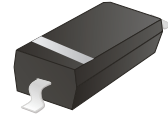


CDSW4148-G

Reverse Voltage: 100 V

Forward Current: 150mA

RoHS Device



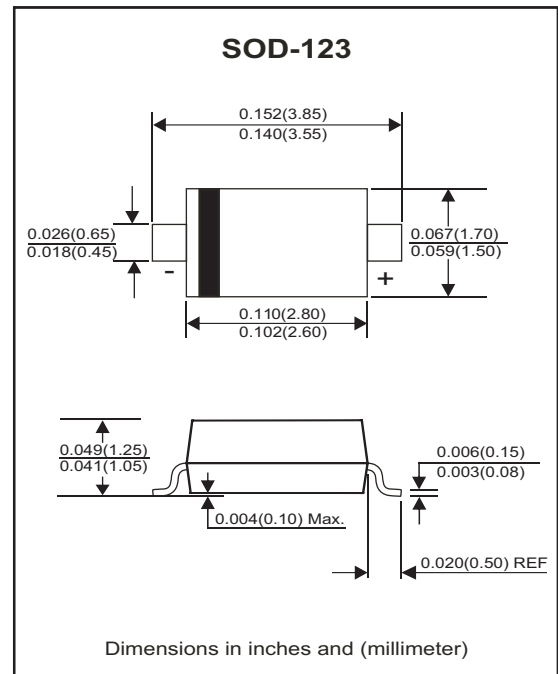
Features

- Fast switching speed
- High speed
- High conductance
- Surface mount package ideally suited for automatic insertion
- For general purpose switching applications
- Flat Package SOD-123 in Stead mini-MELF package

Mechanical data

- Case: SOD-123, Molded Plastic
- Terminals: Solderable per MIL-STD-750, method 2026.
- Weight: 0.0097 grams(approx.).

Circuit diagram



Maximum Rating (at Ta=25°C unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|--|---------|----------|------|
| Peak repetitive peak reverse voltage | VRRM | 100 | V |
| Working peak reverse voltage | VRWM | | |
| DC blocking voltage | VR | | |
| RMS reverse voltage | VR(RMS) | 71 | V |
| Average rectified output current | Io | 150 | mA |
| Non-Repetitive peak forward surge current @t=1μs | IFSM | 2 | A |
| Power dissipation | Pd | 350 | mW |
| Thermal resistance from junction to ambient | RθJA | 250 | °C/W |
| Junction temperature range | Tj | -40~+150 | °C |
| Storage temperature range | TSTG | -55~+150 | °C |

Electrical Characteristics (at Ta=25°C unless otherwise noted)

| Parameter | Conditions | Symbol | Min | Typ | Max | Unit |
|-------------------------------|---|----------|-----|-----|-------|---------------|
| Forward voltage | $I_F = 1 \text{ mA}$ | V_{F1} | | | 0.715 | V |
| | $I_F = 10 \text{ mA}$ | V_{F2} | | | 0.855 | V |
| | $I_F = 50 \text{ mA}$ | V_{F3} | | | 1.0 | V |
| | $I_F = 150 \text{ mA}$ | V_{F4} | | | 1.25 | V |
| Reverse current | $V_R = 20 \text{ V}$ | I_{R1} | | | 25 | nA |
| | $V_R = 75 \text{ V}$ | I_{R2} | | | 1 | μA |
| Capacitance between terminals | $f = 1 \text{ MHz}$ and $V_R = 0 \text{ V}$ | C_J | | | 2 | pF |
| Reverse recovery time | $I_F = I_R = 10 \text{ mA}$, $R_L = 100 \Omega$, $I_{rr} = 0.1 \times I_R$ | T_{RR} | | | 4 | nS |

Typical Characteristics (CDSW4148-G)

