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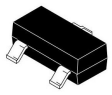
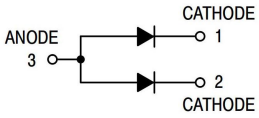
MMBD2835LT1G, MMBD2836LT1G, Monolithic Dual Switching Diodes

Features

- These Devices are Pb−Free, Halogen Free/BFR Free and are RoHS Compliant



SOT−23 (TO−236AB)
CASE 318−08
STYLE 12



MAXIMUM RATINGS (EACH DIODE)

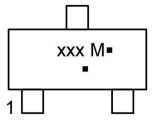
Rating	Symbol	Value	Unit
Reverse Voltage MMBD2835LT1G, SMMBD2835LT1G MMBD2836LT1G	V_R	 35 75	Vdc
Forward Current	I_F	100	mAdc

THERMAL CHARACTERISTICS

Total Device Dissipation FR−5 Board (Note 1) T_A = 25°C Derate above 25°C	P_D	225 1.8	mW mW/°C
Thermal Resistance, Junction−to−Ambient	$R_{\theta JA}$	556	°C/W
Total Device Dissipation Alumina Substrate, (Note 2) T_A = 25°C Derate above 25°C	P_D	300 2.4	mW mW/°C
Thermal Resistance, Junction−to−Ambient	$R_{\theta JA}$	417	°C/W
Junction and Storage Temperature	T_J, T_{stg}	−55 to +150	°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.
1. FR−5 = 1.0 × 0.75 × 0.062 in.
2. Alumina = 0.4 × 0.3 × 0.024 in. 99.5% alumina.

MARKING DIAGRAM



xxx = Specific Device Code
A3X = MMBD2835LT1G
SMMBD2835LT1G
A2X = MMBD2836LT1G
M = Date Code
▪ = Pb−Free Package
(Note: Microdot may be in either location)

*Date Code orientation and/or overbar may vary depending upon manufacturing location.

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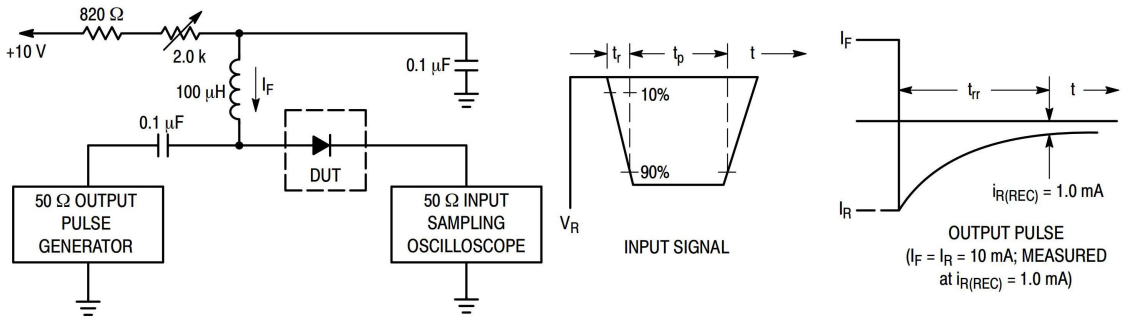
ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted) **(EACH DIODE)**

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Reverse Breakdown Voltage (I_R = 100 μAdc) MMBD2835LT1G, MMBD2836LT1G	$V_{(BR)}$	 35 75	 – –	Vdc
Reverse Voltage Leakage Current (Note 3) (V_R = 30 Vdc) MMBD2835LT1G (V_R = 50 Vdc) MMBD2836LT1G	I_R	 – –	 100 100	nAdc
Diode Capacitance (V_R = 0 V, f = 1.0 MHz)	C_T	–	4.0	pF
Forward Voltage (I_F = 10 mAdc) (I_F = 50 mAdc) (I_F = 100 mAdc)	V_F	 – – –	 1.0 1.0 1.2	Vdc
Reverse Recovery Time (I_F = I_R = 10 mAdc, $I_{R(REC)}$ = 1.0 mAdc) (Figure 1)	t_{rr}	–	4.0	ns

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

3. For each individual diode while the second diode is unbiased.



Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current (I_F) of 10 mA.
2. Input pulse is adjusted so $I_{R(peak)}$ is equal to 10 mA.
3. $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

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CURVES APPLICABLE TO EACH CATHODE

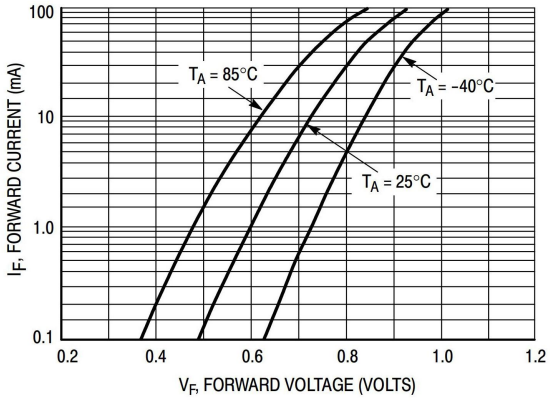

Figure 2. Forward Voltage

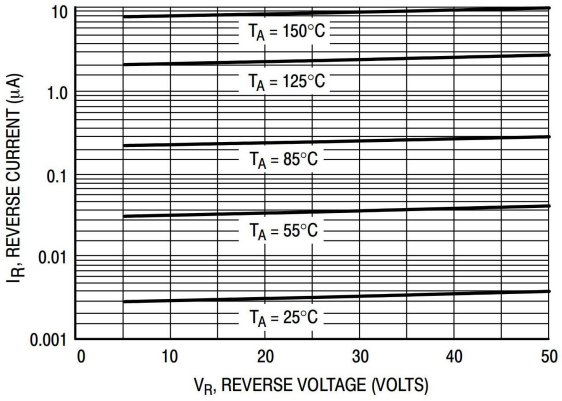

Figure 3. Leakage Current

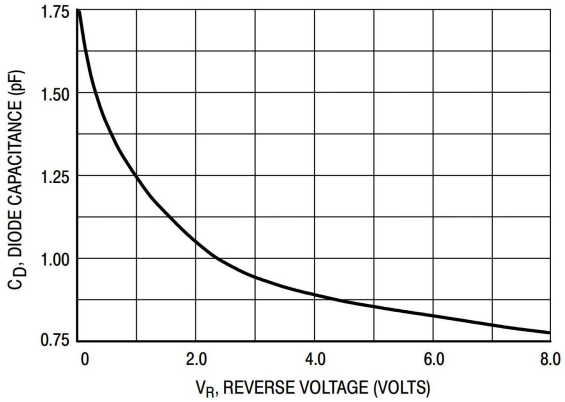

Figure 4. Capacitance