



Silicon Bidirectional Trigger Diodes

FEATURES

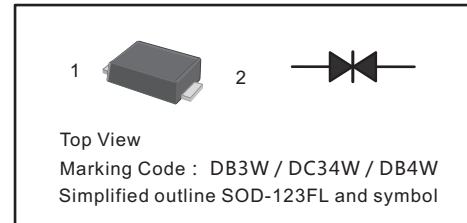
These diacs are intended for use in thyristor phase control circuits for lamp-dimming, universal-motor speed controls, and heat controls.

MECHANICAL DATA

- Case: SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 15mg 0.00048oz

PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1 | Cathode |
| 2 | Anode |



Absolute Maximum Ratings (Ta = 25°C)

| Parameter | Symbol | Value | Unit |
|---|-----------------------------------|---------------|------|
| Power Dissipation (Tc = 100°C) | P _{tot} | 150 | mW |
| Repetitive Peak On-state Current (tp = 20 μs, f = 100 Hz) | I _{TRM} | 2 | A |
| Operating Junction and Storage Temperature Range | T _j , T _{stg} | - 40 to + 125 | °C |

Characteristics at Ta = 25°C

| Parameter | | Symbol | Min. | Max. | Unit |
|--|-------|---|------|------|------|
| Breakover Voltage at C = 22 nF, see diagram 1 | DB3W | V _{BO} | 28 | 36 | V |
| | DC34W | | 30 | 38 | V |
| | DB4W | | 35 | 45 | V |
| Breakover Voltage Symmetry at C = 22 nF, see diagram 1 | | [+V _{BO} - -V _{BO}] | — | 3 | V |
| Dynamic Breakover Voltage at ΔI = [I _{BO} to I _F = 10 mA] | | ΔV ± | 5 | — | V |
| Output Voltage See diagram 2 | | V _O | 5 | — | V |
| Breakover Current at C = 22 nF | | I _{BO} | — | 50 | μA |
| Leakage Current at V _B = 0.5V _{BOmax} | | I _B | — | 10 | μA |
| Rise Time See diagram 3 | | t _r | — | 2 | μs |



