

MBR0520

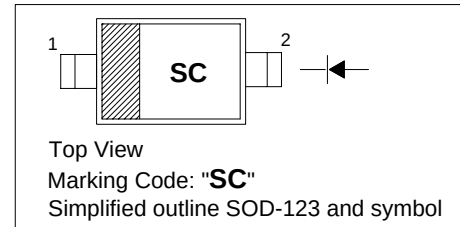
SURFACE MOUNT SCHOTTKY RECTIFIER

Features

- Very low forward voltage
- High Current Capability

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



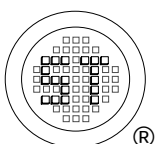
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

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	$I_{FSM}^{1)}$	55	A
		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 0.44 0.26 0.36	V V V 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	40 150 3 7	μA μA mA 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)



Dated : 04/07/2006

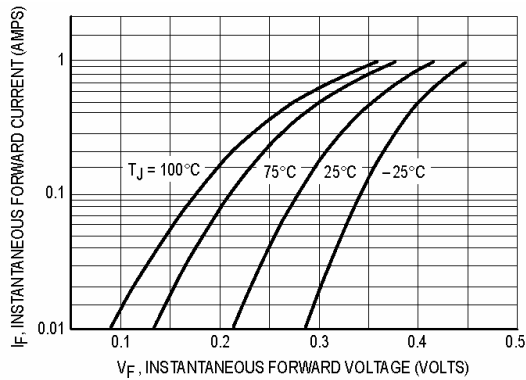


Figure 1. Typical Forward Voltage

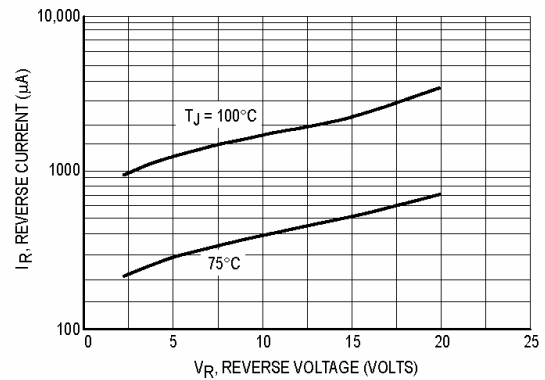


Figure 2. Typical Reverse Current

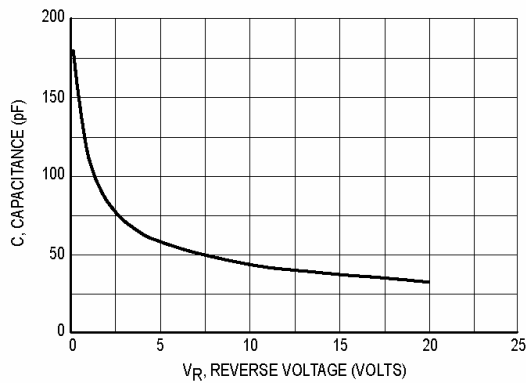


Figure 3. Typical Capacitance

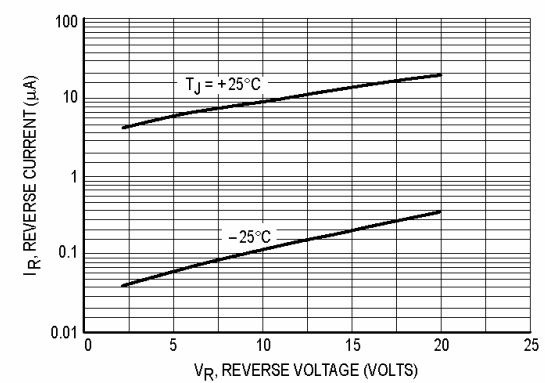


Figure 4. Typical Reverse Current

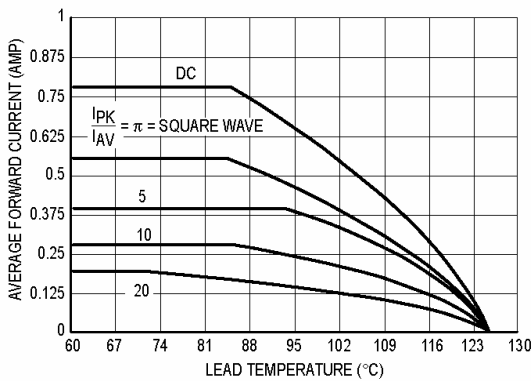


Figure 5. Current Derating (Lead)

