

SR1045L THRU SR10100L

10 0A Surface Mount Schottky Barrier Rectifiers



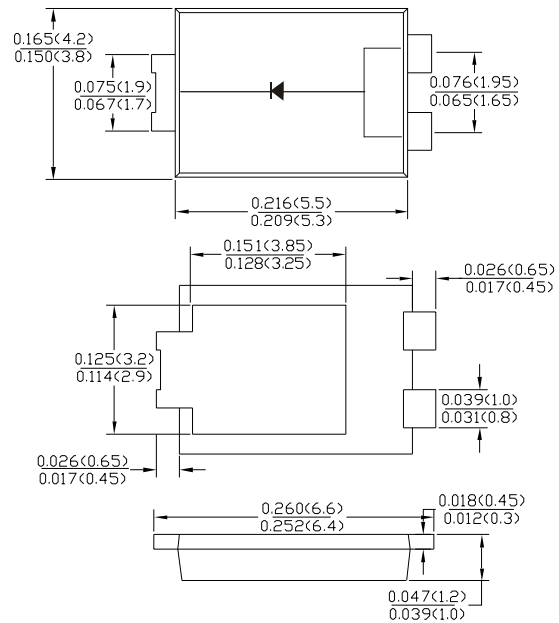
Features

- 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
- Polarity: Cathode Band
- Mounting Position: Any
- Marking: Type Number
- Lead Free: For RoHS/Lead Free Version

TO-277



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	SR1045L	SR1050L	SR1060L	SR1080L	SR10100L	Unit	
Peak Repetitive Reverse Voltage	V_{RRM}							
Working Peak Reverse Voltage	V_{RWM}	45	50	60	80	100	V	
DC blocking voltage	V_{DC}							
RMS Rectified Voltage	$V_{R(RMS)}$	28	35	42	56	70	V	
Average Rectified Output Current (Note1)	$I_F(AV)$	10						A
Non-Repetitive Peak Forward Surge 8.3ms Single Half Sine-Wave Superimposed on rated load (JEDEC Method) (Note2)	I_{FSM}	275						A
I^2t Rating for Fusing ($t < 8.3\text{ms}$)	I^2t	313.844						A^2s
Forward Voltage Drop $T_A = 25^\circ\text{C}$ @ $I_F = 10\text{A}$	V_{FM}	0.42	0.45	0.50	0.70		V	
Peak Reverse Current $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage $T_A = 100^\circ\text{C}$	I_R	0.3 15						mA
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$ $R_{\theta JL}$	80 15						$^\circ\text{C/W}$
Operating junction temperature range	T_J	-55 to +150						$^\circ\text{C}$
storage temperature range	T_{STG}	-55 to +150						$^\circ\text{C}$

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

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

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Fig.1 - Forward Current Derating Curve

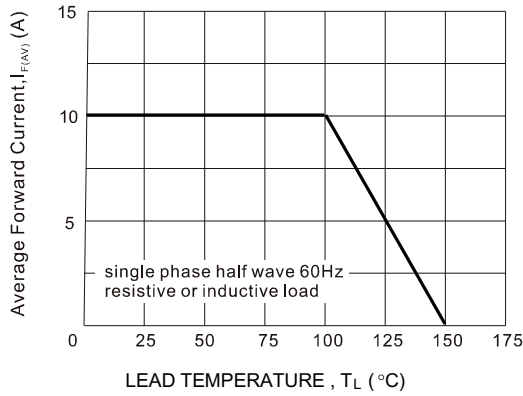


Fig.2 : Instantaneous Forward Voltage

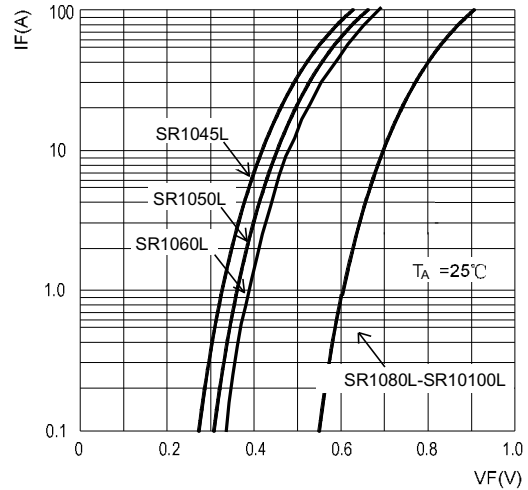


Fig.3: Surge Forward Current Capacity

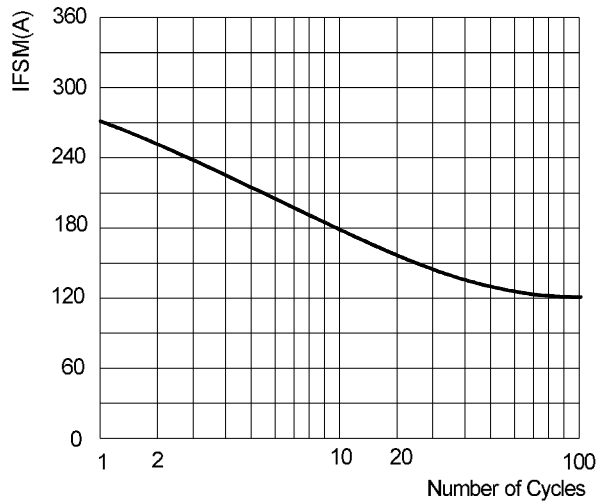


Fig.4: Typical Reverse Characteristics

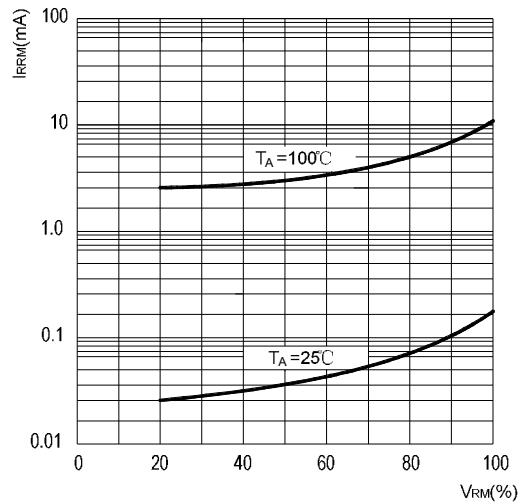


FIG.5 MOUNTING PAD LAYOUT

