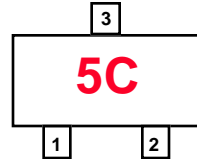
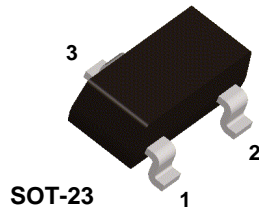
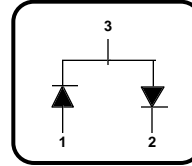


## MMBD7000



CONNECTION DIAGRAM



### High Conductance Ultra Fast Diode

Sourced from Process 1P. See MMBD1201-1205 for characteristics.

#### Absolute Maximum Ratings\*

TA = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
$W_{IV}$	Working Inverse Voltage	70	V
$I_O$	Average Rectified Current	200	mA
$I_F$	DC Forward Current	600	mA
$i_f$	Recurrent Peak Forward Current	700	mA
$i_{f(surge)}$	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.

**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

TA = 25°C unless otherwise noted

Symbol	Characteristic	Max	Units
		MMBD7000*	
$P_D$	Total Device Dissipation Derate above 25°C	350	mW
		2.8	mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	°C/W

\* Device mounted on glass epoxy PCB 1.6" X 1.6" X 0.06"; mounting pad for the collector lead min. 0.93 in2

# High Conductance Ultra Fast Diode

(continued)

## Electrical Characteristics

TA = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
B <sub>V</sub>	Breakdown Voltage	I <sub>R</sub> = 100 μA	100		V
I <sub>R</sub>	Reverse Current	V <sub>R</sub> = 100 V V <sub>R</sub> = 50 V V <sub>R</sub> = 50 V, T <sub>A</sub> = 125°C		500 300 100	nA nA μA
V <sub>F</sub>	Forward Voltage	I <sub>F</sub> = 1.0 mA I <sub>F</sub> = 10 mA I <sub>F</sub> = 50 mA I <sub>F</sub> = 150 mA	550 670 0.75	700 820 1.1 1.25	mV mV V V
C <sub>O</sub>	Diode Capacitance	V <sub>R</sub> = 0, f = 1.0 MHz		1.5	pF
T <sub>RR</sub>	Reverse Recovery Time	I <sub>F</sub> = 10 mA, I <sub>RR</sub> = 1.0 mA, R <sub>L</sub> = 100Ω		4.0	nS

MMBD7000