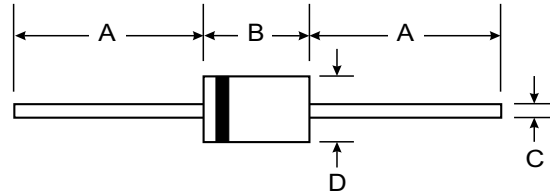


Features

- Low cost
- Diffused junction
- Low leakage
- Low forward voltage drop
- High current capability
- Easily cleaned with Freon, Alcohol, Isopropanol and similar solvents
- The plastic material carries U/L recognition 94V-0



Mechanical Data

- Case: JEDEC DO-15, molded plastic
- Terminals: Axial lead, solderable per MIL-STD-202, Method 208
- Polarity: Color band denotes cathode
- Weight: 0.014 ounces, 0.39 grams
- Mounting position: Any

DO-15		
Dim	Min	Max
A	25.40	—
B	5.50	7.62
C	0.686	0.889
D	2.60	3.60
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

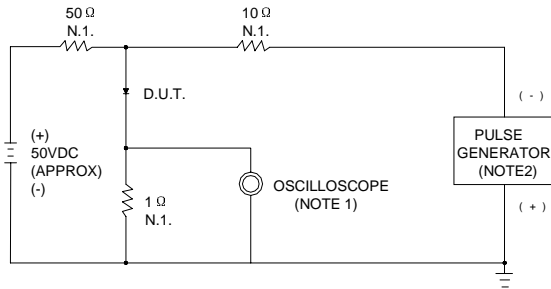
		BYV 37	BYV 38	UNITS
Maximum recurrent peak reverse voltage	V _{RRM}	800	1000	V
Maximum RMS voltage	V _{RMS}	560	700	V
Maximum DC blocking voltage	V _{DC}	800	1000	V
Maximum average forward rectified current 9.5mm lead length, @T _A =75°C	I _{F(AV)}	2.0		A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @T _J =125°C	I _{FSM}	50.0		A
Maximum instantaneous forward voltage @ 1.0 A	V _F	1.1		V
Maximum reverse current @T _A =25°C at rated DC blocking voltage @T _A =100°C	I _R	5.0 100		μA
Maximum reverse recovery time (Note1)	t _{rr}	300		ns
Typical junction capacitance (Note2)	C _J	15		pF
Typical thermal resistance (Note3)	R _{θJA}	45		K/W
Operating junction temperature range	T _J	- 55---- +150		°C
Storage temperature range	T _{STG}	- 55---- +150		°C

NOTE:1. Measured with I_F=0.5A, I_R=1A, I_{rr}=0.25A.

2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3. Thermal resistance from junction to ambient, l=10mm, T_c=constant.

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



NOTES: 1. RISE TIME = 7ns MAX. INPUT IMPEDANCE = 1MΩ, 22PF
2. RISE TIME = 10ns MAX. SOURCE IMPEDANCE = 50Ω

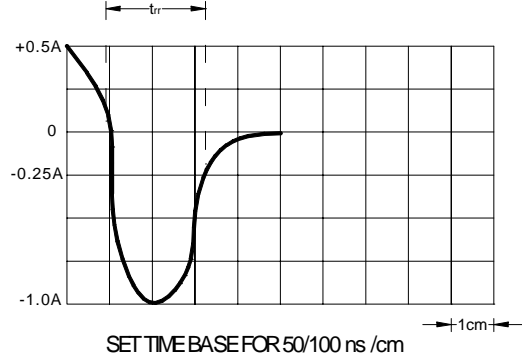
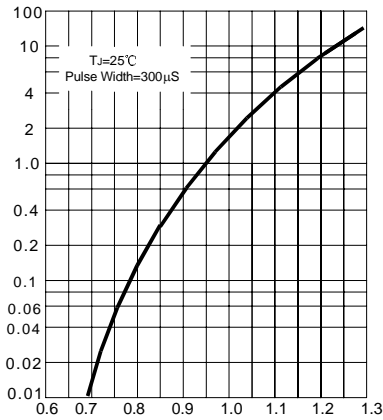


FIG.2 – TYPICAL FORWARD CHARACTERISTIC

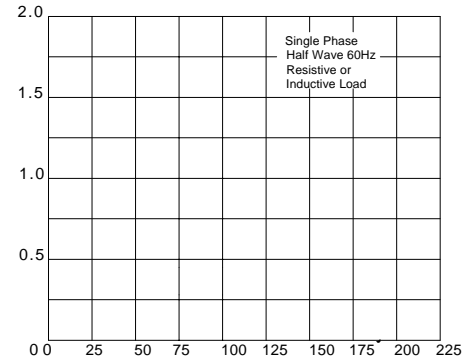
INSTANTANEOUS FORWARD CURRENT AMPERES



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

FIG.3 – FORWARD DERATING CURRENT

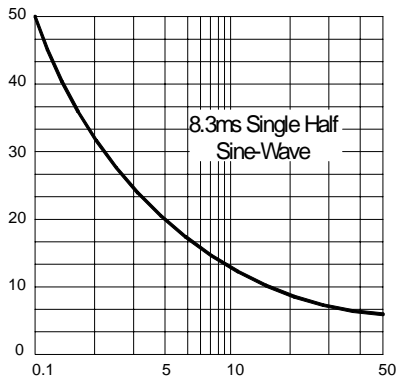
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES



AMBIENT TEMPERATURE, °C

FIG.4 – PEAK FORWARD SURGE CURRENT

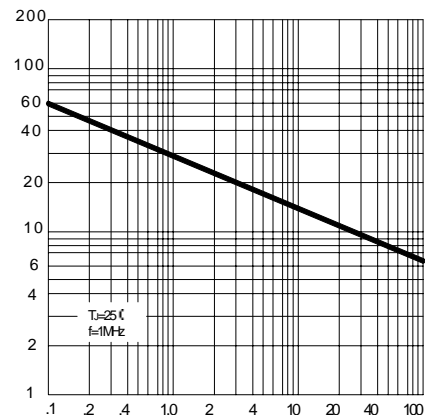
PEAK FORWARD SURGE CURRENT AMPERES



NUMBER OF CYCLES AT 60Hz

FIG.7 – TYPICAL JUNCTION CAPACITANCE

JUNCTION CAPACITANCE, pF



REVERSE VOLTAGE, VOLTS