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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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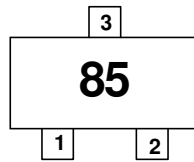
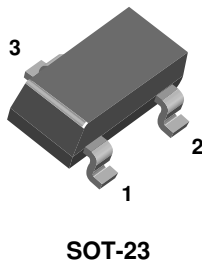
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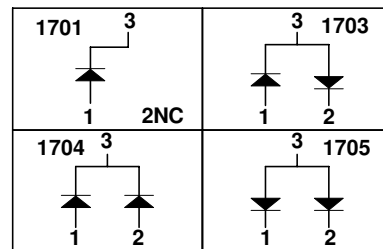
# MMBD1701/A / 1703/A / 1704/A / 1705/A



**MARKING**

MMBD1701	85	MMBD1701A	85A
MMBD1703	87	MMBD1703A	87A
MMBD1704	88	MMBD1704A	88A
MMBD1705	89	MMBD1705A	89A

**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	30	V
$I_{F(AV)}$	Average Rectified Forward Current	50	mA
$I_{FSM}$	Non-repetitive Peak Forward Surge Current Pulse Width = 1.0 second	250	mA
$T_{stg}$	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	$^\circ\text{C}/\text{W}$

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

Symbol	Parameter	Test Conditions	Min	Max	Units
$V_R$	Breakdown Voltage	$I_R = 5.0 \mu\text{A}$	30		V
$V_F$	Forward Voltage	$I_F = 10 \mu\text{A}$ $I_F = 100 \mu\text{A}$ $I_F = 1.0 \text{ mA}$ $I_F = 10 \text{ mA}$ $I_F = 20 \text{ mA}$ $I_F = 50 \text{ mA}$	420 520 640 760 810 0.89	500 610 740 880 950 1.1	mV mV mV mV mV V
$I_R$	Reverse Current	$V_R = 20 \text{ V}$		50	nA
$C_T$	Total Capacitance	$V_R = 0, f = 1.0 \text{ MHz}$		1.0	pF
$t_{rr}$	Reverse Recovery Time			0.7	ns
	<b>MMBD1701-1705</b>	$I_F = I_R = 10 \text{ mA}, I_{RR} = 1.0 \text{ mA}, R_L = 100 \Omega$		1.0	ns
	<b>MMBD1701A-1705A</b>	$I_F = I_R = 10 \text{ mA}, I_{RR} = 1.0 \text{ mA}, R_L = 100 \Omega$		1.0	ns

