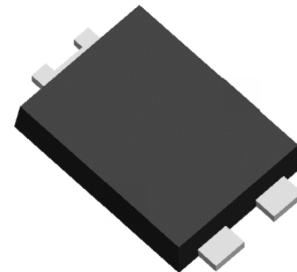




## 1. Features

- Schottky Barrier Chip
- High Thermal Reliability
- Patented Super Barrier Rectifier Technology
- High Forward Surge Capability
- Ultra Low Power Loss, High Efficiency
- Excellent High Temperature Stability
- Plastic material-UL flammability 94V-0

TO-277B



## 2. Mechanical Data

- Case: TO-277B, molded plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Meet MSL level 1, per J-STD-020.LF  
Maximum peak of 260 °C
- Polarity: Cathode Band
- Mounting Position: Any
- Marking: Type Number
- Lead Free: For RoHS/Lead Free Version



## 3. Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified Single phase, half wave, 60Hz, resistive or inductive load  
For capacitive load derate current by 20%

PARAMETER	Symbol	SL1045	SL1050	SL1060	SL1080	SL10100	Unit	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$							
Maximum RMS Voltage	$V_{RWM}$	45	50	60	80	100	V	
Maximum DC Blocking Voltage	$V_{DC}$							
RMS Rectified Voltage	$V_{R(RMS)}$	32	35	42	56	70	A	
Average Rectified Output Current (Note1)	$I_{F(AV)}$			10			A	
Non-Repetitive Peak Forward Surge8.3ms Single Half Sine-Wave Superimposed on rated load(JEDEC Method) (Note2)	$I_{FSM}$			250			A	
$I^2t$ Rating for fusing ( $t < 8.3ms$ )	$I^2t$			259.375			$A^2s$	
Forward Voltage Drop $T_A=25^\circ C$ @ $I_F=10A$	$V_{FM}$	0.45	0.47	0.50	0.70		V	
Peak Reverse Current @ $T_A=25^\circ C$	$I_R$	0.3				mA		
At Rated DC Blocking Voltage @ $T_A=100^\circ C$		15						
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$ $R_{\theta JL}$	80 10				°C/W		
Operating Temperature Range	$T_J$	-55 to +150				°C		
Storage Temperature Range	$T_{STG}$	-55 to +150				°C		

Note:

