating Temperature Range	T _J	-55 to +125							°C
Storage Temperature Range	T _{STG}	-55 to +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 Plastic Passivation Junction

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

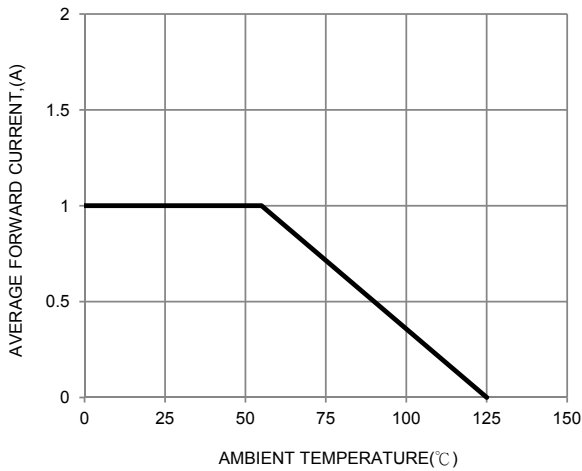


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

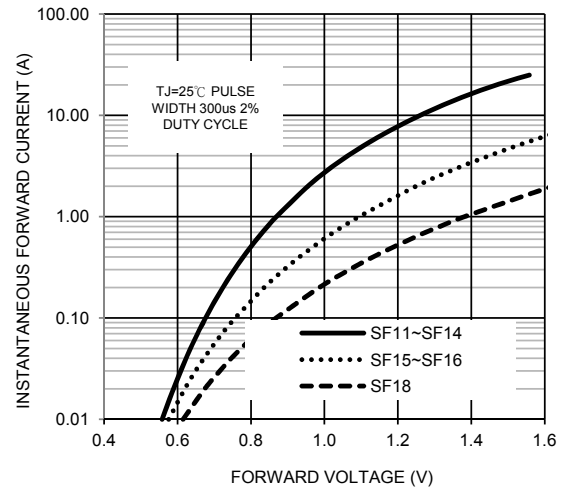


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

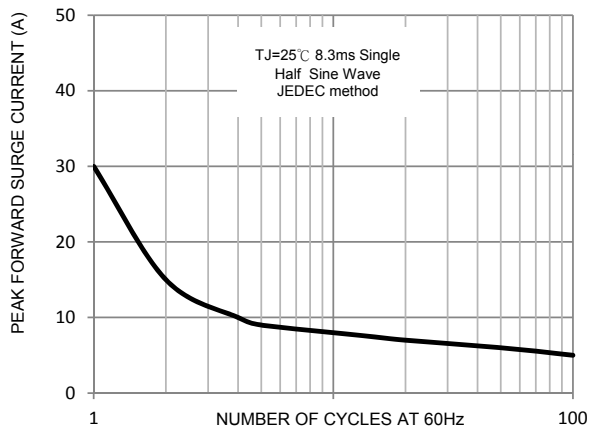


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

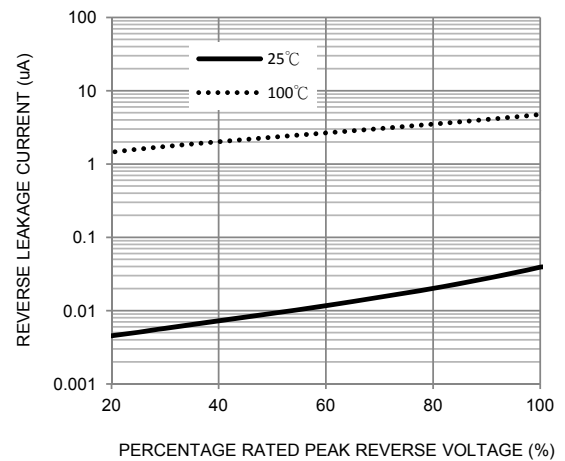


FIG. 5-TYPICAL JUNCTION CAPACITANCE

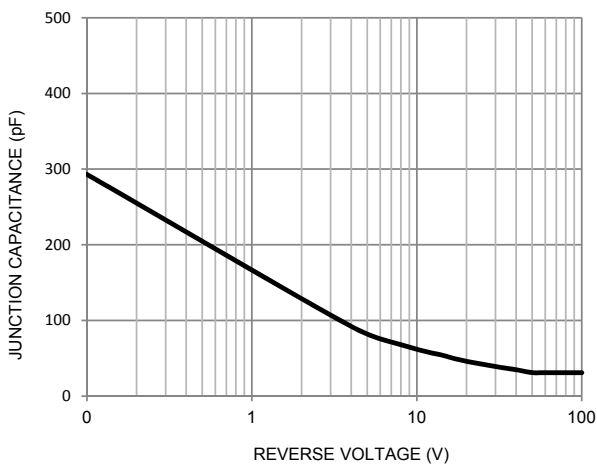


FIG. 6-Reverse Recovery Time Characteristic and Test Circuit

