

SF11~SF18

SUPERFAST RECOVERY RECTIFIERS

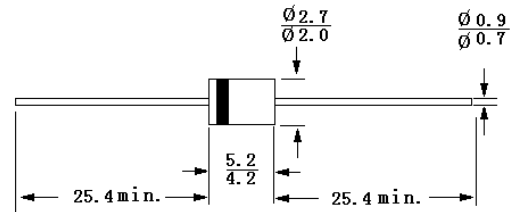
Reverse Voltage - 50 to 600 V

Forward Current - 1 A

DO-41

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High surge capability
- Low forward voltage, high current capability
- Hermetically sealed
- Super-fast recovery times
- Low leakage



Dimensions in mm

Mechanical Data

- **Case:** DO-41 molded plastic
- **Terminals:** Axial Leads, solderable per MIL-STD-202, method 208 guaranteed
- **Polarity:** Colored band denotes cathode end
- **Mounting position:** Any

Absolute Maximum Ratings and Characteristics

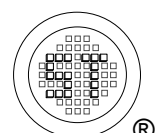
Rating at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load, for capacitive load, derate current by 20%.

Parameter	Symbols	SF11	SF12	SF13	SF14	SF15	SF16	SF18	Unit
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 Rectified Current 0.375" (9.5 mm) Lead Length at T _A = 55 °C	I _{F(AV)}	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	I _{FSM}	30							A
Maximum Forward Voltage at 1 A	V _F	0.95				1.25		1.7	V
Maximum Reverse Current Rated DC Blocking Voltage at T _a = 25 °C at T _a = 100 °C	I _R	5 500							µA
Maximum Reverse Recovery Time ¹⁾	t _{rr}	35						50	ns
Typical Junction Capacitance ²⁾	C _J	50				25			pF
Typical Thermal Resistance ³⁾	R _{θJA}	50							°C/W
Operating Junction Temperature	T _j	- 55 to + 150							°C
Storage Temperature Range	T _{stg}	- 55 to + 150							°C

¹⁾ Reverse recovery test conditions: $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$

²⁾ Measured at 1.0MHz and applied reverse voltage of 4 V

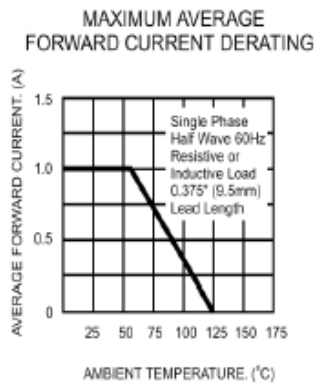
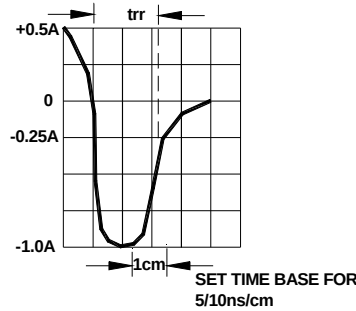
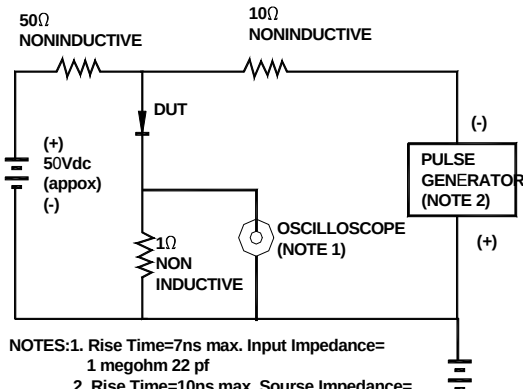
³⁾ Thermal resistance from junction to ambient 0.375" (9.5 mm) lead length P.C.B mounted.



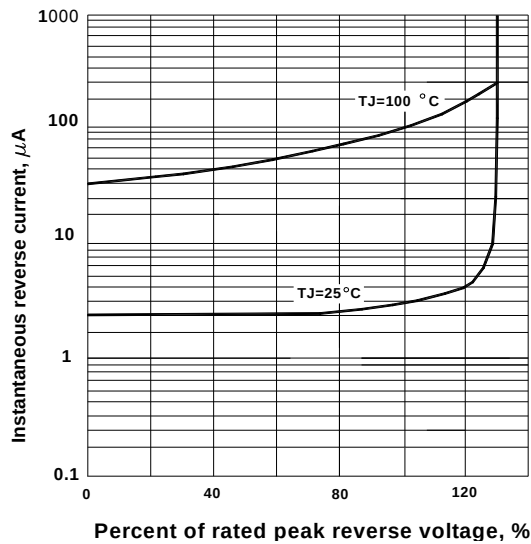
Dated : 13/05/2005 H

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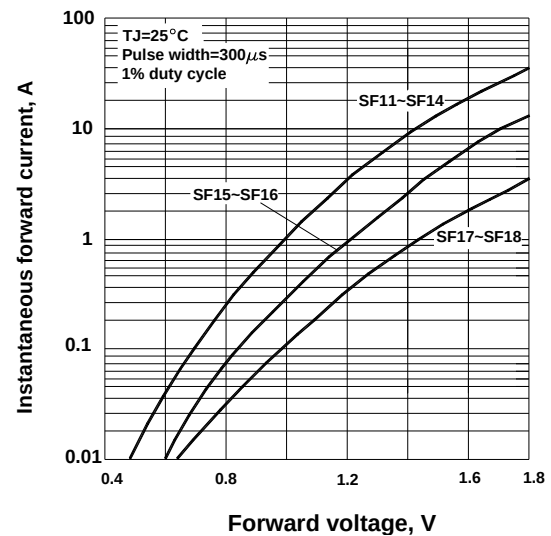
REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



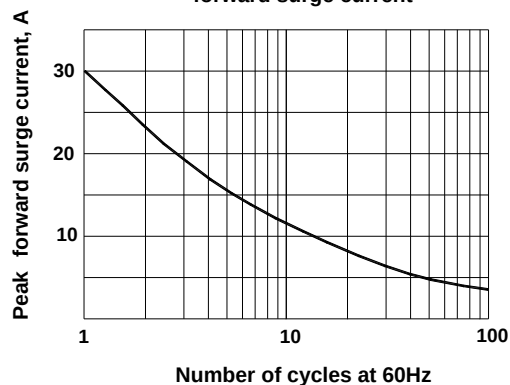
Typical reverse characteristics



Typical forward characteristics



Maximum non-repetitive forward surge current



Typical junction capacitance

