



# F1A1 THRU F1A7

## 1.0 AMP. FAST RECOVERY RECTIFIERS

**FEATURES**

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

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting Position: Any
- \* Weight: 0.20grams

**VOLTAGE RANGE**  
50 to 1000 Volts  
**CURRENT**  
1.0 Amperes

**R-1**

Dimensions in inches and (millimeters)

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Rating 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%

TYPE NUMBER	SYMBOLS	F1A1	F1A2	F1A3	F1A4	F1A5	F1A6	F1A7	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum D. C Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375" (9.5mm) lead length @ $T_A = 40^\circ C$	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	25							A
Maximum Instantaneous Forward Voltage at 1.0A	$V_F$	1.3							V
Maximum D. C Reverse Current @ $T_A = 25^\circ C$ at Rated D. C Blocking Voltage @ $T_A = 100^\circ C$	$I_R$	5.0 100							$\mu A$ $\mu A$
Maximum Reverse Recovery Time (Note 1)	$T_{RR}$	150				250	500		nS
Typical Junction Capacitance (Note 2)	$C_J$	15							pF
Operating Temperature Range	$T_J$	-65 to +125							$^\circ C$
Storage Temperature Range	$T_{STG}$	-65 to +150							$^\circ C$

**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 4.0V D. C.

## RATINGS AND CHARACTERISTIC CURVES (F1A1 THRU F1A7)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

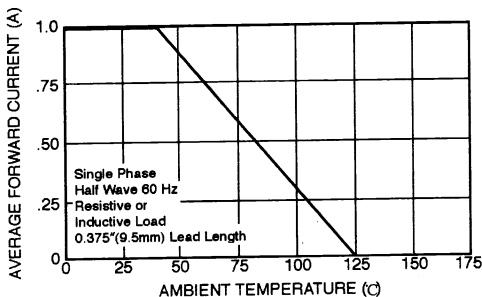


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

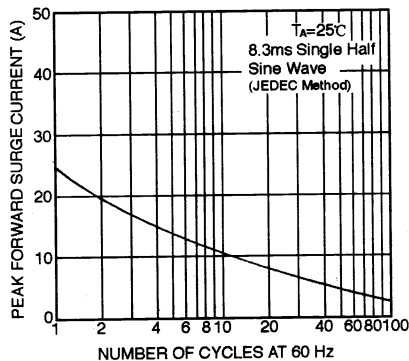


FIG. 3 - TYPICAL FORWARD CHARACTERISTICS

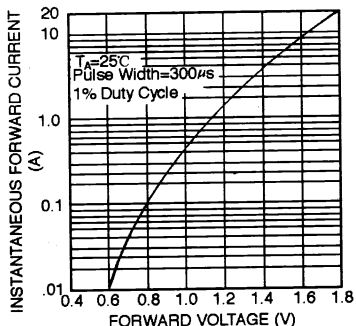


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

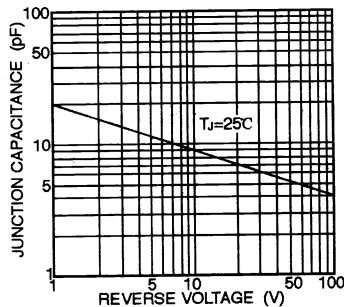
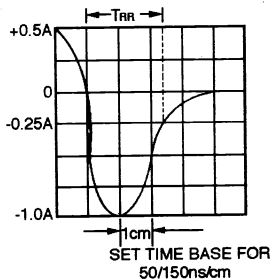
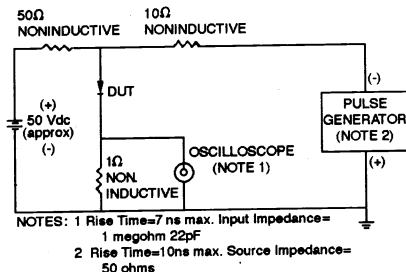


FIG. 5 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS





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