

RECTIFIERS

High Efficiency, 1A

UES1001-UES1003

2

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

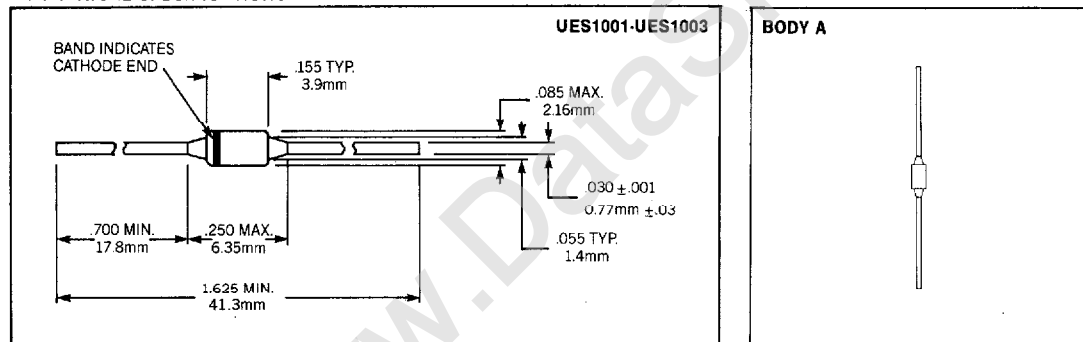
| | |
|--|---|
| Peak Inverse Voltage, UES1001 | 50V |
| Peak Inverse Voltage, UES1002 | 100V |
| Peak Inverse Voltage, UES1003 | 150V |
| Maximum Average D.C. Output Current at $T_L = 75^\circ\text{C}$, $L = 3/8"$ | 1A |
| Non-Repetitive Surge Current at 8.3ms | 30A |
| Thermal Resistance at $L = 3/8"$ | $.75^\circ\text{C/W}$ |
| Operating and Storage Temperature Range | $-55^\circ\text{C} + 175^\circ\text{C}$ |

ELECTRICAL SPECIFICATIONS

| Type | PIV | Maximum Forward Voltage (V_F) @ | | Maximum Reverse Current (I_R) @ PIV | | Maximum Reverse Recovery Time* |
|---------|------|-------------------------------------|---------------------------|---|-----------------------------|--------------------------------|
| | | $T_J = 25^\circ\text{C}$ | $T_J = 100^\circ\text{C}$ | @ $T_J = 25^\circ\text{C}$ | @ $T_J = 100^\circ\text{C}$ | |
| UES1001 | 50V | .975V | .895V | 2 μA | 50 μA | 25nS |
| UES1002 | 100V | @ | @ | | | |
| UES1003 | 150V | 1A | 1A | | | |

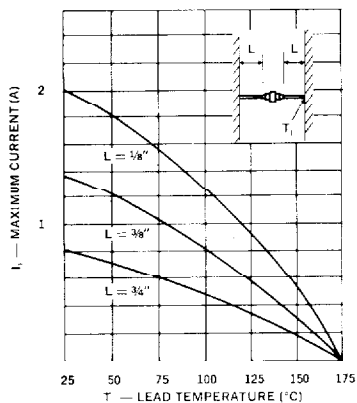
*Measured in circuit $I_F = .5\text{A}$, $I_R = 1.0\text{A}$, $I_{\text{REC}} = .25\text{A}$

MECHANICAL SPECIFICATIONS

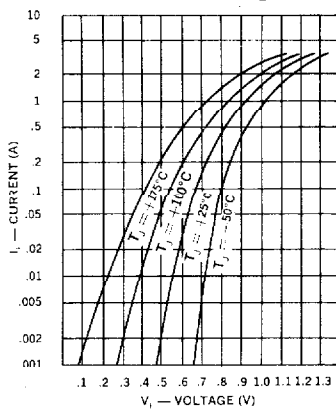


THESE DEVICES ALSO AVAILABLE IN SURFACE MOUNT PACKAGE. SEE SECTION 10

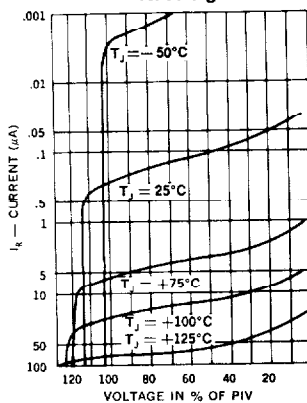
Output Current vs. Lead Temperature



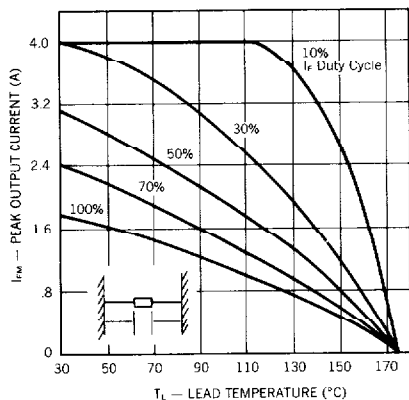
Typical Forward Current vs. Forward Voltage



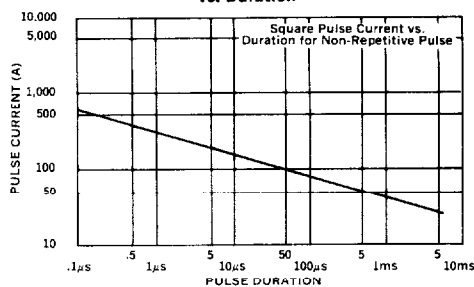
Typical Reverse Current vs. Voltage



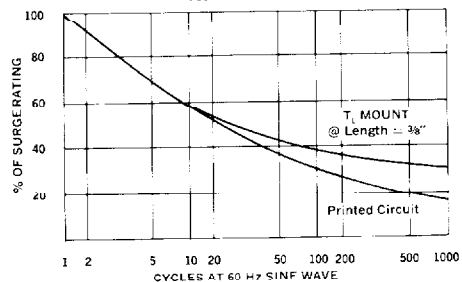
Peak Output Current vs. Lead Temperature



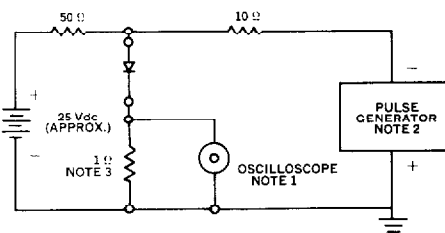
Forward Pulse Current vs. Duration



Multiple Surge Current vs. Duration



Reverse-Recovery Circuit



- NOTES:**
 1. Oscilloscope: Rise time $\leq 3\text{ns}$; input impedance = $50\Omega</math>.
 2. Pulse Generator: Rise time $\leq 8\text{ns}$; source impedance $10\Omega</math>.
 3. Current viewing resistor, non-inductive, coaxial recommended.$$