



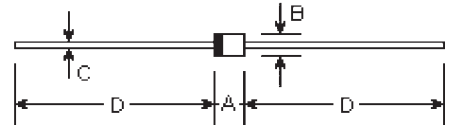
1F1 THRU 1F7

FAST SWITCHING PLASTIC RECTIFIER
Reverse Voltage - 50 to 1000 Volts
Forward Current - 1.0 Ampere

Features

- High current capability.
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0 utilizing Flame retardant epoxy molding compound.
- 1.0 ampere operation at $T_A=55^\circ\text{C}$ with no thermal runaway
- Fast switching for high efficiency
- Low leakage

R-1



Mechanical Data

- **Case:** Molded plastic, R-1
- **Terminals:** Plated axial leads, solderable per MIL-STD-202, method 208
- **Polarity:** Color band denotes cathode
- **Mounting Position:** Any
- **Weight:** 0.007 ounce, 0.20 gram

DIM	DIMENSIONS				Note
	inches		mm		
	Min.	Max.	Min.	Max.	
A	0.114	0.138	2.9	3.5	
B	0.095	0.099	2.42	2.51	
C	0.020	0.024	0.5	0.6	
D	1.000	-	25.40	-	

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.
 Single phase, half wave, 60Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

	Symbols	1F1	1F2	1F3	1F4	1F5	1F6	1F7	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{(AV)}$	1.0							Amp
Peak forward surge current 8.3mS single half sine-wave superimposed on rated load (MIL-STD-750D 4066 method)	I_{FSM}	30.0							Amps
Maximum forward voltage at 1.0A DC	V_F	1.30							Volts
Maximum DC reverse current at rated DC blocking voltage $T_J=25^\circ\text{C}$ $T_J=100^\circ\text{C}$	I_R	5.0 150.0							μA
Maximum reverse recovery time (Note 1)	T_{rr}	150			250	500			nS
Typical junction capacitance (Note 2)	C_J	10.0							μF
Typical thermal resistance (Note 3)	$R_{\theta JA}$	67.0							$^\circ\text{C/W}$
Operating and storage temperature range	T_J, T_{STG}	-55 to +150							$^\circ\text{C}$

Notes:

- (1) Reverse recovery test conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_T=0.25\text{A}$
- (2) Measured at 1.0MHz and applied reverse voltage of 4.0 VDC
- (3) Thermal resistance from junction to ambient and from junction to lead 0.375" (9.5mm) lead length, P.C.B. mounted with 0.22X0.22" (5.5X5.5mm) copper pads

RATINGS AND CHARACTERISTIC CURVES

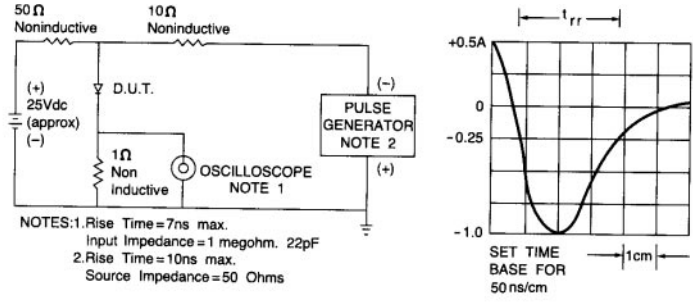


Fig. 1 – REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

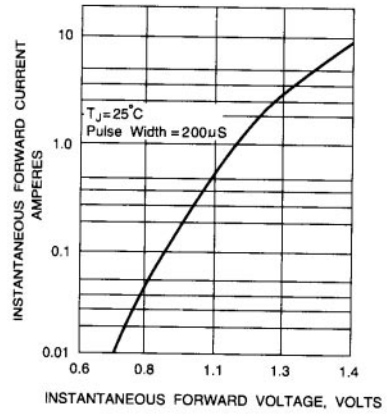


Fig. 2 – TYPICAL FORWARD CHARACTERISTICS

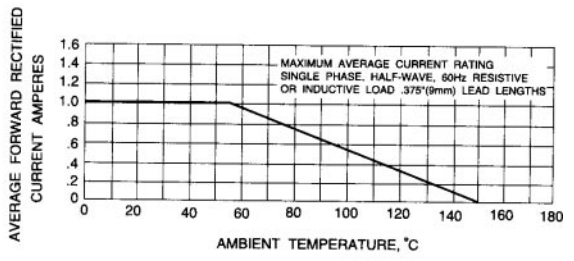


Fig. 3 – FORWARD CURRENT DERATING CURVE

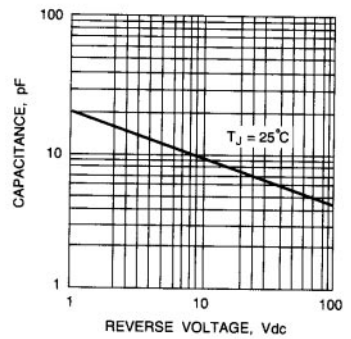


Fig. 4 – TYPICAL JUNCTION CAPACITANCE

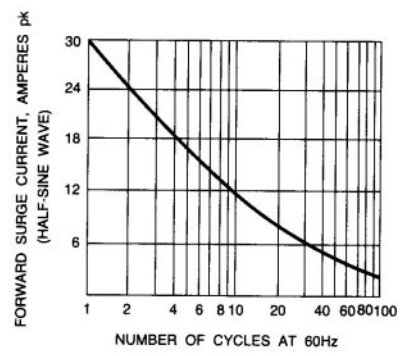


Fig. 5 – PEAK FORWARD SURGE CURRENT