

SUPER FAST RECTIFIERS

VOLTAGE RANGE: 300 - 500 V
CURRENT: 20 A

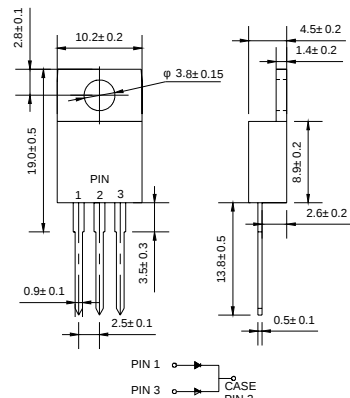
FEATURES

- ◇ Low cost
- ◇ Diffused junction
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with freon, alcohol, Isopropanol and similar solvents

MECHANICAL DATA

- ◇ Case: JEDEC TO-220AB, molded plastic
- ◇ Terminals: Plated leads, solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.071 ounces, 2.006 grams
- ◇ Mounting: Any

TO - 220AB



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 50Hz, resistive or inductive load. For capacitive load, derate by 20%.

		BYV34-300	BYV34-400	BYV34-500	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	300	400	500	V
Maximum RMS voltage	V_{RMS}	210	280	350	V
Maximum DC blocking voltage	V_{DC}	300	400	500	V
Maximum average forward rectified current @ $T_A = 115^\circ\text{C}$	$I_{F(AV)}$	20			A
Peak forward surge current 10ms single half-sine-wave superimposed on rated load	I_{FSM}	120			A
Maximum instantaneous forward voltage @ $I_F = 10\text{A}, T_J = 150^\circ\text{C}$ forward voltage @ $I_F = 20\text{A}, T_J = 25^\circ\text{C}$	V_F	1.05 1.35			V
Maximum reverse current at rated DC blocking voltage @ $T_A = 25^\circ\text{C}$ @ $T_A = 100^\circ\text{C}$	I_R	50 600			μA
Maximum reverse recovery time (Note1)	t_{rr}	60			ns
Typical thermal resistance (Note2)	$R_{\theta JA}$	60			K/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. Thermal resistance from junction to ambient.

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

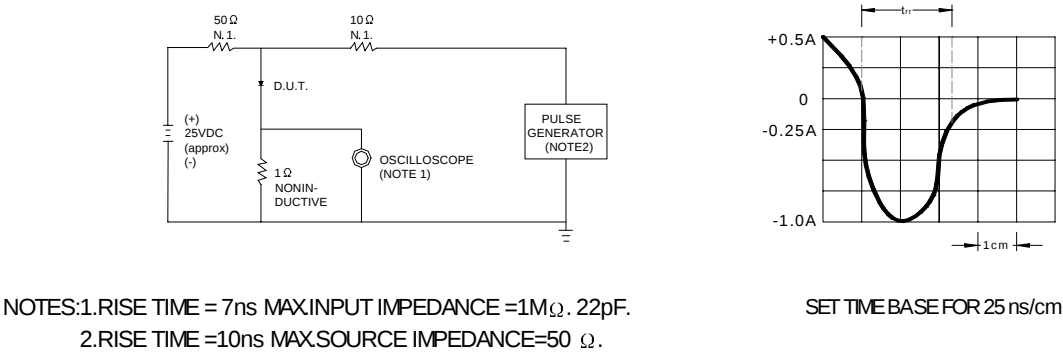


FIG.2 -- FORWORD DERATING CURVE

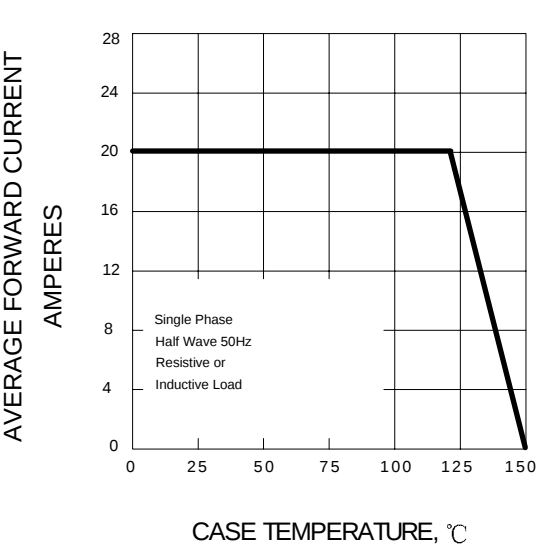


FIG.3 -- TYPICAL FORWORD CHARACTERISTIC

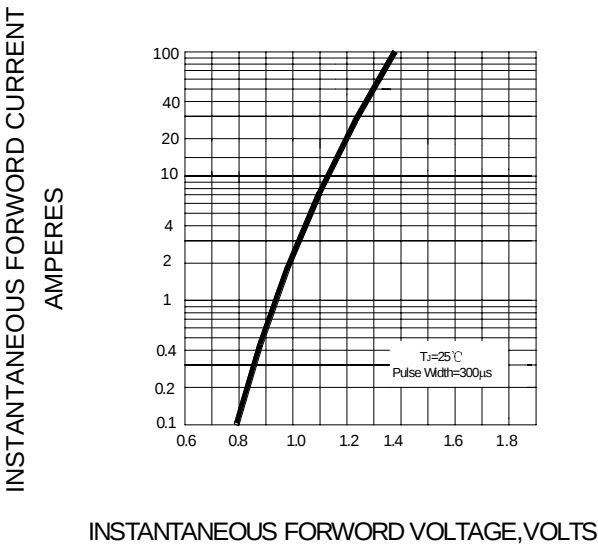


FIG.4- PEAK FORWORD SURGE CURRENT

