

Features

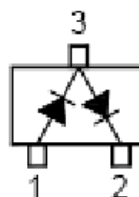
- Fast switching device ($T_{rr} < 4.0ns$)
- Surface device type mounting
- Moisture sensitivity level 1
- Matte Tin(Sn) lead finish with Nickel(Ni) underplate
- Pb free version and RoHS compliant
- Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code



Mechanical Data

- Case : Flat lead SOT-323 small outline plastic package
- Terminal : Matte tin plated, solderable per MIL-STD-202, Method 208 guaranteed
- High temperature soldering guaranteed: 260°C/S
- Polarity : Indicated by cathode band
- Weight : 5 mg

Pin Configuration



Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Absolute Maximum Ratings ($T_A = 25^\circ C$)

| Parameter | Symbol | Value | Units |
|---|-------------------|---------------|-------|
| Peak Repetitive Reverse Voltage | V_{RRM} | 85 | V |
| Reverse Voltage | V_R | 75 | V |
| Continuous Forward Current | Single Diode Load | 150 | mA |
| | Double Diode Load | 130 | |
| Repetitive Peak Forward Current | I_{FRM} | 500 | mA |
| Peak Forward Surge Current ($t_p = 10ms$) | at $t = 1\mu s$ | 4 | A |
| | at $t = 1ms$ | 1 | |
| | at $t = 1s$ | 0.5 | |
| Total Power Dissipation | P_{tot} | 200 | mW |
| Thermal Resistance form Junction Ambient | R_{thJA} | 625 | °C/W |
| Junction Temperature | T_J | 150 | °C |
| Storage Temperature Range | T_{STG} | - 55 to + 150 | °C |

Characteristics at $T_A = 25^\circ C$

| Parameter | Symbol | Max. | Units |
|---|----------|-------|-------|
| Forward Voltage | V_F | 0.715 | V |
| at $I_F = 1 mA$ | | 0.855 | |
| at $I_F = 10 mA$ | | 1 | |
| at $I_F = 150 mA$ | | 1.25 | |
| Reverse Current | I_R | 30 | nA |
| at $V_R = 25 V$ | | 1 | uA |
| at $V_R = 75 V$ | | 30 | uA |
| at $V_R = 25 V, T_j = 150^\circ C$ | | 50 | uA |
| at $V_R = 75 V, T_j = 150^\circ C$ | | | |
| Total Capacitance | C_d | 1.5 | pF |
| at $V_R = 0 V, f = 1 MHz$ | | | |
| Reverse Recovery Time | t_{rr} | 4 | ns |
| at $I_F = I_R = 10 mA, I_{rr} = 0.1 \times I_R, R_L = 100 \Omega$ | | | |

