

FAST RECOVERY RECTIFIER

VOLTAGE RANGE: 200 --- 600 V
CURRENT: 3.0 A

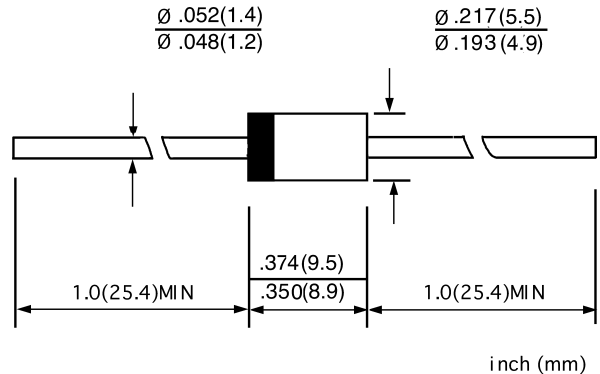
FEATURES

- ◇ 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-27, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.041 ounces, 1.15 grams
- ◇ Mounting position: Any

DO - 27



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%.

		BYW95A	BYW95B	BYW95C	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	200	400	600	V
Maximum RMS voltage	V_{RMS}	140	280	420	V
Maximum DC blocking voltage	V_{DC}	200	400	600	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ C$	$I_{F(AV)}$	3.0			A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$	I_{FSM}	70.0			A
Maximum instantaneous forward voltage @ 3.0 A	V_F	1.5			V
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=100^\circ C$	I_R	10.0 100.0			μA
Maximum reverse recovery time (Note1)	t_{rr}	250			ns
Typical junction capacitance (Note2)	C_J	32			pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	22			$^\circ C/W$
Operating junction temperature range	T_J	-55-----+150			$^\circ C$
Storage temperature range	T_{STG}	-55-----+150			$^\circ C$

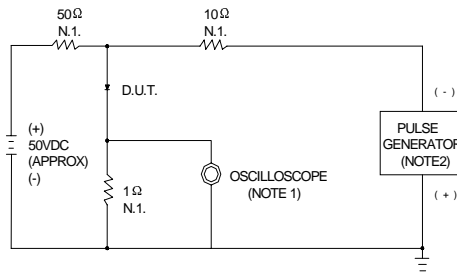
NOTE: 1. Measured with $I_F=0.5A$, $I_R=1A$, $I_{rr}=0.25A$.

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

3. Thermal resistance from junction to ambient.

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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

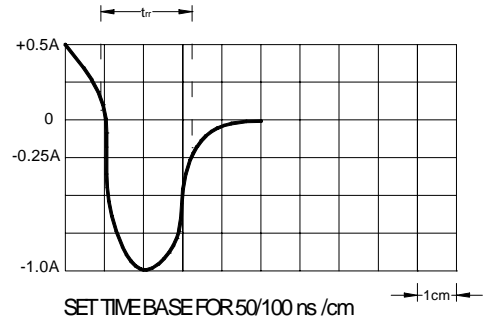
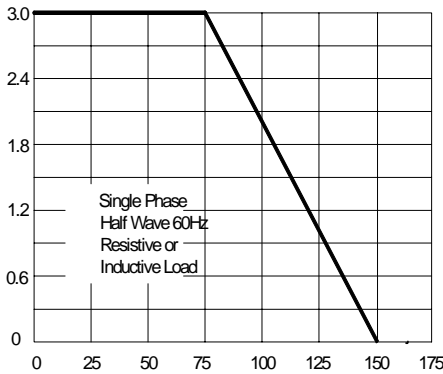


FIG.2 –FORWARD DERATING CURRENT

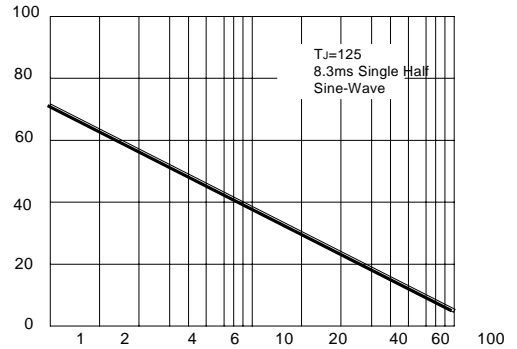
AVERAGE FORWARD RECTIFIED CURRENT
AMPERES



AMBIENT TEMPERATURE, °C

FIG.3 –PEAK FORWARD SURGE CURRENT

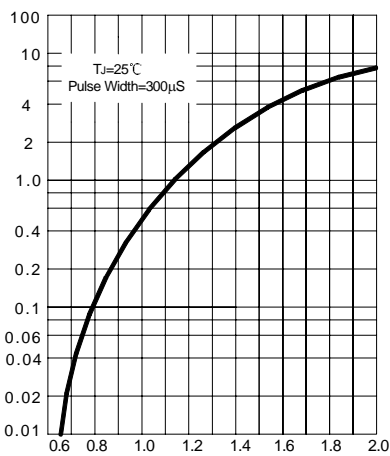
PEAK FORWARD SURGE CURRENT
AMPERES



NUMBER OF CYCLES AT 60 Hz

FIG.4–TYPICAL FORWARD CHARACTERISTIC

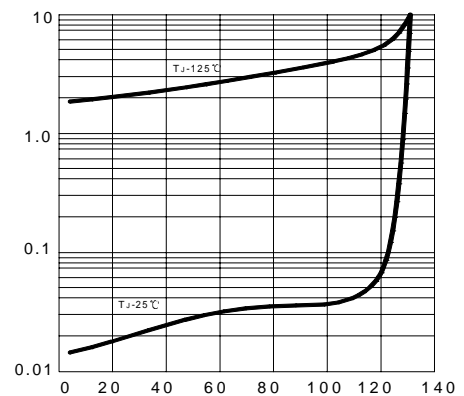
INSTANTANEOUS FORWARD CURRENT
AMPERES



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

FIG.5–TYPICAL REVERSE CHARACTERISTICS

REVERSE CURRENT, MICROAMPERES



PERCENT OF RATED REVERSE VOLTAGE, %