



GF3045

Integrated bypass diode for Solar cell Module

Features

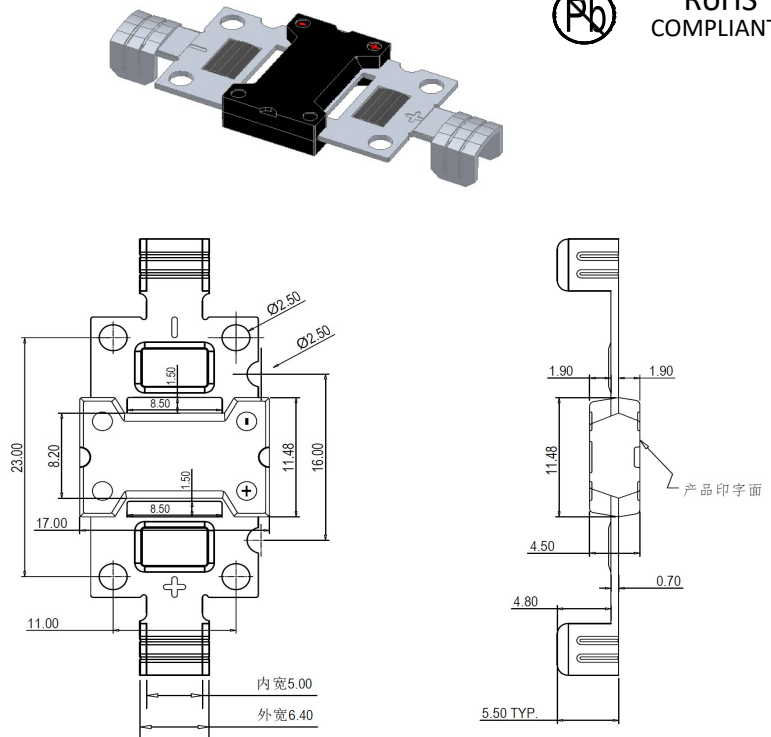
- Schottky Barrier high diode;
- Low thermal resistance;
- Lower forward voltage drop, low power loss;
- Isolate Package design, ideal for heat dispersion;
- High forward current capability;
- Excellent anti-humidity;
- Low profile package;
- High forward surge capability;

Mechanical Data

- Case: GFM;
- Terminals: Copper;
- High temperature soldering guaranteed;
Heated-tool welding 260℃, 10seconds
- Marking: As marked on product;

Order Information

Package	GFM
PVC tube	30pcs/ tube
Inner Box	300pcs/ Inner box
Carton	1500pcs/ Carton



Typical Applications

For the protection of solar cell bypass box.
Using DC forward current without reverse bias.

Case: GFM

Dimensions in millimeters

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.

For capacitive load, derate current by 20%.

Parameter	Symbol	GF3045		Unit
Maximum repetitive peak reverse voltage	V_{RRM}	45		Volt
Maximum working peak reverse voltage	V_{RWM}	45		Volt
Average rectified output current @ 60Hz sine wave, $T_a=25^\circ\text{C}$	I_O	30		Amps
Non-Repetitive Peak forward surge current @ 60Hz, single sine-wave load	I_{FSM}	450		Amps
Rating for fusing ($t < 8.3\text{ms}$)	I^2t	840		A^2sec
Instantaneous forward voltage drop	V_F	0.45 Typ. 0.50 Typ. 0.52 Typ. 0.54 Typ.	0.55 max. 0.60 max. 0.62 max. 0.64 max.	Volt
Reverse Current at Rated DC reverse Voltage	@ $T_j=25^\circ\text{C}$ I_R	100 Typ. 500 max.		μA
	@ $T_j=125^\circ\text{C}$ I_R	10.00 Typ. 50.00 max.		mA
Typical capacitance (1.0 MHz and Applied reverse Voltage of 5.0V D.C)	C_j	1400		pF
Typical thermal resistance	$R_{\theta J-c}$	1.5		$^\circ\text{C/W}$
Storage Temperature	T_{STG}	-55 to +150		$^\circ\text{C}$
Junction Temperature IN DC Forward Mode, without reverse bias, $t \leq 1\text{ h}$	T_J	-55 to +150		$^\circ\text{C}$



Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)

