

LM4001 THRU LM4007

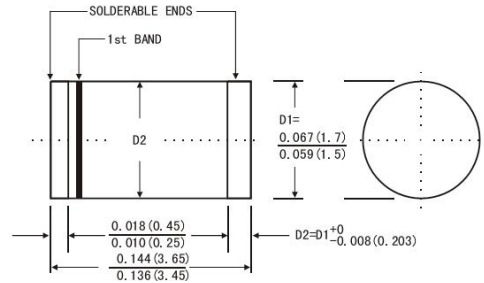
SURFACE MOUNT SILICON RECTIFIERS

Reverse Voltage - 50 to 1000 V

Forward Current - 1 A

Features

- The plastic package carries Underwrites Laboratory Flammability classification 94V-0
- For surface mounted application



MiniMELF (DO-213AA) Plastic Package

Mechanical Data

- Case: MiniMELF(DO-213AA), molded plastic body
- Terminals: Lead solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any

Maximum Ratings and Electrical characteristics

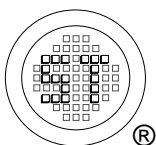
Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| Parameter | Symbols | LM4001 | LM4002 | LM4003 | LM4004 | LM4005 | LM4006 | LM4007 | Units |
|---|-----------------|---------------|--------|--------|--------|--------|--------|--------|--------------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current at $T_A = 75\text{ }^\circ\text{C}$ | $I_{(AV)}$ | 1 | | | | | | | A |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) | I_{FSM} | 25 | | | | | | | A |
| Maximum Forward Voltage at 1 A | V_F | 1.1 | | | | | | | V |
| Maximum Reverse Current at Rated DC Blocking Voltage $T_A = 25\text{ }^\circ\text{C}$ $T_A = 125\text{ }^\circ\text{C}$ | I_R | 5 50 | | | | | | | μA |
| Typical Junction Capacitance ¹⁾ | C_J | 15 | | | | | | | pF |
| Typical Thermal Resistance ²⁾ | $R_{\theta JA}$ | 75 | | | | | | | $^\circ\text{C/W}$ |
| Typical Thermal Resistance ³⁾ | $R_{\theta JL}$ | 30 | | | | | | | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range | T_j, T_{stg} | - 65 to + 175 | | | | | | | $^\circ\text{C}$ |

¹⁾ Measured at 1 MHz and applied reverse voltage of 4 V D.C

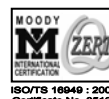
²⁾ Thermal resistance from junction to ambient, 0.24 X 0.24" (6 X 6 mm) copper pads to each terminal

³⁾ Thermal resistance from junction to terminal, 0.24 X 0.24" (6 X 6 mm) copper pads to each terminal



SEMTECH ELECTRONICS LTD.

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



LM4001 THRU LM4007

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

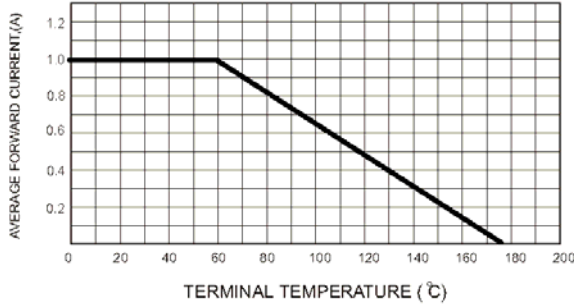


FIG.2-TYPICAL FORWARD CHARACTERISTICS

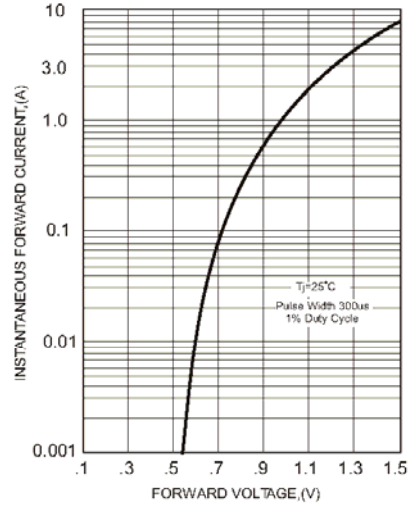


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

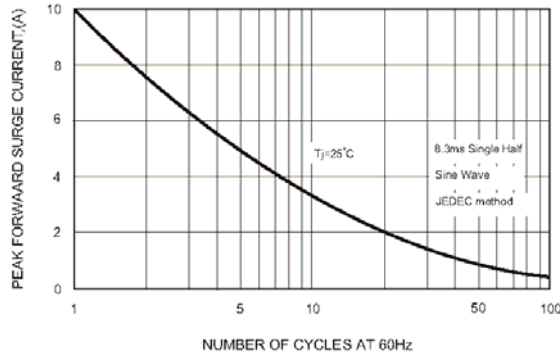


FIG.4-TYPICAL JUNCTION CAPACITANCE

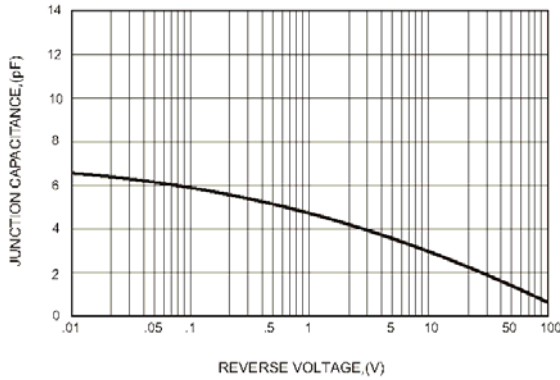
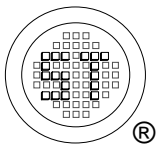
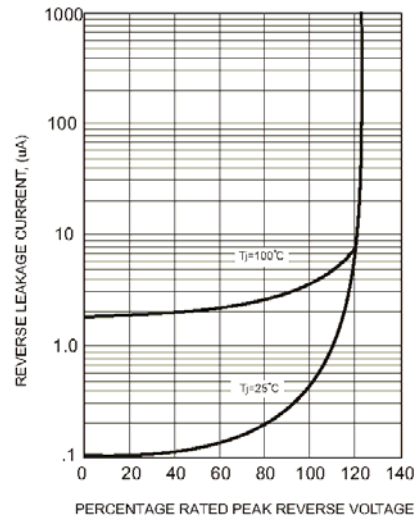


FIG.5 - TYPICAL REVERSE CHARACTERISTICS



SEMTECH ELECTRONICS LTD.
 (Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)

