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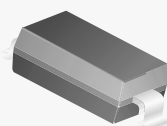
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January 2016

MMSD4148 — Small Signal Diode

MMSD4148 Small Signal Diode



SOD123
Color Band Denotes Cathode
Top Marking: 5H

Ordering Information

Part Number	Top Mark	Package	Packing Method
MMSD4148	5H	SOD-123 2L	Tape and Reel, 7 inch Reel, 3000 pcs
MMSD4148_D87Z	5H	SOD-123 2L	Tape and Reel, 13 inch Reel, 10000 pcs

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	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	$^\circ\text{C}$

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	$I_R = 5.0\ \mu\text{A}$	75		V
		$I_R = 100\ \mu\text{A}$	100		
V_F	Forward Voltage	$I_F = 10\ \text{mA}$		1.0	V
I_R	Reverse Current	$V_R = 20\ \text{V}$		25	nA
		$V_R = 20\ \text{V}, T_A = 150^\circ\text{C}$		50	μA
		$V_R = 75\ \text{V}$		5.0	μA
C_T	Total Capacitance	$V_R = 0, f = 1.0\ \text{MHz}$		4.0	pF
t_{rr}	Reverse Recovery Time	$I_F = 10\ \text{mA}, V_R = 6.0\ \text{V},$ $I_{RR} = 1.0\ \text{mA}, R_L = 100\ \Omega$		4.0	nS

