

MBR0520

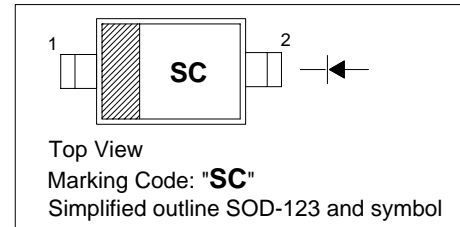
SURFACE MOUNT SCHOTTKY RECTIFIER

Features

- Very low forward voltage
- High Current Capability

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



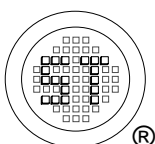
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit	
DC Reverse Voltage	V_R	20	V	
Peak Reverse Voltage	V_{RRM}			
Working Peak Reverse Voltage	V_{RWM}			
Average Forward Current at DC, $T_L = 129^\circ\text{C}$	I_F	0.5	A	
Peak One Cycle Non-repetitive Surge Current	$I_{FSM}^{1)}$	at 25°C 5 μs sine or 3 μs rect. pulse	55	A
		at 25°C 10 ms sine or 6 ms rect. pulse	6.5	A
Thermal Resistance Junction to Lead	R_{thJL}	150	$^\circ\text{C/W}$	
Thermal Resistance Junction to Ambient	R_{thJA}	340	$^\circ\text{C/W}$	
Junction Temperature	T_J	- 65 to + 150	$^\circ\text{C}$	
Storage Temperature	T_{stg}	- 65 to + 150	$^\circ\text{C}$	

¹⁾ Following any rated load condition and with rated V_{RRM} applied.

Electrical Characteristics

Parameter	Symbol	Max.	Unit
Forward Voltage at $I_F = 0.1\text{ A}$, $T_J = 25^\circ\text{C}$ at $I_F = 0.5\text{ A}$, $T_J = 25^\circ\text{C}$ at $I_F = 0.1\text{ A}$, $T_J = 100^\circ\text{C}$ at $I_F = 0.5\text{ A}$, $T_J = 100^\circ\text{C}$	V_F	0.375	V
		0.44	V
		0.26	V
		0.36	V
Reverse Leakage Current at $V_R = 10\text{ V}$, $T_J = 25^\circ\text{C}$ at $V_R = 20\text{ V}$, $T_J = 25^\circ\text{C}$ at $V_R = 10\text{ V}$, $T_J = 100^\circ\text{C}$ at $V_R = 20\text{ V}$, $T_J = 100^\circ\text{C}$	I_R	40	μA
		150	μA
		3	mA
		7	mA
Junction Capacitance at $V_R = 5\text{ V}_{DC}$ (test signal range 100 KHz to 1 MHz), $T_J = 25^\circ\text{C}$	C_T	110	pF



SEMTECH ELECTRONICS LTD.

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



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ISO 9001:2000 Certificate No. 0506098

Dated : 04/07/2006

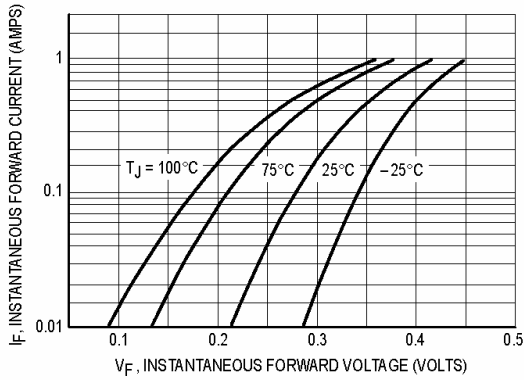


Figure 1. Typical Forward Voltage

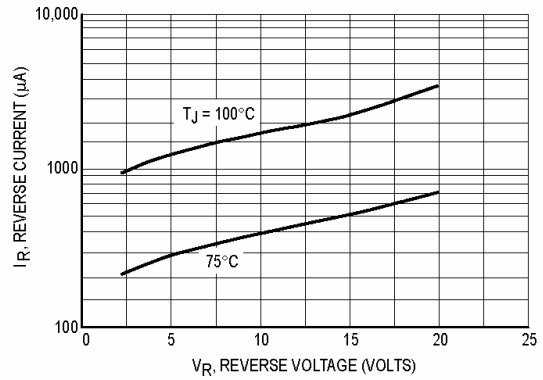


Figure 2. Typical Reverse Current

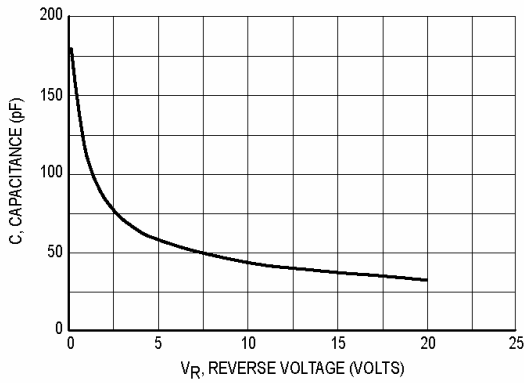


Figure 3. Typical Capacitance

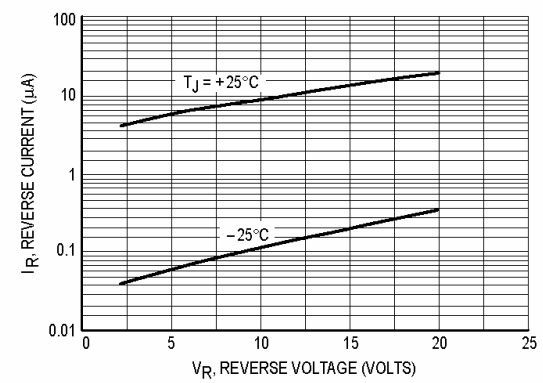


Figure 4. Typical Reverse Current

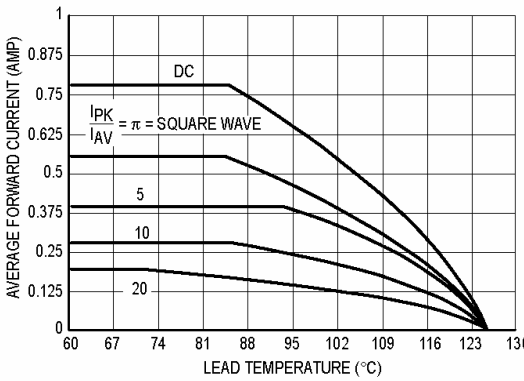


Figure 5. Current Derating (Lead)

