



## BY251 - BY254

### 3.0 AMPS. Silicon Rectifiers

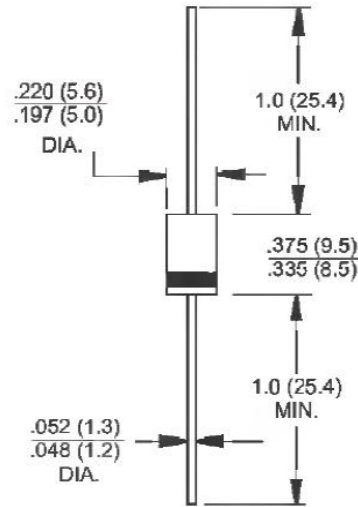
#### DO-201AD

### Features

- ✧ High efficiency, Low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ Low power loss
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

### Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Lead: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode
- ✧ High temperature soldering guaranteed: 260°C/10s / .375", (9.5mm) lead lengths at 5 lbs, (2.3kg) tension
- ✧ Weight: 1.2 grams



#### Dimensions in inches and (millimeters)

#### Marking Diagram



- BY25X = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

### 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	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	200	400	600	800	V
Maximum RMS Voltage	$V_{RMS}$	140	280	420	560	V
Maximum DC Blocking Voltage	$V_{DC}$	200	400	600	800	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length @ $T_A=75^\circ\text{C}$	$I_{F(AV)}$	3				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 (Note 1) @ 3 A	$V_F$	1.0				V
Maximum DC Reverse Current at @ $T_A=25^\circ\text{C}$ Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$	$I_R$	5 100				 uA
Maximum Full Load Reverse Current, Full Cycle Average .375"(9.5mm) Lead Length @ $T_L=75^\circ\text{C}$	$I_{R(AV)}$	30				uA
Typical Junction Capacitance (Note 2)	$C_j$	40				pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	40				$^\circ\text{C/W}$
Operating Temperature Range	$T_J$	- 65 to + 150				$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	- 65 to + 150				$^\circ\text{C}$

Note1: Pulse Test with PW=300 usec, 1% Duty Cycle

Note2: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

Note3: Mount on Cu-Pad Size 16mm × 16mm on P.C.B.

## RATINGS AND CHARACTERISTIC CURVES (BY251 THRU BY254)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

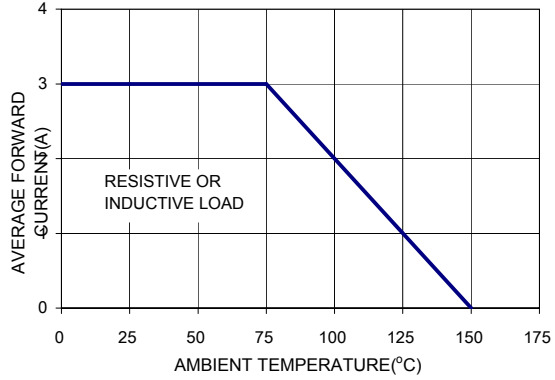


FIG. 2- TYPICAL REVERSE CHARACTERISTICS

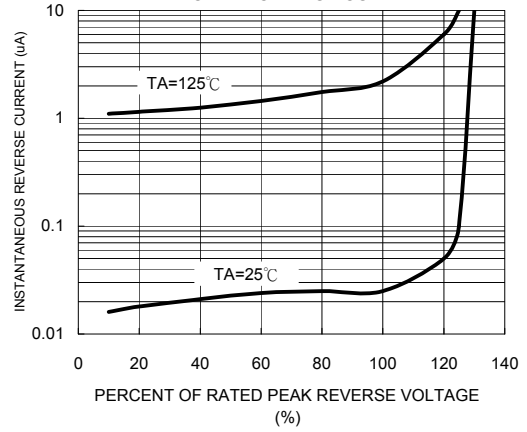


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

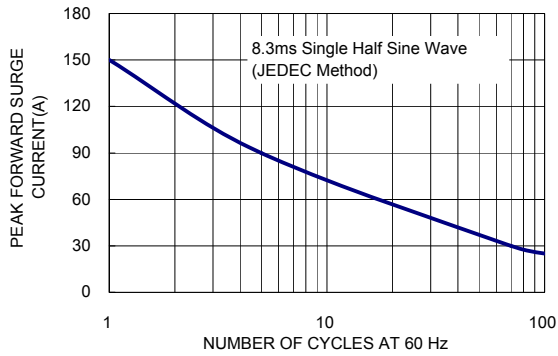


FIG. 4- TYPICAL JUNCTION CAPACITANCE

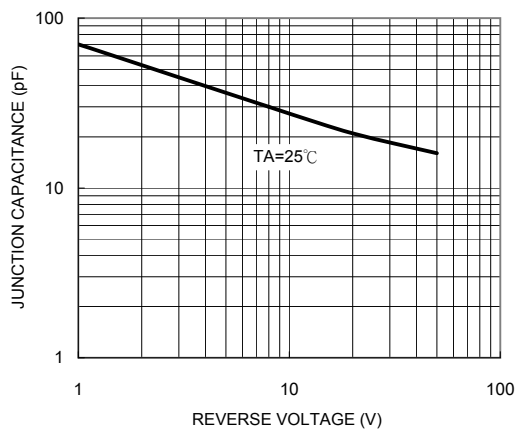


FIG. 5- TYPICAL FORWARD CHARACTERISTICS

