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 $T_A = 25^oC$ unless otherwise specified.

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 (θ_{JL})	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

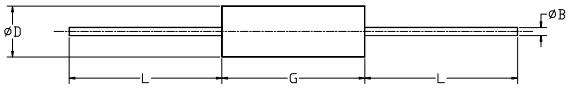
CHARACTERISTIC	CONDITIONS	MIN	TYP	MAX	UNIT
Maximum Forward Voltage (V_f)	I_F = 1.0A (300 μsec pulse, duty cycle < 2%)	-	-	0.49	Volts
Maximum Instantaneous Reverse Current At Rated (PIV)	T_A = 25° C T_A = 100° C	-	-	50 5.0	μAmps mAmps
Junction Capacitance (C_J)	V_R = 5 Vdc 0.01 ≤ f ≤ 1MHz V_{sig} = 15 mV p-p	-	-	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).
- ← 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.
- ↑ Derate linearly at 14 mA/°C above T_L or T_{EC} = +55°C (1N5819-1), where T_{EC} is at L = .375 inch.

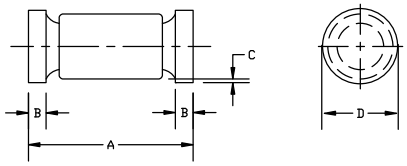
SENSITRON

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AXIAL



MELF



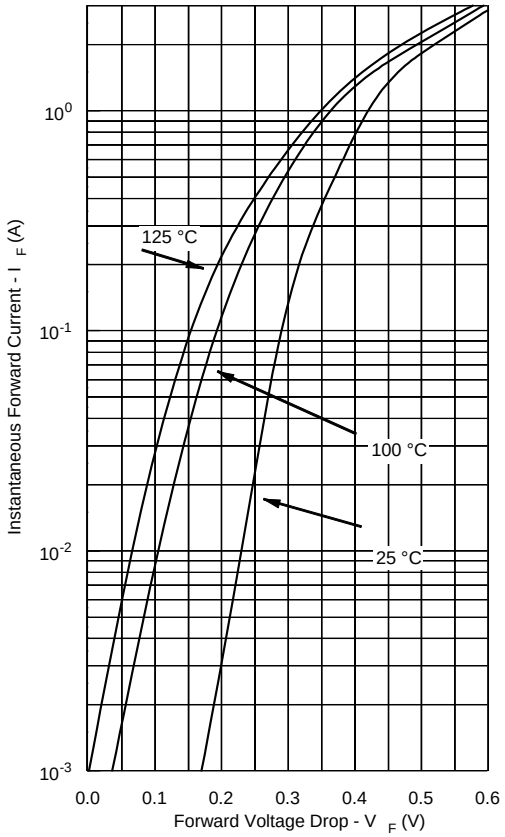
SCHOTTKY BARRIER 1N5819-1

PACKAGE STYLE	DIMENSIONS - INCHES (MILLIMETERS)			
	ϕB	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

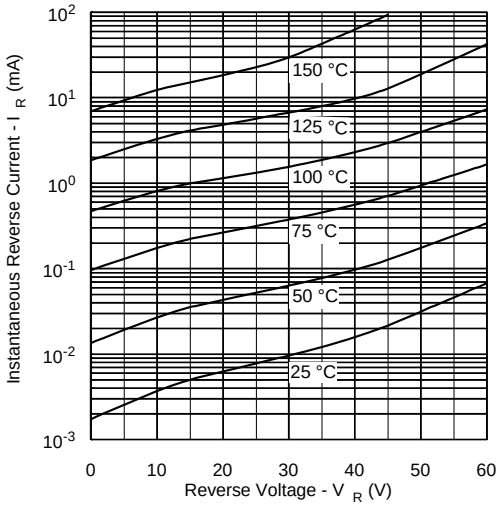
SCHOTTKY BARRIER 1N5819UR-1

PACKAGE STYLE	DIMENSIONS - INCHES (MILLIMETERS)			
	A	B	C	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

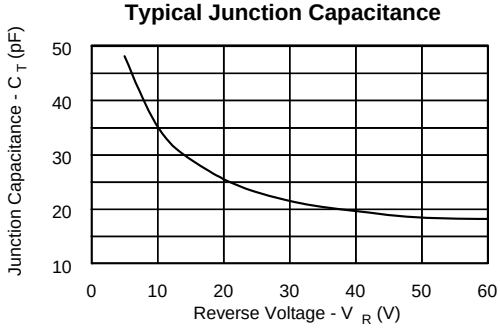
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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