Is Now Part of

ON Semiconductor®

To learn more about ON Semiconductor, please visit our website at
www.onsemi.com

Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will be changed to a dash (-). This document may contain device numbers with an underscore (_). Please check the ON Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.onsemi.com. Please email any questions regarding the system integration to Fairchild_questions@onsemi.com.

FAIRCHILD
SEMICONDUCTOR®

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

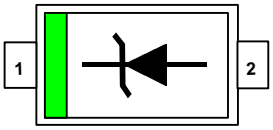
- 7 inch reel (178mm); 8mm Tape; 3,000 units per reel.

Absolute Maximum Ratings (note 1) T_A=25°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°C Derate above 25°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
ΔV_Z	Maximum Voltage Change (note 2)	950	mV
Lead Solder Temperature (Max 10 second duration)		260	°C
Nominal Zener Voltage (V_Z) at 50µA		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 100µA and V_Z at 10µA.

Top Mark: CK
1: Cathode
2: Anode



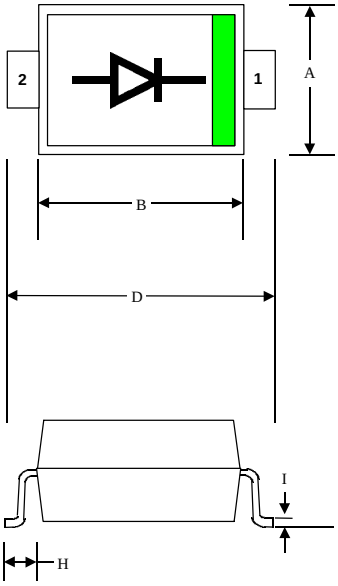
Electrical Characteristics T_A=25°C unless otherwise noted

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

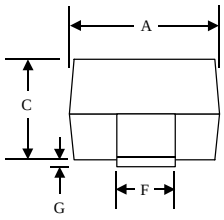
SOD-123 PACKAGE

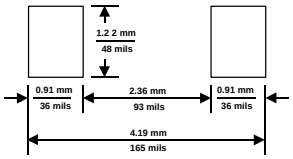
PACKAGE CODE = (D6)
Fairchild Semiconductor's Criteria

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

TRADEMARKS

The following are registered and unregistered trademarks Fairchild Semiconductor owns or is authorized to use and is not intended to be an exhaustive list of all such trademarks.

ACEx™	FACT Quiet Series™	LittleFET™	Power247™	SuperSOT™-6
ActiveArray™	FAST®	MICROCOUPLER™	PowerTrench®	SuperSOT™-8
Bottomless™	FASTr™	MicroFET™	QFET®	SyncFET™
CoolFET™	FRFET™	MicroPak™	QS™	TinyLogic®
CROSSVOLT™	GlobalOptoisolator™	MICROWIRE™	QT Optoelectronics™	TINYOPTO™
DOME™	GTO™	MSX™	Quiet Series™	TruTranslation™
EcoSPARK™	HiSeC™	MSXPro™	RapidConfigure™	UHC™
E^{2}CMOS™	I^{2}C™	OCX™	RapidConnect™	UltraFET®
EnSigna™	ImpliedDisconnect™	OCXPro™	SILENT SWITCHER®	VCX™
FACT™	ISOPLANAR™	OPTOLOGIC®	SMART START™	
Across the board. Around the world.™		OPTOPLANAR™	SPM™	
The Power Franchise™		PACMAN™	Stealth™	
Programmable Active Droop™		POP™	SuperSOT™-3	

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.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:
Literature Distribution Center for ON Semiconductor
19521 E. 32nd Pkwy, Aurora, Colorado 80011 USA
Phone: 303−675−2175 or 800−344−3860 Toll Free USA/Canada
Fax: 303−675−2176 or 800−344−3867 Toll Free USA/Canada
Email: orderlit@onsemi.com

N. American Technical Support: 800−282−9855 Toll Free USA/Canada
Europe, Middle East and Africa Technical Support:
Phone: 421 33 790 2910
Japan Customer Focus Center
Phone: 81−3−5817−1050

ON Semiconductor Website: **www.onsemi.com**

Order Literature: http://www.onsemi.com/orderlit

For additional information, please contact your local Sales Representative