

# ***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.

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

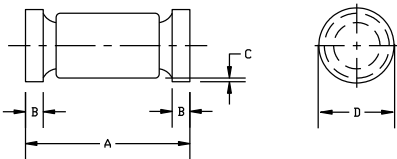
### **ELECTRICAL CHARACTERISTICS**

<b>CHARACTERISTIC</b>	<b>CONDITIONS</b>	<b>MIN</b>	<b>TYP</b>	<b>MAX</b>	<b>UNIT</b>
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	$\mu\text{Amps}$ $\text{mAmps}$
Junction Capacitance ( $C_J$ )	$V_R = 5\text{ Vdc}$ $0.01 \leq f \leq 1\text{MHz}$ $V_{sig} = 15\text{ mV p-p}$	-	-	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  $+125^\circ\text{C}$

PACKAGE DIMENSIONS:

MELF

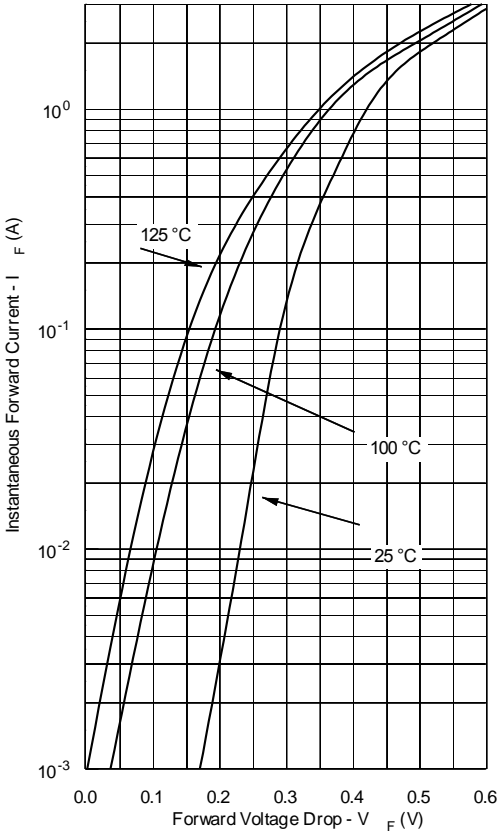


SCHOTTKY BARRIER

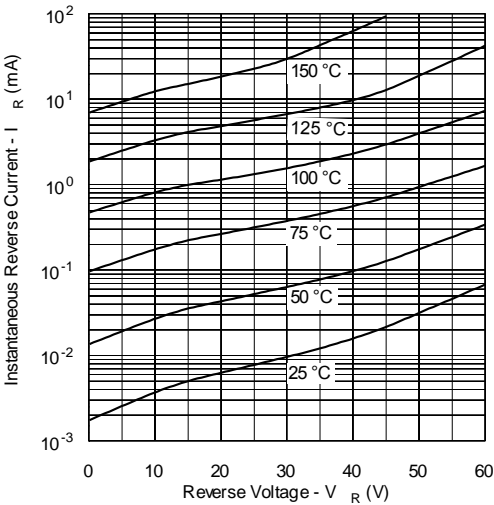
PACKAGE STYLE	DIMENSIONS - INCHES ( MILLIMETERS)			
	A	B	C	D
DO-213AB	.189/.205	.016/.022	0.001 Min	.094/.105
	.480/.521	0.41/0.56	0.03 Min	2.39/2.67

GRAPHS:

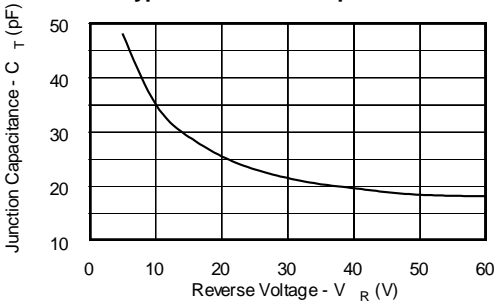
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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