1. Valid Provided that are kept at ambient temperature at a distance of 9.5mm

2. Fr-4pcb.2oz.Copper, minimum recommend pad layout .18.8mm×14.4mm. Anode pad dimensions 5.6mm×14.4mm



### 4. Rating And Characteristic Curves

Fig. 1 Forward Current Derating Curve

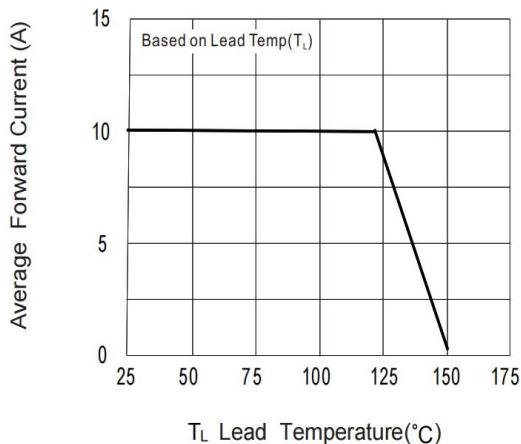


Fig. 2 Typical Forward Characteristics

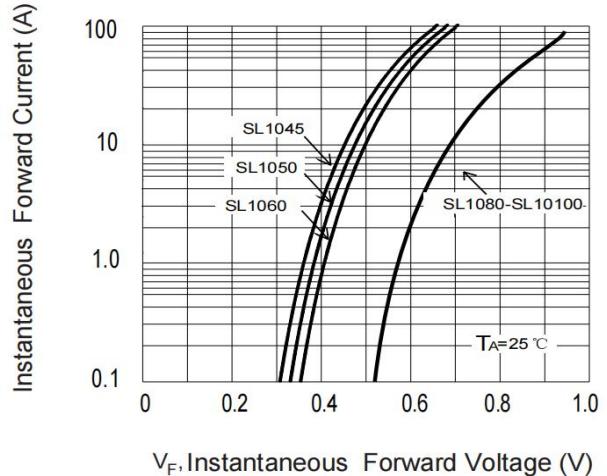


Fig. 3 Forward Surge Current Capability

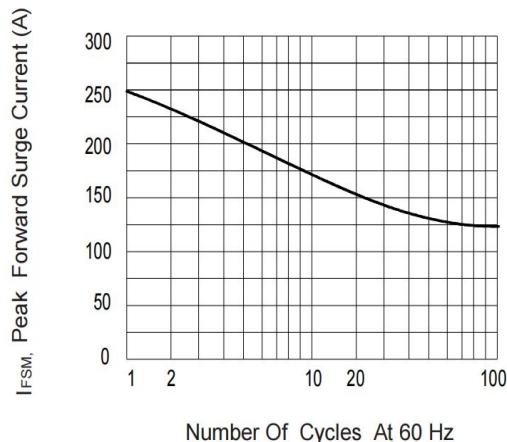
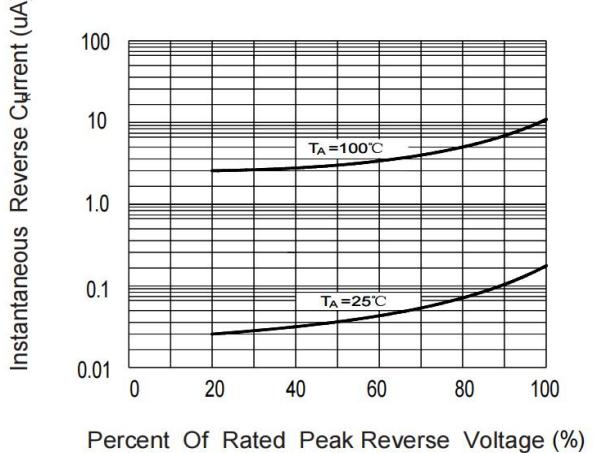
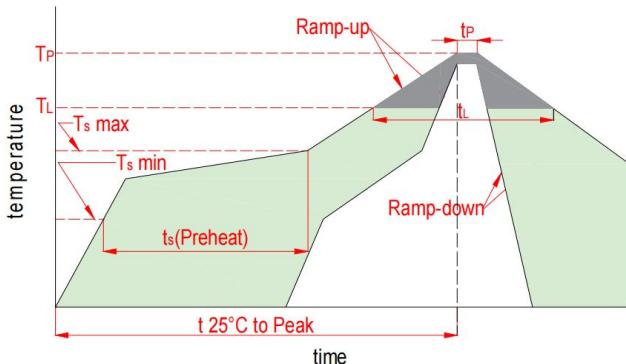


Fig. 4 Typical Reverse Characteristics



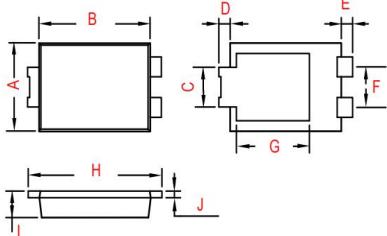


## 5. Dimensions

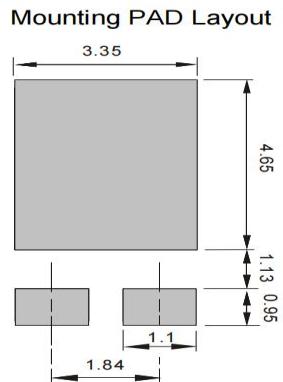


Reflow Condition		Lead-free
Pre Heat	Temp. min( $T_s$ (min))	150°C
	Temp. max( $T_s$ (min))	200°C
	Time(min to max)( $t_s$ )	60~120s
Reflow	Aver. ramp up rate(Liquidus Temp.)( $T_L$ )to peak	3°C/s max
	$T_s$ (max) to $T_L$ -Ramp-up Rate	3°C/s max
Reflow	Temp.( $T_L$ )(Liquidus)	217°C
	Temp.( $t_L$ )(Liquidus)	60~150s
Reflow	Peak Temp.( $T_p$ )	260 <sup>+0/-5</sup> °C
	Time within actual peak Temp.( $t_p$ )	30s max
	Ramp-down Rate	6°C/s max
	Time 25°C to peak Temp.( $T_p$ )	8 minutes max
Do not exceed		260°C

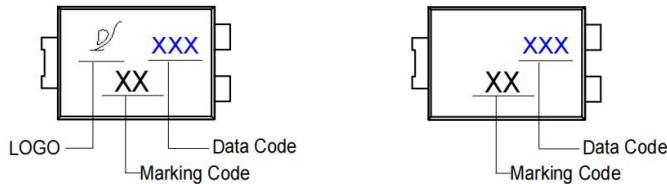
## 6. Part Marking System



Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.150	0.165	3.80	4.20
B	0.209	0.217	5.30	5.50
C	0.067	0.075	1.70	1.90
D	0.018	0.026	0.45	0.65
E	0.018	0.026	0.45	0.65
F	0.065	0.065	1.65	1.65
G	0.128	0.152	3.25	3.85
H	0.252	0.260	6.40	6.60
I	0.039	0.047	1.00	1.20
J	0.008	0.018	0.20	0.45



## 7. Part Marking System



## 8. Package Information

Package	Tape Width (mm)	Reel Size		Quantity(pcs)
		mm	Inch	
TO-277B	12	330	13	5000



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