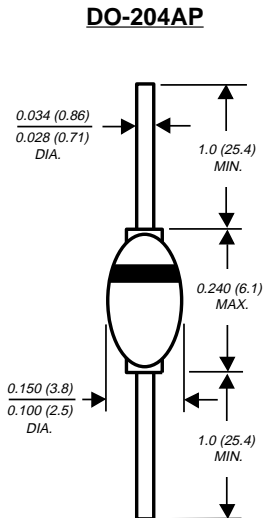


BYW32 THRU BYW36

MINIATURE GLASS PASSIVATED FAST SWITCHING RECTIFIER

Reverse Voltage - 200 to 600 Volts Forward Current - 2.0 Amperes

PATENTED*

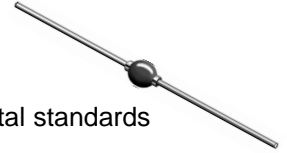


Dimensions in inches and (millimeters)

* Brazed-lead assembly is covered by Patent No. 3,930,306

FEATURES

- ◆ High temperature metallurgically bonded construction
- ◆ Hermetically sealed case
- ◆ Glass passivated cavity-free junction
- ◆ 2.0 Ampere operation at $T_A=55^\circ\text{C}$ with no thermal runaway
- ◆ Typical I_R less than $0.1\mu\text{A}$
- ◆ Capable of meeting environmental standards of MIL-STD-19500
- ◆ Fast switching for high efficiency
- ◆ High temperature soldering guaranteed: $350^\circ\text{C}/10$ seconds $0.375"$ (9.5mm) lead length, 5 lbs. (2.3kg) tension



MECHANICAL DATA

Case: JEDEC DO-204AP solid glass body
Terminals: Solder plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.02 ounce, 0.56 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	BYW32	BYW33	BYW34	BYW35	BYW36	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	200	300	400	500	600	Volts
Maximum RMS voltage	V_{RMS}	140	210	280	350	420	Volts
Maximum DC blocking voltage	V_{DC}	200	300	400	500	600	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{(AV)}$	2.0					Amps
Peak forward surge current 10ms single half sine-wave superimposed on rated load at $T_A=25^\circ\text{C}$	I_{FSM}	40.0					Amps
Maximum instantaneous forward voltage at 2.0A	V_F	1.2					Volts
Maximum DC reverse current at rated DC blocking voltage	I_R	5.0					μA
Maximum full load reverse current Full cycle average, 0.375" (9.5mm) lead length	$I_{R(AV)}$	5.0 50.0					μA
Maximum reverse recovery time (NOTE 1)	t_{rr}	200					ns
Typical junction capacitance (NOTE 2)	C_J	15.0					pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	55.0					$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J	-65 to +175					$^\circ\text{C}$
Storage temperature range	T_{STG}	-65 to +200					$^\circ\text{C}$

NOTES:

- (1) Measured with $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- (3) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

RATINGS AND CHARACTERISTIC CURVES BYW32 THRU BYW36 SERIES

FIG. 1 - FORWARD CURRENT DERATING CURVE

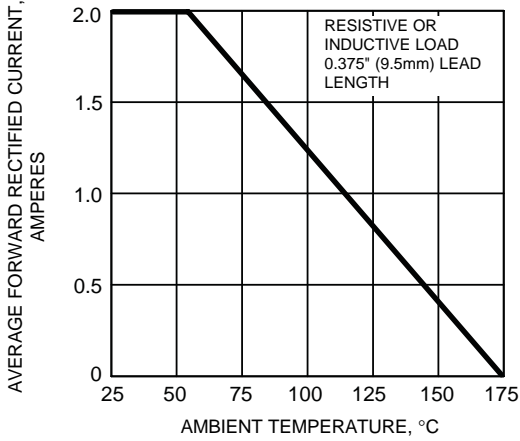


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

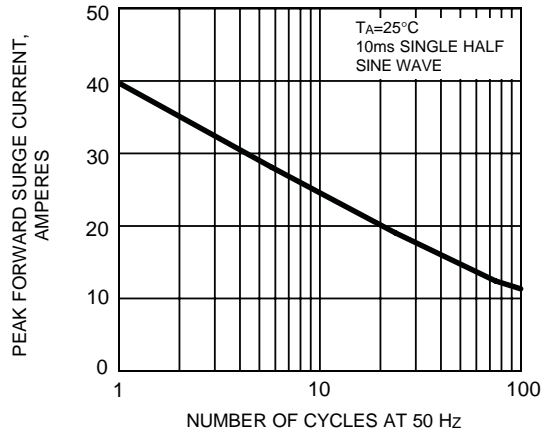


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

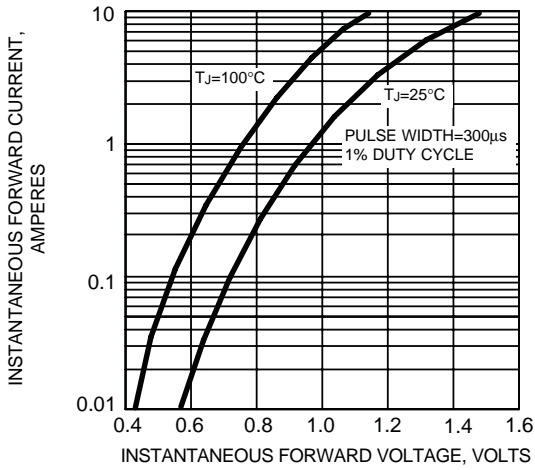


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

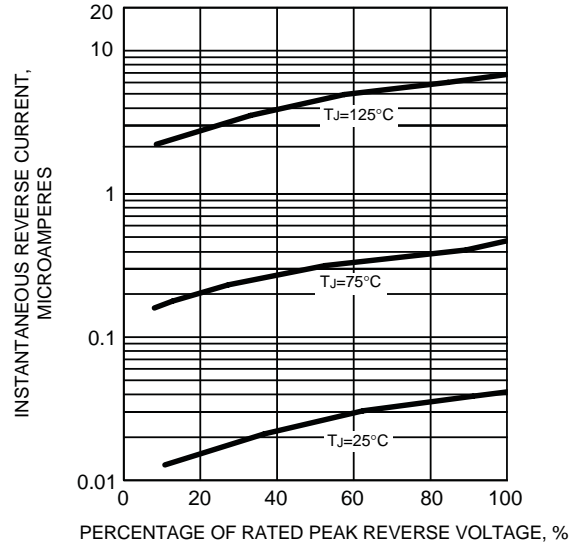


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

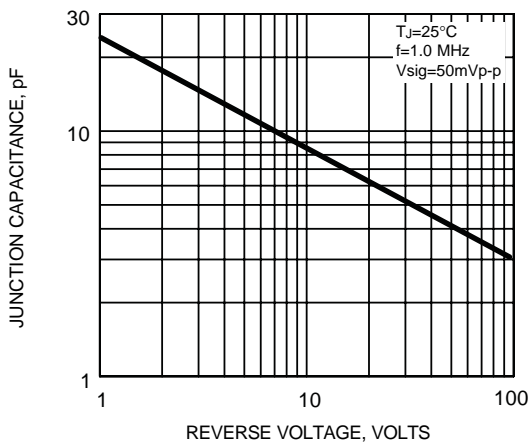


FIG. 6 - TYPICAL RECTIFICATION EFFICIENCY

