Microsemi
WATERTOWN DIVISION

PRELIMINARY

UPR802, UPR804, UPR806

Surface Mount UES Rectifiers

PRODUCT PREVIEW

DESCRIPTION

This state of the art high frequency rectifier is ideally suited for applications requiring high blocking voltage. It has the ability to switch significant current with minimal switching transients and losses. Leakage current at high temperature has been minimized; achieving exceptionally low reverse loses. An ultra stable process ensures high reliability and long life.
This device is designed for a wide variety of high-frequency applications.

KEY FEATURES

- Ultra Fast Recovery-35ns
- Controlled Avalanche
- High Temperature Operation with Low Loss
- Minimal Recovery Transients
- Low Turn-on Voltage
- Powermite 3 Package

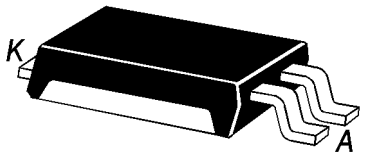
IMPORTANT: For the most current data, consult *MICROSEMI*'s website: **http://www.microsemi.com**

APPLICATIONS/BENEFITS

- Battery Charger and Switching Circuits Where the intrinsic source-drain diode is an undesirable feature
- Small foot print

ABSOLUTE MAXIMUM RATINGS AT 25° C (UNLESS OTHERWISE SPECIFIED)

Rating	Symbol	Value	Unit
Peak Reverse Voltage UPR802	V_{R1}	200	V
Peak Reverse Voltage UPR804	V_{R1}	400	V
Peak Reverse Voltage UPR806	V_{R1}	600	V
Average DC Output Current Tc = 130 °C	Io	8	A
Peak Forward Surge Current 8.3 mS	V_F	100	A
Storage Temperature	T stg	-55 to 150	°C
Operating Temperature	T op	-55 to 150	°C



THERMAL CHARACTERISTICS (UNLESS OTHERWISE SPECIFIED)

Thermal Resistance			
Junction-to Case	Rjtab	2.0	°C/Watt

(1) Mounted on 2" square by 0.06' thick FR4 board with a 1" x 1" square 2 ounce copper pattern.
(2) Mounted on 0.06 thick FR4 board, using recommended footprint.

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580 Pleasant Street, Watertown, MA. 02472-2408, 617-926-0404, Fax: 617-924-1235

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ELECTRICAL PARAMETERS@25°C (unless otherwise specified)

Parameter	Symbol	Conditions	Typ.	Units
On characteristics (pulsed Width = 400 µs, Duty Cycle <1%)				
Forward Voltage	Vf	I_F = 4.0A	1.2	V
Forward Voltage	Vf	I_F = 8.0A	1.35	V
Forward Voltage Tc = 125 °C	Vf	I_F = 8.0A	1.1	V
Reverse Current	I_R	Ir = V_R	10	µA
Reverse Current Tc = 125 °C	I_R	Ir = V_R	250	µA
Switching characteristics (Tc = 25 °C)				
Reverse Recovery Time	TIRM/ IRM	dI/dt = 100 A/µs	35	ns

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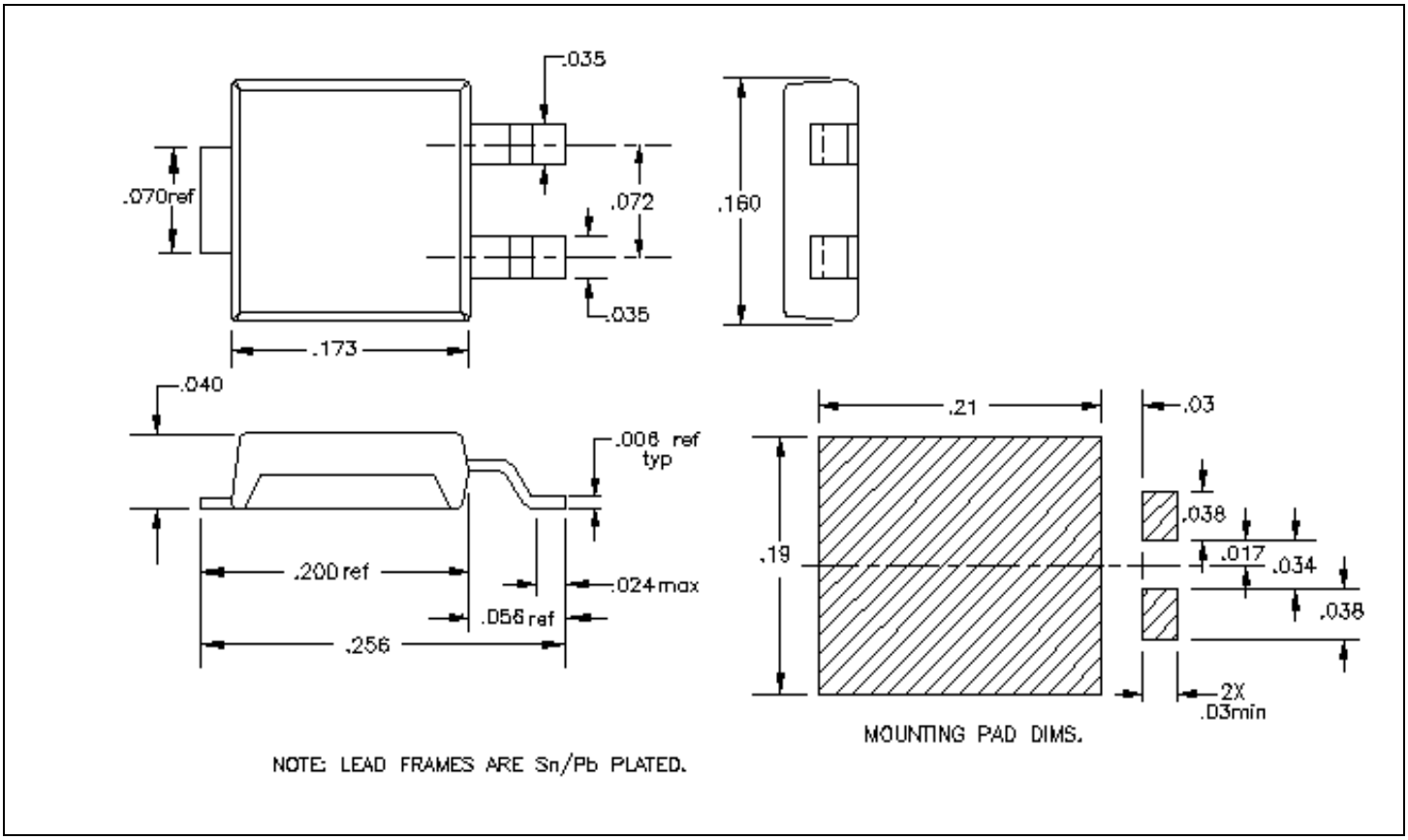

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