

# Schottky Diode

## **1N5819**

40V / 1A

# DATASHEET

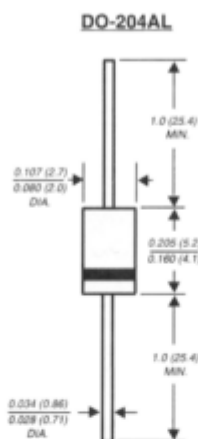
OEM – General Semiconductor

Source: General Semiconductor Databook 1998

# 1N5817 THRU 1N5819

## SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 40 Volts Forward Current - 1.0 Ampere



Dimensions in inches and (millimeters)

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- Guardring 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: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3 kg) tension

### MECHANICAL DATA

**Case:** JEDEC DO-204AL molded plastic body  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.012 ounces, 0.34 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	1N5817	1N5818	1N5819	UNITS
* Maximum repetitive peak reverse voltage	VRRM	20	30	40	Volts
Maximum RMS voltage	VRMS	14	21	28	Volts
* Maximum DC blocking voltage	VDC	20	30	40	Volts
* Maximum non-repetitive peak reverse voltage	VRSM	24	36	48	Volts
* Maximum average forward rectified current 0.375" (9.5mm) lead length at T <sub>L</sub> =90°C	I(AV)	1.0			Amp
* Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at T <sub>L</sub> =70°C	IFSM	25.0			Amps
* Maximum instantaneous forward voltage at 1.0A (NOTE 1)	VF	0.450	0.550	0.600	Volts
* Maximum instantaneous forward voltage at 3.1A (NOTE 1)	VF	0.750	0.875	0.900	Volts
* Maximum instantaneous reverse current at rated DC reverse voltage T <sub>A</sub> =25°C (NOTE 1) T <sub>A</sub> =100°C	IR	1.0 10.0			mA
Typical thermal resistance (NOTE 2)	R <sub>θJA</sub> R <sub>θJL</sub>	50.0 15.0			°C/W
Typical junction capacitance (NOTE 3)	C <sub>J</sub>	110.0			pF
* Storage and operating junction temperature range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +125			°C

\*JEDEC registered values

**NOTES:**

- (1) Pulse test: 300µs pulse width, 1% duty cycle
- (2) Thermal resistance from junction to lead, and/or to ambient P.C.B. mounted with 0.375" (9.5mm) lead length with 1.5 x 1.5" (38 x 38mm) copper pads
- (3) Measured at 1.0 MHz and applied reverse voltage of 4.0 volts

**RATINGS AND CHARACTERISTIC CURVES 1N5817 THRU 1N5819**

