



# BY251 THRU BY255

## 3.0 AMPS. Silicon Rectifiers

Voltage Range  
200 to 1300 Volts  
Current  
3.0Amperes

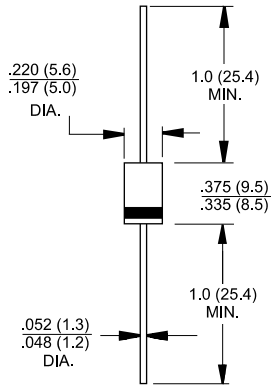
### DO-201AD

### Features

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

### Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Epoxy: UL 94V-O 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



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%

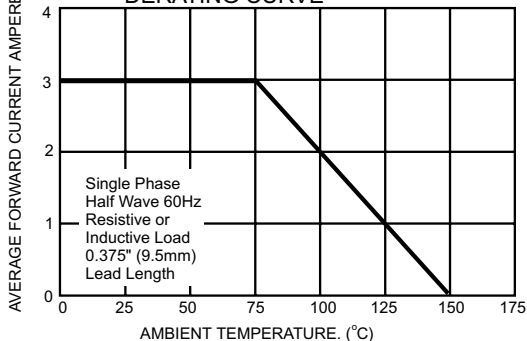
Type Number	BY251	BY252	BY253	BY254	BY255	Units
Maximum Recurrent Peak Reverse Voltage	200	400	600	800	1300	V
Maximum RMS Voltage	140	280	420	560	910	V
Maximum DC Blocking Voltage	200	400	600	800	1300	V
Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length @ T <sub>A</sub> = 75°C	3.0					A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	150					A
Maximum Instantaneous Forward Voltage @ 3.0A	1.0					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					µA µA
Maximum Full Load Reverse Current, Full Cycle Average .375"(9.5mm) Lead Length @ T <sub>J</sub> =75°C	30					µA
Typical Junction Capacitance (Note 1)	50					pF
Typical Thermal Resistance RθJA (Note 2)	18					°C/W
Operating Temperature Range T <sub>J</sub>	-65 to +150					°C
Storage Temperature Range T <sub>STG</sub>	-65 to +150					°C

Notes: 1. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

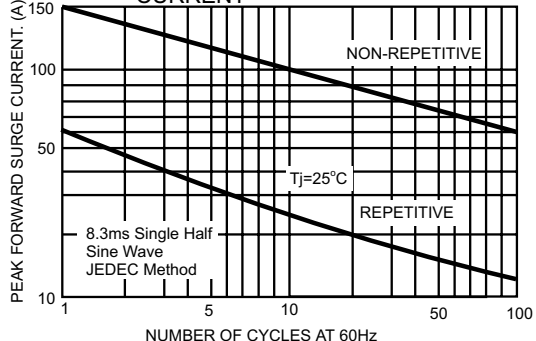
2. Thermal Resistance from Junction to Ambient .375" (9.5mm) Lead Length.

## RATINGS AND CHARACTERISTIC CURVES (BY251 THRU BY255)

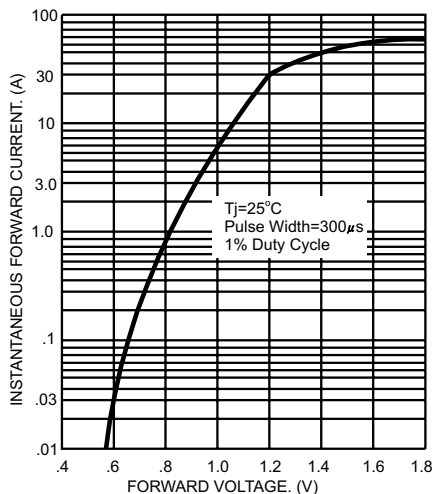
**FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE**



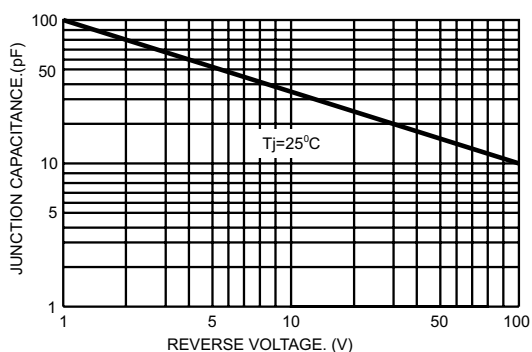
**FIG.2- MAXIMUM FORWARD SURGE CURRENT**



**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



**FIG.4- TYPICAL JUNCTION CAPACITANCE**



**FIG.5- TYPICAL REVERSE CHARACTERISTICS**

