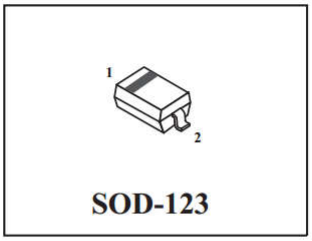
MMSD4148

SURFACE MOUNT SWITCHING DIODE

Features

- Fast Switching Speed
- Surface Mount Package Ideally Suited for
- Automatic Insertion
- For General Purpose Switching Applications
- High Conductance
- Pb-Free package is available



Equivalent Circuit Diagram

Mechanical Data

- Case: SOD-123, Molded Plastic
- Terminals: Solderable per MIL-STD-202,Method 208
- Polarity: Cathode Band
- Marking: **51M**
- Weight: 0.01 grams (approx.)

Maximum Ratings @ T_A = 25C unless otherwise specified

Characteristic	Symbol		Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	75	V
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Forward Continuous Current (Note 1)	I_{FM}		
Average Rectified Output Current (Note 1)	I_O	150	mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0μs @ t = 1.0s	I_{FSM}	2.0 1.0	A
Power Dissipation (Note 1)	P_d	350	mW
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{\theta JA}$	357	K/W
Operating and Storage Temperature Range	T_j , T_{STG}	-65 to +150	°C

Electrical Characteristics @ T_A = 25C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Maximum Forward Voltage	V_{FM}	—	0.715 0.855 1.0 1.25	V	I_F = 1.0mA I_F = 10mA I_F = 50mA I_F = 150mA
Maximum Peak Reverse Current	I_{RM}	—	2.5 50 30 25	μA μA μA nA	V_R = 75V V_R = 75V, T_j = 150°C V_R = 25V, T_j = 150°C V_R = 20V
Junction Capacitance	C_j	—	2.0	pF	V_R = 0, f = 1.0MHz
Reverse Recovery Time	t_{rr}	—	4.0	ns	I_F = I_R = 10mA, I_{rr} = 0.1 x I_R, R_L = 100Ω

Notes: 1. Valid provided that terminals are kept at ambient temperature.

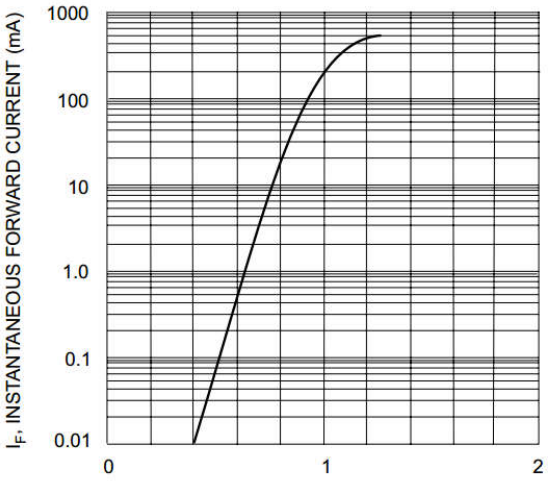


Fig. 1 Forward Characteristics

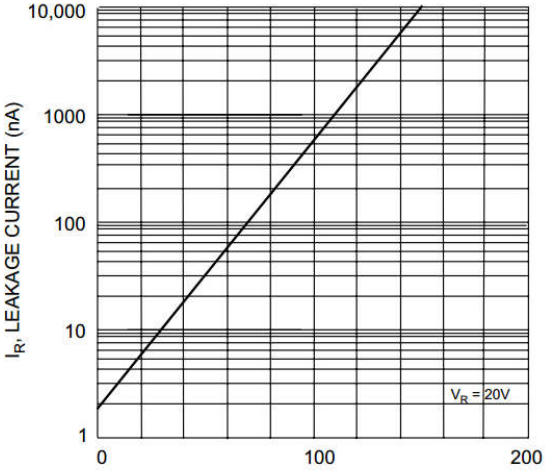
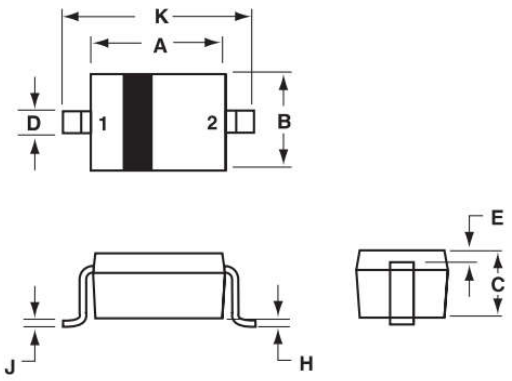


Fig. 2 Leakage Current vs Junction Temperature

SOD-123 Outline Dimensions



Unit:mm

SOD-123		
Dim	Min	Max
A	2.55	2.85
B	1.40	1.80
C	0.95	1.35
D	0.50	0.70
E	0.30 REF	
H	-	0.10
J	-	0.15
K	3.55	3.85

PIN 1. CATHODE
2. ANODE