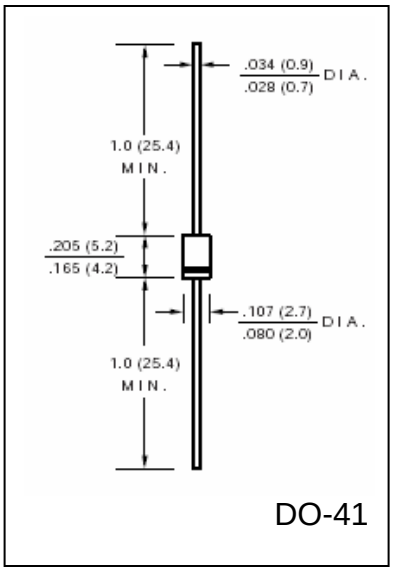
SUPER FAST RECTIFIER

SF11 THRU SF18

VOLTAGE RANGE 50 to 600 Volts
CURRENT 1.0 Ampere

FEATURES

- Super fast switching speed
- Low power loss, high efficiency
- Low Leakage
- High Surge Capacity
- High Temperature soldering guaranteed: 260 ^{O}C / 10 second, 0.375" (9.5mm) lead length



DO-41

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
- Weight: 0.012 ounce, 0.33 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25^{O}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	100	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^{O}C (Note 1)	$I_{(AV)}$	1.0								Amps
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	30								Amps
Maximum Instantaneous Forward Voltage @ 1.0A	V_F	0.95				1.25		1.7		Volts
Maximum DC Reverse Current at Rated T_A = 25 ^{O}C DC Blocking Voltage per element T_A = 125 ^{O}C	I_R	5.0 150								µA
Maximum Reverse Recovery Time Test conditions I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A	t_{rr}	35								nS
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	C_J	15				10				pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	60								^{O}C/W
Operating Junction Temperature	T_J	(-65 to +150)								^{O}C
Storage Temperature Rang	T_{STG}	(-65 to +150)								^{O}C

Notes:

1. Thermal resistance from junction to ambient with 0.375" (9.5mm) lead length, PCB mounted

Lead Free
RoHS Compliant

RATINGS AND CHARACTERISTIC CURVES SF11 THRU SF18

FIG.1-TYPICAL FORWARD CURRENT
DERATING CURVE

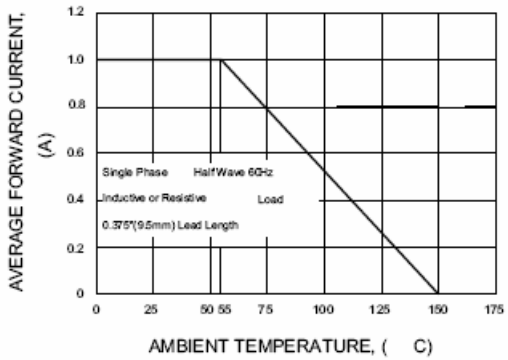


FIG.2-MAXIMUM NON-REPETITIVE PEAK
FORWARD SURGE CURRENT

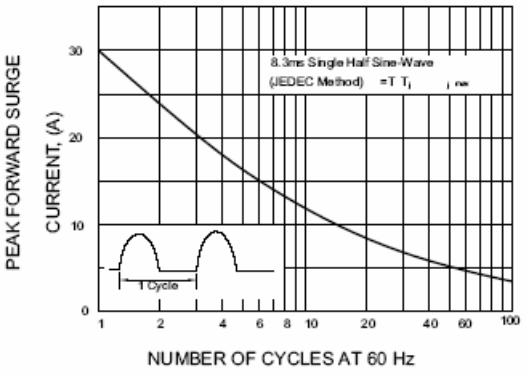


FIG.3-TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

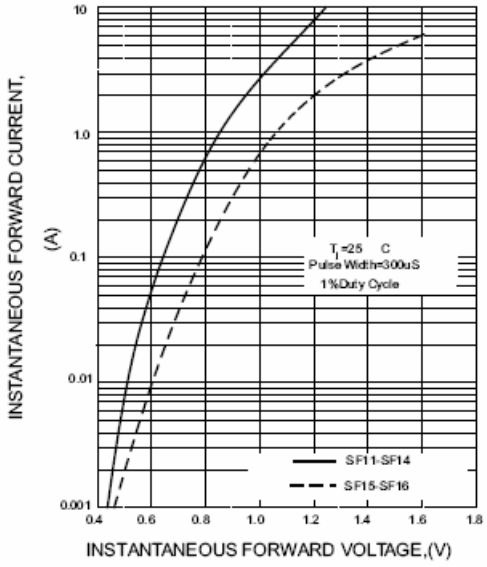


FIG.4-TYPICAL REVERSE
CHARACTERISTICS

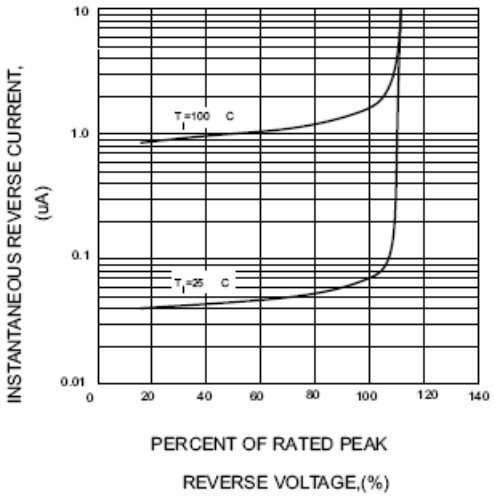


FIG.5-TYPICAL JUNCTION CAPACITANCE

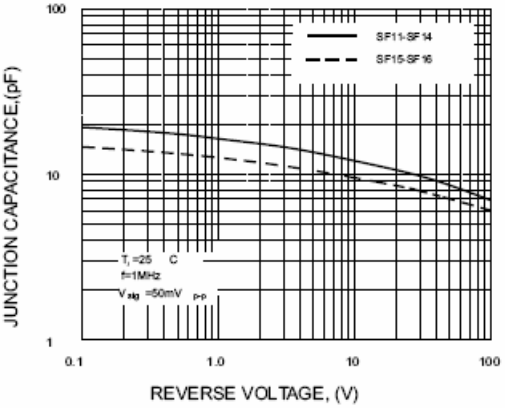
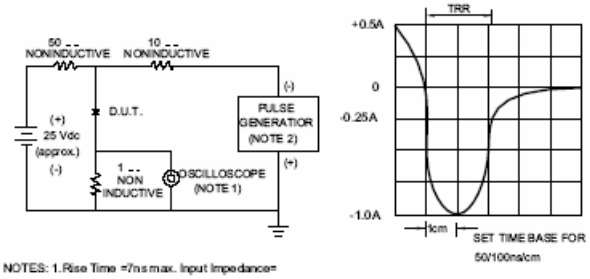


FIG.6-TEST CIRCUIT DIAGRAM AND
REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1.Rise Time =7ns max. Input Impedance=
1 megohm. 22pF
2.Rise time=10ns max. Source Impedance=
50 ohms