



GF4045

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°C, 10seconds
- Marking: As marked on product;

Order Information

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

Typical Applications

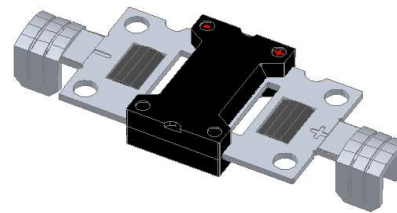
For the protection of solar cell bypass box.
Using DC forward current without reverse bias.

Maximum Ratings and Electrical Characteristics

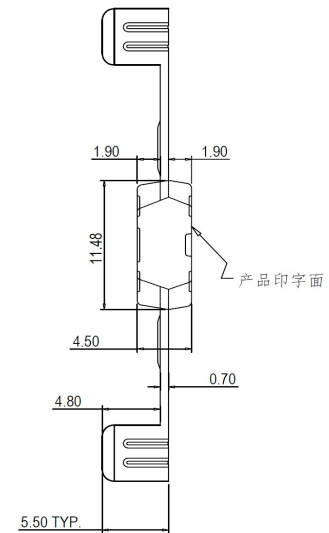
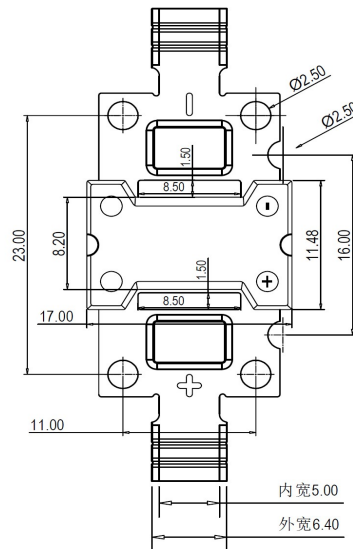
Ratings at 25°C ambient temperature unless otherwise specified.

For capacitive load, derate current by 20%.

Parameter	Symbol	GF4045		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, Ta=25℃	I _O	40		Amps
Non-Repetitive Peak forward surge current @ 60Hz, single sine-wave load	I _{FSM}	500		Amps
Rating for fusing (t<8.3ms)	I ² t	1037		A ² sec
Instantaneous forward voltage drop	V _F	@IF=10A	0.40 Typ. 0.45 max.	Volt
		@IF=20A	0.45 Typ. 0.50 max.	
		@IF=30A	0.52 Typ. 0.57 max.	
		@IF=40A	0.55 Typ. 0.60 max.	
Reverse Current at Rated DC reverse Voltage	I _R	@Tj=25℃	330 Typ. 500 max.	μA
		@Tj=125℃	80.00 Typ. 150.00 max.	mA
Typical capacitance (1.0 MHz and Applied reverse Voltage of 5.0V D.C)	C _j	2200		pF
Typical thermal resistance	R _{θJ-A}	30		℃/W
	R _{θJ-c}	1.5		
	R _{θJ-L}	7		
Storage Temperature	T _{STG}	-55 to +150		℃
Junction Temperature IN DC Forward Mode, without reverse bias. t ≤1 h	T _J	-55 to +150		℃



