



SYNSEMI SEMICONDUCTOR

1N5817 thru 1N5819

1.0 Amp. Schottky Barrier Rectifiers
Voltage Range 20 to 40 Volts Forward Current 1.0 Ampere

Features

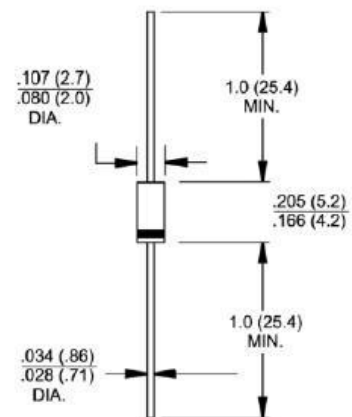
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Low power loss, high efficiency
- ◆ For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- ◆ Guardring for overvoltage protection



DO-204AL (DO-41)

Mechanical Data

- ◆ **Case:** DO-204AL (DO-41) molded plastic body
- ◆ **Terminals:** Plated leads, solderable per MIL-STD-750, Method 2026
High temperature soldering guaranteed: 250°C/10 seconds at terminals 0.375" (9.5mm) lead length, 5lbs (2.3kg) tension for axials
- ◆ **Polarity:** Color band denotes cathode end
- ◆ **Weight:** plastic body DO-41: 0.33 gram, 0.012 ounce



Maximum Ratings and Electrical Characteristics

Dimensions in inches and (millimeters)

(T_A = 25°C unless otherwise noted)

Parameter	Symbols	1N5817	1N5818	1N5819	Units
Maximum repetitive peak reverse voltage	V _{RRM}	20	30	40	Volts
Maximum RMS voltage	V _{RMS}	14	21	28	Volts
Maximum DC blocking voltage	V _{DC}	20	30	40	Volts
Maximum non-repetitive peak reverse voltage	V _{FSM}	24	36	48	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at T _A = 90°C	I _{F(AV)}	1.0			Amp
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) at T _A = 70°C	I _{FSM}	25.0			Amps
Maximum instantaneous forward voltage at 1.0 (Note 1)	V _F	0.450	0.550	0.600	Volts
Maximum instantaneous forward voltage at 3.1 (Note 1)	V _F	0.750	0.875	0.900	Volts
Maximum average reverse current at rated DC blocking voltage (Note 1) T _A = 25°C T _A = 100°C	I _R	1.0 10.0			mA
Typical thermal resistance (Note 2) °C junction-to-ambient (plastic) °C junction-to-lead (plastic)	R _{θJA} R _{θJA}	50 15			°C/W
Typical junction capacitance at 4.0V, 1.0MHz	C _J	110			pF
Operating and storage temperature range	T _J , T _{STG}	-65 to +125			°C

- Notes:**
1. Pulse test: 300μs pulse width, 1% duty cycle
 2. Thermal resistance from junction to lead vertical P.C.B. mounted, 0.375" (9.5mm) lead length with 1.5 x 1.5" (38 x 38mm) copper pads

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RATINGS AND CHARACTERISTIC CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

