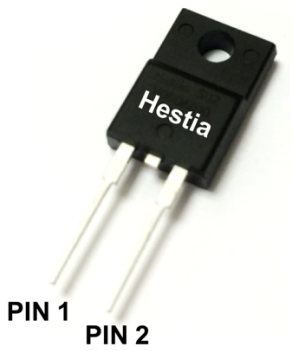
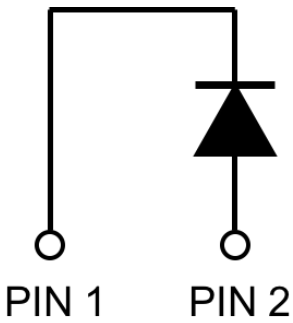
H2S060V002

SiC Schottky Diode

Package TO-220-FP-2L



Inner Circuit



Product Summary

V_R	650 V	
I_F	4A (T_c= 25℃)	2A (T_c=131 ℃)
Q_C	7 nC	

Halogen free

RoHS COMPLIANT

Features

- Low Conduction and Switching Loss
- Positive Temperature Coefficient on V_F
- Temperature Independent Switching Behavior
- Fast Reverse Recovery
- High Surge Current Capability
- Fully Isolated Case

Benefits

- Higher System Efficiency
- Parallel Device Convenience
- High Temperature Application
- High Frequency Operation
- Hard Switching & High Reliability
- Environmental Protection

Applications

- SMPS
- PFC
- Solar/ Wind Renewable Energy
- Power Inverters
- Motor Drives

Maximum Ratings

Parameter	Symbol	Test Conditions	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	T_J = 25℃	650	V
Peak Reverse Surge Voltage	V_{RSM}	T_J = 25℃	650	V
DC Blocking Voltage	V_R	T_J = 25℃	650	V
Continuous Forward Current	I_F	T_C= 25℃	4	A
		T_C= 131℃	2	A
		T_C= 135℃	1.8	A

© 2017 Hestia Power Inc.

Maximum Ratings

Parameter	Symbol	Test Conditions	Value	Unit
Non-Repetitive Peak Forward Surge Current	I_{FSM}	T_C = 25℃, T_P = 10 ms Half Sine Wave	15	A
		T_C = 125℃, T_P = 10 ms Half Sine Wave	13	A
		T_C = 25℃, T_P = 10 µs Pulse	TBD	A
Repetitive Peak Forward Surge Current	I_{FRM}	T_C = 25℃, T_P = 10 ms Half Sine Wave, D = 0.1	14	A
		T_C = 125℃, T_P = 10 ms Half Sine Wave, D = 0.1	12	A
Power Dissipation	P_D	T_C = 25℃	12.5	W
		T_C = 125℃	4.2	W
Operating Junction and Storage Temperature	T_J		175	℃
	T_{stg}		-55 to 175	℃
Thermal Resistance Junction to Case	$R_{\Theta JC}$		12.0	℃/W

Electrical Characteristics

Parameter	Symbol	Test Conditions	Typ.	Max.	Unit
DC Blocking Voltage	V_{DC}	I_R = 100 µA, T_J = 25℃	> 650		V
Forward Voltage	V_F	I_F = 2A, T_J = 25℃	1.5	1.8	V
		I_F = 2A, T_J = 175℃	1.8	2.2	V
Reverse Current	I_R	V_R = 600V, T_J = 25℃	< 1	30	µA
		V_R = 600V, T_J = 175℃	2	80	µA
Total Capacitive Charge	Q_C	I_F = 2A, dI/dt=300A/µs, V_R=400V, T_J=25℃	7		nC
Total Capacitance	C	V_R=1V, T_J=25℃, f =1 MHz V_R=200V, T_J=25℃, f =1 MHz V_R=400V, T_J=25℃, f =1 MHz	85 15 15		pF

© 2017 Hestia Power Inc.

