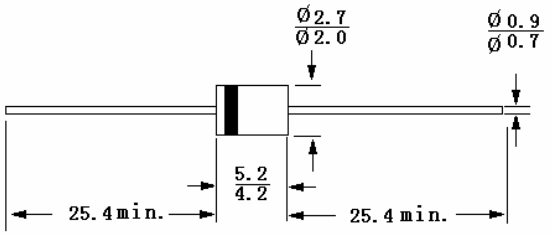
SF11~SF18

SUPERFAST RECOVERY RECTIFIERS
Reverse Voltage – 50 to 600 Volts
Forward Current – 1.0 Ampere

DO-41



Dimensions in mm

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

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

	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" (9.5mm) Lead Length at T_A = 55℃	$I_{(AV)}$	1.0							A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30							A
Maximum Forward Voltage at 1.0A	V_F	0.95				1.25		1.7	V
Maximum Reverse Current Ta = 25℃ at Rated DC Blocking Voltage Ta = 100℃	I_R	5.0 500							uA
Maximum Reverse Recovery Time (note1)	T_{RR}	35						50	nS
Typical Junction Capacitance(note2)	C_J	50				25			pF
Typical Thermal Resistance(note3)	$R_{\theta JA}$	50							$^OC/W$
Operating Junction Temperature	T_J	-55 to +150							^OC
Storage Temperature Range	Ts	-55 to +150							^OC

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 4.0V
3.Thermal resistance from junction to ambient 0.375" (9.5mm) lead length P.C.B mounted.

SEMTECH ELECTRONICS LTD.
(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)

ISO/TS 16949 : 2002 Certificate No. 05103 ISO 14001:2004 Certificate No. 7116 ISO 9001:2000 Certificate No. 0506098

Dated : 13/05/2005 H

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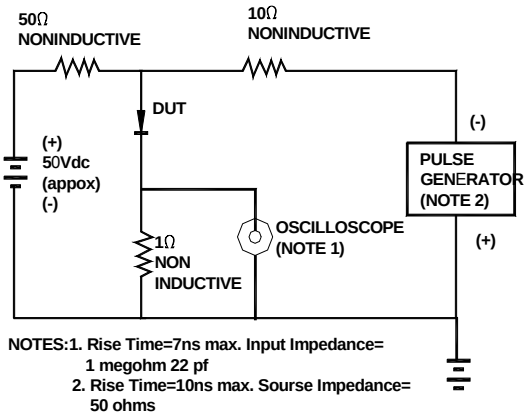
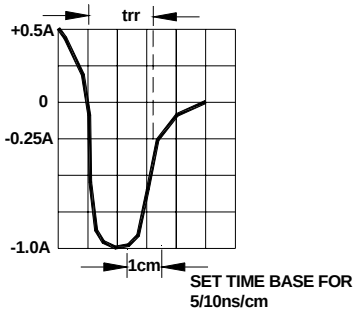
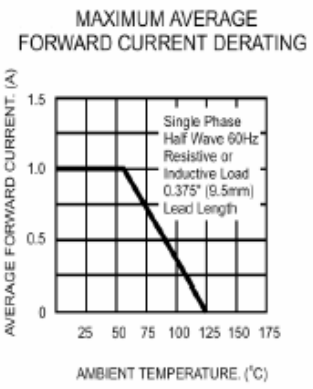
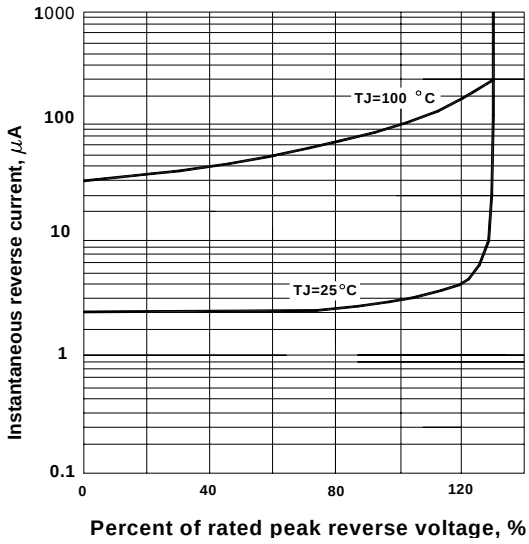
REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



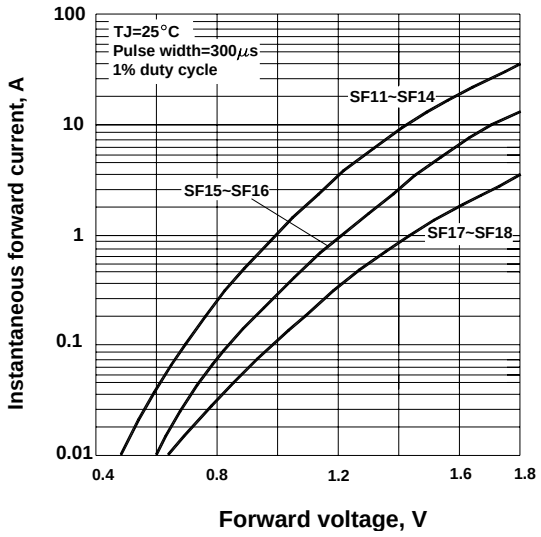




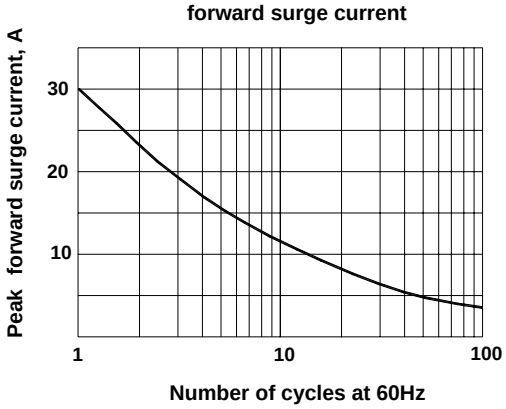
Typical reverse characteristics



Typical forward characteristics



Maximum non-repeitive forward surge current



Typical junction capacitance