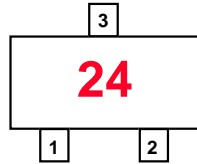
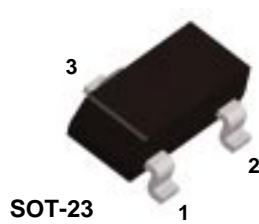
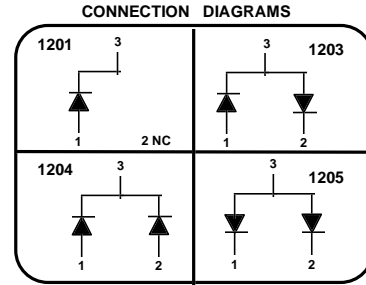


MMBD1201 / 1203 / 1204 / 1205



MARKING
MMBD1201 24 MMBD1204A 27
MMBD1203 26 MMBD1205A 28



High Conductance Ultra Fast Diode

Sourced from Process 1P.

Absolute Maximum Ratings*

TA = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
W_{IV}	Working Inverse Voltage	50	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	1.0	A
	Pulse width = 1.0 second	2.0	A
	Pulse width = 1.0 microsecond		
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
		MMBD1201/1203/1204/1205*	
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)

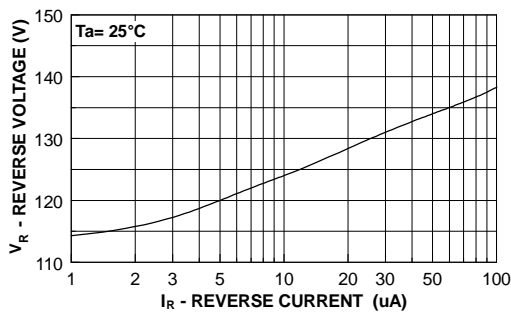
Electrical Characteristics

TA = 25°C unless otherwise noted

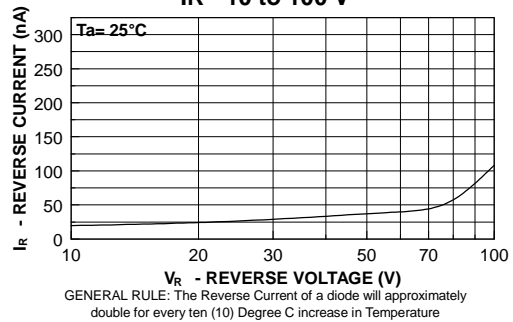
Symbol	Parameter	Test Conditions	Min	Max	Units
B _V	Breakdown Voltage	I _R = 100 μA	100		V
I _R	Reverse Current	V _R = 20 V V _R = 50 V V _R = 50 V, T _A = 150°C		25 50 5.0	nA nA μA
V _F	Forward Voltage	I _F = 1.0 mA I _F = 10 mA I _F = 100 mA I _F = 200 mA I _F = 300 mA	550 660 820 0.87	600 740 920 1.0 1.1	mV mV mV V V
C _T	Diode Capacitance	V _R = 0, f = 1.0 MHz		2.0	pF
T _{RR}	Reverse Recovery Time	I _{RR} = 1.0 mA, I _F = I _R = 10 mA, R _L = 100Ω		4.0	nS

Typical Characteristics

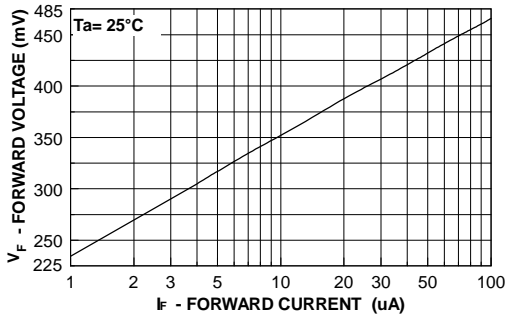
REVERSE VOLTAGE vs REVERSE CURRENT
BV - 1.0 to 100 uA



