

**FAST RECOVERY RECTIFIER**

**VOLTAGE RANGE 1000 to 1800 Volts CURRENT 0.5 Ampere**

**FEATURES**

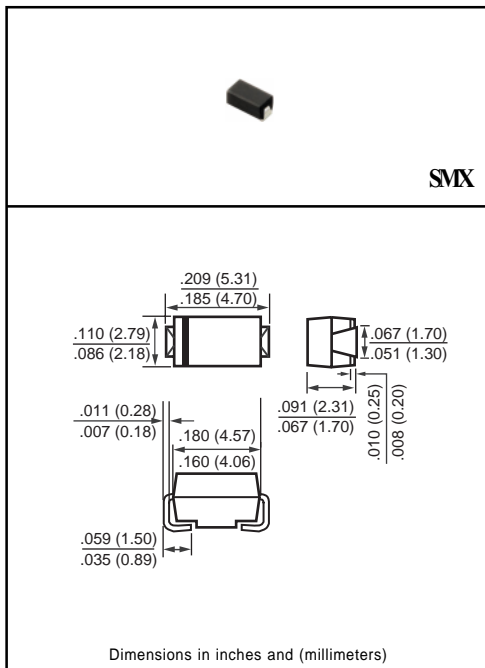
- \* Fast switching
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability
- \* High current surge
- \* High reliability

**MECHANICAL DATA**

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

**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	FFM1000W	FFM1200W	FFM1400W	FFM1500W	FFM1600W	FFM1800W	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	1000	1200	1400	1500	1600	1800	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	700	840	980	1050	1120	1260	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	1000	1200	1400	1500	1600	1800	Volts
Maximum Average Forward Rectified Current at TA = 25°C	I <sub>O</sub>	0.5						Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	25						Amps
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	15						pF
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to + 150						°C

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

CHARACTERISTICS	SYMBOL	FFM1000W	FFM1200W	FFM1400W	FFM1500W	FFM1600W	FFM1800W	UNITS
Maximum Instantaneous Forward Voltage at 0.5A DC	V <sub>F</sub>	1.8						Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage TA = 25°C	I <sub>R</sub>	5.0						uAmps
Maximum Full Load Reverse Current Full Cycle Average, .375" (9.5mm) lead length at TL = 55°C		100						uAmps
Maximum Reverse Recovery Time (Note 1)	t <sub>rr</sub>	300						nSec

NOTES : 1. Reverse Recovery Test Conditions: I<sub>F</sub> = 0.5A, I<sub>R</sub> = -1.0A, I<sub>RR</sub> = -0.25A  
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts

# RATING AND CHARACTERISTIC CURVES ( FFM1000W THRU FFM1800W )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

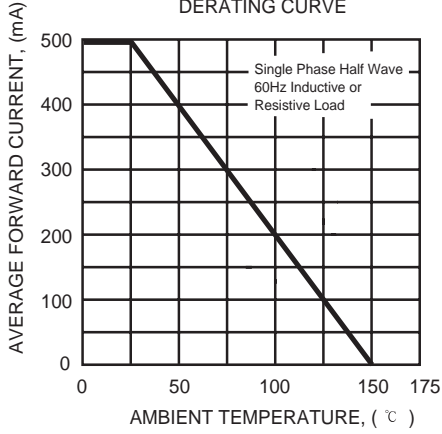


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

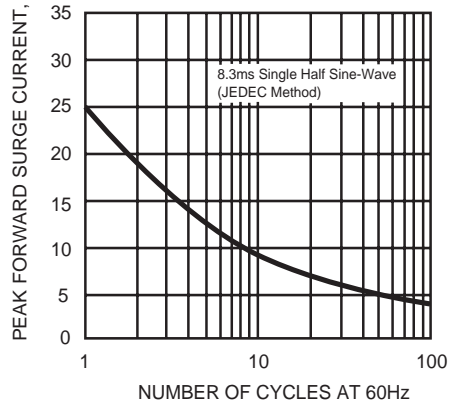
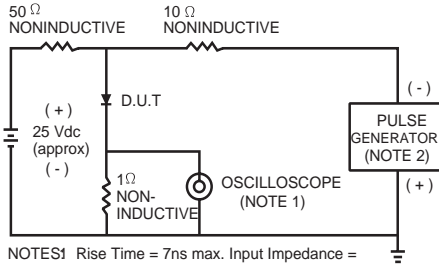
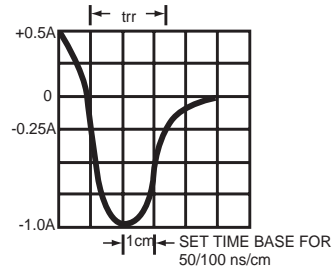


FIG. 3 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES1 Rise Time = 7ns max. Input Impedance = 1 megohm. 22 pF.  
 2. Rise Time = 10ns max. Source Impedance = 50 ohms.



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