

Monolithic Dual Switching Diode

Common Cathode

FEATURES

- We declare that the material of product compliance with RoHS requirements.
- S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.

ORDERING INFORMATION

| Device | Marking | Shipping |
|----------------------------|---------|-------------------|
| LBAV70TT1G S-LBAV70TT1G | A4 | 3000 Tape & Reel |
| LBAV70TT3G S-LBAV70TT3G | A4 | 10000 Tape & Reel |

MAXIMUM RATINGS (T_A = 25°C)

| Rating | Symbol | Max | Unit |
|----------------------------|------------------------|-----|------|
| Reverse Voltage | V _R | 70 | Vdc |
| Forward Current | I _F | 200 | mAdc |
| Peak Forward Surge Current | I _{FM(surge)} | 500 | mAdc |

THERMAL CHARACTERISTICS

| Characteristic | Symbol | Max | Unit |
|--|-----------------------------------|-------------|-------|
| Total Device Dissipation FR-5 Board ⁽¹⁾ T _A = 25°C | P _D | 225 | mW |
| Derate above 25°C | | 1.8 | mW/°C |
| Thermal Resistance, Junction to Ambient | R _{θJA} | 555 | °C/W |
| Total Device Dissipation Alumina Substrate ⁽²⁾ T _A = 25°C | P _D | 300 | mW |
| Derate above 25°C | | 2.9 | mW/°C |
| Thermal Resistance, Junction to Ambient | R _{θJA} | 345 | °C/W |
| Junction and Storage Temperature | T _J , T _{stg} | -55 to +150 | °C |

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

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

OFF CHARACTERISTICS

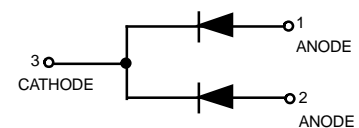
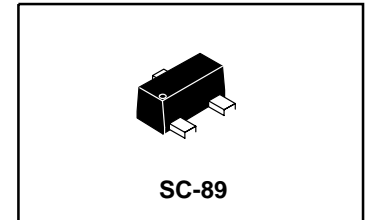
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|---|----------------------------------|------------------|----------------------------|--------------|
| Reverse Breakdown Voltage (I _(BR) = 100 μAdc) | V _(BR) | 70 | - | Vdc |
| Reverse Voltage Leakage Current (3) (V _R = 70 Vdc) (V _R = 50 Vdc) | I _R I _R | - - | 5.0 100 | μAdc nAdc |
| Diode Capacitance (V _R = 0, f = 1.0 MHz) | C _D | - | 1.5 | pF |
| Forward Voltage (I _F = 1.0 mAdc) (I _F = 10 mAdc) (I _F = 50 mAdc) (I _F = 150 mAdc) | V _F | - - - - | 715 855 1000 1250 | mVdc |
| Reverse Recovery Time (I _F = I _R = 10 mAdc, R _L = 100 Ω, I _{R(REC)} = 1.0 mAdc) (Figure 1) | t _{rr} | - | 6.0 | ns |
| Forward Recovery Voltage (I _F = 10 mAdc, t _r = 20 ns) (Figure 2) | V _{RF} | - | 1.75 | V |

1. FR-5 = 1.0 × 0.75 × 0.062 in.

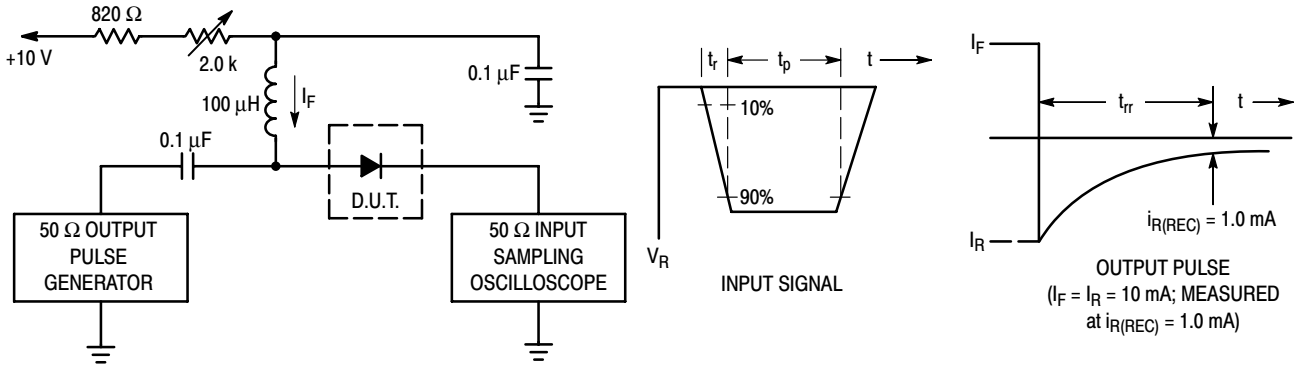
2. Alumina = 0.4 × 0.3 × 0.024 in. 99.5% alumina.

