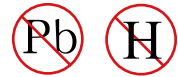




YEA SHIN TECHNOLOGY CO., LTD

BAV70

Monolithic Dual Switching Diode Common Cathode



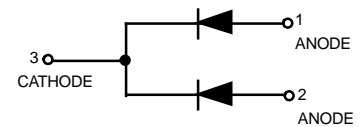
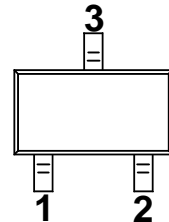
MAXIMUM RATINGS (T_A = 25°C)

| 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} | 556 | °C/W |
| Total Device Dissipation Alumina Substrate ⁽²⁾ T _A = 25°C | P _D | 300 | mW |
| Derate above 25°C | | 2.4 | mW/°C |
| Thermal Resistance, Junction to Ambient | R _{θJA} | 417 | °C/W |
| Junction and Storage Temperature | T _J , T _{stg} | -55 to +150 | °C |

SOT-23



Marking :A4

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

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

OFF CHARACTERISTICS

| | | | | |
|---|-------------------|----|------|------|
| Reverse Breakdown Voltage (I _{BR} = 100 μAdc) | V _(BR) | 70 | — | Vdc |
| Reverse Voltage Leakage Current (V _R = 25 Vdc, T _J = 150°C) | I _R | — | 60 | μAdc |
| (V _R = 70 Vdc) | | — | 2.5 | |
| (V _R = 70 Vdc, T _J = 150°C) | | — | 100 | |
| 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, V _R = 5.0 Vdc, I _{R(REC)} = 1.0 mAdc) (Figure 1) | t _{rr} | — | 6.0 | ns |

1. FR-5 = 1.0 × 0.75 × 0.062 in.

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

DEVICE CHARACTERISTICS

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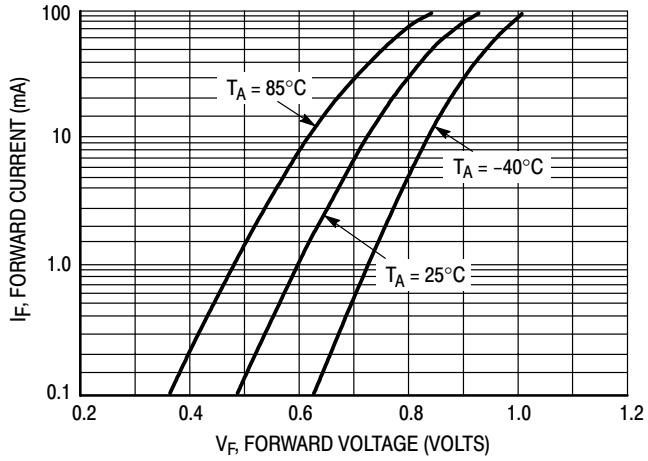


Figure 2. Forward Voltage

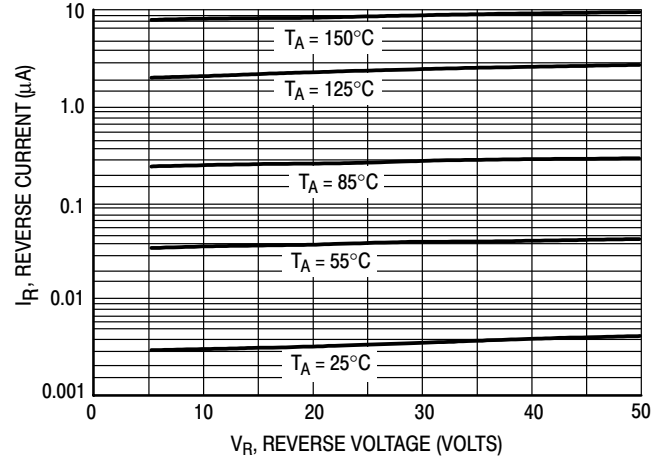


Figure 3. Leakage Current

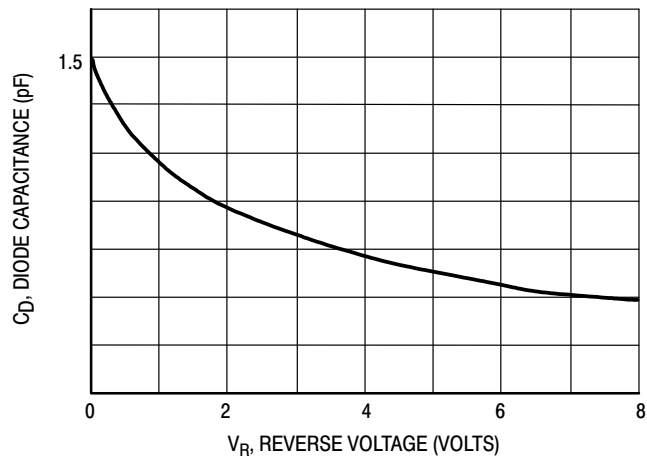
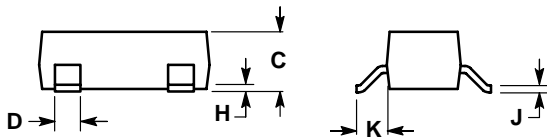
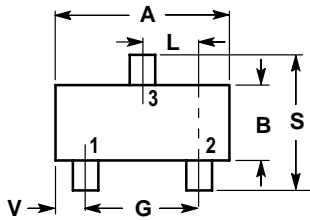


Figure 4. Capacitance

PACKAGE OUTLINE & DIMENSIONS

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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 |
| E | 0.0701 | 0.0807 | 1.78 | 2.04 |
| F | 0.0005 | 0.0040 | 0.013 | 0.100 |
| G | 0.0034 | 0.0070 | 0.085 | 0.177 |
| H | 0.0140 | 0.0285 | 0.35 | 0.69 |
| I | 0.0350 | 0.0401 | 0.89 | 1.02 |
| J | 0.0830 | 0.1039 | 2.10 | 2.64 |
| K | 0.0177 | 0.0236 | 0.45 | 0.60 |

- PIN 1. ANODE
2. ANODE
3. CATHODE

