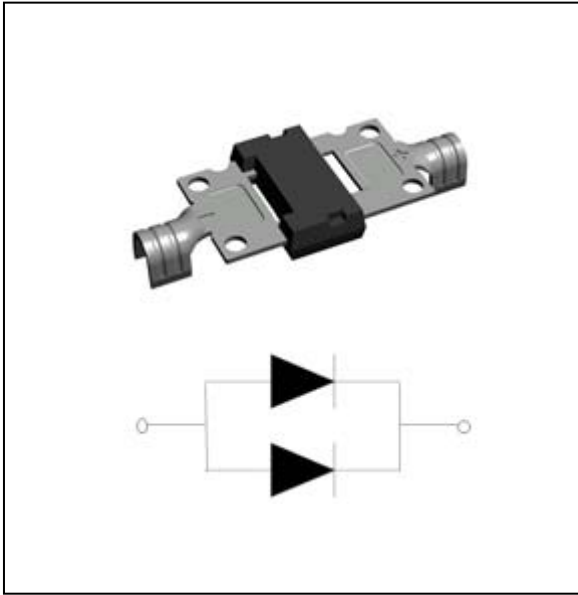




# GFMK4045C

## Schottky Bypass Diode Module



### Features

- High frequency operation
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Guard ring for enhanced ruggedness and long term reliability

### Typical Applications

Photovoltaic solar cell protection schottky rectifier

### Mechanical Data

- **Package:** GF025  
Molding compound meets UL 94 V-0 flammability rating,
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD 22-B102
- **Polarity:** As marked

### ■Maximum Ratings ( $T_a=25^{\circ}\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GFMK4045C
Device marking code			GFMK4045C
Repetitive Peak Reverse Voltage	VRRM	V	45
Average Rectified Output Current @60Hz sine wave, R-load, $T_a=25^{\circ}\text{C}$	IO	A	40
Surge(Non-repetitive)Forward Current @60Hz sine wave, 1 cycle, $T_j=25^{\circ}\text{C}$	IFSM	A	650
Current Squared Time @1ms≤t<8.3ms $T_j=25^{\circ}\text{C}$ , Rating of per diode	I <sup>2</sup> t	A <sup>2</sup> S	1750
Storage Temperature	Tstg	°C	-55 ~+150
Junction Temperature IN DC Forward Mode-Forward Operations, without reverse bias, t≤1 h (Fig. 1) (1)	Tj	°C	-55 ~+200

#### Note

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

### ■Electrical Characteristics ( $T_a=25^{\circ}\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	GFMK4045C
Maximum instantaneous forward voltage drop per diode	VF	V	IFM=40A	0.51
Maximum DC reverse current at rated DC blocking voltage per diode	IRRM1	mA	VRM=VRRM $T_a=25^{\circ}\text{C}$	0.12
	IRRM2	mA	VRM=VRRM $T_a=100^{\circ}\text{C}$	13
	IRRM3	mA	VRM=VRRM $T_a=125^{\circ}\text{C}$	60



# GFMK4045C

## ■ Thermal Characteristics ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	GFMK4045C
Thermal Resistance (1)	$R_{\theta J-C}$	$^\circ\text{C/W}$	1.5

### Note

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

## ■ Ordering Information (Example)

PREFERRED P/N	UNIT WEIGHT(g)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
GFMK4045C	Approximate 4.0	30	600	2400	Tube

