

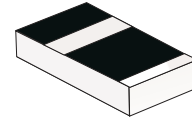
SMD Switching Diode

CDSSC4148N-G

Voltage: 75 V

Current: 150mA

RoHS Device

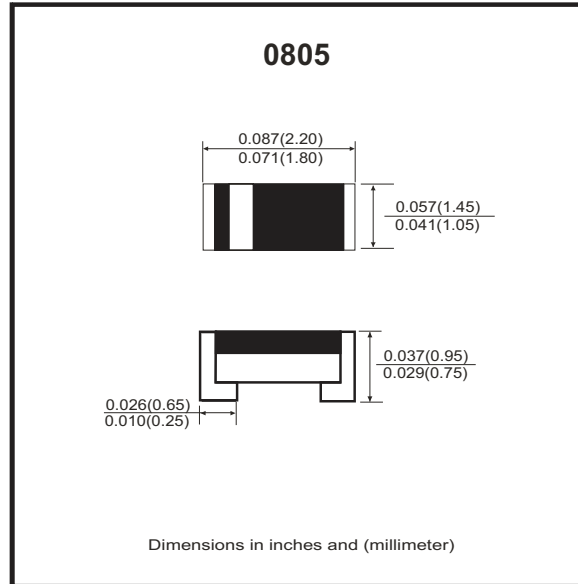


Features

- Designed for mounting on small surface.
- Silicon Epitaxial Planar Diode.
- Fast switching diode.
- Lead free

Mechanical data

- Case: 0805
- Marking: Cathode Band.
- Weight: 0.006 gram(approx.).



Thermal Characteristics (Parameter at Tamb = 25°C)¹⁾

| Parameter | Symbol | Value | Unit |
|---|------------------|-------------|-------|
| Forward Power Dissipation Power derating above 25 °C | P _{tot} | 200 | mW |
| | | 1.60 | mW/°C |
| Junction Temperature | T _J | 150 | °C |
| Thermal Resistance Junction to Ambient Air | R _{θJA} | 375 | °C/W |
| Operating & Storage Temperature Range | T _{STG} | -55 to +150 | °C |

Maximum Rating (Parameter at Tamb = 25°C)¹⁾

| Parameter | Symbol | Value | Unit |
|--|--------------------|-------|------|
| Repetitive Peak Reverse Voltage | V _{RMM} | 100 | V |
| Average rectified current sin half wave rectification with resistive load | I _{F(AV)} | 150 | mA |
| Repetitive Peak Forward Current at Tamb=25°C | I _{FRM} | 300 | mA |
| Non-Repetitive Surge Forward Current at t<1s and Tj=25°C at t≤8.3ms and Tj=25°C | I _{FSM} | 500 | mA |
| | | 1000 | mA |

Electrical Characteristics (Parameter at Tamb = 25°C)¹⁾

| Parameter | Symbol | Value | Unit |
|---|------------------|-------|------|
| MAX. Forward Voltage at I _F =10mA at I _F =100mA | V _F | 1.0 | V |
| | | 1.25 | V |
| MAX. Leakage Current at V _R =20V at V _R =75V | I _R | 0.025 | uA |
| | | 5 | uA |
| Capacitance at V _R =0V,f=1MHz | C _{tot} | 4 | pF |
| Reverse Recovery Time at I _F =I _R =10mA, R _L =100Ω | T _{rr} | 4 | ns |

Notes:

1.) Valid provided that components are kept at ambient temperature.

RATING AND CHARACTERISTIC CURVES (CDSSC4148N-G)

