

# BY8004

**PRV : 5000 Volts**

**I<sub>F(AV)</sub> : 20 mA**

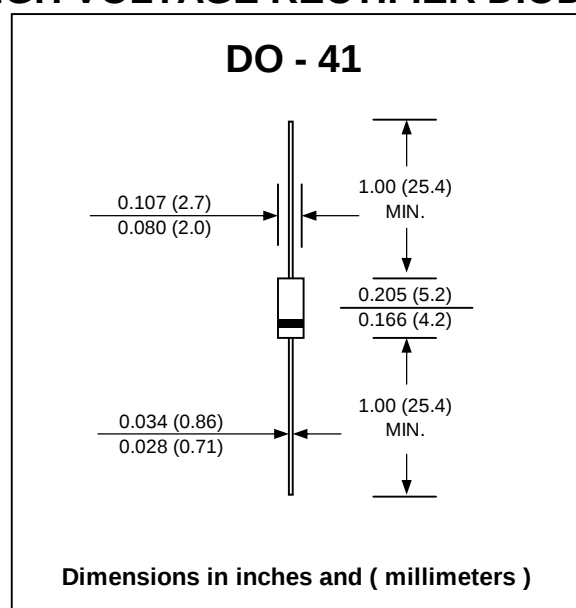
## FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* **Pb / RoHS Free**

## MECHANICAL DATA :

- \* Case : DO-41 Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.34 gram

## FAST RECOVERY HIGH VOLTAGE RECTIFIER DIODE



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| RATING                                                                                   | SYMBOL             | VALUE         | UNIT |
|------------------------------------------------------------------------------------------|--------------------|---------------|------|
| Maximum Repetitive Peak Reverse Voltage                                                  | V <sub>RRM</sub>   | 5000          | V    |
| Maximum Working Reverse Voltage                                                          | V <sub>RW</sub>    | 4000          | V    |
| Maximum Average Forward Current (See Fig. 2)                                             | I <sub>F(AV)</sub> | 20            | mA   |
| Maximum Repetitive Peak Forward Current (Note 1)                                         | I <sub>FRM</sub>   | 500           | mA   |
| Maximum Forward Voltage at I <sub>F</sub> = 100 mA.                                      | V <sub>F</sub>     | 20            | V    |
| Maximum Reverse Current at V <sub>R</sub> = V <sub>RWmax</sub> , T <sub>j</sub> = 120 °C | I <sub>R</sub>     | 3.0           | μA   |
| Maximum Reverse Recovery Time ( Note 2 )                                                 | T <sub>rr</sub>    | 100           | ns   |
| Junction Temperature Range                                                               | T <sub>J</sub>     | - 40 to + 150 | °C   |
| Storage Temperature Range                                                                | T <sub>STG</sub>   | - 40 to + 150 | °C   |

### Notes :

- (1) Withstands peak currents during flash-over in a picture tube.
- (2) Reverse Recovery Test Conditions : I<sub>F</sub> = 0.5 A, I<sub>R</sub> = 1.0 A, I<sub>rr</sub> = 0.25 A.

## RATING AND CHARACTERISTIC CURVES ( BY8004 )

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

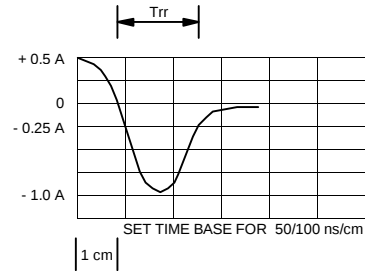
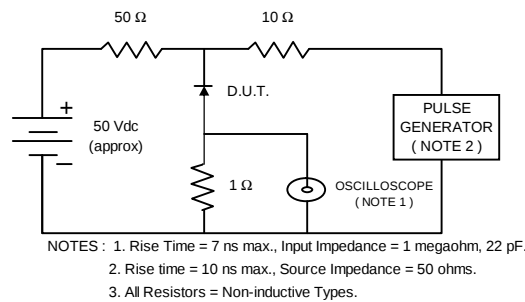


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

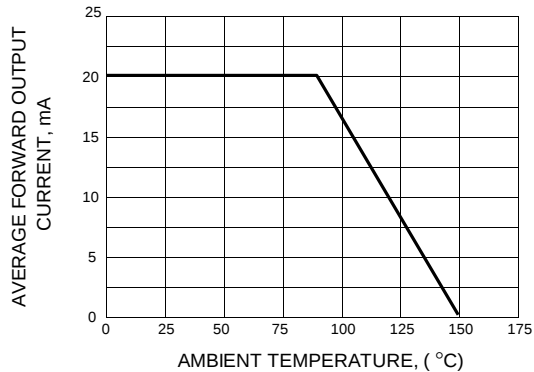


FIG.3 - MAXIMUM PEAK FORWARD CURRENT

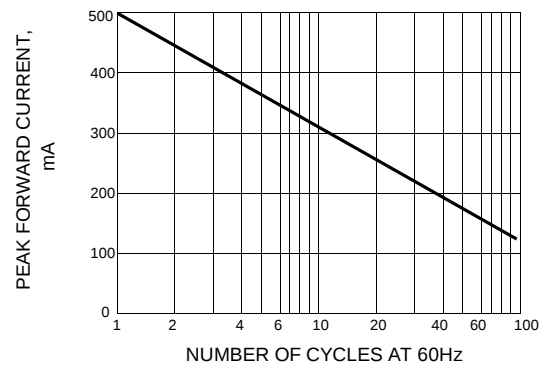


FIG.4 - MAXIMUM FORWARD CHARACTERISTICS

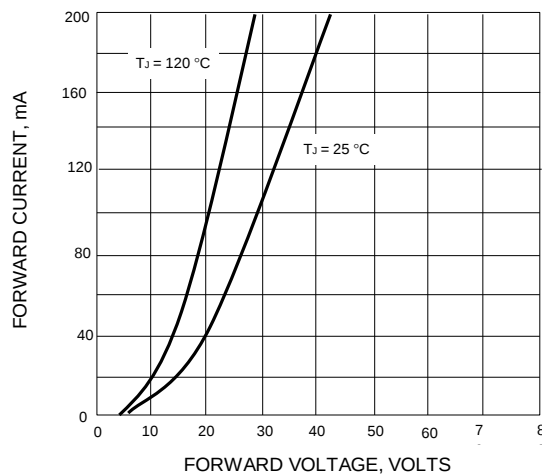


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

