

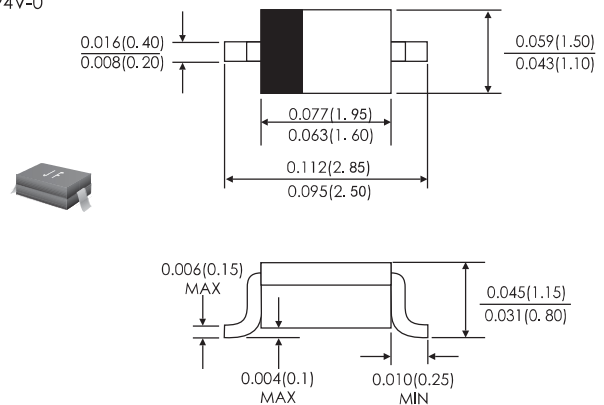
## FEATURES

- 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
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU

## MECHANICAL DATA

- Case: SOD-323 molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750,method 2026
- Polarity: color band denotes cathode end
- Marking:SL

## SOD-323



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified ,Single phase ,half wave ,resistive or inductive load. For capacitive load,derate by 20%.)

|                                                                                                  |                       | Symbols                            | 1N5819WS    | Units |
|--------------------------------------------------------------------------------------------------|-----------------------|------------------------------------|-------------|-------|
| Maximum repetitive peak reverse voltage                                                          |                       | V <sub>RRM</sub>                   | 40          | Volts |
| Maximum RMS voltage                                                                              |                       | V <sub>RMS</sub>                   | 28          | Volts |
| Maximum DC blocking voltage                                                                      |                       | V <sub>DC</sub>                    | 40          | Volts |
| Maximum average forward rectified current                                                        |                       | I(AV)                              | 1.0         | Amp   |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) |                       | I <sub>FSM</sub>                   | 25.0        | Amps  |
| Maximum instantaneous forward voltage at 1.0 A(note 1 )                                          |                       | V <sub>F</sub>                     | 0.55        | Volts |
| Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)                       | T <sub>A</sub> =25°C  | I <sub>R</sub>                     | 0.1         | mA    |
|                                                                                                  | T <sub>A</sub> =100°C |                                    | 10          |       |
| Typical thermal resistance(Note 2)                                                               |                       | R <sub>θJL</sub>                   | 35          | °C/W  |
| Operating junction and storage temperature range                                                 |                       | T <sub>J</sub><br>T <sub>STG</sub> | -55 to +150 | °C    |

Notes: 1.Pulse test: 300μs pulse width,1% duty cycle  
 2.mounted on PCB with 0.2X0.2"(5.0X5.0mm)copper pads

# 1N5819WS

Characteristic Curves(TA=25 °C unless otherwise noted)

FIG.1-FORWARD CURRENT DERATING CURVE

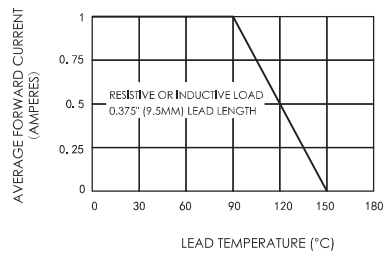


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

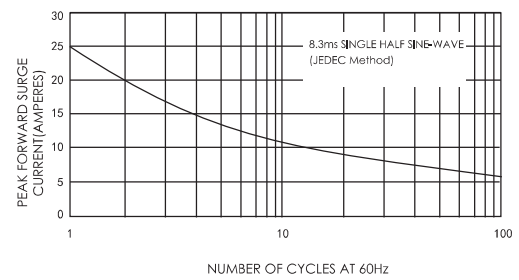


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

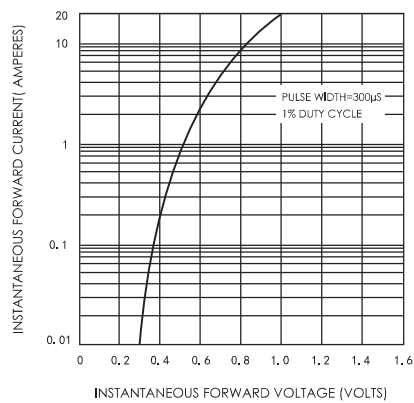


FIG.4-TYPICAL REVERSE CHARACTERISTICS

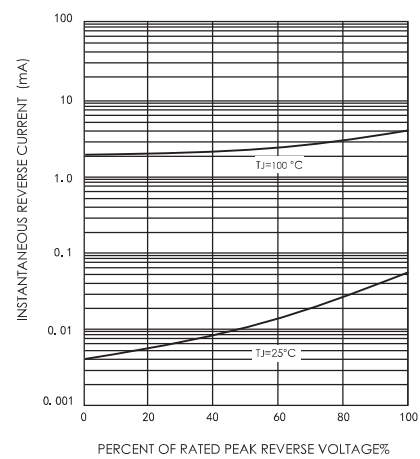


FIG.5-TYPICAL JUNCTION CAPACITANCE

