SENSITRON SEMICONDUCTOR

JAN JANTX JANTXV

TECHNICAL DATA DATA SHEET 193, REV. C

HERMETIC AXIAL LEAD / MELF SCHOTTKY BARRIER DIODE

DESCRIPTION: A 45 VOLT, 1.0 AMP, AXIAL LEAD/SURFACE MOUNT SCHOTTKY BARRIER DIODE.

MAXIMUM RATINGS

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

MAXIMOMIKATIKOS		7 til Tatiligo	are at 1 _A	20 0 dificos otrici wise specifica.	
RATING	CONDITIONS	MIN	TYP	MAX	UNIT
Peak Inverse Voltage (PIV)	←	1	-	45	Vdc
Average DC Output Current (I _o)	↑	-	-	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 (_{0,JL})	Junction to Lead d = 0.375"	ı	-	70	°C/W
Thermal Resistance (θ _{JEC})	Junction to Endcap	-	-	40	°C/W
Junction Temperature (T _J)	-	-55	-	+125	°C
Operating Temperature (T _{op)}	-	-55	-	+125	°C
Storage Temp. (T _{stg})	-	-55	-	+150	°C

ELECTRICAL CHARACTERISTICS

CHARACTERISTIC	CONDITIONS	MIN	TYP	MAX	UNIT
Maximum Forward Voltage (V _f)	I _F = 1.0A (300 μsec pulse, duty cycle < 2%)	-	-	0.49	Volts
Maximum Instantaneous Reverse Current At Rated (PIV)	T _A = 25° C T _A = 100° C	-	-	0.05 4.0	μAmps mAmps
Junction Capacitance (C _J)	$\begin{aligned} &V_R = 5 \text{ Vdc} \\ &0.01 \leq f \leq 1 \text{MHz} \\ &V_{sig} = 15 \text{ mV p-p} \end{aligned}$	-	-	70	pF

Notes: - All ratings are at TA = 25°C unless otherwise specified.

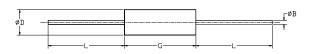
- Maximum storage temperature range: -55°C to +150°C.
- Maximum operating temperature range: -55°C to +125°C (1N5819-1, 1N5819UR-1).
- \leftarrow Derate linearly at 4.5 V/°C above T_L or T_{EC} = +100°C (1N5819-1), where T_{EC} is at L = .375 inch.
- \uparrow Derate linearly at 14 mA/°C above T_L or T_{EC} = +55°C (1N5819-1), where T_{EC} is at L = .375 inch.

^{• 221} West Industry Court ■ Deer Park, NY 11729-4681 ■ Phone (631) 586 7600 Fax (631) 242 9798 •

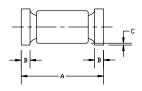
[•] World Wide Web - www.sensitron.com • E-mail Address - sales@sensitron.com •

DATA SHEET 193, REV. C

AXIAL



MELF





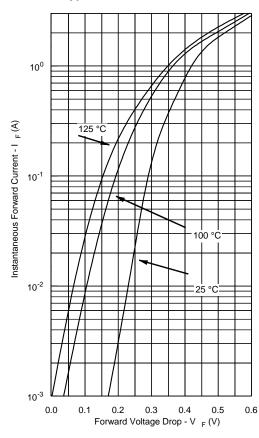
SCHOTTKY BARRIER 1N5819-1

PACKAGE	DIMENSIONS - INCHES (MILLIMETERS)			
STYLE	φВ	φD	G	L
	.028/.034	.08/.107	.160/.205	1.00/1.30
DO-41	0.71/0.86	.203/.272	.406/.521	2.54/3.302

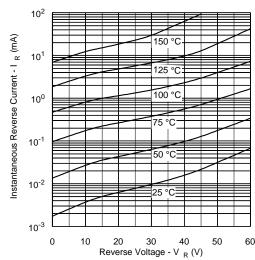
SCHOTTKY BARRIER 1N5819UR-1

DIMENSIONS - INCHES (MILLIMETERS)			
Α	В	С	D
.189/.205	.016/.022	0.001 Min	.094/.105
.480/.521	0.41/0.56	0.03 Min	2.39/2.67
	A .189/.205	A B .189/.205 .016/.022	A B C .189/.205 .016/.022 0.001 Min

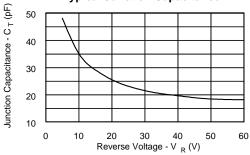
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



^{• 221} West Industry Court Deer Park, NY 11729-4681 Phone (631) 586 7600 Fax (631) 242 9798 •

[•] World Wide Web - www.sensitron.com • E-mail Address - sales@sensitron.com •

DATA SHEET 193, REV. C

DISCLAIMER:

- 1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the Sensitron Semiconductor sales department for the latest version of the datasheet(s).
- 2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.
- 3- In no event shall Sensitron Semiconductor be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). Sensitron Semiconductor assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.
- 4- In no event shall Sensitron Semiconductor be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.
- 5- No license is granted by the datasheet(s) under any patents or other rights of any third party or Sensitron Semiconductor.
- 6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of Sensitron Semiconductor.
- 7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations.