

## MAXIMUM RATINGS

- Notes:**
1. At 3/8 inch (10 mm) lead length from body.
  2. Derate linearly at 22 mA/°C for  $55^{\circ}\text{C} \leq T_A \leq 100^{\circ}\text{C}$ .
  3. Above  $T_A = 100^{\circ}\text{C}$ , derate linearly at 26.7 mA/°C to zero at  $T_A = 175^{\circ}\text{C}$ .
  4. These ambient ratings are for PC boards where thermal resistance from mounting point to ambient is sufficiently controlled where  $T_{J(\text{max})}$  does not exceed  $175^{\circ}\text{C}$ .
  5.  $I_F = 0.5\text{ A}$ ,  $I_{RM} = 1\text{ A}$ ,  $I_{R(\text{REC})} = 0.250\text{ A}$ .

## MECHANICAL and PACKAGING

- CASE: Hermetically sealed voidless hard glass with tungsten slugs.
- TERMINALS: Axial-leads are tin/lead (Sn/Pb) over copper. RoHS compliant matte-tin is available for commercial grade only.
- MARKING: Body paint and part number.
- POLARITY: Cathode band.
- TAPE & REEL option: Standard per EIA-296. Contact factory for quantities.
- WEIGHT: 750 milligrams.
- See [Package Dimensions](#) on last page.

## PART NOMENCLATURE

**JAN 1N5415 (e3)**

### Reliability Level

JAN = JAN Level  
JANTX = JANTX Level  
JANTXV = JANTXV Level  
JANS = JANS Level  
Blank = commercial

### JEDEC type number

See [Electrical Characteristics](#)  
table

### RoHS Compliance

e3 = RoHS compliant ([available on commercial grade only](#))  
Blank = non-RoHS compliant

## SYMBOLS & DEFINITIONS

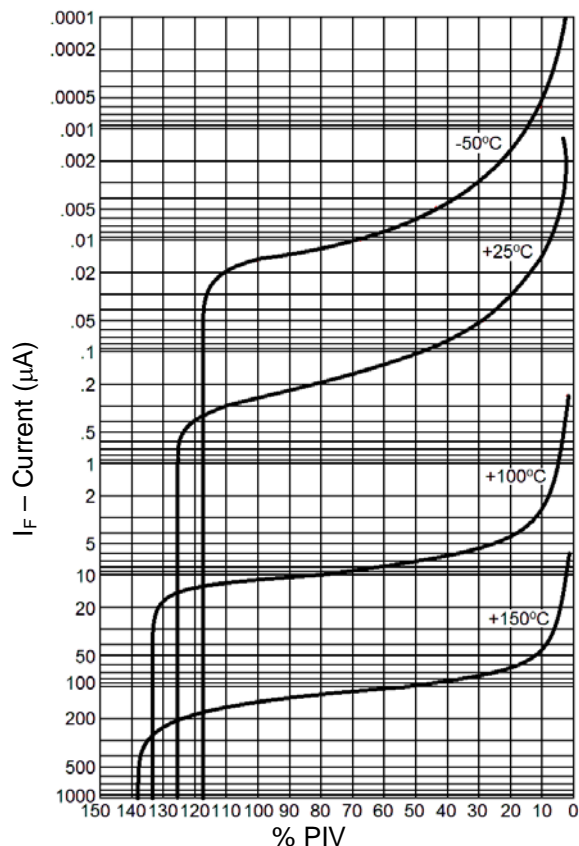
Symbol	Definition
$V_{BR}$	Minimum Breakdown Voltage: The minimum voltage the device will exhibit at a specified current.
$V_{RWM}$	Working Peak Reverse Voltage: The maximum peak voltage that can be applied over the operating temperature range excluding all transient voltages (ref JESD282-B).
$I_O$	Average Rectified Output Current: The Output Current averaged over a full cycle with a 50 Hz or 60 Hz sine-wave input and a 180 degree conduction angle.
$V_F$	Maximum Forward Voltage: The maximum forward voltage the device will exhibit at a specified current.
$I_R$	Maximum Reverse Current: The maximum reverse (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 decay point after a peak reverse current occurs.