RoHS
COMPLIANT



Case: GFM

Dimensions in millimeters



Ratings and Characteristics Curves

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

FIG.1 Derating Curve Output Rectified Current

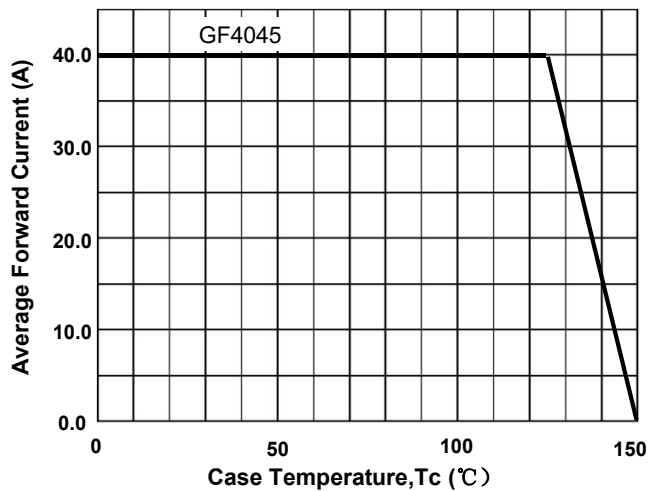


FIG.2 Typical Forward Characteristics per Diode

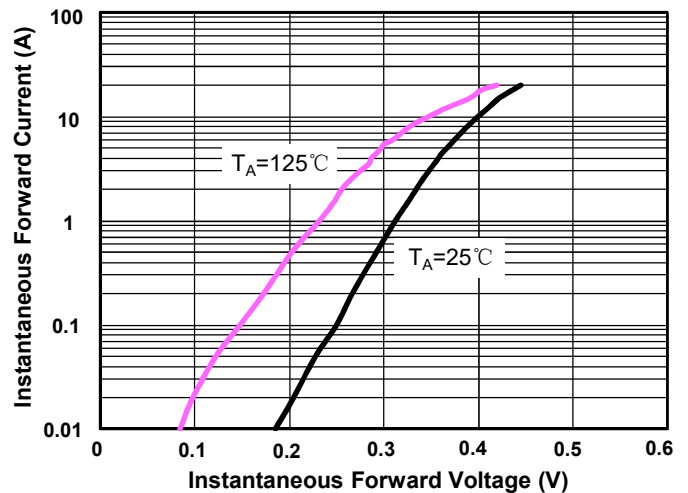


FIG.3 Maximum Non-Repetitive Peak Forward Surge Current per Diode

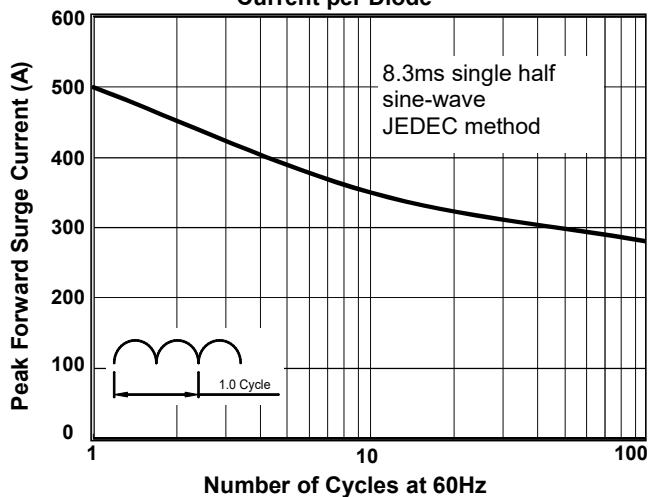


FIG.4 Typical Reverse Characteristics per Diode

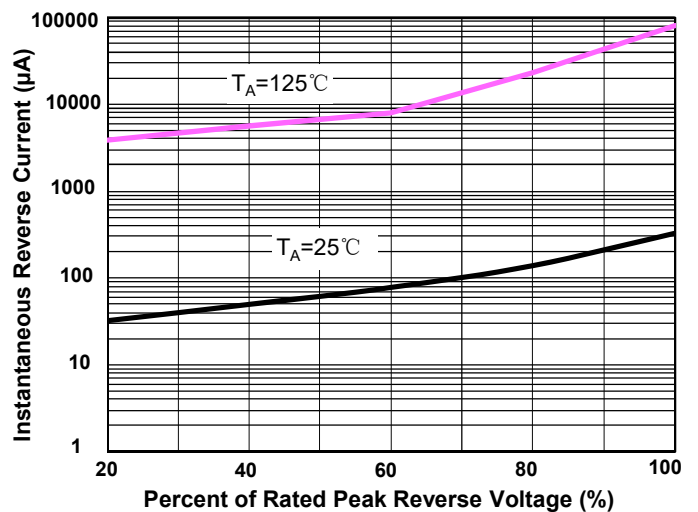
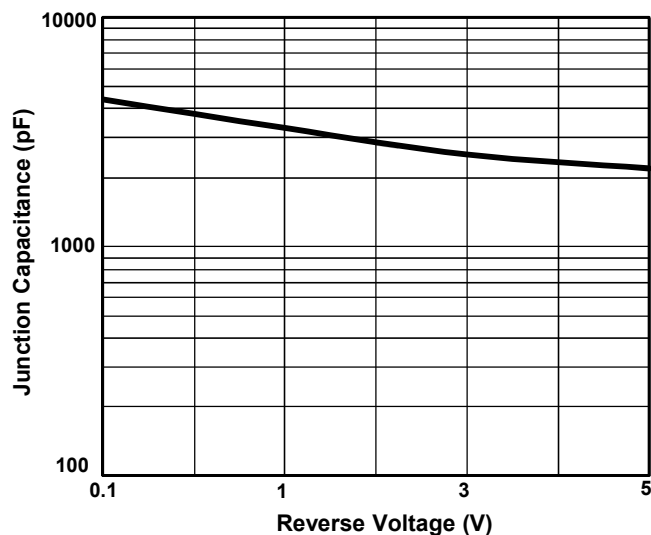


FIG.5 Typical Junction Capacitance per Diode





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