



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 losses. 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>

**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 $T_c = 130\text{ }^\circ\text{C}$	I_o	8	A
Peak Forward Surge Current 8.3 mS	V_F	100	A
Storage Temperature	T stg	-55 to 150	$^\circ\text{C}$
Operating Temperature	T op	-55 to 150	$^\circ\text{C}$

APPLICATIONS/BENEFITS

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



**THERMAL CHARACTERISTICS
(UNLESS OTHERWISE SPECIFIED)**

Thermal Resistance			
Junction-to Case	R_{jtab}	2.0	$^\circ\text{C/Watt}$

- (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.





WATERTOWN DIVISION

PRELIMINARY

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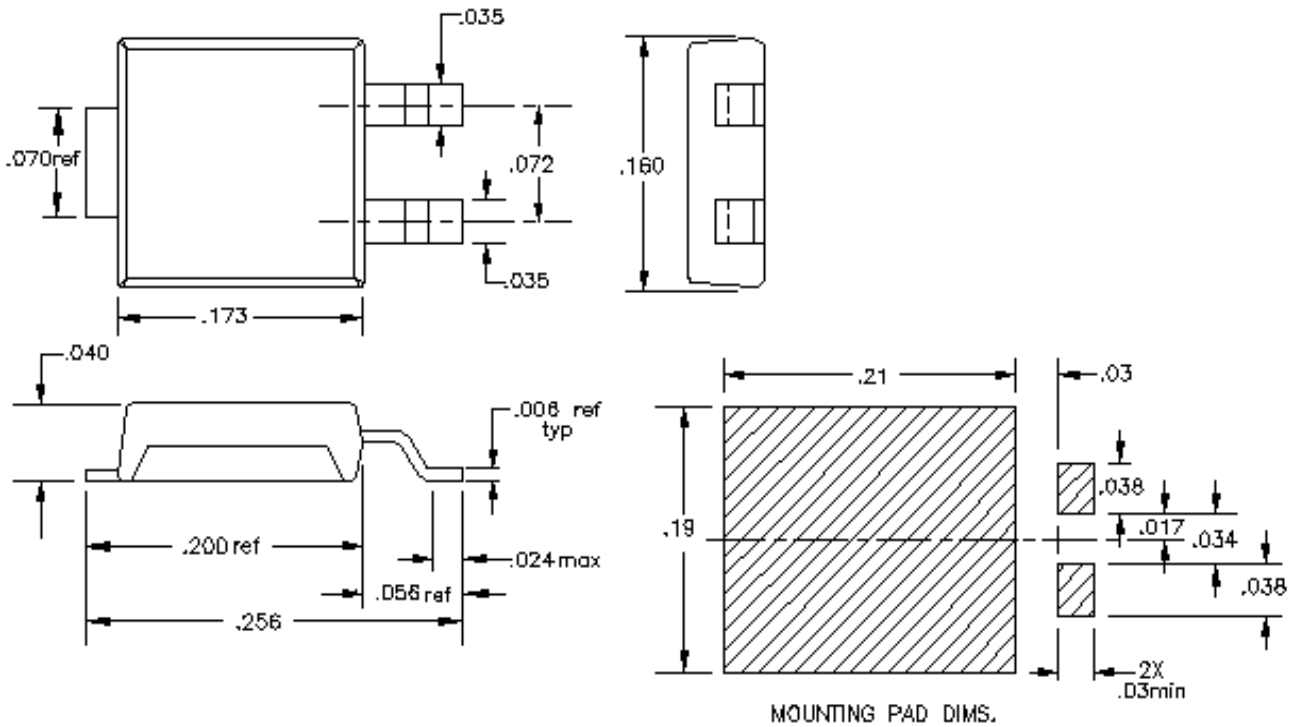
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ELECTRICAL PARAMETERS@25°C (unless otherwise specified)

Parameter	Symbol	Conditions	Typ.	Units
▶ On characteristics (pulsed Width = 400 μs, Duty Cycle <1%)				
Forward Voltage	V _f	I _F = 4.0A	1.2	V
Forward Voltage	V _f	I _F = 8.0A	1.35	V
Forward Voltage T _c = 125 °C	V _f	I _F = 8.0A	1.1	V
Reverse Current	I _R	I _r = V _R	10	μA
Reverse Current T _c = 125 °C	I _R	I _r = V _R	250	μA
▶ Switching characteristics (T_c = 25 °C)				
Reverse Recovery Time	T _{IRM} / I _{RM}	dI/dt = 100 A/μs	35	ns

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NOTE: LEAD FRAMES ARE Sn/Pb PLATED.



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NOTES:

www.Microsemi.com

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