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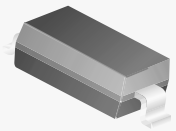
Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will be changed to a dash (-). This document may contain device numbers with an underscore (_). Please check the ON Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.onsemi.com. Please email any questions regarding the system integration to Fairchild_questions@onsemi.com.

January 2016

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°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	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

Electrical Characteristics

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

Symbol	Parameter	Conditions	Min.	Max.	Unit
V_R	Breakdown Voltage	I_R = 5.0 µA	75		V
		I_R = 100 µA	100		
V_F	Forward Voltage	I_F = 10 mA		1.0	V
I_R	Reverse Current	V_R = 20 V		25	nA
		V_R = 20 V, T_A = 150°C		50	µA
		V_R = 75 V		5.0	µA
C_T	Total Capacitance	V_R = 0, f = 1.0 MHz		4.0	pF
t_{rr}	Reverse Recovery Time	I_F = 10 mA, V_R = 6.0 V, I_{RR} = 1.0 mA, R_L = 100 Ω		4.0	nS

Typical Performance Characteristics

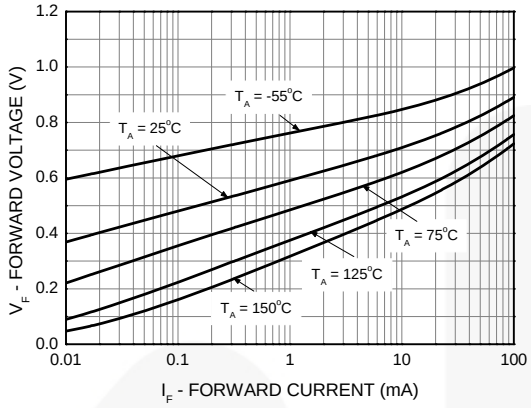


Figure 1. Forward Voltage vs. Forward Current

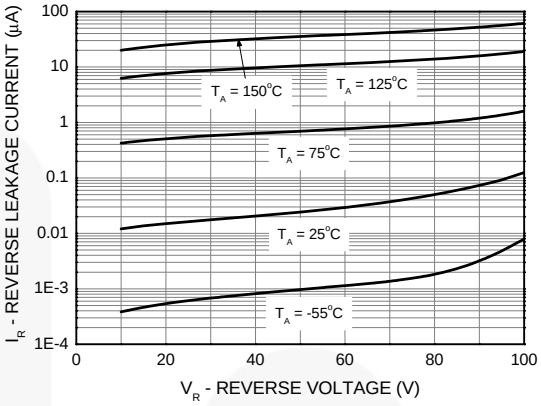


Figure 2. Reverse Voltage vs. Reverse Current

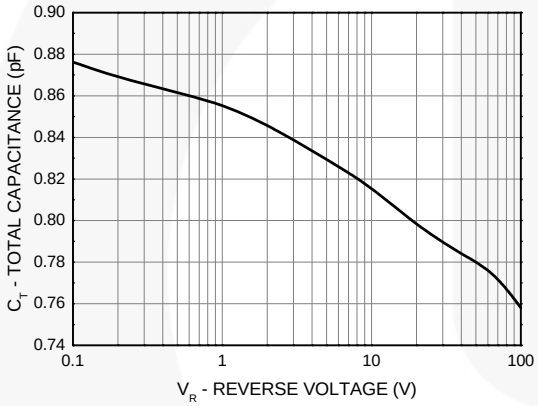
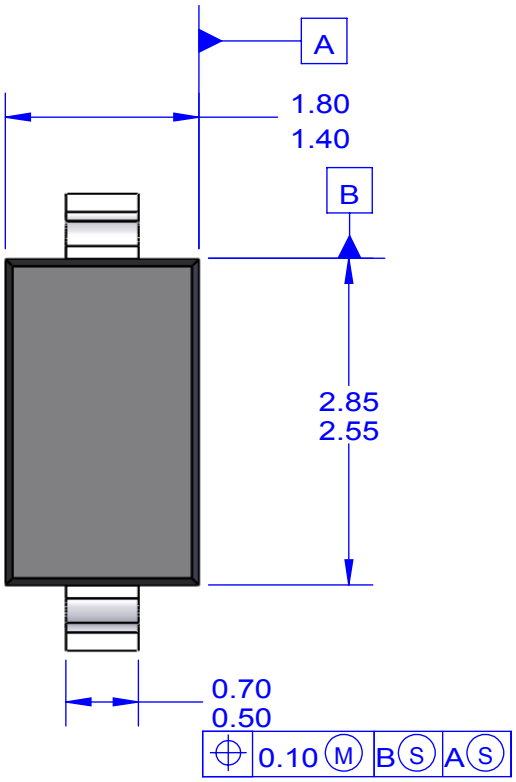
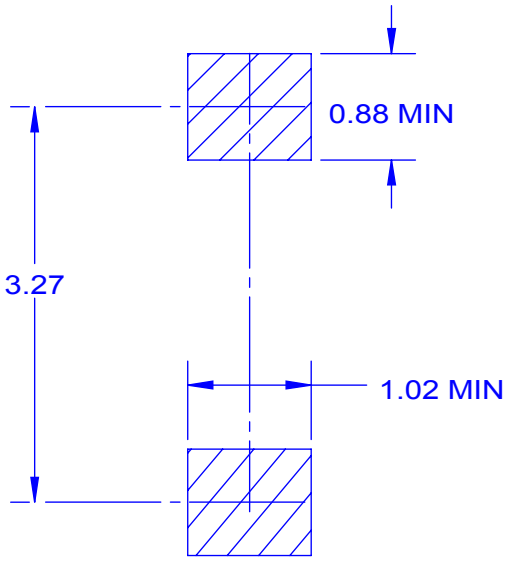


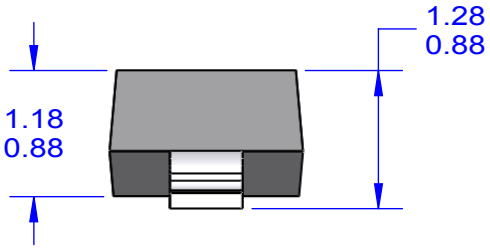
Figure 3. Total Capacitance



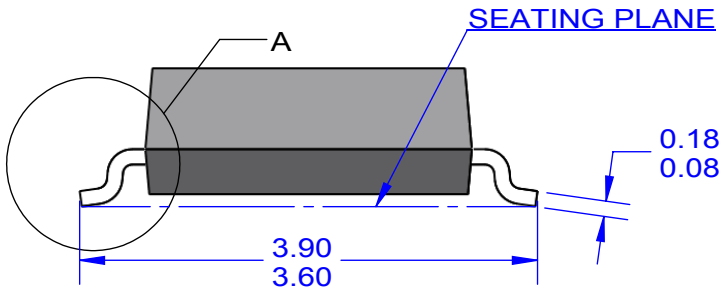
TOP VIEW



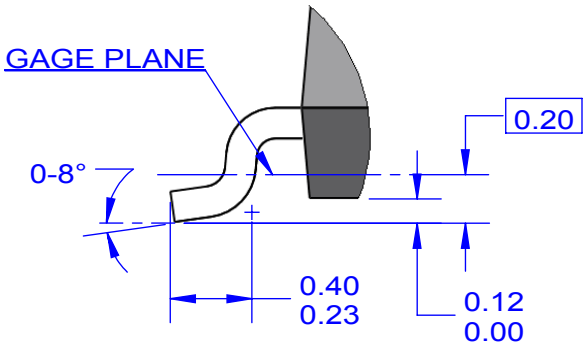
LAND PATTERN
RECOMMENDATION



FRONT VIEW



SIDE VIEW



DETAIL "A"
SCALE 2:1

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

PUBLICATION ORDERING INFORMATION

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