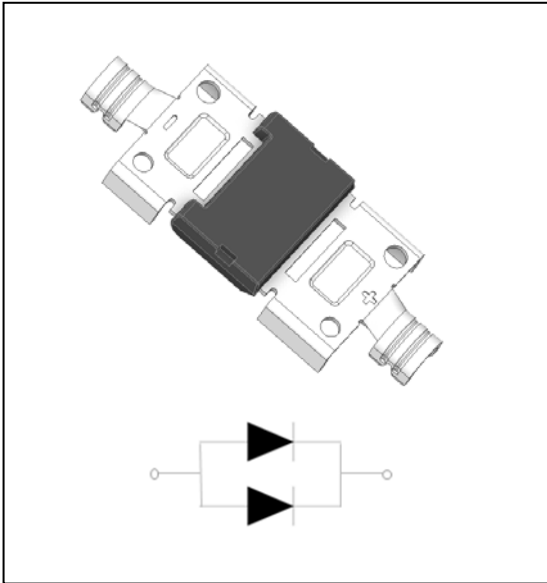




# MK5045

## 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 参数	SYMBOL 符号	UNIT 单位	MK5045
Device marking code 产品型号			MK5045
Repetitive Peak Reverse Voltage 反向重复峰值电压	VRRM	V	45
Average Rectified Output Current @60Hz half sine-wave, R-load, Ta=25°C 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	50
Surge(Non-repetitive)Forward Current@60Hz half sine-wave, 1 cycle, Ta=25°C 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	700
Current Squared Time @1ms≤t<8.3ms Tj=25°C 正向浪涌周期电流平方时间积(1ms≤t<8.3ms 结温Tj=25°C)	I²t	A²s	2030
Storage Temperature 储存温度	Tstg	°C	-55 ~+150
Junction Temperature/ IN DC Forward Mode-Forward Operations, without reverse bias, t ≤1 h (Fig. 1)(1) 结温 在正向直流条件下，没有施加反向电压，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 参数	SYMBOL 符号	UNIT 单位	TEST CONDITIONS 测试条件	MK5045
Maximum instantaneous forward voltage drop per diode 最大正向瞬时压降	VFM	V	IFM=50A 正向最大电流=50A	0.5
Maximum DC reverse current at rated DC blocking voltage per diode 在直流反向峰值电压条件下，最大的反向电流	IRRM1	mA	VRM=VRRM 环境温度Ta=25°C	0.2
	IRRM2		VRM=VRRM 环境温度Ta=100°C	18
	IRRM3		VRM=VRRM 环境温度Ta=125°C	70



# MK5045

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

PARAMETER 参数	SYMBOL 符号	UNIT 单位	MK5045
Thermal Resistance (1) 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 型号规格	UNIT WEIGHT(g) 单位重量(克)	MINIIMUM PACKAGE(pcs) 最小单管数量(颗)	OUTER CARTON QUANTITY(pcs) 整箱数量(颗)	DELIVERY MODE 包装方式
MK5045	Approximate 5.5 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

