

Ordering Information

Part Number	Top Mark	Package	Packing Method	
MMBD914	5D	SOT-23 3L	Tape and Reel	

Absolute Maximum Ratings^{(1), (2)}

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at $T_A = 25^{\circ}$ C unless otherwise noted.

Symbol	Parameter		Value	Unit
V _{RRM}	Maximum Repetitive Reverse Voltage		100	V
I _{F(AV)}	Average Rectified Forward Current		200	mA
	Non-Repetitive Peak Forward Surge Current	Pulse Width = 1.0 second	1.0	٨
		Pulse Width = 1.0 microsecond	2.0	A
T _{STG}	Storage Temperature Range		-55 to +150	°C
TJ	Operating Junction Temperature		150	°C

Notes:

- 1. These ratings are based on a maximum junction temperature of 150°C.
- 2. These are steady-state limits. Fairchild Semiconductor should be consulted on applications involving pulsed or low-duty-cycle operations.

Thermal Characteristics

Values are at T_{A} = 25°C unless otherwise noted.

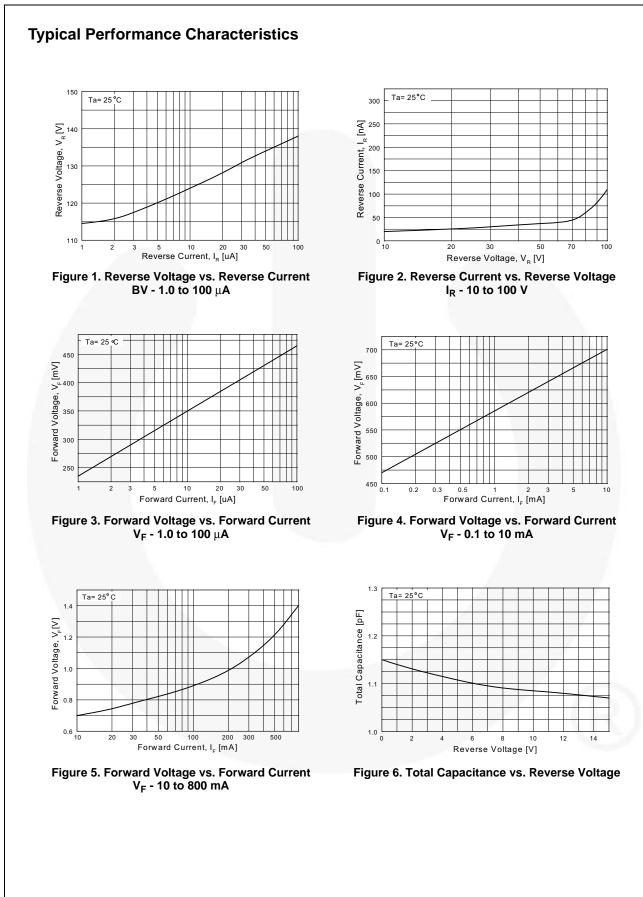
Symbol	Parameter	Value	Unit
PD	Power Dissipation	350	mW
R_{\thetaJA}	Thermal Resistance, Junction-to-Ambient 357		°C/W

Electrical Characteristics

Values are at $T_A = 25^{\circ}C$ unless otherwise noted.

Symbol	Parameter	Conditions	Min.	Max.	Unit
V _R Bre	Breakdown Voltage	I _R = 5.0 μA	75		- V
		I _R = 100 μA	100		
V _F	Forward Voltage	I _F = 10 mA		1.0	V
I _R Rever		V _R = 20 V		25	nA
	Reverse Current	V _R = 20 V, T _A = 150°C		50	μA
		V _R = 75 V		5.0	μA
CT	Total Capacitance	V _R = 0, f = 1.0 MHz		4.0	pF
t _{rr}	Reverse Recovery Time	$I_F = 10 \text{ mA}, V_R = 6 \text{ V},$ $I_{RR} = 1.0 \text{ mA}, R_L = 100 \Omega$		4.0	ns
V _{FR}	Peak Forward Recovery Voltage	I_{F} = 50 mA, PEAK SQUARE WAVE PULSE WIDTH = 0.1 μS 5 kHz – 100 kHz REP RATE		2.5	V

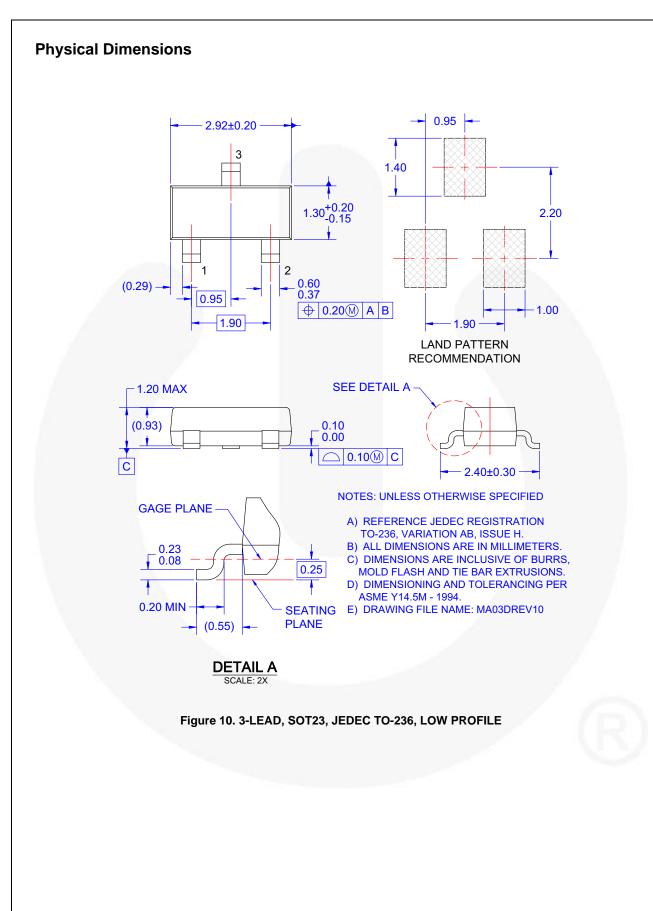
MMBD914 — Small Signal Diode



Typical Performance Characteristics (Continued) 4.0 400 Ta= 25 °C 300 Current [mA] 200 AVER RECT 100 1.0 L 10 0 20 30 40 50 60 50 100 150 0 Reverse Current [mA] Ambient Temperature, T_A [°C] Figure 8. Average Rectified Current($I_{F(AV)}$) vs. Ambient Temperature(T_A) Figure 7. Reverse Recovery Time vs. **Reverse Current** 500 Power Dissipation, P[mW] 400 300 SOT-23 Pkg 200 100 0 L 0 100 50 150 200 Average Temperature, I_o [°C] Figure 9. Power Derating Curve

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