

Silicon Diode

BYV95A

Fast Switching Rectifier

200V / 1,5A

DATASHEET

from

www.web-bcs.com

OEM – General Semiconductor

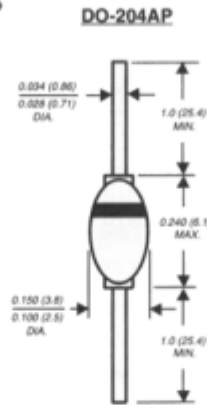
Source: General Semiconductor Databook 1998

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

