

# Small Signal Diode

## FDLL457A / 1N457A

### ABSOLUTE MAXIMUM RATINGS

(T<sub>A</sub> = 25°C unless otherwise noted) (Note 1)

| Symbol             | Rating                                                                             | Value       | Unit |
|--------------------|------------------------------------------------------------------------------------|-------------|------|
| V <sub>RRM</sub>   | Maximum Repetitive Reverse Voltage                                                 | 70          | V    |
| I <sub>F(AV)</sub> | Average Rectified Forward Current                                                  | 200         | mA   |
| I <sub>FSM</sub>   | Non-repetitive Peak Forward Current<br>Pulse Width = 1.0 s<br>Pulse Width = 1.0 μs | 1.0<br>4.0  | A    |
| T <sub>STG</sub>   | Storage Temperature Range                                                          | -65 to +200 | °C   |
| T <sub>J</sub>     | Operating Junction Temperature                                                     | 175         | °C   |

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

- These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.  
Measured on 8.3 ms single half-sine wave or equivalent square wave.  
Duty cycle = 4 pulses per minute maximum.

### THERMAL CHARACTERISTICS

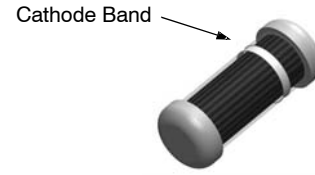
| Symbol           | Parameter                                  | Max | Unit |
|------------------|--------------------------------------------|-----|------|
| P <sub>D</sub>   | Power Dissipation                          | 500 | mW   |
| R <sub>θJA</sub> | Thermal Resistance,<br>Junction-to-Ambient | 350 | °C   |

### ELECTRICAL CHARACTERISTICS

(T<sub>A</sub> = 25°C unless otherwise noted)

| Symbol         | Parameter         | Conditions                                                             | Min    | Max        | Unit     |
|----------------|-------------------|------------------------------------------------------------------------|--------|------------|----------|
| V <sub>R</sub> | Breakdown Voltage | I <sub>R</sub> = 100 μA                                                | 85     | –          | V        |
| V <sub>F</sub> | Forward Voltage   | I <sub>F</sub> = 10 mA<br>I <sub>F</sub> = 100 mA                      | –<br>– | 1.0<br>1.0 | V<br>V   |
| I <sub>R</sub> | Reverse Leakage   | V <sub>R</sub> = 60 V<br>V <sub>R</sub> = 60 V, T <sub>A</sub> = 150°C | –<br>– | 25<br>5.0  | nA<br>μA |
| C <sub>T</sub> | Total Capacitance | V <sub>R</sub> = 0, f = 1.0 MHz                                        | –      | 6.0        | pF       |

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.



MiniMELF / SOD-80  
CASE 100AD  
(Color Band Denotes Cathode)

### MARKING DIAGRAM

| COLOR BAND MARKING |          |
|--------------------|----------|
| DEVICE             | 1ST BAND |
| FDLL457A           | WHITE    |

FDLL457A = Specific Device Code

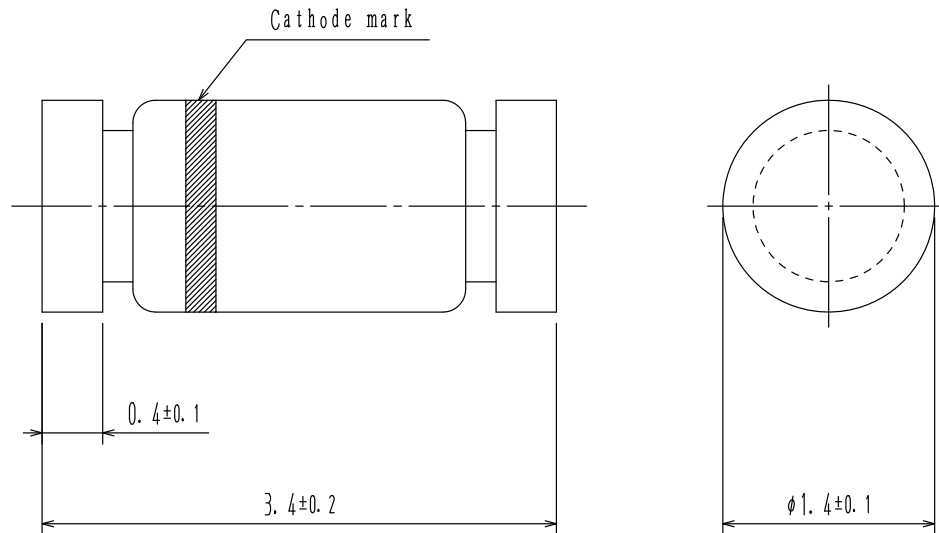
### ORDERING INFORMATION

| Device   | Package             | Shipping†                    |
|----------|---------------------|------------------------------|
| FDLL457A | SOD-80<br>(Pb-Free) | 2,500 Units /<br>Tape & Reel |

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

**MiniMELF / SOD-80**  
**CASE 100AD**  
**ISSUE O**

DATE 30 APR 2012



NOTES: UNLESS OTHERWISE SPECIFIED

A) PACKAGE STANDARD REFERENCE:  
JEDEC DO-213, VARIATION AC.

B) ALL DIMENSIONS ARE IN MILLIMETERS.

 CORNER RADIUS IS OPTIONAL.

D) DRAWING FILE NAME: SOD80A REV01

|                         |                          |                                                                                                                                                                                     |
|-------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
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| <b>DESCRIPTION:</b>     | <b>MINIMELF / SOD-80</b> | <b>PAGE 1 OF 1</b>                                                                                                                                                                  |

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