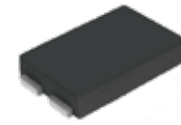
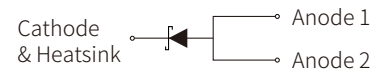


## FEATURES

- | Excellent High Temperature Stability
- | Low Forward Voltage
- | Low Power Loss/high Efficiency
- | High Forward Surge Capability
- | Ideal For Automated Placement
- | Meet AEC-Q101 Requirements



TO-277B



Schematic Symbol

## APPLICATIONS

- | Trench Schottky barrier rectifier is designed for high frequency miniature switched mode powersupplies such as adapters, lighting

## APPROVALS

<b>RoHS</b>	Compliance with 2011/65/EU
<b>HF</b>	Compliance with IEC61249-2-21:2003

## MAXIMUM RATINGS (T<sub>A</sub>=25°C )

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	100	V
Maximum Average Forward Rectified Current	I <sub>F(AV)</sub>	15	A
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed On Rated Load Per Diode	I <sub>FSM</sub>	250	A
Maximum Instantaneous Forward Voltage Per Diode (Note 1) T <sub>J</sub> =25°C , I <sub>F</sub> =15A	V <sub>F</sub>	0.82	V
Maximum Instantaneous Reverse Current Per Diode at Rated Reverse Voltage	I <sub>R</sub>	5	μA
Typical Thermal Resistance	R <sub>θJL</sub>	11	°C/W
Operating Junction And Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to 175	°C

Note 1: Pulse Test with Pulse Width=300μs, 1% Duty Cycle

# CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

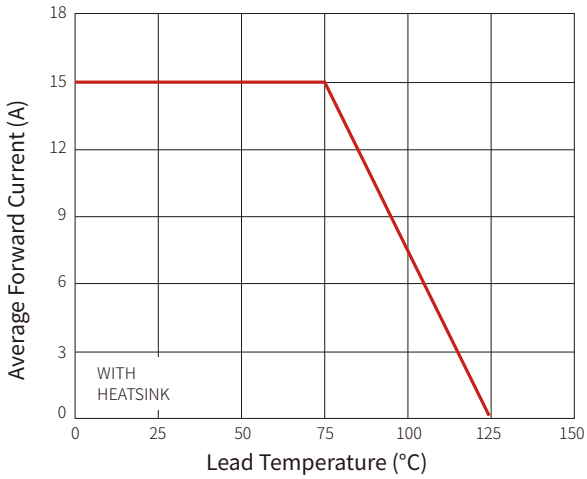


Fig.2 Typical Forward Characteristics

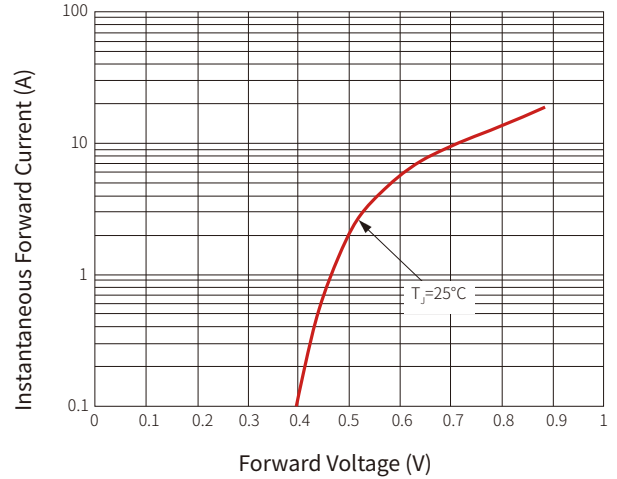


Fig. 3 Maximum Non-repetitive Forward Surge Current

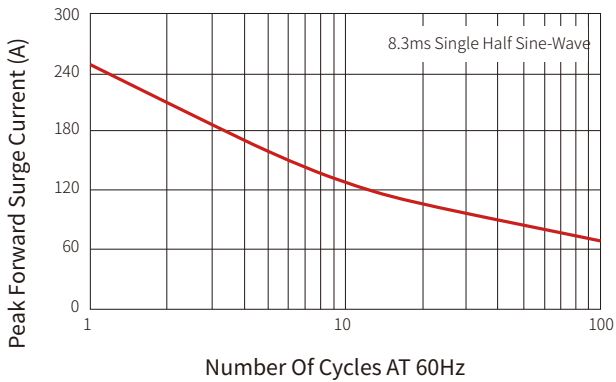
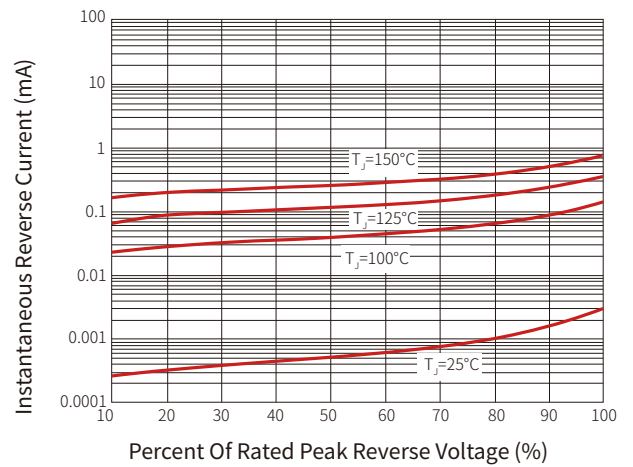
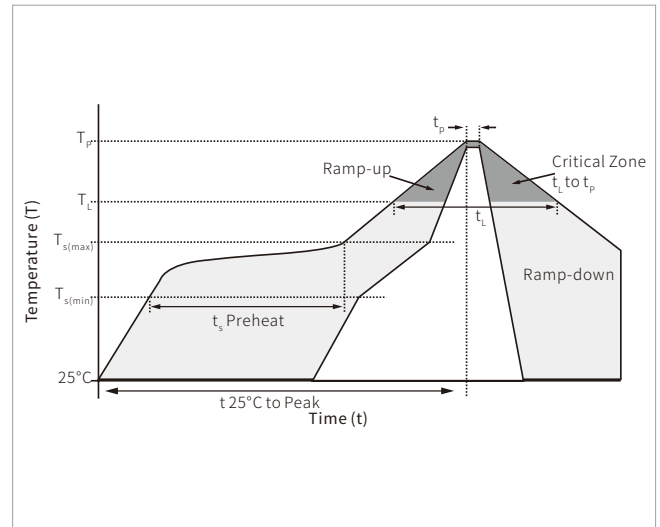