Small Signal Product

Fig. 1 Forward Current Derating Curve

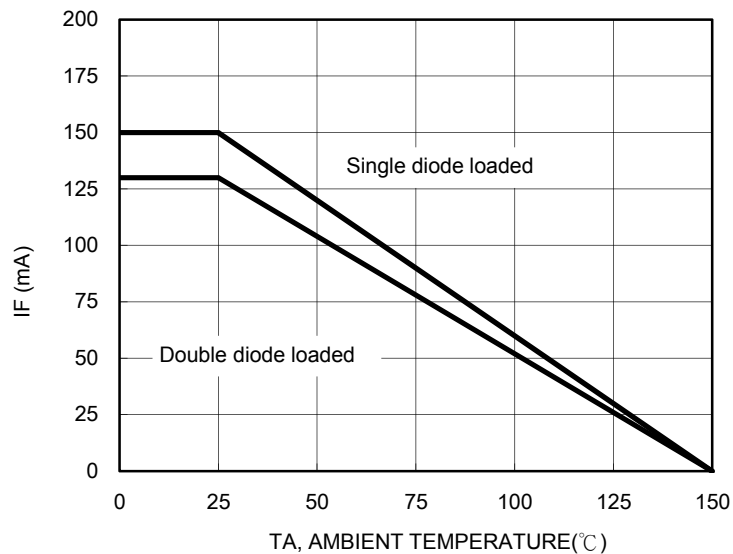


Fig. 2 Forward Characteristics

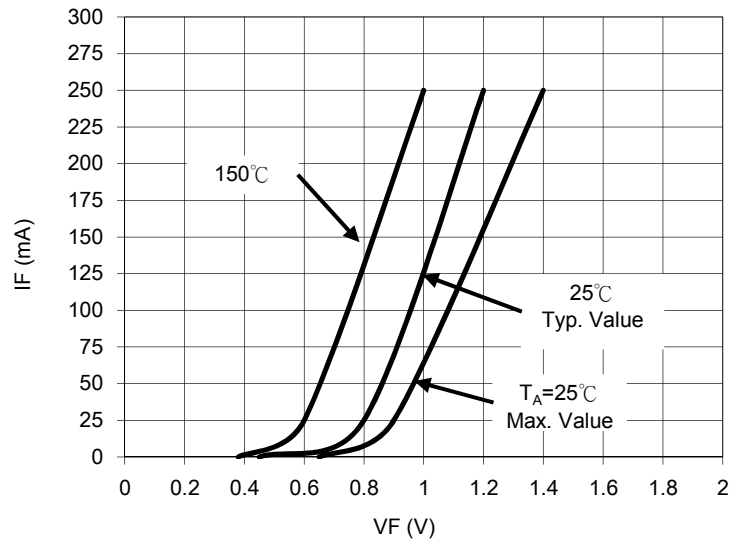


Fig. 3 Maximim Non-repetitive Peak Forward Surge Current

