

# BYV36A - BYV36E

## VERY FAST SOFT-RECOVERY AVALANCHE RECTIFIER DIODES

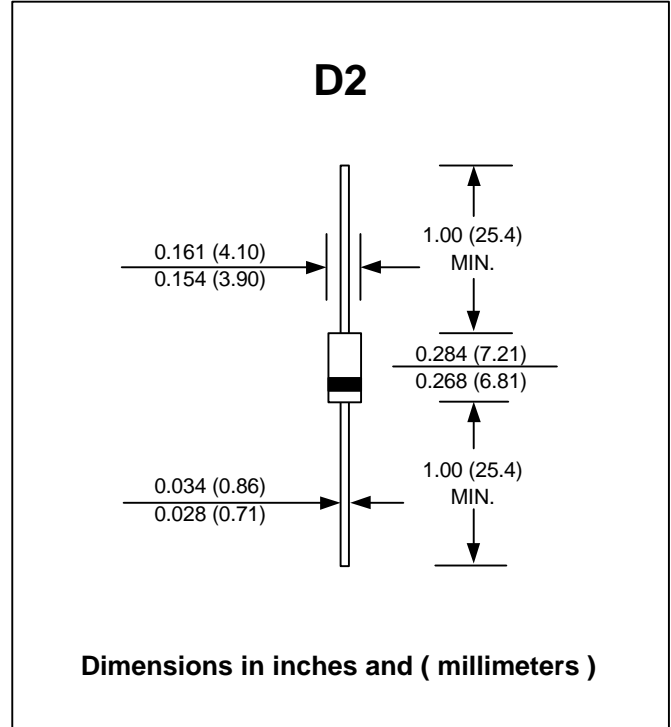
**PRV : 200 - 1000 Volts**  
**Io : 1.5 , 1.6 Ampere**

### 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 grams



### 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%.

RATING		SYMBOL	BYV36A	BYV36B	BYV36C	BYV36D	BYV36E	UNIT
Maximum Repetitive Peak Reverse Voltage		V <sub>RRM</sub>	200	400	600	800	1000	V
Maximum Continuous Reverse Voltage		V <sub>R</sub>	200	400	600	800	1000	V
Minimum Reverse Avalanche Breakdown Voltage @ I <sub>R</sub> = 0.1 mA		V <sub>(BR)R</sub>	300	500	700	900	1100	V
Maximum Average Forward Current ( Note 1 )		I <sub>F(AV)</sub>	1.6			1.5		A
Maximum Non-Repetitive Peak Forward Current		I <sub>FSM</sub>	30					A
Maximum Repetitive Peak Forward Current ( T <sub>tp</sub> = 60 °C )		I <sub>FRM</sub>	24			21		A
Maximum Forward Voltage at 1.0 Amp. ; T <sub>J</sub> = 25 °C T <sub>J</sub> = 175 °C		V <sub>F</sub>	1.35			1.45		V
		V <sub>F</sub>	1.0			1.05		V
Maximum Reverse Current	V <sub>R</sub> = V <sub>RRMmax</sub>	I <sub>R</sub>	5.0					μA
	V <sub>R</sub> = V <sub>RRMmax</sub> ; T <sub>J</sub> = 165 °C	I <sub>R(H)</sub>	150					μA
Maximum Reverse Recovery Time ( Note 2 )		T <sub>rr</sub>	100			150		ns
Typical Thermal Resistance - Junction to tie-point		R <sub>th j-tp</sub>	46					K/W
Junction Temperature Range		T <sub>J</sub>	175					°C
Storage Temperature Range		T <sub>STG</sub>	- 65 to + 175					°C

### Notes :

( 1 ) T<sub>tp</sub> = 60 °C , lead length 10 mm.

( 2 ) Measured with I<sub>F</sub> = 0.5 A, I<sub>R</sub> = 1.0A, I<sub>rr</sub> = 0.25A.

## RATING AND CHARACTERISTIC CURVES ( BYV36A - BYV36E )

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

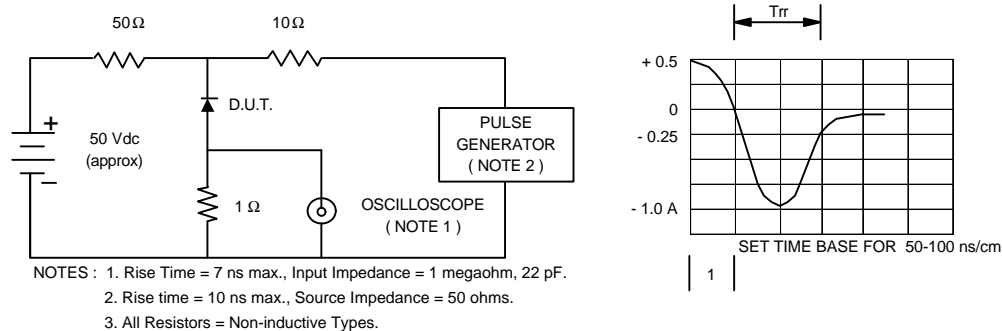


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

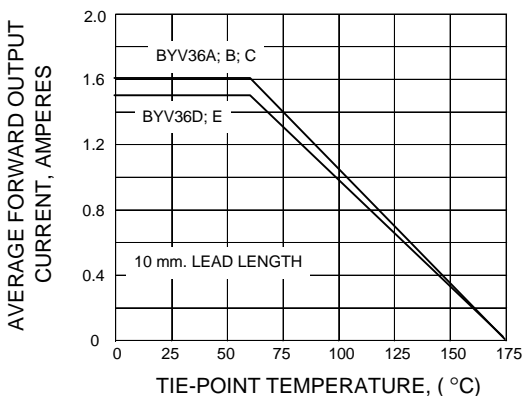


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

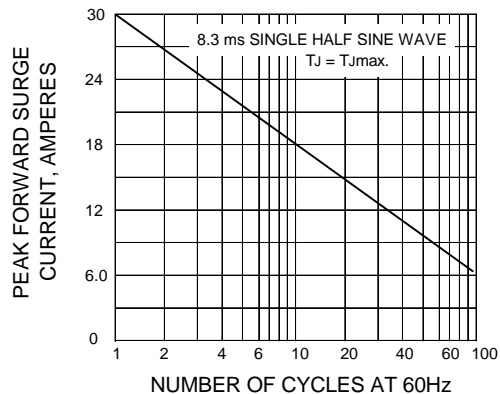


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

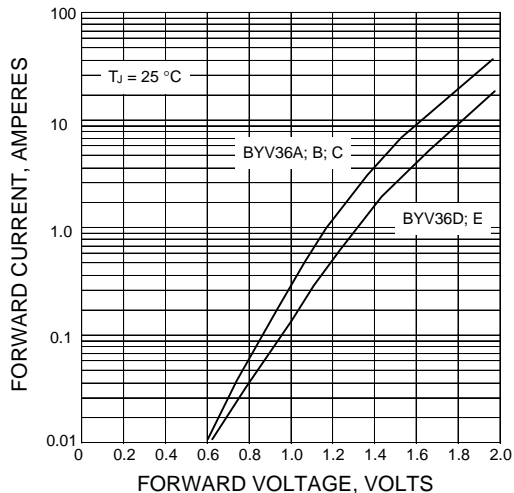


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