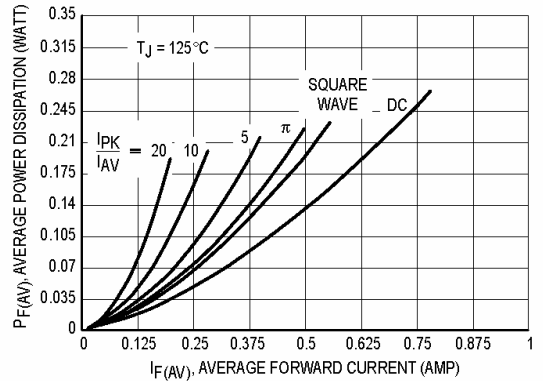
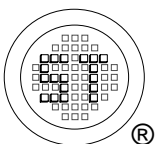


Figure 6. Power Dissipation



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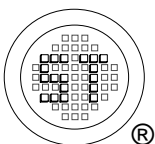
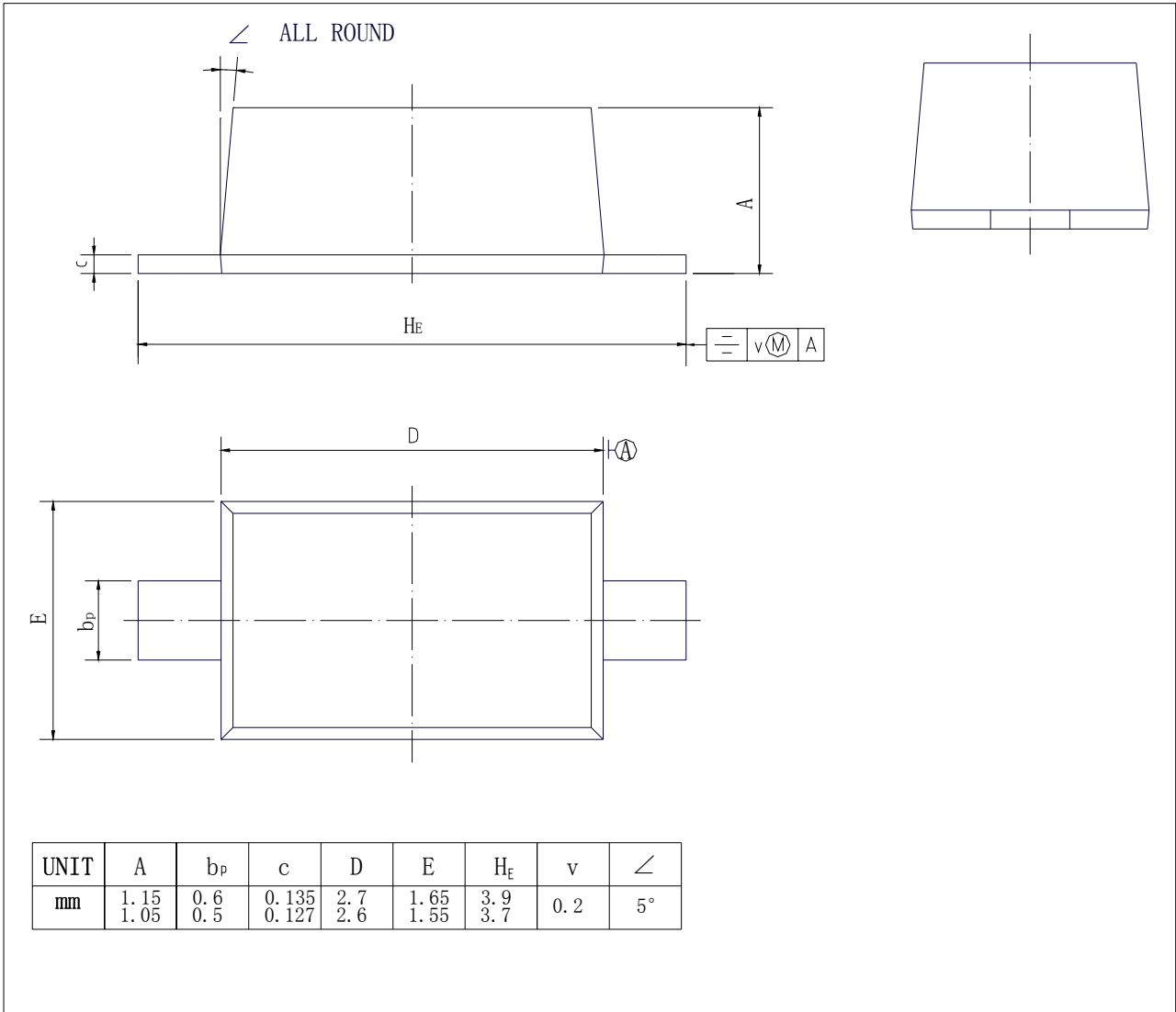
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PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123



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