Typical Characteristics

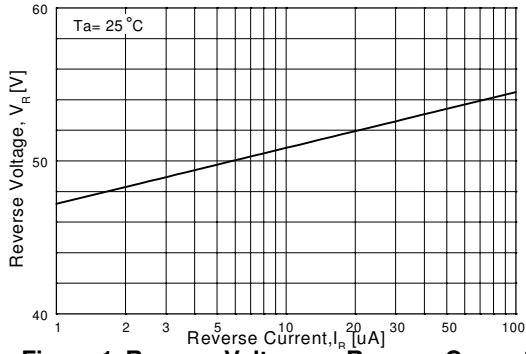


Figure 1. Reverse Voltage vs Reverse Current  
BV - 1.0 to 100 uA

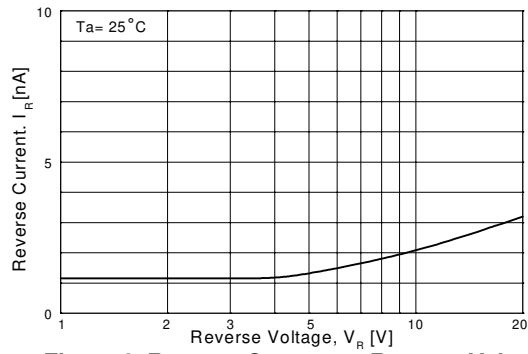


Figure 2. Reverse Current vs Reverse Voltage  
IR - 1 to 22V

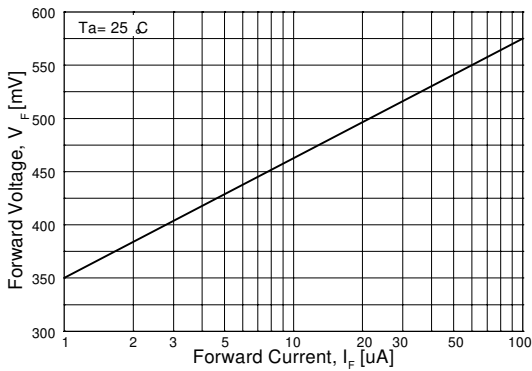


Figure 3. Forward Voltage vs Forward Current  
VF - 1.0 to 100 uA

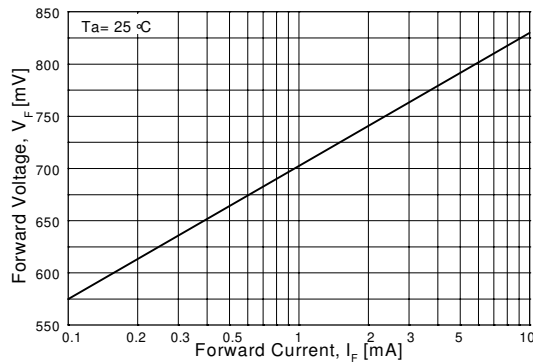


Figure 4. Forward Voltage vs Forward Current  
VF - 0.1 to 10 mA

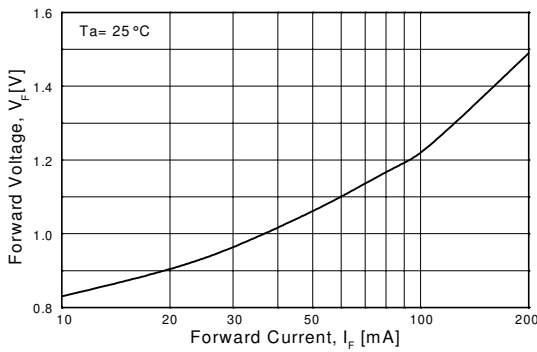


Figure 5. Forward Voltage vs Forward Current  
VF - 10 - 200 mA

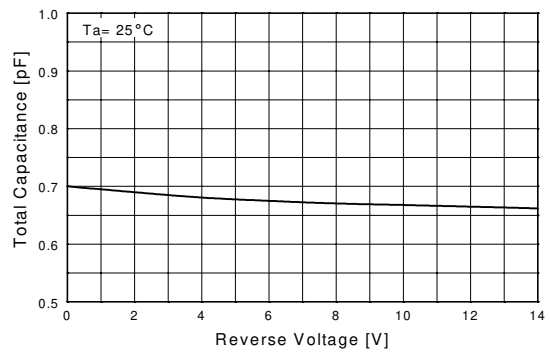


Figure 6. Total Capacitance vs Reverse Current

Typical Characteristics (continued)

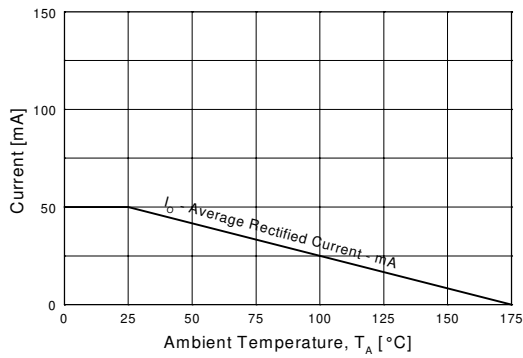


Figure 7. Average Rectified Current ( $I_o$ ) versus Ambient Temperature ( $T_A$ )

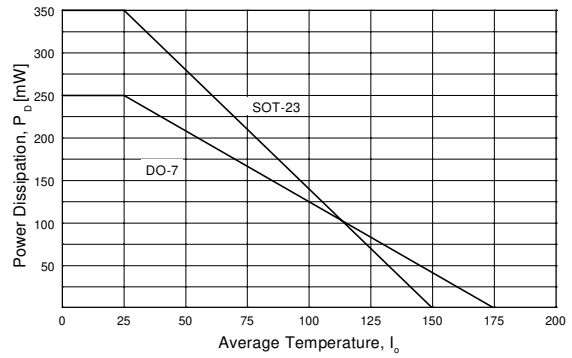


Figure 8. Power Derating Curve

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