

FAST RECOVERY RECTIFIERS

VOLTAGE RANGE: 200---600 V
CURRENT: 2.0 A

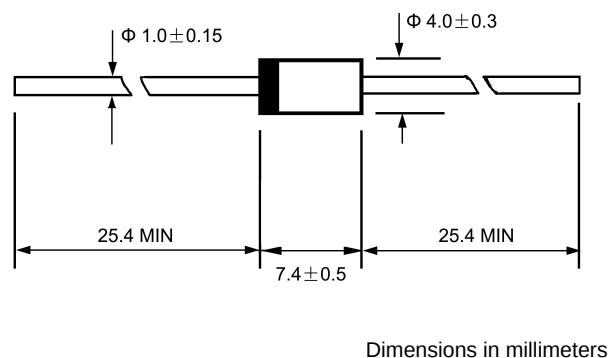
FEATURES

- ◇ 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-15B, molded plastic
- ◇ Terminals: Axial lead ,solderable per MIL- STD-202,Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.024ounces,0.68 grams
- ◇ Mounting position: Any

DO - 15B



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%.

		BYW 32	BYW 33	BYW 34	BYW 35	BYW 36	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	200	300	400	500	600	V
Maximum RMS voltage	V_{RMS}	140	210	280	350	420	V
Maximum DC blocking voltage	V_{DC}	200	300	400	500	600	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ\text{C}$	$I_{F(AV)}$	2.0					A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$	I_{FSM}	40.0					A
Maximum instantaneous forward voltage @ 2.0 A	V_F	1.2					V
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=150^\circ\text{C}$	I_R	5.0 50.0					μA
Maximum reverse recovery time (Note1)	t_{rr}	200					ns
Typical junction capacitance (Note2)	C_J	22					pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	35					$^\circ\text{C/W}$
Operating junction temperature range	T_J	- 55---- +150					$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55---- +150					$^\circ\text{C}$

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

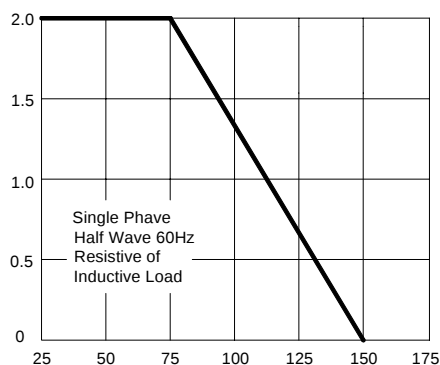
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3. Thermal resistance from junction to ambient.

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FIG.1 -FORWARD DERATING CURVE

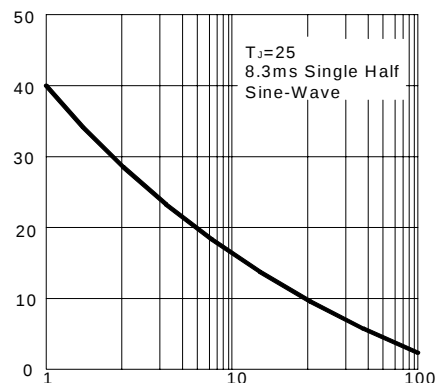
AVERAGE FORWARD RECTIFIED
CURRENT, AMPERES



AMBIENT TEMPERATURE, °C

FIG.2 -PEAK FORWARD SURGE CURRENT

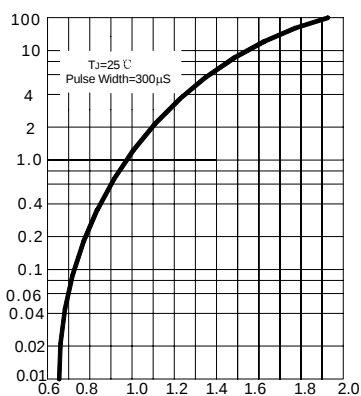
PEAK FORWARD SURGE CURRENT
AMPERES



NUMBER OF CYCLES AT 60 Hz

FIG.3 -TYPICAL FORWARD CHARACTERISTICS

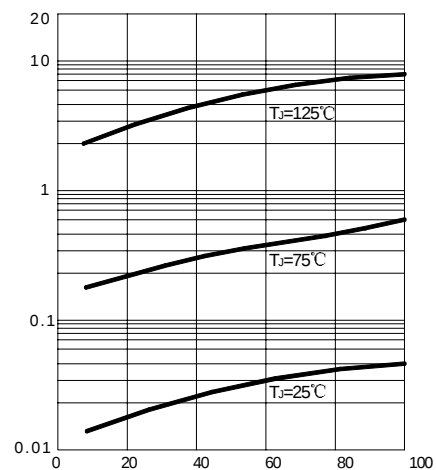
INSTANTANEOUS FORWARD CURRENT
AMPERES



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

FIG.4-TYPICAL REVERSE CHARACTERISTICS

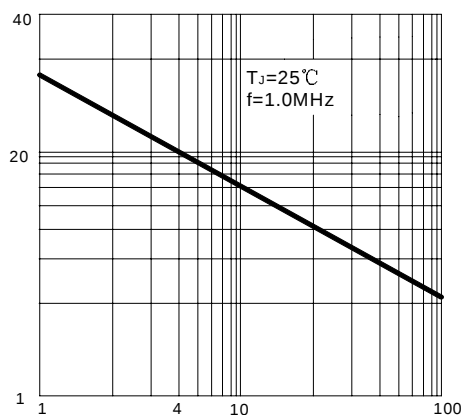
INSTANTANEOUS REVERSE CURRENT,
AMPERES



PERCENT OF RATED PEAK REVERSE VOLTAGE, %

FIG.5- TYPICAL JUNCTION CAPACITANCE

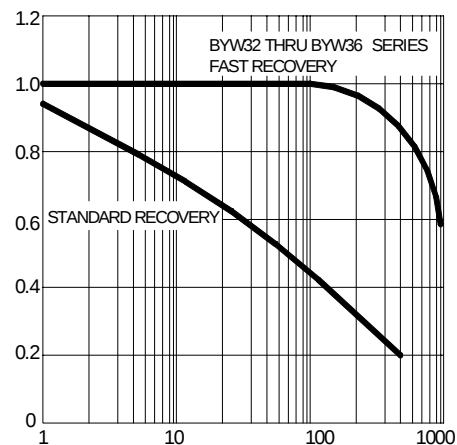
JUNCTION CAPACITANCE, pF



REVERSE VOLTAGE, VOLTS

FIG.6- TYPICAL RECTIFICATION EFFICIENCY

RECTIFICATION EFFICIENCY



FREQUENCY, KHz