Silicon Diode

1N4002

100V/1A

DATASHEET

OEM – Fairchild

Source: Fairchild Databook 1978

Datasheet Rev. 1.3 – 02/19 – data without warranty / liability

1N4001 · 1N4007

1 A SILICON RECTIFIERS

- **GLASS PACKAGE**
- **1000 V RATING (1N4007)**

ABSOLUTE MAXIMUM RATINGS (Note 1)

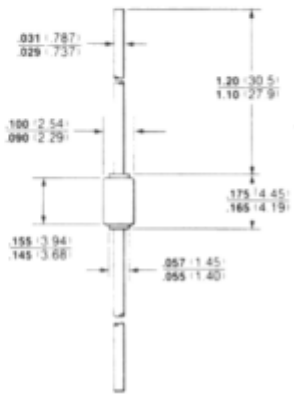
Temperatures

Storage Temperature Range	−65°C to +175°C
Maximum Junction Operating Temperature	+175°C
Lead Temperature	+260°C

Maximum Voltages and Currents

V_{RRM}	Peak Repetitive Reverse Voltage	1N4001	50 V
V_{RWM}	Working Peak Reverse Voltage	1N4002	100 V
V_R	DC Blocking Voltage	1N4003	200 V
		1N4004	400 V
		1N4005	600 V
		1N4006	800 V
		1N4007	1000 V
$V_{R(rms)}$	rms Reverse Voltage	1N4001	35 V
		1N4002	70 V
		1N4003	140 V
		1N4004	280 V
		1N4005	420 V
		1N4006	560 V
		1N4007	700 V
I_O	Average Rectified Forward Current (Note 2)		1 A
I_{FSM}	Peak Forward Surge Current		30 A

DO-41 OUTLINE



NOTES:
Copper clad steel leads, tin plated
Gold plated leads available
Hermetically sealed glass package
Package weight is 0.30 gram

ELECTRICAL CHARACTERISTICS (25°C Ambient Temperature unless otherwise noted)

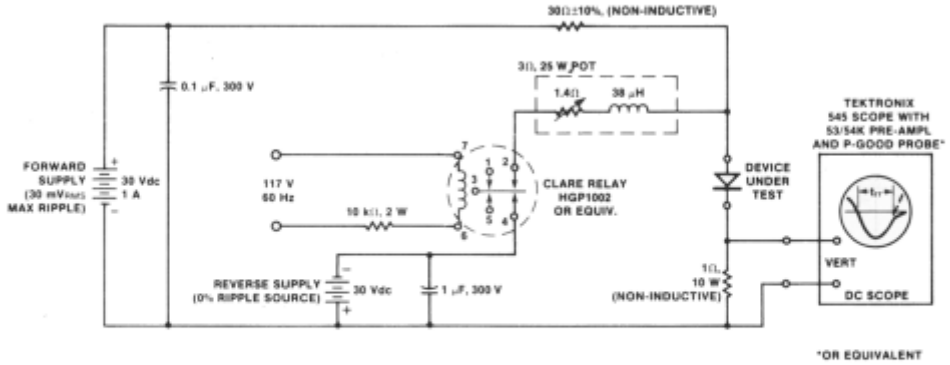
SYMBOL	CHARACTERISTIC	TYP	MAX	UNITS	TEST CONDITIONS
V_F	Forward Voltage	0.95	1.10	V	I_O = 1.0 A, T_A = 75°C
$V_{F(AV)}$	Average Forward Voltage	0.75	0.80	V	I_F = 1 A
V_{FM}	Peak Forward Voltage	1.40	1.60	V	I_O = 1.0 A
I_R	Reverse Current	0.05 0.5	10.0 50	μA μA	Rated dc Voltage Rated dc Voltage, T_A = 100°C
$I_{R(AV)}$	Average Reverse Current	1.0	30	μA	Rated V_R, I_O = 1.0 A
t_{rr}	Reverse Recovery Time (Note 3)	1.0		μs	I_f = 1.0 A, V_r = 30 V

NOTES:
1. These are limiting values above which the serviceability of the rectifier may be impaired.
2. Derate Linearly above T_A = 75°C (Note 3).
3. For product family characteristic curves and test circuit, refer to Chapter 4_D16.

CURVE SET NUMBER D16

GENERAL PURPOSE 1 A RECTIFIER

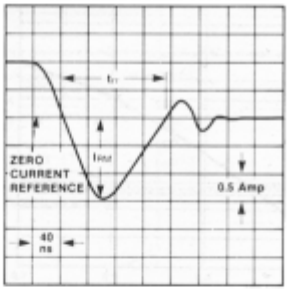
REVERSE RECOVERY TIME TEST CIRCUIT



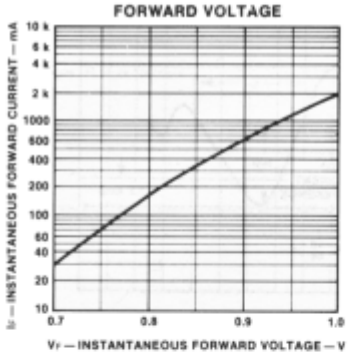
TYPICAL ELECTRICAL CHARACTERISTICS

AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE NOTED

TYPICAL RECOVERY PATTERN



INSTANTANEOUS FORWARD CURRENT VERSUS INSTANTANEOUS FORWARD VOLTAGE



RECTIFIED FORWARD CURRENT VERSUS TEMPERATURE