

# BY251 thru BY255

## MEDIUM CURRENT PLASTIC RECTIFIER



**CHENG-YI  
ELECTRONIC**



### FEATURE

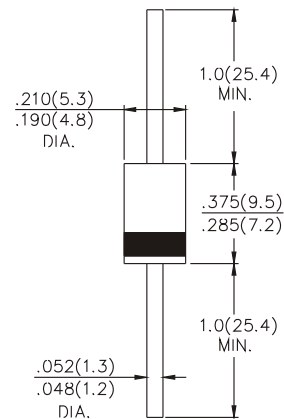
- High surge current capability
- Plastic package has underwriters laboratory Flammability classification 94V-0
- Low leakage
- Void-free molded in DO-201AD plastic package
- High current operation of 3 Amperse at  $T_A=95^{\circ}\text{C}$  with no thermal runaway
- Exceeds enviromental standard of MIL-STD-19500/228

### MECHANICAL DATA

- Case:JEDEC D0-201AD molded plastic
- Trminals:plated axials leads ,solderable per MIL-STD-750, Method 2026
- Polarity:Color band denotes cathode
- Weight:0.04 ounce, 1.1gram
- Mounting Position:Any

VOLTAGE RANGE-200 TO 1300 Volts  
CURRENT -3.0 Amperes

### DO-201AD



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at  $25^{\circ}\text{C}$  ambient temperature unless otherwise specified.  
60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

		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 lengths at $T_A=95^{\circ}\text{C}$	$I_{(AV)}$	3.0					A
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	100.0					A
Maximum Instantaneous Forward Voltage $T_J=25^{\circ}\text{C}$ at 3.0A $T_J=100^{\circ}\text{C}$	$V_F$	1.1 1.0					V
Maximum DC Reverse Current $T_A=25^{\circ}\text{C}$ at Rated DC Blocking Voltage $T_A=100^{\circ}\text{C}$	$I_R$	5.0 500					$\mu\text{A}$
Typical Junction Capacitance (Note 2) $T_J=25^{\circ}\text{C}$	$C_J$	28.0					pF
Typical Reverse Recovery Time (Note 3)	$T_{RR}$	2.5					$\mu\text{S}$
Typical Thermal Resistance (Note1)	$T \theta_{JA}$	15.0					$^{\circ}\text{C} / \text{W}$
Operating Junction Temperature Range	$T_J$	-55 to +150					$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150					$^{\circ}\text{C}$

Notes : 1. Thermal Resistance from Junction to applied at ambient .375" (9.5mm) lead lengths, P.C. Board mounted.

2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

3. Reverse Recovery Test Conditions :  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{rr}=0.25\text{A}$ .

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### RATING AND CHARACTERISTICS CURVES BY251 THRU BY255

Fig.1 - FORWARD CURRENT DERATING CURVE

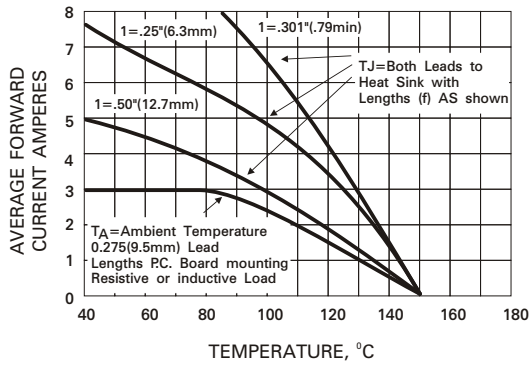


Fig.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

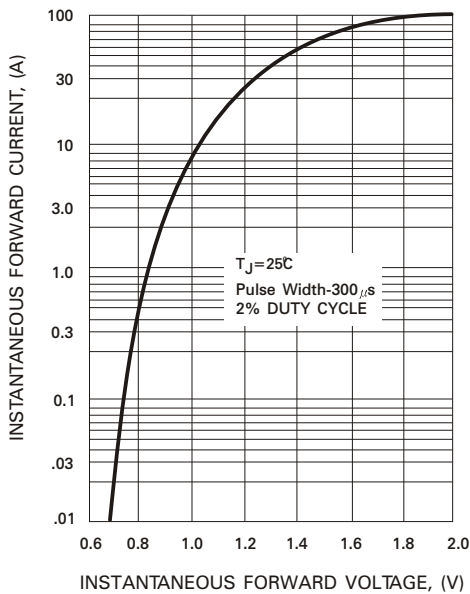


Fig.2 - MAXIMUM PEAK FORWARD SURGE CURRENT

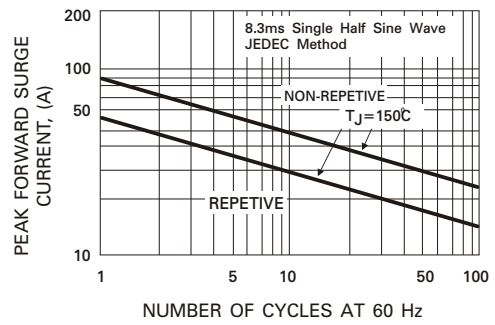


Fig.4 - TYPICAL JUNCTION CAPACITANCE

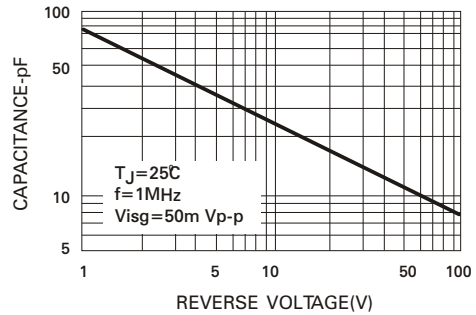


Fig.5 - TYPICAL REVERSE CHARACTERISTICS

