



SL10T100

10.0A Surface Mount Schottky Barrier Rectifiers

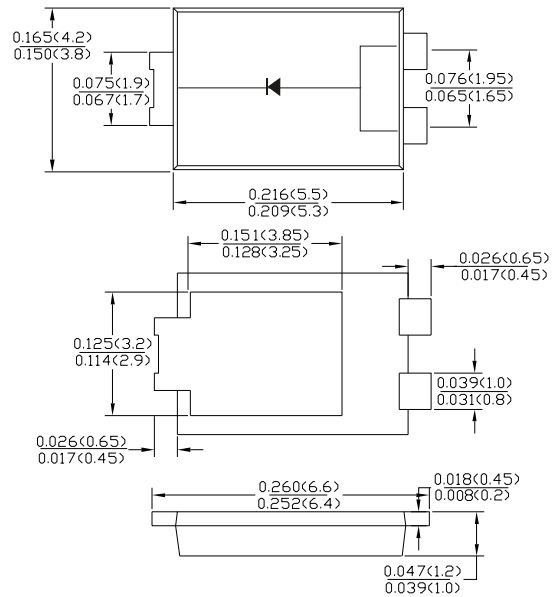
Features

- 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

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

TO-277B



dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbol	SL10T100		Unit
Peak Repetitive Reverse Voltage	V_{RRM}	100		V
Working Peak Reverse Voltage	V_{RWM}	100		V
DC blocking voltage	V_{DC}	100		V
RMS Rectified Voltage	$V_{R(RMS)}$	70		V
Average Rectified Output Current	$I_{F(AV)}$	10.0		A
Non-Repetitive Peak Forward Surge @ $T_j=25^\circ\text{C}$ Current 8.3ms Single half sine-wave @ $T_j=125^\circ\text{C}$ Superimposed On Rated Load (JEDEC Method)	I_{FSM}	200	160	A
Non-Repetitive Peak Forward Surge @ $T_j=25^\circ\text{C}$ Current 1.0ms Single half sine-wave @ $T_j=125^\circ\text{C}$ Superimposed On Rated Load (JEDEC Method)	I_{FSM}	400	320	A
10000 times of the wave surge current (time width 1ms, time interval 3s)	I_{FSM}	150		A
I^2t Rating for Fusing ($t < 8.3\text{ms}$)	I^2t	166		A^2s
Forward Voltage Drop $T_A = 25^\circ\text{C}$ @ $I_F=1\text{A}$ $T_A = 25^\circ\text{C}$ @ $I_F=5\text{A}$ $T_A = 25^\circ\text{C}$ @ $I_F=10\text{A}$	V_{FM}	Typ. 0.38 0.50 0.59	Max. - - 0.64	V
Peak Reverse Current At Rated DC Blocking Voltage $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	I_R	0.1 15		mA
Typical Junction Capacitance (Note 1)	C_J	1000		pF
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$ $R_{\theta JL}$	83 6.3		$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150		$^\circ\text{C}$

Note: 1. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C

2. Device mounted on FR-4 substrate, 1"×1", 2oz, single-sided, PC boards with 0.1"×0.15" copper pad.



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Fig.1 - Forward Current Derating Curve

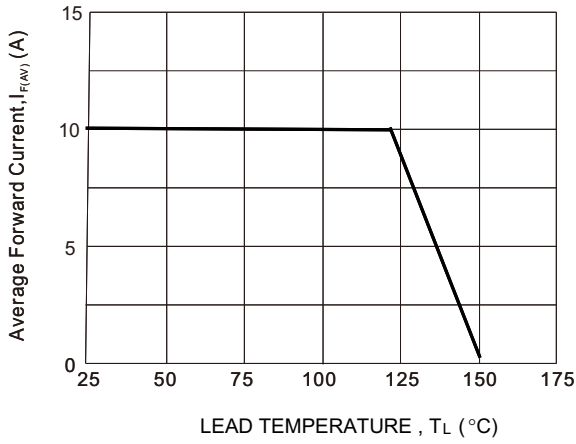


Fig. 2 Typical Forward Characteristics (per leg)