FIG.1 Derating Curve Output Rectified Current

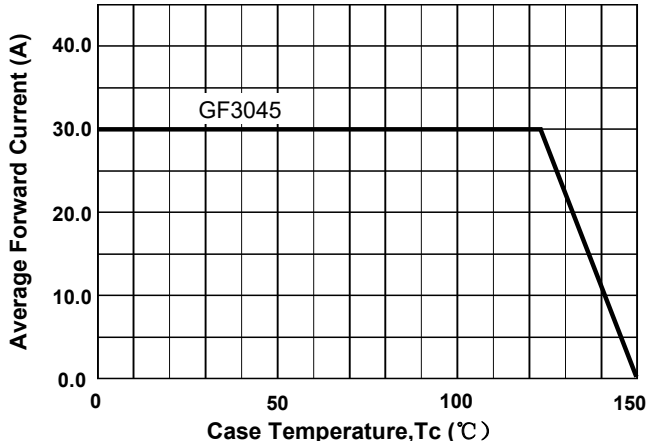


FIG.2 Typical Forward Characteristics per Diode

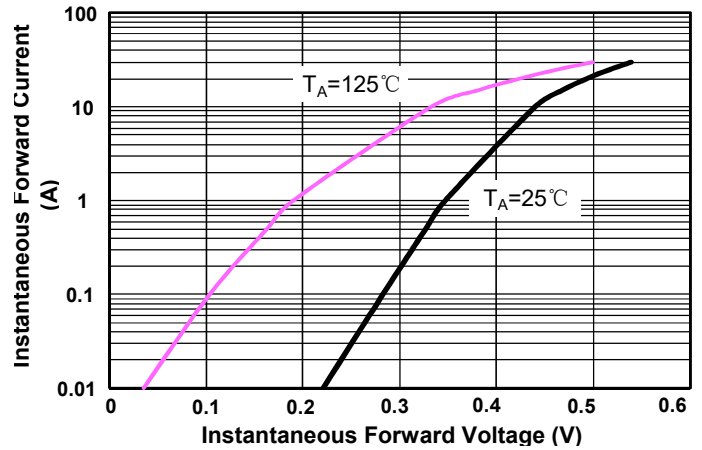


FIG.3 Maximum Non-Repetitive Peak Forward Surge Current per Diode

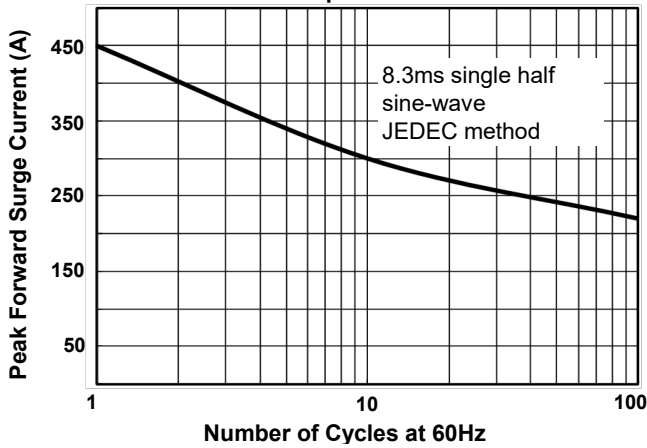


FIG.4 Typical Reverse Characteristics per Diode

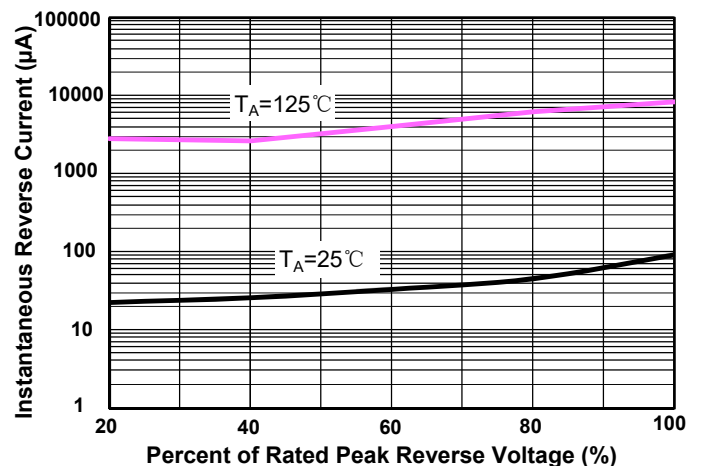
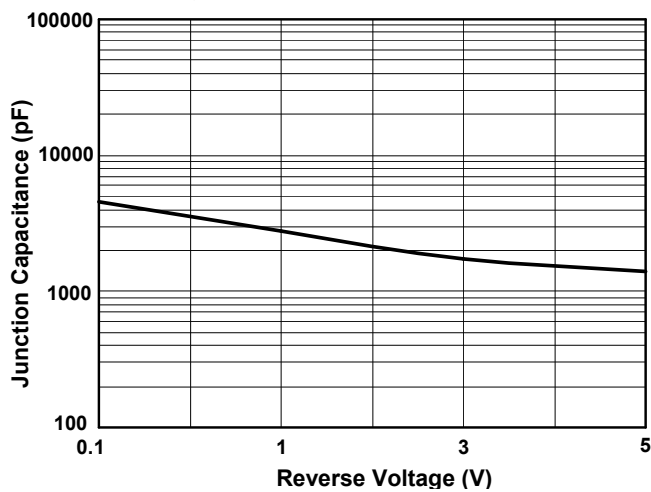


FIG.5 Typical Junction Capacitance per Diode





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