MEI

Lead Free RoHS Compliant

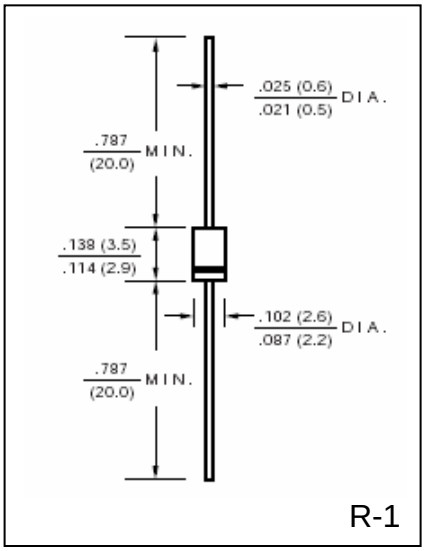
SUPER FAST GLASS PASSIVATED RECTIFIER

SF11RG THRU SF18RG

VOLTAGE RANGE **50 to 600 Volts**
CURRENT **1.0 Ampere**

FEATURES

- Super fast switching speed
- Glass passivated chip junction
- 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



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: 0.007 ounce, 0.2 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	SF 11RG	SF 12RG	SF 13RG	SF 14RG	SF 15RG	SF 16RG	SF 17RG	SF 18RG	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	$I_{(AV)}$	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		XXX		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 50								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 Range	T_J	(-55 to +150)								^{O}C
Storage Temperature Range	T_{STG}	(-55 to +150)								^{O}C

Notes:

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

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RATINGS AND CHARACTERISTIC CURVES SF11RG THRU SF18RG

FIG.1–TYPICAL FORWARD CURRENT DERATING CURVE

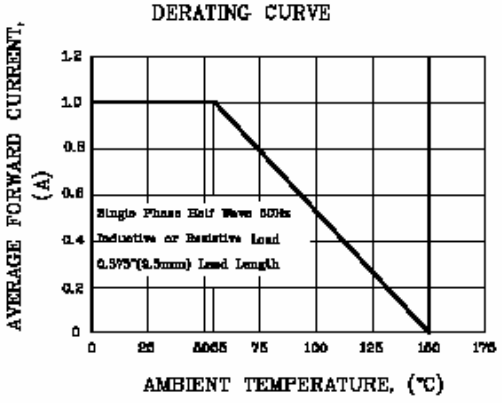


FIG.2–MAXIMUM NON–REPETITIVE PEAK FORWARD SURGE CURRENT

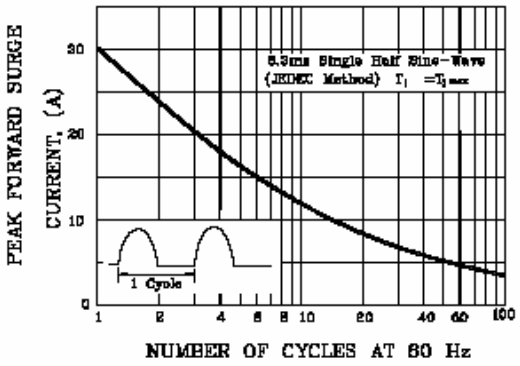


FIG.3–TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

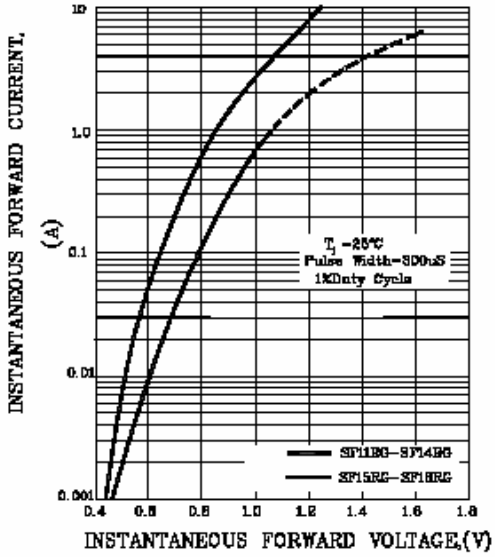


FIG.4–TYPICAL REVERSE CHARACTERISTICS

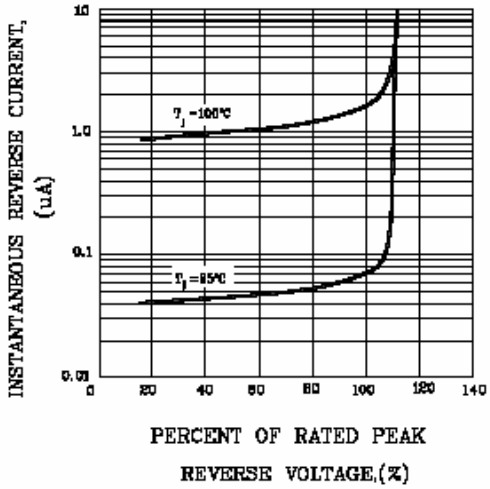


FIG.5–TYPICAL JUNCTION CAPACITANCE

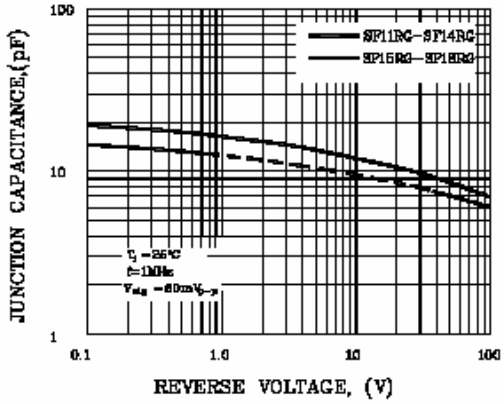
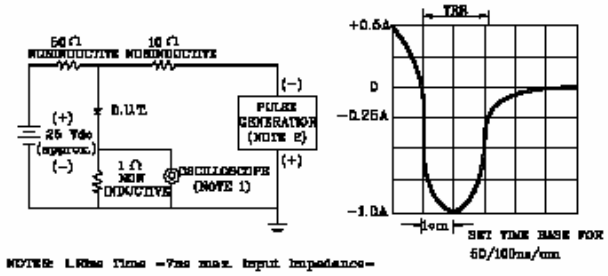


FIG.6–TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1.Rise Time =7ns max. Input Impedance= 1 megohm 22pF

2.Rise time=10ns max. Source Impedance= 50 ohms