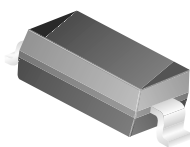


# MBR0530

## Schottky Rectifier

### Features

- 0.5 Ampere, low forward voltage, less than 430mV
- Compact surface mount package with the same footprint as mini-melf



**SOD123**  
Color Band Denotes Cathode  
Mark: B3

### Absolute Maximum Ratings \* T<sub>a</sub> = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V <sub>RRM</sub>	Maximum Repetitive Reverse Voltage	30	V
I <sub>F(AV)</sub>	Average Rectified Forward Current	500	mA
I <sub>FSM</sub>	Non Repetitive Peak Forward Current (Surge applied at rated load conditions half wave, single, phase, 60Hz)	5.5	A
T <sub>STG</sub>	Storage Temperature Range	-65 to +150	°C
T <sub>Jmax</sub>	Operating Junction Temperature	-65 to +125	°C

These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

### Thermal Characteristics

Symbol	Parameter	Value	Units
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient *	206	°C/W
R <sub>θJL</sub>	Thermal Resistance, Junction to Lead	173	°C/W

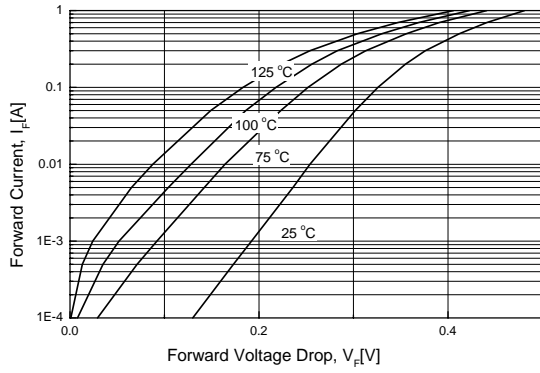
\* 1 inch square pad size on FR-4 board.

### Electrical Characteristics T<sub>C</sub> = 25°C unless otherwise noted

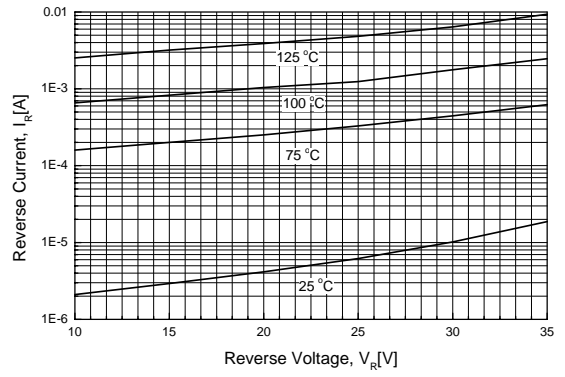
Symbol	Parameter	Value	Units
V <sub>F</sub>	Forward Voltage	@ I <sub>F</sub> = 100mA	375
		I <sub>F</sub> = 100mA, T <sub>A</sub> = 100°C	340
		I <sub>F</sub> = 500mA	430
		I <sub>F</sub> = 500mA, T <sub>A</sub> = 100°C	420
I <sub>R</sub>	Reverse Current	@ V <sub>R</sub> = 15V	20
		V <sub>R</sub> = 30V	130
		V <sub>R</sub> = 30V, T <sub>a</sub> = 100°C	5

# Typical Performance Characteristics

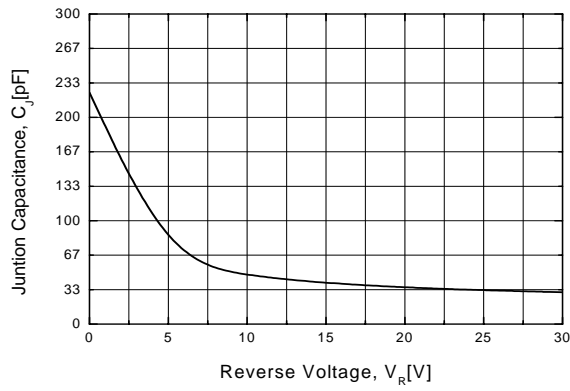
**Figure 1. Forward Voltage Characteristics**



**Figure 2. Reverse Current vs Reverse Voltage**



**Figure 3. Total Capacitance**



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CROSSVOLT™	GTO™	MICROWIRE™	Quiet Series™	TruTranslation™
DOMET™	HiSeC™	MSX™	RapidConfigure™	UHC™
EcoSPARK™	I <sup>2</sup> C™	MSXPro™	RapidConnect™	UltraFET®
E <sup>2</sup> C MOS™	i-Lo™	OCX™	μSerDes™	UniFET™
EnSigna™	ImpliedDisconnect™	OCXPro™	ScalarPump™	VCX™
FACT™	IntelliMAX™	OPTOLOGIC®	SILENT SWITCHER®	Wire™
FACT Quiet Series™		OPTOPLANAR™	SMART START™	
		PACMAN™	SPM™	
Across the board. Around the world.™		POP™	Stealth™	
The Power Franchise®		Power247™	SuperFET™	
Programmable Active Droop™		PowerEdge™	SuperSOT™-3	

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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**Definition of Terms**

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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