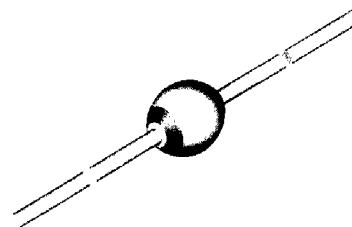


## BY448 / BY458

### Standard Avalanche Sinterglass Diode

#### Features

- Glass passivated junction
- Hermetically sealed package



#### Applications

High voltage rectification diode  
Efficiency diode in horizontal deflection circuits

#### Mechanical Data

**Case:** SOD-57 Sintered glass case

**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** approx. 369 mg

#### Parts Table

| Part  | Type differentiation                          | Package |
|-------|---|---------|
| BY448 | $V_R = 1500 \text{ V}; I_{FAV} = 2 \text{ A}$ | SOD-57  |
| BY458 | $V_R = 1200 \text{ V}; I_{FAV} = 2 \text{ A}$ | SOD-57  |

#### Absolute Maximum Ratings

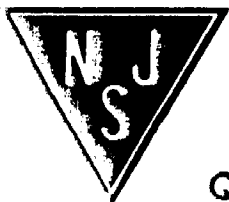
$T_{amb} = 25 \text{ }^\circ\text{C}$ , unless otherwise specified

| Parameter                               | Test condition                        | Part  | Symbol          | Value         | Unit             |
|---|---------------------------------------|-------|-----------------|---------------|------------------|
| Reverse voltage                         | see electrical characteristics        | BY448 | $V_R = V_{RRM}$ | 1500          | V                |
|   |                                       | BY458 | $V_R = V_{RRM}$ | 1200          | V                |
| Peak forward surge current              | $t_p = 10 \text{ ms}$ , half sinewave |       | $I_{FSM}$       | 30            | A                |
| Average forward current                 |                                       |       | $I_{FAV}$       | 2             | A                |
| Junction temperature                    |                                       |       | $T_J$           | 140           | $^\circ\text{C}$ |
| Storage temperature range               |                                       |       | $T_{stg}$       | - 55 to + 175 | $^\circ\text{C}$ |
| Non repetitive reverse avalanche energy | $I_{(BR)R} = 0.4 \text{ A}$           |       | $E_R$           | 10            | mJ               |

#### Maximum Thermal Resistance

$T_{amb} = 25 \text{ }^\circ\text{C}$ , unless otherwise specified

| Parameter        | Test condition                                | Symbol     | Value | Unit |
|------------------|---|------------|-------|------|
| Junction ambient | $l = 10 \text{ mm}$ , $T_L = \text{constant}$ | $R_{thJA}$ | 45    | K/W  |
|                  | on PC board with spacing 25 mm                | $R_{thJA}$ | 100   | K/W  |



# BY448 / BY458

## Electrical Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

| Parameter                   | Test condition  | Symbol   | Min | Typ. | Max | Unit          |
|-----------------------------|---|----------|-----|------|-----|---------------|
| Forward voltage             | $I_F = 3\text{ A}$  | $V_F$    |     |      | 1.6 | V             |
| Reverse current             | $V_R = V_{RRM}$   | $I_R$    |     |      | 3   | $\mu\text{A}$ |
|                             | $V_R = V_{RRM}, T_j = 140\text{ }^{\circ}\text{C}$          | $I_R$    |     |      | 140 | $\mu\text{A}$ |
| Total reverse recovery time | $I_F = 1\text{ A}, -d_{IF}/d_t = 0.05\text{ A}/\mu\text{s}$ | $t_{rr}$ |     |      | 20  | $\mu\text{s}$ |
| Reverse recovery time       | $I_F = 0.5\text{ A}, I_R = 1\text{ A}, i_R = 0.25\text{ A}$ | $t_{rr}$ |     |      | 2   | $\mu\text{s}$ |

## Package Dimensions in mm (Inches)

