

## FDH/FDLL 400



DO-35



LL-34

THE PLACEMENT OF THE EXPANSION GAP  
HAS NO RELATIONSHIP TO THE LOCATION  
OF THE CATHODE TERMINAL

COLOR BAND MARKING

| DEVICE  | 1ST BAND | 2ND BAND |
|---------|----------|----------|
| FDLL400 | BROWN    | VIOLET   |

### High Voltage General Purpose Diode

Sourced from Process 1J. See MMBD1401-1405 for characteristics.

#### Absolute Maximum Ratings\*

TA = 25°C unless otherwise noted

| Symbol         | Parameter   | Value                     | Units  |
|----------------|---|---------------------------|--------|
| $W_{IV}$       | Working Inverse Voltage   | <b>FDH/FDLL400</b><br>150 | V      |
| $I_O$          | Average Rectified Current   | 200                       | mA     |
| $I_F$          | DC Forward Current  | 500                       | mA     |
| $i_f$          | Recurrent Peak Forward Current  | 600                       | mA     |
| $i_{f(surge)}$ | Peak Forward Surge Current<br>Pulse width = 1.0 second<br>Pulse width = 1.0 microsecond | 1.0<br>4.0                | A<br>A |
| $T_{stg}$      | Storage Temperature Range   | -65 to +200               | °C     |
| $T_J$          | Operating Junction Temperature  | 175                       | °C     |

\*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

**NOTES:**

- 1) These ratings are based on a maximum junction temperature of 200 degrees C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

#### Thermal Characteristics

TA = 25°C unless otherwise noted

| Symbol          | Characteristic                                | Max                 | Units |
|-----------------|---|---------------------|-------|
|                 |   | <b>FDH/FDLL 400</b> |       |
| $P_D$           | Total Device Dissipation<br>Derate above 25°C | 500                 | mW    |
|                 |   | 3.33                | mW/°C |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient       | 300                 | °C/W  |

## High Voltage General Purpose Diode

(continued)

### Electrical Characteristics

TA = 25°C unless otherwise noted

| Symbol          | Parameter                                | Test Conditions  | Min | Max        | Units    |
|-----------------|--|--|-----|------------|----------|
| B <sub>V</sub>  | Breakdown Voltage <b>FDH/FDLL400</b>     | I <sub>R</sub> = 100 μA  | 200 |            | V        |
| I <sub>R</sub>  | Reverse Current <b>FDH/FDLL400</b>       | V <sub>R</sub> = 150 V<br>V <sub>R</sub> = 150 V, T <sub>A</sub> = 150°C                     |     | 100<br>100 | nA<br>μA |
| V <sub>F</sub>  | Forward Voltage <b>FDH/FDLL400</b>       | I <sub>F</sub> = 200 mA<br>I <sub>F</sub> = 300 mA   |     | 1.0<br>1.1 | V<br>V   |
| C <sub>O</sub>  | Diode Capacitance <b>FDH/FDLL400</b>     | V <sub>R</sub> = 0, f = 1.0 MHz  |     | 2.0        | pF       |
| T <sub>RR</sub> | Reverse Recovery Time <b>FDH/FDLL400</b> | I <sub>F</sub> = I <sub>R</sub> = 30 mA, I <sub>rr</sub> = 3.0 mA,<br>R <sub>L</sub> = 100 Ω |     | 50         | nS       |

FDH400 / FDLL400

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| E <sup>2</sup> CMOS™ | PowerTrench®  | VCX™        |
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