



# BY296 THRU BY299

## 2.0 AMPS. Fast Recovery Rectifiers

Voltage Range  
100 to 800 Volts  
Current  
2.0 Amperes

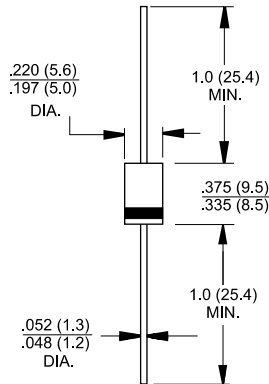
### Features

- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ High reliability
- ◇ High surge current capability

### Mechanical Data

- ◇ Cases: Molded plastic
- ◇ Epoxy: UL 94V-0 rate flame retardant
- ◇ Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- ◇ Polarity: Color band denotes cathode end
- ◇ High temperature soldering guaranteed: 250°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ◇ Weight: 1.2 grams

### DO-201AD



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

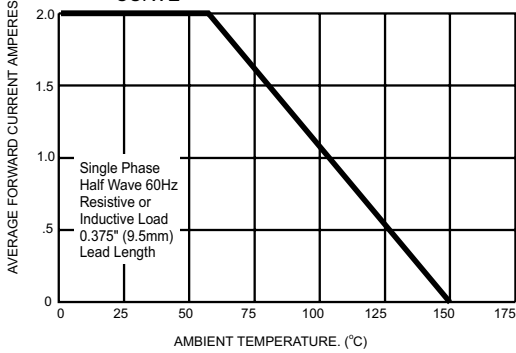
Rating at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

Type Number	BY296	BY297	BY298	BY299	Units
Maximum Recurrent Peak Reverse Voltage	100	200	400	800	V
Maximum RMS Voltage	70	140	280	560	V
Maximum DC Blocking Voltage	100	200	400	800	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length @ T <sub>A</sub> = 55°C	2.0				A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	70				A
Maximum Instantaneous Forward Voltage @ 2.0A	1.2				V
Maximum DC Reverse Current @ T <sub>A</sub> =25°C at Rated DC Blocking Voltage @ T <sub>A</sub> =100°C	5.0 100				uA uA
Maximum Reverse Recovery Time ( Note 1 )	250				nS
Typical Junction Capacitance ( Note 2 )	30				pF
Operating Temperature Range T <sub>J</sub>	-65 to +150				°C
Storage Temperature Range T <sub>STG</sub>	-65 to +150				°C

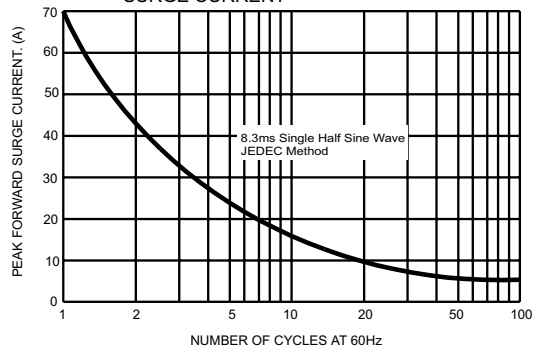
Notes: 1. Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A  
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.

## RATINGS AND CHARACTERISTIC CURVES (BY296 THRU BY299)

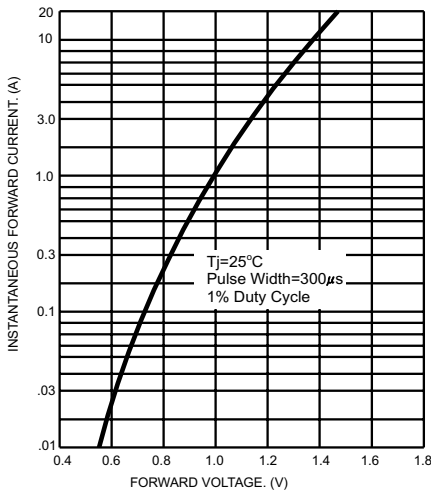
**FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE**



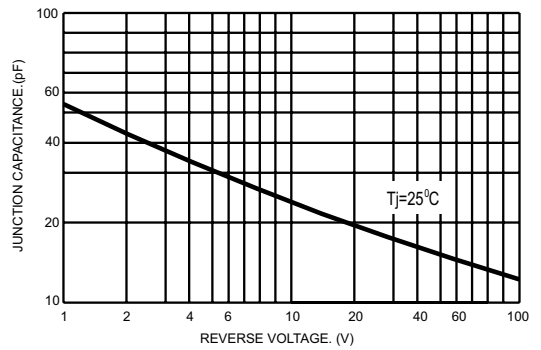
**FIG. 2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



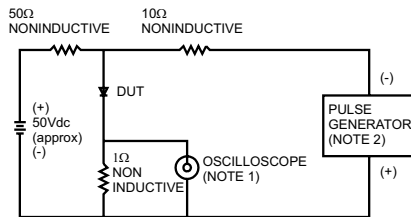
**FIG. 3- TYPICAL FORWARD CHARACTERISTICS**



**FIG. 4- TYPICAL JUNCTION CAPACITANCE**



**FIG. 5- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



NOTES: 1. Rise Time=7ns max. Input Impedance=1 megohm 22pf  
 2. Rise Time=10ns max. Source Impedance=50 ohms

