

BYV36A - BYV36E

VERY FAST SOFT-RECOVERY AVALANCHE RECTIFIER DIODES

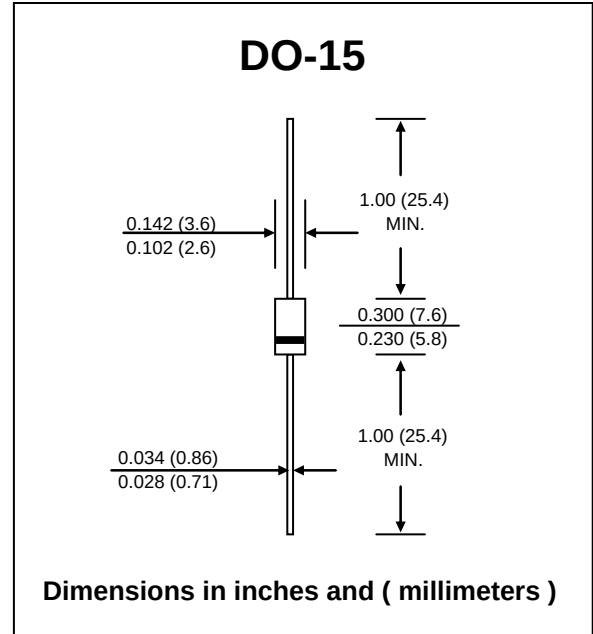
PRV : 200 - 1000 Volts
Io : 1.5 , 1.6 Ampere

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 : DO-15 Molded plastic
- * Epoxy : UL94V-0 rate flame retardant
- * Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 0.4 gram



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

Notes :

- (1) T_{tp} = 60 °C , lead length 10 mm.
- (2) Measured with I_F = 0.5 A, I_R = 1.0A, I_{rr} = 0.25A.

RATING AND CHARACTERISTIC CURVES (BYV36A - BYV36E)

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

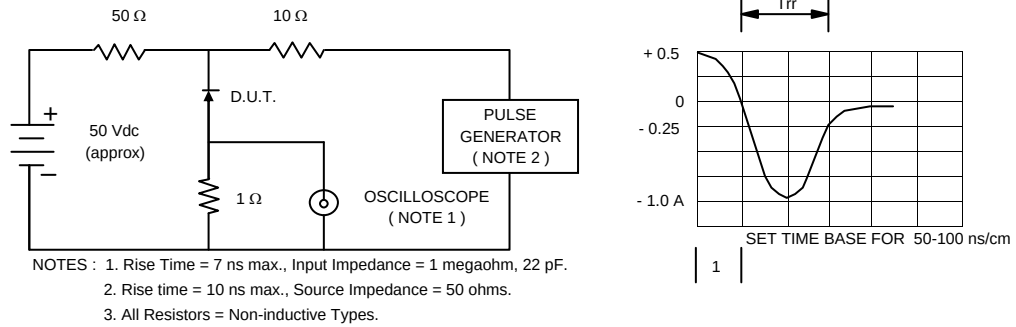


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

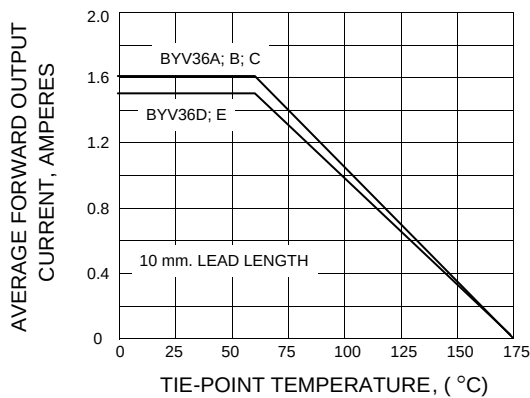


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

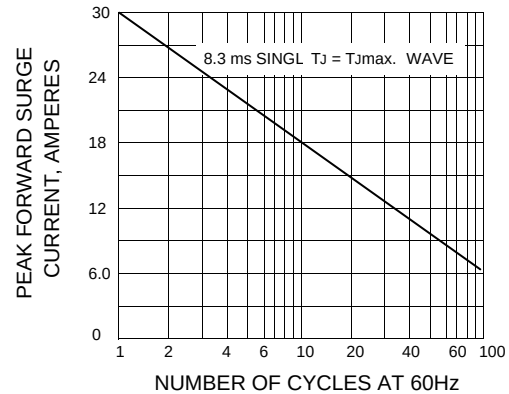


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

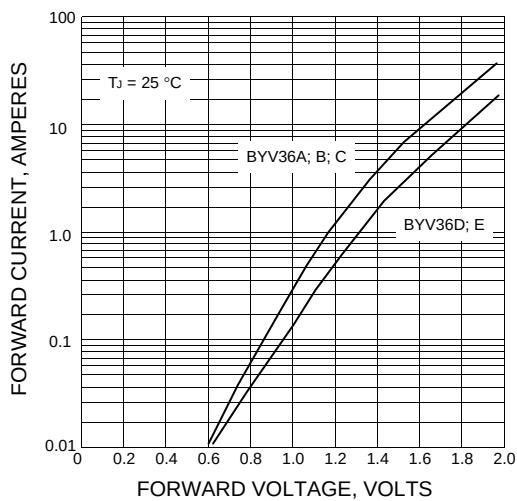


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

