



## Data Sheet

Customer :

Product : Small Signal Schottky Diode-Low VF

Part No.: B120LW/B130LW/B140LW

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## 1 Amperes Surface Mount Schottky Barrier Rectifiers

### Voltage : 20 to 40Volts

#### ■ Features

- Tiny plastic SMD package
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- High surge capability
- Guardring for over voltage protection
- Ultra high-speed switching
- Silicon epitaxial planar chip, metal silicon junction
- Lead-free parts meet environmental standards of MIL-STD-19500/228
- Halogen free



#### ■ Mechanical Data

**Epoxy** : UL94-V0 rated flame retardant

**Case** : Molded Plastic, SOD-123

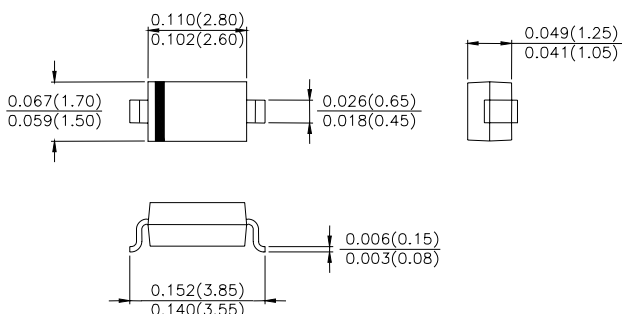
**Terminals** : Solder plated, Solderable per MIL-STD-750, Method 2026

**Polarity** : Indicated by cathode end

**Weight** : 0.0004 ounce, 0.010 gram

**Packaging** : 2.5Kpcs per 7" reel or 3Kpcs per 7" reel

#### ■ Package Dimensions in inches(millimeters): SOD-123



#### ■ Maximum Ratings And Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Parameter	Symbol	B120LW	B130LW	B140LW	Unit
Marking Code		B2	B3	B4	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	V
Maximum Instantaneous Forward Voltage@1.0A, $T_A=25^\circ\text{C}$	$V_F$	0.43		0.45	V
Operating Temperature	$T_J$	-50 ~ +100			°C

Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
Forward Rectified Current	See Fig.2	$I_O$			1.0	A
Forward Surge Current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	$I_{FSM}$			5.5	A
Reverse Current	$V_R=V_{RRM}, T_A=25^\circ\text{C}$	$I_R$			1.0	mA
	$V_R=V_{RRM}, T_A=100^\circ\text{C}$				20	
Thermal Resistance	Junction to ambient	$R_{\theta JA}$		42		°C/W
Diode Junction Capacitance	f=1MHz and applied 4V DC reverse voltage	$C_J$		130		pF
Storage Temperature		$T_{STG}$	-50		+150	°C

## Rated and Characteristic Curve

FIG.1-TYPICAL FORWARD CHARACTERISTICS

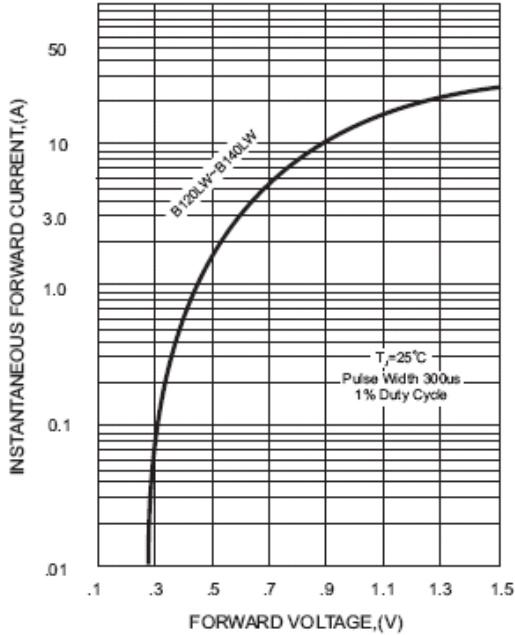


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

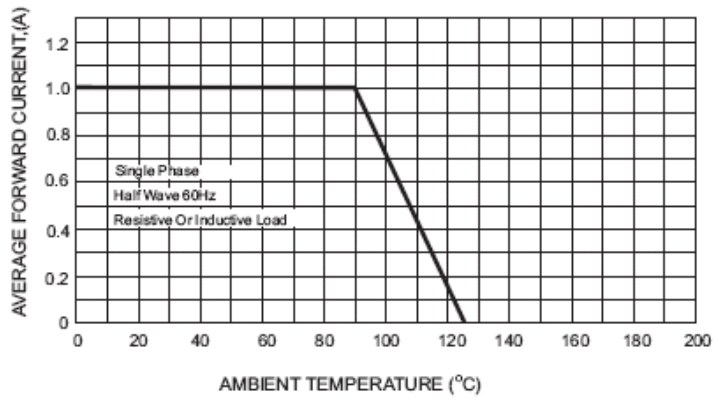


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

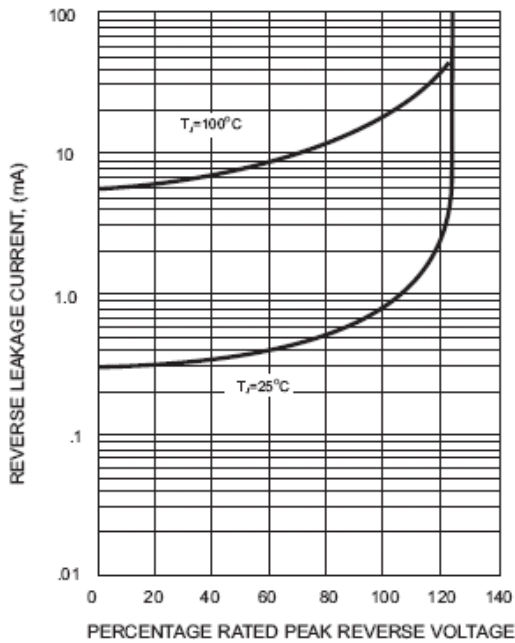


FIG.4-TYPICAL JUNCTION CAPACITANCE

