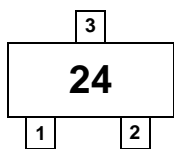
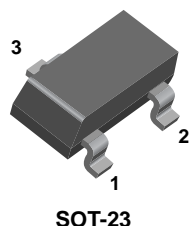
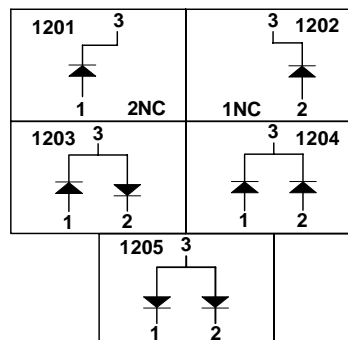


# MMBD1201 / 1202 / 1203 / 1204 / 1205 Small Signal Diodes



**MARKING**  
MMBD1201 24 MMBD1202 25  
MMBD1203 26 MMBD1204 27  
MMBD1205 28

Connection Diagram



## 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	1.0	A
	Pulse Width = 1.0 microsecond	2.0	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.

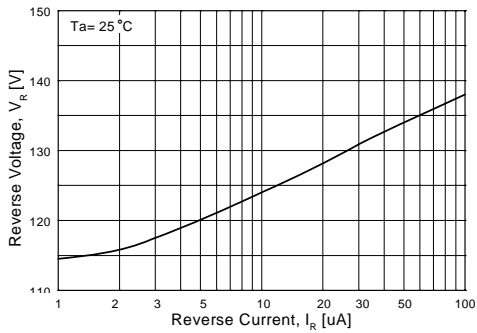
## Thermal Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

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

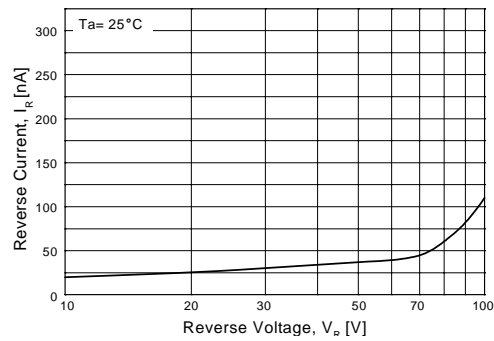
**Electrical Characteristics**  $T_A = 25^\circ\text{C}$  unless otherwise noted

Symbol	Parameter	Test Conditions	Min.	Max.	Units
$V_R$	Breakdown Voltage	$I_R = 100\mu\text{A}$	100		V
$V_F$	Forward Voltage	$I_F = 1.0\text{mA}$	550	600	mV
		$I_F = 10\text{mA}$	660	740	mV
		$I_F = 100\text{mA}$	820	920	mV
		$I_F = 200\text{mA}$	0.87	1.0	V
		$I_F = 300\text{mA}$	-	1.1	V
$I_R$	Reverse Leakage	$V_R = 20\text{V}$		25	nA
		$V_R = 50\text{V}$		50	nA
		$V_R = 50\text{V}, T_A = 150^\circ\text{C}$		5.0	$\mu\text{A}$
$C_T$	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

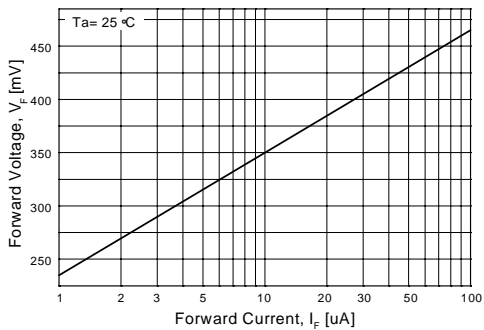
**Typical Performance Characteristics**



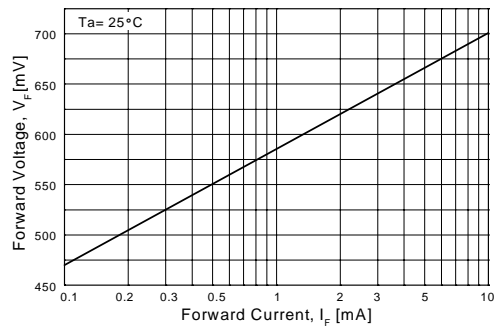
**Figure 1. Reverse Voltage vs Reverse Current**  
BV - 1.0 to 100uA



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

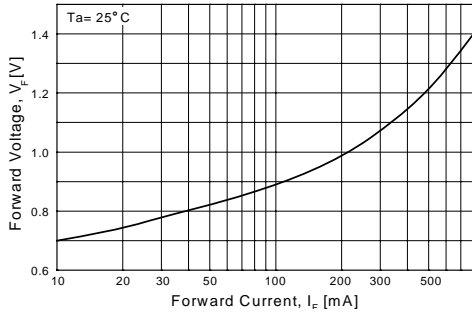


**Figure 3. Forward Voltage vs Forward Current**  
VF - 1.0 to 100 uA

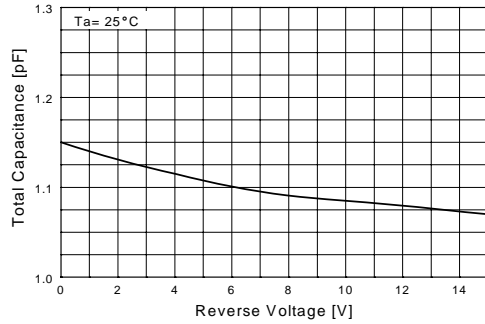


**Figure 4. Forward Voltage vs Forward Current**  
VF - 0.1 to 10 mA

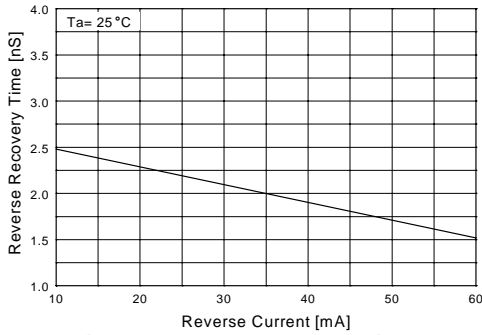
**Typical Performance Characteristics** (Continued)



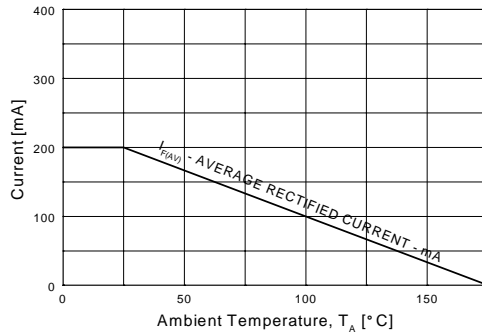
**Figure 5. Forward Voltage vs Forward Current**  
VF - 10 - 800 mA



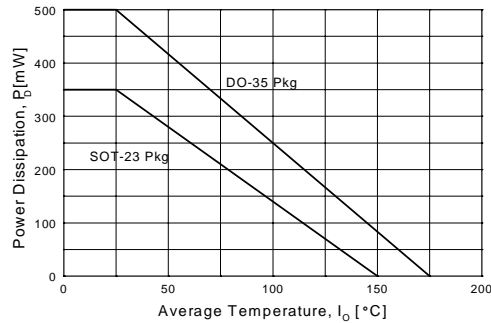
**Figure 6. Total Capacitance vs Reverse Voltage**



**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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| FAST®  | mWSaver™                                       | SuperSOT™-6   | UniFET™  |
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| FETBench™  | OPTOLOGIC®                                     | SupreMOS®   | VisualMax™   |
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