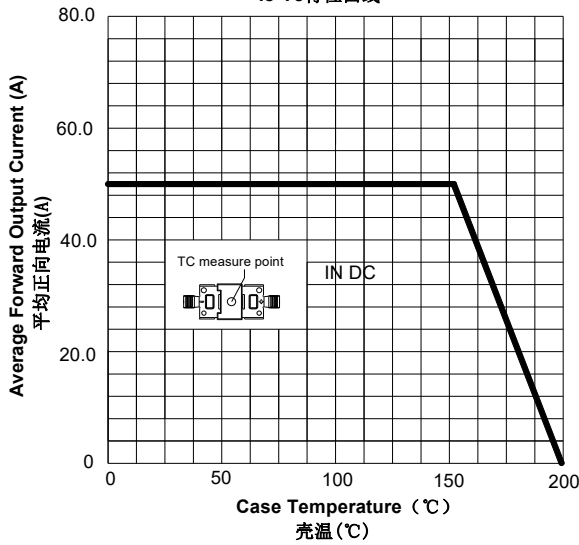


FIG2: Surge Forward Current Capability  
向浪涌电流能力

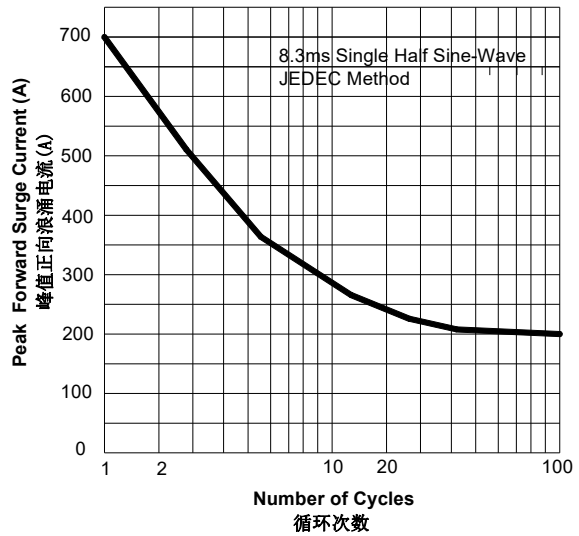


FIG3: Forward Voltage  
正向压降

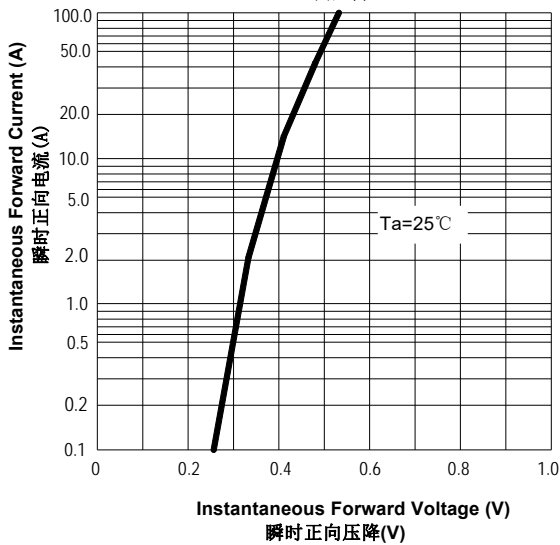
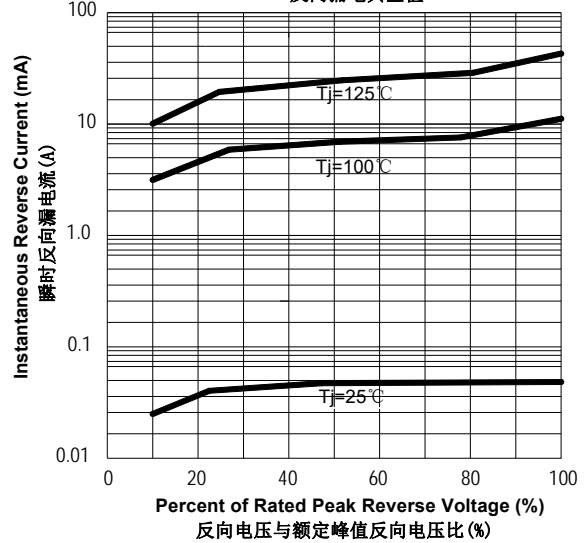


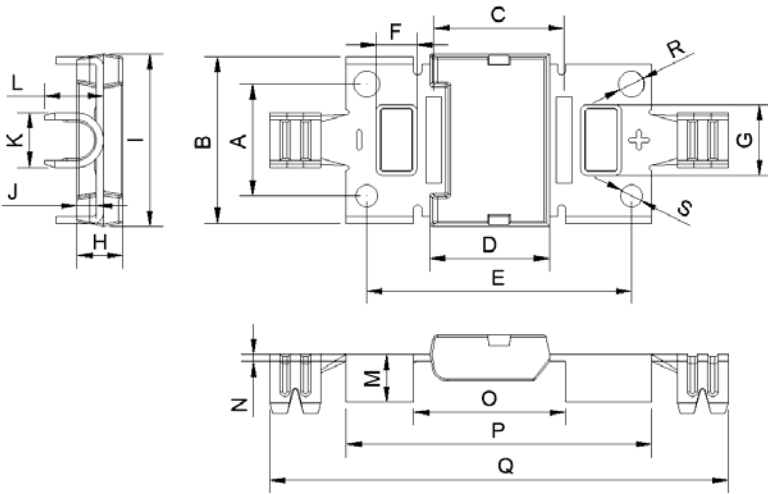
FIG4: Typical Reverse Characteristics  
反向漏电典型值





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## ■Outline Dimensions / 外形尺寸



DIM	MM		NOTE
	MIN	MAX	
A	10.5	11.5	
B	15.9	16.9	
C	12.6	13	
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	5.8	
L	5.6	6	
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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