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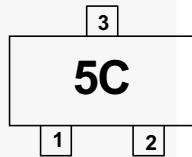
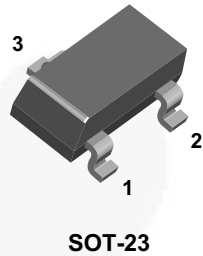
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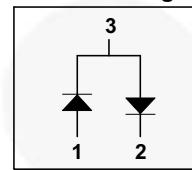
February 2015



# MMBD7000 Small Signal Diode



Connection Diagram



## Ordering Information

Part Number	Top Mark	Package	Packing Method
MMBD7000	5C	SOT-23 3L	Tape and Reel

## Absolute Maximum Ratings<sup>(1), (2)</sup>

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at  $T_A = 25^\circ\text{C}$  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	1.0
		Pulse Width = 1.0 microsecond	2.0
$T_{STG}$	Storage Temperature Range	-55 to +150	$^\circ\text{C}$
$T_J$	Operating Junction Temperature	150	$^\circ\text{C}$

### Notes:

1. These ratings are based on a maximum junction temperature of  $150^\circ\text{C}$ .
2. These are steady-state limits. Fairchild Semiconductor should be consulted on applications involving pulsed or low-duty-cycle operations.

## Thermal Characteristics

Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

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

## Electrical Characteristics

Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

Symbol	Parameter	Conditions	Min.	Max.	Unit
$V_R$	Breakdown Voltage	$I_R = 100 \mu\text{A}$	100		V
$V_F$	Forward Voltage	$I_F = 1.0 \text{ mA}$	550	700	mV
		$I_F = 10 \text{ mA}$	670	820	mV
		$I_F = 100 \text{ mA}$	0.75	1.1	V
$I_R$	Reverse Current	$V_R = 100 \text{ V}$		500	nA
		$V_R = 50 \text{ V}$		300	nA
		$V_R = 50 \text{ V}, T_A = 125^\circ\text{C}$		100	$\mu\text{A}$
$C_T$	Total Capacitance	$V_R = 0, f = 1.0 \text{ MHz}$		1.5	pF
$t_{rr}$	Reverse Recovery Time	$I_F = I_R = 10 \text{ mA}, I_{RR} = 1.0 \text{ mA}, R_L = 100 \Omega$		4.0	nS

Physical Dimensions

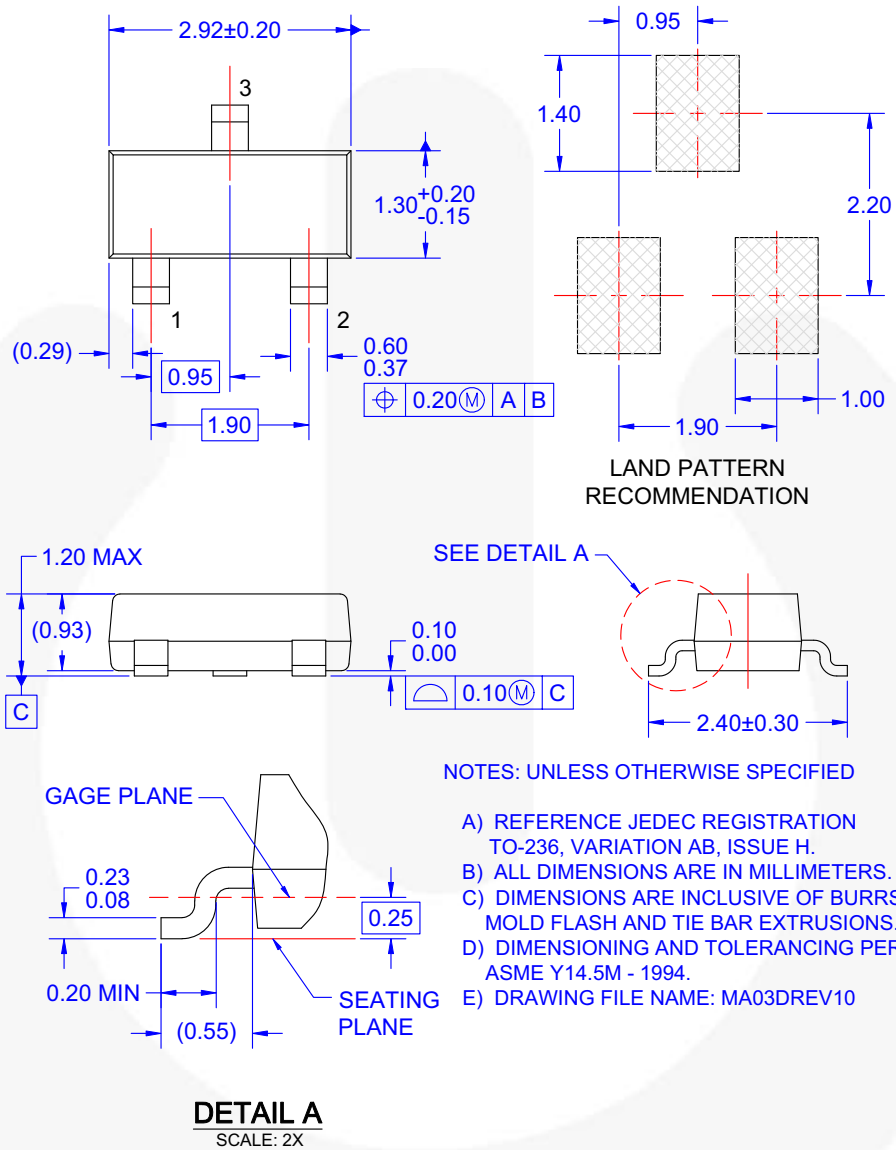







Figure 1. 3-LEAD, SOT23, JEDEC TO-236, LOW PROFILE



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No Identification Needed	Full Production	Datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve the design.
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