

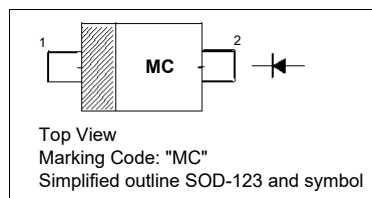
MBR130W Surface Mount Schottky Barrier Diode

Features

- Low Forward Voltage
- Package Designed for Optimal Automated Board Assembly

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



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

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	30	V
Working Peak Reverse Voltage	V_{RWM}	30	V
DC Blocking Voltage	V_R	30	V
Average Rectified Forward Current (Rated V_R) $T_L = 65^\circ\text{C}$	$I_{F(AV)}$	1	A
Non-Repetitive Peak Forward Surge Current (Surge Applied at Rated Load Conditions, Halfwave, Single Phase, 60 Hz)	I_{FSM}	5.5	A
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	230 ¹⁾	$^\circ\text{C/W}$
Thermal Resistance, Junction to Lead	$R_{\theta JL}$	108 ¹⁾	$^\circ\text{C/W}$
Operating Junction Temperature	T_j	- 65 to + 125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 125	$^\circ\text{C}$

¹⁾ FR-4 or FR-5 = 3.5 X 1.5 inches using a 1 inch Cu pad.

Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Forward Voltage at $I_F = 0.1\text{ A}$ at $I_F = 0.7\text{ A}$	V_F	- -	0.35 0.5	V
Reverse Breakdown Voltage at $I_R = 1\text{ mA}$	$V_{(BR)R}$	30	-	V
Reverse Current at $V_R = 30\text{ V}$ at $V_R = 5\text{ V}$	I_R	- -	200 50	μA

