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## MMSZ4684

### 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
- 500mW rating on FR-4 or FR-5 board.
- Class 3 ESD rating (>16kV) per Human Body Model

### Ordering

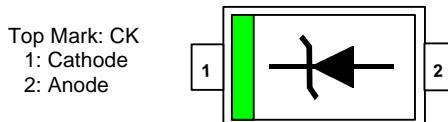
- 7 inch reel (178mm); 8mm Tape; 3,000 units per reel.

### Absolute Maximum Ratings (note 1) $T_A=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$T_{STG}$	Storage Temperature	-55 ~ 150	°C
$T_J$	Maximum Junction Temperature	-55 ~ 150	°C
$P_D$	Total Power Dissipation at $25^\circ\text{C}$ Derate above $25^\circ\text{C}$	500 6.7	mW mW/°C
$R_{QJA}$	Thermal Resistance Junction to Ambient	340	°C/W
$R_{QJL}$	Thermal Resistance Junction to Lead	150	°C/W
$\Delta V_Z$	Maximum Voltage Change (note 2)	950	mV
Lead Solder Temperature (Max 10 second duration)		260	°C
Nominal Zener Voltage ( $V_Z$ ) at $50\mu\text{A}$		3.3	V

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

Note 2: Voltage change is equal to the difference between  $V_Z$  at  $100\mu\text{A}$  and  $V_Z$  at  $10\mu\text{A}$ .



### Electrical Characteristics $T_A=25^\circ\text{C}$ unless otherwise noted

Symbol	Characteristics	Test Conditions	Min.	Max.	Units
$V_Z$	Zener Voltage	$I_{ZT} = 50\mu\text{A D.C.}$	3.14	3.47	V
$I_R$	Reverse Leakage	$V_R = 1.5\text{V}$		7.5	$\mu\text{A}$
$V_F$	Forward Voltage	$I_F = 10\text{mA}$		900	mV
$\Delta V_Z$	Delta Zener Voltage (Note 2)	$I_{ZT} = 100\mu\text{A to } 10\mu\text{A}$		950	mV

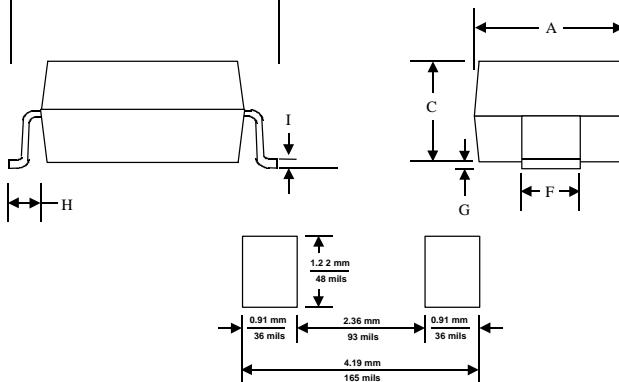
**SOD-123 PACKAGE**

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

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