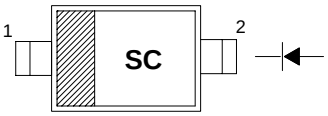
MBR0520

SURFACE MOUNT SCHOTTKY RECTIFIER

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View
Marking Code: "**SC**"
Simplified outline SOD-123 and symbol

Features

- Very low forward voltage
- High Current Capability

Absolute Maximum Ratings (T_a = 25°C)

Parameter		Symbol	Value	Unit
DC Reverse Voltage Peak Reverse Voltage Working Peak Reverse Voltage		V_R V_{RRM} V_{RWM}	20	V
Average Forward Current at DC, T_L = 129°C		I_F	0.5	A
Peak One Cycle Non-repetitive Surge Current	at 25 °C 5 µs sine or 3 µs rect. pulse	I_{FSM} [1)]	55	A
	at 25°C 10 ms sine or 6 ms rect. pulse		6.5	A
Thermal Resistance Junction to Lead		R_{thJL}	150	°C/W
Thermal Resistance Junction to Ambient		R_{thJA}	340	°C/W
Junction Temperature		T_J	- 65 to + 150	°C
Storage Temperature		T_{stg}	- 65 to + 150	°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 A, T_J = 25 °C	V_F	0.375	V
at I_F = 0.5 A, T_J = 25°C		0.44	V
at I_F = 0.1 A, T_J = 100°C		0.26	V
at I_F = 0.5 A, T_J = 100°C		0.36	V
Reverse Leakage Current			
at V_R = 10 V, T_J = 25°C	I_R	40	µA
at V_R = 20 V, T_J = 25°C		150	µA
at V_R = 10 V, T_J = 100°C		3	mA
at V_R = 20 V, T_J = 100°C		7	mA
Junction Capacitance at V_R = 5 V_{DC} (test signal range 100 KHz to 1 MHz), T_J = 25°C	C_T	110	pF

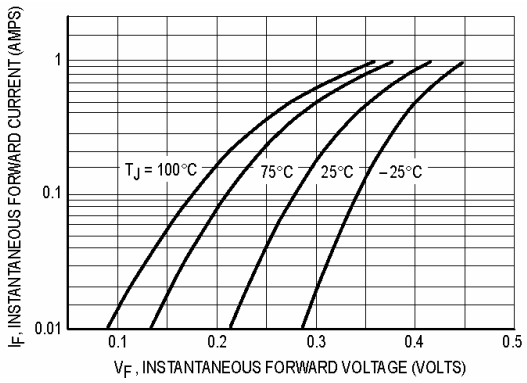


Figure 1. Typical Forward Voltage

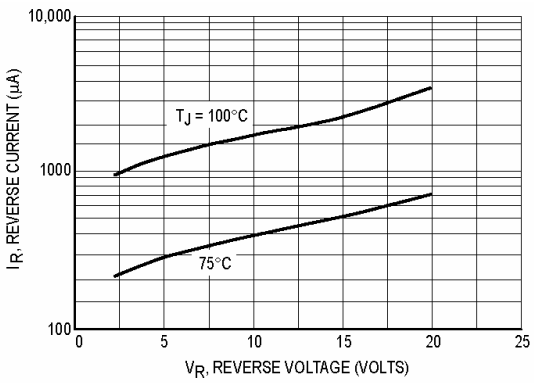


Figure 2. Typical Reverse Current

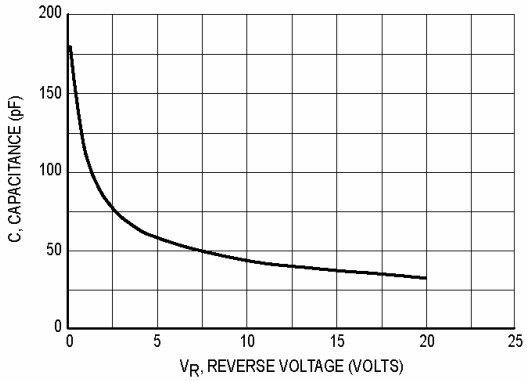


Figure 3. Typical Capacitance

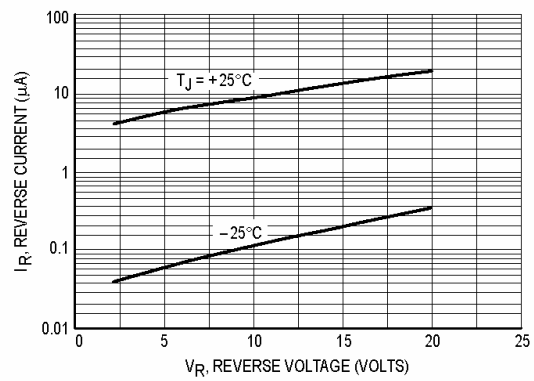


Figure 4. Typical Reverse Current

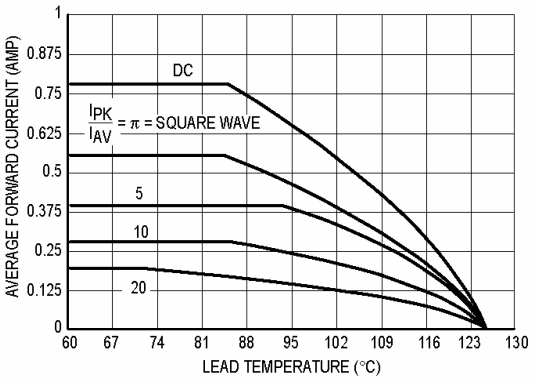


Figure 5. Current Derating (Lead)

