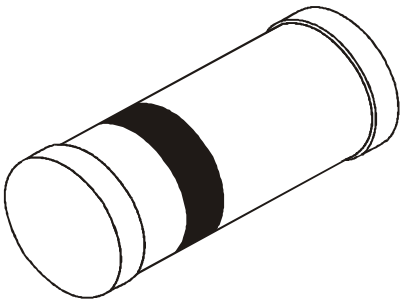
# HIGH SPEED SILICON DIODES

**CLL4150**



**SOD - 80C**
**Mini MELF (LL- 34 )**

**Polarity: Cathode is indicated by a black band**

## Hermetically Sealed, Glass Silicon Diodes

## Intended for General Purpose use in Computer and Industrial Application

### ABSOLUTE MAXIMUM RATINGS

| DESCRIPTION | SYMBOL | VALUE | UNIT |
|---|---|---|---|
| Repetitive Peak Reverse Voltage | $V_{RRM}$ | 75 | V |
| Continuous Reverse Voltage | $V_R$ | 50 | V |
| Continuous Forward Current | *$I_F$ | 300 | mA |
| Repetitive Peak Forward Current | $I_{FRM}$ | 600 | mA |
| Non Repetitive Peak Forward Current t=1 µs | $I_{FSM}$ | 4.0 | A |
| t=1 ms | | 1.0 | A |
| t=1 s | | 0.5 | A |
| Power Dissipation up to $T_a$=25ºC | *$P_{tot}$ | 500 | mW |
| Storage Temperature | $T_{stg}$ | - 65 to 200 | ºC |
| Junction Temperature | $T_j$ | 200 | ºC |

### THERMAL RESISTANCE

| | | | |
|---|---|---|---|
| Junction to tie point | $R_{th\ (j\text{-}tp)}$ | 300 | K/W |
| Junction to Ambient in free air | *$R_{th\ (j\text{-}a)}$ | 350 | K/W |

### ELECTRICAL CHARACTERISTICS ($T_a$=25ºC unless otherwise specified)

| DESCRIPTION | SYMBOL | TEST CONDITION | MIN | MAX | UNIT |
|---|---|---|---|---|---|
| Forward Voltage | $V_F$ | $I_F$=1mA | 0.54 | 0.62 | V |
| | | $I_F$=10mA | 0.66 | 0.74 | V |
| | | $I_F$=50mA | 0.76 | 0.86 | V |
| | | $I_F$=100mA | 0.82 | 0.92 | V |
| | | $I_F$=200mA | 0.87 | 1.00 | V |
| Reverse Breakdown Voltage | $V_{BR}$ | $I_R$=100µA | 75 | | V |
| Reverse Current | $I_R$ | $V_R$= 50V | | 100 | nA |
| | | $V_R$=50V, $T_j$=150ºC | | 100 | µA |