Diagram1: current-voltage characteristic

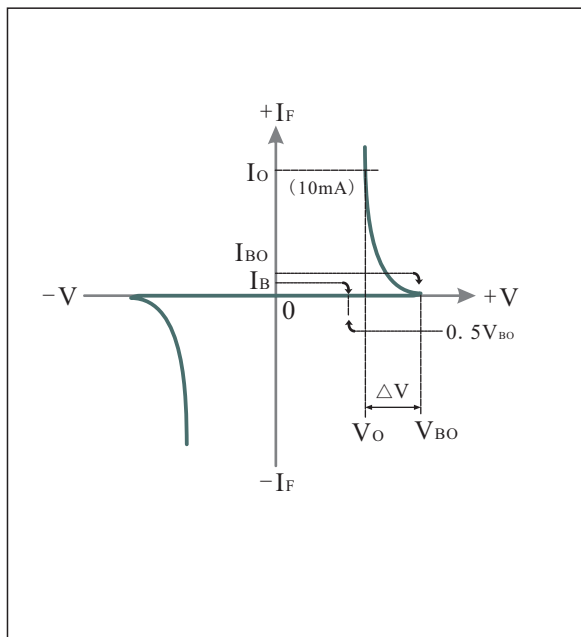


Diagram2: Test circuit for output voltage

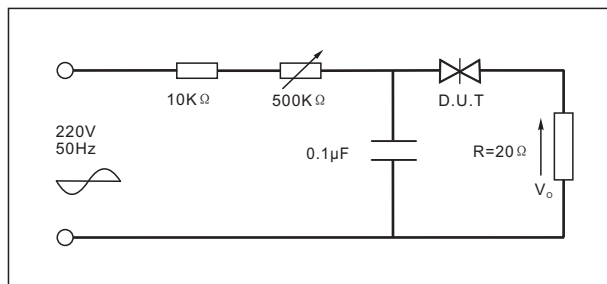


Diagram3: Test circuit see Fig.2. Adjust R for $I_p=0.5A$

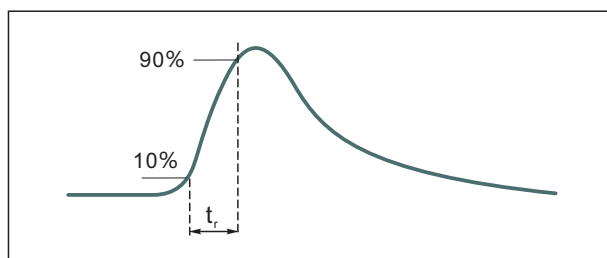


Fig.1: Power dissipation versus ambient temperature(maximum values)

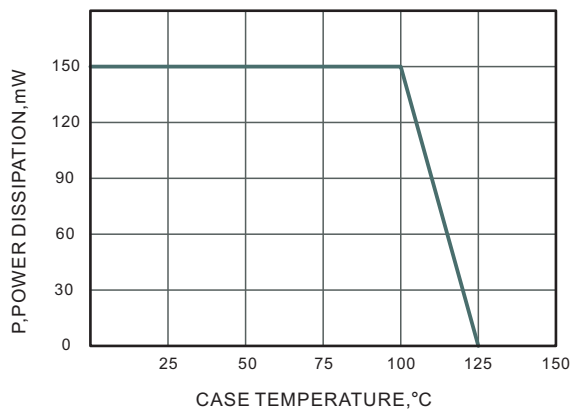


Fig.2: Power dissipation versus ambient temperature(maximum values)

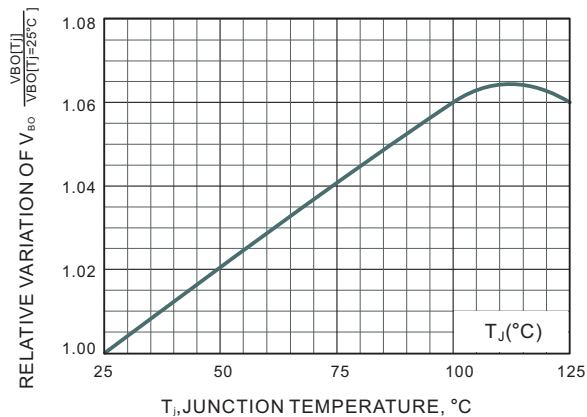
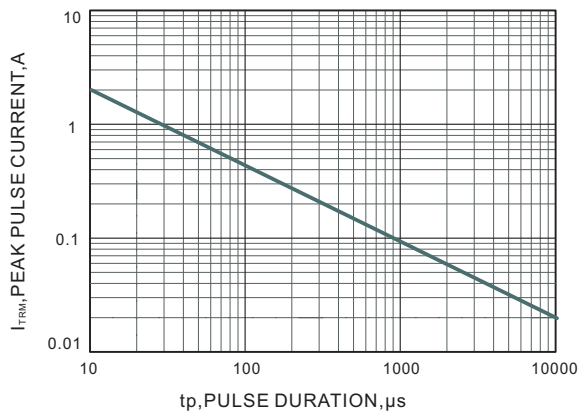


Fig.3: Power dissipation versus ambient temperature(maximum values)

