

## FEATURES

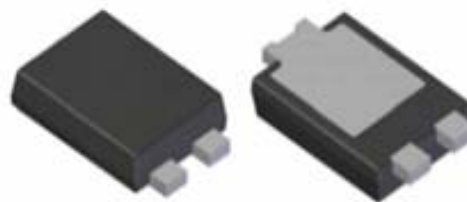
- High current capability, low forward voltage
- Excellent high temperature stability
- Low power loss, and high efficiency
- High Forward Surge Capability
- Patented package technology

## APPLICATIONS

- Switching mode power supply applications
- Portable equipment battery applications
- High frequency rectification
- DC/DC Converter
- Designed as bypass diodes for solar panels

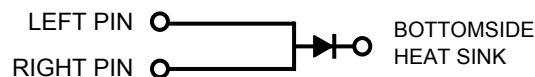
## SYMBOL

Package: TO-277B (SMD)



Top View

Bottom View



特征：超薄封装，体积小，超低压降等特点

典型应用：手机充电器、平板电脑、移动电源、其他充电器、1A、2A端口充电电路

以及太阳能电池、汽车电子、电脑周边、家电等产品，适合高密度PCB、高效率适配器电源

H1045L可代替同类器件型号：

SR1045L、MBR1045、MBR1045CT、MCC1045UL、SB1045L、SV1045、UL1045、SBR10U45SP5、MBR1045ULPS

## ■ ABSOLUTE MAXIMUM RATINGS ( $T_A=25^{\circ}\text{C}$ , unless otherwise specified)

| CHARACTERISTIC                                                          | SYMBOL      | RATING   | UNIT               |
|-------------------------------------------------------------------------|-------------|----------|--------------------|
| Repetitive peak reverse voltage                                         | $V_{RRM}$   | 45       | V                  |
| Maximum DC blocking voltage                                             | $V_{RM}$    | 45       |                    |
| Average forward current                                                 | $I_{F(AV)}$ | 10       | A                  |
| Surge non repetitive forward current (8.3ms single half sine-wave)      | $I_{FSM}$   | 278      |                    |
| Single pulse avalanche energy ( $I_{AS}=12\text{A}$ , $L=10\text{mH}$ ) | $E_{AS}$    | 530      | mJ                 |
| Junction Temperature                                                    | $T_J$       | 150      | $^{\circ}\text{C}$ |
| Storage Temperature                                                     | $T_{stg}$   | -55~+150 |                    |

## ■ Thermal Characteristics

| CHARACTERISTIC                           | SYMBOL    | RATING | UNIT                 |
|------------------------------------------|-----------|--------|----------------------|
| Thermal Resistance, Junction-to-Ambience | $R_{QJA}$ | 31     | $^{\circ}\text{C/W}$ |

## ■ Electrical Characteristics

| Characteristic          | Symbol | Test Condition             | Rating                    |      |      | UNIT |
|-------------------------|--------|----------------------------|---------------------------|------|------|------|
|                         |        |                            | Min                       | Typ  | Max  |      |
| Forward voltage drop    | $V_F$  | $I_F=2\text{A}$            | --                        | 0.31 | 0.35 | V    |
|                         |        | $I_F=8\text{A}$            | --                        | 0.37 | 0.38 |      |
|                         |        | $I_F=10\text{A}$           | $T_J=25^{\circ}\text{C}$  | --   | 0.41 |      |
|                         |        |                            | $T_J=100^{\circ}\text{C}$ | --   | 0.36 |      |
| Reverse leakage current | $I_R$  | $V_R=\text{Max. } V_{RRM}$ | $T_J=25^{\circ}\text{C}$  | --   | 0.06 | mA   |
|                         |        |                            | $T_J=125^{\circ}\text{C}$ | --   | 17   |      |

