YT1045

FEATURES

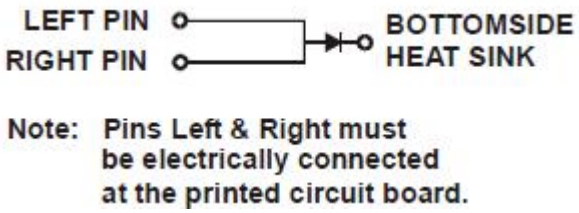
- Bypass Diodes for Solar Panels
- Maximum Junction Temperture 200℃
- High Thermal Reliablity
- Patented Super Barrier Rectifier Technology
- High Forward Surge Capability
- Ultra Low Power Loss,High Efficiency
- Excellent High Temperature Stability



Top View



Bottom View



Mechanical Data

- Case:TO-277 Molded Plastic “Green”Molding Compound
- Terminals:Plated Leads Solder per MIL-STD-202,Method 208
- Polarity:Cathode Bande
- Mounting Position:Any

Maximum Ratings and Electrical Characteristics(TA=25℃ unless otherwise noted)

Single Phase,half wave,60HZ,resistive or inductive load.

For capacitive load,derate current by 20%

Symbol	Parameter	Value	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	32	V
I_O	Average Rectified Output Current(Note1)@TL=90℃	10.0	A
I_{FSM}	Non-repetitive Peak Forward Surge Current @ t=8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) @TL=75℃	275	A
V_{FM}	Forword Voltage Drop @I_F=8A,Tj=25℃	0.42	V
	@I_F=10A,Tj=25℃	0.47	
	@I_F=10A,Tj=125℃	0.41	
I_{RM}	Peak Reverse Current @V_F=45V, T_j=25℃	0.3	mA
	AT Rated DC Blocking Voltage @ V_F=45V, T_j=100℃	15	
	@V_F=45V, T_j=150℃	75	
P_{ARM}	Repetitive Peak Avalanche Power(1us,25℃)	30000	W
$R_{\Theta JA}$	Typical Thermal Resistance Junction to Ambient(Note2)	73	℃/W
	(Note3)	31	
T_j	Operting Temperature Range @V_R≤80% V_{RRM}	-65~+150	℃
	@V_R≤50% V_{RRM}	≤180	
	D_C Forward mode	≤200	
T_{stg}	Storage Temperature	-65~+150	℃

Note: 1.Valid provided that leads are kept at ambient temperature at a distance of 9.5mm from the case

2.FR-4 PCB,2OZ.Copper,minimum recommended pad layout

3.Polymide PCB,2OZ.Copper.Cathode pad dimensions 18.8mm*14.4mm.Anode pad dimensions 5.6mm*14.4mm

