



# گروه فنی مهندسی جوش و برش مقدم

اعتماد از شما کیفیت و تخصص از ما



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برای کسب اطلاعات بیشتر بر روی لینک ها کلیک کنید

- 7 سال سابقه آموزش تعمیرات تخصصی دستگاه های جوش اینورتری تک فاز و 3 فاز
- 7 سال سابقه فروش قطعات الکترونیکی دستگاه جوش تک فاز و 3 فاز
- آموزش تخصصی تحلیل دستگاه های جوش اینورتری مختص ابراز فروشان
- آموزش تخصصی ابراز آلات شارژی

## Schottky Barrier Plastic Rectifier

### FEATURES

- Guardring for overvoltage protection
  - Very small conduction losses
  - Extremely fast switching
  - Low forward voltage drop
  - High frequency operation
- Solder dip 275 °C max. 10 s, per JESD 22-B106
  - Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT

**DO-41 (DO-204AL)**

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	1.0 A
$V_{RRM}$	20 V, 30 V, 40 V
$I_{FSM}$	25 A
$V_F$	0.45 V, 0.55 V, 0.60 V
$T_J$ max.	125 °C
Package	DO-41 (DO-204AL)
Circuit configuration	Single

### TYPICAL APPLICATIONS

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

### MECHANICAL DATA

**Case:** DO-41 (DO-204AL)

Molding compound meets UL 94 V-0 flammability rating Base P/N-E3 - RoHS-compliant, commercial grade

**Terminals:** matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

E3 suffix meets JESD 201 class 1A whisker test

**Polarity:** color band denotes the cathode end

MAXIMUM RATINGS ( $T_A = 25\text{ °C}$ unless otherwise noted)					
PARAMETER	SYMBOL	1N5817	1N5818	1N5819	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	V
Maximum RMS voltage	$V_{RMS}$	14	21	28	V
Maximum DC blocking voltage	$V_{DC}$	20	30	40	V
Maximum non-repetitive peak reverse voltage	$V_{RSM}$	24	36	48	V
Maximum average forward rectified current at 0.375" (9.5 mm) lead length at $T_L = 90\text{ °C}$	$I_{F(AV)}$	1.0			A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	25			A
Voltage rate of change (rated $V_R$ )	$dV/dt$	10 000			V/ $\mu$ s
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +125			°C

ELECTRICAL CHARACTERISTICS ( $T_A = 25\text{ °C}$ unless otherwise noted)						
PARAMETER	TEST CONDITIONS	SYMBOL	1N5817	1N5818	1N5819	UNIT
Maximum instantaneous forward voltage	1.0	$V_F^{(1)}$	0.450	0.550	0.600	V
Maximum instantaneous forward voltage	3.1	$V_F^{(1)}$	0.750	0.875	0.900	V
Maximum average reverse current at rated DC blocking voltage	$T_A = 25\text{ °C}$	$I_R^{(1)}$	1.0			mA
	$T_A = 100\text{ °C}$		10			
Typical junction capacitance	4.0 V, 1.0 MHz	$C_J$	125	110		pF

**Note**

<sup>(1)</sup> Pulse test: 300  $\mu$ s pulse width, 1 % duty cycle



THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)					
PARAMETER	SYMBOL	1N5817	1N5818	1N5819	UNIT
Typical thermal resistance	R <sub>θJA</sub> <sup>(1)</sup>	50			°C/W
	R <sub>θJL</sub> <sup>(1)</sup>	15			

**Note**

<sup>(1)</sup> Thermal resistance from junction to lead vertical PCB mounted, 0.375" (9.5 mm) lead length with 1.5" x 1.5" (38 mm x 38 mm) copper pads

ORDERING INFORMATION (Example)				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
1N5819-E3/54	0.332	54	5500	13" diameter paper tape and reel
1N5819-E3/73	0.332	73	3000	Ammo pack packaging

