

***1N581XS SERIES***

***SCHOTTKY BARRIER RECTIFIER***

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# 1N5817S THRU 1N5819S

## SCHOTTKY BARRIER RECTIFIER



康比電子  
HORNBY ELECTRONIC

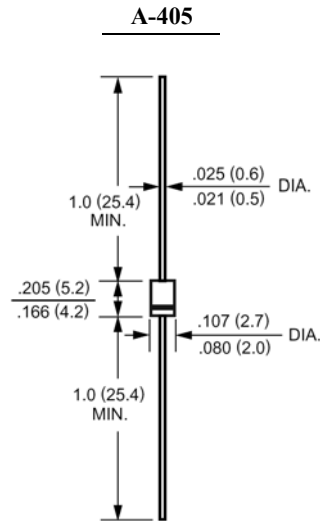
**REVERSE VOLTAGE:** 20 to 40 VOLTS  
**FORWARD CURRENT:** 1.0 AMPERE

### FEATURES

- High current capability
- 1.0 ampere operation at  $T_L=90^\circ\text{C}$  with no thermal runaway.
- Exceeds environmental standards of MIL-S-19500/228
- For use in low voltage, high frequency inverters free wheeling, and porlarlity protection applications

### MECHANICAL DATA

Case: Molded plastic, A-405  
Epoxy: UL 94V-O rate flame retardant  
Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed  
Polarity: Color band denotes cathode end  
Mounting position: Any  
Weight: 0.008ounce, 0.22gram



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Ratings at  $25^\circ\text{C}$  ambient temperature unless otherwise specified.  
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

	Symbols	1N5817S	1N5818S	1N5819S	Units
Maximum Recurrent 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 Average Forward Rectified Current .375"(9.5mm) Lead Length at $T_L=90^\circ\text{C}$	$I_{(AV)}$	1.0			Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	25			Amp
Maximum Forward Voltage at 1.0A DC	$V_F$	0.45	0.55	0.60	Volts
Maximum Forward Voltage at 3.0A DC		0.75	0.875	0.90	
Maximum Reverse Current at $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A=100^\circ\text{C}$	$I_R$	0.5			mAmp
		10			
Typical Junction Capacitance (Note 1)	$C_J$	110			pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	80			$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_J, T_{stg}$	-55 to +125			$^\circ\text{C}$

#### NOTES:

- 1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
- 2- Thermal Resistance From Junction to Ambient 0.5"(12.7mm) lead length P.C.B. Mounted.

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### RATINGS AND CHARACTERISTIC CURVES

FIG. 1 -- TYPICAL FORWARD CURRENT DERATING CURVE

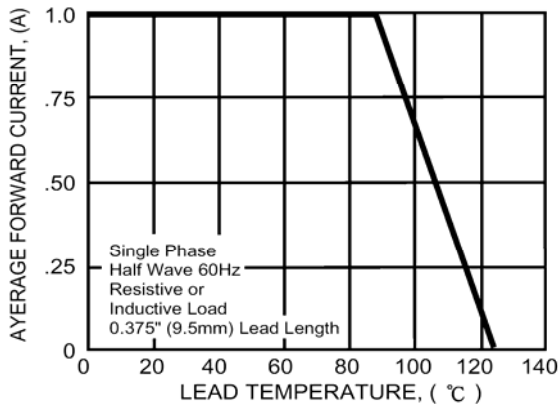


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

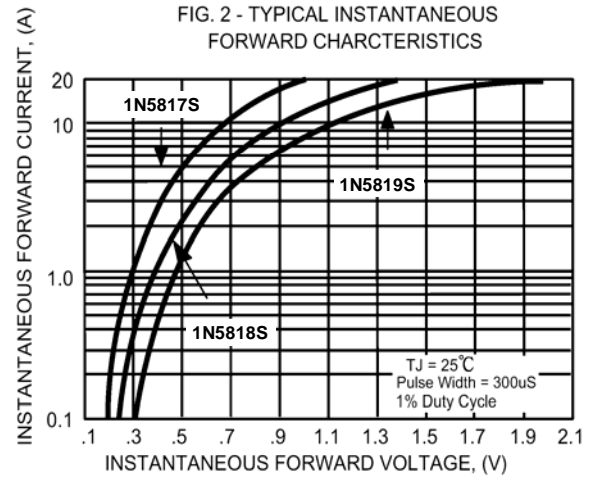


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

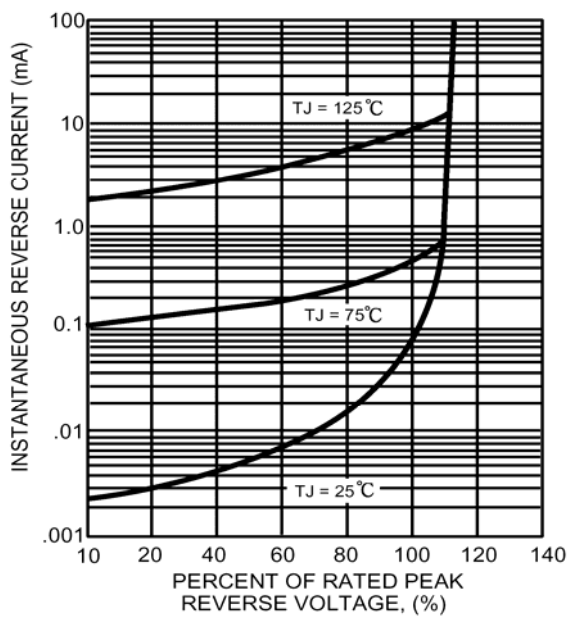


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

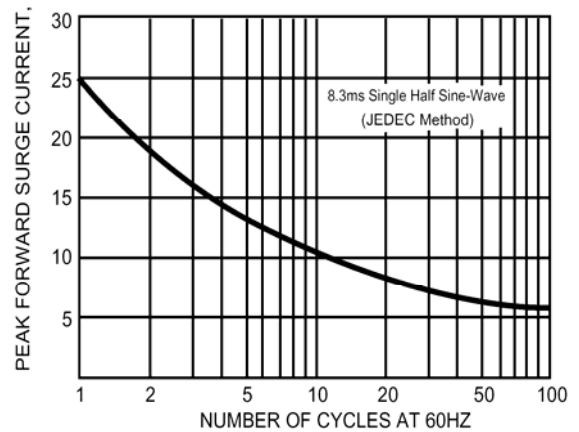


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

