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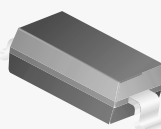


February 2015

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	$^\circ\text{C/W}$

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	μA
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

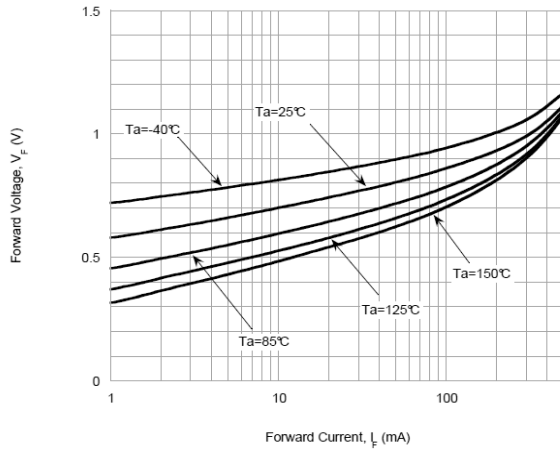


Figure 1. Forward Voltage vs. Forward Current

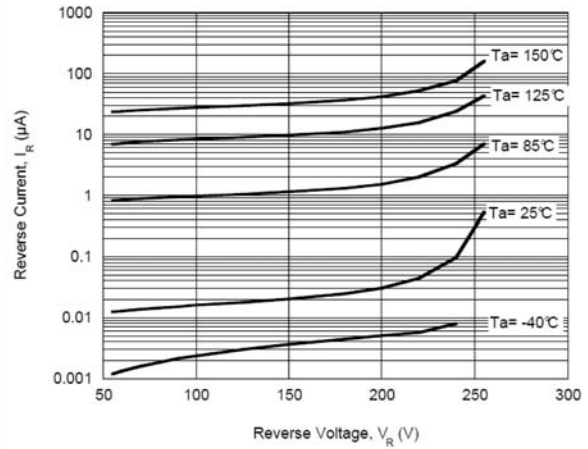


Figure 2. Reverse Current vs. Reverse Voltage

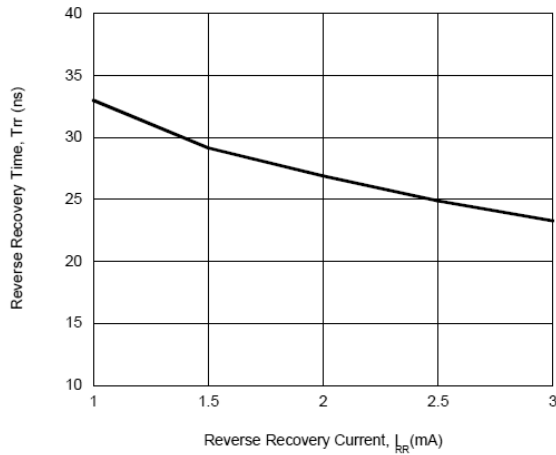


Figure 3. Reverse Recovery Time vs. Reverse Recovery Current

Physical Dimensions

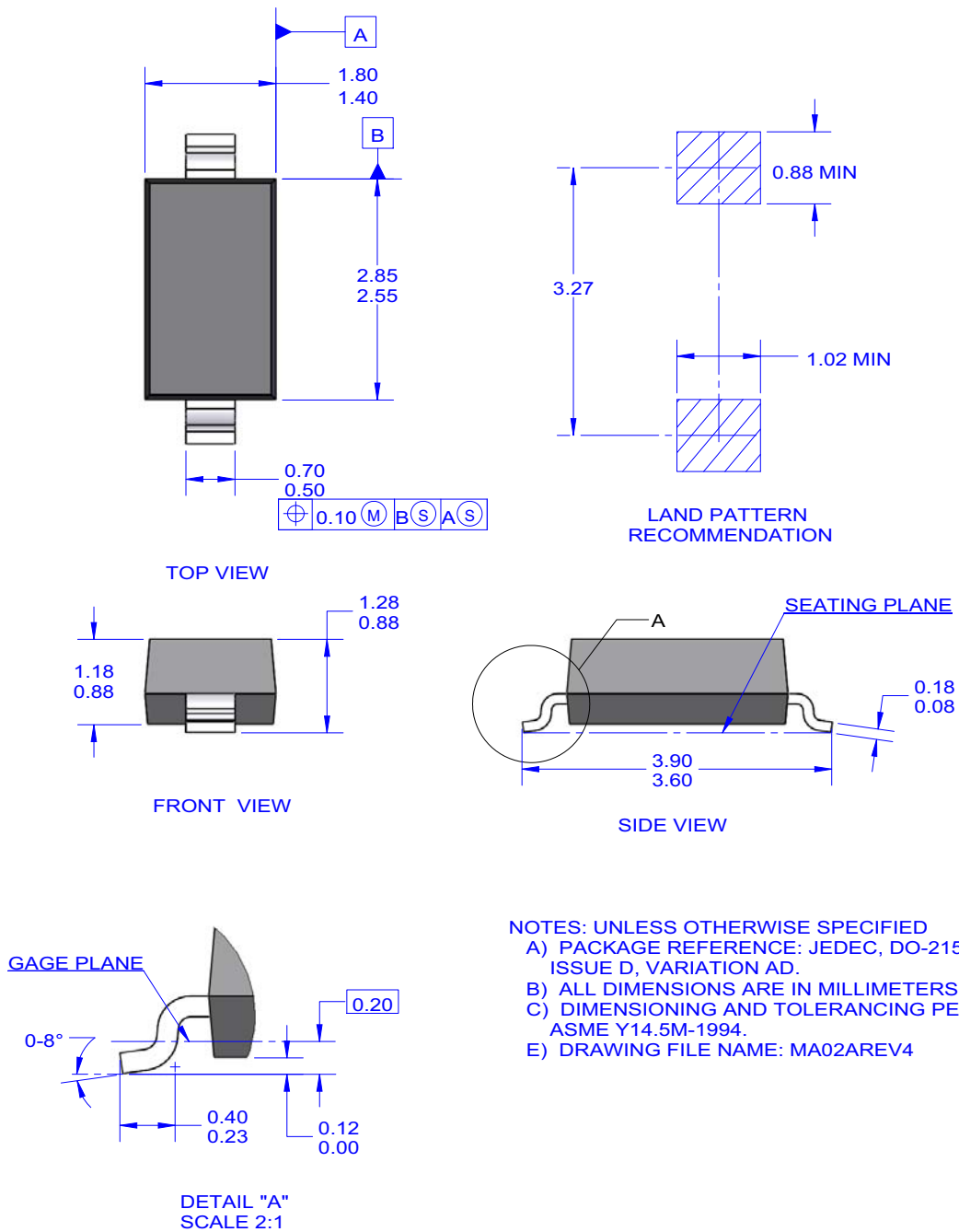


Figure 4. 2-LEAD, SOD123, JEDEC DO-219



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