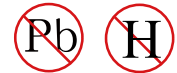




## 10A SURFACE MOUNT LOW VF SCHOTTKY BARRIER RECTIFIER

**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

**Mechanical Data**

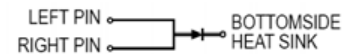
- Case: TO-277 small outline plastic package
- Terminal: Plated leads Solderable per MIL-STD-202, Method 208
- Molding Compound Flammability Rating: UL 94V-0
- Polarity: Cathode Band
- Mounting Position: Any
- Marking: Type Number

**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 @ $T_A = 25^\circ\text{C}$  unless otherwise specified**

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

Parameter	Symbol	YS1045SL	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$		
Working Peak Reverse Voltage	$V_{RWM}$	45	V
DC blocking voltage	$V_{DC}$		
RMS Rectified Voltage	$V_{R(RMS)}$	32	V
Average Rectified Output Current (Note1)	$I_F(AV)$	10	A
Non-Repetitive Peak Forward Surge Single Half Sine-Wave Superimposed on rated load (JEDEC Method) (Note2)	$I_{FSM}$	250	A
$I^2t$ Rating for Fusing ( $t < 8.3\text{ms}$ )	$I^2t$	259.375	$A^2s$
Forward Voltage Drop $T_A = 25^\circ\text{C}$ @ $I_F = 10\text{A}$	$V_{FM}$	0.45	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.