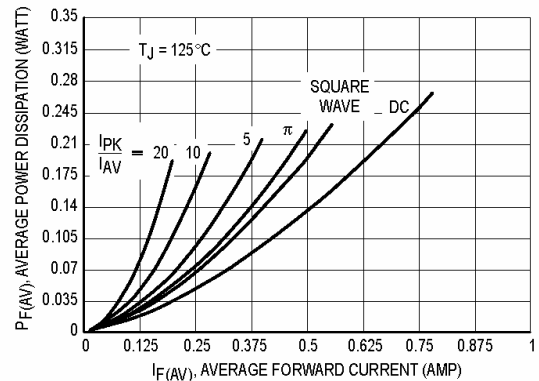
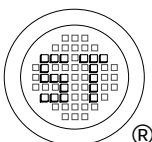


Figure 6. Power Dissipation



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



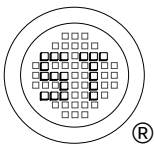
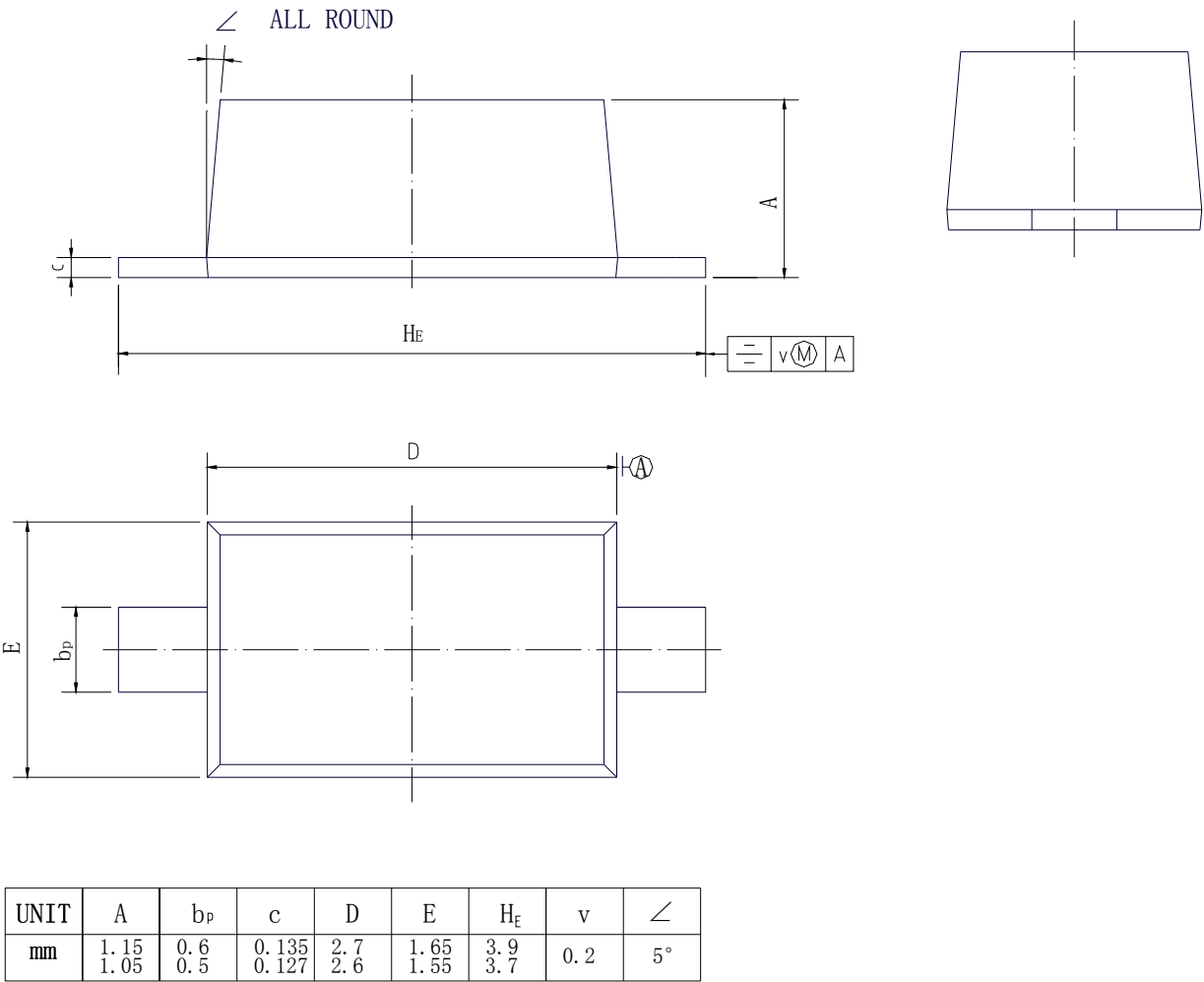
Dated : 04/07/2006

MBR0520

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123



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



Dated : 04/07/2006