Fig.1 - Forward Characteristics

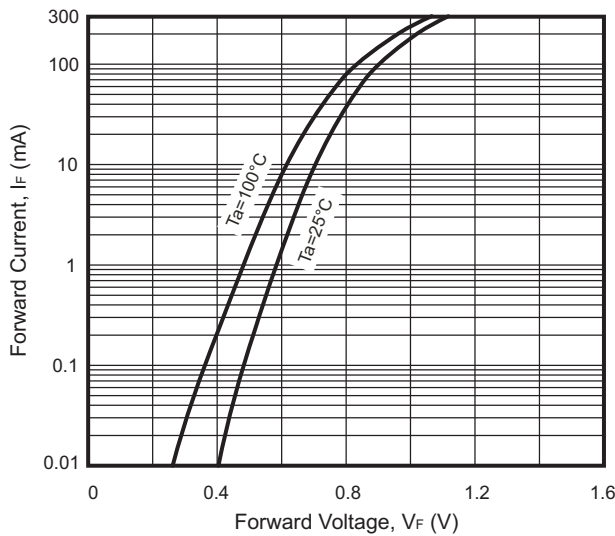


Fig.2 - Reverse Characteristics

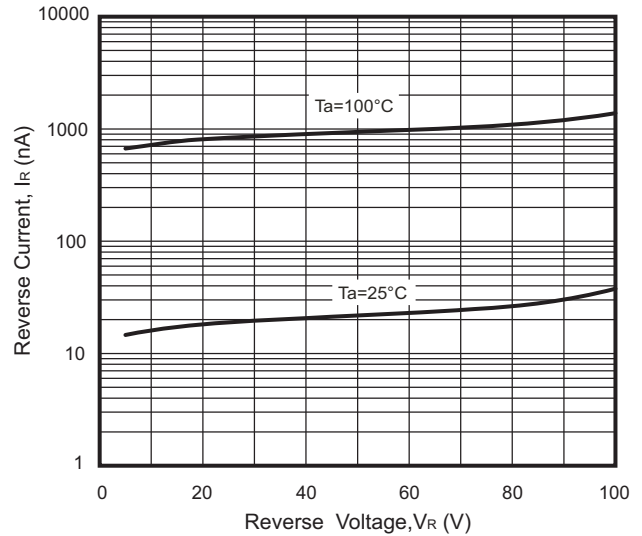


Fig.3 - Capacitance Characteristics

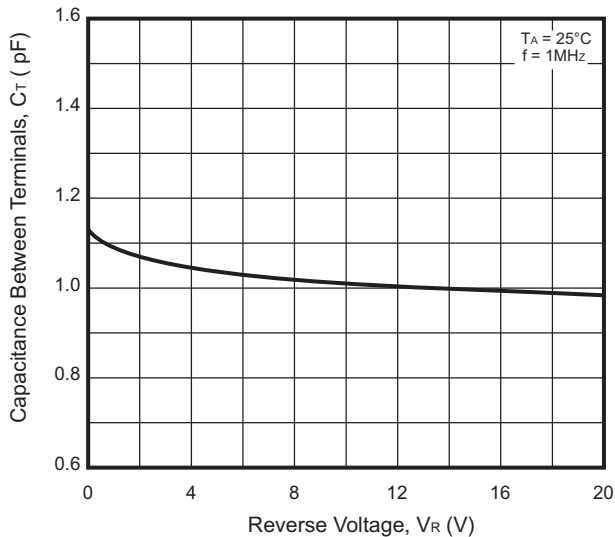
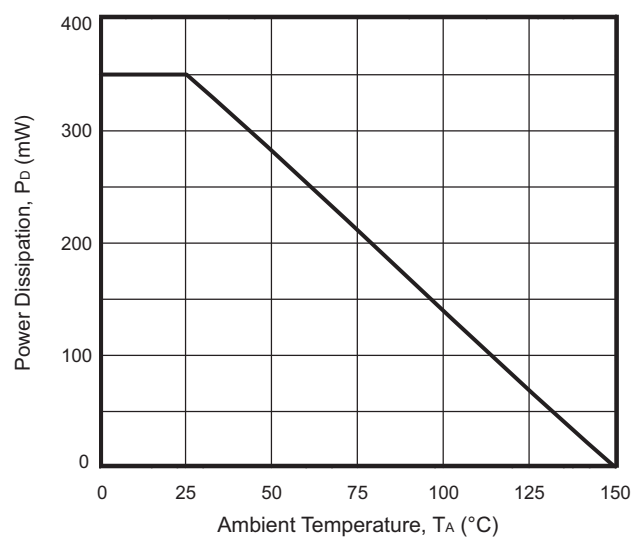
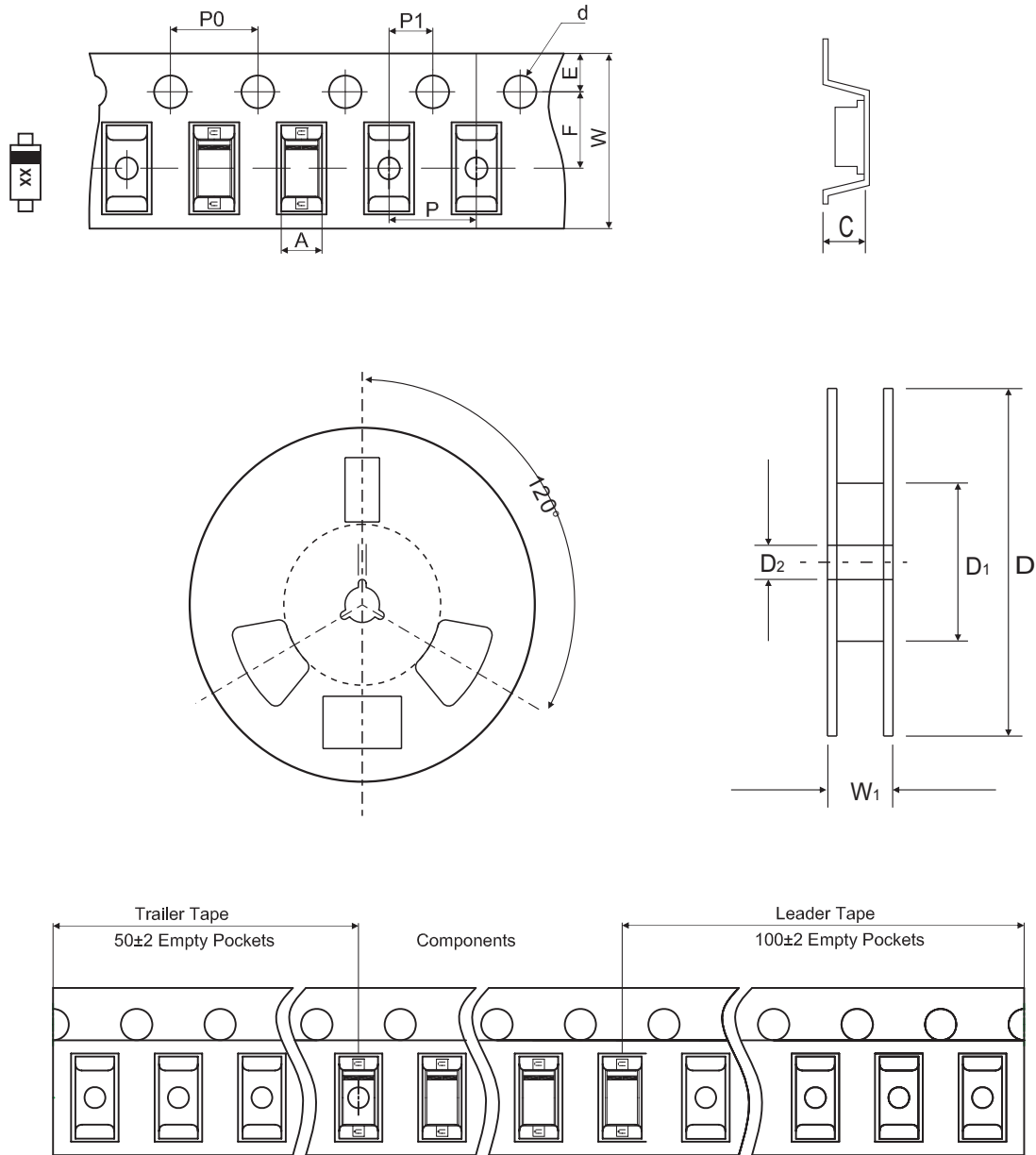


