



YEA SHIN TECHNOLOGY CO., LTD

YS1045SL-A

10A SURFACE MOUNT LOW VF SCHOTTKY BARRIER RECTIFIER



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
- AEC-Q101 qualified

Mechanical Data

- Case: TO-277 small outline plastic package
- Terminal:Plated leads Solderable per MIL-STD-202, Method 208
- Molding Compound Flammability Rating:UL 94V-0
- Polarity:Cathode Band
- Mounting Position:Any
- Marking:Type Number

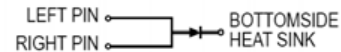
Applications

- Switching mode power supply applications
- Portable equipment battery applications
- High frequency rectification
- DC/DC converter
- Designed as bypass diodes for solar panels

Ordering Information

- Device: YS1045SL
- Package: TO-277
- Marking: 1045SL
- Material: Halogen free
- Packing: Tape & 13" Reel
- Quantity per reel: 5,000pcs

Pin Configuration



Maximum Ratings and Electrical Characteristics @T<sub>A</sub> =25 °C unless otherwise specified

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

Parameter	Symbol	YS1045SL	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>		
Working Peak Reverse Voltage	V <sub>RWM</sub>	45	V
DC blocking voltage	V <sub>DC</sub>		
RMS Rectified Voltage	V <sub>R(RMS)</sub>	32	V
Average Rectified Output Current (Note1)	IF(AV)	10	A
Non-Repetitive Peak Forward Surge Single Half Sine-Wave Superimposed on rated load(JEDEC Method) (Note2)	IFSM	250	A
I <sup>2</sup> t Rating for Fusing (t < 8.3ms)	I <sup>2</sup> t	259.375	A <sup>2</sup> s
Forward Voltage Drop T <sub>A</sub> =25°C @ IF=10A	V <sub>FM</sub>	0.45	V
Peak Reverse Current T <sub>A</sub> =25°C At Rated DC Blocking Voltage T <sub>A</sub> =100°C	I <sub>R</sub>	0.3 15	mA
Typical Thermal Resistance Junctionto Ambient	R <sub>θJA</sub> R <sub>θJL</sub>	80 15	°C/W
Operating junction temperature range	T <sub>J</sub>	-55 to +150	°C
storage temperature range	T <sub>STG</sub>	-55 to +150	°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.