# DEVICE CHARACTERISTICS

## YS1045SL

### Electrical characteristic curves

Fig.1 - Forward Current Derating Curve

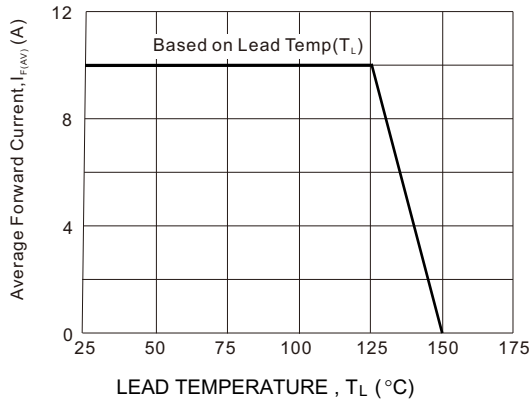


Fig2 : Instantaneous Forward Voltage

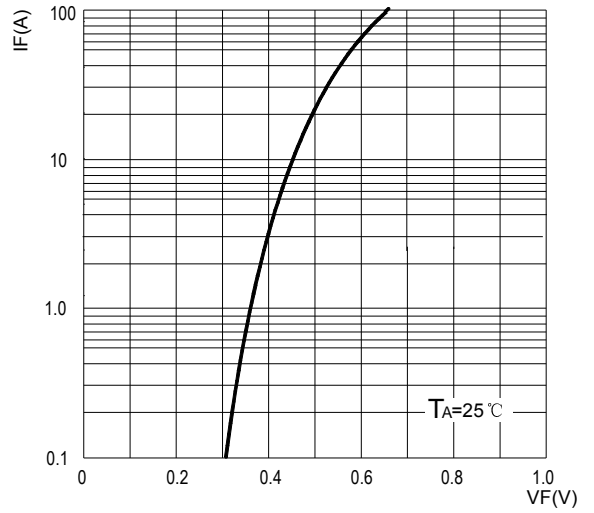


Fig3: Surge Forward Current Capability

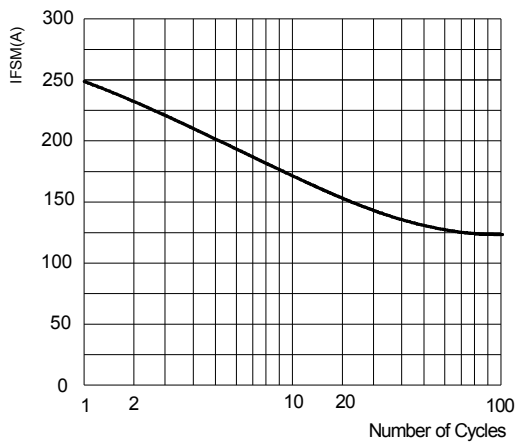
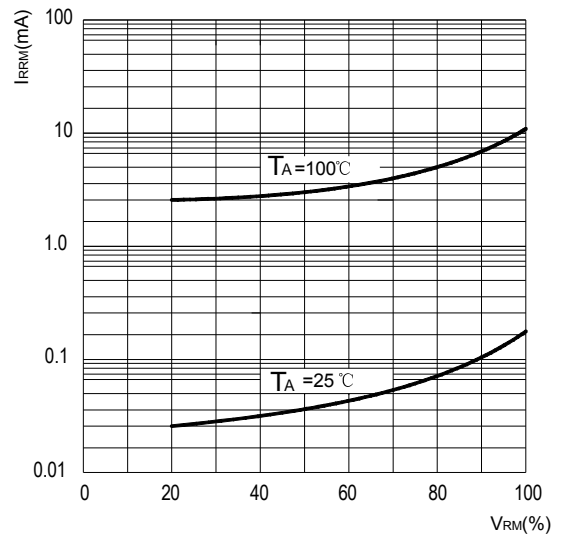


Fig4: Typical Reverse Characteristics



# PACKAGE OUTLINE AND DIMENSIONS

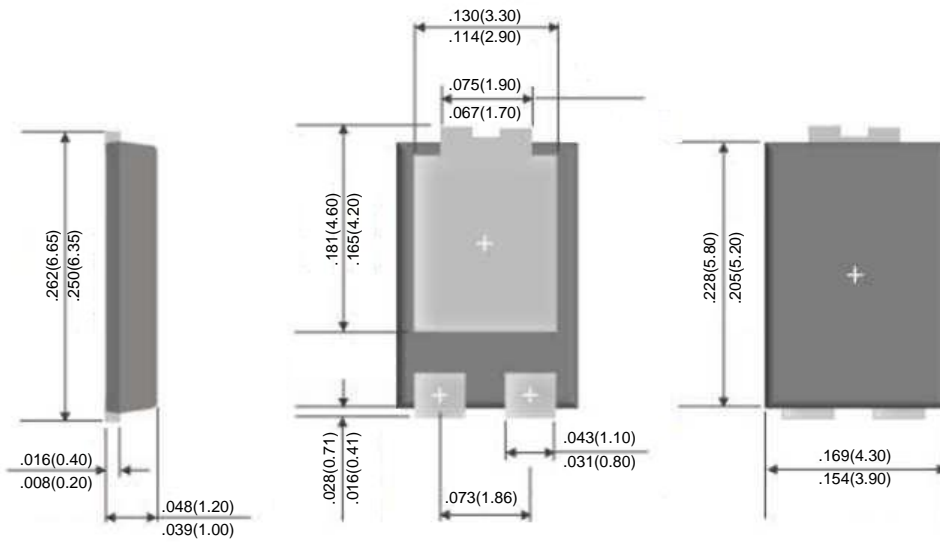
## YS1045SL

### PACKAGE AND SUGGESTED PAD LAYOUT DIMENSION

#### TO-277

Outline drawing and Dimension

Unit:inch(mm)



FOOT PRINT RECOMMENDATION	MARKING CODE						
<p>Foot print recommendation diagram showing dimensions in mm:</p> <ul style="list-style-type: none"> <li>Lead spacing: 0.038(0.97)</li> <li>Lead width: 0.055(1.40)</li> <li>Lead thickness: 0.083(2.10)</li> <li>Body height: 0.138(3.50)</li> <li>Body width: 0.173(4.40)</li> <li>Lead thickness: 0.046(1.18)</li> </ul> <p>unit: mm</p>	<p>Marking code diagram showing the logo, device name '1045SL', and date code 'XXXX' on the package.</p> <table border="1" data-bbox="802 1805 1449 1888"> <thead> <tr> <th>YS</th> <th>1045SL</th> <th>XXXX</th> </tr> </thead> <tbody> <tr> <td>Logo</td> <td>Device name</td> <td>Date code</td> </tr> </tbody> </table>	YS	1045SL	XXXX	Logo	Device name	Date code
YS	1045SL	XXXX					
Logo	Device name	Date code					