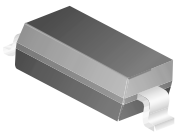
FAIRCHILD SEMICONDUCTOR®

January 2011

MMSD3070
Small Signal Diode



SOD123

COLOR BAND DENOTES CATHODE
TOP MARKING: **33**

Absolute Maximum Ratings * T_a = 25°C unless otherwise noted

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

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Thermal Characteristics

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

Electrical Characteristics T_a = 25°C unless otherwise noted

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

Typical Performance Characteristics

Figure 1. Forward Voltage vs Forward Current

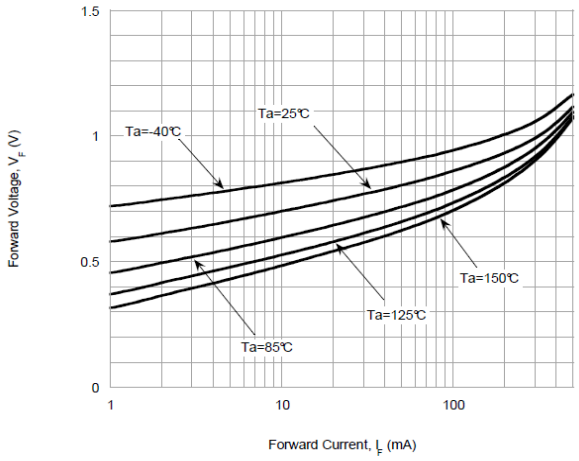


Figure 2. Reverse Current vs Reverse Voltage

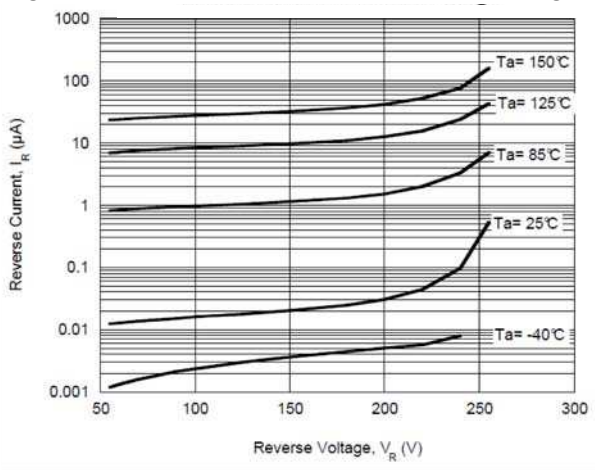
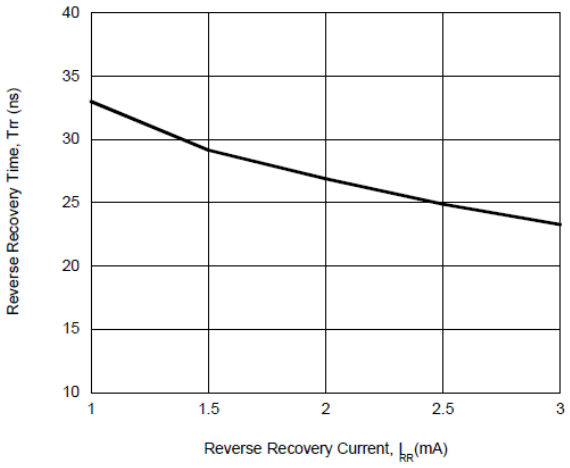


Figure 3. Reverse Recovery Time vs Reverse Recovery Current



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