Device Performances

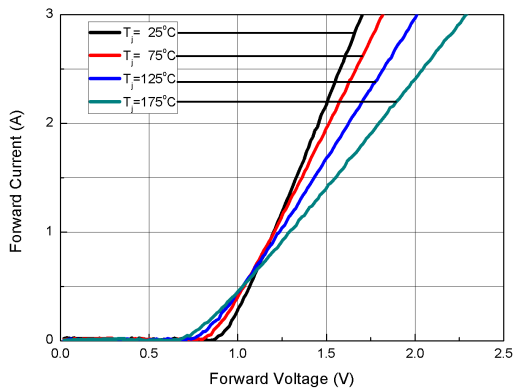


Fig. 1 Forward Characteristics

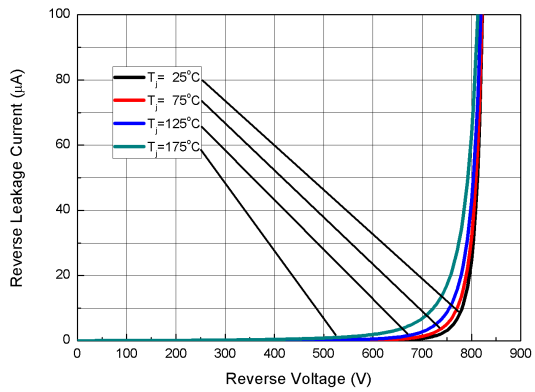


Fig. 2 Reverse Characteristics

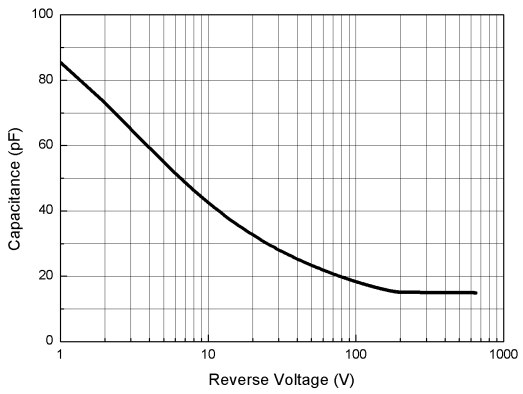


Fig. 3 Capacitance vs. Reverse Voltage

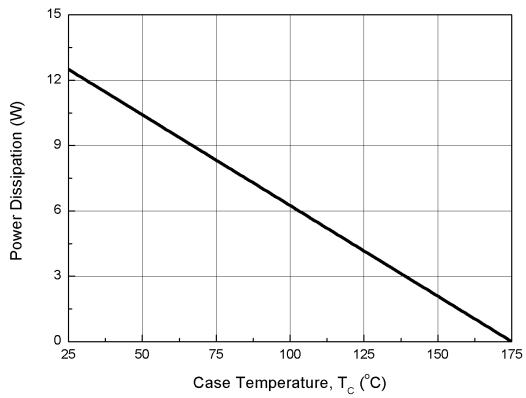


Fig. 4 Power Derating

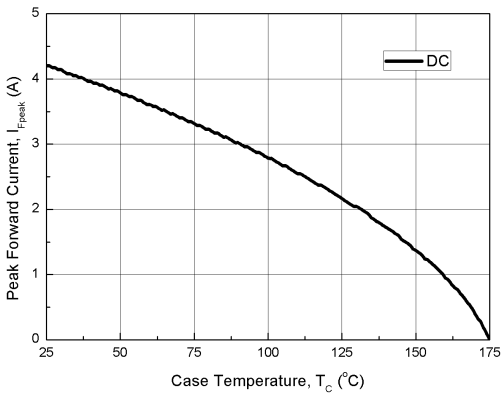
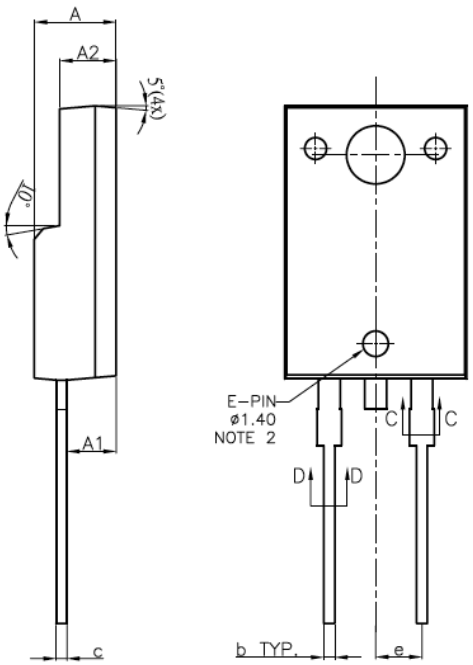


