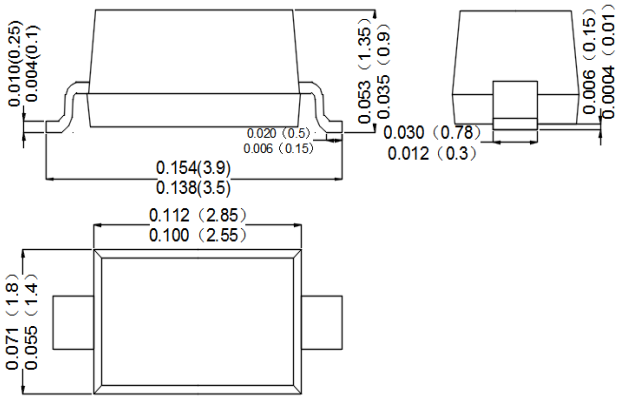
B0520LW

0.5 AMP Surface Mount Schottky Barrier Rectifier

Features

- Low forward voltage drop.
- Guard Ring Construction for Transient Protection
- High Conductance
- Also Available in Lead Free Version

SOD-123



Dimensions in inches and (millimeters)

Mechanical Data

- Case:Molded Plastic,SOD-123
- Epoxy:UL 94V-0 rate flame retardant
- Terminals:Plated Leads Solderable per MIL-STD-750,Method-2026
- Marking:SD
- Mounting Position : Any.

Maximum Ratings Maximum Ratings (Rating at 25℃ ambient temperature unless otherwise specified.)

Characteristic	Symbol	B0520LW	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	20	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_{DC}		
RMS Reverse Voltage	$V_{R(RMS)}$	14	V
Average Rectified Output Current@T_L = 90℃	I_O	0.5	A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	5.5	A
Power Dissipation (Note 1)	P_D	500	mW
Typical Thermal Resistance Junction to Ambient (Note	$R_{\theta JA}$	244	℃/W
Operating junction Temperature Range	T_J	-65 to +125	℃
Storage Temperature Range	T_{STG}	-65 to +125	℃

Electrical Characteristics (Rating at 25℃ ambient temperature unless otherwise specified.)

Characteristic	Test Conditions	Symbol	B0520LW	Unit
Minimum Reverse Breakdown Voltage (Note 2)	IR = 250uA	$V_{(BR)R}$	20	V
Maximum Forward Voltage Drop (Note 2)	I_F = 0.1A, T_j = 25℃	V_{FM}	0.300	V
	I_F = 0.5A, T_j = 25℃		0.385	
	I_F = 0.1A, T_j = 100℃		0.220	
	I_F = 0.5A, T_j = 100℃		0.330	
Maximum Leakage Current (Note 2)	V_R = 10V, T_j = 25℃	I_{RM}	75	uA
	V_R = 15V, T_j = 25℃		-	
	V_R = 20V, T_j = 25℃		250	
	V_R = 10V, T_j = 100℃		5.0	mA
	V_R = 20V, T_j = 100℃		8.0	
Total Capacitance	f = 1MHz, VR = 0V DC	C_T	170	pF

Note:

1. Device mounted on FR-4 PC board, 2"x2", 2 oz. Copper, single sided,
Cathode pad dimensions 0.75"x1.0",Anode pad dimensions 0.25"x1.0".
2. Pulse Test: Pulse width = 300us, Duty Cycle≤2%.

