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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.

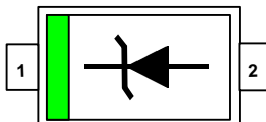
Absolute Maximum Ratings (note 1) $T_A=25^\circ\text{C}$ unless otherwise noted

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

Top Mark: CK
1: Cathode
2: Anode

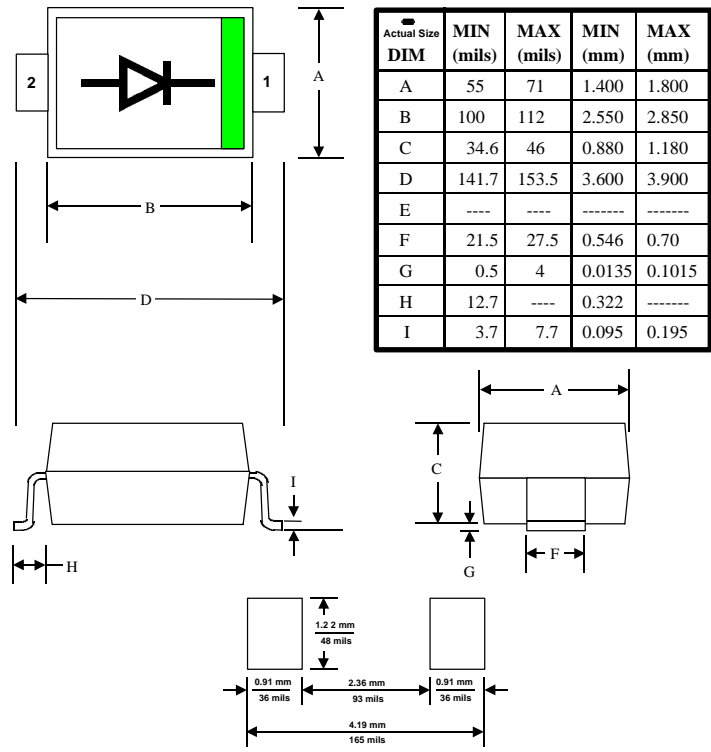


Electrical Characteristics $T_A=25^\circ\text{C}$ unless otherwise noted

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	μA
V_F	Forward Voltage	$I_F = 10\text{mA}$		900	mV
ΔV_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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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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