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Typical Characteristics

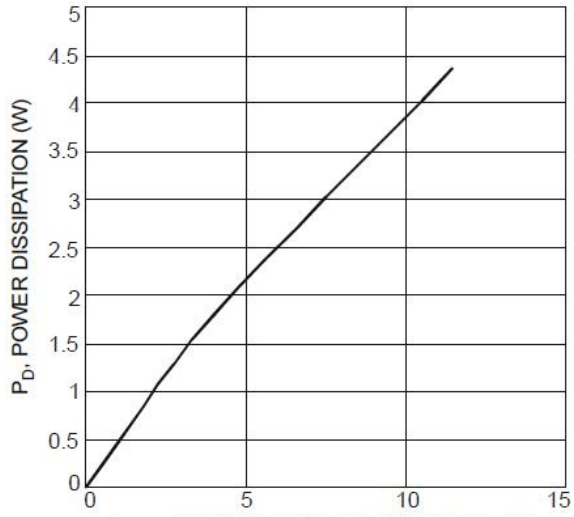


Fig. 1 Forward Power Dissipation

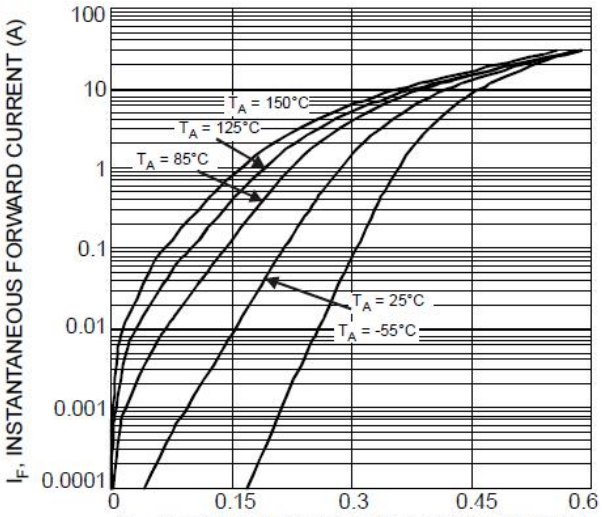


Fig. 2 Typical Forward Characteristics

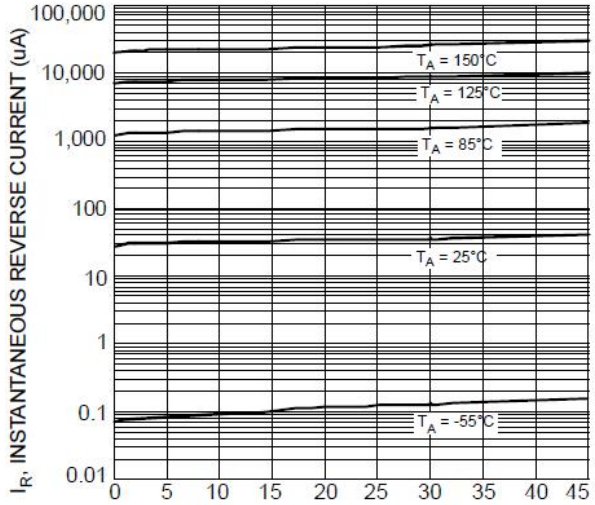


Fig. 3 Typical Reverse Characteristics

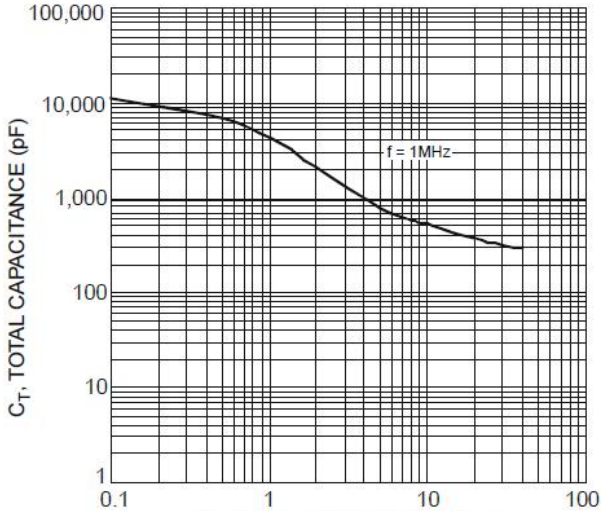


Fig. 4 Total Capacitance vs. Reverse Voltage

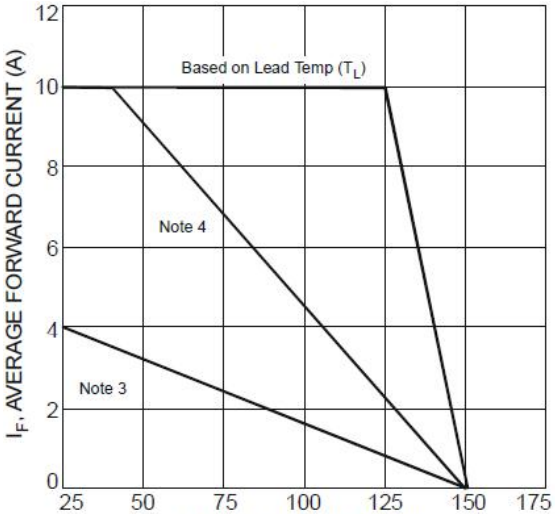


Fig. 5 Forward Current Derating Curve

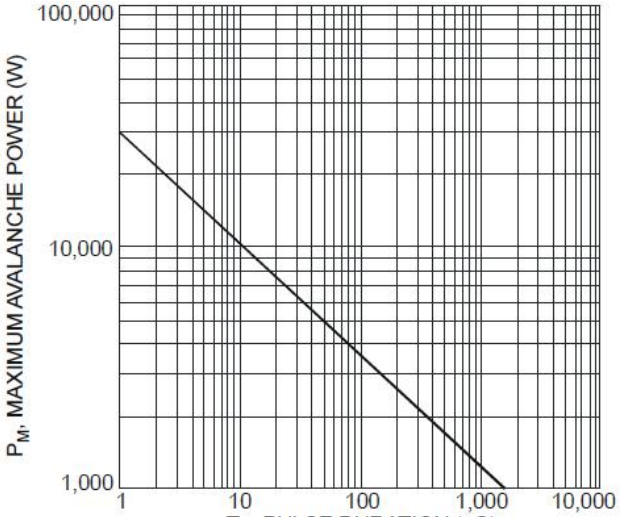
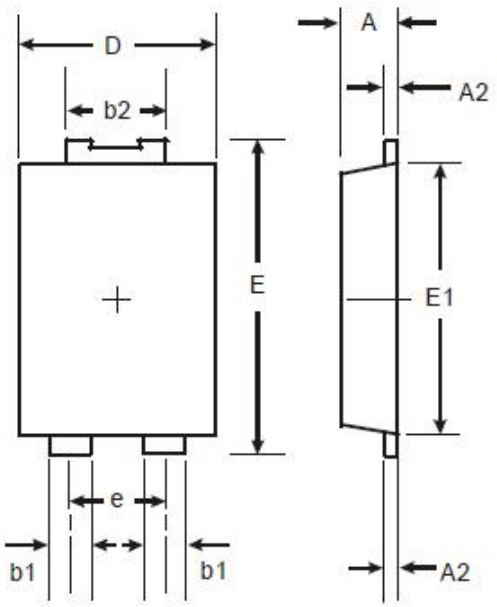