Fig.1 - Forward characteristics

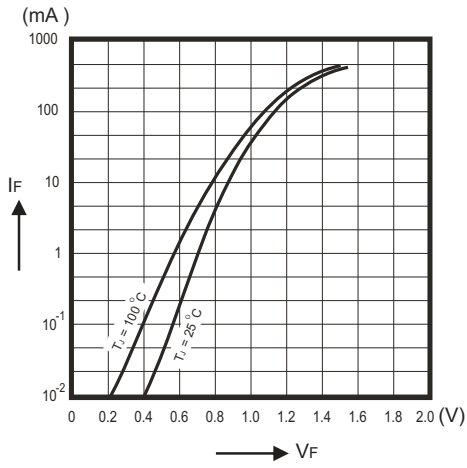


Fig.2 - Power De-rating

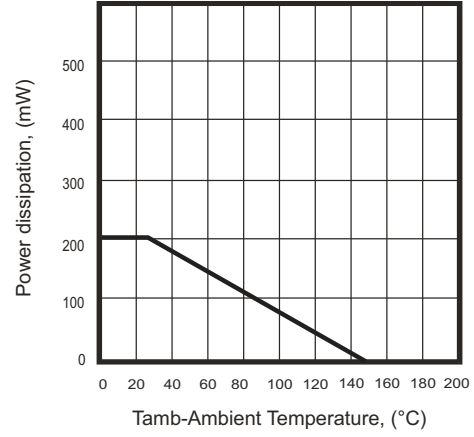


Fig.3 - Forward Current De-rating

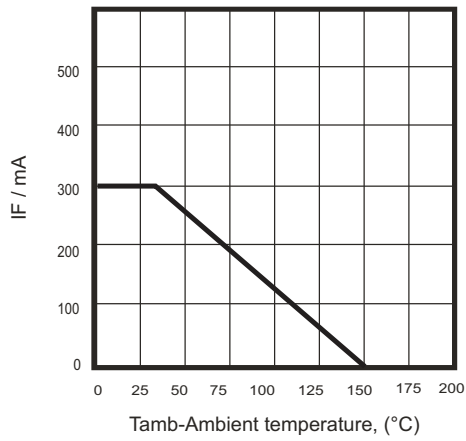
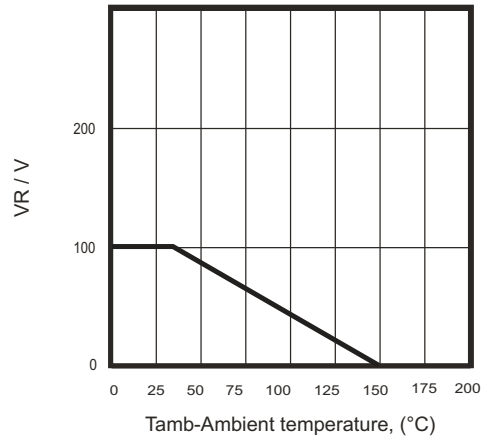
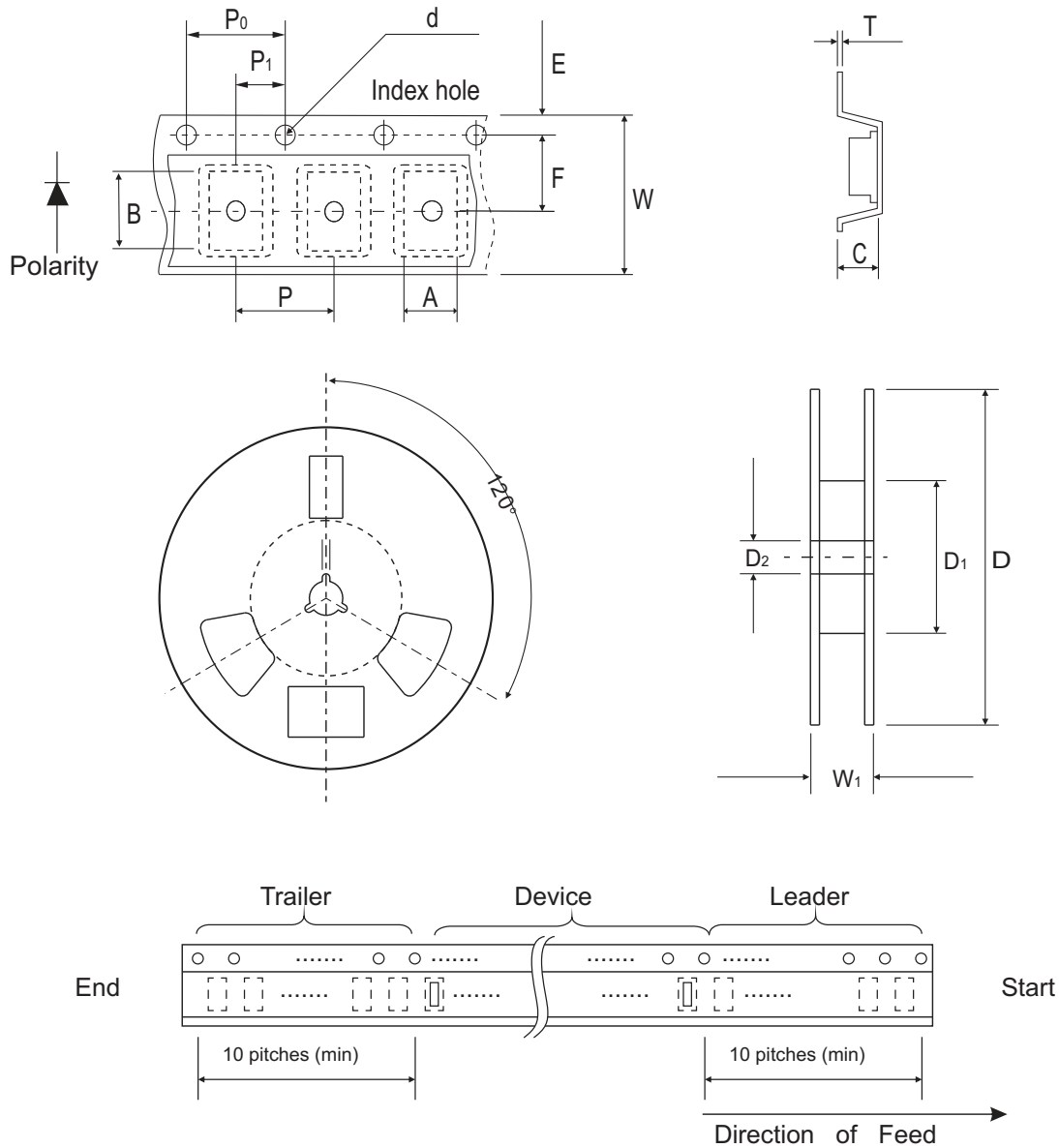