Typical Characteristics

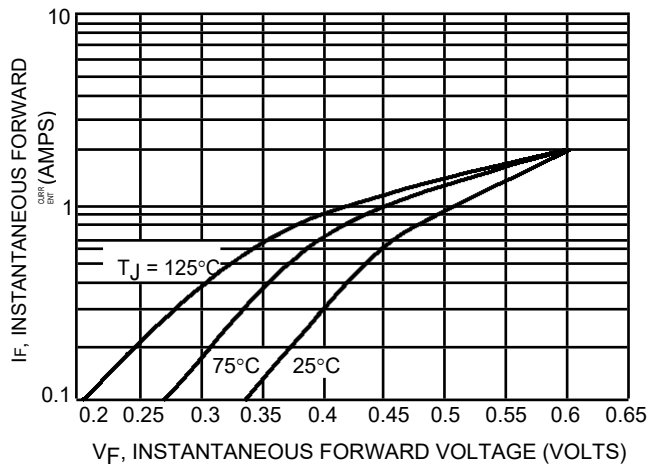


Figure 1. Maximum Forward Voltage

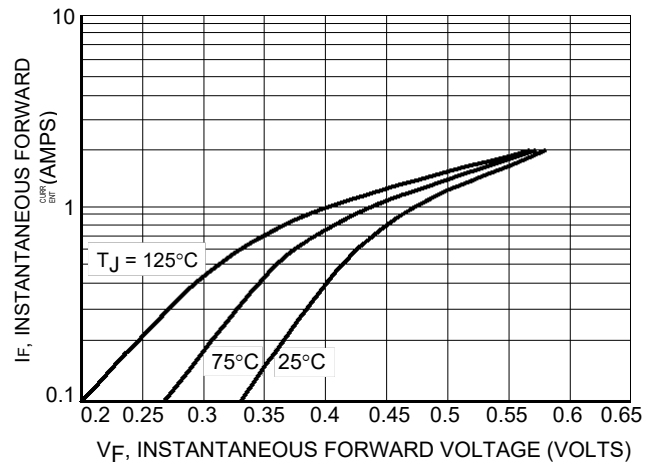


Figure 2. Typical Forward Voltage

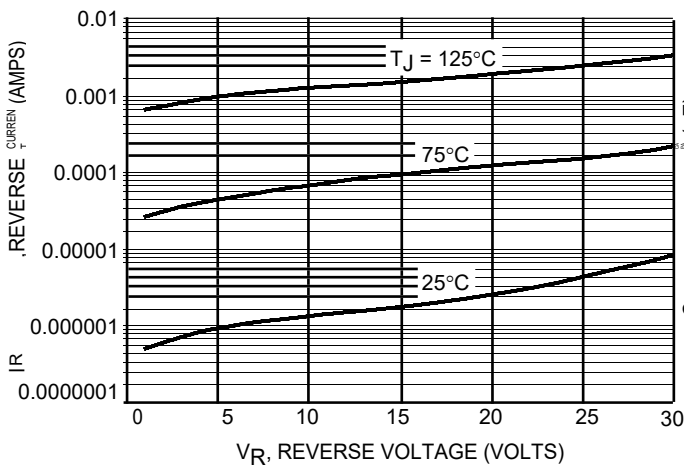


Figure 3. Typical Reverse Current

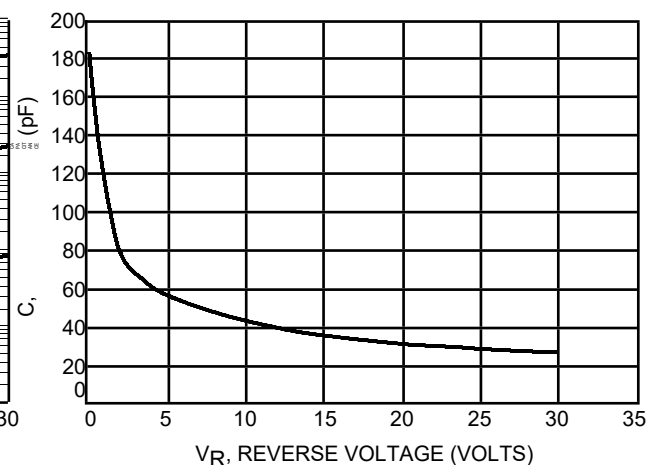


Figure 4. Typical Capacitance

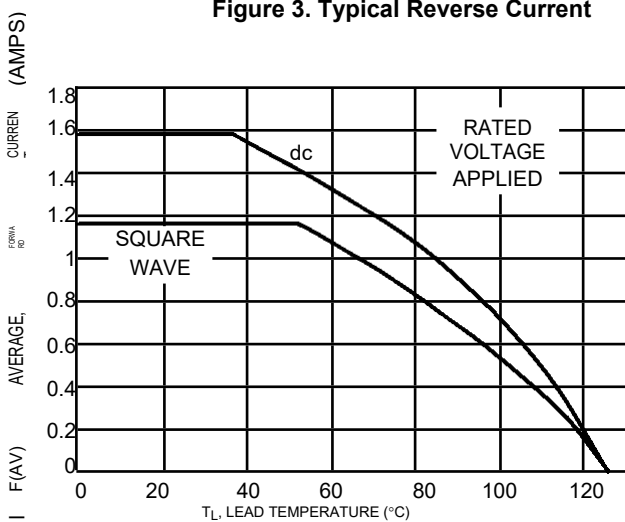


