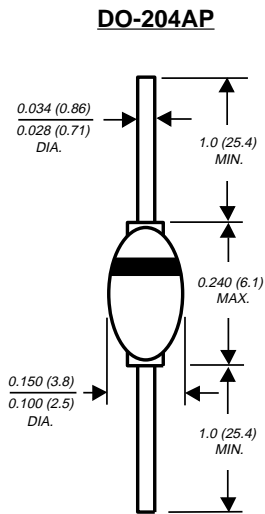


BYV95 AND BYV96 SERIES

MINIATURE GLASS PASSIVATED FAST SWITCHING RECTIFIER

Reverse Voltage - 200 to 1000 Volts Forward Current - 1.5 Amperes

PATENTED *

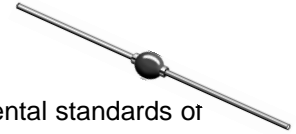


Dimensions in inches and (millimeters)

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

FEATURES

- ◆ High temperature metallurgically bonded construction
- ◆ Hermetically sealed package
- ◆ Glass passivated cavity-free junction
- ◆ 1.5 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-S-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 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	BYV95A	BYV95B	BYV95C	BYV96D	BYV96E	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	140	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	200	400	600	800	1000	Volts
Minimum avalanche breakdown voltage at $100\mu\text{A}$	$V_{(BR)}$	300	500	700	900	1100	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{(AV)}$	1.5					Amps
Peak forward surge current, 10ms single half sine-wave superimposed on rated load at $T_J=165^\circ\text{C}$	I_{FSM}	35.0					Amps
Maximum instantaneous forward voltage at 1.5A $T_J=25^\circ\text{C}$ $T_J=165^\circ\text{C}$	V_F	1.6 1.35					Volts
Maximum full load reverse current, full cycle average, 0.375", (9.5mm) lead length at $T_J=25^\circ\text{C}$ $T_J=165^\circ\text{C}$	$I_{R(AV)}$	1.0 150.0					μA
Maximum DC reverse current at rated DC blocking voltage	I_R	2.0					μA
Maximum reverse recovery time (NOTE 1)	t_{rr}	250			300		ns
Typical junction capacitance (NOTE 2)	C_J	10.0					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 BYV95 AND BYV96 SERIES

FIG. 1 - FORWARD CURRENT DERATING CURVE

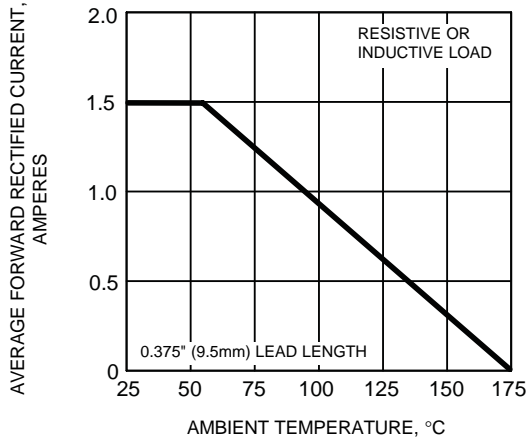


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

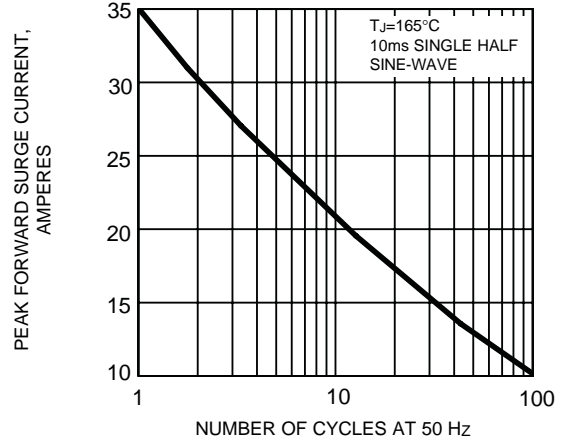


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

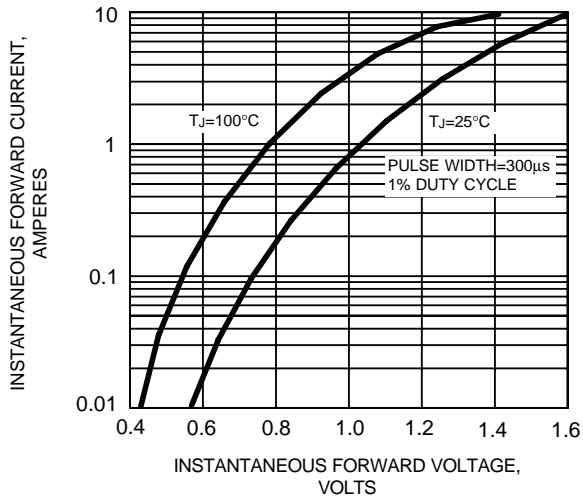


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

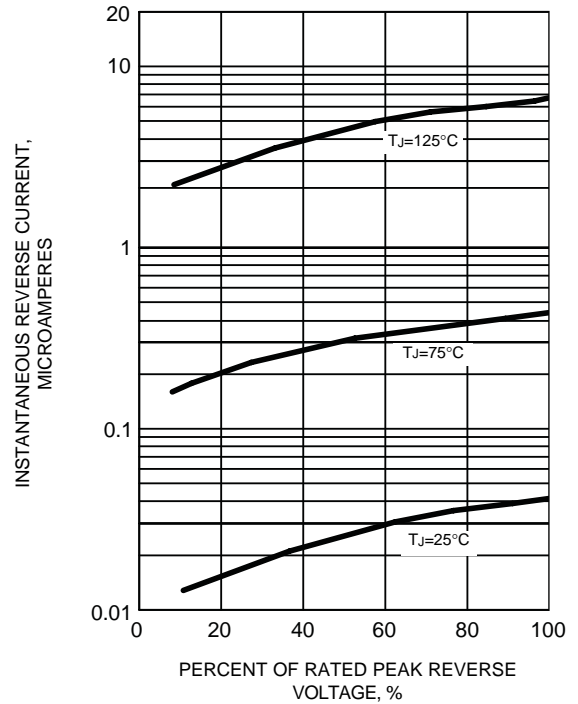


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