Fig.4 - Relative Voltage De-rating



Reel Taping Specification

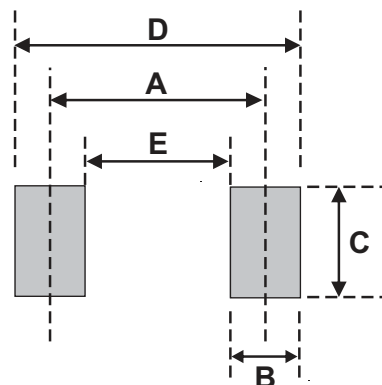


| 0805 | SYMBOL | A | B | C | d | D | D1 | D2 |
|------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | (mm) | 1.65 ± 0.20 | 2.40 ± 0.20 | 0.95 ± 0.05 | 1.50 ± 0.10 | 178.0 ± 1.00 | 60.0 ± 1.00 | 13.0 ± 0.30 |
| | (inch) | 0.065 ± 0.008 | 0.094 ± 0.008 | 0.037 ± 0.002 | 0.059 ± 0.004 | 7.007 ± 0.040 | 2.362 ± 0.040 | 0.512 ± 0.012 |

| 0805 | SYMBOL | E | F | P | P0 | P1 | W | W1 |
|------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | (mm) | 1.75 ± 0.10 | 3.50 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.05 | 8.00 ± 0.20 | 9.50 ± 0.30 |
| | (inch) | 0.689 ± 0.004 | 0.138 ± 0.004 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.002 | 0.315 ± 0.008 | 0.374 ± 0.012 |

Suggested PAD Layout

| SIZE | 0805 | |
|------|-----------|-------------|
| | (mm) | (inch) |
| A | 1.70-2.10 | 0.067-0.083 |
| B | 0.50-0.90 | 0.020-0.035 |
| C | 1.20-1.40 | 0.047-0.055 |
| D | 2.20-3.00 | 0.087-0.118 |
| E | 1.20 | 0.047 |



Standard Packaging

| Case Type | REEL PACK | |
|-----------|--------------|------------------|
| | REEL (pcs) | Reel Size (inch) |
| 0805 | 5,000 | 7 |