



# BY296 THRU BY299

## 2.0 AMPS. Fast Recovery Rectifiers



Voltage Range  
100 to 800 Volts  
Current  
2.0 Amperes

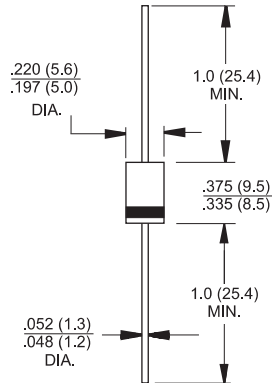
### Features

- ✧ Low forward voltage drop
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability

### Mechanical Data

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

### DO-201AD



Dimensions in inches and (millimeters)

### 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	BY296	BY297	BY298	BY299	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	100	200	400	800	V
Maximum RMS Voltage	$V_{RMS}$	70	140	280	560	V
Maximum DC Blocking Voltage	$V_{DC}$	100	200	400	800	V
Maximum Average Forward Rectified Current .375" (9.5mm) Lead Length @ $T_A = 55^\circ\text{C}$	$I_{(AV)}$	2.0				A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	70				A
Maximum Instantaneous Forward Voltage @ 2.0A	$V_F$	1.2				V
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$	$I_R$	5.0 100				uA uA
Maximum Reverse Recovery Time ( Note 1 )	$T_{rr}$	250				nS
Typical Junction Capacitance ( Note 2 )	$C_j$	40				pF
Typical Thermal Resistance ( Note 3 )	$R_{\theta JA}$	55				$^\circ\text{C/W}$
Operating Temperature Range	$T_J$	-65 to +150				$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +150				$^\circ\text{C}$

Notes:1. Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$

2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.

3. Mount on Cu-Pad Size 16mm x 16mm on P.C.B.

## RATINGS AND CHARACTERISTIC CURVES (BY296 THRU BY299)

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

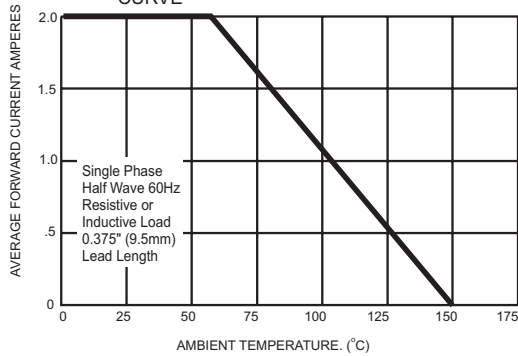


FIG. 2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

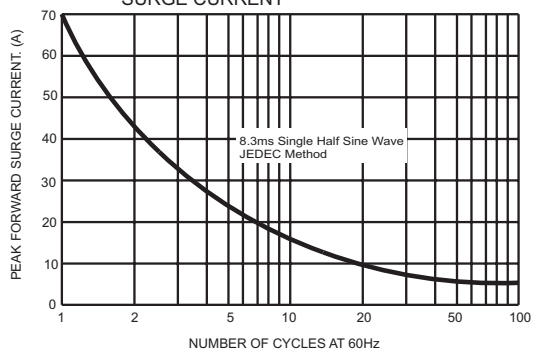


FIG. 3- TYPICAL FORWARD CHARACTERISTICS

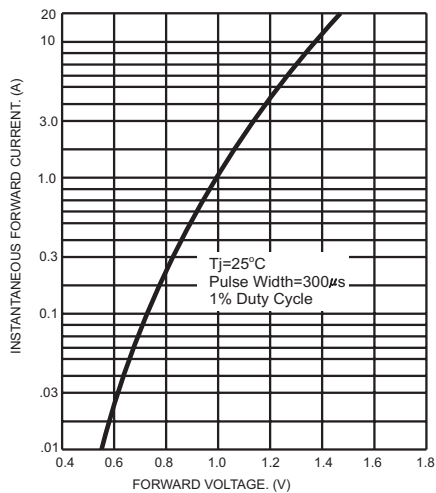


FIG. 4- TYPICAL JUNCTION CAPACITANCE

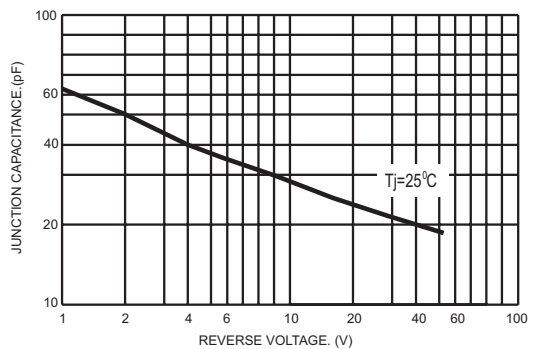


FIG. 5- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

