

# MBR0530

## SCHOTTKY BARRIER RECTIFIERS

0.5 AMPERES 30 VOLTS

Surface Mount Schottky Power Rectifier

### Description

This Schottky Power Rectifier is ideally suited for low voltage, high frequency rectification, or as free wheeling and polarity protection diodes in surface mount applications where compact size and weight are critical to the system.

### Features

- Guarding for stress protection
- Low forward voltage
- 125° Operating junction temperature

### Mechanical Characteristics

- Polarity designator: cathode band
- Case: epoxy, molded
- Finish: all external surfaces corrosion resistant and terminal leads are readily solderable
- Lead and mounting surface temperature for soldering purposes: 260° Max. for 10 seconds

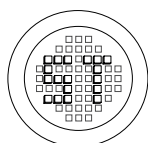
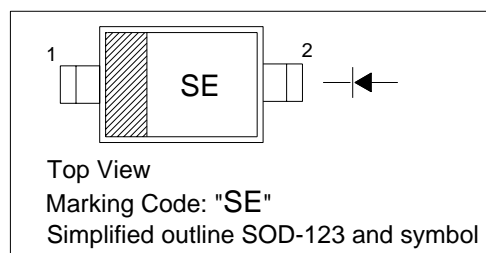
### Absolute Maximum Ratings (Ta = 25 °C)

Parameter	Symbol	Limits	Unit
DC Blocking Voltage	$V_R$	30	V
Peak Repetitive Reverse Voltage	$V_{RRM}$	30	V
Working Peak Reverse Voltage	$V_{RWM}$	30	V
Average Rectified Forward Current @ Rated $V_R$ , $T_L=100^\circ$	$I_{F(AV)}$	0.5	A
Non-Repetitive Peak Surge Current. (Surge applied at rated load conditions halfwave, single phase, 60Hz)	$I_{FSM}$	5.5	A
Thermal Resistance Junction to Lead	$R_{\theta JL}$	150	? /W
Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	206	? /W
Operating Junction Temperature	$T_J$	-65 to +125	°
Storage Temperature	$T_{stg}$	-65 to +125	°

1) 1 inch square pad size (1x 0.5 inch for each lead) on FR4 board

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



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РАДИОТЕХ

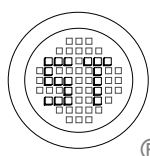
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## Electrical Characteristics (Ta = 25°C)

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Instantaneous Forward Voltage (Note 2.)	V <sub>F</sub>	-	-	0.375	V	I <sub>F</sub> = 0.1A T <sub>J</sub> = 25°C
		-	-	0.43	V	I <sub>F</sub> = 0.5A T <sub>J</sub> = 25°C
Instantaneous Reverse Current (Note 2)	I <sub>R</sub>	-	-	130	uA	Rated DC voltage, T <sub>C</sub> = 25°C
		-	-	20	uA	V <sub>R</sub> = 15V T <sub>C</sub> = 25°C
Voltage Rate of Change (Rated V <sub>R</sub> )	d <sub>v</sub> / d <sub>t</sub>	-	-	1000	V/us	-

1) Pulse test: pulse width < 300us, duty cycle ≤ 2%.



## SEMTECH ELECTRONICS LTD.

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ISO/TS 16949 : 2002  
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Certificate No. 7116



ISO 9001 : 2000  
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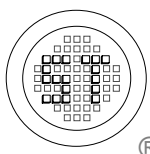
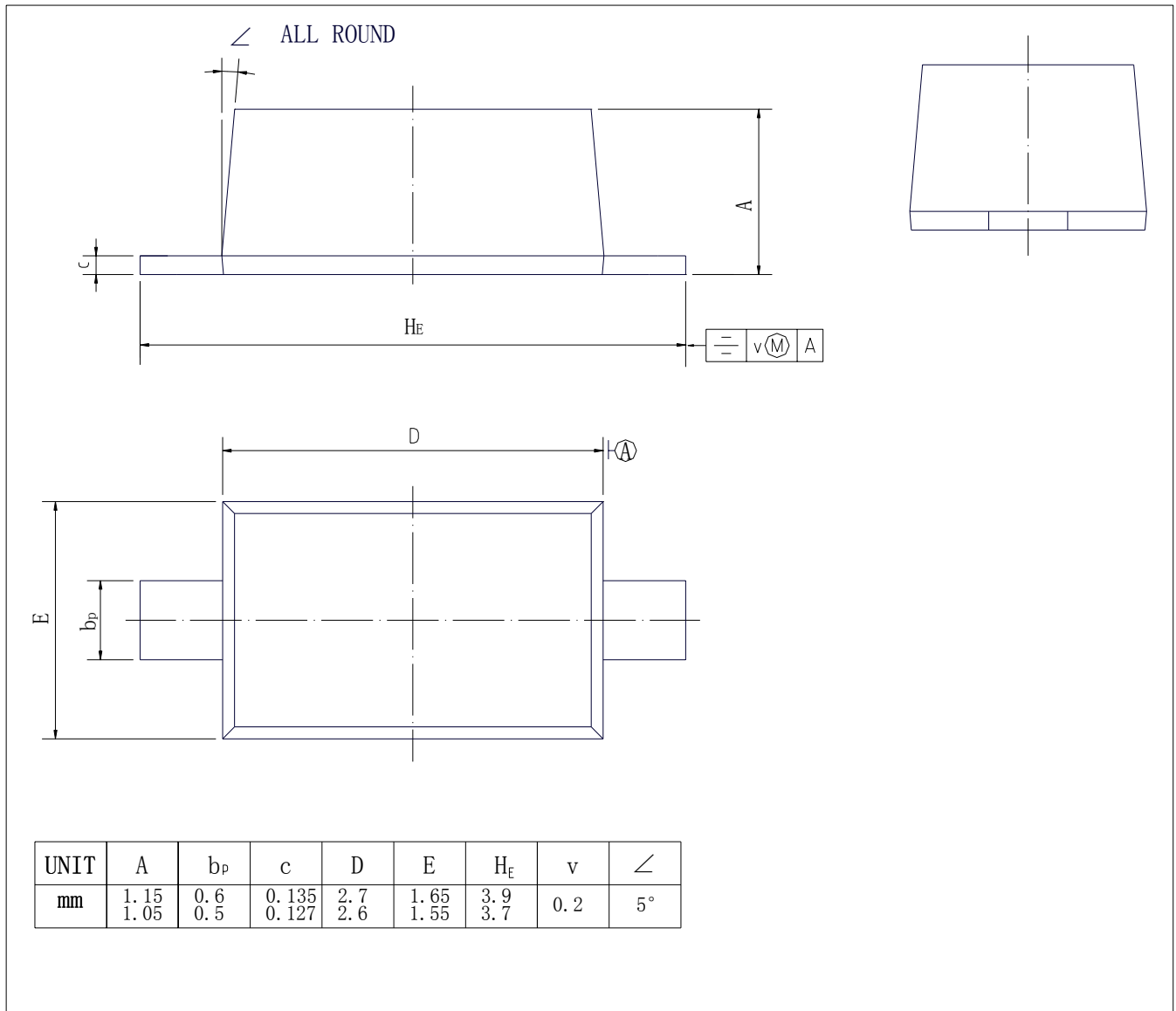
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## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123



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