



# BY251 THRU BY255

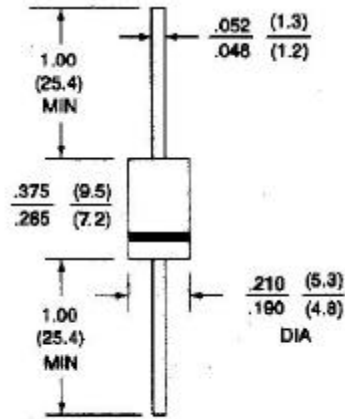
## MEDIUM CURRENT PLASTIC RECTIFIER

VOLTAGE - 200 to 1300 Volts CURRENT - 3.0 Amperes

### FEATURES

- Exce High surge current capability
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Low leakage
- Void-free molded in DO-201AD plastic package
- High current operation of 3 Amperes at  $T_A=95\text{ }^{\circ}\text{C}$  with no thermal runaway
- eds environmental standards of MIL-S-19500/228

### DO-201AD



Dimensions in inches and (millimeters)

### MECHANICAL DATA

Case: JEDEC DO-201AD Molded plastic

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode

Mounting Position: Any

Weight: 0.04 ounce, 1.1 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25  $^{\circ}\text{C}$  ambient temperature unless otherwise specified.

60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	SYMBOLS	BY251	BY252	BY253	BY254	BY255	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	200	400	600	800	1300	Volts
Maximum RMS Voltage	$V_{RMS}$	140	280	420	560	910	Volts
Maximum DC Blocking Voltage	$V_{DC}$	200	400	600	800	1300	Volts
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at $T_A=95\text{ }^{\circ}\text{C}$	$I_{(AV)}$	3.0					Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	100.0					Amps
Maximum Instantaneous Forward Voltage $T_J=25\text{ }^{\circ}\text{C}$ at 3.0A	$V_F$	1.1					Volts
		$T_J=100\text{ }^{\circ}\text{C}$					Volts
Maximum DC Reverse Current $T_A=25\text{ }^{\circ}\text{C}$ at Rated DC Blocking Voltage $T_A=100\text{ }^{\circ}\text{C}$	$I_R$	5.0					$\mu\text{g A}$
		1000					$\mu\text{g A}$
Typical Junction capacitance (Note 2) $T_J=25\text{ }^{\circ}\text{C}$	$C_J$	40					$\mu\text{F}$
Typical Reverse Recovery Time (Note 3)	$T_{RR}$	2.5					$\mu\text{g A}$
Typical Thermal Resistance (Note 1)	$R_{\theta KJA}$	15.0					$^{\circ}\text{C/W}$
Operating Junction Temperature Range	$T_J$	-50 to +150					$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-50 to +150					$^{\circ}\text{C}$

### NOTES:

1. Thermal Resistance From Junction to applied at Ambient 0.375"(9.5mm) lead length P.C.Board mounted.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
3. Reverse Recovery Test Conditions:  $I_F=0.5\text{ A}$ ,  $I_R=1.0\text{ A}$ ,  $I_{rr}=0.25\text{ A}$ .

# RATING AND CHARACTERISTIC CURVES

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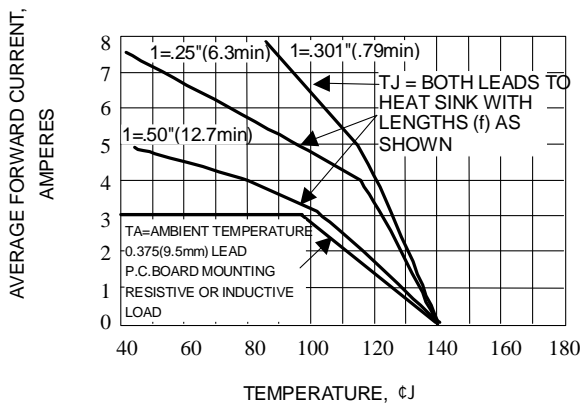


