

New Jersey Semi-Conductor Products, Inc.

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RECTIFIERS

High Efficiency, 2.5A

UES1101 BYV27-50
UES1102 BYV27-100
UES1103 BYV27-150

FEATURES

- Very Fast Recovery Times
- Very Low Forward Voltage
- Small Size
- Convenient Package

DESCRIPTION

An axial leaded power rectifier useful in many switching applications. Particularly suited where very fast recovery and low forward voltage are required.

ABSOLUTE MAXIMUM RATINGS

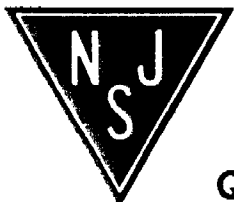
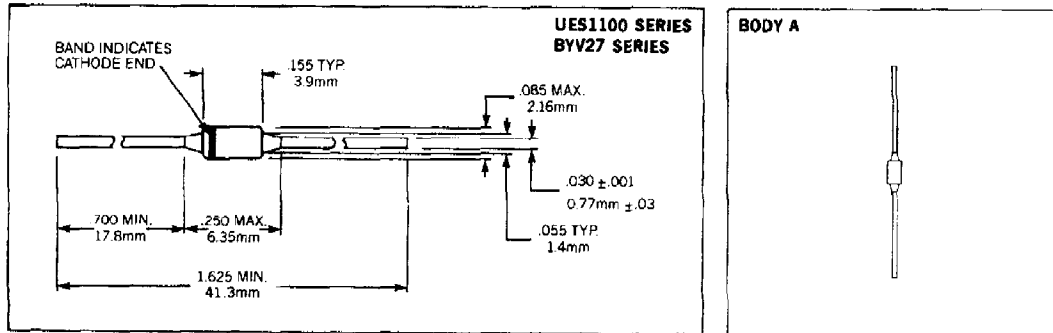
| | UES1101 | UES1102 | UES1103 | BYV27-50 | BYV27-100 | BYV27-150 |
|--|-----------------|---------|---------|----------|-----------|-----------|
| Peak Inverse Voltage, V_R | 50V | 100V | 150V | 50V | 100V | 150V |
| Maximum Average D.C. Output at $T_J = 75^\circ\text{C}$, $L = \frac{1}{2}\mu\text{s}$, I_o | 2.5A | 2.5A | 2.5A | 2.5A | 2.0A | 2.0A |
| Non-Repetitive Surge Current at 8.3ms, I_{FSM} | 35A | 35A | 35A | 35A | 50A | 50A |
| Thermal Resistance at $L = \frac{1}{2}\mu\text{s}$, $R_{\theta JC}$ | 38°C/W | 38°C/W | 38°C/W | 38°C/W | 46°C/W | 46°C/W |
| Junction Operating Temperature, T_J | 175°C | 175°C | 175°C | 175°C | 165°C | 165°C |
| Operating and Storage Temperature Range | -55°C to +175°C | | | | | |

ELECTRICAL SPECIFICATIONS

| Type | Maximum Reverse Voltage V_R | Maximum Forward Voltage @ | | Maximum Reverse Current @ Rated V_R | | Maximum Reverse Recovery Time* |
|-----------|-------------------------------|---------------------------|---------------------------|---------------------------------------|---------------------------|--------------------------------|
| | | $T_J = 25^\circ\text{C}$ | $T_J = 100^\circ\text{C}$ | $T_J = 25^\circ\text{C}$ | $T_J = 100^\circ\text{C}$ | |
| UES1101 | 50V | .975V | .895V | 2 μA | 50 μA | 25nS |
| UES1102 | 100V | @ | @ | | | |
| UES1103 | 150V | 2A | 2A | | | |
| BYV27-50 | 50V | 1.25V | .85V | 1 μA | 150 μA | 25nS |
| BYV27-100 | 100V | @ | @ | | | |
| BYV27-150 | 150V | 5A | 2.5A | | | |

*Measured in circuit $I_R = \frac{1}{2}\text{A}$, $I_F = 1.0\text{A}$, $I_{REC} = \frac{1}{2}\text{A}$

MECHANICAL SPECIFICATIONS



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Quality Semi-Conductors