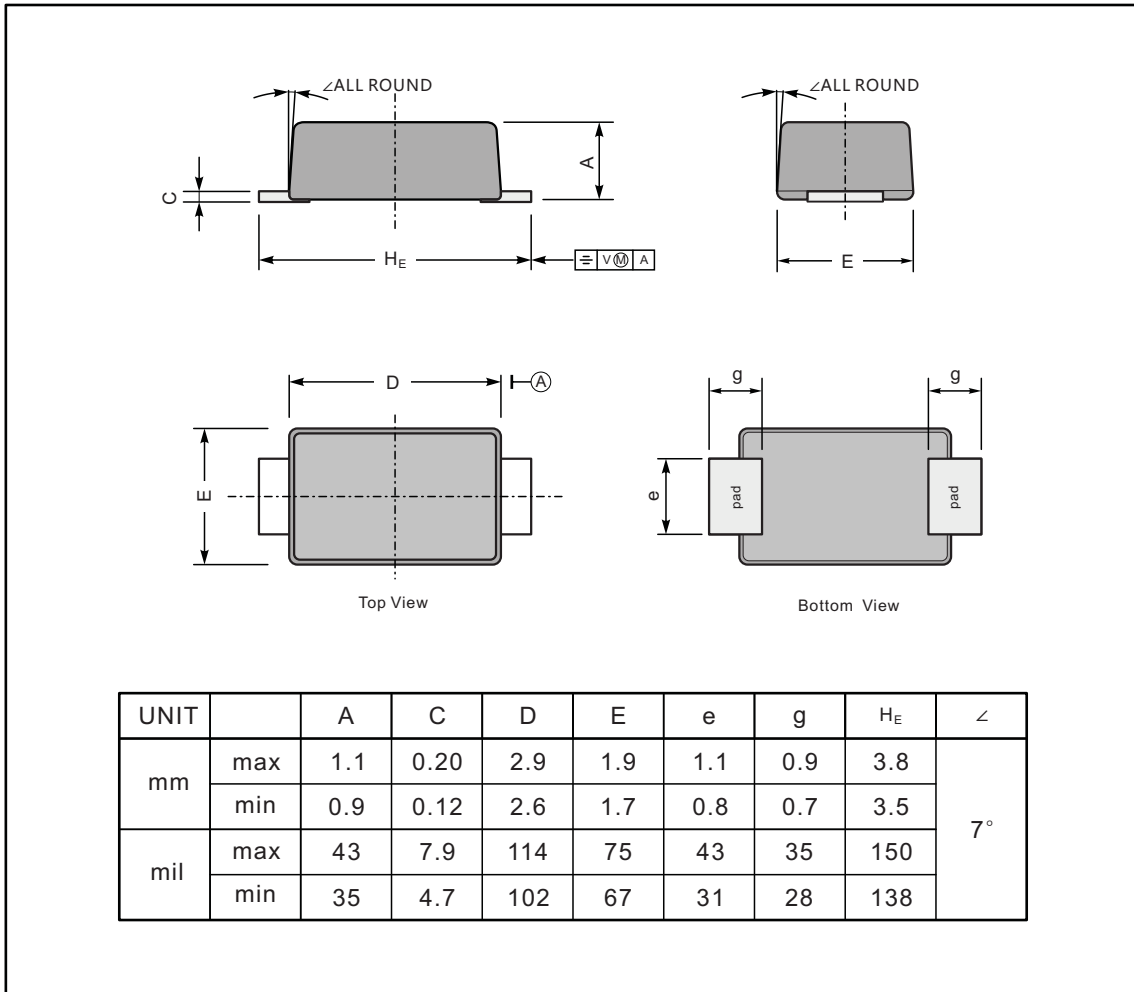




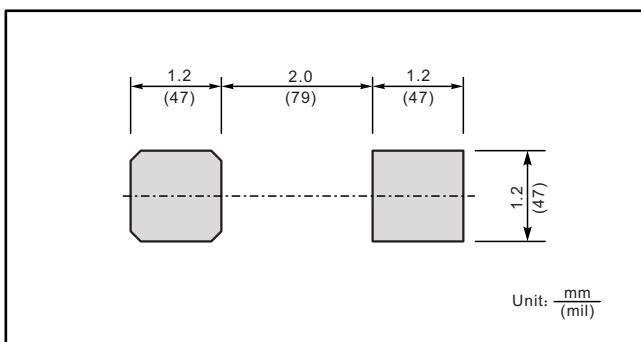
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123FL



The recommended mounting pad size



Marking

| Type number | Marking code |
|-------------|--------------|
| DB3W | DB3W |
| DC34W | DC34W |
| DB4W | DB4W |

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