

MBR130W

SURFACE MOUNT SCHOTTKY POWER RECTIFIER

Features:

- Guardring for Stress Protection
- Low Forward Voltage
- 125°C Operating Junction Temperature
- Package Designed for Optimal Automated Board Assembly
- ESD Ratings: Machine Model, C;
Human Body Model, 3

Mechanical Data:

Case: SOD-123, Plastic

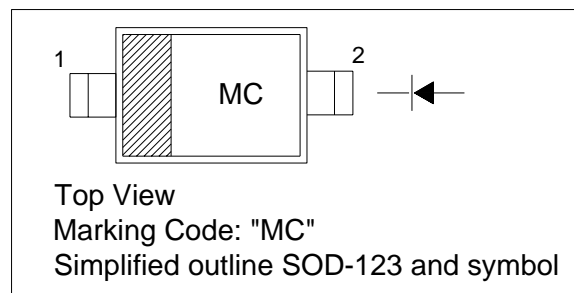
Finish : All External Surfaces Corrosion Resistant and Terminal
Leads are Readily Solderable

Polarity : Cathode Band

Weight : 0.01 grams (approx.)

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



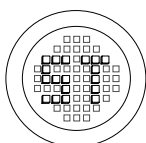
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

	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) $T_L=65^\circ\text{C}$	$I_{F(AV)}$	1.0	A
Non-Repetitive Peak Forward Surge Current (Surge Applied at Rated Load Conditions, Halfwave, Single Phase, 60Hz)	I_{FSM}	5.5	A
Operating Junction Temperature	T_j	-65 to +125	$^\circ\text{C}$
Storage Temperature Range	T_S	-65 to +125	$^\circ\text{C}$
Voltage Rated of Change (Rated V_R)	Dv/dt	1000	V/ μS

Thermal Characteristics

	Symbol	Value	Unit
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	230 ¹⁾	$^\circ\text{C/W}$
Thermal Resistance, Junction to Lead	$R_{\theta JL}$	108 ¹⁾	$^\circ\text{C/W}$

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



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РАДИОТЕХ

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MBR130W

Characteristics

	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage ¹⁾ at $I_F = 0.1A, T_J = 25^\circ C$ at $I_F = 0.7A, T_J = 25^\circ C$ at $I_F = 1.0A, T_J = 25^\circ C$	V_F	-	-	0.35 0.45 -	V
Reverse Leakage Current ¹⁾ Rated dc Blocking Voltage, $T_C = 25^\circ C$ at $V_R = 5V, T_C = 25^\circ C$	I_R	-	-	60 10	μA

¹⁾ Pulse Test: Pulse width $\leq 300\mu s$, Duty Cycle $\leq 2\%$.

