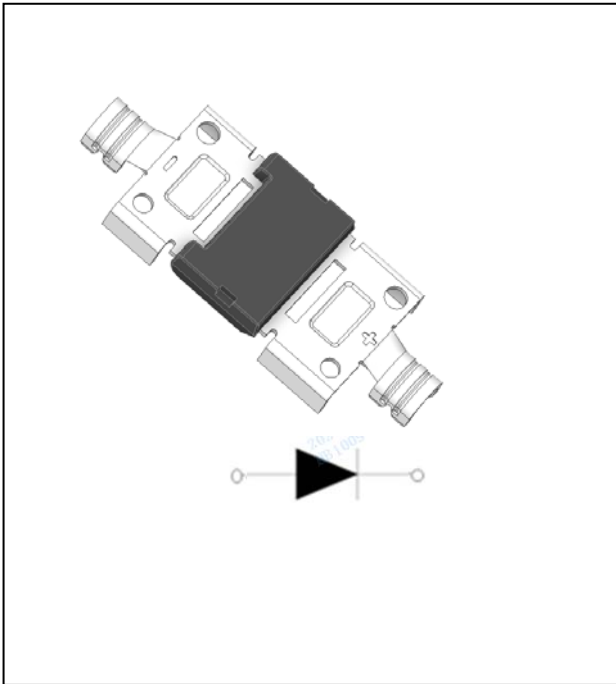




# MK3045

## Schottky Bypass Diode Module

### 肖特基旁路二极管模块



#### Features/产品特点

- High frequency operation /高频工作
- Low forward voltage drop/ 正向压降小
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance /高纯度、高温环氧封装，机械强度和防潮性好
- long term reliability/长期可靠性好

#### Typical Applications/典型应用

Photovoltaic solar cell protection schottky rectifier/  
光伏太阳能电池保护肖特基整流器

#### Mechanical Data/产品参数

- Package/封装: GF030S
- Molding compound meets UL 94 V-0 flammability rating/塑封材料符合UL 94 V-0可燃性等级
- Terminals/引脚材料: Tin plated leads, solderable per J-STD-002 and JESD 22-B102/铜镀锡引线，可焊性符合J-STD-002 JESD 22-B102标准
- Polarity/极性: As marked/见印字符号

#### Maximum Ratings (Ta=25°C Unless otherwise specified) / 最大额定值 (环境温度Ta=25°C，除非另有定义)

| PARAMETER<br>参数   | SYMBOL<br>符号 | UNIT<br>单位 | MK3045    |
|---|--------------|------------|-----------|
| Device marking code<br>产品型号   |              |            | MK3045    |
| Repetitive Peak Reverse Voltage<br>反向重复峰值电压   | VRRM         | V          | 45        |
| Average Rectified Output Current @60Hz half sine-wave, R-load, Ta=25°C<br>平均整流输出电流，测试条件：60Hz正弦半波，电阻负载，环境温度Ta=25°C                               | Io           | A          | 30        |
| Surge(Non-repetitive)Forward Current@60Hz half sine-wave, 1 cycle, Ta=25°C<br>正向(不重复)浪涌电流，测试条件：60Hz正弦半波，一个周期，结温Tj=25°C                          | IFSM         | A          | 325       |
| Current Squared Time @1ms≤t<8.3ms Tj=25°C<br>正向浪涌周期电流平方时间积(1ms≤t<8.3ms 结温Tj=25°C)   | I²t          | A²s        | 435       |
| Storage Temperature<br>储存温度   | Tstg         | °C         | -55 ~+150 |
| Junction Temperature/<br>IN DC Forward Mode-Forward Operations, without reverse bias, t≤1 h (Fig. 1)(1)<br>结温<br>在正向直流条件下，不施加反向电压，通电≤1h (图示1) ① | Tj           | °C         | -55 ~+200 |

NOTE: (1) Meets the requirements of IEC 61215 Ed. 2 bypass diode thermal test.