Fig. 5 Current Derating

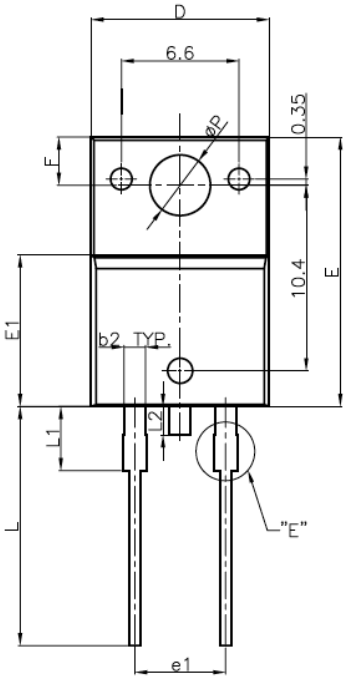
© 2017 Hestia Power Inc.

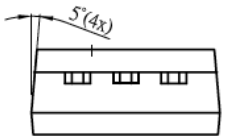
Package Dimensions TO-220-FP-2L

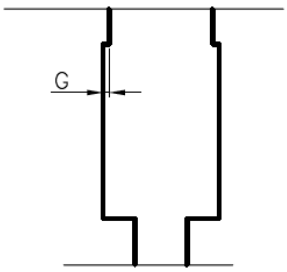


SYMBOLS	DIMENSIONS IN MILLIMETERS			DIMENSIONS IN INCHES		
	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.
A	4.20	4.50	4.80	0.165	0.177	0.189
A1	2.50	---	2.90	0.098	---	0.114
A2	2.90	3.10	3.30	0.114	0.122	0.130
b	0.30	---	0.93	0.012	---	0.037
b1	0.30	0.60	0.90	0.012	0.024	0.035
b2	1.00	---	1.43	0.039	---	0.056
b3	1.00	1.20	1.40	0.039	0.047	0.055
c	0.50	---	0.73	0.020	---	0.029
c1	0.50	0.60	0.70	0.020	0.024	0.028
D	9.90	10.00	10.10	0.390	0.394	0.398
E	14.80	15.10	15.40	0.583	0.594	0.606
E1	8.40	8.50	8.60	0.331	0.335	0.339
e	---	2.55 BSC	---	---	0.100 BSC	---
e1	---	5.10 BSC	---	---	0.200 BSC	---
F	2.55	2.70	2.85	0.100	0.106	0.112
G	0.00	---	0.127	0.000	---	0.005
L	13.00	13.40	13.80	0.512	0.528	0.543
L1	3.45	3.60	3.75	0.136	0.142	0.148
L2	---	---	1.60	---	---	0.063
øP	2.90	3.20	3.50	0.114	0.126	0.138

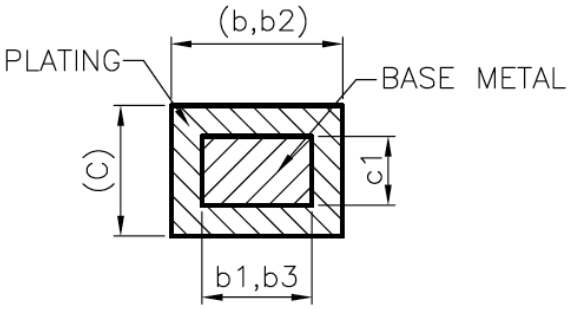
NOTES:
1.All dimension are in mm[inch].
2.Tolerance : ±0.004inch.







DETAIL"E"



1 SECTION C–C & D–D

© 2017 Hestia Power Inc.