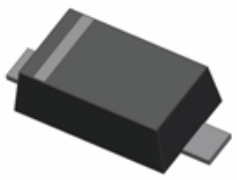
TAK CHEONG®

PRELIMINARY DATASHEET

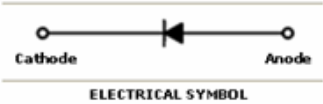
SOD-123 SURFACE MOUNT

Very Small Outline Flat Lead Plastic Package Schottky Rectifier

Green Product



SOD-123 Flat Lead



ELECTRICAL SYMBOL

Absolute Maximum Ratings

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
P_D	Power Dissipation	410	mW
T_{STG}	Storage Temperature Range	-65 to +125	°C
T_J	Operating Junction Temperature	+125	°C
V_{RM}	Repetitive Peak Reverse Voltage MBR0520W MBR0530W MBR0540W	20 30 40	V
$I_{F(AV)}$	Average Forward Rectified Current	0.5	A
I_{FSM}	Peak Forward Surge Current (at 8.3ms single half sine-wave)	5.5	A
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$R_{\theta JA}$	Maximum Thermal Resistance, Junction-to-Ambient (Valid provided that electrodes are kept at ambient temperature)	244	°C/W

These ratings are limiting values above which the serviceability of the diode may be impaired.

Specification Features:

- Low Forward Voltage Drop
- Flat Lead SOD-123 Small Outline Plastic Package
- Surface Device Type Mounting
- RoHS Compliant
- Green EMC
- Matte Tin(Sn) terminal Finish
- Band Indicates Cathode
- Weight: approx. 0.01g

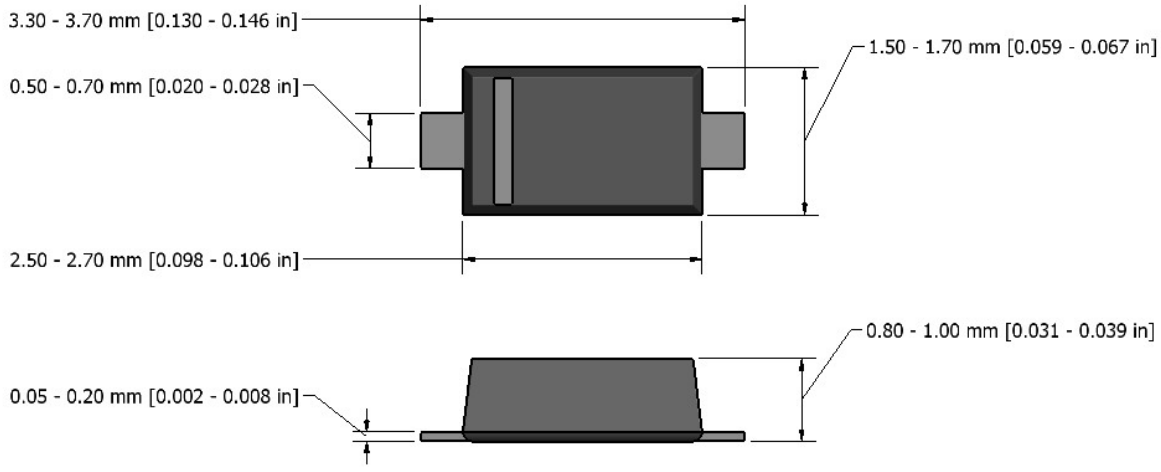
DEVICE MARKING CODES:

Device Type	Device Marking
MBR0520W	B2
MBR0530W	B3
MBR0540W	B4

Electrical Characteristics (T_A = 25°C unless otherwise noted)

Symbol	Parameter		Test Condition	Limits			Unit
				Min	Typ	Max	
V_R	Reverse Leakage Current	MBR0520W	I_R=250uA	20	---	---	µA
		MBR0530W	I_R=130uA	30			
		MBR0540W	I_R=20uA	40			
I_R	Reverse Leakage Current	MBR0520W	V_R=10V	---	---	75	µA
			V_R=20V			250	
		MBR0530W	V_R=15V			20	
			V_R=30V			130	
		MBR0540W	V_R=20V			10	
			V_R=40V			20	
V_F	Forward Voltage	MBR0520W	I_F=100mA	---	---	0.300	Volts
			I_F=500mA			0.385	
		MBR0530W	I_F=100mA			0.375	
			I_F=500mA			0.430	
		MBR0540W	I_F=0.5A			0.51	
			I_F=1A			0.62	

SOD-123 Package Outline



Note: Dimensions are exclusive of Burrs, Mold Flash & Tie Bar extrusions.

NOTICE

The information presented in this document is for reference only. Tak Cheong reserves the right to make changes without notice for the specification of the products displayed herein.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Tak Cheong Semiconductor Co., Ltd., or anyone on its behalf, assumes no responsibility or liability for any damagers resulting from such improper use of sale.

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