Fig. 1-FORWARD CURRENT DERATING CURVE

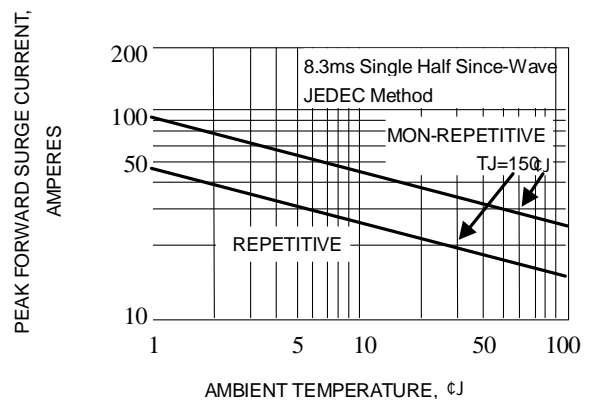


Fig. 2-MAXIMUM PEAK FORWARD SURGE CURRENT

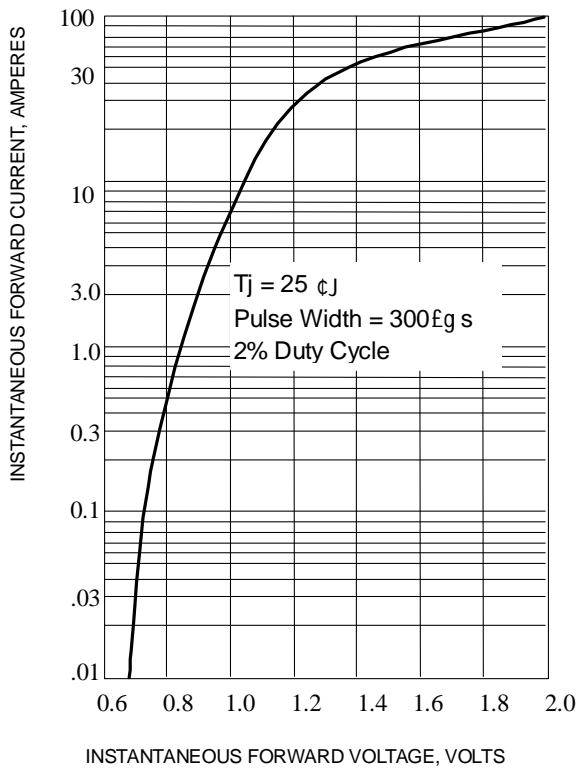


Fig. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

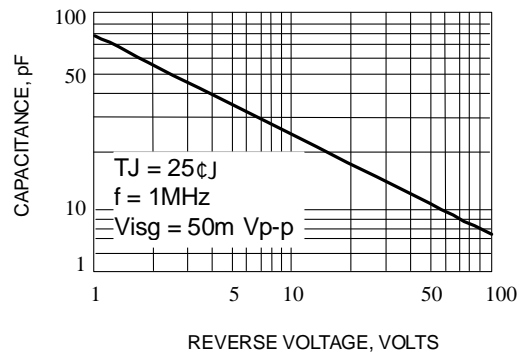


Fig. 4-TYPICAL JUNCTION CAPACITANCE

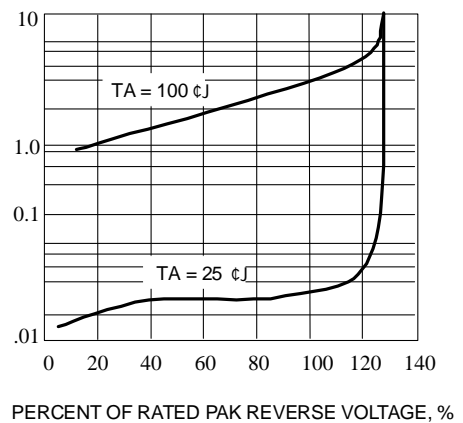


Fig. 5-TYPICAL REVERSE CHARACTERISTICS