Figure 5. Current Derating, Lead, $R_{JL} = 108 \text{ C/W}$

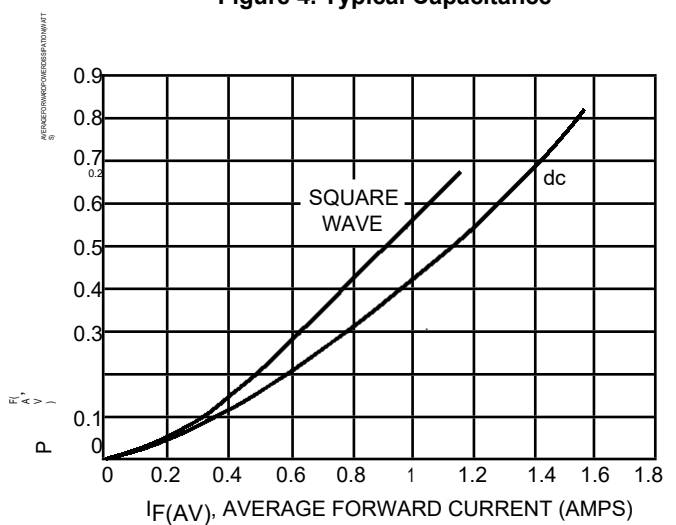
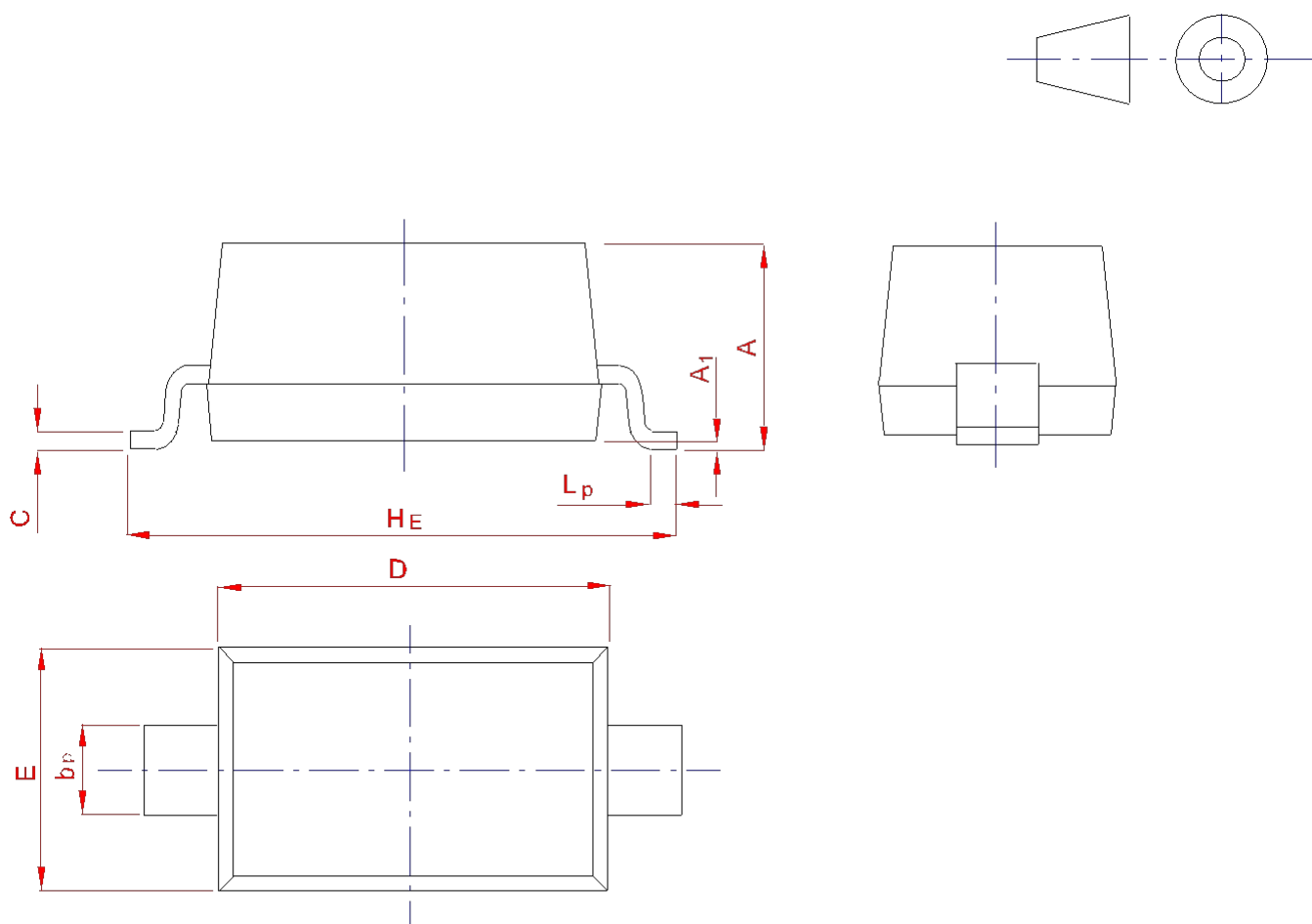


Figure 6. Forward Power Dissipation

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123



UNIT	A	bp	C	D	E	HE	A1	Lp
mm	1.20	0.60	0.135	2.75	1.65	3.85	0.10	0.50
	0.90	0.50	0.100	2.55	1.55	3.55	0.01	0.20