Typical Performance Characteristics

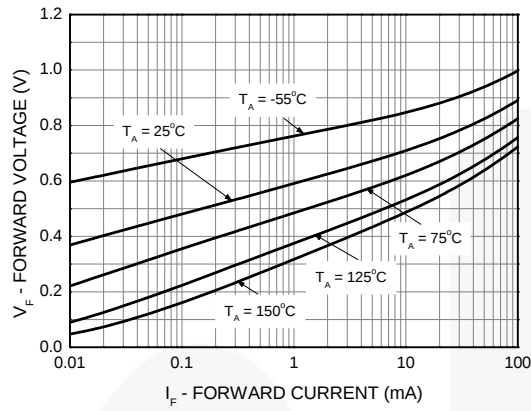


Figure 1. Forward Voltage vs. Forward Current

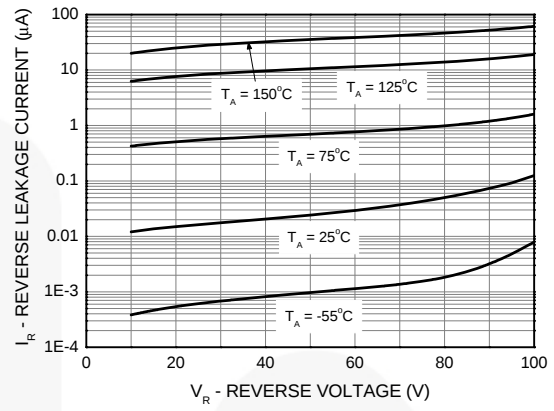


Figure 2. Reverse Voltage vs. Reverse Current

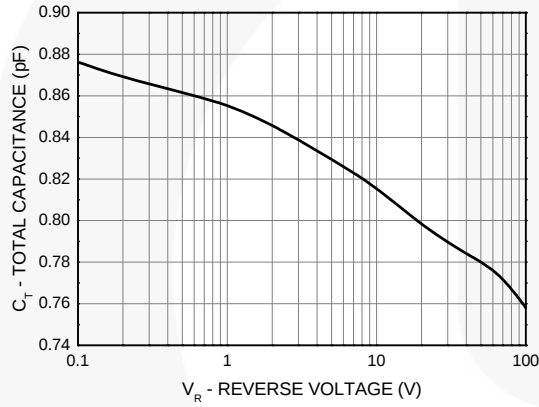
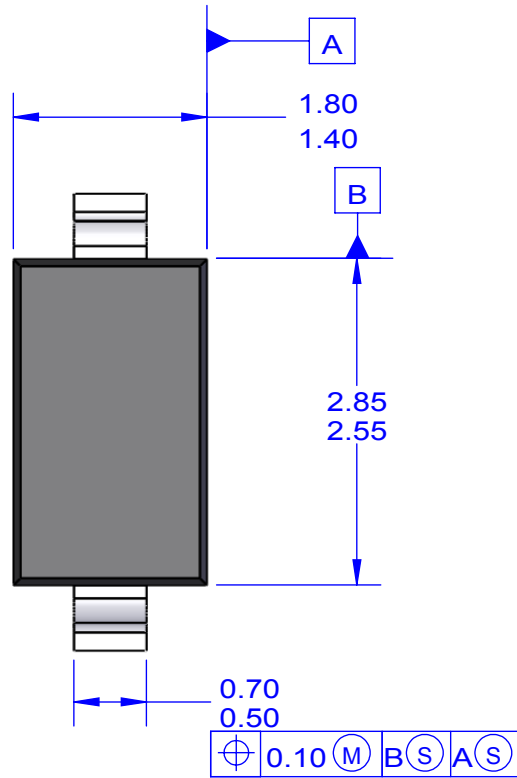
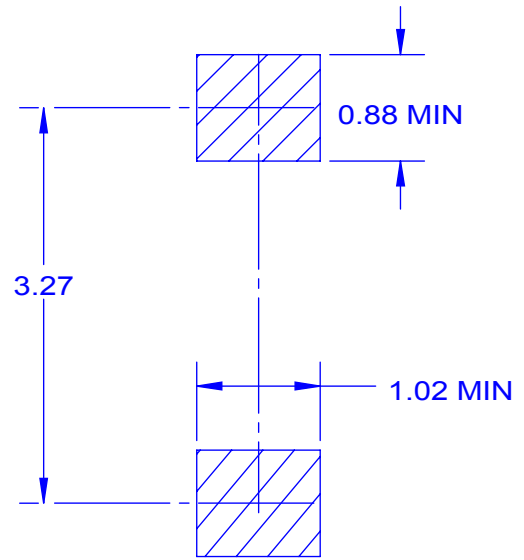


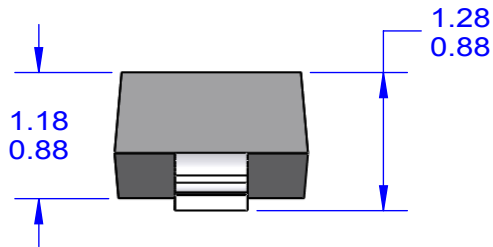
Figure 3. Total Capacitance



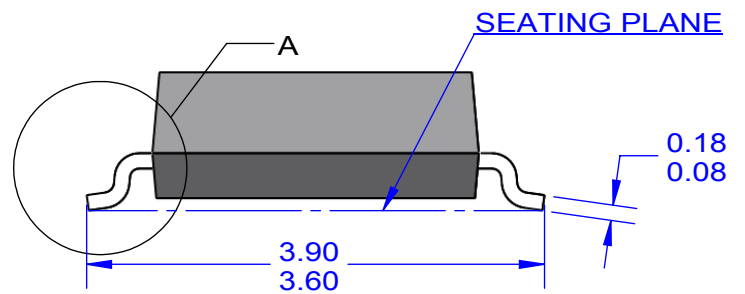
TOP VIEW



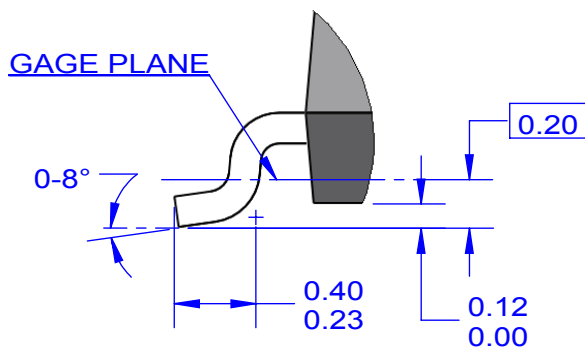
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RECOMMENDATION



FRONT VIEW



SIDE VIEW



DETAIL "A"
SCALE 2:1

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- 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.
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