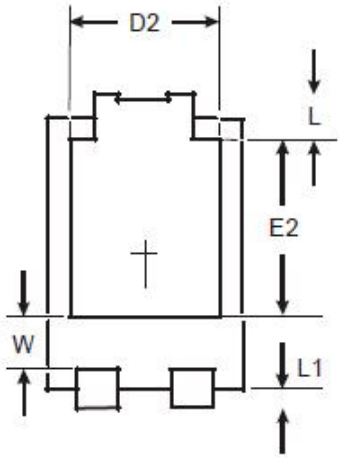


Fig. 6 Maximum Avalanche Power

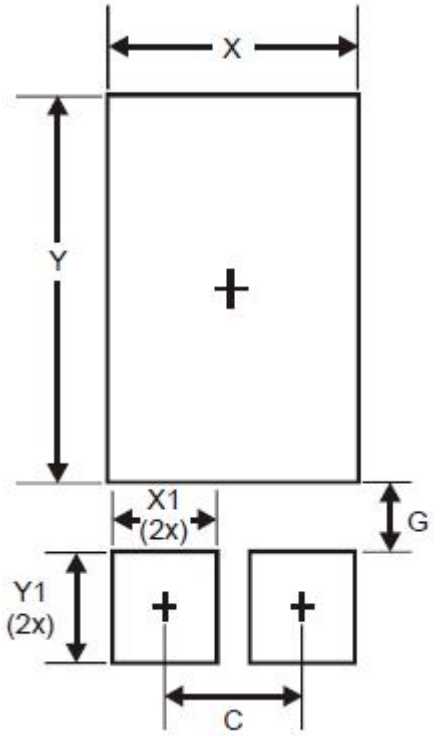
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Package Outline Dimensions





TO-277		
Dim	Min	Max
A	1.05	1.15
A2	0.33	0.43
b1	0.80	0.99
b2	1.70	1.88
D	3.90	4.05
D2	3.054 Typ	
E	6.40	6.60
e	1.84 Typ	
E1	5.30	5.45
E2	3.549 Typ	
L	0.75	0.95
L1	0.50	0.65
W	1.10	1.41
All Dimensions in mm		



Dimensions	Value (in mm)
C	1.840
G	0.852
X	3.360
X1	1.390
Y	4.860
Y1	1.400

Disclaimer

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.

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