

SF11~SF18

SUPERFAST RECOVERY RECTIFIER

VOLTAGE 50 to 1000 Volt **CURRENT** 1.0 Ampere

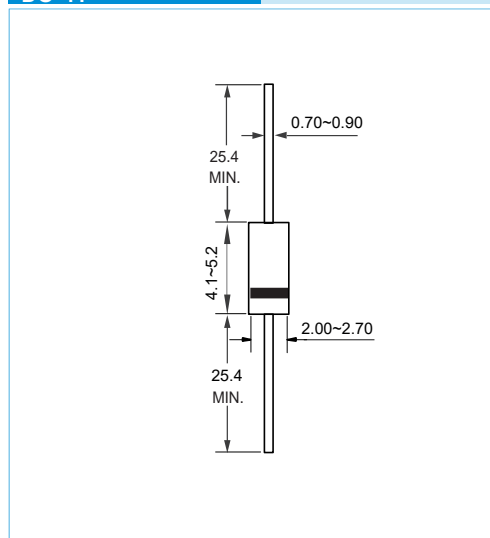
DO-41 Unit:mm

FEATURES

- Low Leakage Current
- High current capability
- High reliability
- Lead free in compliance with EU RoHS

MECHANICAL DATA

- Case Material: Molded Plastic.
- UL Flammability Classification Rating 94V-0



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	SF11	SF12	SF13	SF14	SF15	SF16	SF18	UNITS	
Maximum Recurrent 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 Current (see FIG.1)	$I_{F(AV)}$	1.0							A	
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	30							A	
Maximum Forward Voltage at 1.0 A	V_F	0.95			1.30		1.70		V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R					5.0		100		μA
Maximum Reverse Recovery Time(Note 1)	t_{rr}					35				ns
Thermal Resistance	$R_{\theta JA}$					50				$^{\circ}C / W$
Typical Junction Capacitance (Note2)	C_J					17				pF
Operating Junction Temperature Range	T_J					-55 to +150				$^{\circ}C$
Storage Temperature Range	T_{STG}					-55 to +150				$^{\circ}C$

NOTES:

1. Reverse Recovery Test Conditions: $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$
2. Measured at 1.0MHz and applied reverse voltage of 4.0 volt

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RATING AND CHARACTERISTIC CURVES

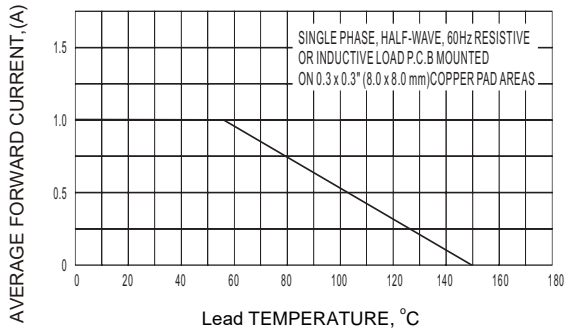


Fig. 1 Forward Current Derating Curve

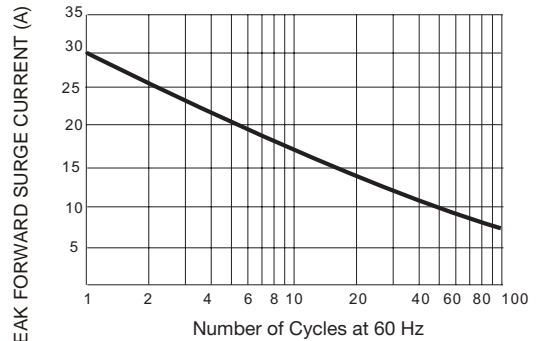


Fig. 2 Surge Current Derating Curve

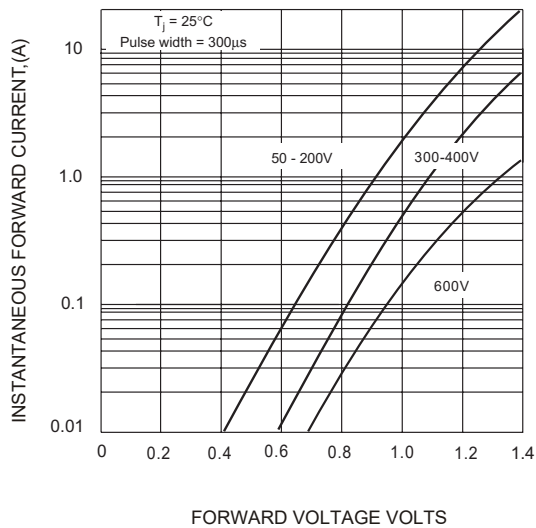


Fig. 3 Typical Forward Characteristics

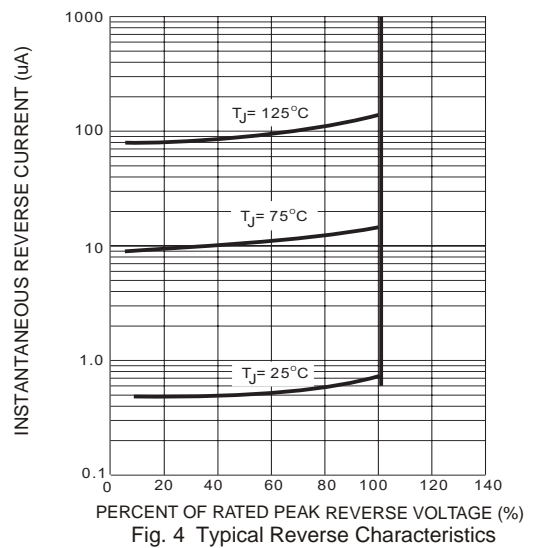


Fig. 4 Typical Reverse Characteristics

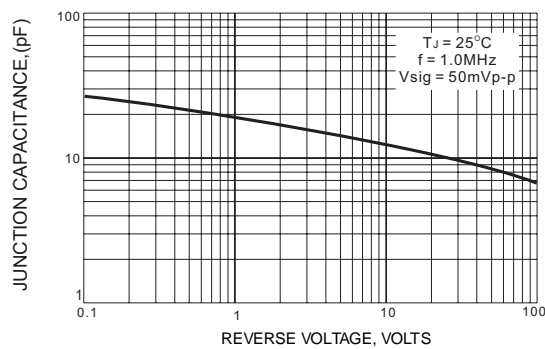
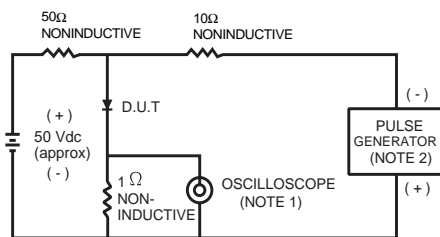


Fig. 5 Typical Junction Capacitance



- NOTES:
- Rise time = 7.0 ns max; Input impedance = 1.0 megaohm 22 pf.
 - Rise time = 10 ns max; Source impedance = 50 ohms.

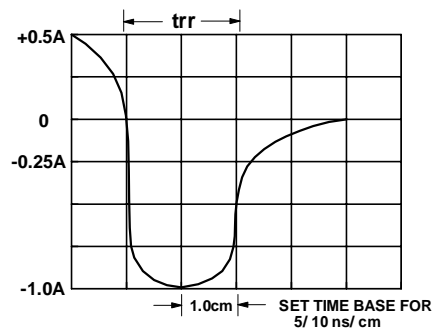


Fig. 6 Reverse Recovery Time Characteristic and Test Circuit

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ORDER INFORMATION

- Packing information

Part Number	Case	Reel Size	QUANTITY
SF11~SF18	DO-41	13 Inch	5000