

Kingtronics®**SF11 THRU SF18****SUPER FAST RECTIFIER****REVERSE VOLTAGE** 50 to 600 Volts **FORWARD CURRENT** 1.0 Ampere**FEATURES**

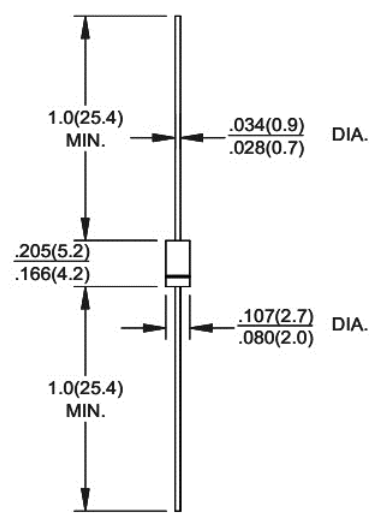
- Super fast speed switching speed
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High reliability
- High temperature soldering guaranteed
- 260°C/10 seconds, 0.375" (9.5mm) lead length at 5 lbs(2.3kg) tension

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any

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%**

DO-41

Dimensions in inches and (millimeters)

PARAMETER	SYMBOL	SF11	SF12	SF13	SF14	SF15	SF16	SF18	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	VOLTS
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	VOLTS
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{(AV)}$	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		1.7		VOLTS
Maximum DC Reverse Current at Rated DC blocking voltage	I_R	$T_A=25^\circ\text{C}$							uA
		$T_A=100^\circ\text{C}$							
Maximum reverse recovery time (NOTE 1)	T_{RR}	35							ns
Typical Junction Capacitance (Note 2)	C_J	15			10				pF
Typical TSFmal Resistance (NOTE 3)	$R_{\theta JA}$	60							
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							°C

1- Reverse Recovery Test Conditions: $I_f=0.5A, I_r=1.0A, I_{rr}=0.25A$.

2- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

3-Thermal Resistance From Junction to Ambient at .375" (9.5mm) lead length, P.C. board mounted.

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SF11 THRU SF18

RATINGS AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

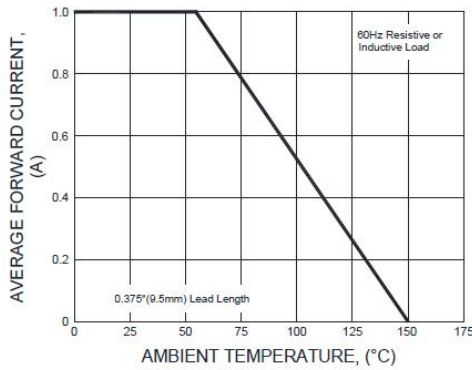


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

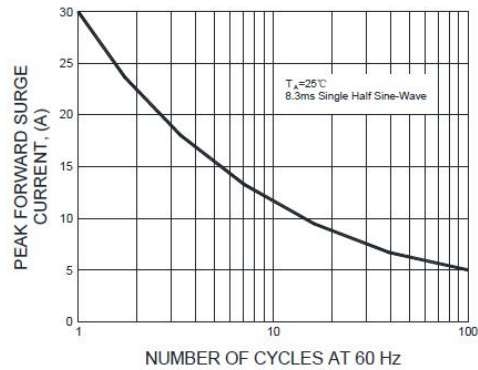


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

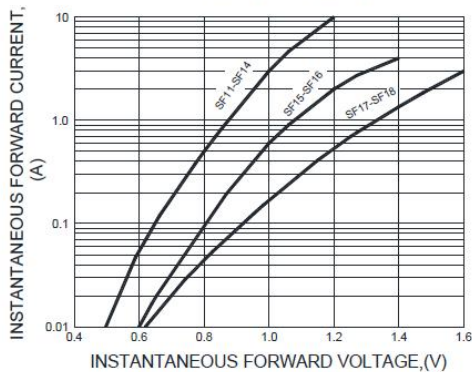


FIG.3-TYPICAL REVERSE CHARACTERISTICS

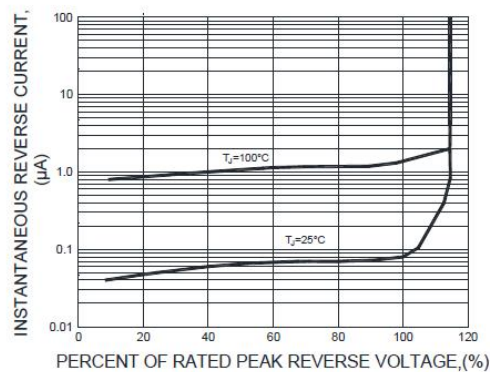


FIG.5-TYPICAL JUNCTION CAPACITANCE

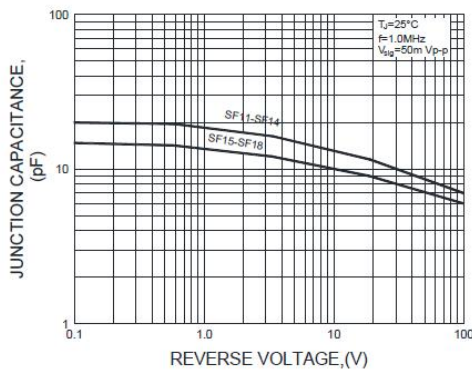
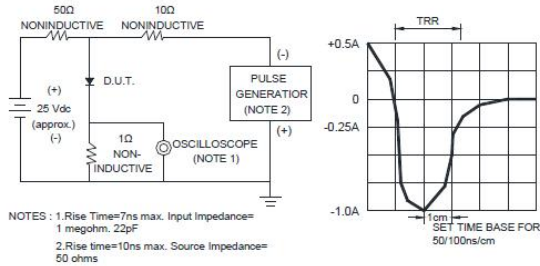


FIG.6-TEST CIRCUIT DIAGRAM AND FORWARD SURGE CURRENT



Note: Specifications are subject to change without notice.

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