注：（1）满足 IEC 61215 ED.2 旁路二极管热性能要求。

#### Electrical Characteristics (Ta=25°C Unless otherwise specified) / 电特性 (环境温度Ta=25°C 除非另有规定)

| PARAMETER<br>参数   | SYMBOL<br>符号 | UNIT<br>单位 | TEST CONDITIONS<br>测试条件  | MK3045 |
|---|--------------|------------|--------------------------|--------|
| Maximum instantaneous forward voltage drop per diode<br>最大正向瞬时压降                        | VFM          | V          | 正向最大电流IF=30A             | 0.55   |
| Maximum DC reverse current at rated DC blocking voltage per diode<br>在反向峰值电压条件下，最大的反向电流 | IRRM1        | mA         | VRM=VRRM<br>环境温度Ta=25°C  | 0.1    |
|   | IRRM2        |            | VRM=VRRM<br>环境温度Ta=100°C | 7.0    |
|   | IRRM3        |            | VRM=VRRM<br>环境温度Ta=125°C | 20     |



# MK3045

## ■ Thermal Characteristics (Ta=25°C Unless otherwise specified) / 热阻(环境温度Ta=25°C 除非另有规定)

| PARAMETER<br>参数              | SYMBOL<br>符号 | UNIT<br>单位 | MK3045 |
|------------------------------|--------------|------------|--------|
| Thermal Resistance (1)<br>热阻 | RθJ-C        | °C/W       | 1.0    |

**Note:** (1) Thermal resistance from Between junction and case, On glass-epoxi substrate.

(1) 注: (1) Pn结与二极管壳体间热阻, 在玻璃基板上。

## ■ Ordering Information (Example) / 包装信息 (示例)

| PREFERRED P/N<br>型号规格 | UNIT WEIGHT(g)<br>单位重量(克)   | MINIIMUM PACKAGE(pcs)<br>最小单管数量(颗) | OUTER CARTON<br>QUANTITY(pcs)<br>整箱数量(颗) | DELIVERY MODE<br>包装方式 |
|-----------------------|-----------------------------|------------------------------------|--|-----------------------|
| MK3045                | Approximate 5.5<br>平均5.5克/只 | 30                                 | 1500                                     | Tube                  |

