

## BYV95A - BYV96E

## AVALANCHE FAST RECOVERY RECTIFIER DIODES

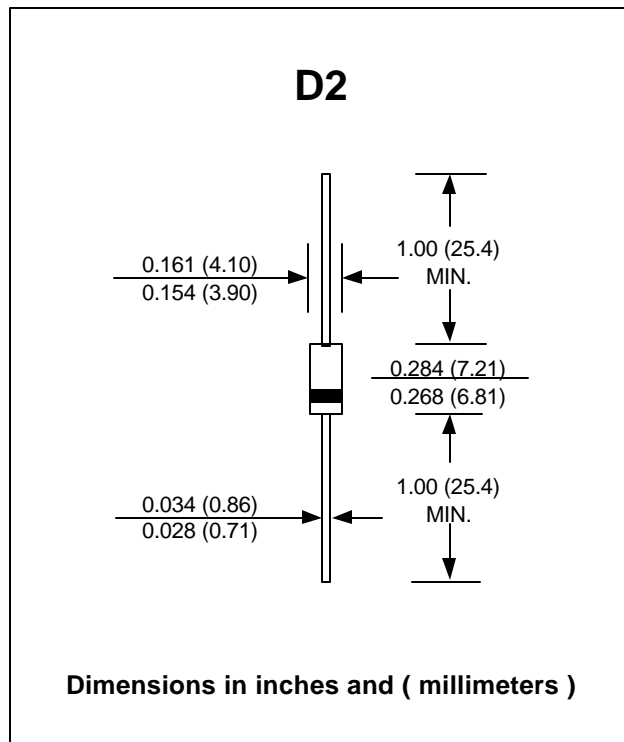
**PRV : 200 - 1000 Volts**  
**Io : 1.5 Amperes**

### FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Fast switching for high efficiency

### MECHANICAL DATA :

- \* Case : D2 Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.465 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 50 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

RATING	SYMBOL	BYV95A	BYV95B	BYV95C	BYV96D	BYV96E	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	200	400	600	800	1000	Volts
Maximum RMS voltage	V <sub>RMS</sub>	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	200	400	600	800	1000	Volts
Min. Avalanche Breakdown Voltage @ 100 μA	V <sub>BR(min.)</sub>	300	500	700	900	1100	Volts
Maximum Average Forward Rectified Current Lead Length 10 mm. ; T <sub>tp</sub> = 65 °C	I <sub>F(AV)</sub>	1.5					Amps.
Peak Forward Surge Current single half sine wave superimposed on rated load	I <sub>FSM</sub>	35					Amps.
Maximum Forward Voltage at I <sub>F</sub> = 3.0 Amps.	V <sub>F</sub>	1.6					Volts
Maximum DC Reverse Current T <sub>J</sub> = 25 °C at Rated DC Blocking Voltage T <sub>J</sub> = 165 °C	I <sub>R</sub>	5.0					μA
		150					
Maximum Reverse Recovery Time ( Note 1 )	T <sub>rr</sub>	150			200		ns
Typical Thermal Resistance (Note 2)	R <sub>θJA</sub>	50					°C/W
Junction Temperature Range	T <sub>J</sub>	175					°C
Storage Temperature Range	T <sub>STG</sub>	- 65 to + 175					°C

### Notes :

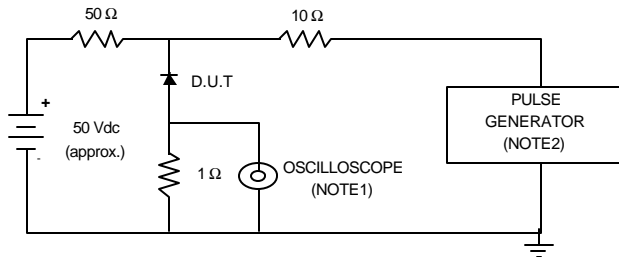
(1) Measured with  $I_F = 0.5A$ ,  $R = 1.0A$ ,  $I_{rr} = 0.25A$

(2) Thermal resistance from Junction to Ambient at 0.375" (9.5mm) Lead Lengths. P.C. Board Mounted.

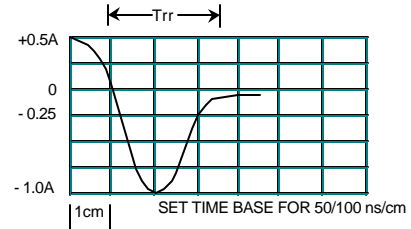
**UPDATE : AUGUST 3, 1998**

## RATING AND CHARACTERISTIC CURVES ( BYV95A - BYV96E )

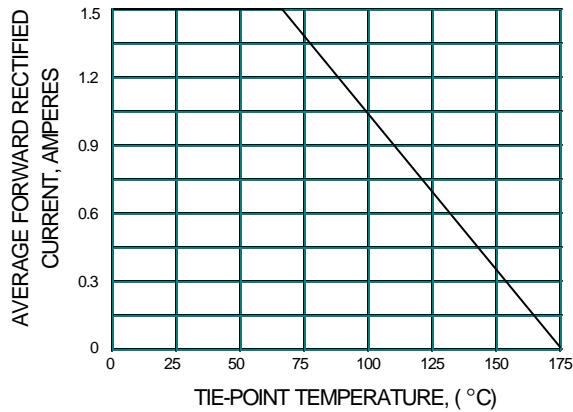
**FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



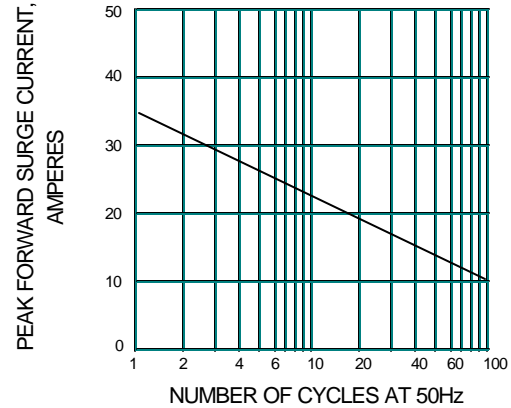
NOTE : 1. Rise Time = 7ns max., Input Impedance = 1 megaohm, 22pF.  
2. Rise Time = 10ns max., Source Impedance = 50 ohms.  
3. All Resistors = Non-inductive Types.



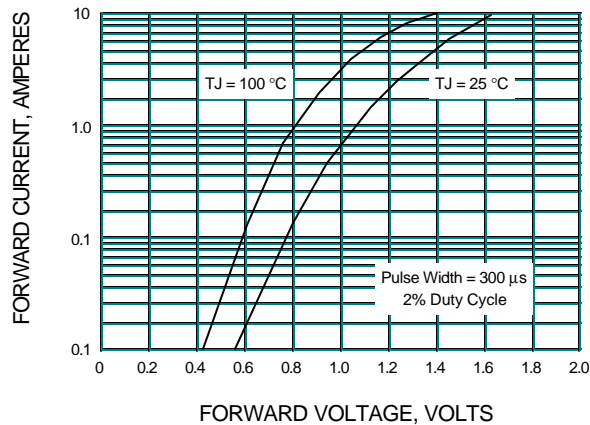
**FIG.2 - FORWARD CURRENT DERATING CURVE**



**FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**

