

# BYV95A - BYV96E

# AVALANCHE FAST RECOVERY RECTIFIER DIODES

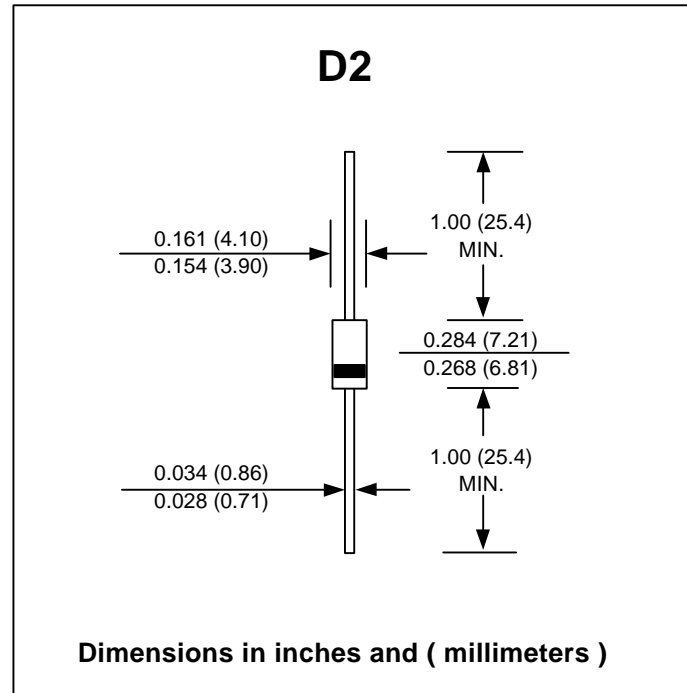
**PRV : 200 - 1000 Volts**  
**Io : 1.5 Amperes**

### FEATURES :

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

### 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	UNIT
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	200	400	600	800	1000	V
Min. Avalanche Breakdown Voltage @ 100 $\mu$ A	$V_{BR(min.)}$	300	500	700	900	1100	V
Maximum Average Forward Rectified Current Lead Length 10 mm. ; $T_p = 65$ °C	$I_{F(AV)}$	1.5					A
Peak Forward Surge Current single half sine wave superimposed on rated load	$I_{FSM}$	35					A
Maximum Forward Voltage at $I_F = 3.0$ Amps.	$V_F$	1.6					V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	5.0					$\mu$ A
	$I_{R(H)}$	150					$\mu$ A
Maximum Reverse Recovery Time ( Note 1 )	$T_{rr}$	250			300		ns
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	50					°C/W
Junction Temperature Range	$T_J$	175					°C
Storage Temperature Range	$T_{STG}$	- 65 to + 175					°C

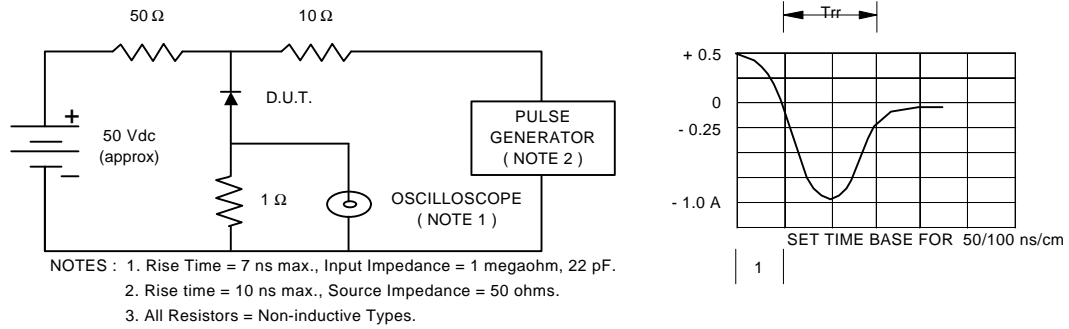
### Notes :

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

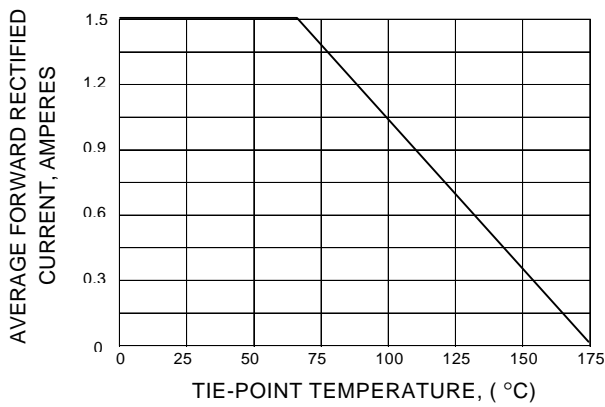
(2) Thermal resistance from Junction to Ambient at 0.375" (9.5mm) Lead Lengths, P.C. Board Mounted.

## RATING AND CHARACTERISTIC CURVES ( BYV95A - BYV96E )

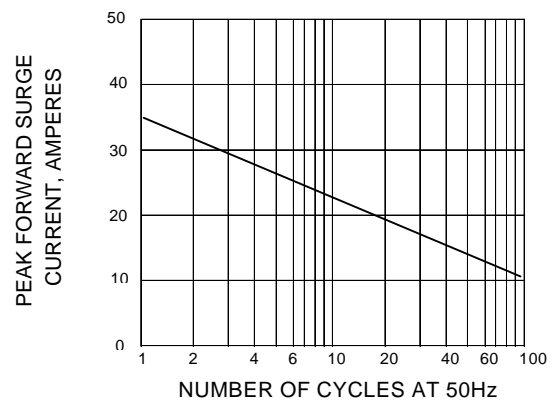
**FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



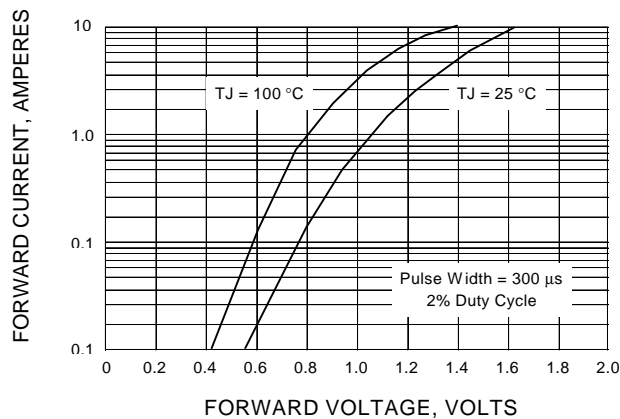
**FIG.2 - FORWARD CURRENT DERATING CURVE**



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



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**

