



B0520LW, B0530W, B0540W

0.5A Surface Mount Schottky Barrier Rectifier



Voltage Range
20 to 40 Volts
410m Watts Power Dissipation

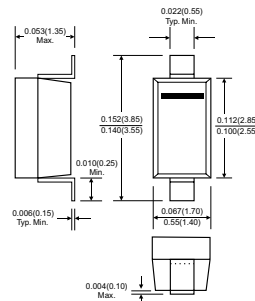
Features

- ✧ Low forward voltage drop
- ✧ Guard ring construction for transient protection
- ✧ High conductance

Mechanical Data

- ✧ Case: SOD-123, plastic
- ✧ Terminals: Solderable per MIL-STD-202, Method 208
- ✧ Marking: Date Code and Type Code
Type Code: B0520LW Marking: SD
B0530W Marking: SE
B0540W Marking: SF
- ✧ Weight: 0.01 grams (approx.)

SOD-123



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

Type Number	Symbol	B0520LW	B0530W	B0540W	Units
Peak Repetitive Reverse Voltage	VRRM	20	30	40	V
Working Peak Reverse Voltage	VRWM				
DC Blocking Voltage	VR				
RMS Reverse Voltage	VR(RMS)	14	21	28	V
Average Rectified Current @ TL=100°C	Io		0.5		A
Non-repetitive Peak Forward Surge Current 8.3ms Single half Sine-Wave Superimposed on Rated Load (JEDEC Method)	IFSM		5.5		A
Power Dissipation (Note 1)	Pd		410		mW
Thermal Resistance Junction to Ambient Air (Note 1)	R θ JA		244		°C/W
Operating and Storage Temperature Range	T _J , T _{STG}		-65 to + 125		°C
Voltage Rate of Change	dv / dt		1000		V/μS

Electrical Characteristics

Type Number	Symbol	B0520LW	B0530W	B0540W	Units
Minimum Reverse Breakdown Voltage IR=250uA IR=130uA IR=20uA	V(BR)	20 - -	- 30 -	- - 40	V
Maximum Reverse Leakage Current (Note 2) VR=10V Tj=25°C VR=15V Tj=25°C VR=20V Tj=25°C VR=30V Tj=25°C VR=40V Tj=25°C VR=10V Tj=100°C VR=20V Tj=100°C VR=40V Tj=100°C	IR	1.0 - 250 - - 5.0 8.0 -	- 20 - 130 - - - -	- - 10 - 20 - 5.0 13	uA mA
Maximum Forward Voltage Drop (Note 2) Tj=25°C IF=0.1A Tj=25°C IF=0.5A Tj=25°C IF=1.0A Tj=100°C IF=0.1A Tj=100°C IF=0.5A Tj=100°C IF=1.0A	VF	0.300 0.385 - 0.220 0.330 -	0.375 0.430 - - - -	- 0.510 0.620 - 0.460 0.610	V
Junction Capacitance VR=0, f=1.0MHz	Cj	170			pF

Notes: 1. Valid Provided that Leads are Kept at Ambient Temperature.

2. Pulse Test: Pulse width = 300uS, Duty cycle ≤ 2%..

3. dv / dt Measured at Rated VR.

RATINGS AND CHARACTERISTIC CURVES (B0520LW, B0530W, B0540W)

FIG.1- FORWARD CURRENT DERATING CURVE

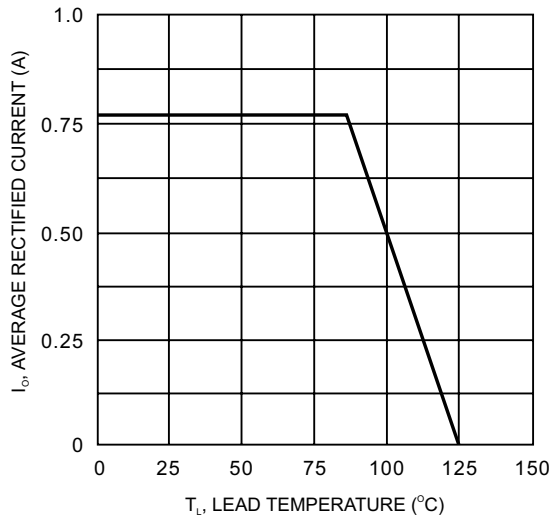


FIG.2- TYPICAL FORWARD CHARACTERISTICS

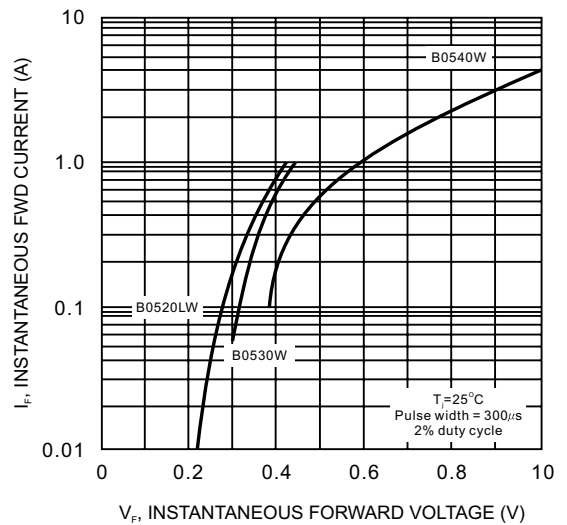


FIG.3- TYP. JUNCTION CAPACITANCE VS REVERSE VOLTAGE

