Schottky Rectifier

Features

- 0.5 A, Low Forward Voltage less than 430 mV
- Compact Surface Mount Package with The Same Footprint as Mini-melf

Applications

- Solid–State Relays
- Industrial Controls
- Lighting Controls
- Static Power Switches
- AC Motor Starters

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

Symbol	Description	Value	Unit
V _{RRM}	Maximum Repetitive Reverse Voltage	30	V
I _{F(AV)}	Average Rectified Forward Current	500	mA
I _{FSM}	Non Repetitive Peak Forward Current (Surge Applied at Rated Load Conditions Half–Wave, Single–Phase, 60 Hz)	5.5	А
T _{STG}	Storage Temperature Range	-65 to +150	°C
T _{Jmax}	Operating Junction Temperature	-65 to +125	°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

Table 1. ORDERING INFORMATION

Part Number	Top Mark	Package	Packing Method
MBR0530	B3	SOD-123 2L	Tape and Reel

Table 2. THERMAL CHARACTERISTICS (Values are at $T_A = 25^{\circ}C$ unless otherwise noted)

Symbol	Parameter	Value	Unit
$R_{ hetaJA}$	Thermal Resistance, Junction-to-Ambient (Note 1)	206	°C/W
$R_{ extsf{ heta}JL}$	Thermal Resistance, Junction-to-Lead	173	°C/W

1. 1 inch square pad size on FR-4 board.



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MBR0530

Symbol	Parameter	Conditions	Min.	Max.	Unit
V _F	Forward Voltage	I _F = 100 mA		375	
		I _F = 100 mA, T _A = 100°C		340	mV
		I _F = 500 mA		430	
		I _F = 500 mA, T _A = 100°C		420	
	Reverse Current	V _R = 15 V		20	μΑ
I _R		V _R = 30 V		130	μΑ
		$V_{R} = 30 \text{ V}, \text{T}_{A} = 100^{\circ}\text{C}$		5	mA

Table 3. ELECTRICAL CHARACTERISTICS	(Values are at $T_A = 25^{\circ}C$ unless otherwise noted)
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TYPICAL PERFORMANCE CHARACTERISTICS



Figure 1. Forward Current vs. Forward Voltage



Figure 2. Reverse Current vs. Reverse Voltage



Figure 3. Breakdown Voltage vs. Reverse Current



Figure 4. Total Capacitance





*For additional information on our Pb–Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

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DESCRIPTION:	SOD-123		PAGE 1 OF 1	
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PUBLICATION ORDERING INFORMATION

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