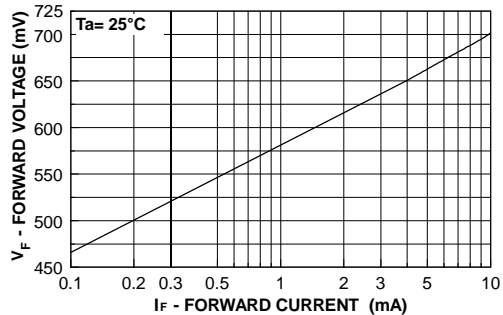
REVERSE CURRENT vs REVERSE VOLTAGE
IR - 10 to 100 V



FORWARD VOLTAGE vs FORWARD CURRENT
VF - 1.0 to 100 uA



FORWARD VOLTAGE vs FORWARD CURRENT
VF - 0.1 to 10 mA



MMBD1201 / 1203 / 1204 / 1205

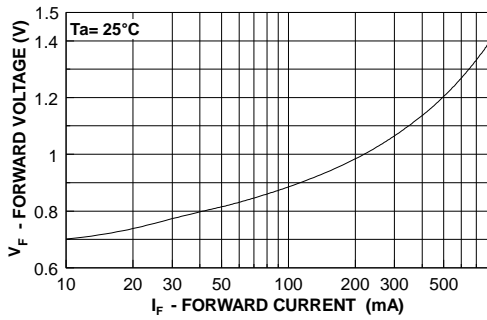
High Conductance Ultra Fast Diode

(continued)

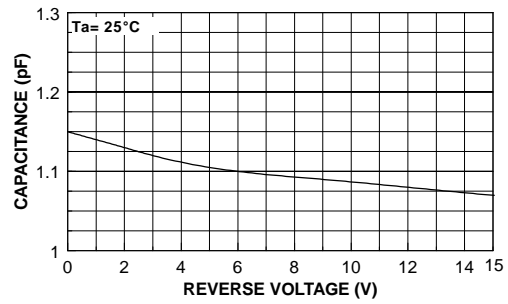
MMBD1201 / 1203 / 1204 / 1205

Typical Characteristics (continued)

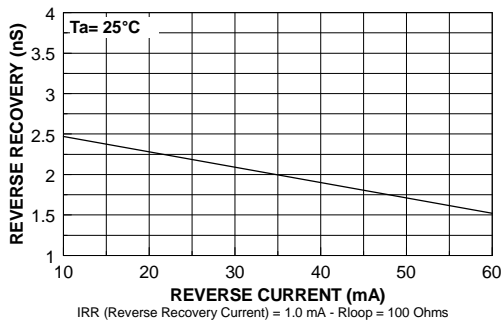
FORWARD VOLTAGE vs FORWARD CURRENT
VF - 10 - 800 mA



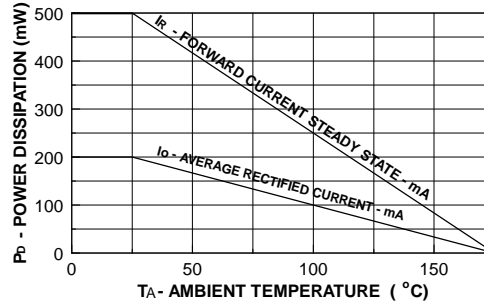
CAPACITANCE vs REVERSE VOLTAGE
VR - 0.0 to 15 V



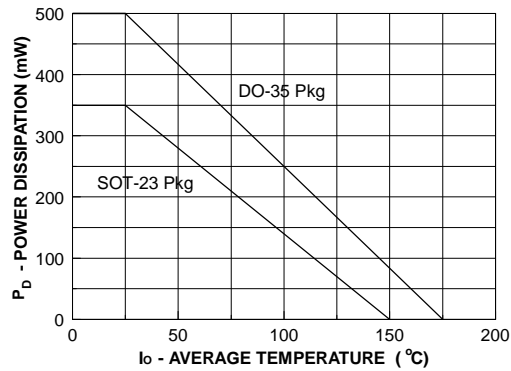
REVERSE RECOVERY TIME vs REVERSE CURRENT
TRR - IR 10 mA vs 60 mA



Average Rectified Current (Io) & Forward Current (IF) versus Ambient Temperature (TA)



POWER DERATING CURVE



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PRODUCT STATUS DEFINITIONS

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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