

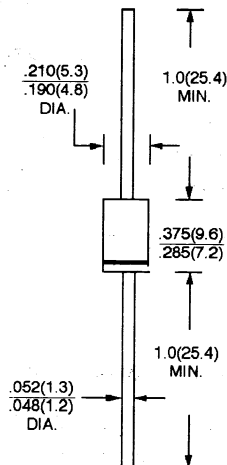


# BY251 THRU BY255

## 3.0 AMPS. SILICON RECTIFIERS

**VOLTAGE RANGE**  
50 to 1000 Volts  
**CURRENT**  
3.0 Amperes

### DO-201AD



Dimensions in inches and (millimeters)

### FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability

### MECHANICAL DATA

- \* Case: 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
- \* Mounting Position: Any
- \* Weight: 1.18 grams

### 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	SYMBOLS	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 D. C Blocking Voltage	$V_{DC}$	200	400	600	800	1300	V
Maximum Average Forward Rectified Current .375" (9.5mm) lead length @ $T_A = 75^\circ\text{C}$	$I_{F(AV)}$	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 at 3.0A	$V_F$	1.0					V
Maximum D. C Reverse Current @ $T_A = 25^\circ\text{C}$ at Rated D. C Blocking Voltage @ $T_A = 100^\circ\text{C}$	$I_R$	5.0 100					$\mu\text{A}$ $\mu\text{A}$
Typical Junction Capacitance (Note 1)	$C_J$	50					pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	18					$^\circ\text{C}/\text{W}$
Operating Temperature Range	$T_J$	- 65 to + 125					$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	- 65 to + 150					$^\circ\text{C}$

NOTES: 1. Measured at 1 MHz and applied reverse voltage of 4.0V D. C.  
2. Thermal Resistance from Junction to Ambient 0.375"(9.5mm)Lead Length.

## RATINGS AND CHARACTERISTIC CURVES (BY251 THRU BY255)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

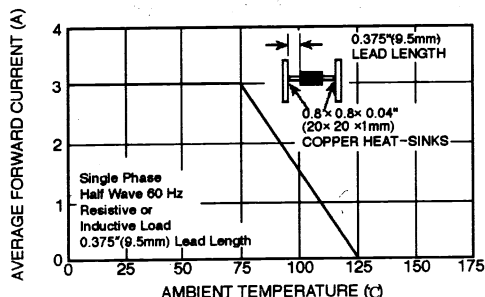


FIG. 2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

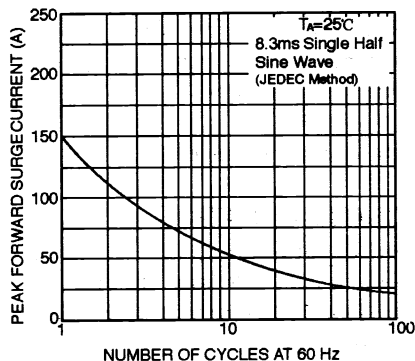


FIG. 3 - TYPICAL FORWARD CHARACTERISTICS

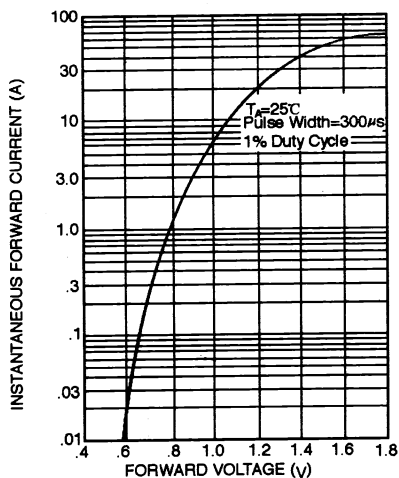


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

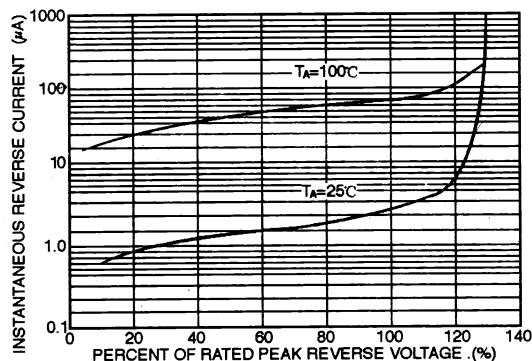
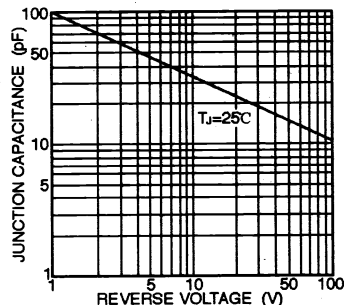


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



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[www.datasheetcatalog.com](http://www.datasheetcatalog.com)

Datasheets for electronics components.