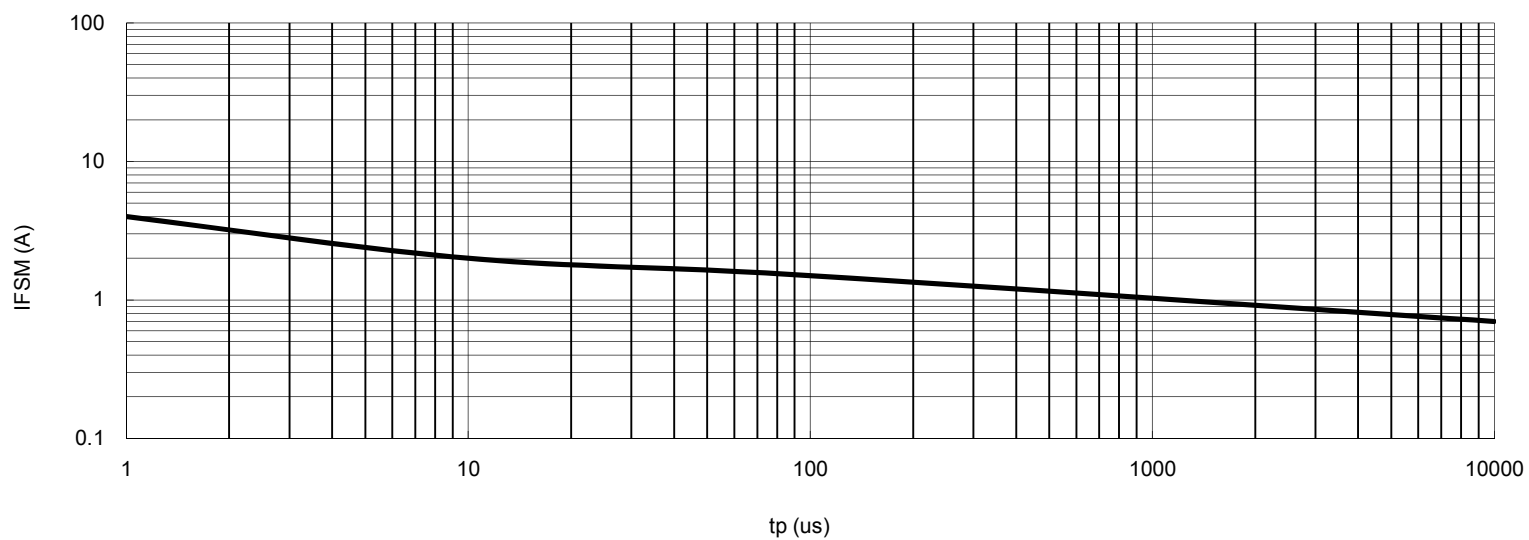


Fig. 4 Typical Reverse Characteristics

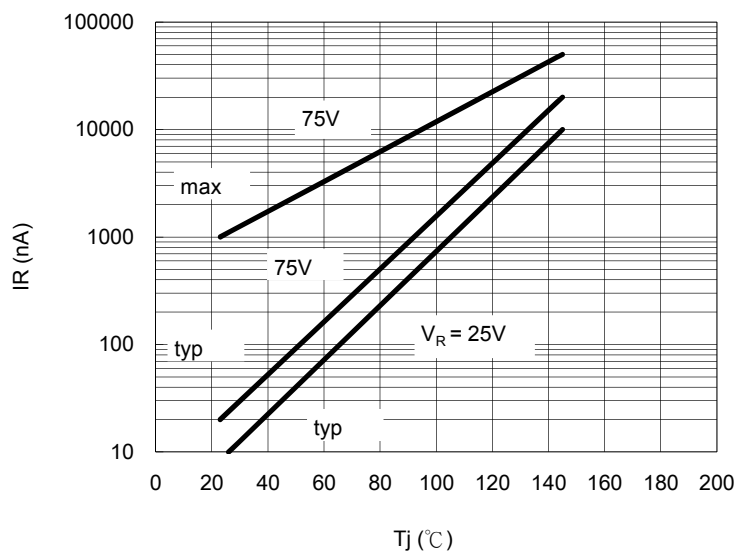
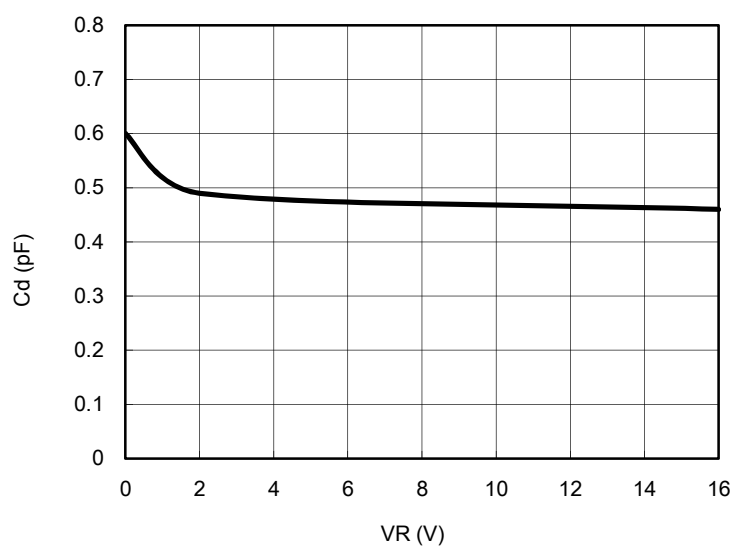
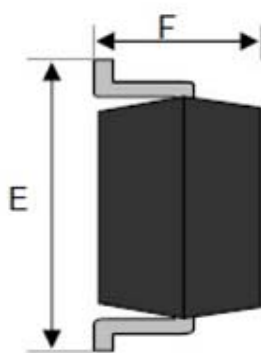
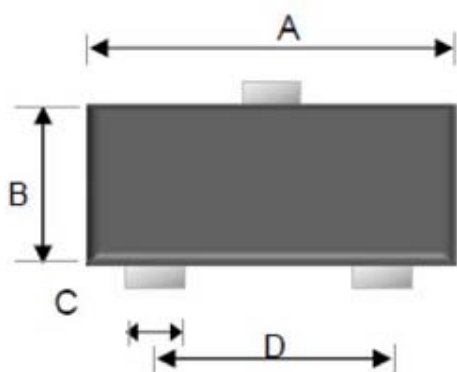


