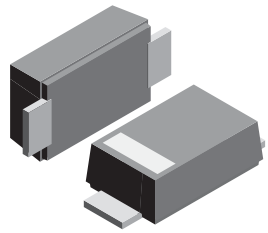
B130LAW

SURFACE MOUNT SCHOTTKY BARRIER DIODES

VOLTAGE RANGE: 30V
CURRENT: 1.0 A



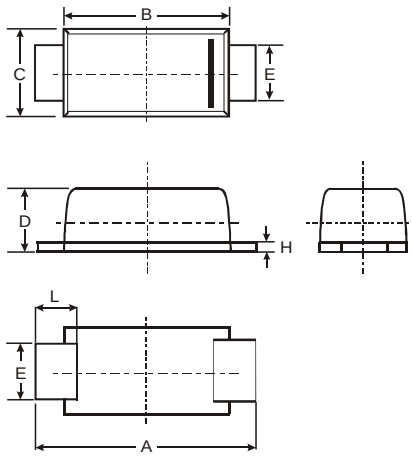
Features

- Guard Ring Die Construction for
- Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Low Forward Voltage Drop

Mechanical Data

- Case: SOD-123FL, Plastic
- Plastic Material: UL Flammability Classification Rating 94V-0
- Polarity: Cathode Band
- Terminals: Solderable per MIL-STD-202, Method 208
- Type Code: SX
- Weight: 0.01 grams (approx.)

RoHS COMPLIANT



SOD-123FL			
Dim	Min	Max	Typ
A	3.58	3.72	3.65
B	2.72	2.78	2.75
C	1.77	1.83	1.80
D	1.02	1.08	1.05
E	0.097	1.03	1.00
H	0.13	0.17	0.15
L	0.53	0.57	0.55
All Dimensions in mm			

Maximum Ratings @ T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	B130LAW	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	V
Average Forward Current (See Figure 6)	$I_{F(AV)}$	1.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	12	A
Power Dissipation (Note 2)	P_d	450	mW
Typical Thermal Resistance Junction to Ambient (Note 2)	$R_{\theta JA}$	222	°C/W
Operating Temperature Range	T_j	-55 to +125	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	30	—	—	V	I_R = 1.5mA
Forward Voltage (Note 1)	V_F	— — —	0.25 0.35 0.38	— 0.37 0.42	V	I_F = 0.1A I_F = 0.7A I_F =1.0A
Leakage Current (Note 1)	I_R	—	0.15	1.0	mA	V_R = 30V, T_A = 25°C
Total Capacitance	C_T	—	40	—	pF	V_R = 10V, f = 1.0MHz

Notes: 1. Short duration pulse test to minimize self-heating effect.
2. Part mounted on FR-4 board with recommended pad layout

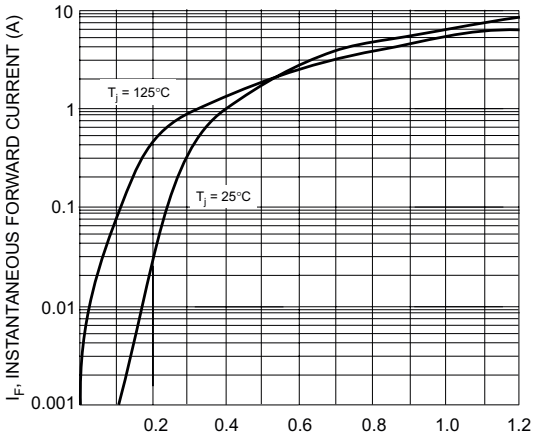


Fig. 1, Typical Forward Characteristics

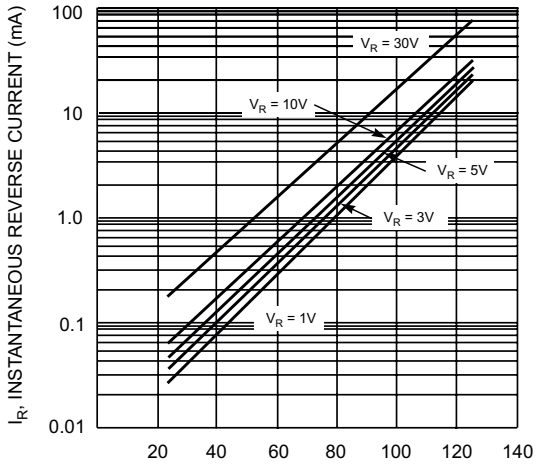


Fig. 2, Typical Pulsed Reverse Characteristics

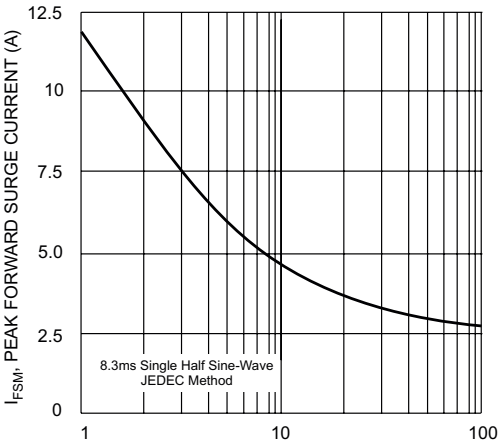


Fig. 3, Maximum Non-Repetitive Peak Forward Surge Current

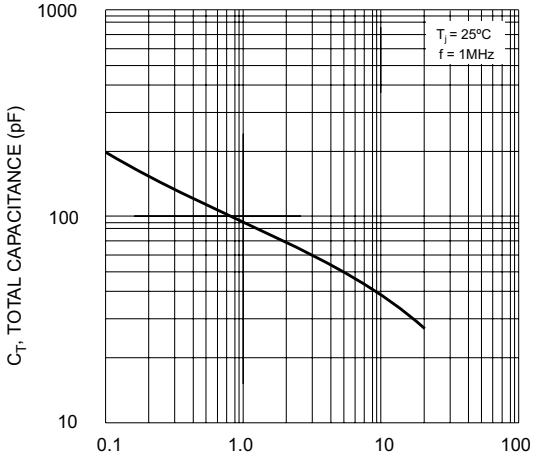


Fig. 4, Typical Total Capacitance vs. Reverse Voltage

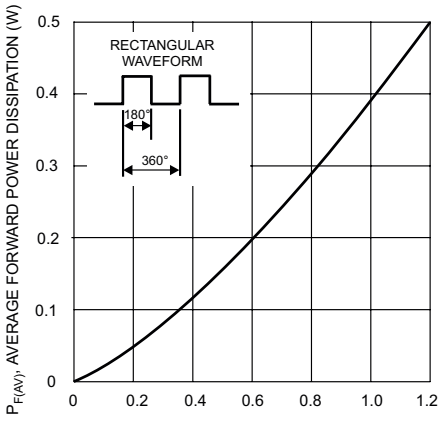


Fig. 5, Forward Power Derating

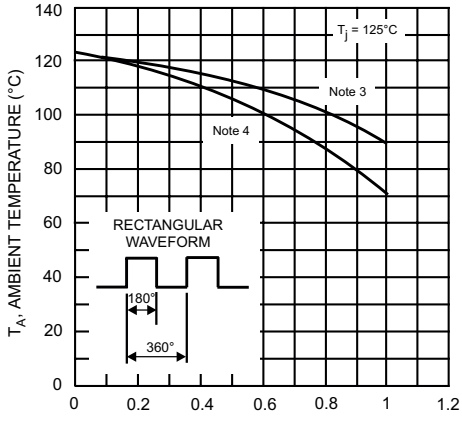


Fig. 6, Forward Current Derating