# RECTIFIERS
## High Efficiency, 3.5A

UES1301 BYV28-50
UES1302 BYV28-100
UES1303 BYV28-150

**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**

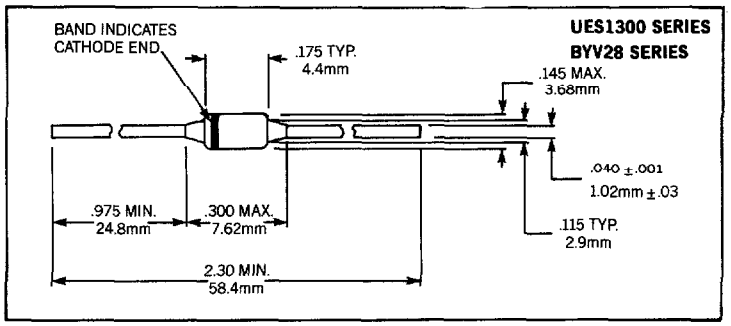
| | UES1301 | UES1302 | UES1303 | BYV28-50 | BYV28-100 | BYV28-150 |
|---|---|---|---|---|---|---|
| Peak Inverse Voltage, $V_R$ | 50V | 100V | 150V | 50V | 100V | 150V |
| Maximum Average D.C. Output at $T_L$ = 75°C, L = ⅜" $I_O$ | 6.0A | | | | 3.5A | |
| Non-Repetitive Surge Current at 8.3ms, $I_{FSM}$ | 125A | | | | 80A | |
| Thermal Resistance at L = ⅜", $R_{\theta JC}$ | 20°C/W | | | | 25°C/W | |
| Junction Operating Temperature, $T_j$ | 175°C | | | | 165°C | |
| Operating and Storage Temperature Range | -55°C to +175°C | | | | | |

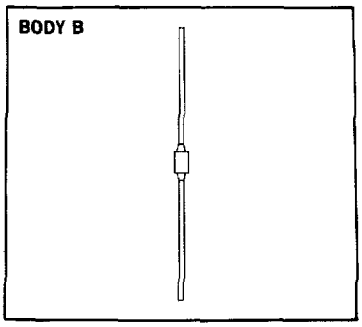
**ELECTRICAL SPECIFICATIONS**

| Type | Maximum Reverse Voltage $V_R$ | Maximum Forward Voltage @ | | | Maximum Reverse Current @ Rated $V_R$ | | Maximum Reverse Recovery Time* |
|---|---|---|---|---|---|---|---|
| | | $T_J$ = 25°C | $T_J$ = 100°C | | $T_J$ = 25°C | $T_J$ = 100°C | |
| UES1301<br>UES1302<br>UES1303 | 50V<br>100V<br>150V | .925V<br>@<br>6A | .850V<br>@<br>6A | | 5μA | 150μA | 30ns |
| | | $T_J$ = 25°C | $T_J$ = 165°C | | $T_J$ = 25°C | $T_J$ = 100°C | |
| BYV28-50<br>BYV28-100<br>BYV28-150 | 50V<br>100V<br>150V | 1.10V<br>@<br>5A | .75V<br>@<br>3A | .90V<br>@<br>5A | 1μA | 150μA | 30ns |

*Measured in circuit $I_F$ = 0.5A, $I_R$ = 1.0A, $I_{REC}$ = .25A

**MECHANICAL SPECIFICATIONS**




**THESE DEVICES ALSO AVAILABLE IN SURFACE MOUNT PACKAGE. SEE SECTION 10**

Microsemi Corp.
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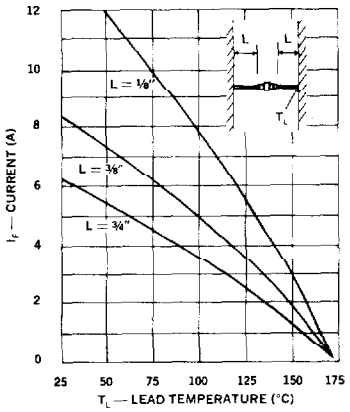
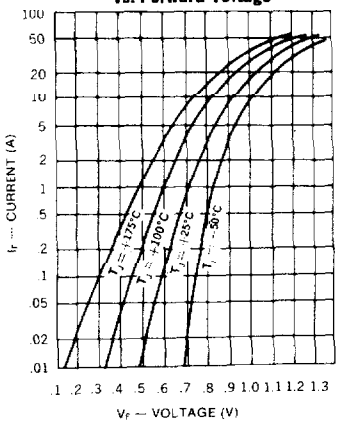
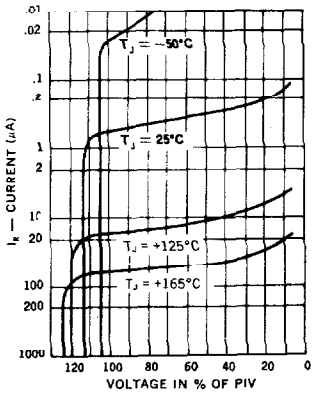
**Output Current vs. Lead Temperature**



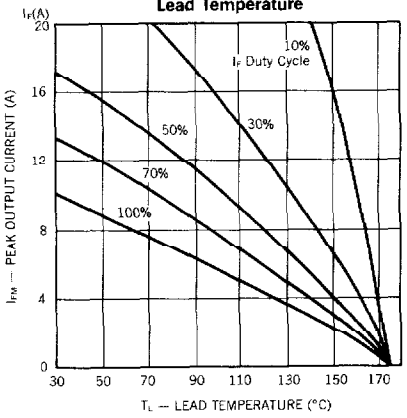

**Typical Forward Current vs. Forward Voltage**



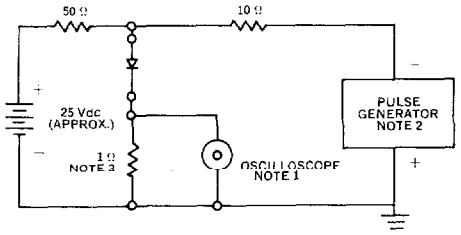

**Typical Reverse Current vs. Voltage**




**Peak Output Current vs. Lead Temperature**

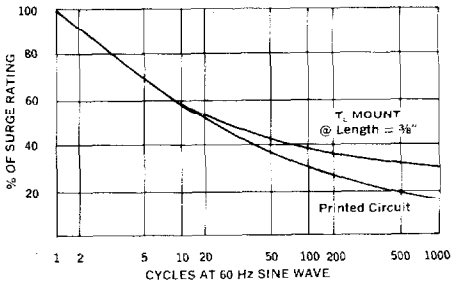



**Reverse-Recovery Circuit**

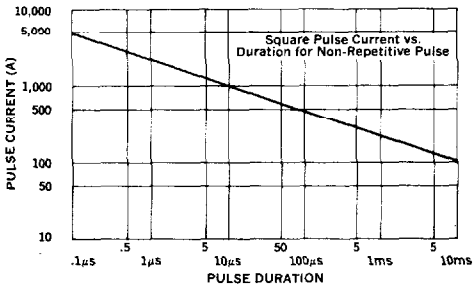



NOTES:
1. Oscilloscope: Rise time≤3nS; input impedance = 50Ω.
2. Pulse Generator: Rise time≤8nS; source impedance 10Ω.
3. Current viewing resistor, non-inductive, coaxial recommended.

**Multiple Surge Current vs. Duration**




**Forward Pulse Current vs. Duration**

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