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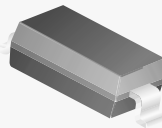
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February 2015

MMSD3070 — Small Signal Diode

# MMSD3070 Small Signal Diode



**SOD123**  
COLOR BAND DENOTES CATHODE  
TOP MARKING: 33

## Ordering Information

Part Number	Top Mark	Package	Packing Method
MMSD3070	33	SOD-123 2L	Tape and Reel

## Absolute Maximum Ratings

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	200	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	$^\circ\text{C}$

## Thermal Characteristics

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

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

### Electrical Characteristics

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

Symbol	Parameter	Conditions	Min.	Max.	Unit
$V_R$	Breakdown Voltage	$I_R = 100 \mu\text{A}$	200		V
$V_F$	Forward Voltage	$I_F = 100 \text{mA}$		1.0	V
$I_R$	Reverse Current	$V_R = 175 \text{V}$		100	nA
		$V_R = 175 \text{V}, T_A = 150^\circ\text{C}$		100	$\mu\text{A}$
$C_T$	Total Capacitance	$V_R = 0, f = 1.0 \text{MHz}$		5.0	pF
$t_{rr}$	Reverse Recovery Time	$I_F = I_R = 30 \text{mA}, I_{RR} = 1.0 \text{mA}, R_L = 100 \Omega$		50	ns



