

**DESCRIPTION**

In Microsemi's new Powermite<sup>®</sup> SMT package, these high efficiency ultrafast rectifiers offer the power handing capabilities previously found only in much larger packages. They are ideal for SMD applications that operate at high frequencies.

In addition to its size advantages, Powermite<sup>®</sup> package features include a full metallic bottom that eliminates the possibility of solder flux entrapment during assembly, and a unique locking tab acts as an integral heat sink. Its innovative design makes this device ideal for use with automatic insertion equipment.

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

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

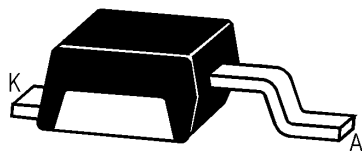
Rating	Symbol	Value	Unit
Maximum Reverse Voltage, UPSC100	V	100	Vdc
Maximum Reverse Voltage, UPSC200	V	200	Vdc
Maximum Average Output Current, T <sub>TAB</sub> = 75°C	T	1.0	Adc
Non-Repetitive Sinusoidal Surge Current (8.3 mS)	I	15	A
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C
Operating Temperature	T <sub>op</sub>	-55 to +150	°C

**THERMAL CHARACTERISTICS  
(UNLESS OTHERWISE SPECIFIED)**

**Thermal Resistance**

Junction-to Tab	R <sub>tab</sub>	30	°C/Watt
Junction-to Bottom	R <sub>ja</sub> (1)	10	°C/Watt

(1) When Mounted on PC board with 2 ounce copper pattern.




**KEY FEATURES**

- High power surface mount package.
- Silicon carbide Schottky rectifiers no reverse voltage recovery.
- Internal heat sink locking tabs
- Low forward voltage.
- Full metallic bottom eliminates flux entrapment
- Compatible with automatic insertion equipment
- Low profile-maximum height of 1mm supplied in 8mm tape and reel- 3,000 units/ 7" reel; 12,000 units/ 12" reel

**APPLICATIONS/BENEFITS**

- Switching and Regulating Power Supplies.
- Charge Pump Circuits.
- Reduces reverse recovery loss due to low IRM.
- Small foot print

.100 X .105 mils  
1:1 Actual size

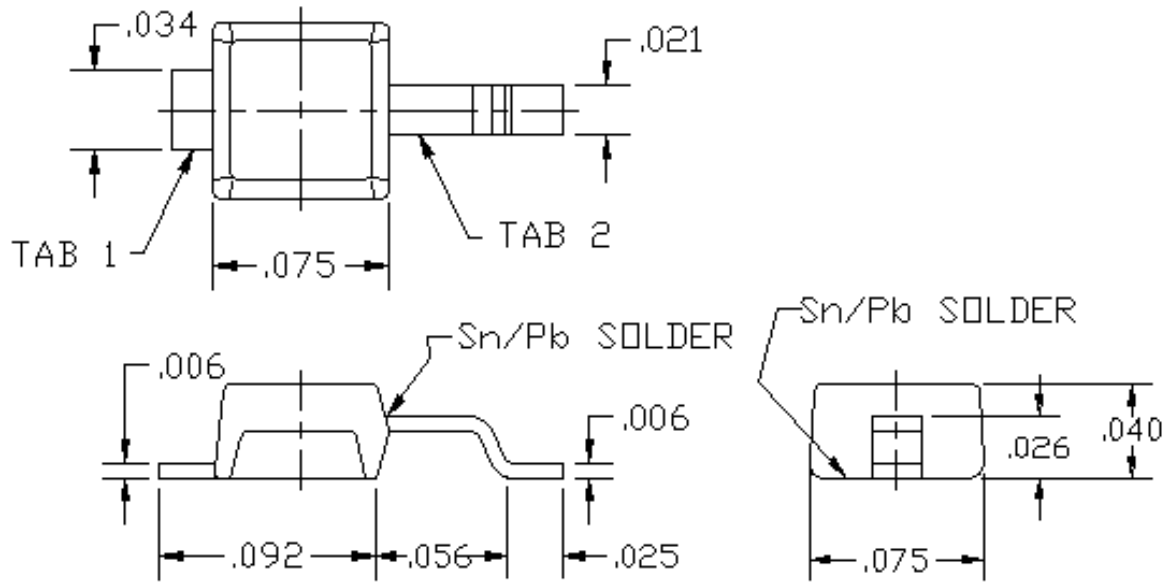




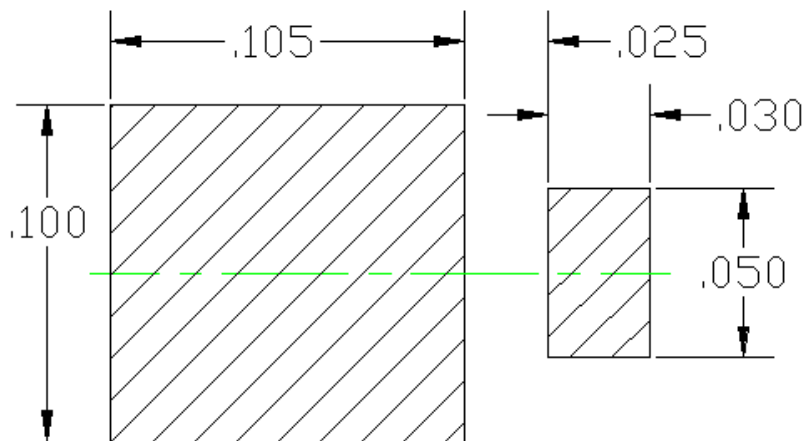

**ELECTRICAL PARAMETERS @ 25°C (unless otherwise specified)**

Parameter	Symbol	Conditions	Min	Typ.	Max	Units
<b>▶ Off Characteristics</b>						
Forward Voltage:	$V_F$	$I_F = 1\text{ A}$			2.0	V
Reverse Current:	$I_R$	$V_R = \text{Max Rating}$			100	$\mu\text{A}$
<b>▶ Dynamic characteristics</b>						
Capacitance	$C_T$	$V_R = 5\text{V}; F = 1\text{ MHz}$			80	pF

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NOTES:  
UNLESS OTHERWISE SPECIFIED.  
1. ALL DIMENSIONS ARE  $\pm .005$  inch.  
2. TAB 1-CATHODE  
2. TAB 2-ANODE.



SUGGESTED MOUNTING PAD DIMENSIONS



*PRELIMINARY*

**UPSC100/UPSC200**

**Silicon Carbide Schottky Rectifiers**

**PRODUCT PREVIEW**

**NOTES:**

**www.Microsemi.com**

**NOTES**