## ■ Characteristics (Typical)

FIG1:  $I_o - T_c$  Curve

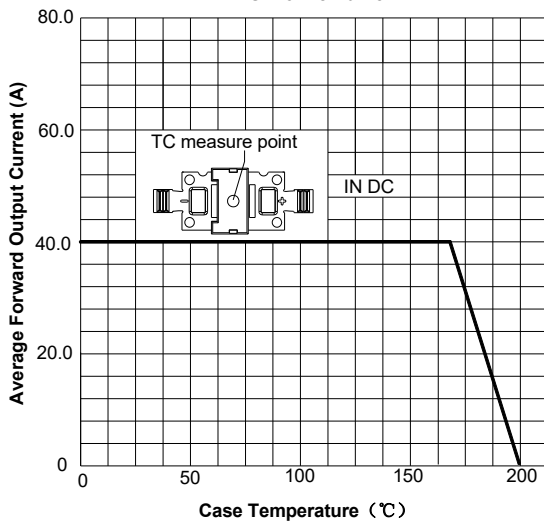


FIG2: Surge Forward Current Capability

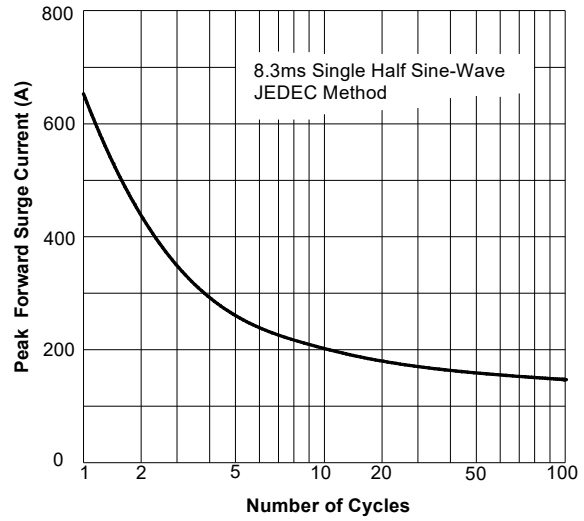


FIG3: Instantaneous Forward Voltage

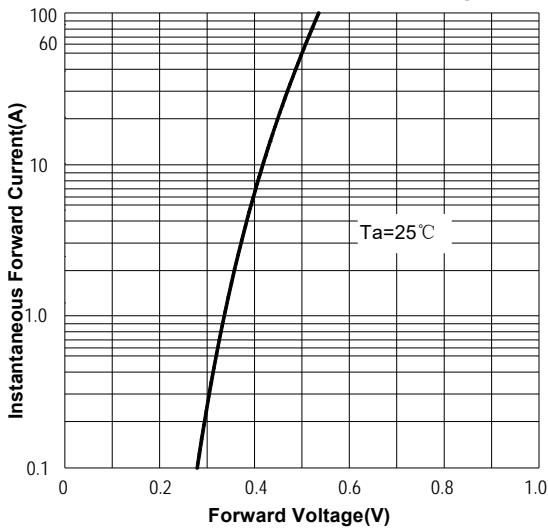
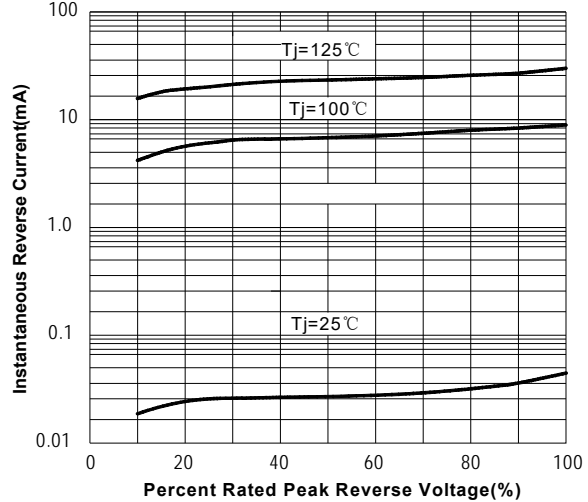


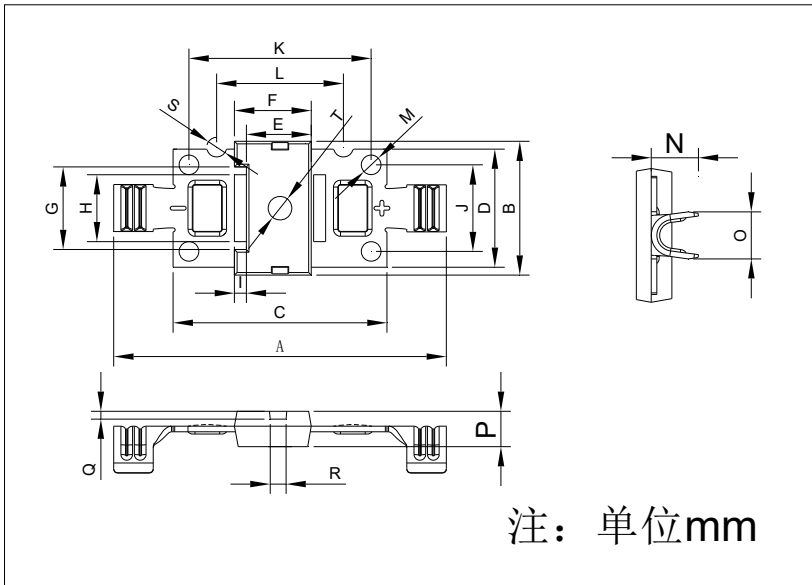
FIG4: Instantaneous Reverse Characteristics





# GFMK4045C

## ■Outline Dimensions (in millimeters)



DIM	MM		NOTE
	MIN	MAX	
A	41.5	42.5	
B	16.5	17.5	
C	26.5	27.5	
D	14.5	15.5	
E	7.9	8.5	
F	9.4	10	
G	10.50REF		
H	8.2	8.8	
I	1.2	1.8	
J	10.7	11.3	
K	22.7	23.3	
L	15.7	16.3	
M	Φ2.35	Φ2.65	
N	5.65	6.25	
O	5.72	6.22	
P	4.4	4.6	
Q	0.7	1.3	
R	1.7	2.3	
S	Φ2.3	Φ2.7	
T	Φ2.7	Φ3.3	



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