

**FAST RECOVERY RECTIFIER****VOLTAGE RANGE 1000 to 1800 Volts CURRENT 1.0 Ampere****FEATURES**

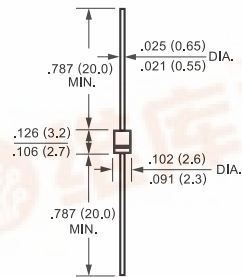
- \* Fast switching
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability
- \* High current surge
- \* High reliability

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: UL 94V-O rate flame retardant
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 0.19 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%.

**R-1**

Dimensions in inches and (millimeters)

**MAXIMUM RATINGS** (At  $T_A = 25^\circ\text{C}$  unless otherwise noted)

RATINGS	SYMBOL	1F10	1F12	1F14	1F15	1F16	1F18	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	1000	1200	1400	1500	1600	1800	Volts
Maximum RMS Voltage	$V_{RMS}$	700	840	980	1050	1120	1260	Volts
Maximum DC Blocking Voltage	$V_{DC}$	1000	1200	1400	1500	1600	1800	Volts
Maximum Average Forward Rectified Current at $T_A = 25^\circ\text{C}$	$I_o$	0.5						Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	25						Amps
Typical Junction Capacitance (Note 2)	$C_J$	15						pF
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to + 150						$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS** (At  $T_A = 25^\circ\text{C}$  unless otherwise noted)

CHARACTERISTICS	SYMBOL	1F10	1F12	1F14	1F15	1F16	1F18	UNITS
Maximum Instantaneous Forward Voltage at 0.5A DC	$V_F$	1.8						Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A = 25^\circ\text{C}$	$I_R$	5.0						$\mu\text{Amps}$
Maximum Full Load Reverse Current Full Cycle Average, 375" (9.6mm) lead length at $T_L = 55^\circ\text{C}$		100						$\mu\text{Amps}$
Maximum Reverse Recovery Time (Note 1)	$t_{rr}$	300						nSec

NOTES: 1. Reverse Recovery Test Conditions:  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $I_{RR} = 0.25\text{A}$ 

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

## RATING AND CHARACTERISTIC CURVES ( 1F10 THRU 1F18 )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

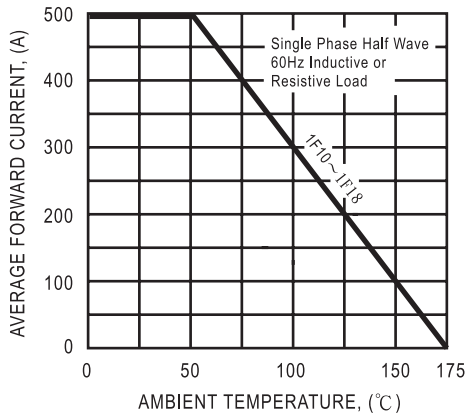


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

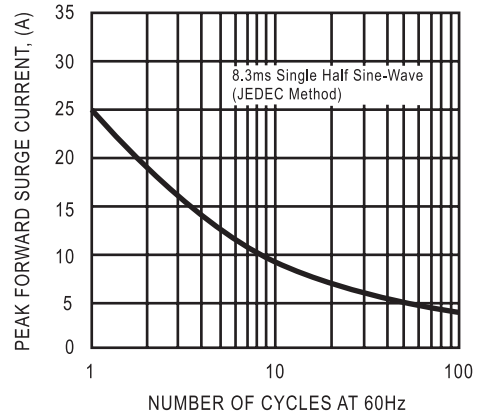


FIG. 3 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