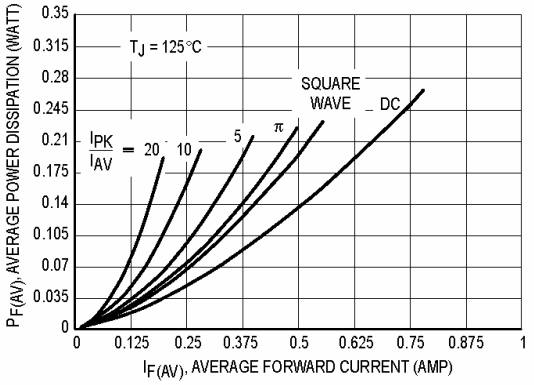
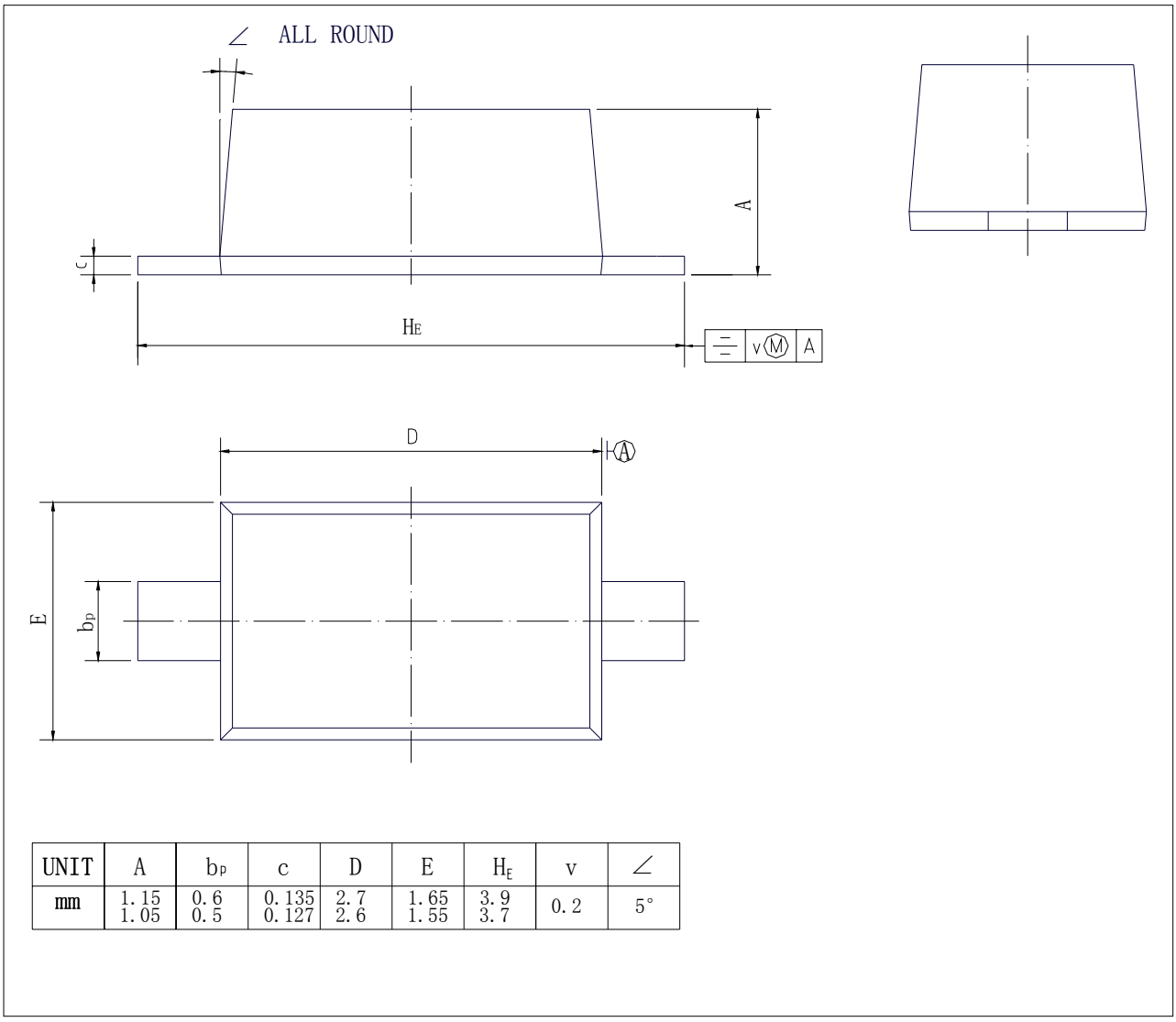


Figure 6. Power Dissipation

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads **SOD-123**



UNIT	A	b_p	c	D	E	H_E	v	∠
mm	1.15 1.05	0.6 0.5	0.135 0.127	2.7 2.6	1.65 1.55	3.9 3.7	0.2	5°