Fig. 5 Typical Capacitance



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Dimensions

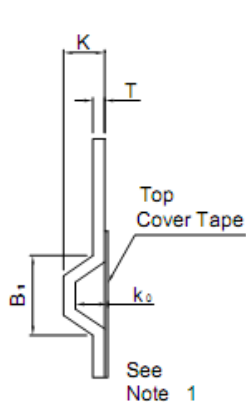


| DIM. | Unit(mm) | | Unit(inch) | |
|------|----------|------|------------|-------|
| | Min | Max | Min | Max |
| A | 1.90 | 2.10 | 0.075 | 0.083 |
| B | 1.15 | 1.35 | 0.045 | 0.053 |
| C | 0.25 | 0.35 | 0.010 | 0.014 |
| D | 1.20 | 1.40 | 0.047 | 0.055 |
| E | 2.00 | 2.45 | 0.079 | 0.096 |
| F | 0.80 | 1.00 | 0.031 | 0.039 |

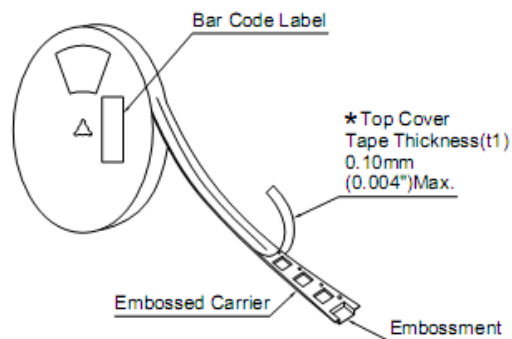
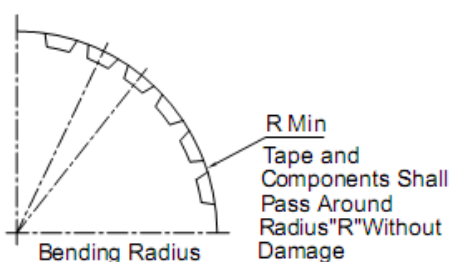
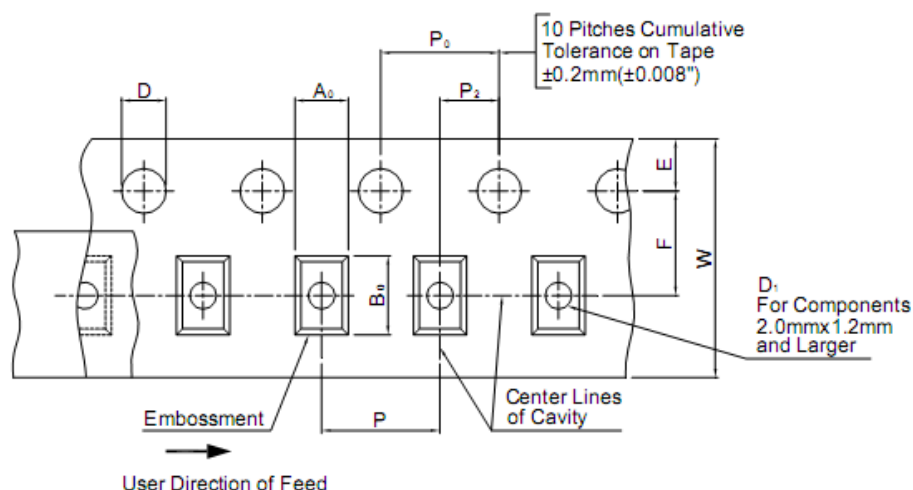
Ordering Information

| Part No. | Package | Packing | Packing code | Packing code (Green) | Marking |
|----------|---------|--------------|--------------|----------------------|---------|
| BAV99W | SOT-323 | 3K / 7" Reel | RF | RFG | A7 |

Tape and Reel specification



For Machine Reference Only
Including Draft And RADLL
Concentric Around Bo



| Tape Size | B1 | D | D1 | E | F | K | P0 | P2 | R |
|-----------|------|---------|-----|------|-------|-----|------|------|-----|
| | max | +0.1;-0 | min | ±1.0 | ±0.05 | max | ±0.1 | ±0.1 | min |
| 8 mm | 4.55 | 1.5 | 1 | 1.75 | 3.5 | 2.4 | 4 | 2 | 25 |

| T | W |
|-----|-----|
| max | max |
| 0.6 | 8.3 |

Unit (mm)

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