

TECHNICAL DATA DATA SHEET 2038, REV. B

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°C unless otherwise specified

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RATING	CONDITIONS	MIN	TYP	MAX	UNIT
Peak Inverse Voltage (PIV)	←	-	-	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 (_{θJL})	Junction to Lead d = 0.375"	-	-	70	°C/W
Thermal Resistance (θ_{JEC})	Junction to Endcap	-	-	40	°C/W
Junction Temperature (T _J)	-	-65	-	+125	°C
Operating Temperature (T _{op)}	-	-65	-	+125	°C
Storage Temp. (T _{stg})	-	-65	-	+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	-	-	50 5.0	μAmps mAmps
Junction Capacitance (C _J)	$\begin{aligned} &V_R = 5 \text{ Vdc} \\ &0.01 \leq f \leq 1 \\ &V_{sig} = 15 \text{ mV p-p} \end{aligned}$	-	-	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.

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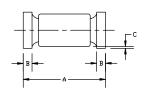
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AXIAL



MELF





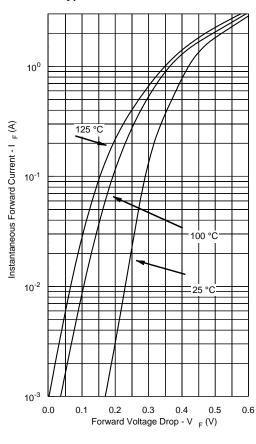
SCHOTTKY BARRIER 1N5819-1

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

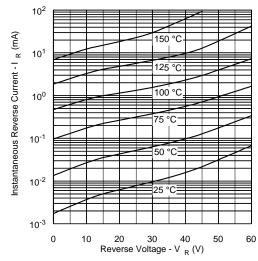
SCHOTTKY BARRIER 1N5819UR-1

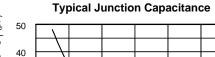
PACKAGE	DIMENSIONS)		
STYLE	Α	В	С	D
	.189/.205	.016/.022	0.001 Min	.094/.105
DO-213AB	.480/.521	0.41/0.56	0.03 Min	2.39/2.67

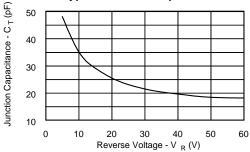
Typical Forward Characteristics



Typical Reverse Characteristics







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