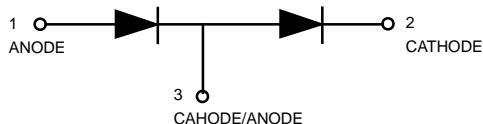


Dual Series Switching Diode

LBAV99LT1

SOT-23
DEVICE MARKING

LBAV99LT1 = A7

MAXIMUM RATINGS (EACH DIODE)

| Rating | Symbol | Value | Unit |
|---|-----------------|-------|------|
| Reverse Voltage | V_R | 70 | Vdc |
| Forward Current | I_F | 215 | mAdc |
| Peak Forward Surge Current | $I_{FM(surge)}$ | 500 | mAdc |
| Repetitive Peak Reverse Voltage | V_{RRM} | 70 | V |
| Average Rectified Forward Current (1) (averaged over any 20 ms period) | $I_{F(AV)}$ | 715 | mA |
| Repetitive Peak Forward Current | I_{FRM} | 450 | mA |
| Non-Repetitive Peak Forward Current | I_{FSM} | | A |
| $t = 1.0 \mu s$ | | 2.0 | |
| $t = 1.0 ms$ | | 1.0 | |
| $t = 1.0 S$ | | 0.5 | |

THERMAL CHARACTERISTICS

| Characteristic | Symbol | Max | Unit |
|--|-----------------|-------------|----------------------|
| Total Device Dissipation FR-5 Board, (1) $T_A = 25^\circ C$ Derate above $25^\circ C$ | P_D | 225 1.8 | mW mW/ $^\circ C$ |
| Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 556 | $^\circ C/W$ |
| Total Device Dissipation Alumina Substrate, (2) $T_A = 25^\circ C$ Derate above $25^\circ C$ | P_D | 300 2.4 | mW mW/ $^\circ C$ |
| Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 417 | $^\circ C/W$ |
| Junction and Storage Temperature | T_J, T_{stg} | -65 to +150 | $^\circ C$ |

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

| Characteristic | Symbol | Min | Max | Unit |
|----------------|--------|-----|-----|------|
|----------------|--------|-----|-----|------|

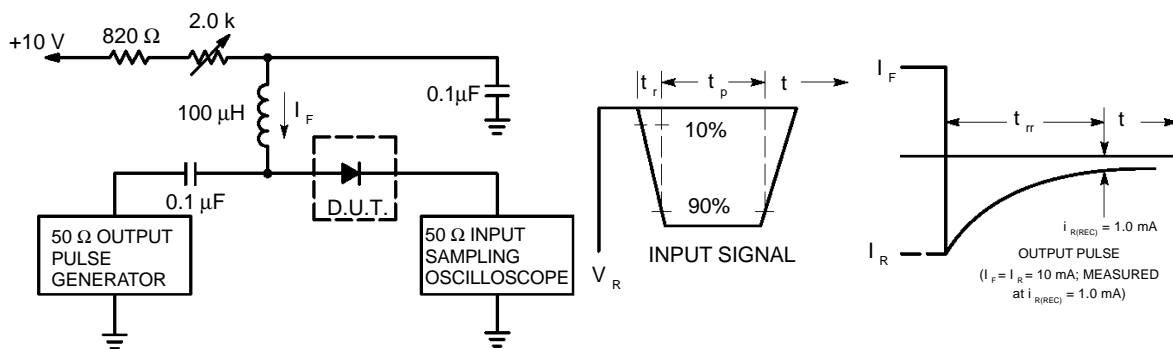
OFF CHARACTERISTICS

| | | | | |
|--|------------|----|------|------------|
| Reverse Breakdown Voltage ($I_{(BR)} = 100 \mu A$) | $V_{(BR)}$ | 70 | — | Vdc |
| Reverse Voltage Leakage Current ($V_R = 70 Vdc$) | I_R | — | 2.5 | μA dc |
| ($V_R = 25 Vdc, T_J = 150^\circ C$) | | — | 30 | |
| ($V_R = 70 Vdc, T_J = 150^\circ C$) | | — | 50 | |
| Diode Capacitance ($V_R = 0, f = 1.0 MHz$) | C_D | — | 1.5 | pF |
| Forward Voltage ($I_F = 1.0 mAdc$) | V_F | — | 715 | mVdc |
| ($I_F = 10 mAdc$) | | — | 855 | |
| ($I_F = 50 mAdc$) | | — | 1000 | |
| ($I_F = 150 mAdc$) | | — | 1250 | |
| Reverse Recovery Time ($I_F = I_R = 10 mAdc, i_{R(REC)} = 1.0 mAdc, R_L = 100 \Omega$) (Figure 1) | t_{rr} | — | 6.0 | ns |
| Forward Recovery Voltage ($I_F = 10 mA, t_r = 20 ns$) | V_{FR} | — | 1.75 | V |

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.

LBAV99LT1



- 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 DIODE

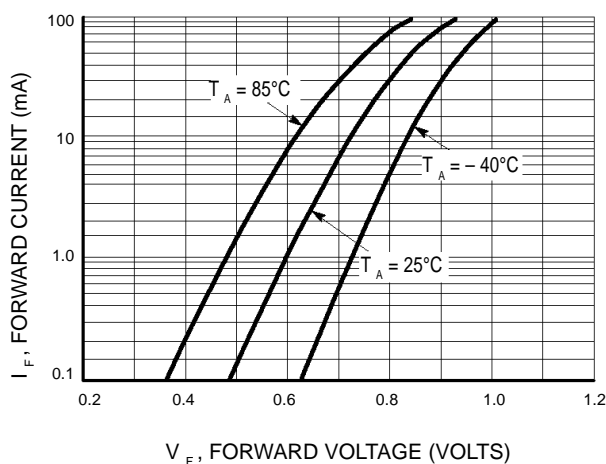


Figure 2. Forward Voltage

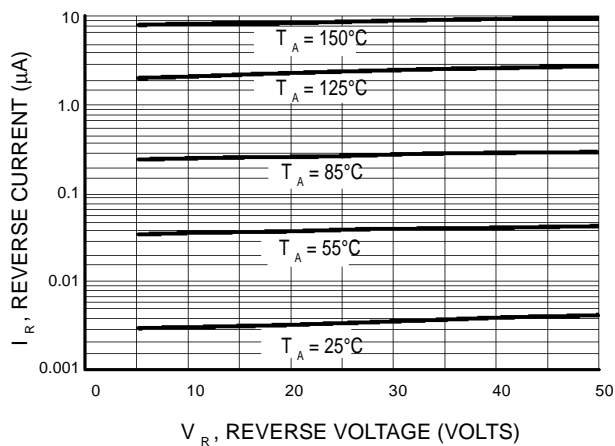


Figure 3. Leakage Current

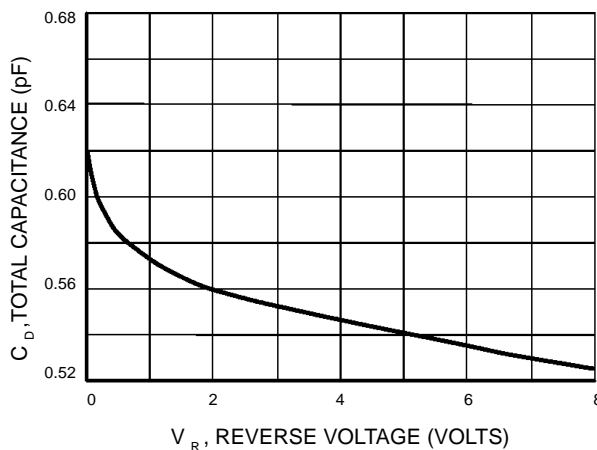
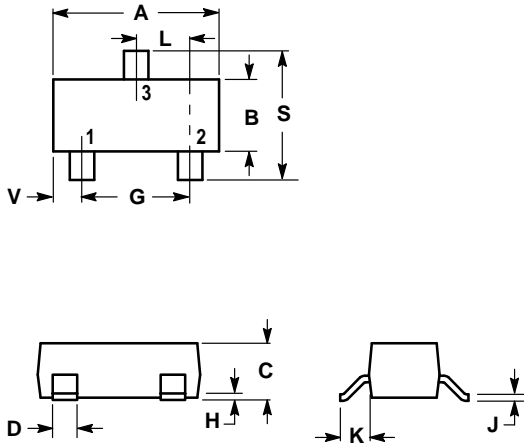


Figure 4. Capacitance

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NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

| DIM | INCHES | | MILLIMETERS | |
|-----|--------|--------|-------------|-------|
| | MIN | MAX | MIN | MAX |
| A | 0.1102 | 0.1197 | 2.80 | 3.04 |
| B | 0.0472 | 0.0551 | 1.20 | 1.40 |
| C | 0.0350 | 0.0440 | 0.89 | 1.11 |
| D | 0.0150 | 0.0200 | 0.37 | 0.50 |
| G | 0.0701 | 0.0807 | 1.78 | 2.04 |
| H | 0.0005 | 0.0040 | 0.013 | 0.100 |
| J | 0.0034 | 0.0070 | 0.085 | 0.177 |
| K | 0.0140 | 0.0285 | 0.35 | 0.69 |
| L | 0.0350 | 0.0401 | 0.89 | 1.02 |
| S | 0.0830 | 0.1039 | 2.10 | 2.64 |
| V | 0.0177 | 0.0236 | 0.45 | 0.60 |

- PIN 1. ANODE
 2. CAHODE
 3. CAHODE/ANODE