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

LBAV70TT1G
S-LBAV70TT1G



LBAV70TT1G,S-LBAV70TT1G



- 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

Curves Applicable to Each Anode

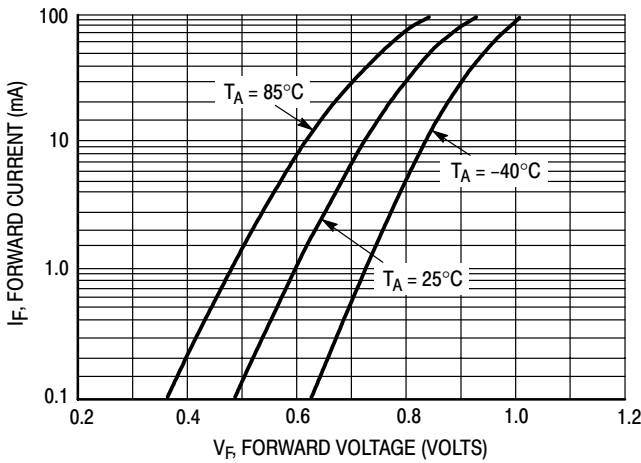


Figure 2. Forward Voltage

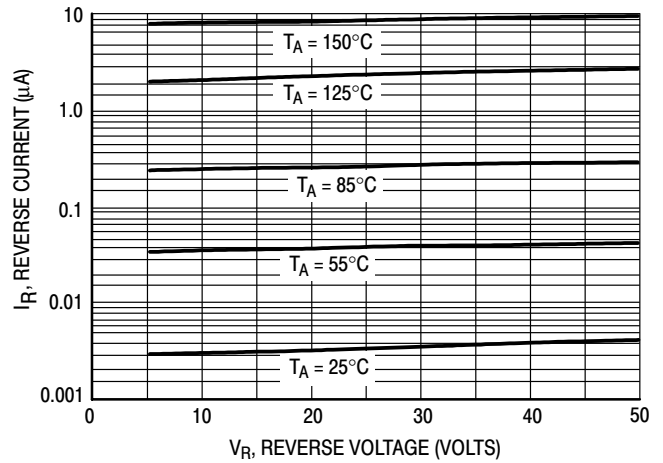


Figure 3. Leakage Current

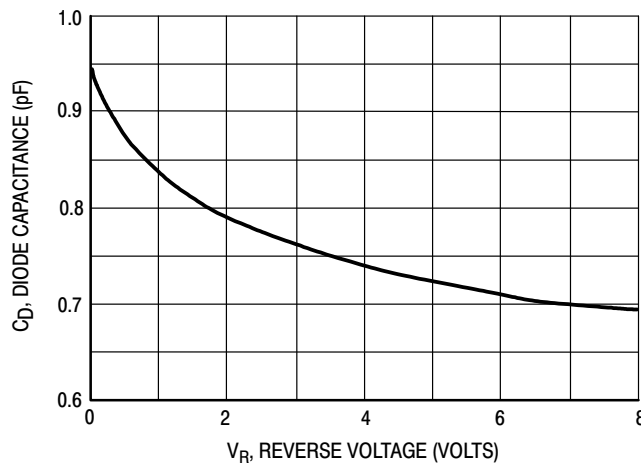
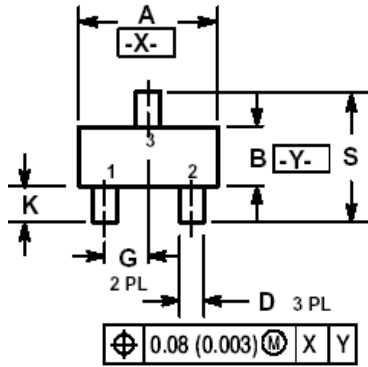


Figure 4. Capacitance

LBAV70TT1G,S-LBAV70TT1G

SC-89

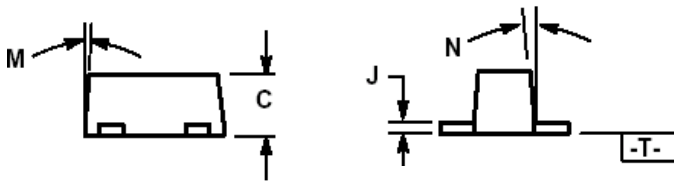
Dimension Outline:



NOTES:

- 1.DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
- 2.CONTROLLING DIMENSION: MILLIMETERS
- 3.MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
- 4.463C-01 OBSOLETE, NEW STANDARD 463C-02.

| DIM | MILLIMETERS | | | INCHES | | |
|-----|-------------|------|------|-----------|-------|-------|
| | MIN | NOM | MAX | MIN | NOM | MAX |
| A | 1.50 | 1.60 | 1.70 | 0.059 | 0.063 | 0.067 |
| B | 0.75 | 0.85 | 0.95 | 0.030 | 0.034 | 0.040 |
| C | 0.60 | 0.70 | 0.80 | 0.024 | 0.028 | 0.031 |
| D | 0.23 | 0.28 | 0.33 | 0.009 | 0.011 | 0.013 |
| G | 0.50 BSC | | | 0.020 BSC | | |
| H | 0.53 REF | | | 0.021 REF | | |
| J | 0.10 | 0.15 | 0.20 | 0.004 | 0.006 | 0.008 |
| K | 0.30 | 0.40 | 0.50 | 0.012 | 0.016 | 0.020 |
| L | 1.10 REF | | | 0.043 REF | | |
| M | --- | --- | 10 ° | --- | --- | 10 ° |
| N | --- | --- | 10 ° | --- | --- | 10 ° |
| S | 1.50 | 1.60 | 1.70 | 0.059 | 0.063 | 0.067 |



Soldering Footprint:

