

## 表面安装高效率整流二极管

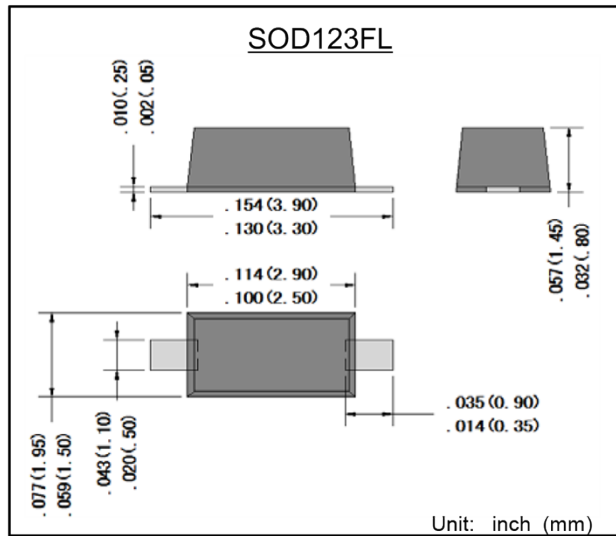
反向电压 50 ~ 1000 V

正向电流 1.0 A

## Surface Mount High-efficiency Rectifiers

Reverse Voltage 50 ~ 1000 V

Forward Current 1.0 A



### 特征 Features

- 玻璃钝化芯片 Glass passivated chip
- 反向漏电流低 Low reverse leakage
- 正向浪涌承受能力强 High forward surge capability
- 高信赖性 High reliability
- 高温焊接保证 High temperature soldering guaranteed:  
260°C/10 秒  
260°C/10seconds
- 引线 and 管体皆符合RoHS标准  
Lead and body according with RoHS standard
- 型号后缀“-F”标记无卤素产品  
Green compound with suffix “-F” on Marking

### 机械数据 Mechanical Data

- 封装外形:SOD123FL塑封 Case:SOD123FL Molded plastic
- 环氧树脂:UL易燃等级:94V-0  
Epoxy:UL 94V-0 rate flame retardant
- 引脚:镀锡,无铅 Lead: Pure tin plated, lead free

### 极限值和温度特性 TA = 25°C 除非另有规定。

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

| 参数<br>Parameter   | 符号<br>Symbols   | US1AL        | US1BL | US1DL | US1GL | US1JL | US1KL | US1ML | 单位<br>Unit |
|---|-----------------|--------------|-------|-------|-------|-------|-------|-------|------------|
| 最大可重复峰值反向电压<br>Maximum repetitive peak reverse voltage  | $V_{RRM}$       | 50           | 100   | 200   | 400   | 600   | 800   | 1000  | V          |
| 最大均方根电压 Maximum RMS voltage   | $V_{RMS}$       | 35           | 70    | 140   | 280   | 420   | 560   | 700   | V          |
| 最大直流阻断电压<br>Maximum DC blocking voltage   | $V_{DC}$        | 50           | 100   | 200   | 400   | 600   | 800   | 1000  | V          |
| 最大正向平均整流电流<br>Maximum average forward rectified current   | $I_{F(AV)}$     | 1.0          |       |       |       |       |       |       | A          |
| 正向不重复浪涌电流 8.3 ms单一正弦半波<br>Non-repetitive peak forward surge current<br>8.3 ms single half sine-wave | $I_{FSM}$       | 30           |       |       |       |       |       |       | A          |
| 典型热阻 Typical thermal resistance (Note 1)  | $R_{\theta JA}$ | 180          |       |       |       |       |       |       | °C/W       |
| 工作结温<br>Operating junction temperature  | $T_J$           | 150          |       |       |       |       |       |       | °C         |
| 存储温度<br>Storage temperature range   | $T_{STG}$       | -55 --- +150 |       |       |       |       |       |       | °C         |

备注 Note:

1) 安装在覆铜面积5.0毫米\*5.0毫米的PCB板上,从PN结到周围环境的热阻。

1) Thermal resistance from junction to ambient, PCB mounted with 5.0mm\*5.0mm Copper Pad Areas.

### 电特性 TA = 25°C 除非另有规定。

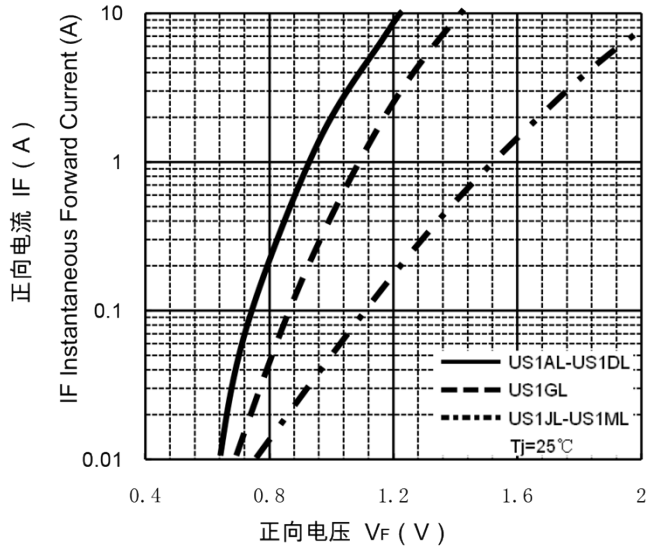
Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

