



FUKUCOM COMPANY LTD.

福 靈 有 限 公 司

FLAT P, 3/F, EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,
KWUN TONG, KOWLOON, HONG KONG.
TEL: 2790-0314 FAX: 2790-0206



SUPER FAST RECOVERY RECTIFIER

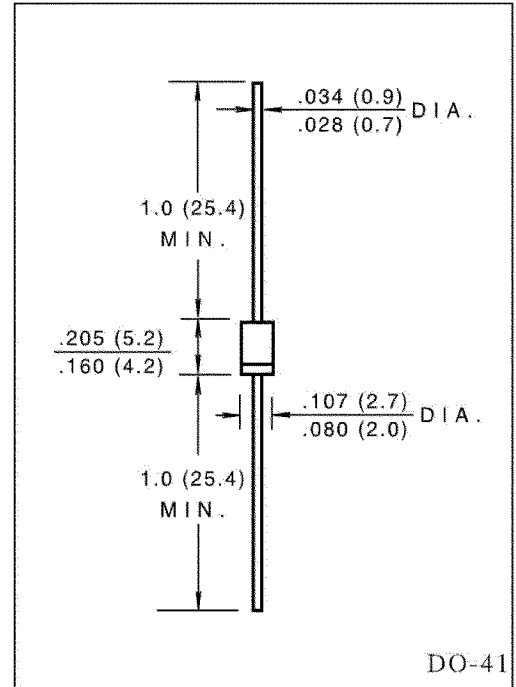
SF11 THRU SR18

FEATURES

- Super fast switching speed.
- Low leakage.
- Low forward voltage.
- High current capability.
- High surge capability
- High temperature soldering guaranteed:
260°C/10 seconds, 0.375" (9.5mm) lead length
at 5 lbs. (2.3kg) tension.

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V - 0 rate flame retardant.
- Polarity: Color band denoted cathode end.
- Lead: Plastic axial lead, solderable per MIL - STD - 202E
method 208C
- Mounting position : Any
- Weight: 0.012 ounce, 0.33 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C 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	SF17	SF18	UNIT	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	10	150	200	300	400	500	600	Volts	
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	350	420	Volts	
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	500	600	Volts	
Maximum Average Forward Rectified Current, 0.375" (9.5mm) lead length at $T_A = 55^\circ C$	$I_{(AV)}$	1.0								Amp	
Peak Forward Surge Current 8.3ms single half sine - wave superimposed on rated load (JEDEC method)	I_{FSM}	30								Amps	
Maximum Instantaneous Forward Voltage at 1.0A	V_F	0.95			1.25		1.70			Volts	
Maximum DC Reverse Current at rated DC blocking voltage per element	$T_A = 25^\circ C$	5.0								μA	
	$T_A = 125^\circ C$	150									
Maximum Reverse Recovery Time (Note 1)	t_{rr}	35					50				nS
Typical Junction Capacitance (Note 2)	C_j	15				10					pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	60								$^\circ C/W$	
Operating and Storage Temperature Range	T_J, T_{STG}	(-65 to +150)								$^\circ C$	

NOTES:

1. Test condition: $I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A$.
2. Measured at 1MHz and applied reverse voltage of 4.0 volts.
3. Thermal resistance from junction to ambient with 0.375" (9.5mm) lead length P.C.B. mounted.



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RATINGS AND CHARACTERISTIC CURVES SF11 THRU SF18

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

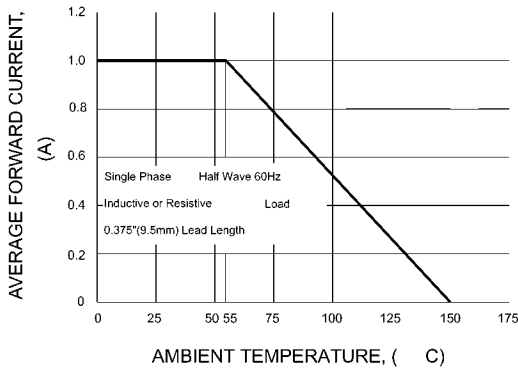


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

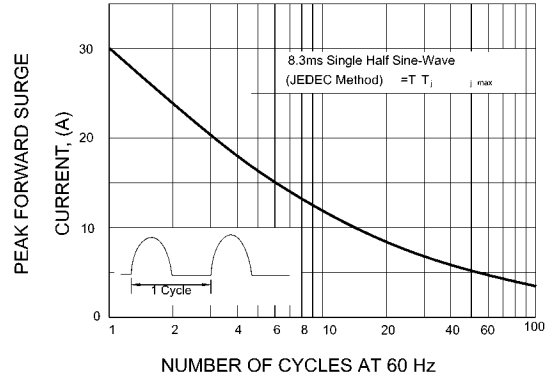


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

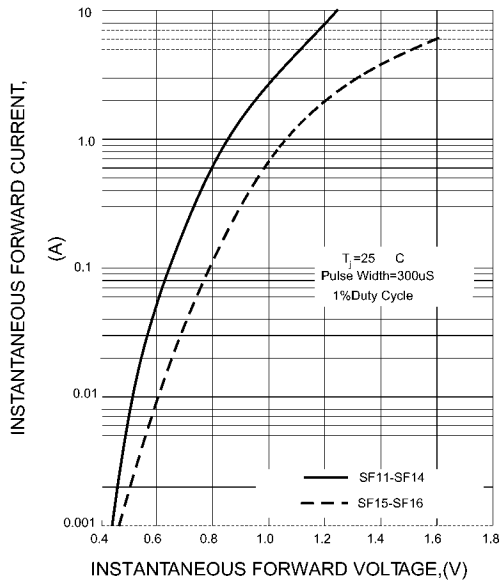


FIG.4-TYPICAL REVERSE CHARACTERISTICS

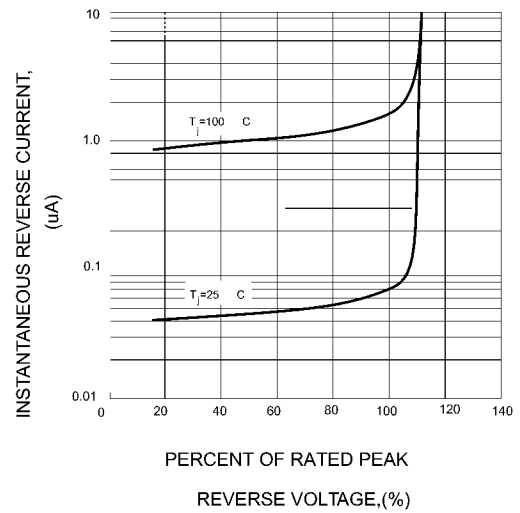


FIG.5-TYPICAL JUNCTION CAPACITANCE

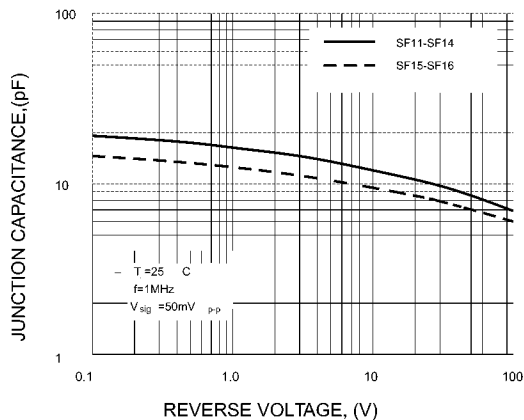


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

