

Silicon – Diode

FDH1000

50V/200mA

DATASHEET

OEM – Fairchild

Source: Fairchild Databook 1978

FDH1000

HIGH CONDUCTANCE SWITCHING DIODE

DIFFUSED SILICON PLANAR

- V_F ... 1 V (MAX) @ 500 mA
- Q_S ... 100 pC (MAX)

ABSOLUTE MAXIMUM RATINGS (Note 1)

Temperatures

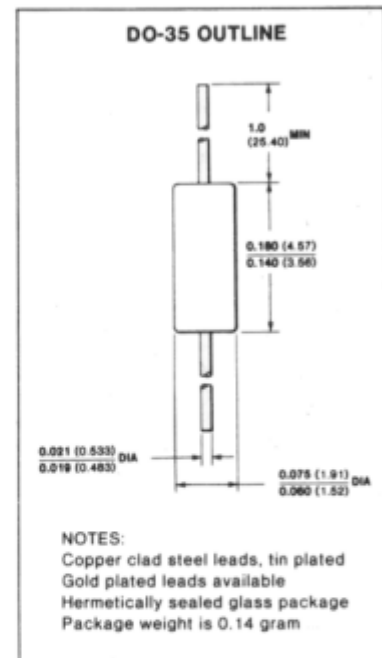
Storage Temperature Range	-65°C to +200°C
Maximum Junction Operating Temperature	+175°C
Lead Temperature	+260°C

Power Dissipation (Note 2)

Maximum Total Power Dissipation at 25°C Ambient	500 mW
Linear Power Derating Factor	3.33 mW / °C

Maximum Voltage and Currents

WIV	Working Inverse Voltage	50 V
I_O	Average Rectified Current	200 mA
I_F	Continuous Forward Current	500 mA
i_f	Peak Repetitive Forward Current	600 mA
$i_f(\text{surge})$	Peak Forward Surge Current	
	Pulse Width = 1 s	1.0 A
	Pulse Width = 1 μ s	4.0 A



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

SYMBOL	CHARACTERISTIC	MIN	MAX	UNITS	TEST CONDITIONS
V_f	Forward Voltage		1.0	V	$I_F = 500$ mA
I_R	Reverse Current		5.0	μ A	$V_R = 50$ V
			50	nA	$V_R = 20$ V
			50	μ A	$V_R = 20$ V, $T_A = 125^\circ\text{C}$
BV	Breakdown Voltage	75		V	$I_R = 100$ μ A
C	Capacitance		5.0	pF	$V_R = 0$, $f = 1.0$ MHz
Q_S	Stored Charge		100	pC	$I_f = 10$ mA, $V_R = 10$ V

NOTES:

1. These ratings are limiting values above which the serviceability of the diode may be impaired.
2. These are steady state limits. The factory should be consulted on applications involving pulsed or low duty-cycle operation.