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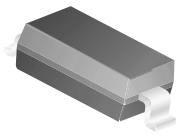
Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes 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®

June 2005

MMSD4448
Small Signal Diode



SOD123
Color Band Denotes Cathode
Top Marking: 10

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

Symbol	Parameter	Value	Unit
V_{RRM}	Maximum Repetitive Reverse Voltage	100	V
$I_{F(AV)}$	Average Rectified Forward Current	200	mA
I_{FSM}	Non-repetitive Peak Forward Surge Current Pulse Width = 1.0 second Pulse Width = 1.0 microsecond	 1.0 2.0	 A A
T_{STG}	Storage Temperature Range	-55 to +150	°C
T_J	Operating Junction Temperature	150	°C

* These ratings are limiting values above which the serviceability of the diode may be impaired.

Thermal Characteristics

Symbol	Parameter	Value	Unit
P_D	Power Dissipation	400	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	312	°C/W

Electrical Characteristics T_C = 25°C unless otherwise noted

Symbol	Parameter	Conditions	Min.	Max.	Units
V_R	Breakdown Voltage	I_R = 5.0µA I_R = 100µA	75 100		V
V_F	Forward Voltage	I_F = 5mA I_F = 100mA	0.62	0.72 1.0	V V
I_R	Reverse Leakage	V_R = 20V V_R = 20V, T_A = 150°C V_R = 75V		25 50 5.0	nA µA µA
C_T	Total Capacitance	V_R = 0, f = 1.0MHz		2.0	pF
t_{rr}	Reverse Recovery Time	I_F = 10mA, V_R = 6.0V, I_{rr} = 1.0mA, R_L = 100Ω		4.0	ns
$V_{F(peak)}$	Peak Forward Recovery Voltage	I_F = 50mA, pw = 0.1µs rep rate: 5 to 10KHz		2.5	V

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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.

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