

FAST RECOVERY RECTIFIER

VOLTAGE RANGE: 800 --- 1000 V
CURRENT: 2.0 A

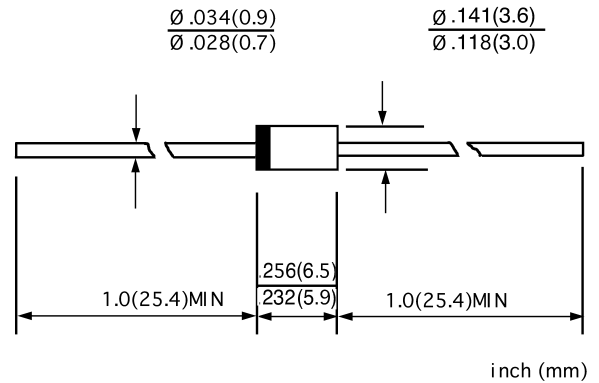
FEATURES

- ◇ 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



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase,half wave,60 Hz,resistive or inductive load. For capacitive load,derate 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, @ $T_A=75^\circ C$	$I_{F(AV)}$	2.0		A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$	I_{FSM}	50.0		A
Maximum instantaneous forward voltage @ 1.0 A	V_F	1.1		V
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=100^\circ C$	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)	$R_{\theta JA}$	45		K/W
Operating junction temperature range	T_J	- 55---- +150		$^\circ C$
Storage temperature range	T_{STG}	- 55---- +150		$^\circ C$

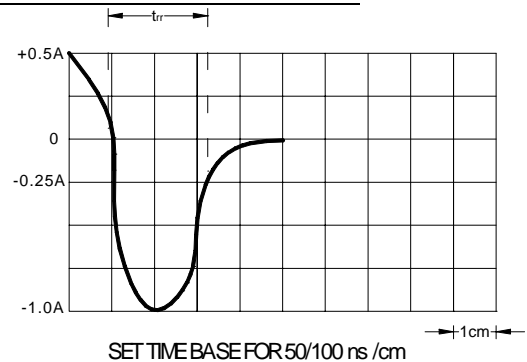
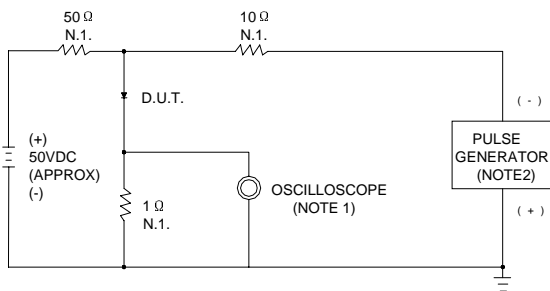
NOTE:1. Measured with $I_F=0.5A$, $I_R=1A$, $I_{rr}=0.25A$.

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

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

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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

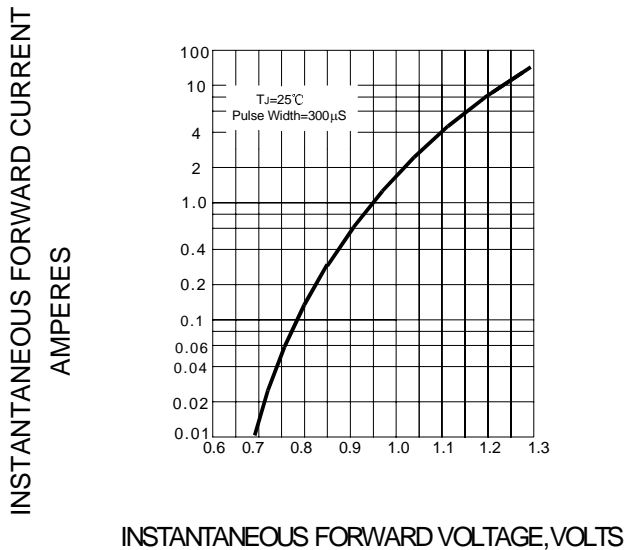


FIG.3 – FORWARD DERATING CURRENT

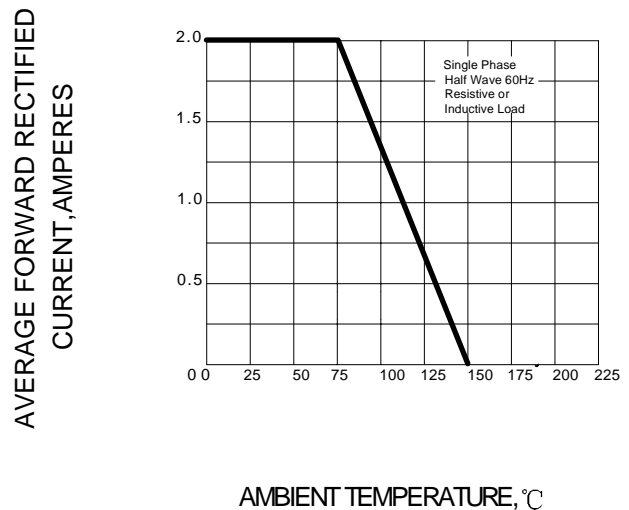


FIG.4 – PEAK FORWARD SURGE CURRENT

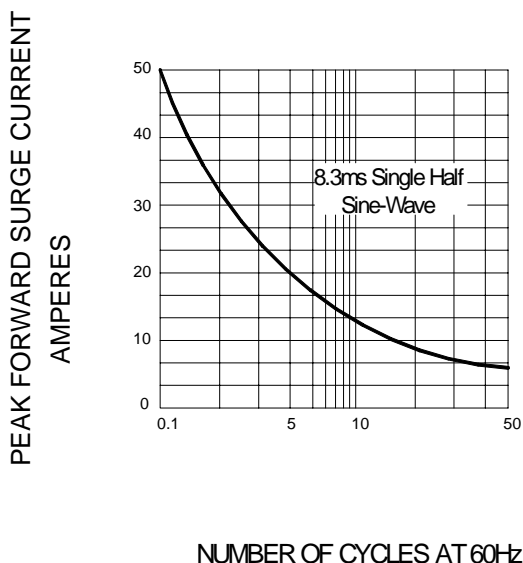


FIG.7 – TYPICAL JUNCTION CAPACITANCE