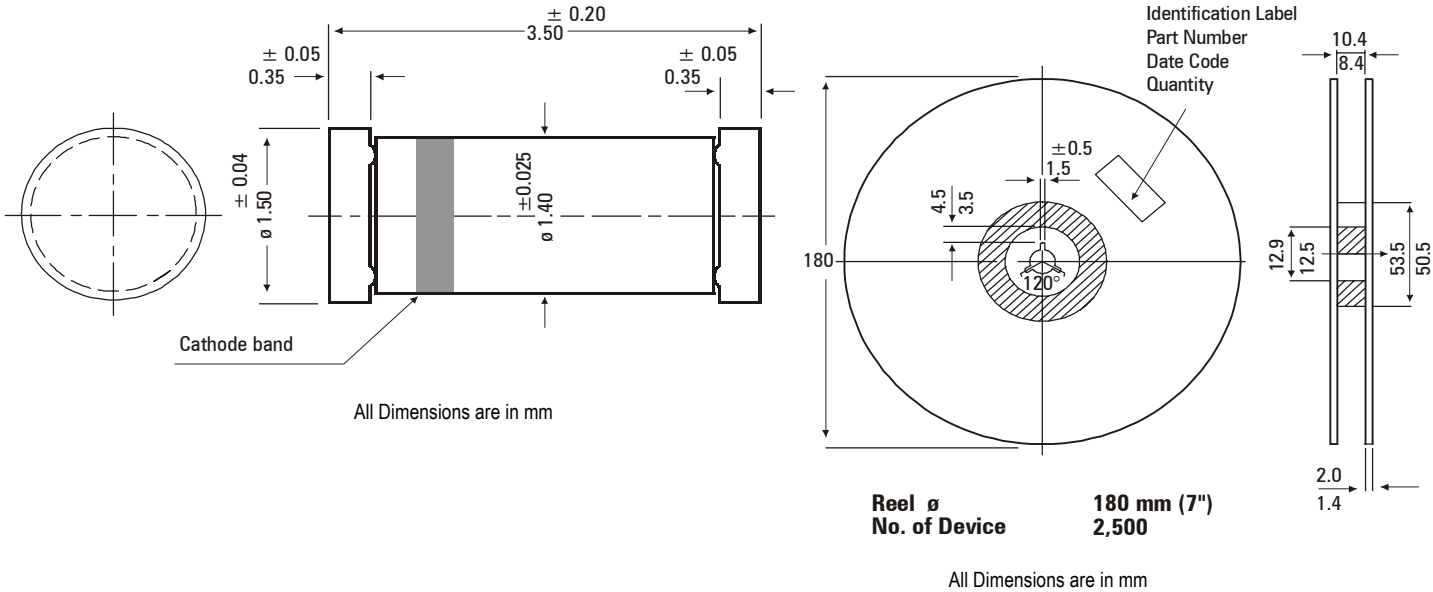
### DYNAMIC CHARACTERISTICS

| | | | | | |
|---|---|---|---|---|---|
| Diode Capacitance | $C_d$ | $V_R$=0V, f=1MHz | | 2.5 | pF |
| Reverse Recovery Time | $t_{rr}$ | $I_F$=10mA, to $I_R$=1mA,$R_L$=100Ω | | 6.0 | ns |
| | | Measured @ $I_R$=0.1mA | . | | |
| Forward Recovery Time | $t_{fr}$ | $I_F$=200mA, $t_r$=0.4ns | | 10 | ns |
| | | Measured @ $V_F$=1V | | | |

***Device mounted on an FR4 printed circuit board**

CLL4150Rev201002E

## SOD 80C (LL-34) Mini MELF Hermetically Sealed Glass Package

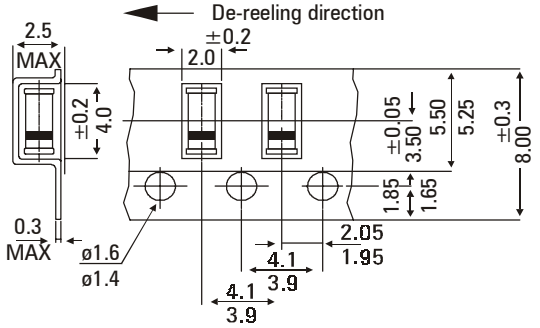



All Dimensions are in mm

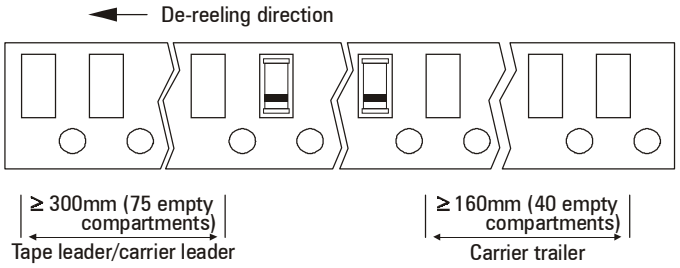
| | |
|---|---|
| **Reel ø** | **180 mm (7")** |
| **No. of Device** | **2,500** |

All Dimensions are in mm

## TAPE & REEL




Notes:
1. Maximum of 0.5% of the total number of components per reel may be missing-exclusively at the beginning and at the end of the reel.
2. A maximum of three consecutive components may be missing, provided this gap is followed by six consecutive components.




All Dimensions are in mm

**Drawings are not to scale**

## Packing Detail

| PACKAGE | STANDARD PACK | | INNER CARTON BOX | | OUTER CARTON BOX | | |
|---|---|---|---|---|---|---|---|
| | Details | Net Weight/Qty | Size | Qty | Size | Qty | Gr Wt |
| SOD-80C T&R | 2.5K/reel | 225 gm/2.5K pcs | 9" x 9" x 9" | 40K | 18" x 12" x 10"<br>19" x 19" x 20" | 80K<br>320K | 7.2 kgs<br>28.8 kgs |

**Component Disposal Instructions**

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.

2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

## Customer Notes

### Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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