# DEVICE CHARACTERISTICS

## YS1045SL-A

### Electrical characteristic curves

Fig.1 - Forward Current Derating Curve

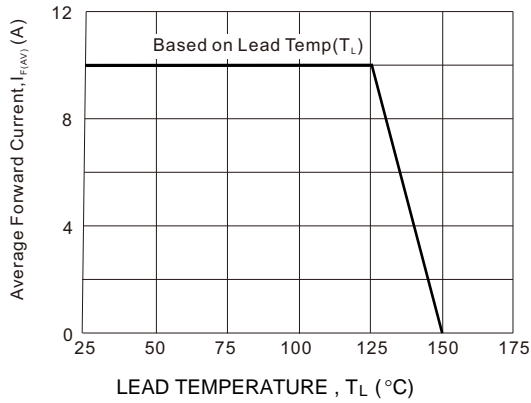


Fig2 : Instantaneous Forward Voltage

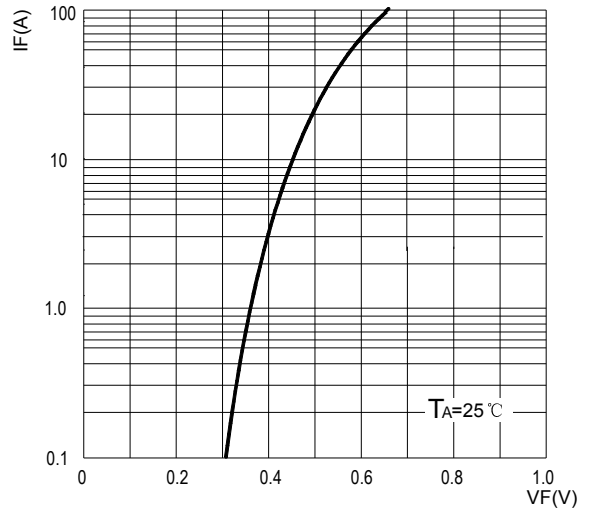


Fig3: Surge Forward Current Capability

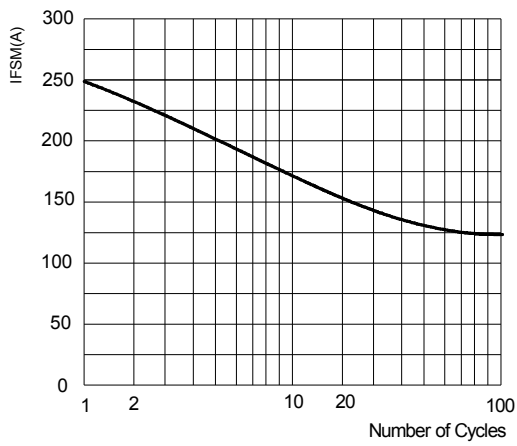
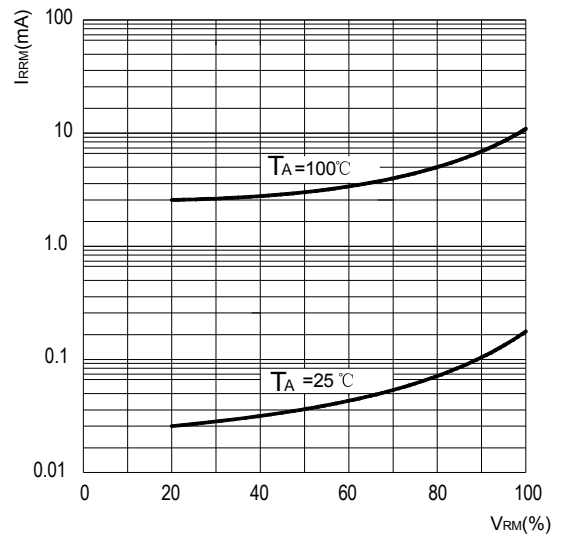


Fig4: Typical Reverse Characteristics



# PACKAGE OUTLINE AND DIMENSIONS

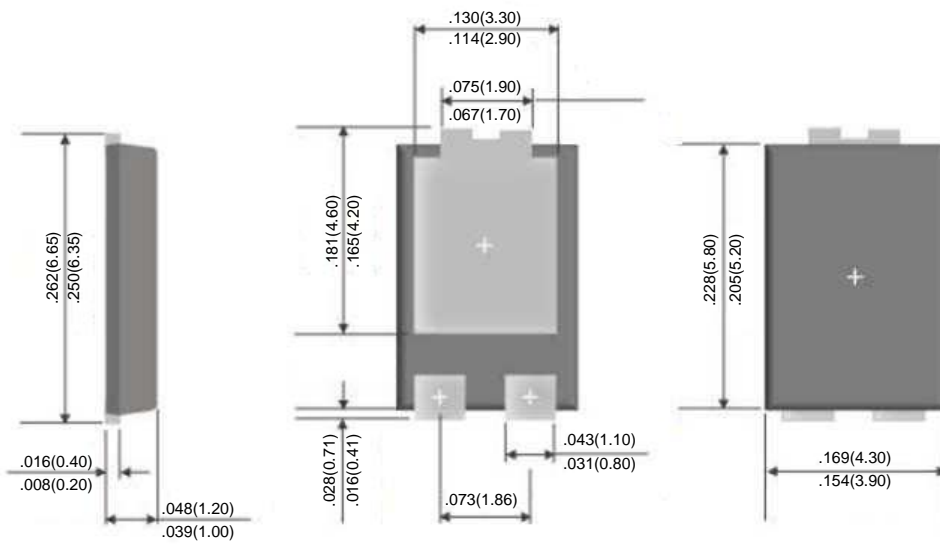
## YS1045SL-A

### PACKAGE AND SUGGESTED PAD LAYOUT DIMENSION

#### TO-277

Outline drawing and Dimension

Unit:inch(mm)



FOOT PRINT RECOMMENDATION	MARKING CODE						
<p style="text-align: center;">unit: mm</p>	<div style="text-align: center;"> </div> <table border="1" style="width: 100%; text-align: center;"> <tr> <td>YS</td> <td>1045SL</td> <td>XXXX</td> </tr> <tr> <td>Logo</td> <td>Device name</td> <td>Date code</td> </tr> </table>	YS	1045SL	XXXX	Logo	Device name	Date code
YS	1045SL	XXXX					
Logo	Device name	Date code					