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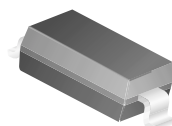
sales@integrated-circuit.com



February 2005

MMSD914

Small Signal Diode



SOD123
 COLOR BAND DENOTES CATHODE
 TOP MARKING: 5D

Absolute Maximum Ratings * 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 Pulse Width = 1.0 microsecond	1.0	A
		2.0	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	Unit
P _D	Power Dissipation	400	mW
R _{θJA}	Thermal Resistance, Junction to Ambient	312	°C/W

Electrical Characteristics T_C = 25°C unless otherwise noted

Symbol	Parameter	Conditions	Min.	Max.	Units
V _R	Breakdown Voltage	I _R = 5.0μA	75		V
		I _R = 100μA	100		V
V _F	Forward Voltage	I _F = 10mA		1.0	V
I _R	Reverse Leakage	V _R = 20V		25	nA
		V _R = 20V, T _A = 150°C		50	μA
		V _R = 75V		5.0	μA
C _T	Total Capacitance	V _R = 0V, f = 1.0MHz		4.0	pF
t _{rr}	Reverse Recovery Time	I _F = 10mA, V _R = 6.0V, I _{RR} = 1.0mA, R _L = 100Ω		4.0	ns
V _{F(peak)}	Peak Forward Recovery Voltage	I _F = 50mA, Peak square wave pulse width = 0.1μS, 5kHz - 100kHz rep rate		2.5	V

Typical Characteristics

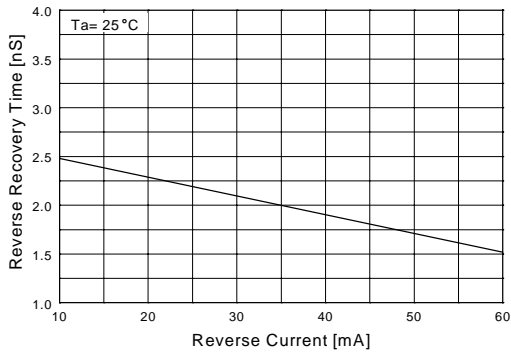


Figure 7. Reverse Recovery Time vs Reverse Current
 TRR - IR 10 mA vs 60 mA

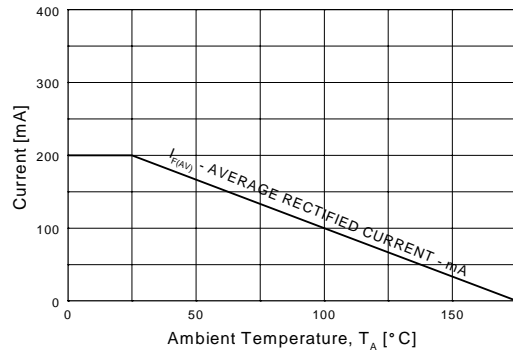


Figure 8. Average Rectified Current ($I_{F(AV)}$) versus Ambient Temperature (T_A)

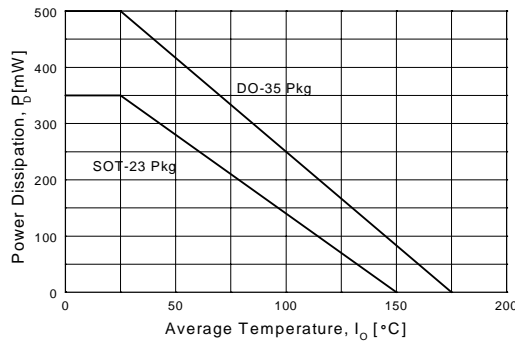
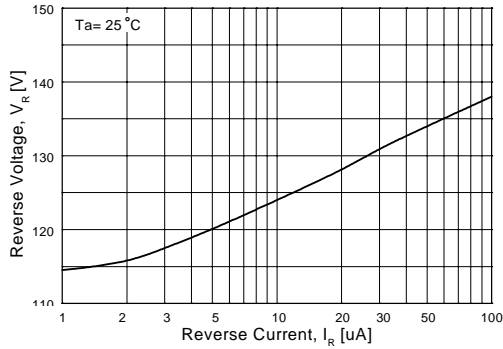
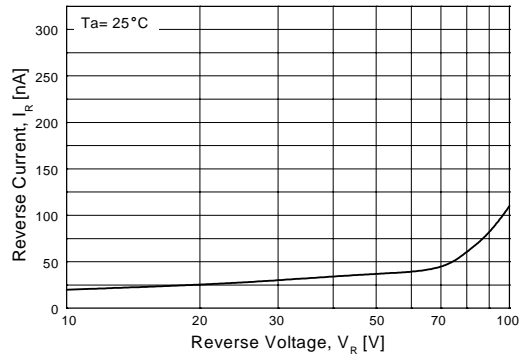