■ Rating and Characteristic Curves

Fig-1. Typical Forward Characteristics

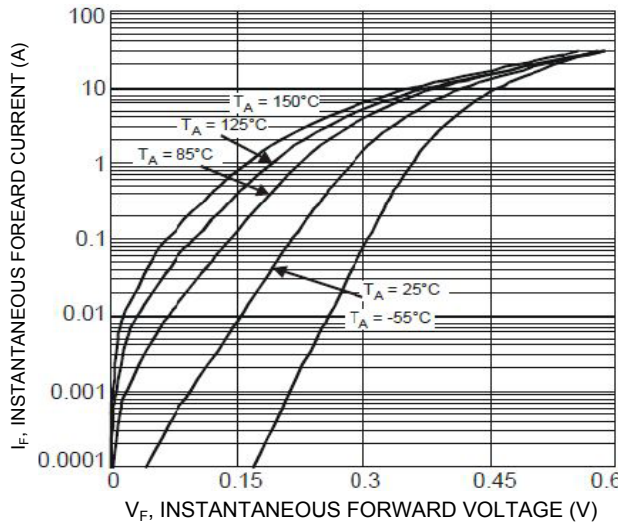


Fig-2. Typical Reverse Characteristics

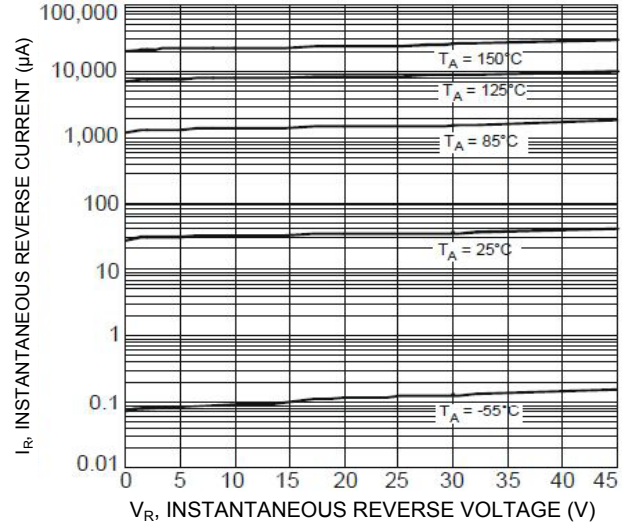


Fig-3. Forward Current Derating Curve

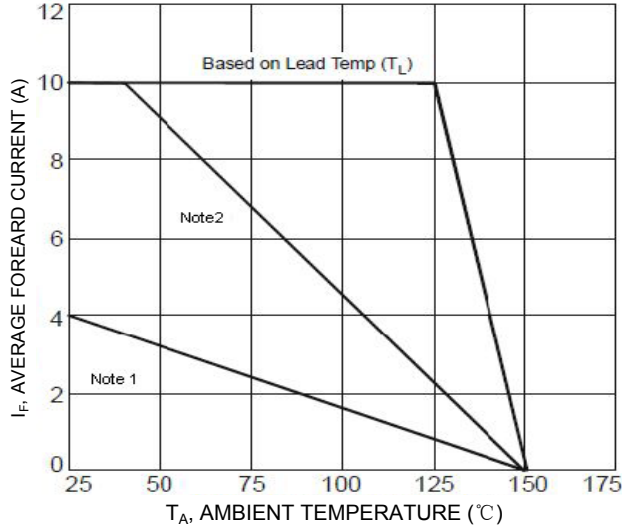


Fig-4. Operating Temperature Derating Curve

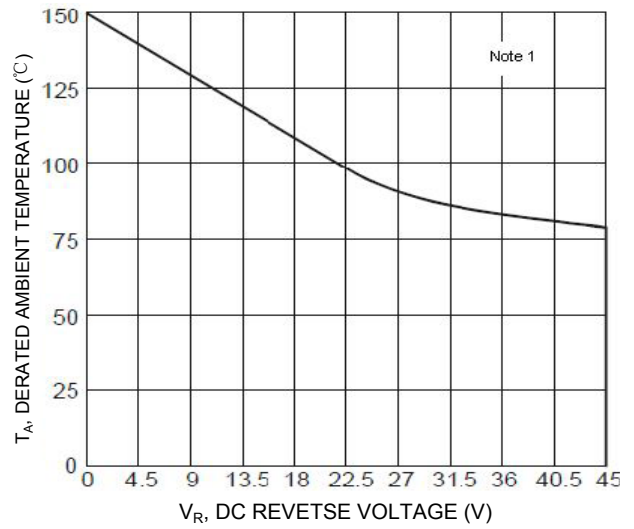
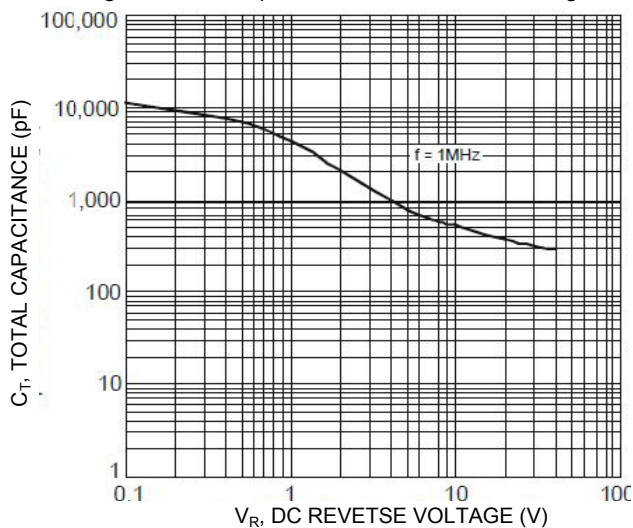
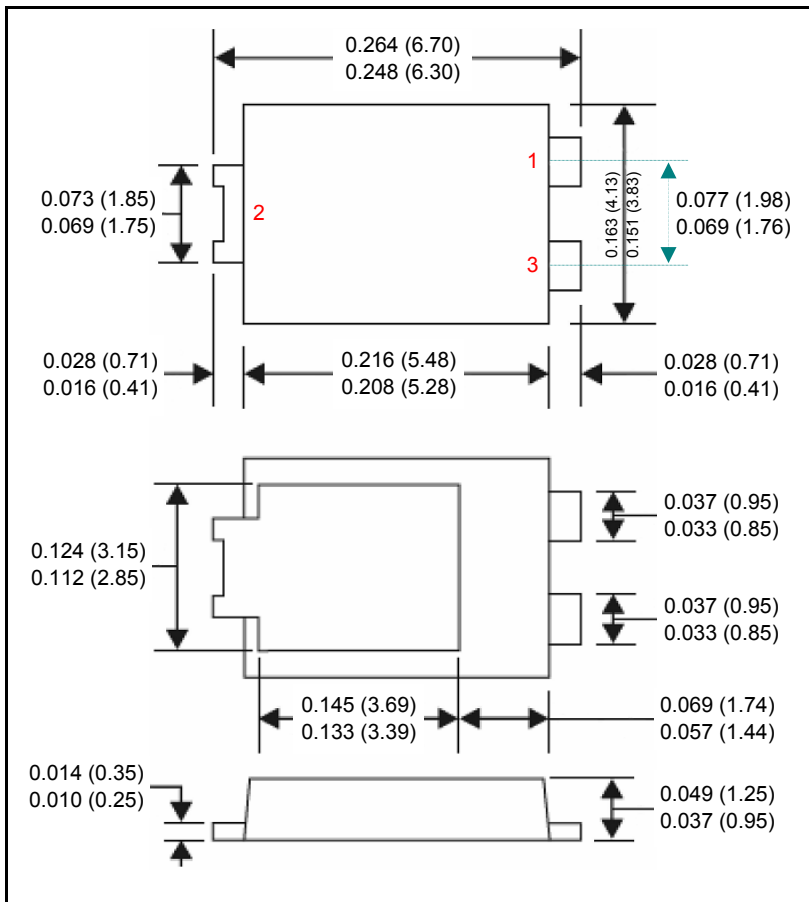


Fig-5. Total Capacitance VS. Reverse Voltage

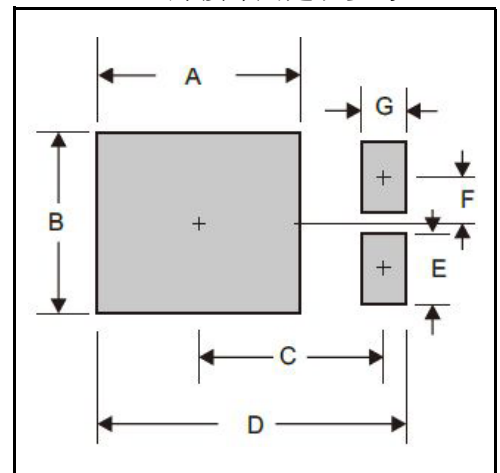


**TO-277B Package Dimensions inch (millimeters) TO-277B SMD 表面贴封装尺寸数据: 英寸(毫米)**

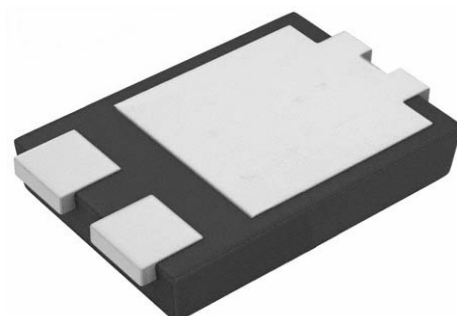


SMD表面贴装  
TO-277  
TO-277B  
QFN5×6  
POWERDI5

**Suggested Pad Layout  
PCB焊接布局建议参考**



| A           | B           | C           | D           | E           | F           | G           |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 0.185(4.70) | 0.142(3.60) | 0.152(3.87) | 0.260(6.60) | 0.055(1.40) | 0.035(0.90) | 0.031(0.80) |



TO-277B（表面贴封装）包装方式  
载带卷盘包装: Tape & Reel  
每卷数量: 5000只 (5Kpcs/Reel)  
每盒数量: 10000只 (10Kpcs/BOX)



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