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TECHNICAL DATA SHEET

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APPLICATIONS / BENEFITS

- Standard recovery 1 Amp rectifiers 200 to 1000 V
- Military and other high-reliability applications
- General rectifier applications including bridges, half-bridges, catch diodes, etc.
- High forward surge current capability
- Extremely robust construction
- Low thermal resistance
- Controlled avalanche with peak reverse power capability
- Inherently radiation hard as described in Microsemi MicroNote 050

MAXIMUM RATINGS

- Junction & Storage Temperature: -65°C to +175°C
- Thermal Resistance: 42°C/W junction to lead at 3/8 inch (10 mm) lead length from body
- Thermal Impedance: 4.5°C/W @ 10 ms
- Average Rectified Forward Current (I_O): 1.0 Amps @ $T_A = 55^\circ\text{C}$
- Forward Surge Current: 25 Amps @ 8.3 ms half-sine
- Solder Temperatures: 260°C for 10 s (maximum)

MECHANICAL AND PACKAGING

- CASE: Hermetically sealed voidless hard glass with Tungsten slugs
- TERMINATIONS: Axial leads are copper with Tin/Lead (Sn/Pb) finish
- MARKING: Body paint and part number, etc.
- POLARITY: Cathode band
- TAPE & REEL option: Standard per EIA-296
- WEIGHT: 340 mg
- See package dimensions on last page

ELECTRICAL CHARACTERISTICS @ 30°C Case Temperature

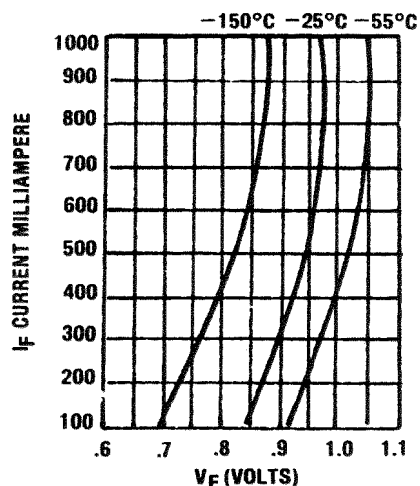
TYPE	WORKING PEAK REVERSE VOLTAGE V_{RWM}	MINIMUM BREAKDOWN VOLTAGE V_{BR} @ 100 μ A	AVERAGE RECTIFIED CURRENT I_O @ $T_A = 55^\circ\text{C}$	MAXIMUM FORWARD VOLTAGE V_F @ 3A	MAXIMUM REVERSE CURRENT I_R @ V_{RWM}		MAXIMUM SURGE CURRENT (NOTE 1) I_{FSM}	MAXIMUM REVERSE RECOVERY (NOTE 2) t_{rr}
	VOLTS	VOLTS	AMPS	VOLTS	μ A		AMPS	μ Sec.
			55°C		25°C	150°C		
1N4245	200	240	1.00	1.3	1.0	150	25	5.0
1N4246	400	480	1.00	1.3	1.0	150	25	5.0
1N4247	600	720	1.00	1.3	1.0	150	25	5.0
1N4248	800	960	1.00	1.3	1.0	150	25	5.0
1N4249	1000	1150	1.00	1.3	1.0	150	25	5.0

NOTE 1: $I_O = 1\text{A}$, 8 ms surge

NOTE 2: $I_F = 0.5\text{A}$, $I_{RM} = 1\text{A}$, $I_{R(REC)} = .250\text{A}$

GRAPHS

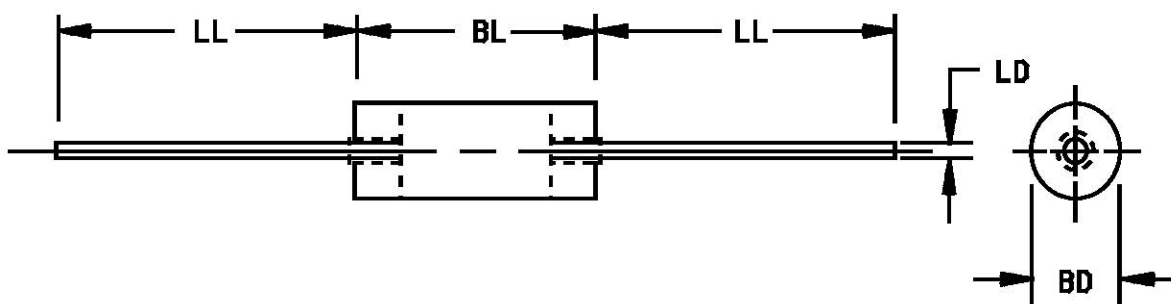
FIGURE 1
 TYPICAL FORWARD CONDUCTANCE CURVE



SYMBOLS & DEFINITIONS

Symbol	Definition
V_{BR}	Minimum Breakdown Voltage: The minimum voltage the device will exhibit at a specified current.
V_{RWM}	Working Peak Reverse Voltage: The maximum peak voltage that can be applied over the operating temperature range.
V_F	Maximum Forward Voltage: The maximum forward voltage the device will exhibit at a specified current.
I_R	Maximum Leakage Current: The maximum leakage current that will flow at the specified voltage and temperature.
t_{rr}	Reverse Recovery Time: The time interval between the instant the current passes through zero when changing from the forward direction to the reverse direction and a specified recovery decay point after a peak reverse current is reached.

PACKAGE DIMENSIONS



NOTE:

1. Dimensions are in inches.
2. Millimeters are given for general information only.
3. Dimension BD shall be measured at the largest diameter.
4. The BL dimension shall include the entire body including slugs and sections of the leads over which the diameter is uncontrolled. This uncontrolled area is defined as the zone between the edge of the diode body and extending .050 inch (1.27 mm) onto the leads
5. The shape of the body, within the bounds of the dimensions is optional.
6. In accordance with ASME Y14.5M, diameters are equivalent to ϕ x symbology.

Ltr	Dimensions				Notes
	Inches		Millimeters		
	Min	Max	Min	Max	
BD	.065	.110	1.65	2.79	
BL	.125	.250	3.30	5.21	
LD	.027	.032	0.66	0.84	
LL	.70	1.30	25.4	38.10	