**RATINGS AND CHARACTERISTICS CURVES (T<sub>A</sub> = 25 °C unless otherwise noted)**

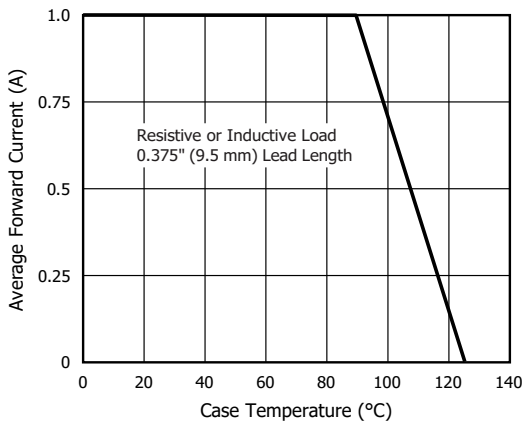


Fig. 1 - Forward Current Derating Curve

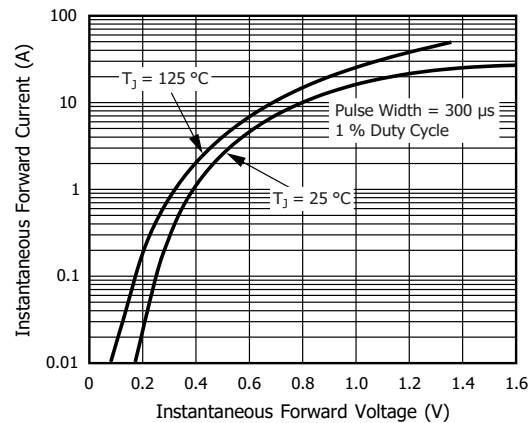


Fig. 3 - Typical Instantaneous Forward Characteristics

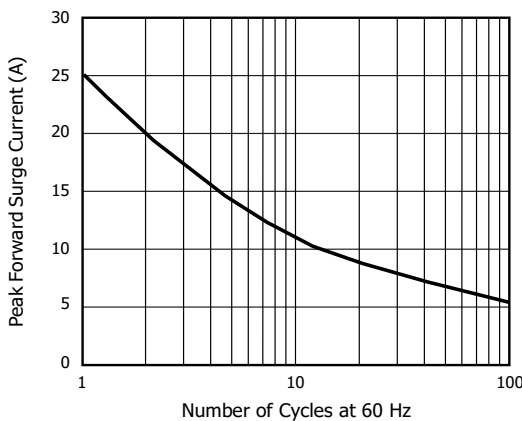


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

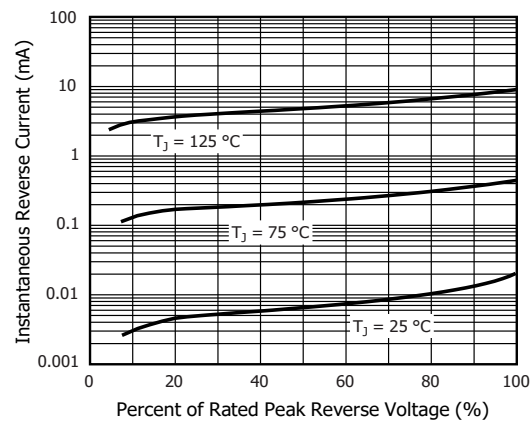


Fig. 4 - Typical Reverse Characteristics

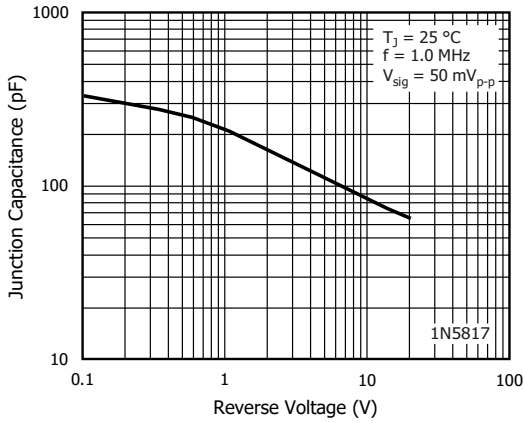


Fig. 5 - Typical Junction Capacitance

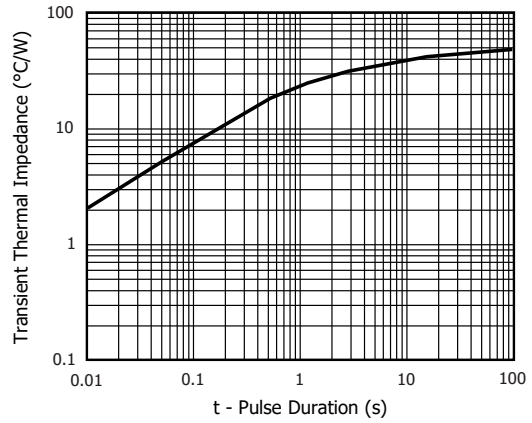


Fig. 7 - Typical Transient Thermal Impedance

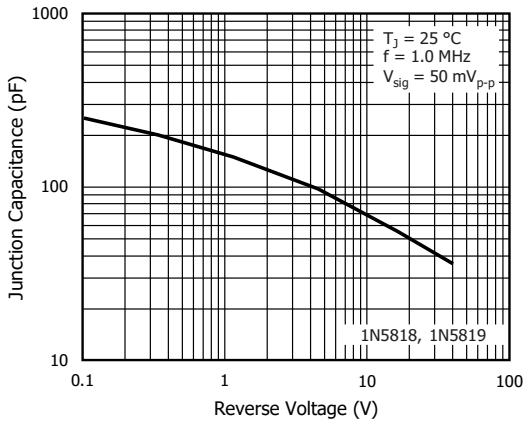
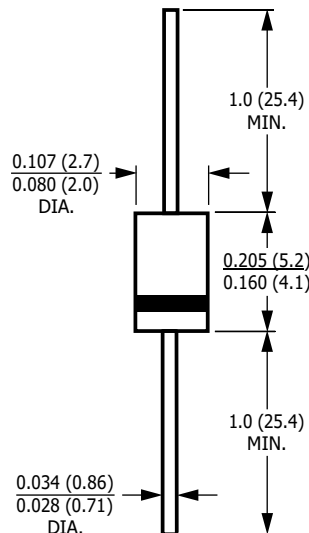


Fig. 6 - Typical Junction Capacitance

### PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

#### DO-41 (DO-204AL)





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