

General Description:

Half watt, General purpose, Medium Current Surface Mount Zener in the SOD-123 package. The SOD-123 package has the same footprint as the glass mini-melf (LL-34) package & provides a convenient alternative to the Leadless package.

Features:

- Compact surface mount with same footprint as mini-melf
- 500 mW rating on FR-4 or FR-5 board.
- Class 3 ESD rating (>16 kV) per Human Body Model

Ordering:

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

Absolute Maximum Ratings (note 1) TA = 25°C unless otherwise noted

Parameter	Value	Units
Storage Temperature	-55 to +150	°C
Maximum Junction Temperature	-55 to +150	°C
Total Power Dissipation at 25°C	500	mW
Derate above 25°C	6.7	mW/°C
Thermal Resistance ($R_{\theta JA}$) Junction to Ambient (note 2)	340	°C/W
Maximum Temperature Coefficient	0.083	%/°C
Nominal Zener Voltage (V_Z) at 7.8 mA	16.0	V

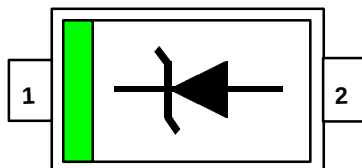
Note 1: These ratings are limiting values above which the serviceability of any semiconductor device may be impaired

Note 2: FR-4 or FR-5 = 3.5 x 1.5 inches using minimum recommended Land Pads.

Top Mark: J1

1: Cathode

2: Anode

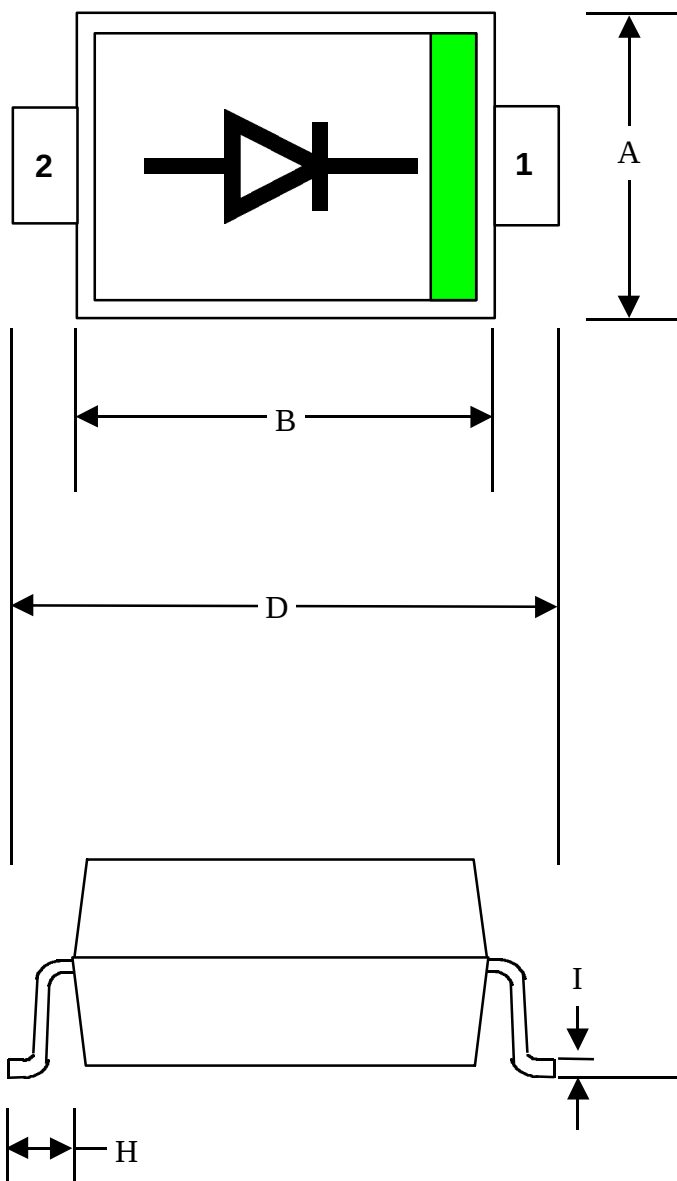

Electrical Characteristics TA = 25°C unless otherwise noted

SYM	CHARACTERISTICS	MIN	MAX	UNITS	TEST CONDITIONS
V_Z	Zener Voltage	15.20 15.04	16.80 16.42	V V	$I_{ZT} = 7.8$ mA D.C. $I_{ZT} = 7.8$ mA Pulse 26 mS
Z_Z	Zener Impedance		17.0	Ohms	$I_{ZT} = 7.8$ mA
Z_{ZK}	Zener Knee Impedance		600	Ohms	$I_{ZK} = 250$ uA
I_R	Reverse Leakage		100	nA	$V_R = 12.0$ V
V_F	Forward Voltage		900	mV	$I_F = 10$ mA

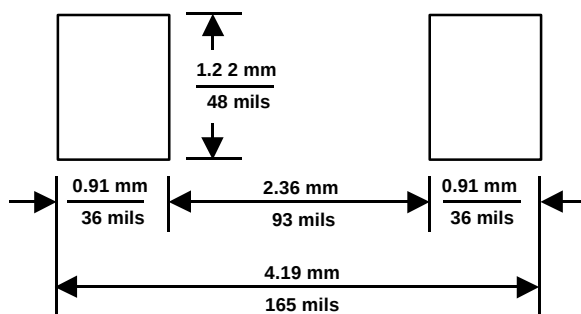
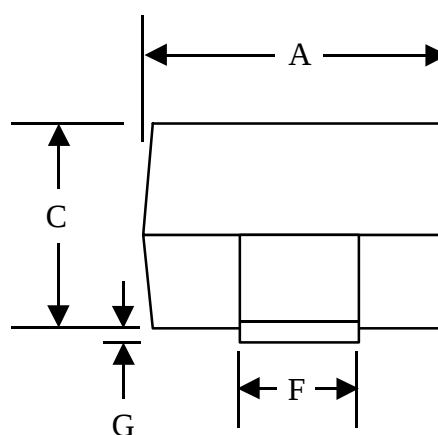
SOD-123 PACKAGE

PACKAGE CODE = (D6)
Fairchild Semiconductor's Criteria

Corrected March 11, 1998



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	34.6	46	0.880	1.180
D	141.7	153.5	3.600	3.900
E	----	----	-----	-----
F	21.5	27.5	0.546	0.70
G	0.5	4	0.0135	0.1015
H	12.7	----	0.322	-----
I	3.7	7.7	0.095	0.195



SOD-123 LAND PADS