

# SENSITRON SEMICONDUCTOR

1N5819UR-1

HERMETIC AXIAL LEAD / MELF  
SCHOTTKY BARRIER DIODE

TECHNICAL DATA  
DATA SHEET 193, REV. D

AVAILABLE AS

1N5819UR-1

JAN EQUIVALENT:

SJ5819UR-1

SV5819UR-1

SX5819UR-1

SS5819UR-1

## HERMETIC SCHOTTKY BARRIER DIODE

DESCRIPTION: A 45 VOLT, 1.0 AMP SCHOTTKY BARRIER DIODE.

### MAXIMUM RATINGS

All ratings are at  $T_A = 25^\circ\text{C}$  unless otherwise specified.

RATING	CONDITIONS	MIN	TYP	MAX	UNIT
Peak Inverse Voltage (PIV)		-	-	45	Vdc
Average DC Output Current ( $I_o$ )	See Notes	-	-	1.0	Amps
Peak Single Cycle Surge Current ( $I_{fsm}$ )	$t_p = 8.3$ ms Single Half Cycle Sine Wave, Superimposed On Rated Load	-	-	25	Amps(pk)
Thermal Resistance ( $\theta_{JEC}$ )	Junction to Endcap	-	-	40	$^\circ\text{C}/\text{W}$
Junction Temperature ( $T_J$ )	-	-55	-	+125	$^\circ\text{C}$
Operating Temperature ( $T_{op}$ )	-	-55	-	+125	$^\circ\text{C}$
Storage Temp. ( $T_{stg}$ )	-	-55	-	+150	$^\circ\text{C}$

### ELECTRICAL CHARACTERISTICS

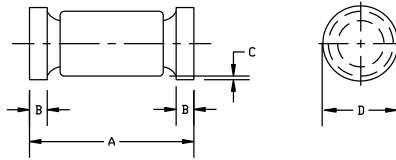
CHARACTERISTIC	CONDITIONS	MIN	TYP	MAX	UNIT
Maximum Forward Voltage ( $V_f$ )	$I_F = 1.0\text{A}$ (300 $\mu\text{sec}$ pulse, duty cycle < 2%)	-	-	0.49	Volts
Maximum Instantaneous Reverse Current At Rated (PIV)	$T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	-	-	50 5.0	$\mu\text{Amps}$ mAmps
Junction Capacitance ( $C_J$ )	$V_R = 5$ Vdc $0.01 \leq f \leq 1\text{MHz}$ $V_{sig} = 15$ mV p-p	-	-	70	pF

**Notes:** - All ratings are at  $T_A = 25^\circ\text{C}$  unless otherwise specified.  
- Maximum storage temperature range:  $-55^\circ\text{C}$  to  $+150^\circ\text{C}$ .  
- Maximum operating temperature range:  $-55^\circ\text{C}$  to  $+125^\circ\text{C}$

**SENSITRON**  
**TECHNICAL DATA**  
**DATA SHEET 193, REV. D**

**PACKAGE DIMENSIONS:**

**MELF**

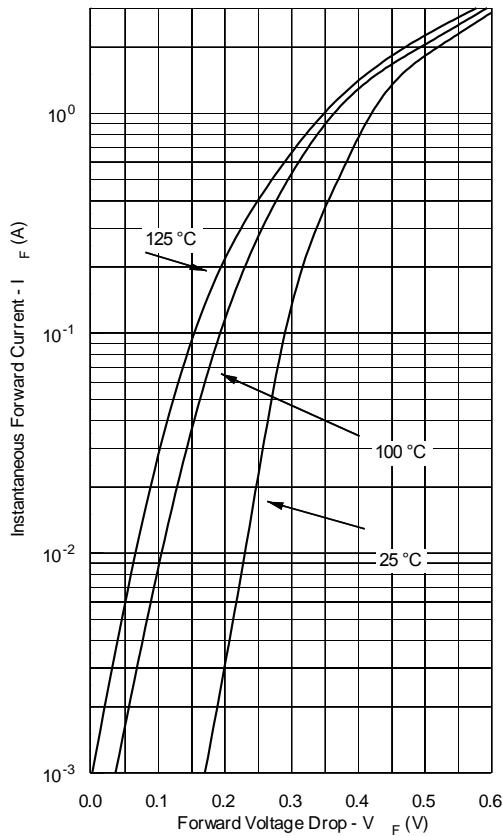


**SCHOTTKY BARRIER**

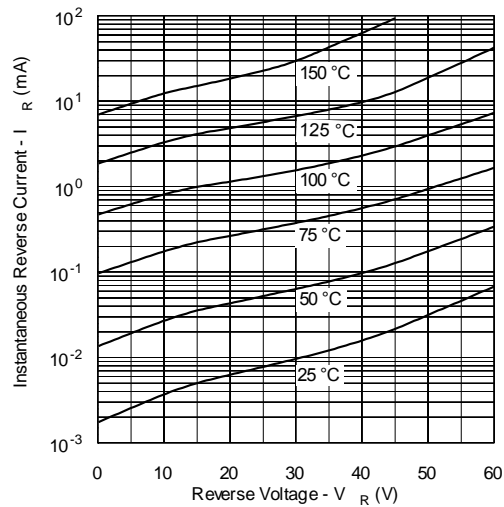
PACKAGE STYLE	DIMENSIONS - INCHES (MILLIMETERS)			
	A	B	C	D
DO-213AB	.189/.205 .480/.521	.016/.022 0.41/0.56	0.001 Min 0.03 Min	.094/.105 2.39/2.67

**GRAPHS:**

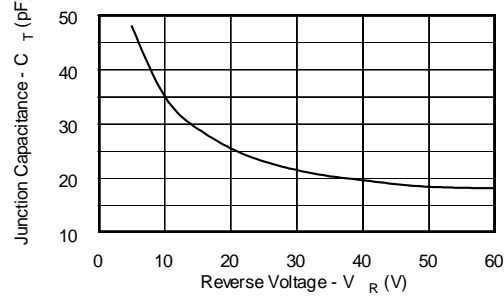
**Typical Forward Characteristics**



**Typical Reverse Characteristics**



**Typical Junction Capacitance**



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TECHNICAL DATA**
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**PART ORDERING INFORMATION**

The following part numbers can be purchased in either axial or surface mount devices and screened and tested to the military screening flow. The parts are marked in accordance with the testing performed, example:

<b>Sensitron Screening Level</b>	<b>Part Number- Surface Mount Package</b>
<b>1N</b>	<b>1N5819UR-1</b>
<b>SJ</b>	<b>SJ5819UR-1</b>
<b>SX</b>	<b>SX5819UR-1</b>
<b>SV</b>	<b>SV5819UR-1</b>
<b>SS</b>	<b>SS5819UR-1</b>

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