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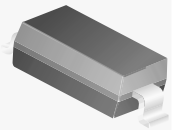
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February 2015

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°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	A
		Pulse Width = 1.0 microsecond	2.0	
T_{STG}	Storage Temperature Range		-55 to +150	°C
T_J	Operating Junction Temperature		150	°C

Thermal Characteristics

Values are at T_A = 25°C unless otherwise noted.

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

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Electrical Characteristics

Values are at T_A = 25°C unless otherwise noted.

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

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Typical Performance Characteristics

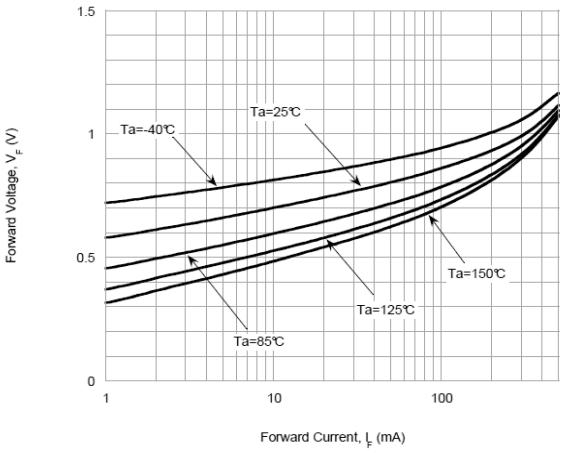


Figure 1. Forward Voltage vs. Forward Current

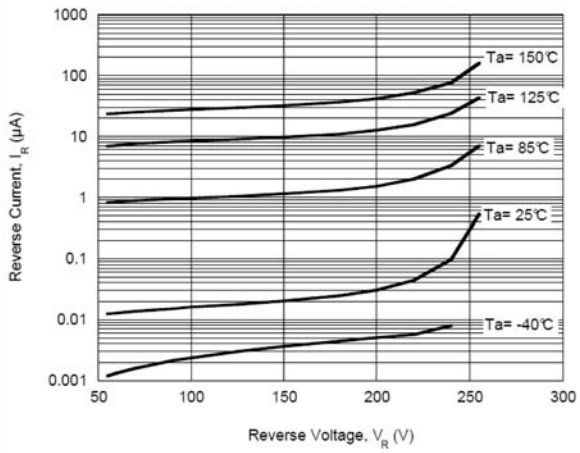


Figure 2. Reverse Current vs. Reverse Voltage

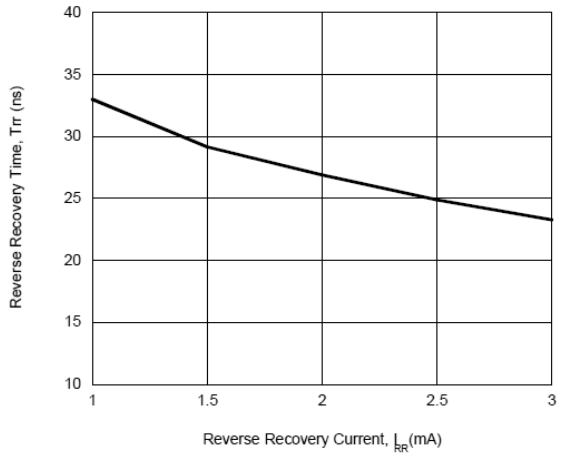


Figure 3. Reverse Recovery Time vs. Reverse Recovery Current

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Physical Dimensions

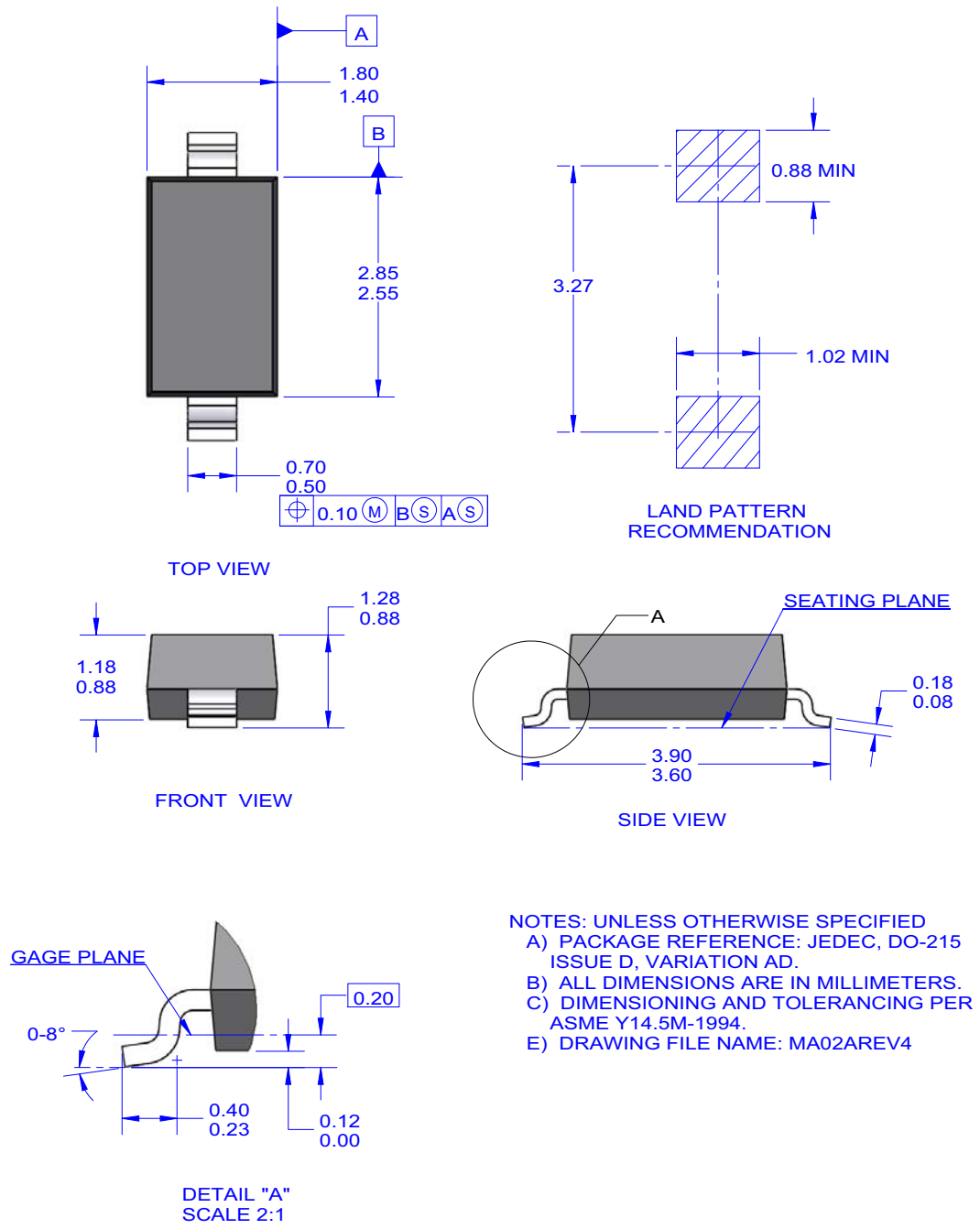


Figure 4. 2-LEAD, SOD123, JEDEC DO-219

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Preliminary	First Production	Datasheet contains preliminary data; supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
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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