Rating And Characteristic Curves

Fig.1 Admissible Power Dissipation Curve

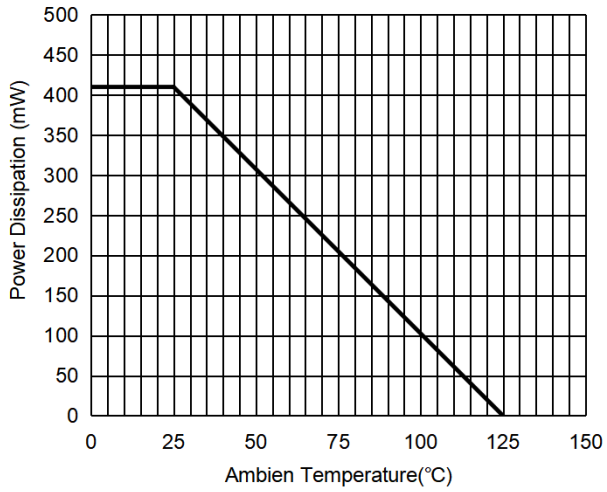


Fig.2 Typical Forward Characteristics

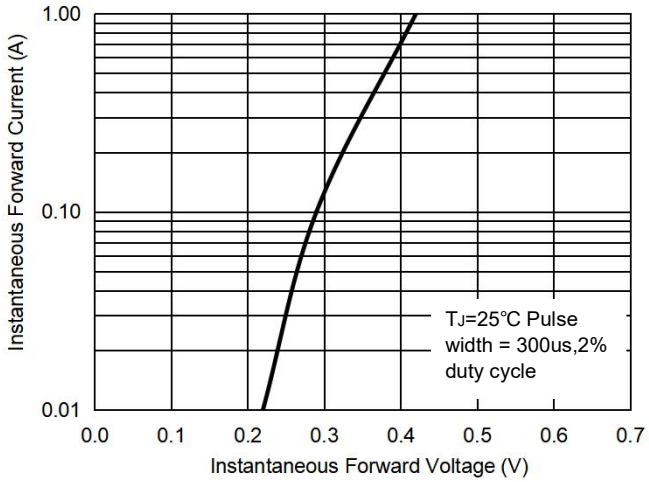


Fig.3 Forward Current Derating Curve

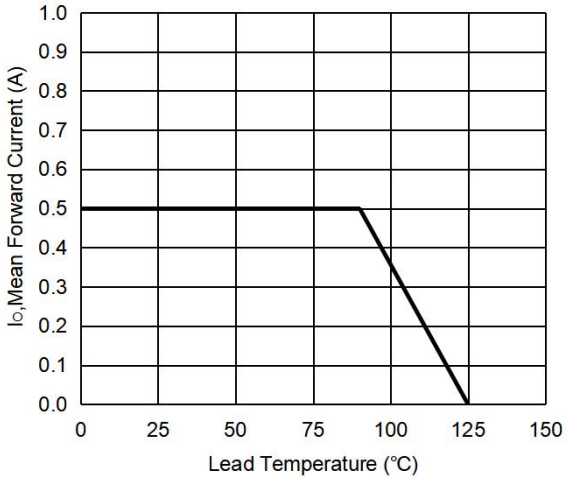
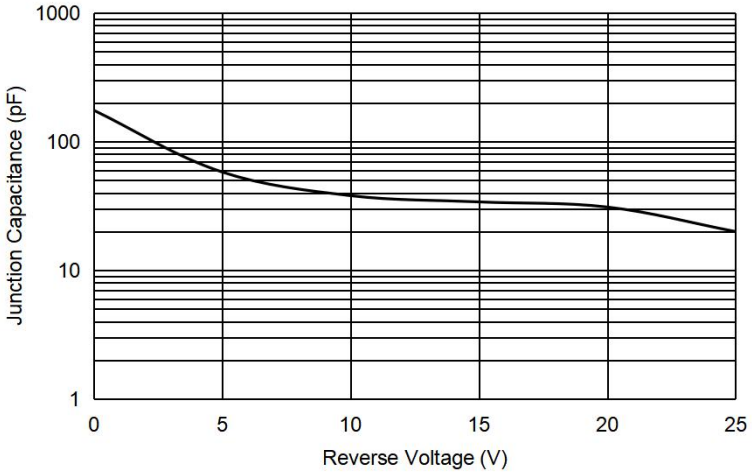


Fig.4 Typical Reverse Chracteristice



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