

Integrated bypass diode for Solar cell Module

MAIN CHARACTERISTICS

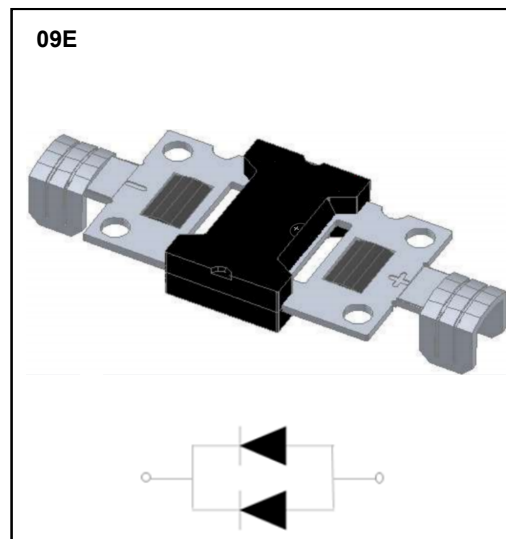
I_O	40 A
V_{RRM}	45 V
T_j	200 °C
$V_{F(typ)}$	0.49V

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;

Mechical Data

- Case: 09E;
- Terminals: Copper;
- High temperature soldering guaranteed;
Heated-tool welding 260°C, 10seconds
- Marking: As marked on product;



MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

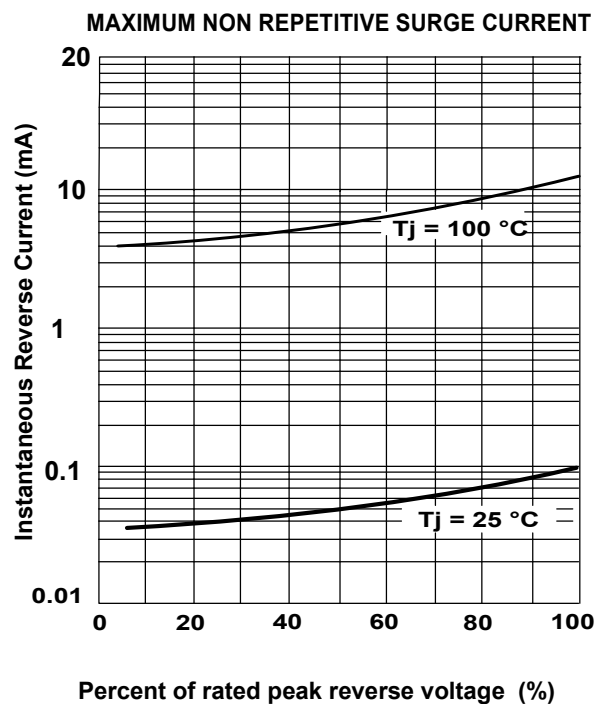
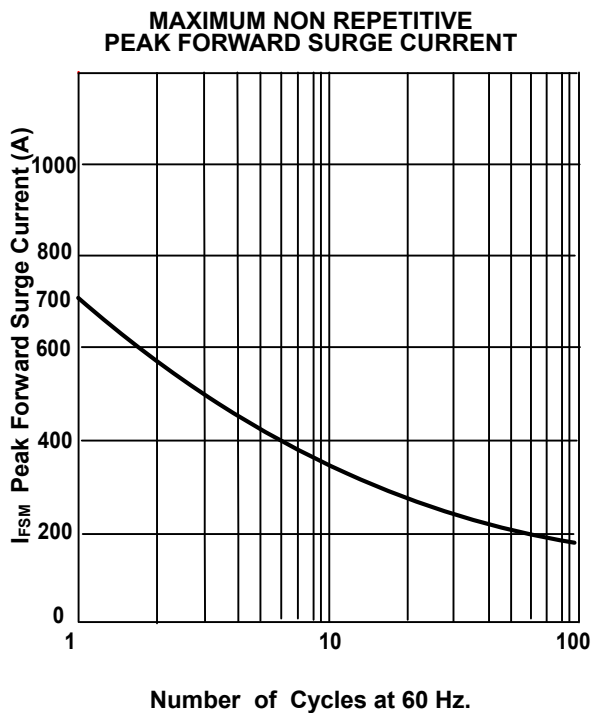
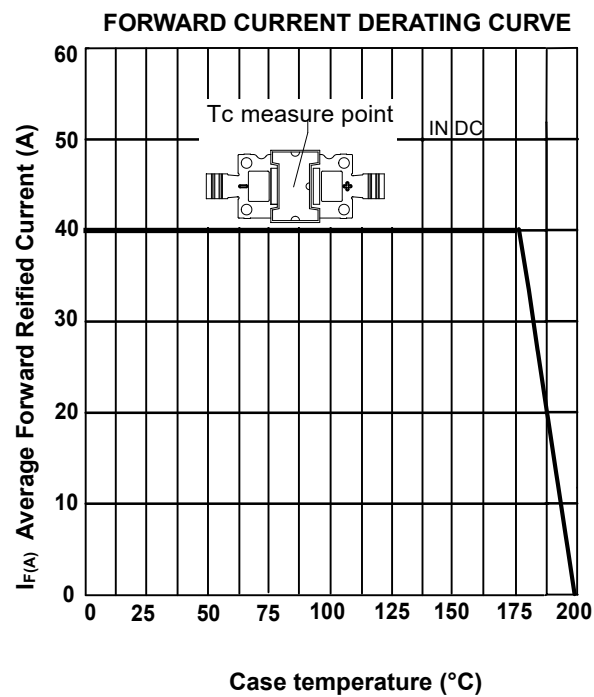
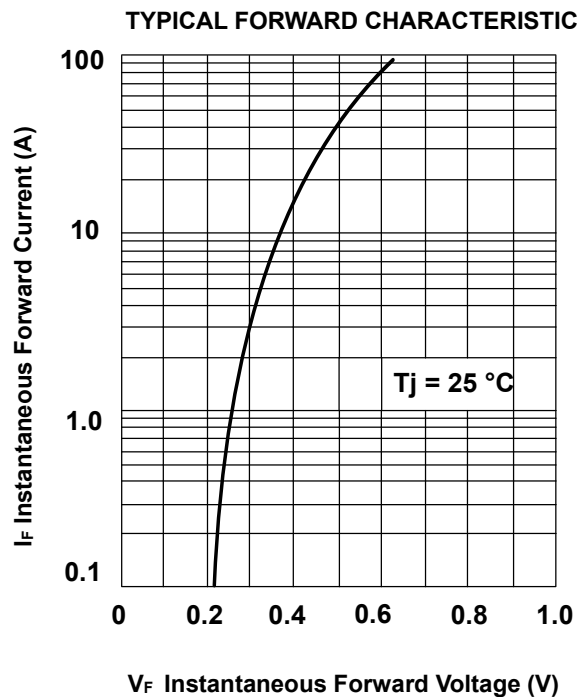
Symbol	Parameter	GP4045C	Unit
V_{RRM}	Peak repetitive reverse voltage	45	V
V_{RWM}	Working peak reverse voltage		
V_R	DC blocking voltage		
$V_{R(RMS)}$	RMS reverse voltage	31.5	V
I_O	Average rectified output current@60Hz half sine-wave, R-load, $T_a=25^{\circ}\text{C}$	40	A
I_{FSM}	Non-Repetitive peak forward surge current (8.3ms half sine wave)	700	A
I^2t	Rating for fusing ($t<8.3\text{ms}$)	2033	A^2S
$R_{\theta jc}$	Thermal resistance from junction to case	1.5	$^{\circ}\text{C}/\text{W}$
T_j	Junction temperature IN DC Forward Mode-Forward Operations, without reverse bias, $t \leq 1\text{ h}$ (1)	-55~+200	$^{\circ}\text{C}$
T_{stg}	Storage temperature	-55~+150	$^{\circ}\text{C}$