| 参数<br>Parameter  | 符号<br>Symbols | US1AL | US1BL | US1DL | US1GL | US1JL | US1KL | US1ML | 单位<br>Unit |
|--|---------------|-------|-------|-------|-------|-------|-------|-------|------------|
| 最大正向电压 @IF=1.0A<br>Maximum forward voltage                         | $V_F$         | 1.0   |       |       | 1.3   | 1.7   |       |       | V          |
| 最大反向电流 @V <sub>DC</sub> TA= 25°C<br>Maximum reverse current        | $I_R$         | 5     |       |       |       |       |       |       | μA         |
| 最大反向恢复时间 IF=0.5A, IR=1.0A, IRR=0.25A<br>MAX. reverse recovery time | $T_{rr}$      | 50    |       |       |       | 75    |       |       | ns         |

## 特性曲线 Characteristic Curves

正向特性曲线 (典型值)

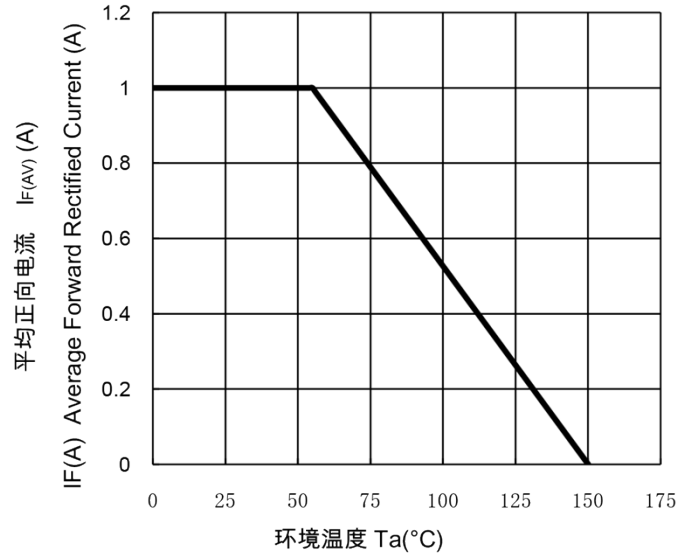
TYPICAL FORWARD CHARACTERISTIC



$V_F$  Instantaneous Forward Voltage (V)

正向电流降额曲线

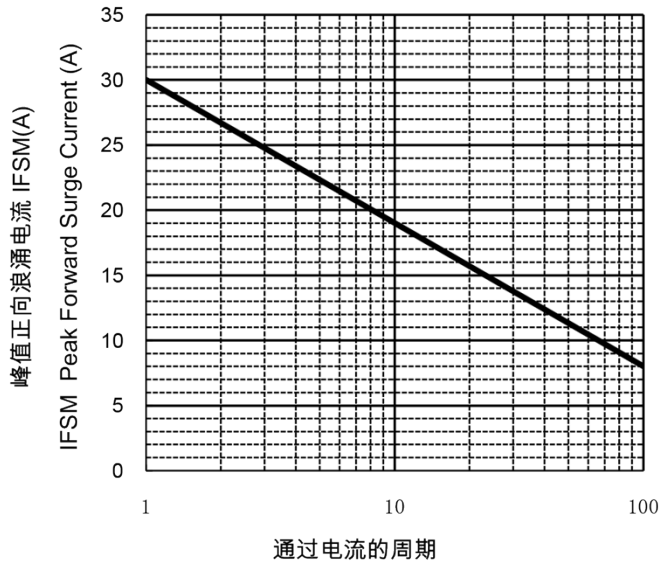
FORWARD CURRENT DERATING CURVE



$T_{amb}$ , ambient temperature ( $^\circ\text{C}$ )

浪涌特性曲线 (最大值)

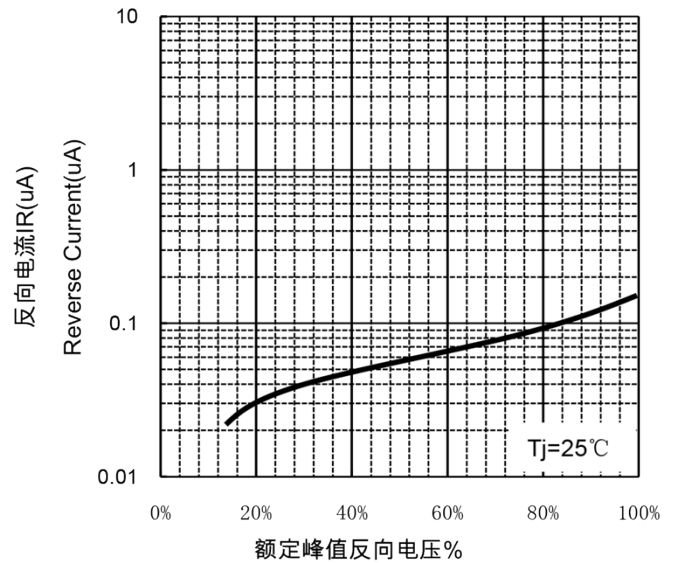
MAXIMUM NON REPETITIVE  
PEAK FORWARD SURGE CURRENT



Number of Cycles at 60 Hz.

反向特性曲线

Typical Reverse Characteristics



Percent Of Rated Peak Reverse voltage %