### Typical Performance Characteristics

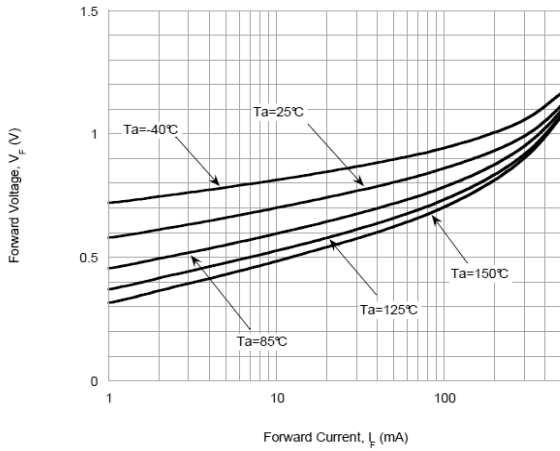


Figure 1. Forward Voltage vs. Forward Current

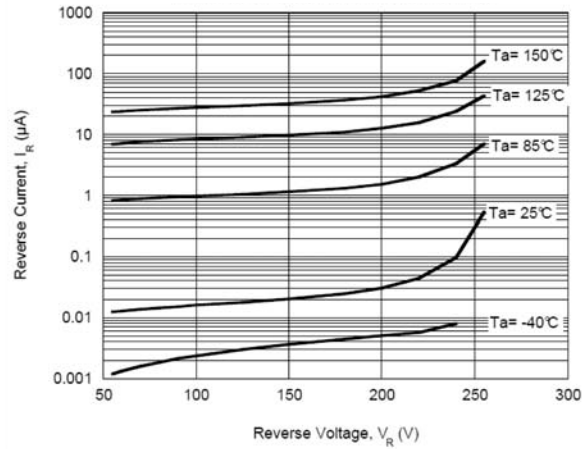


Figure 2. Reverse Current vs. Reverse Voltage

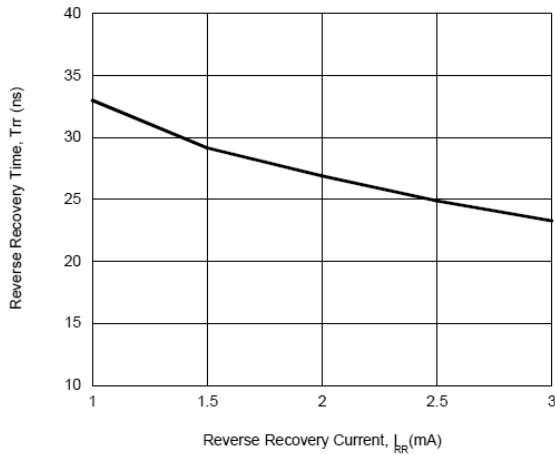
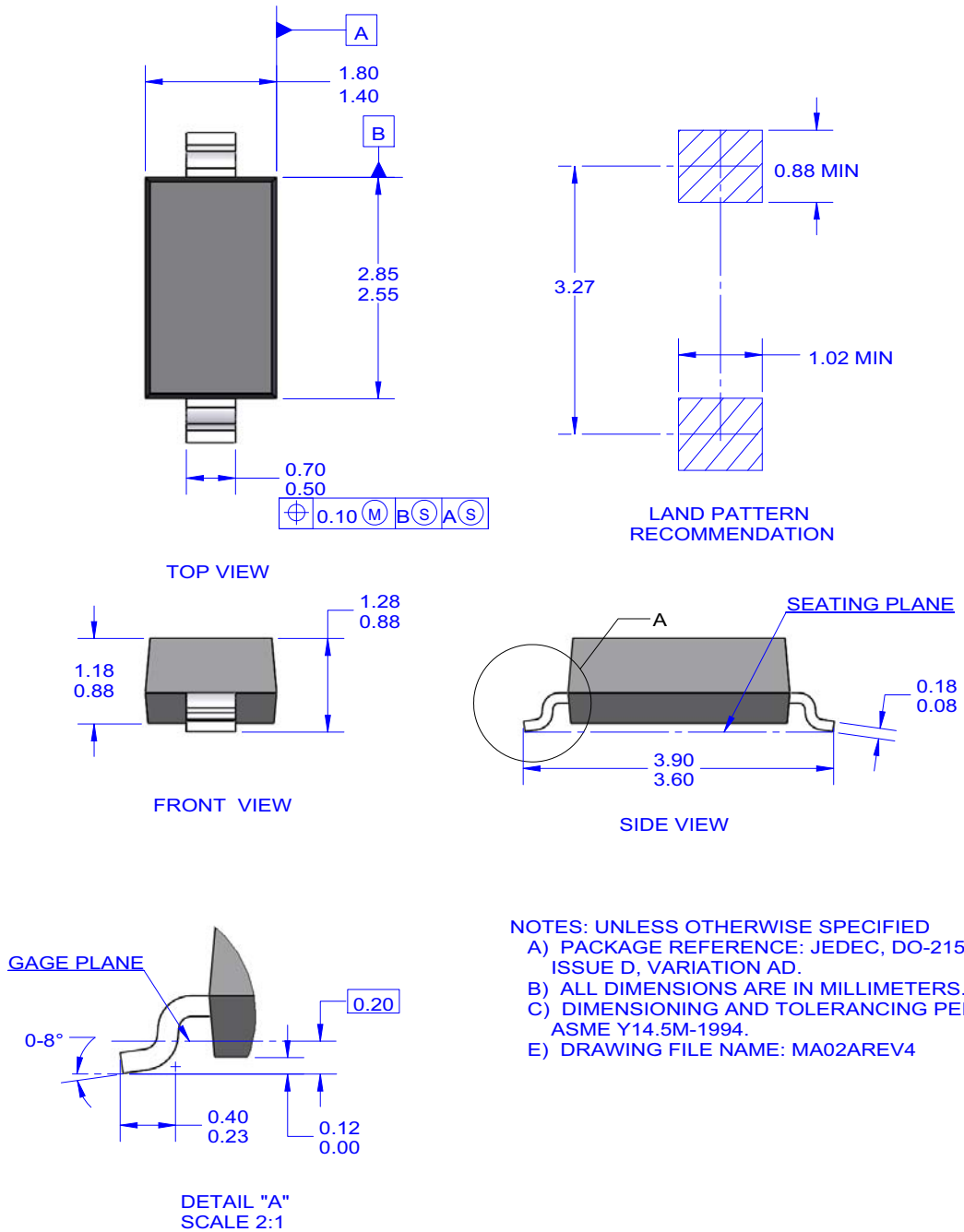


Figure 3. Reverse Recovery Time vs. Reverse Recovery Current

**Physical Dimensions**



- NOTES: UNLESS OTHERWISE SPECIFIED  
 A) PACKAGE REFERENCE: JEDEC, DO-215 ISSUE D, VARIATION AD.  
 B) ALL DIMENSIONS ARE IN MILLIMETERS.  
 C) DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.  
 E) DRAWING FILE NAME: MA02AREV4

**Figure 4. 2-LEAD, SOD123, JEDEC DO-219**



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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.
Obsolete	Not In Production	Datasheet contains specifications on a product that is discontinued by Fairchild Semiconductor. The datasheet is for reference information only.

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