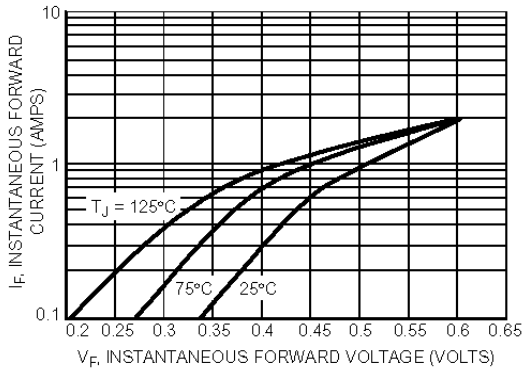


Figure 1. Maximum Forward Voltage

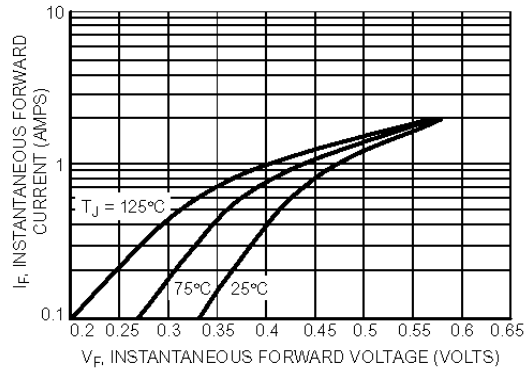


Figure 2. Typical Forward Voltage

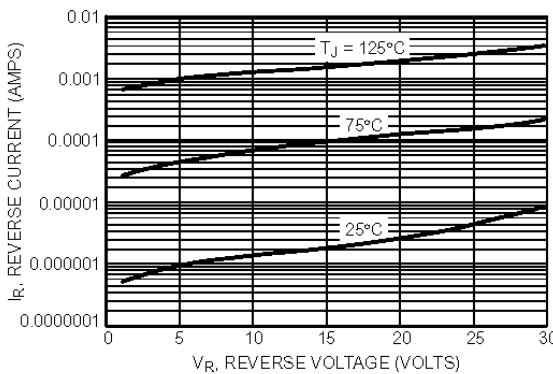


Figure 3. Typical Reverse Current

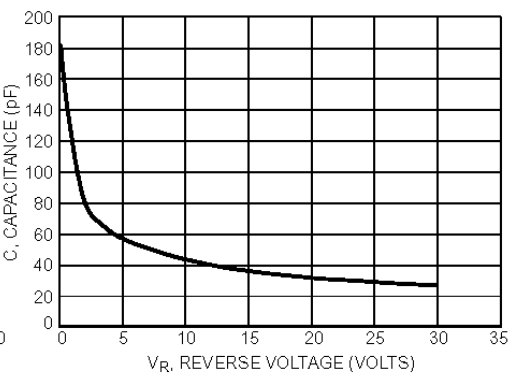


Figure 4. Typical Capacitance

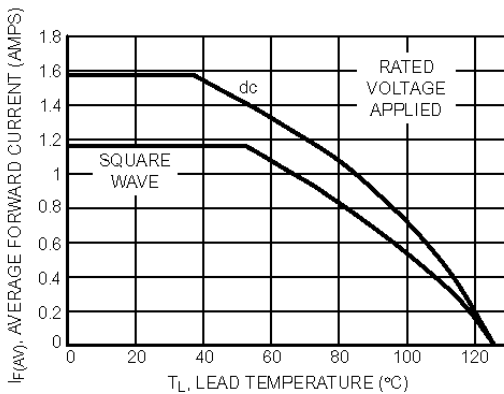


Figure 5. Current Derating, Lead, $R_{\theta JL} = 108^\circ C/W$

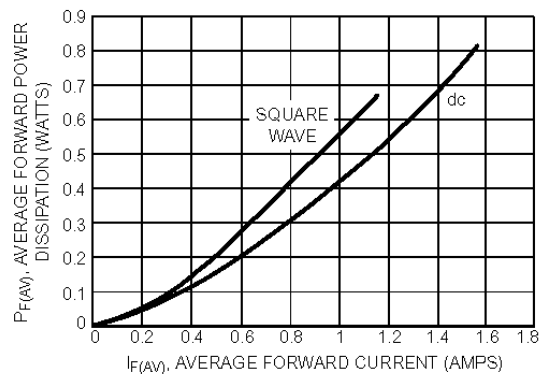
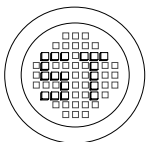
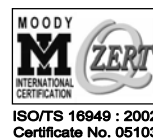


Figure 6. Forward Power Dissipation



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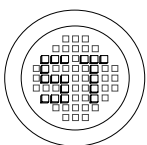
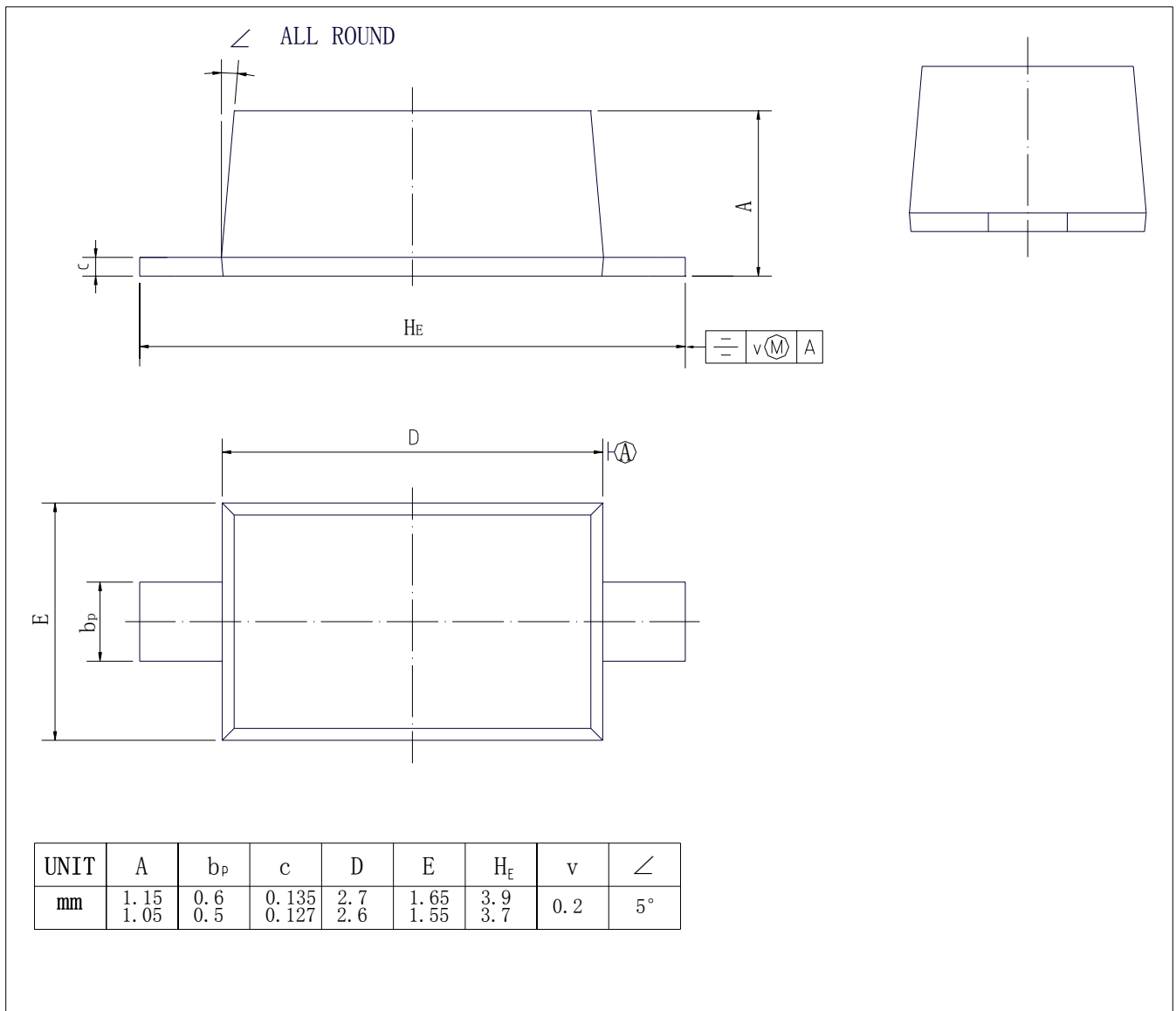


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PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

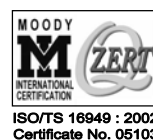
SOD-123



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Dated : 30/09/2005