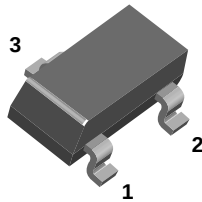


FAIRCHILD
SEMICONDUCTOR®

MMBD1401 / 1403 / 1404 / 1405



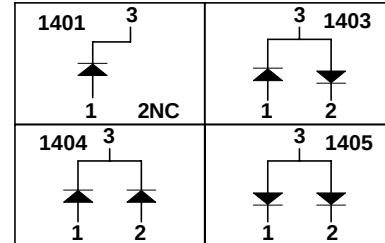
SOT-23



MARKING

MMBD1401	29	MMBD1403	32
MMBD1404	33	MMBD1405	34

Connection Diagrams



Small Signal Diodes

Absolute Maximum Ratings*

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

Symbol	Parameter	Value	Units
V_{RRM}	Maximum Repetitive Reverse Voltage	200	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	$^\circ\text{C}$
T_J	Operating Junction Temperature	150	$^\circ\text{C}$

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

NOTES:

- 1) These ratings are based on a maximum junction temperature of 150 degrees C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics

Symbol	Parameter	Value	Units
P_D	Power Dissipation	350	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	$^\circ\text{C/W}$

Electrical Characteristics

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

Symbol	Parameter	Test Conditions	Min	Max	Units
V_R	Breakdown Voltage	$I_R = 100 \mu\text{A}$	200		V
V_F	Forward Voltage	$I_F = 10 \text{ mA}$ $I_F = 50 \text{ mA}$ $I_F = 200 \text{ mA}$ $I_F = 300 \text{ mA}$	760	800 920 1.0 1.1	mV mV V V
I_R	Reverse Current	$V_R = 120 \text{ V}$ $V_R = 175 \text{ V}$		40 100	nA nA
C_T	Total Capacitance	$V_R = 0$, $f = 1.0 \text{ MHz}$		2.0	pF
t_{rr}	Reverse Recovery Time	$I_F = I_R = 30 \text{ mA}$, $I_{RR} = 3.0 \text{ mA}$, $R_L = 100 \Omega$		50	ns

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DenseTrench™	GTO™	POP™	Stealth™	
DOME™	HiSeC™	Power247™	SuperSOT™-3	
EcoSPARK™	I ² C™	PowerTrench [®]	SuperSOT™-6	
E ² CMOS™	ISOPLANAR™	QFET™	SuperSOT™-8	
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PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
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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.
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