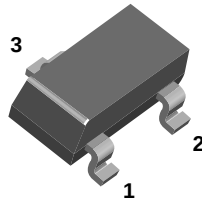
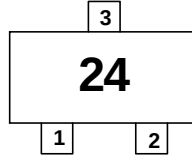


MMBD1201 / 1203 / 1204 / 1205



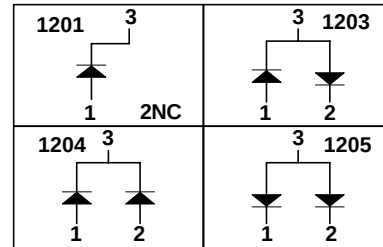
SOT-23



MARKING

MMBD1201	24	MMBD1203	26
MMBD1204	27	MMBD1205	28

Connection Diagrams



Small Signal Diodes

Absolute Maximum Ratings*

$T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
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 2.0	A A
T_{stg}	Storage Temperature Range	-55 to +150	$^\circ\text{C}$
T_J	Operating Junction Temperature	150	$^\circ\text{C}$

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

NOTES:

1) These ratings are based on a maximum junction temperature of 150 degrees C.

2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics

Symbol	Parameter	Value	Units
P_D	Power Dissipation	350	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	$^\circ\text{C/W}$

Electrical Characteristics

$T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
V_R	Breakdown Voltage	$I_R = 100 \mu\text{A}$	100		V
V_F	Forward Voltage	$I_F = 1.0 \text{ mA}$ $I_F = 10 \text{ mA}$ $I_F = 100 \text{ mA}$ $I_F = 200 \text{ mA}$ $I_F = 300 \text{ mA}$	550 660 820 0.87 -	600 740 920 1.0 1.1	mV mV mV V V
I_R	Reverse Current	$V_R = 20 \text{ V}$ $V_R = 50 \text{ V}$ $V_R = 50 \text{ V}, T_A = 150^\circ\text{C}$		25 50 5.0	nA nA μA
C_T	Total Capacitance	$V_R = 0, f = 1.0 \text{ MHz}$		2.0	pF
t_{rr}	Reverse Recovery Time	$I_F = I_R = 10 \text{ mA}, I_{RR} = 1.0 \text{ mA}, R_L = 100 \Omega$		4.0	ns

Small Signal Diode
(continued)