Figure 9. Power Derating Curve

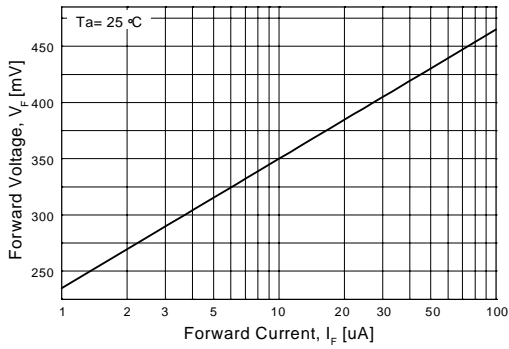
Typical Characteristics



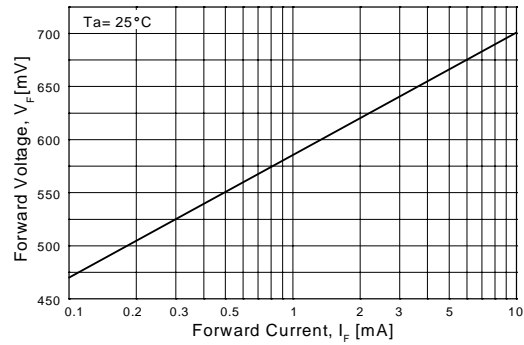
**Figure 1. Reverse Voltage vs Reverse Current
 BV - 1.0 to 100uA**



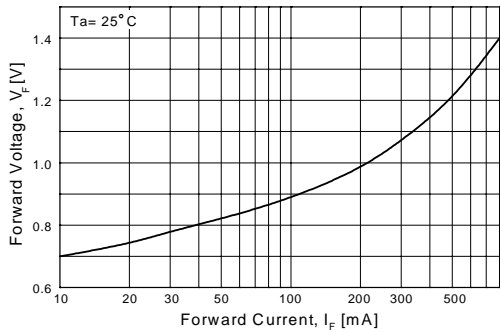
**Figure 2. Reverse Current vs Reverse Voltage
 IR - 10 to 100 V**



**Figure 3. Forward Voltage vs Forward Current
 VF - 1.0 to 100 uA**



**Figure 4. Forward Voltage vs Forward Current
 VF - 0.1 to 10 mA**



**Figure 5. Forward Voltage vs Forward Current
 VF - 10 - 800 mA**

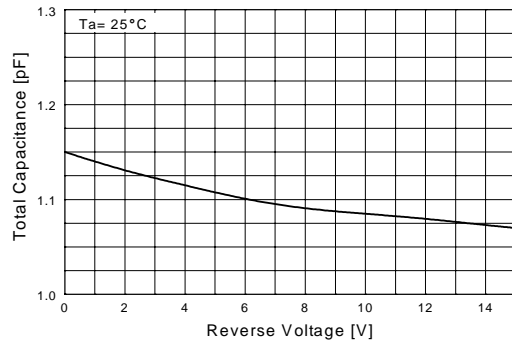


Figure 6. Total Capacitance vs Reverse Voltage

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