

**SUPER FAST**  
**GLASS PASSIVATED RECTIFIER**  
**VOLTAGE 600 Volts CURRENT 4.0 Ampere**

**FEATURES**

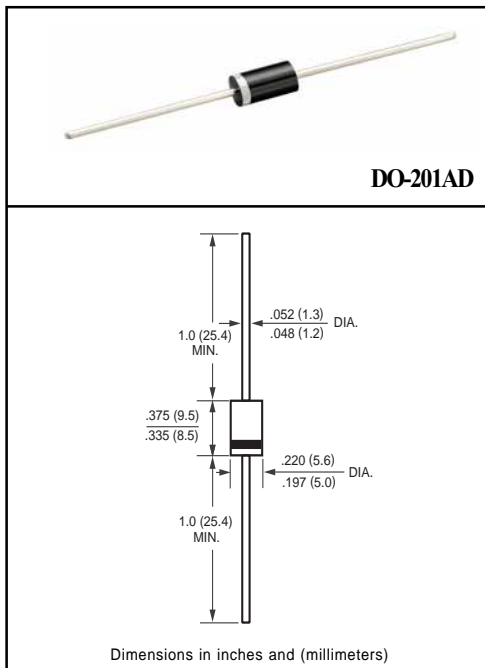
- \* Glass passivated junction
- \* Low switching noise
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability
- \* Super fast switching speed
- \* High reliability
- \* High surge capability

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: Device has UL flammability classification 94V-0
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 1.20 grams

**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%.



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

RATINGS	SYMBOL	SF47	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	600	Volts
Maximum RMS Voltage	VRMS	420	Volts
Maximum DC Blocking Voltage	Vdc	600	Volts
Maximum Average Forward Rectified Current at TA= 50°C	Io	4.0	Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	150	Amps
Typical Junction Capacitance (Note 2)	CJ	30	pF
Operating and Storage Temperature Range	TJ, TSTG	-65 to + 175	°C

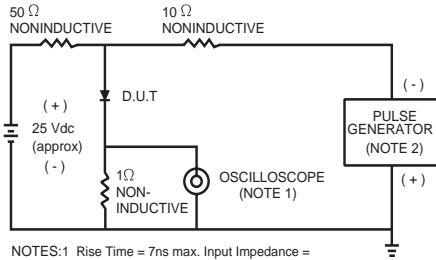
**ELECTRICAL CHARACTERISTICS** (At TA = 25°C unless otherwise noted)

CHARACTERISTICS	SYMBOL	SF47	UNITS
Maximum Instantaneous Forward Voltage at 4.0A DC	VF	1.28	Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage TA = 25°C	IR	5	uAmps
Maximum Full Load Reverse Current Average, Full Cycle .375" (9.5mm) lead length at TL = 55°C		150	uAmps
Maximum Reverse Recovery Time (Note 1)	trr	50	nSec

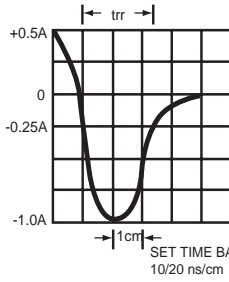
NOTES : 1. Test Conditions: IF = 0.5A, IR = -1.0A, IRR = -0.25A  
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts

# RATING AND CHARACTERISTIC CURVES ( SF47 )

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.



SET TIME BASE FOR 10/20 ns/cm

FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

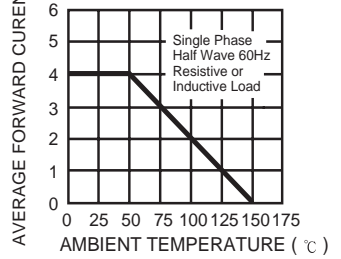


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

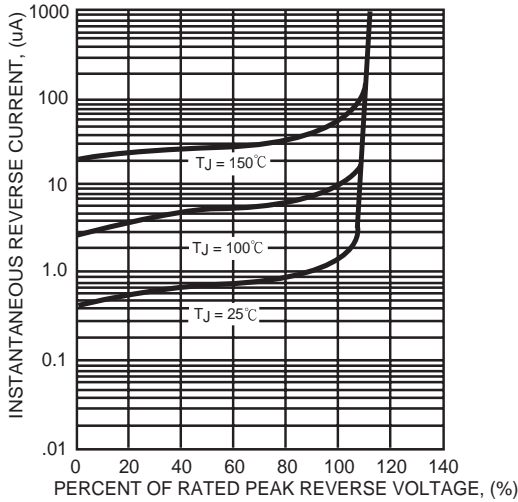


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

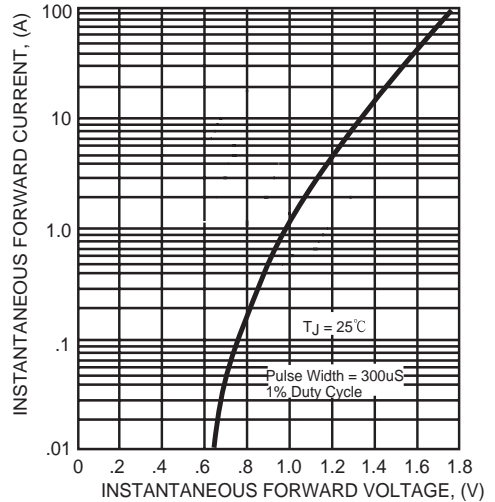


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

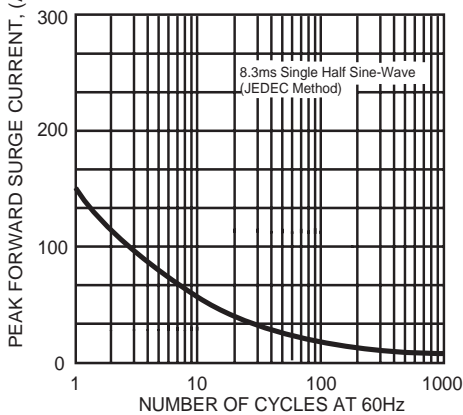


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