Typical Characteristics

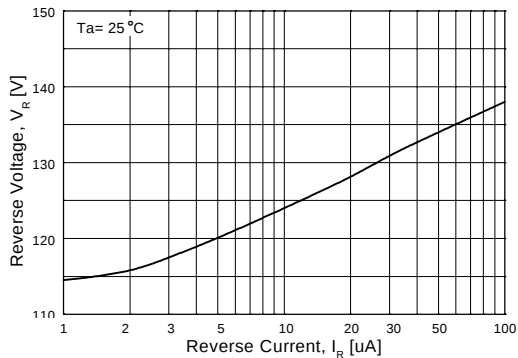


Figure 1. Reverse Voltage vs Reverse Current
BV - 1.0 to 100uA

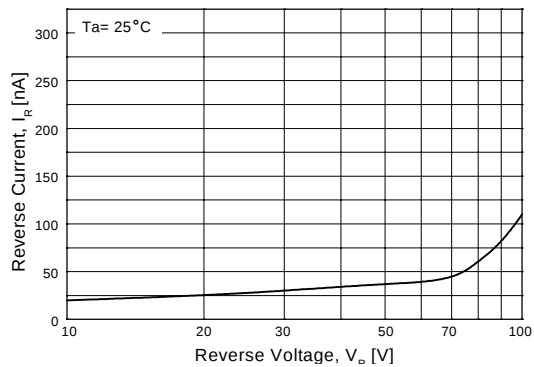


Figure 2. Reverse Current vs Reverse Voltage
IR - 10 to 100 V

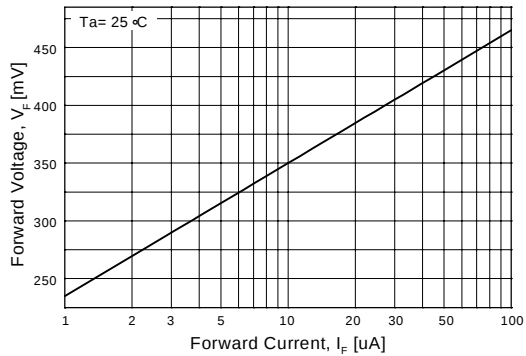


Figure 3. Forward Voltage vs Forward Current
VF - 1.0 to 100 uA

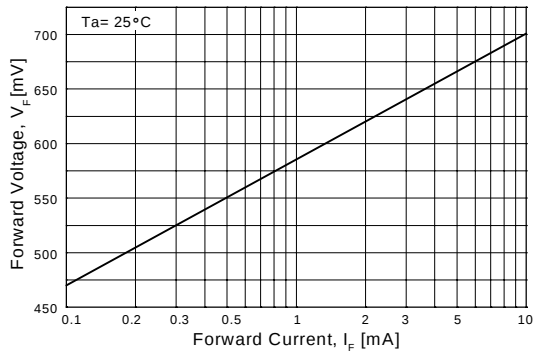


Figure 4. Forward Voltage vs Forward Current
VF - 0.1 to 10 mA

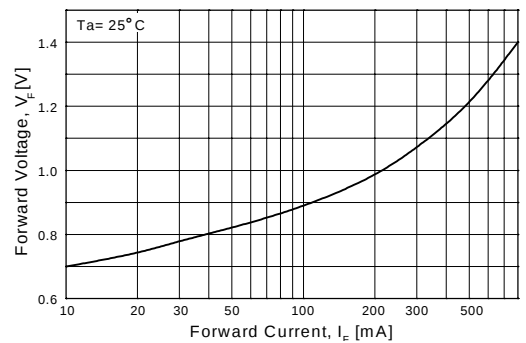


Figure 5. Forward Voltage vs Forward Current
VF - 10 - 800 mA

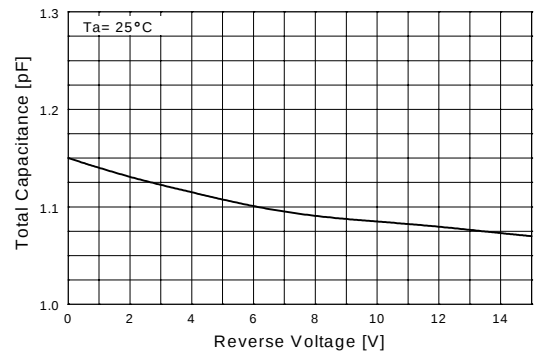


Figure 6. Total Capacitance vs Reverse Voltage

Small Signal Diode
(continued)

Typical Characteristics (continued)

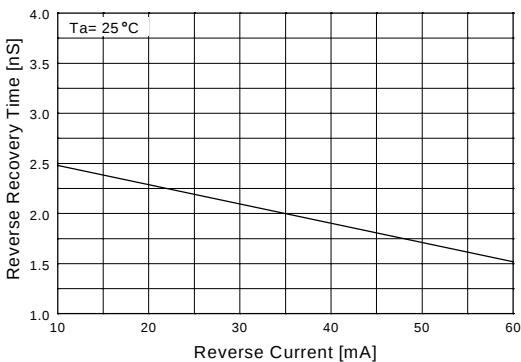


Figure 7. Reverse Recovery Time
vs Reverse Current
TRR - IR 10 mA vs 60 mA

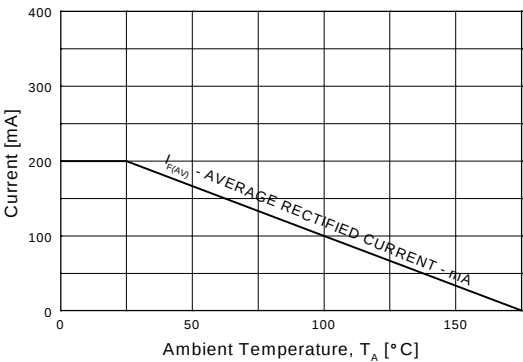


Figure 8. Average Rectified Current ($I_{F(AV)}$)
versus Ambient Temperature (T_A)

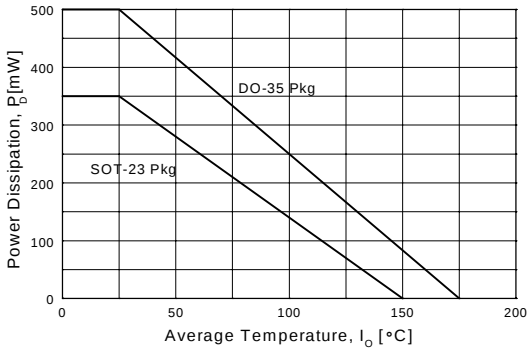


Figure 9. Power Derating Curve

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