

# BY296 THRU BY299



## SOFT RECOVERY PLASTIC RECTIFIER

VOLTAGE - 100 to 800 Volt CURRENT - 2.0 Amperes

### FEATURES

- High surge current capability
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-O
- Void-free plastic package
- 2.0 Ampere operation at  $T_A=55^\circ\text{C}$  with no thermal runaway
- Fast switching for high efficiency
- Exceeds environmental standards of MIL-S-19500/228

### MECHANICAL DATA

Case: Molded plastic, DO-201AD

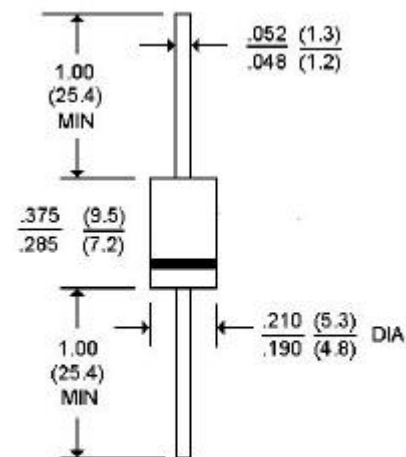
Terminals: Axial leads, solderable per MIL-STD-202, Method 208

Polarity: Band denotes end

Mounting Position: Any

Weight: .04 ounce, 1.1gram

### DO-201AD



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	SYMBOLS	BY296	BY297	BY298	BY299	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	100	200	400	800	Volts
Maximum RMS Voltage	$V_{RMS}$	70	140	280	560	Volts
Maximum DC Blocking Voltage	$V_{DC}$	100	200	400	800	Volts
Maximum Average Forward Rectified Current .375"(9.5mm) lead lengths at $T_A=55^\circ\text{C}$	$I_{(AV)}$	2.0				Amps
Peak Forward Surge Current 10ms single half sine-wave superimposed on rated load	$I_{FSM}$	70.0				Amps
Maximum Repetitive Peak Forward Surge (Note 1)	$I_{FRM}$	10.0				Amps
Maximum Instantaneous Forward Voltage at 3.0A	$V_F$	1.3				Volts
Maximum DC Reverse Current $T_A=25^\circ\text{C}$	$I_R$	10.0				$\mu\text{A}$
At Rated DC Blocking Voltage $T_A=100^\circ\text{C}$		500				
Maximum Reverse Recovery Time (Note 3) $T_J=25^\circ\text{C}$	$T_{RR}$	150				ns
Typical Junction Capacitance (Note 2) $T_J=25^\circ\text{C}$	$C_J$	28.0				pf
Typical Thermal Resistance (Note 4)	$R_{\theta KJA}$	15.0				$^\circ\text{C}/\text{W}$
Operating Temperature Range	$T_J$	-50 to +125				$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-50 to -150				$^\circ\text{C}$

### NOTES:

1. Repetitive Peak Forward Surge Current at  $f < 15\text{HKz}$ .
2. Measured at 1 MHz. And applied reverse voltage of 4.0 volts.
3. Reverse Recovery Test Conditions;  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{rr}=0.25\text{A}$ .
4. Thermal Resistance from Junction to Ambient at .375"(9.5mm) lead lengths with both leads to heat sink.

RATING AND CHARACTERISTIC CURVES

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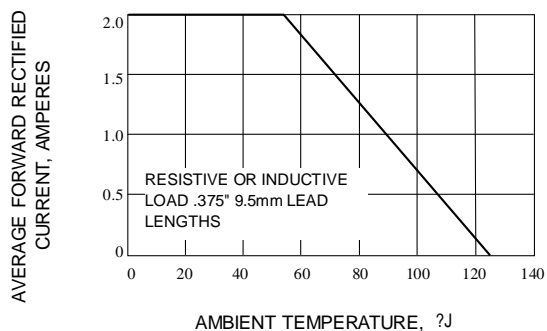


Fig. 1-FORWARD CURRENT DERATING CURVE

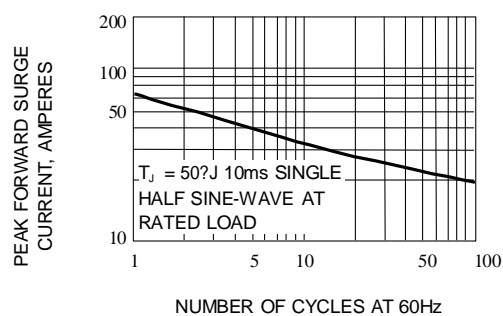


Fig. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

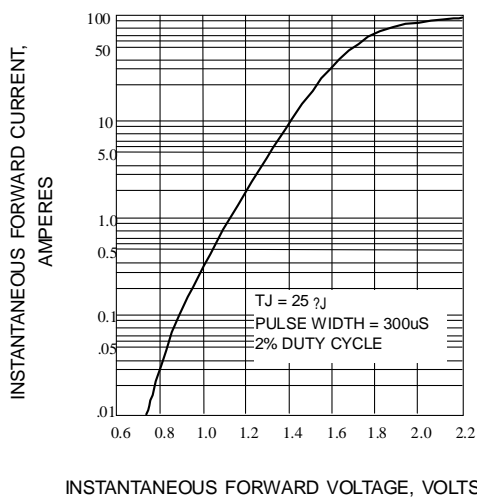


Fig. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

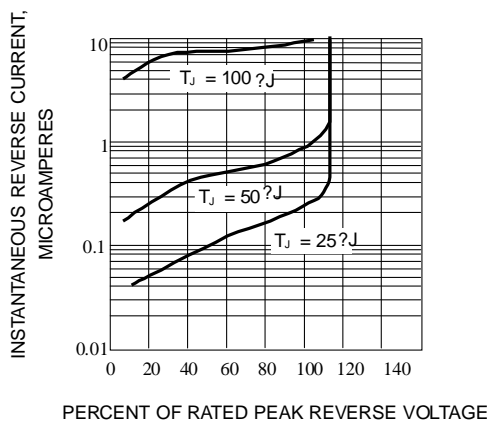


Fig. 4-TYPICAL REVERSE CHARACTERISTICS

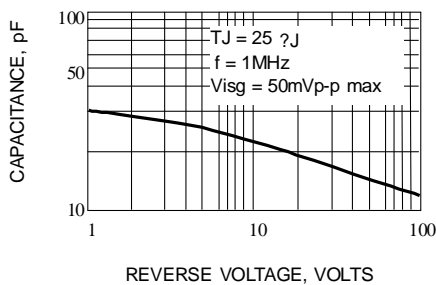


Fig. 5-TYPICAL JUNCTION CAPACITANCE