**ELECTRICAL CHARACTERISTICS**

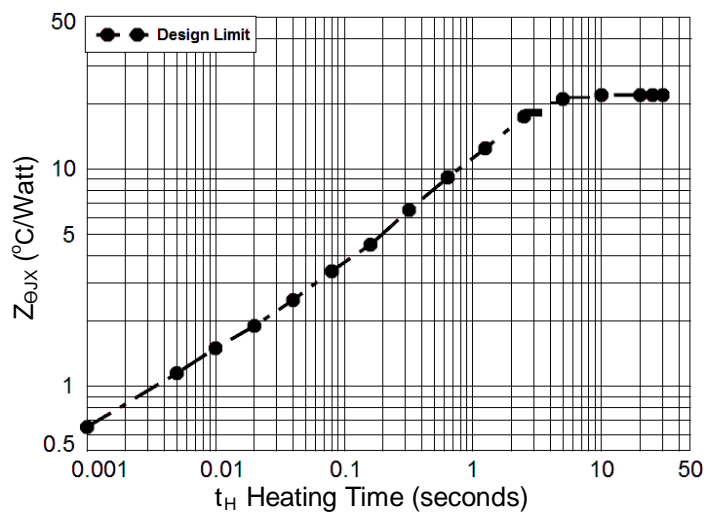
TYPE	MINIMUM BREAKDOWN VOLTAGE	FORWARD VOLTAGE		MAXIMUM REVERSE CURRENT		CAPACITANCE C
	$V_{BR} @ 50 \mu A$	$V_F @ 9 A$		$I_R @ V_{RWM}$		$V_R @ 4 V$
	Volts	MIN. Volts	MAX. Volts	25 °C $\mu A$	100 °C $\mu A$	pF
1N5415	55	0.6	1.5	1.0	20	550
1N5416	110	0.6	1.5	1.0	20	430
1N5417	220	0.6	1.5	1.0	20	250
1N5418	440	0.6	1.5	1.0	20	165
1N5419	550	0.6	1.5	1.0	20	140
1N5420	660	0.6	1.5	1.0	20	120

**NOTE 1:**  $I_F = 0.5 A$ ,  $I_{RM} = 1 A$ ,  $I_{R(REC)} = 0.250 A$ .

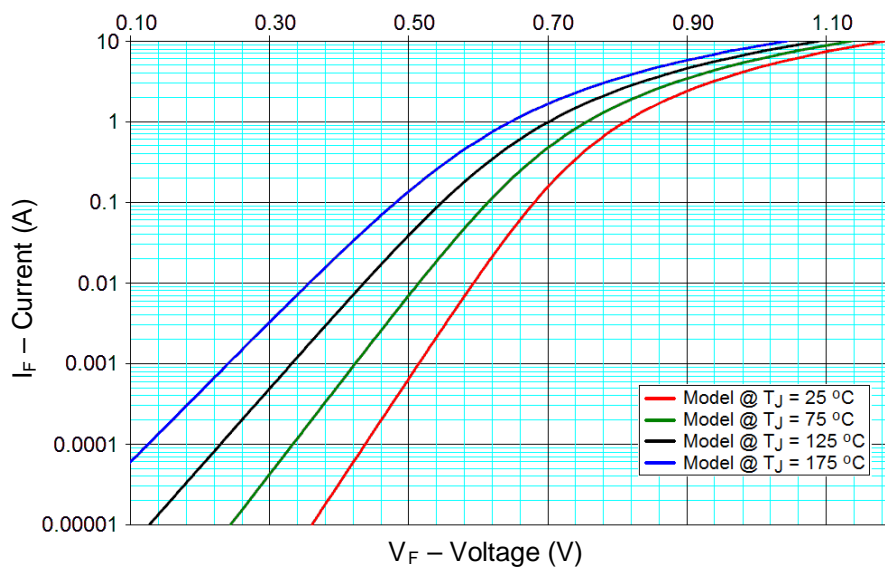
# GRAPHS



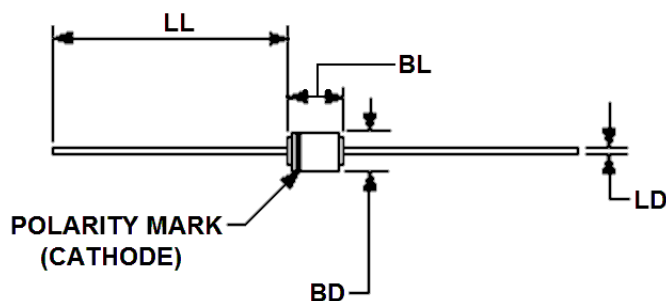
**FIGURE 1**  
Typical Reverse Current vs. PIV



**FIGURE 2**  
Maximum Thermal Impedance



**FIGURE 3**  
Typical Forward Current vs. Forward Voltage

**PACKAGE DIMENSIONS**


Symbol	Dimensions				Notes
	Inch		Millimeters		
	Min	Max	Min	Max	
BD	0.110	0.180	2.79	4.57	3
LD	0.036	0.042	0.91	1.07	4
BL	0.130	0.260	3.30	6.60	4
LL	0.90	1.30	22.9	33.0	

**NOTES:**

1. Dimensions are in inches.
2. Millimeter equivalents 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 lead 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. In accordance with ASME Y14.5M, diameters are equivalent to  $\Phi$ x symbology.