

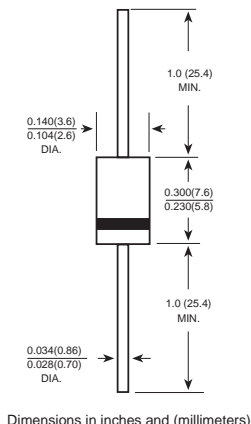


# BY296 THRU BY299

## FAST RECOVERY RECTIFIERS

Reverse Voltage - 100 to 800 Volts Forward Current - 2.0 Amperes

### DO-15



### FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Fast switching for high efficiency
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:
  - ◆ 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

### MECHANICAL DATA

**Case:** JEDEC DO-15 molded plastic body  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.014 ounce, 0.40 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.  
 Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

MDD Catalog Number	SYMBOLS	BY296	BY297	BY298	BY299	UNITS
Maximum repetitive 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 0.375" (9.5mm) lead length at $T_A=75^\circ\text{C}$	$I_{(AV)}$	2.0				Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	70.0				Amps
Maximum instantaneous forward voltage at 2.0A	$V_F$	1.3				Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	$I_R$	100.0				$\mu\text{A}$
Maximum reverse recovery time (NOTE 1)	$t_{rr}$	500				ns
Typical junction capacitance (NOTE 2)	$C_J$	40.0				pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	40.0				$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +150				$^\circ\text{C}$

**Note:** 1. Reverse recovery condition  $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$

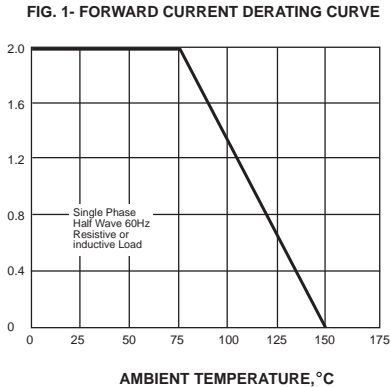
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

3. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

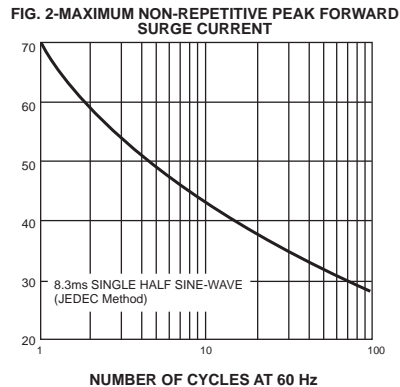


# RATINGS AND CHARACTERISTIC CURVES BY296 THRU BY299

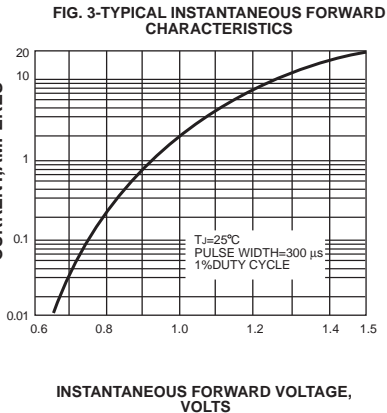
AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES



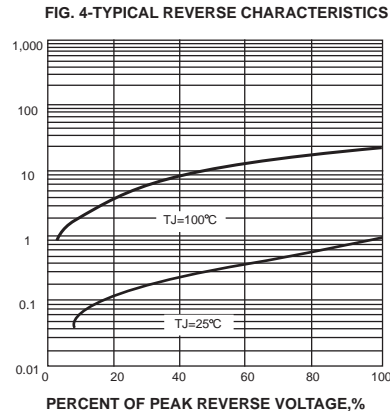
PEAK FORWARD SURGE CURRENT,  
AMPERES



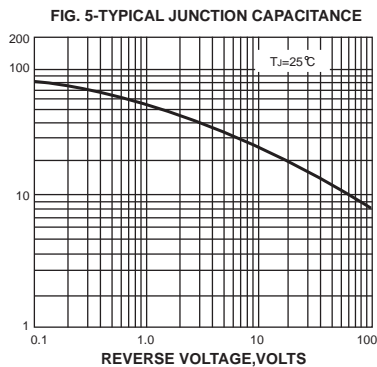
INSTANTANEOUS FORWARD CURRENT,AMPERES



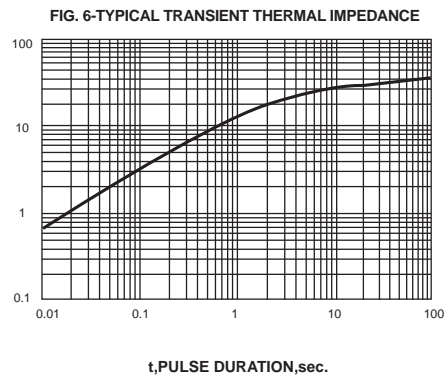
INSTANTANEOUS REVERSE CURRENT,  
MICROAMPERES



JUNCTION CAPACITANCE, pF



TRANSIENT THERMAL IMPEDANCE,  
 $^{\circ}\text{C}/\text{W}$



The cruve graph is for reference only, can't be the basis for judgment(曲线图仅供参考)!



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