

# 1F1 THRU 1F7

### **FAST RECOVERY RECTIFIER**

## VOLTAGE RANGE 50 to 1000 Volts CURRENT 1.0 Ampere

#### **FEATURES**

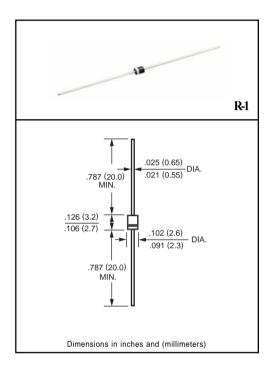
- \* Fast switching
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability
- \* High currenf surge
- \* High reliability

#### **MECHANICAL DATA**

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



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

RATINGS	SYMBOL	1F1	1F2	1F3	1F4	1F5	1F6	1F7	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at TA = 25°C	lo	1.0						Amps	
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	25						Amps	
Typical Junction Capacitance (Note 2)	CJ	15							pF
Operating and Storage Temperature Range	TJ, TSTG	-55 to + 150							٥C

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

CHARACTERISTICS	SYMBOL	1F1	1F2	1F3	1F4	1F5	1F6	1F7	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC	VF	1.3							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage TA = 25°C	l-	5.0							uAmps
Maximum Full Load Reverse Current Full Cycle Average, .375" (9.5mm) lead length at TL = 55°C	- IR	100						uAmps	
Maximum Reverse Recovery Time (Note 1)	trr		1:	50		250	50	00	nSec

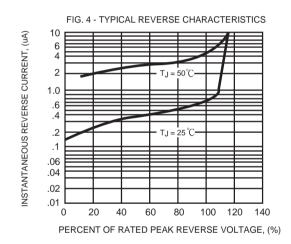
NOTES: 1. Reverse Recovery Test Conditions: IF = 0.5A, IR = -1.0A, IRR = -0.25A

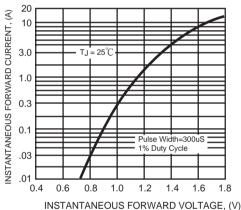
## RATING AND CHARACTERISTIC CURVES (1F1 THRU 1F7)

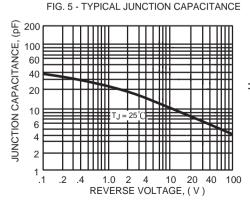
FIG. 1 - TYPICAL FORWARD CURRENT **DERATING CURVE** AVERAGE FORWARD CURRENT, (A) 1.0 .8 .6 .4 Single Phase Half Wave 60Hz .2 Resistive or Inductive Load 0 0 25 50 75 100 125 150

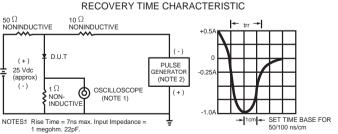
SURGE CURRENT 200 PEAK FORWARD SURGE 8.3ms Single Half Sine-Wave (JEDED Method) 100 CURRENT, (A) 50 30 20 10 1 5 10 50 100 NUMBER OF CYCLES AT 60Hz

FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD









2. Rise Time = 10ns max. Souce Impedance =

50 ohms.

FIG. 6 - TEST CIRCUIT DIAGRAM AND REVERSE

