

## LOW VF SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 40 Volts

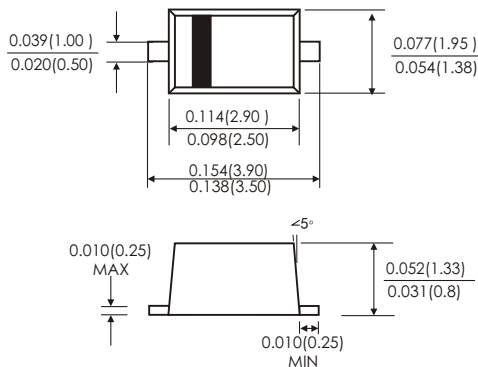
Forward Current - 2.0Amperes

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,low forward voltage drop
- High surge capability
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU and WEEE 2012/19/EU



### SOD-123FL



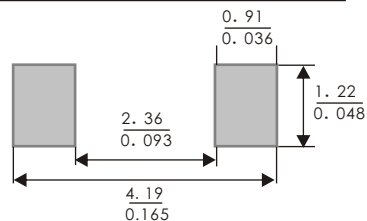
### MECHANICAL DATA

- Case: SOD-123FL molded plastic body
- Terminals: Solder Plated, solderable per MIL-STD-750,method 2026
- Polarity: Color band denotes cathode end
- Weight: 11.7 mg(approximately)

### TYPICAL APPLICATIONS

For use in low voltage ,high frequency inverters ,DC/DC converters, free wheeling ,and polarity protection applications

### Suggested PAD Layout



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS

(Ratings at 25°C ambient temperature unless otherwise specified )

Parameter	Symbol	L24	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	40	V
Maximum average forward rectified current	$I_{F(AV)}$	2.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	$I_{FSM}$	50	A
Operating junction temperature range	$T_j$	-55 to+150	°C
Storage temperature range	$T_{stg}$	-55 to+150	°C

## RATINGS AND CHARACTERISTIC OF L24

### ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C Unless otherwise noted)

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instantaneous forward voltage	I <sub>F</sub> =2.0A	T <sub>A</sub> =25°C	V <sub>F</sub> <sup>1)</sup>	0.43	0.45	V
		T <sub>A</sub> =100°C		0.36	0.38	
		T <sub>A</sub> =125°C		0.34	0.36	
Reverse current	V <sub>R</sub> =40V	T <sub>A</sub> =25°C	I <sub>R</sub> <sup>2)</sup>	60	200	μA
		T <sub>A</sub> =100°C		5	10	mA
		T <sub>A</sub> =125°C		30	50	
Typical junction capacitance	4V, 1MHz		C <sub>j</sub>	170		pF

Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle

2.Pulse test: pulse width≤40ms

### THERMAL CHARACTERISTICS (T<sub>A</sub>=25°C Unless otherwise noted)

Parameter	Symbol	L24	Unit
Typical thermal resistance <sup>3)</sup>	R <sub>θJA</sub>	206.0	°C/W
	R <sub>θJL</sub>	118.0	

3.PCB Mounted with The Suggested PAD Size

### AVAILABLE PACK INFORMATION

Product code	Pack	Reel Size (mm)	Quantity (pcs/reel)	Box Size L×W×H (mm)	Quantity (reel/box)	Carton Size L×W×H (mm)	Quantity (box/carton)
L24-SOD-123FL	T/R	Φ330	7500	330×35×333	2	364×364×360	8

# RATINGS AND CHARACTERISTIC OF L24

FIG.1-FORWARD CURRENT DERATING CURVE

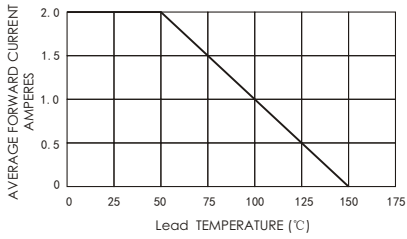


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

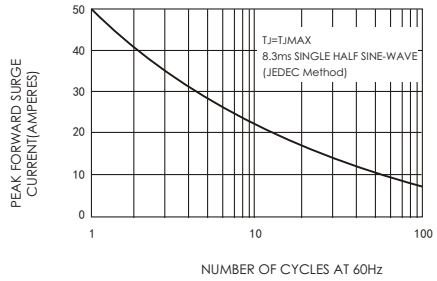


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

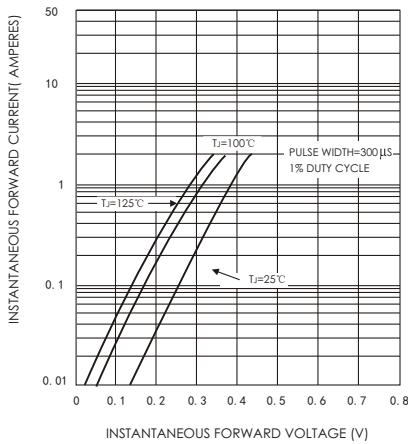


FIG.4-TYPICAL REVERSE CHARACTERISTICS

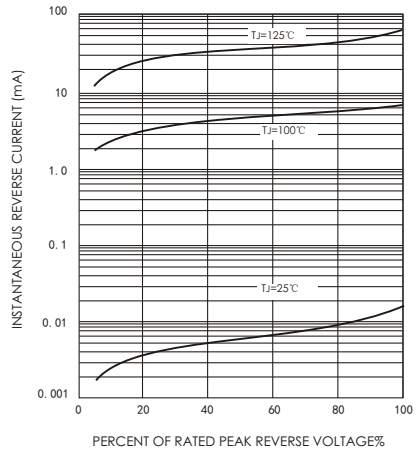


FIG.5-TYPICAL JUNCTION CAPACITANCE

