

FAST RECOVERY RECTIFIER

VOLTAGE RANGE 1000 to 1800 Volts CURRENT 1.0 Ampere

FEATURES

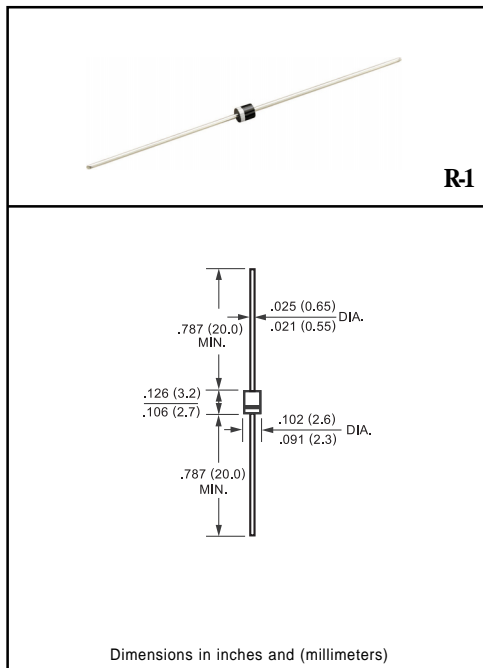
- * Fast switching
- * Low leakage
- * Low forward voltage drop
- * High current capability
- * High current surge
- * High reliability

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%.



MAXIMUM RATINGS (At TA = 25°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 TA = 25°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						°C

ELECTRICAL CHARACTERISTICS (At TA = 25°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 TA = 25°C	I _R	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 _{rr}	300						nSec

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

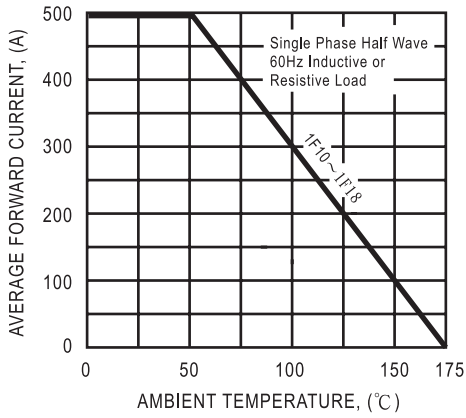


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

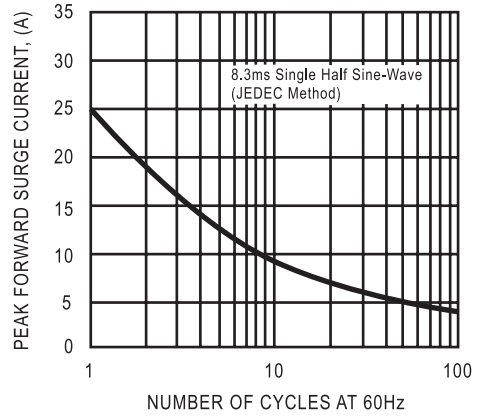
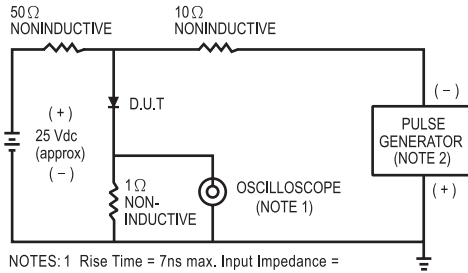


FIG. 3 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