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

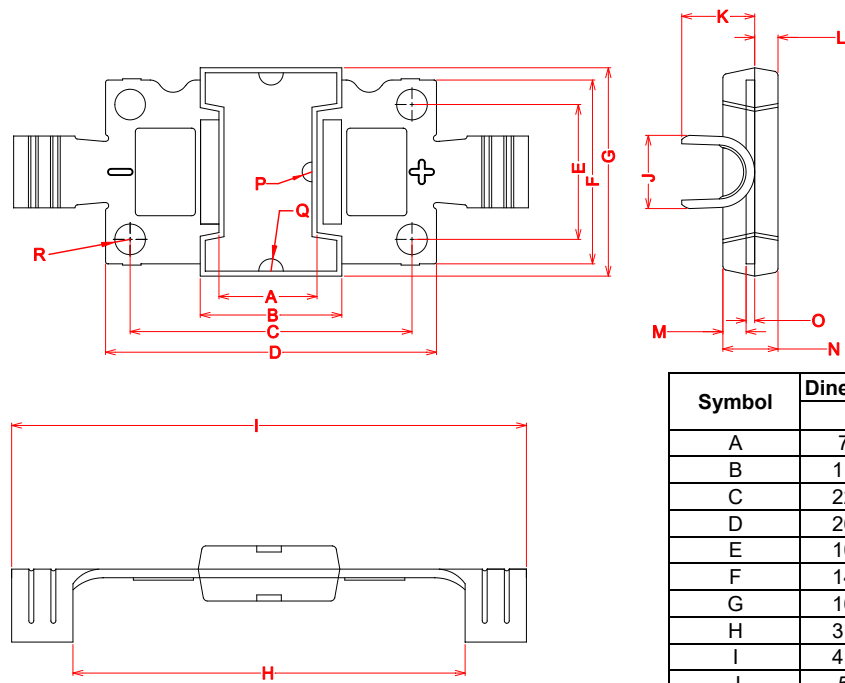
ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=1\text{mA}$	45			V
Reverse current	I_R	$V_R=45\text{V}$	$T_j=25^{\circ}\text{C}$	100	200	μA
			$T_j=100^{\circ}\text{C}$		20	mA
Forward voltage	V_F	$I_F=40\text{A}$	$T_j=25^{\circ}\text{C}$	0.49	0.55	V

Typical Characteristics



09E Package Outline Dimensions



Symbol	Dinemsions In Millimeters		Dinemsions In Inches	
	Min	Max	Min	Max
A	7.800	8.200	0.307	0.323
B	11.350	11.750	0.447	0.463
C	22.500	23.500	0.886	0.925
D	26.500	27.500	1.043	1.083
E	10.500	11.500	0.413	0.453
F	14.500	15.500	0.571	0.610
G	16.500	17.500	0.650	0.689
H	31.500	32.500	1.240	1.280
I	41.500	42.500	1.634	1.673
J	5.700	6.300	0.224	0.248
K	5.750	6.150	0.226	0.242
L	1.700	2.100	0.067	0.083
M	1.700	2.100	0.067	0.083
N	4.300	4.700	0.169	0.185
O	0.600	0.800	0.024	0.031
P	0.800 TYP		0.031 TYP	
Q	1.000 TYP		0.039 TYP	
R	1.250 TYP		0.049 TYP	

Ordering Information

PREFERED P/N	TUBE(pcs)	CARTON(pcs)
GP4045C	30	1500

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