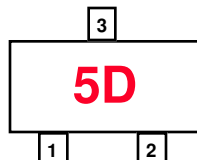
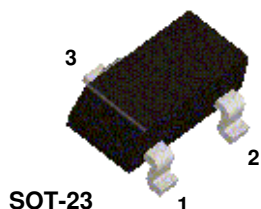
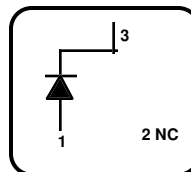


# MMBD914



CONNECTION DIAGRAM



## High Conductance Ultra Fast Diode

Sourced from Process 1P. See 1N4148 for characteristics.

### Absolute Maximum Ratings\*

TA = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
$W_{IV}$	Working Inverse Voltage	75	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
		MMBD914*	
$P_D$	Total Device Dissipation Derate above 25°C	350 2.8	mW 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 I <sub>R</sub> = 5.0 μA	100 75		V V
I <sub>R</sub>	Reverse Current	V <sub>R</sub> = 20 V V <sub>R</sub> = 20 V, T <sub>A</sub> = 150°C V <sub>R</sub> = 75 V		25 50 5.0	nA μA μA
V <sub>F</sub>	Forward Voltage	I <sub>F</sub> = 10 mA		1.0	V
C <sub>O</sub>	Diode Capacitance	V <sub>R</sub> = 0, f = 1.0 MHz		4.0	pF
T <sub>RR</sub>	Reverse Recovery Time	I <sub>F</sub> = 10 mA, V <sub>R</sub> = 6.0 V, I <sub>RR</sub> = 1.0 mA, R <sub>L</sub> = 100Ω		4.0	nS
V <sub>FM</sub>	Peak Forward Recovery Voltage	I <sub>F</sub> = 50 mA PEAK SQUARE WAVE PULSE WIDTH = 0.1 μS 5 kHz - 100 kHz REP RATE		2.5	v