

GLASS PASSIVATED SUPER FAST RECTIFIER

VOLTAGE RANGE 50 to 400 Volts CURRENT 1.0 Ampere

FEATURES

- * High reliability
- * Low leakage
- * Low forward voltage
- * High current capability
- * Super fast switching speed
- * High surge capability
- * Good for switching mode circuit

MECHANICAL DATA

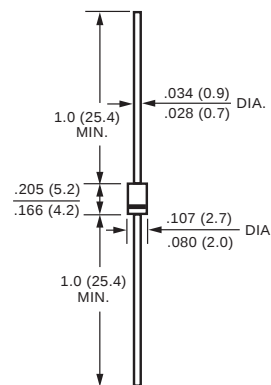
- * Case: Molded plastic
- * Epoxy: Device has UL flammability classification 94V-0
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.33 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
 Single phase, half wave, 60 Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.



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Dimensions in inches and (millimeters)

MAXIMUM RATINGS (At TA = 25°C unless otherwise noted)

RATINGS	SYMBOL	SF11	SF12	SF13	SF14	SF15	SF16	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	150	200	300	400	Volts
Maximum RMS Volts	VRMS	35	70	105	140	210	280	Volts
Maximum DC Blocking Voltage	Vdc	50	100	150	200	300	400	Volts
Maximum Average Forward Current at TA = 55°C	Io	1.0						Amps
Peak Forward Surge Current IFM (surge):8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	30						Amps
Typical Junction Capacitance (Note 2)	Cj	15				10		pF
Operating and Storage Temperature Range	TJ, TSTG	-65 to + 150						°C

ELECTRICAL CHARACTERISTICS (At TA = 25°C unless otherwise noted)

CHARACTERISTICS		SYMBOL	SF11	SF12	SF13	SF14	SF15	SF16	UNITS
Maximum Forward Voltage at 1.0A DC		V _F	0.95				1.25		Volts
Maximum DC Reverse Current	@T _A = 25°C	I _R	5.0						uAmps
at Rated DC Blocking Voltage	@T _A =150°C		50						
Maximum Reverse Recovery Time (Note 1)		t _{rr}	35						nSec

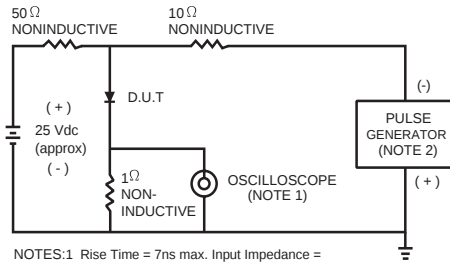
NOTES : 1. Test Conditions: IF=0.5A, IR=-1.0A, IRR=-0.25A.

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

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RATING AND CHARACTERISTIC CURVES (SF11 THRU SF16)

FIG. 1 - 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.

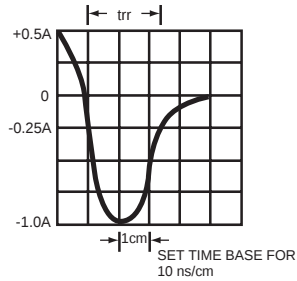


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

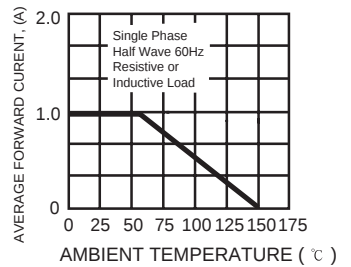


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

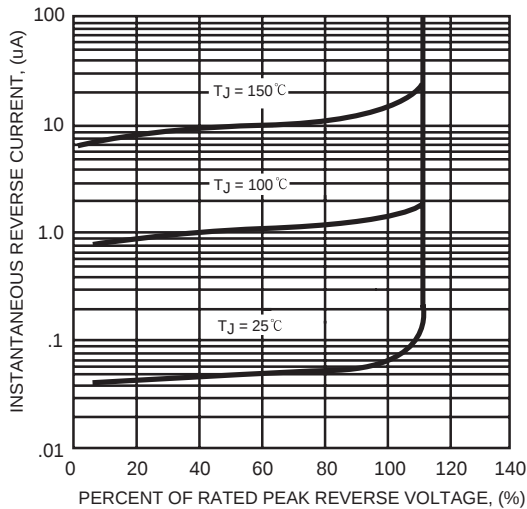


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

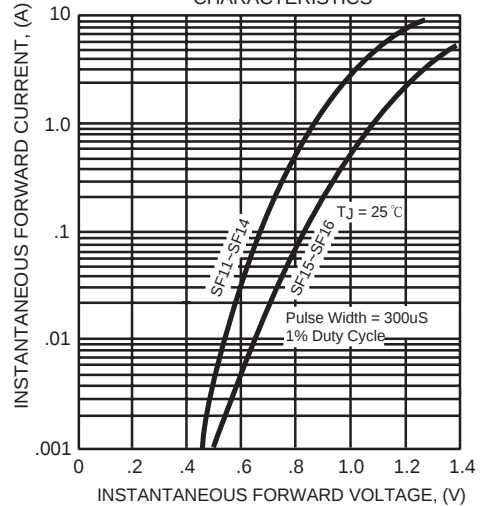


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

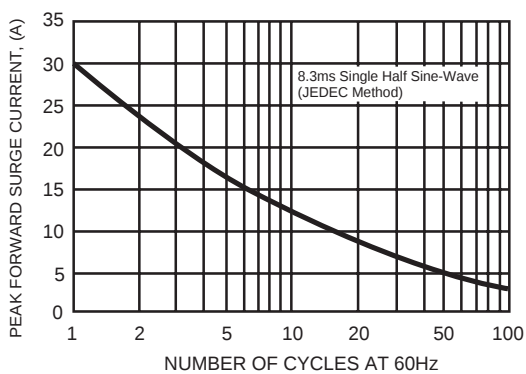


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