## ■ Characteristics (Typical) / 特性(典型值)

FIG1: I<sub>o</sub> - T<sub>c</sub> Curve  
I<sub>o</sub>-T<sub>c</sub>特性曲线

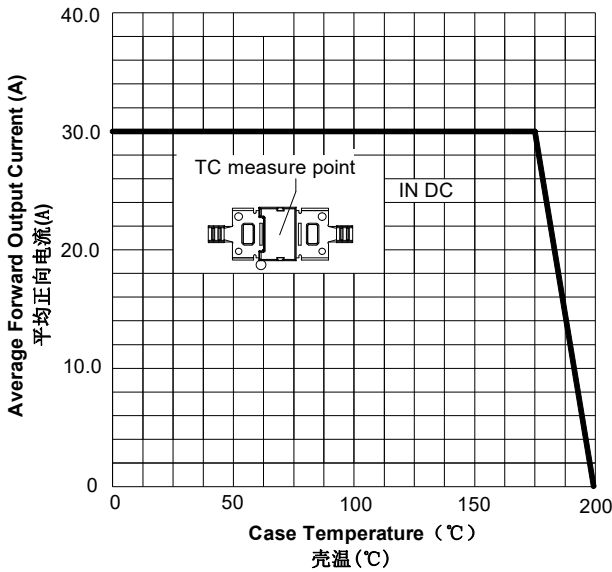


FIG2: Surge Forward Current Capability  
向浪涌电流能力

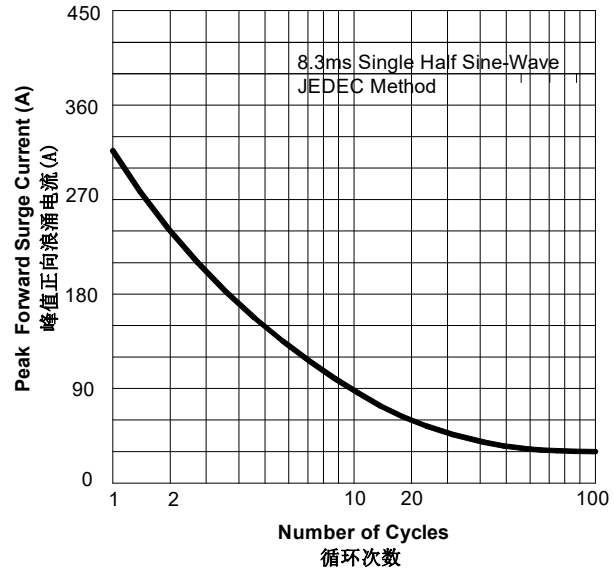


FIG3: Forward Voltage  
正向压降

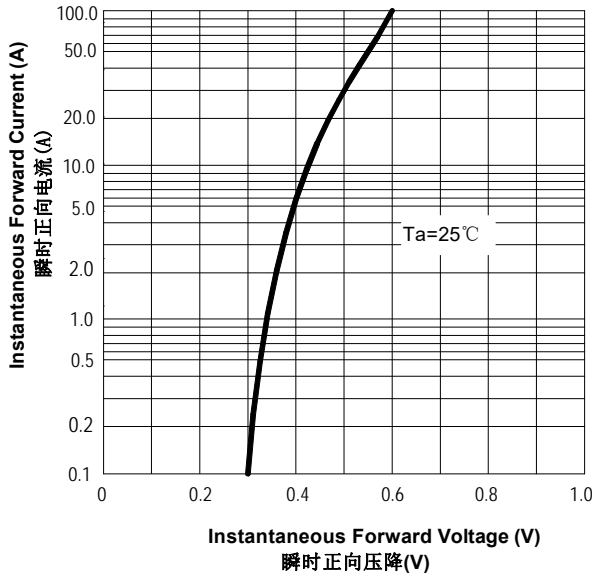
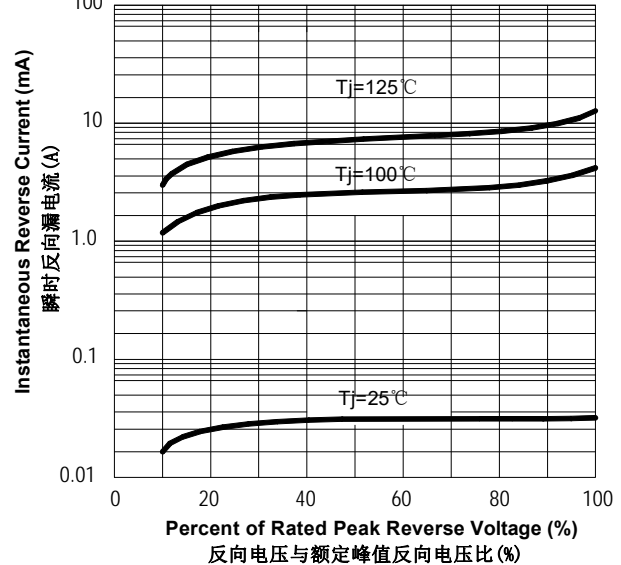


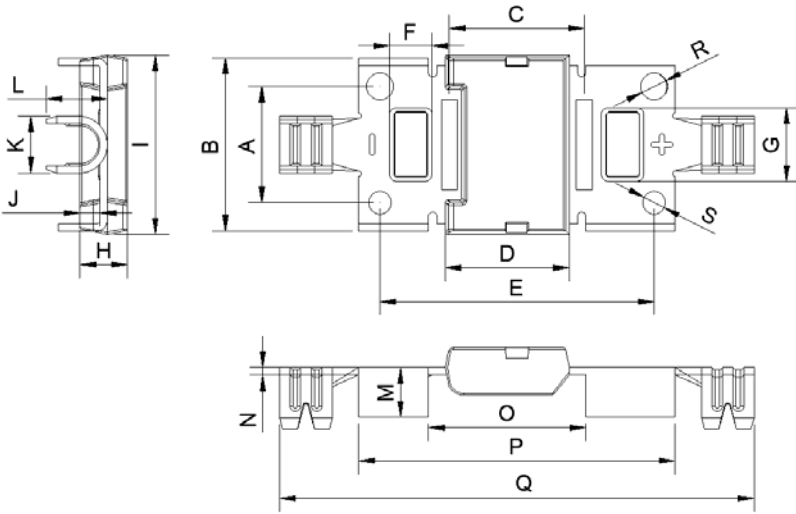
FIG4: Typical Reverse Characteristics  
反向漏电典型值





# MK3045

## ■Outline Dimensions / 外形尺寸



| DIM | MM    |       | NOTE |
|-----|-------|-------|------|
|     | MIN   | MAX   |      |
| A   | 10.5  | 11.5  |      |
| B   | 15.9  | 16.9  |      |
| C   | 11.6  | 12.6  |      |
| D   | 11.23 | 12.23 |      |
| E   | 25.5  | 26.5  |      |
| F   | 3.5   | 4.5   |      |
| G   | 6.5   | 7.5   |      |
| H   | 4.3   | 4.7   |      |
| I   | 16.5  | 17.5  |      |
| J   | 1.7   | 2.1   |      |
| K   | 5.1   | 5.7   |      |
| L   | 5.65  | 5.95  |      |
| M   | 4.4   | 5     |      |
| N   | 0.6   | 0.8   |      |
| O   | 14.73 | 15.13 |      |
| P   | 29.5  | 30.5  |      |
| Q   | 44.5  | 45.5  |      |
| R   | 2.35  | 2.65  |      |
| S   | 2     | 2.3   |      |



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