

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 (θ_{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	$^\circ\text{C}$

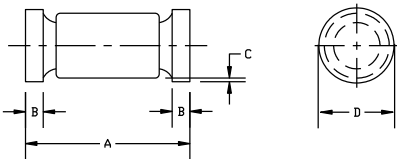
ELECTRICAL CHARACTERISTICS

CHARACTERISTIC	CONDITIONS	MIN	TYP	MAX	UNIT
Maximum Forward Voltage (V_f)	$I_F = 1.0\text{A}$ (300 μsec 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	μAmps 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°C to $+150^\circ\text{C}$.
- Maximum operating temperature range: -55°C to $+125^\circ\text{C}$

PACKAGE DIMENSIONS:

MELF

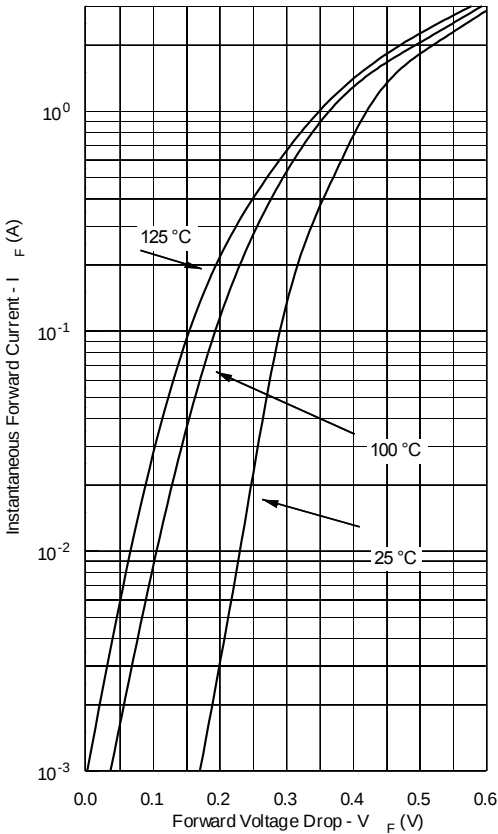


SCHOTTKY BARRIER

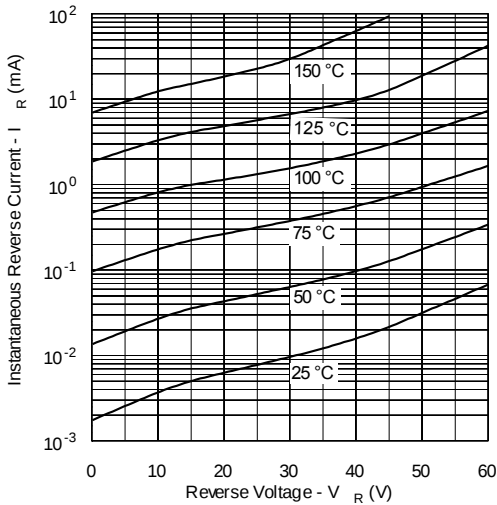
PACKAGE STYLE	DIMENSIONS - INCHES (MILLIMETERS)			
	A	B	C	D
DO-213AB	.189/.205	.016/.022	0.001 Min	.094/.105
	.480/.521	0.41/0.56	0.03 Min	2.39/2.67

GRAPHS:

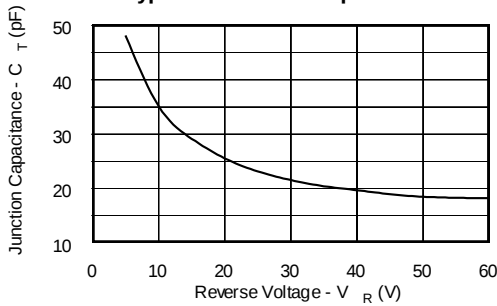
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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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:

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

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