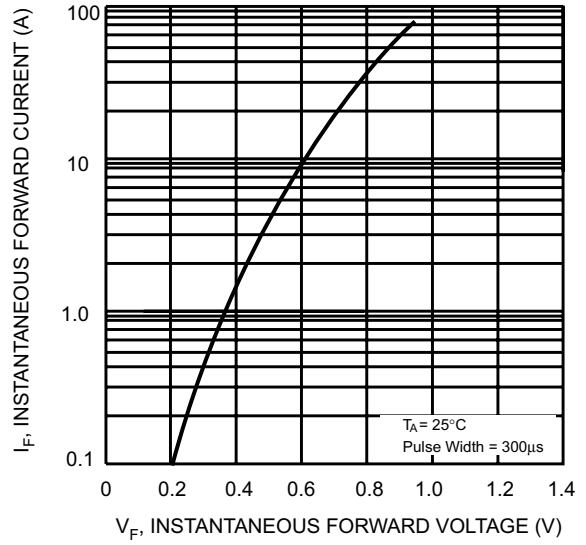


Fig. 3 Maximum Peak Forward Surge Current (per leg)

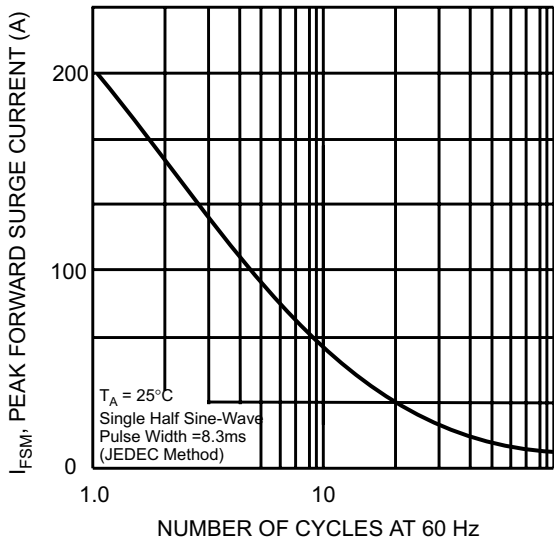


Fig4: Typical Reverse Characteristics

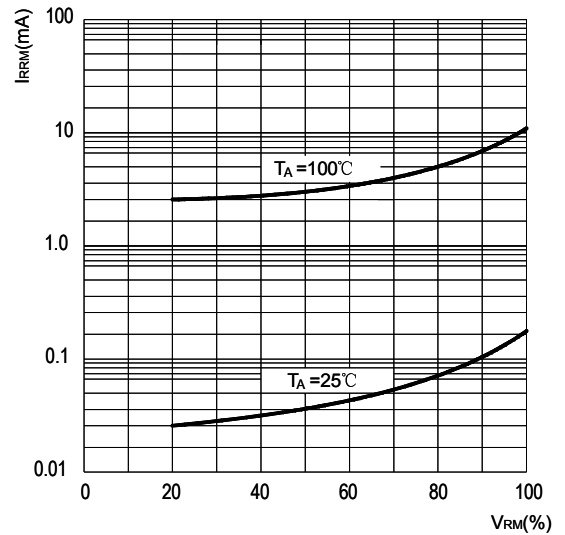
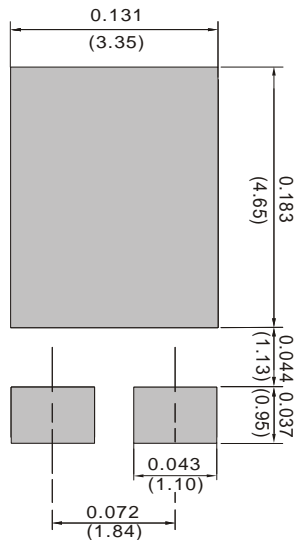


FIG.5 MOUNTING PAD LAYOUT





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