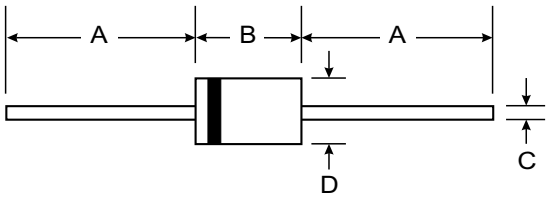
BYV37-BYV38

2.0A Axial Leaded Fast Recovery Rectifier

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



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		

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

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%.

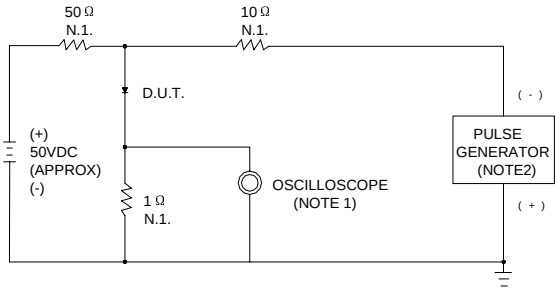
		BYV 37	BYV 38	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	800	1000	V
Maximum RMS voltage	V_{RMS}	560	700	V
Maximum DC blocking voltage	V_{DC}	800	1000	V
Maximum average forward rectified current 9.5mm lead length, @T_A=75℃	$I_{F(AV)}$	2.0		A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @T_J=125℃	I_{FSM}	50.0		A
Maximum instantaneous forward voltage @ 1.0 A	V_F	1.1		V
Maximum reverse current @T_A=25℃	I_R	5.0		μA
at rated DC blocking voltage @T_A=100℃		100		
Maximum reverse recovery time (Note1)	t_{rr}	300		ns
Typical junction capacitance (Note2)	C_J	15		pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	45		K/W
Operating junction temperature range	T_J	- 55---- +150		℃
Storage temperature range	T_{STG}	- 55---- +150		℃

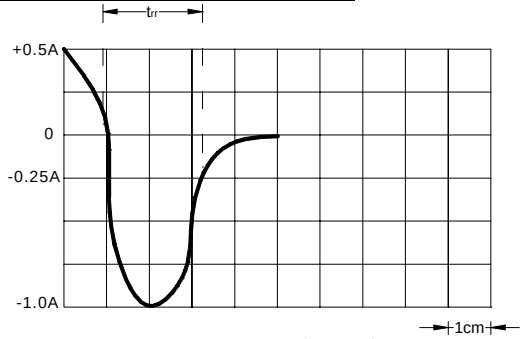
NOTE:1. Measured with I_F=0.5A, I_R=1A, I_{rr}=0.25A.

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

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

SET TIME BASE FOR 50/100 ns /cm

FIG.2 –TYPICAL FORWARD CHARACTERISTIC

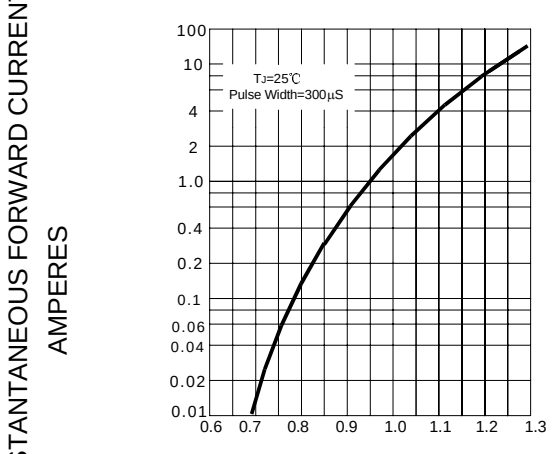


FIG.3– FORWARD DERATING CURRENT

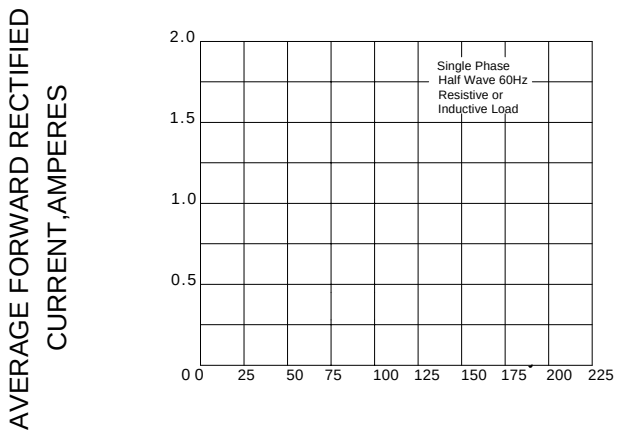


FIG.4– PEAK FORWARD SURGE CURRENT

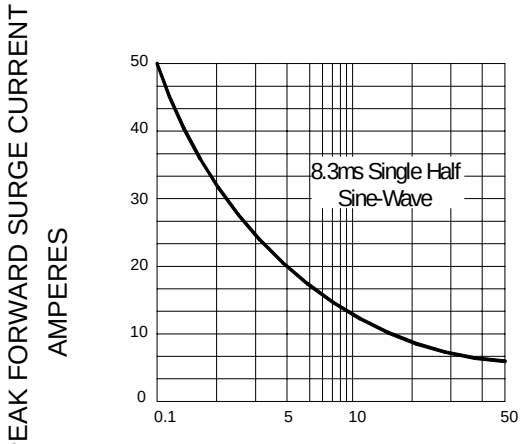


FIG.7 –TYPICAL JUNCTION CAPACITANCE