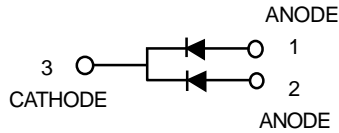
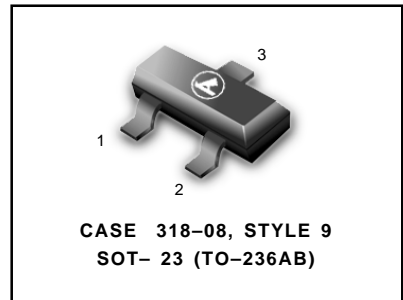


Monolithic Dual Switching Diodes



MMBD2837LT1
MMBD2838LT1



MAXIMUM RATINGS(EACH DIODE)

| Rating | Symbol | Value | Unit |
|---------------------------|-------------|-------|------|
| Peak Reverse Voltage | V_{RM} | 75 | Vdc |
| D.C Reverse Voltage | V_R | 30 | Vdc |
| | MMBD2837LT1 | 50 | |
| | MMBD2838LT1 | | |
| Peak Forward Current | I_{FM} | 450 | mAdc |
| | | 300 | |
| Average Rectified Current | I_O | 150 | mAdc |
| | | 100 | |

THERMAL CHARACTERISTICS

| Characteristic | Symbol | Max | Unit |
|--|-----------------|-------------|-------|
| Total Device Dissipation FR- 5 Board ⁽¹⁾ | P_D | 225 | mW |
| $T_A = 25^\circ\text{C}$ | | | |
| Derate above 25°C | | 1.8 | mW/°C |
| Thermal Resistance, Junction to Ambient | $R_{\theta JA}$ | 556 | °C/W |
| Total Device Dissipation | P_D | 300 | mW |
| Alumina Substrate, ⁽²⁾ $T_A = 25^\circ\text{C}$ | | | |
| Derate above 25°C | | 2.4 | 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 |

DEVICE MARKING

MMBD2837LT1 = A5; MMBD2838LT1 = MA6

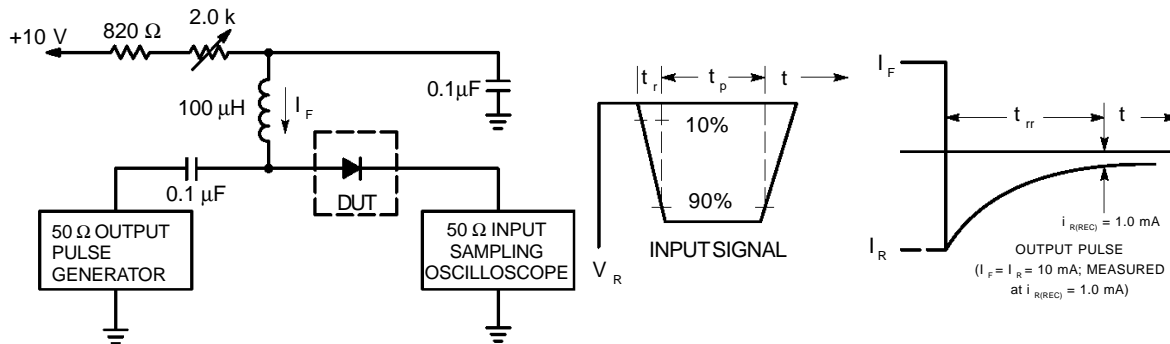
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted) (EACH DIODE)

| Characteristic | Symbol | Min | Max | Unit |
|---|-------------|------------|-----|-----------------|
| OFF CHARACTERISTICS | | | | |
| Reverse Breakdown Voltage($I_{BR} = 100\mu\text{Adc}$) | MMBD2837LT1 | $V_{(BR)}$ | 35 | — |
| | MMBD2838LT1 | | 75 | — |
| Reverse Voltage Leakage Current | | I_R | — | μAdc |
| ($V_R = 30\text{ Vdc}$) | MMBD2837LT1 | | — | 0.1 |
| ($V_R = 50\text{ Vdc}$) | MMBD2838LT1 | | | 0.1 |
| Diode Capacitance | | C_T | — | 4.0 |
| ($V_R = 0\text{ V}$, $f = 1.0\text{ MHz}$) | | | | pF |
| Forward Voltage($I_F = 10\text{ mAdc}$) | | V_F | — | 1.0 |
| ($I_F = 50\text{ mAdc}$) | | | | 1.0 |
| ($I_F = 100\text{ mAdc}$) | | | | 1.2 |
| Reverse Recovery Time($I_F = I_R = 10\text{ mAdc}$, $I_{R(REC)} = 1.0\text{ mAdc}$)(Figure 1) t_{rr} | | | — | 4.0 |
| | | | | ns |

1. FR-5 = 1.0 x 0.75 x 0.062 in.

2. Alumina = 0.4 x 0.3 x 0.024 in. 99.5% alumina.

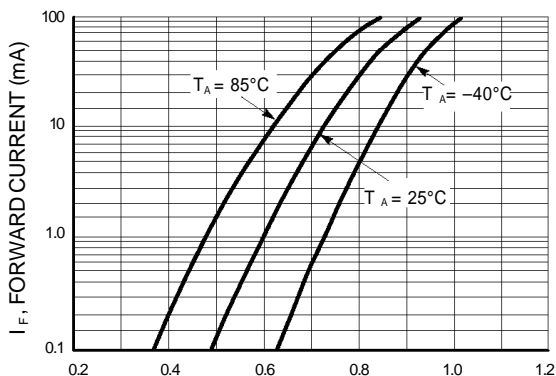
MMBD2837LT1 MMBD2838LT1



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

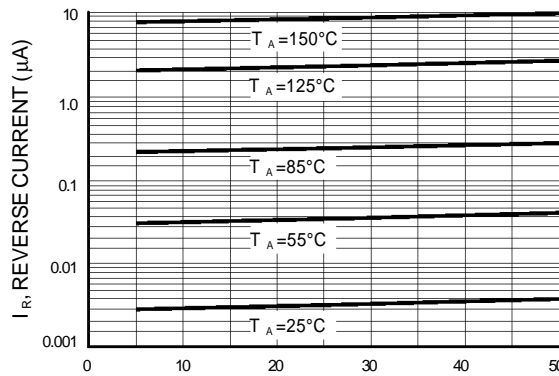
Figure 1. Recovery Time Equivalent Test Circuit

CURVES APPLICABLE TO EACH CATHODE



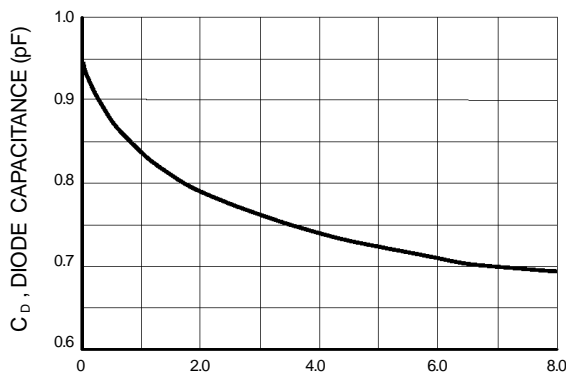
V_F , FORWARD VOLTAGE (VOLTS)

Figure 2. Forward Voltage



V_R , REVERSE VOLTAGE (VOLTS)

Figure 3. Leakage Current



V_R , REVERSE VOLTAGE (VOLTS)

Figure 4. Capacitance