Fig.4 Typical Reverse Characteristics

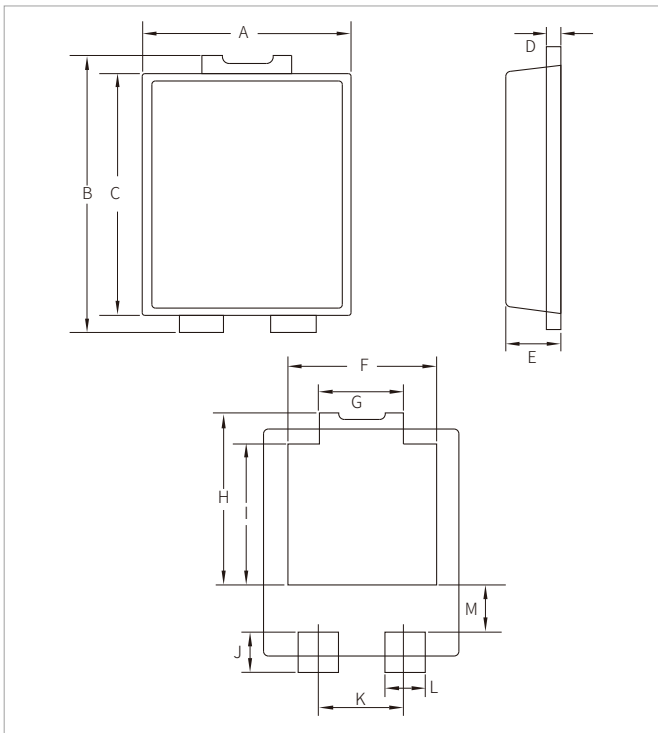


## SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ( $T_{s(min)}$ )	150°C
	Temperature Max ( $T_{s(max)}$ )	200°C
	Time (min to max) ( $t_s$ )	60 – 180 secs
Average ramp up rate (Liquidus Temp ( $T_L$ ) to peak)		3°C/second max
$T_{s(max)}$ to $T_L$ - Ramp-up Rate		3°C/second max
Reflow	Temperature ( $T_L$ ) (Liquidus)	217°C
	Time (min to max) ( $t_L$ )	60 – 150 seconds
Peak Temperature ( $T_p$ )		260°C
Time within 5°C of actual peak Temperature ( $t_p$ )		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature ( $T_p$ )		8 minutes max.
Do not exceed		260°C

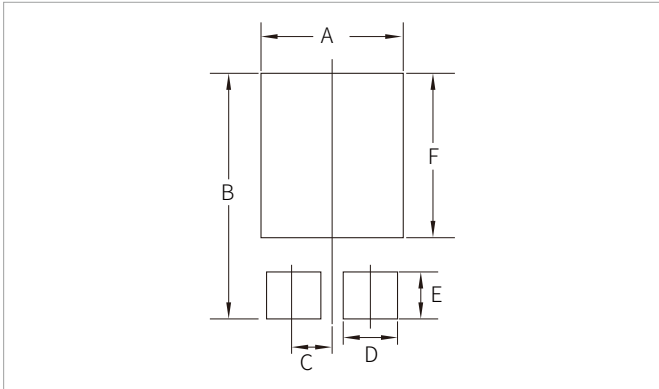


## TO-277B PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.00	4.60	0.157	0.181
B	6.20	6.80	0.244	0.268
C	5.50	6.00	0.216	0.236
D	0.25	0.40	0.010	0.016
E	1.05	1.35	0.041	0.053
F	3.00	3.50	0.118	0.138
G	1.70	2.00	0.067	0.079
H	4.20	4.50	0.165	0.177
I	3.52Nom		0.139Nom	
J	0.85	1.10	0.033	0.043
K	1.86Nom		0.073Nom	
L	0.80	1.00	0.031	0.039
M	1.10	1.40	0.043	0.055

## RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.40	-	0.134	-
B	6.90		0.272	
C	0.95		0.037	
D	1.30	-	0.051	-
E	1.30	-	0.051	-
F	4.60	-	0.181	-

## ORDERING INFORMATION

Part Number	Component Package	Marking	QTY/Reel	Reel Size
TSB15100Q	TO-277B	 SB15100	5000PCS	13"

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Website



Wechat

To find your local partner within Semiware's global website: [www.semiware.com](http://www.semiware.com)

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