



# BY251 THRU BY255

3.0 AMPS. Silicon Rectifiers



Voltage Range  
200 to 1300 Volts  
Current  
3.0 Amperes

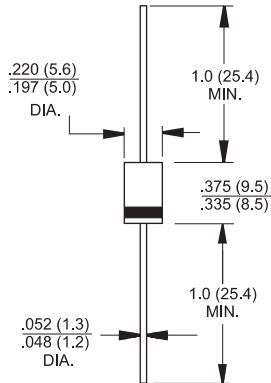
## Features

- ✧ 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: 260°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%

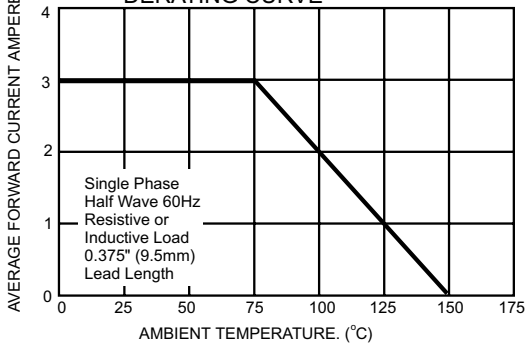
Type Number	Symbol	BY251	BY252	BY253	BY254	BY255	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	200	400	600	800	1300	V
Maximum RMS Voltage	$V_{RMS}$	140	280	420	560	910	V
Maximum DC Blocking Voltage	$V_{DC}$	200	400	600	800	1300	V
Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length @ $T_A = 75^\circ C$	$I_{(AV)}$	3.0					A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	$I_{FSM}$	150					A
Maximum Instantaneous Forward Voltage @ 3.0A	$V_F$	1.0					V
Maximum DC Reverse Current @ $T_A=25^\circ C$ at Rated DC Blocking Voltage @ $T_A=100^\circ C$	$I_R$	5.0 100					$\mu A$ $\mu A$
Maximum Full Load Reverse Current, Full Cycle Average .375" (9.5mm) Lead Length @ $T_L=75^\circ C$	$HT_{IR}$	30					$\mu A$
Typical Junction Capacitance ( Note 1 )	$C_j$	50					pF
Typical Thermal Resistance ( Note 2 )	$R_{\theta JA}$	18					$^\circ C/W$
Operating Temperature Range	$T_J$	-65 to +150					$^\circ C$
Storage Temperature Range	$T_{STG}$	-65 to +150					$^\circ C$

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

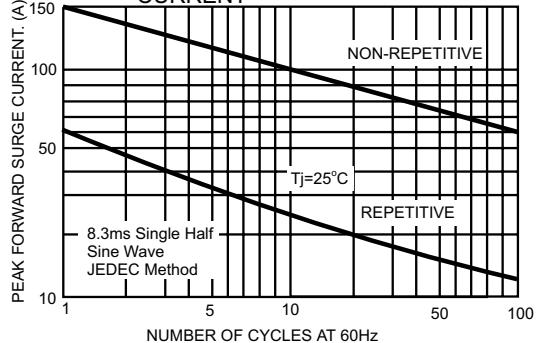
2. Thermal Resistance from Junction to Ambient .375" (9.5mm) Lead Length.

## RATINGS AND CHARACTERISTIC CURVES (BY251 THRU BY255)

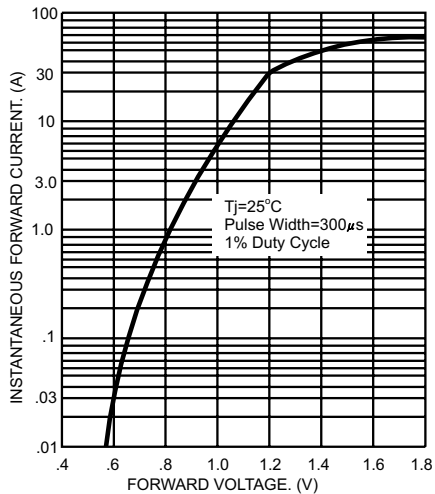
**FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE**



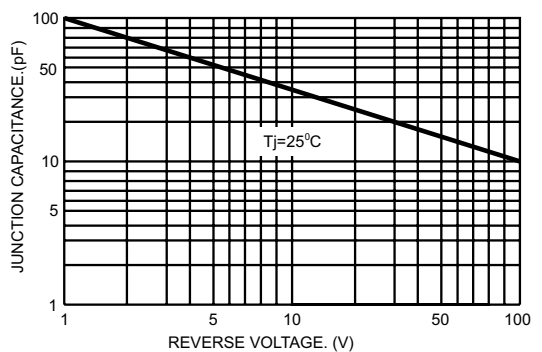
**FIG.2- MAXIMUM FORWARD SURGE CURRENT**



**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



**FIG.4- TYPICAL JUNCTION CAPACITANCE**



**FIG.5- TYPICAL REVERSE CHARACTERISTICS**

