

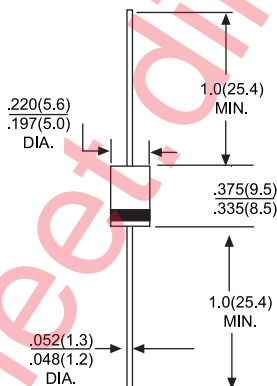


# BY251 THRU BY255

## 3.0 AMPS. SILICON RECTIFIERS

**Voltage Range**  
200 to 1300 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

- 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

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Type Number		BY251	BY252	BY253	BY254	BY255	UNITS
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	200	400	600	800	1300	V
Maximum RMS Voltage	V <sub>RMS</sub>	140	280	420	560	910	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	200	400	600	800	1300	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length @T <sub>A</sub> = 75°C	I <sub>F(AV)</sub>	3.0					A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I <sub>FSM</sub>	150					A
Maximum Instantaneous Forward Voltage @3.0A	V <sub>F</sub>	1.0					V
Maximum DC Reverse Current @ T <sub>A</sub> = 25°C at Rated DC Blocking Voltage @ T <sub>A</sub> = 100°C	I <sub>R</sub>	5.0 100					µA µA
Maximum Full Load Reverse Current, Full Cycle Average .375"(9.5mm) Lead Length @T <sub>L</sub> =75°C	I <sub>R</sub>	30					µA
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	50					pF
Typical Thermal Resistance (Note 2)	R <sub>θJA</sub>	18					°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to +125					°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150					°C

NOTES: 1. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.  
2. Thermal Resistance from Junction to Ambient .375"(9.5mm) Lead Length.

# RATING AND CHARACTERISTIC CURVES BY251 THRU BY255



FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

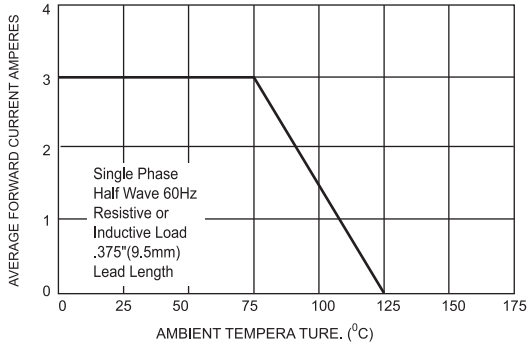


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

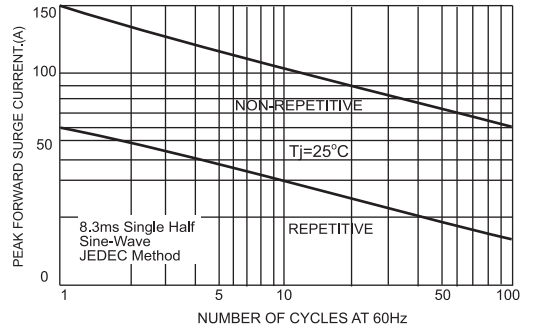


FIG.4-TYPICAL REVERSE CHARACTERISTICS

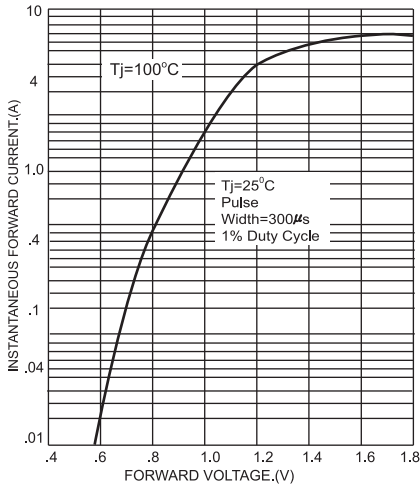


FIG.4-TYPICAL JUNCTION CAPACITANCE

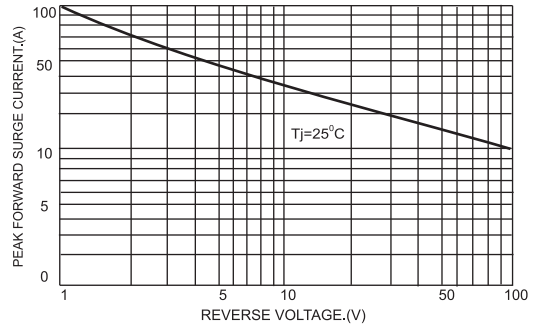


FIG.5- TYPICAL REVERSE CHARACTERISTICS

