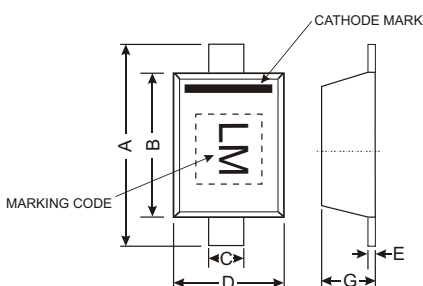


### Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Negligible Reverse Recovery Time
- Low Reverse Capacitance
- Ultra-Small Surface Mount Package

### Mechanical Data

- Case: SOD-523, Plastic
- Case material - UL Flammability Rating Classification 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Finish - Matte Tin (Note 1)  
Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Marking Code: LM
- Weight: 0.002 grams (approx.)



| SOD-523              |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| A                    | 1.50 | 1.70 |
| B                    | 1.10 | 1.30 |
| C                    | 0.25 | 0.35 |
| D                    | 0.70 | 0.90 |
| E                    | 0.10 | 0.20 |
| G                    | 0.50 | 0.70 |
| All Dimensions in mm |      |      |

### Maximum Ratings @ T<sub>A</sub> = 25°C unless otherwise specified

| Characteristic                                                                         | Symbol                                                 | Value       | Unit |
|----------------------------------------------------------------------------------------|--------------------------------------------------------|-------------|------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | V <sub>RRM</sub><br>V <sub>RWM</sub><br>V <sub>R</sub> | 30          | V    |
| RMS Reverse Voltage                                                                    | V <sub>R(RMS)</sub>                                    | 21          | V    |
| Mean Rectifying Current (Note 2)                                                       | I <sub>O</sub>                                         | 200         | mA   |
| Peak Forward Surge Current 8.3ms Half Sine                                             | I <sub>FSM</sub>                                       | 1.0         | A    |
| Power Dissipation (Note 2)                                                             | P <sub>d</sub>                                         | 150         | mW   |
| Thermal Resistance, Junction to Ambient Air (Note 2)                                   | R <sub>θJA</sub>                                       | 667         | °C/W |
| Operating and Storage Temperature Range                                                | T <sub>J</sub> , T <sub>STG</sub>                      | -65 to +125 | °C   |

### Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

| Characteristic                | Symbol             | Min | Typ | Max          | Unit     | Test Conditions                                 |
|-------------------------------|--------------------|-----|-----|--------------|----------|-------------------------------------------------|
| Reverse Breakdown Voltage     | V <sub>(BR)R</sub> | 30  | —   | —            | V        | I <sub>R</sub> = 150μA                          |
| Forward Voltage Drop          | V <sub>F</sub>     | —   | —   | 0.35<br>0.50 | V        | I <sub>F</sub> = 20mA<br>I <sub>F</sub> = 200mA |
| Peak Reverse Current (Note 3) | I <sub>R</sub>     | —   | —   | 150<br>30    | μA<br>μA | V <sub>R</sub> = 30V<br>V <sub>R</sub> = 10V    |
| Total Capacitance             | C <sub>T</sub>     | —   | 20  | —            | pF       | V <sub>R</sub> = 0V, f = 1.0MHz                 |

### Ordering Information (Note 4)

| Device     | Packaging | Shipping         |
|------------|-----------|------------------|
| SDM20U30-7 | SOD-523   | 3000/Tape & Reel |

- Note:
1. If lead-bearing terminal plating is required, please contact your Diodes Inc. sales representative for availability and minimum order details.
  2. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
  3. Short duration pulse test used so as to minimize self-heating effect.
  4. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