Fig.4 - Power Derating Curve



Reel Taping Specification



| SOD-123 | SYMBOL | A | B | C | d | D | D ₁ | D ₂ |
|---------|--------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|
| | (mm) | 1.85 ± 0.05 | 3.94 ± 0.05 | 1.57 ± 0.05 | 1.55 ± 0.10 | 178.00 ± 2.00 | 54.40 ± 1.00 | 13.00 ± 1.00 |
| | (inch) | 0.073 ± 0.002 | 0.155 ± 0.002 | 0.062 ± 0.002 | 0.061 ± 0.004 | 7.008 ± 0.079 | 2.142 ± 0.039 | 0.512 ± 0.039 |

| SOD-123 | SYMBOL | E | F | P | P ₀ | P ₁ | W | W ₁ |
|---------|--------|---------------|---------------|---------------|----------------|----------------|-------------------------|----------------|
| | (mm) | 1.75 ± 0.10 | 3.50 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.10 | 8.00 + 0.30 / - 0.10 | 12.30 ± 1.00 |
| | (inch) | 0.069 ± 0.004 | 0.138 ± 0.004 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.004 | 0.315 + 0.012 / - 0.004 | 0.484 ± 0.039 |

Marking Code

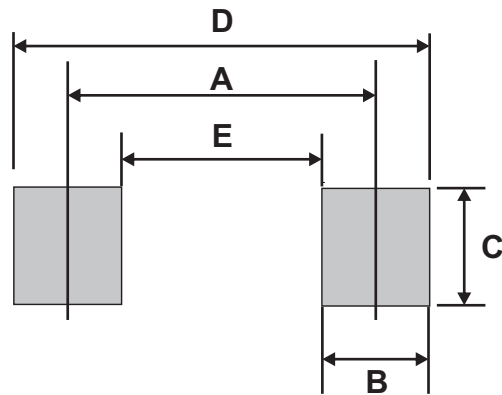
| Part Number | Marking Code |
|-------------|--------------|
| CDSW4148-G | T4 |



xx = Product type marking code

Suggested PAD Layout

| SIZE | SOD-123 | |
|------|---------|--------|
| | (mm) | (inch) |
| A | 3.24 | 0.128 |
| B | 0.80 | 0.031 |
| C | 1.00 | 0.039 |
| D | 4.04 | 0.159 |
| E | 2.44 | 0.096 |



Standard Packaging

| Case Type | REEL PACK | |
|-----------|--------------|------------------|
| | REEL (pcs) | Reel Size (inch) |
| SOD-123 | 3,000 | 7 |

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