FAIRCHILD SEMICONDUCTOR TM

MMSD914

General Description:

The high breakdown voltage, fast switching speed and high forward conductance of this diode packaged in a SOD-123 Surface Mount package makes it desirable also as a general purpose diode.

Features:

- Compact surface mount with same footprint as mini-melf.
- 400 milliwatt Power Dissipation package.
- High Breakdown Voltage, Fast Switching Speed.
- Typical capacitance less than 1.5 picofarad.

Ordering:

- 7 inch reel (178 mm); 8 mm Tape; 3,000 units per reel.

High Conductance Fast Diode

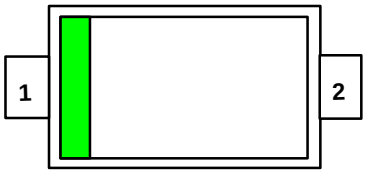
Absolute Maximum Ratings* TA = 25°C unless otherwise noted

Sym	Parameter	Value	Units
T_{stg}	Storage Temperature	-55 to +150	°C
T_J	Operating Junction Temperature	-55 to +150	°C
P_D	Total Power Dissipation at T_A = 25°C	400	W
	Linear Derating Factor from T_A = 25°C	3.2	mW/°C
R_{OJA}	Thermal Resistance Junction-to-Ambient	312	°C/W
W_{iv}	Working Inverse Voltage	75	V
I_O	Average Rectified Current	200	mA
I_F	DC Forward Current (IF)	600	mA
$i_{F(surge)}$	Peak Forward Surge Current (IFSM) Pulse Width = 1.0 Second	1.0	Amp
	Pulse Width = 1.0 microsecond	2.0	Amp

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired

ELECTRICALLY THE SAME AS THE FDLL914 DEVICE. SOURCED FROM THE 1P PRODUCT.

Top Mark: 5D



Actual Size

Electrical Characteristics TA = 25°C unless otherwise noted

SYM	CHARACTERISTICS	MIN	MAX	UNITS	TEST CONDITIONS
B_V	Breakdown Voltage	100 75		V V	I_R = 100 uA I_R = 5.0 uA
I_R	Reverse Leakage		25 50 5.0	nA uA uA	V_R = 20 V V_R = 20 V T_A = 150°C V_R = 75 V
V_F	Forward Voltage		1.0	V	I_F = 10 mA
C_T	Capacitance		4.0	pF	V_R = 0.0 V, f = 1.0 MHz
T_{RR}	Reverse Recovery Time		4.0	ns	I_F = 10 mA V_R = 6.0 V I_{RR} = 1.0 mA R_L = 100 Ohms

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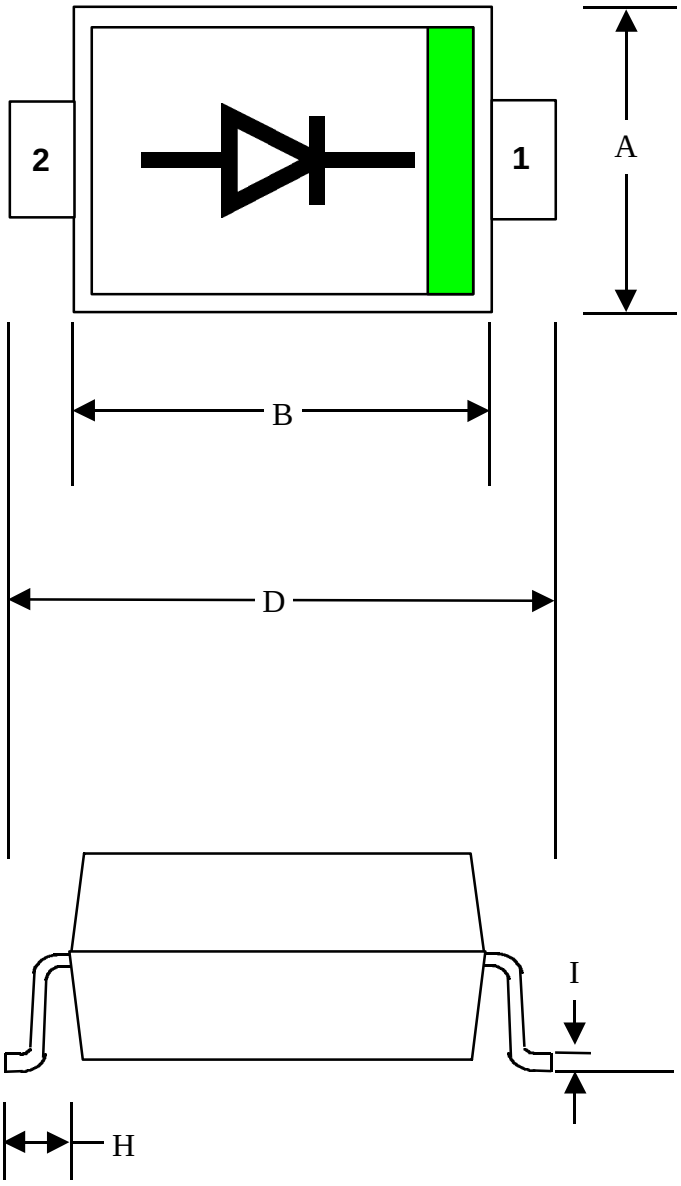
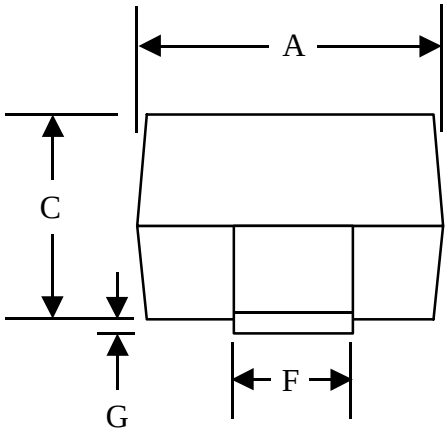
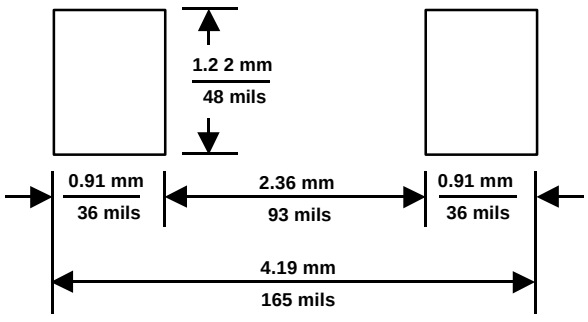
SOD-123 PACKAGE

PACKAGE CODE = (D6)
Fairchild Semiconductor's Criteria



Actual Size DIM	MIN (mils)	MAX (mils)	MIN (mm)	MAX (mm)
A	55	71	1.400	1.800
B	100	112	2.550	2.850
C	35	46	0.880	1.180
D	142	154	3.600	3.900
E	----	----	-------	-------
F	21	28	0.546	0.70
G	0.5	4	0.0135	0.1015
H	13	----	0.322	-------
I	4	8	0.095	0.195





SOD-123 LAND PADS

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PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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