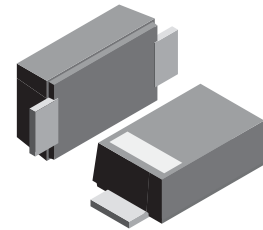


VOLTAGE RANGE: 30V
CURRENT: 1.0 A

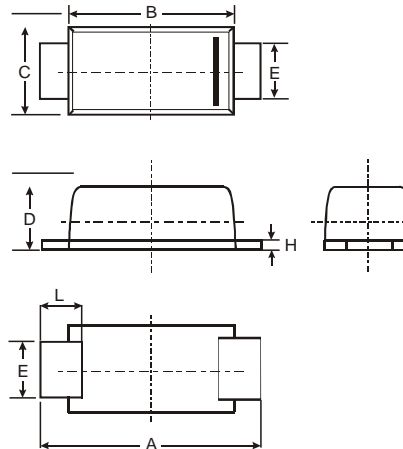
Features

- 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.)



SOD-123FL			
Dim	Min	Max	Typ
A	3.50	3.80	3.65
B	2.60	2.90	2.75
C	1.70	1.90	1.80
D	0.09	1.10	1.00
E	0.08	1.10	0.095
H	0.12	0.20	0.16
L	0.07	0.09	0.08
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 _{θJA}	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

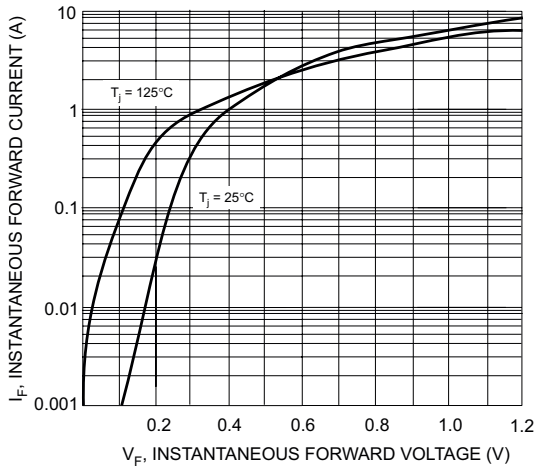


Fig. 1, Typical Forward Characteristics

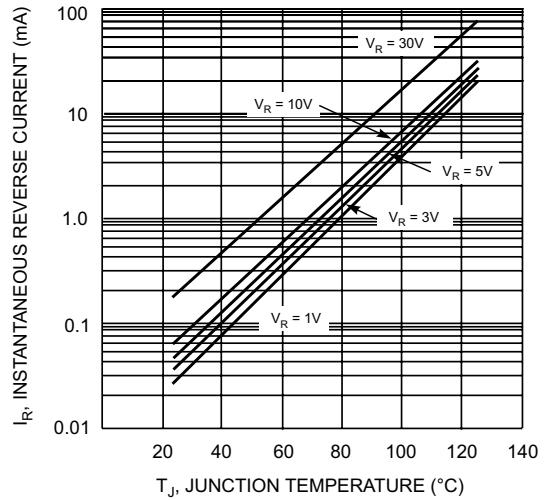


Fig. 2, Typical Pulsed Reverse Characteristics

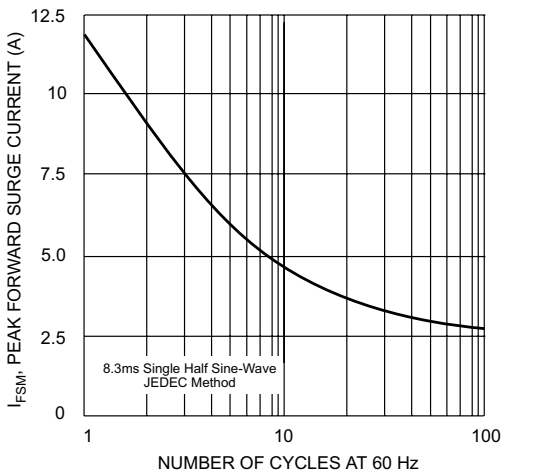


Fig. 3, Maximum Non-Repetitive Peak Forward Surge Current

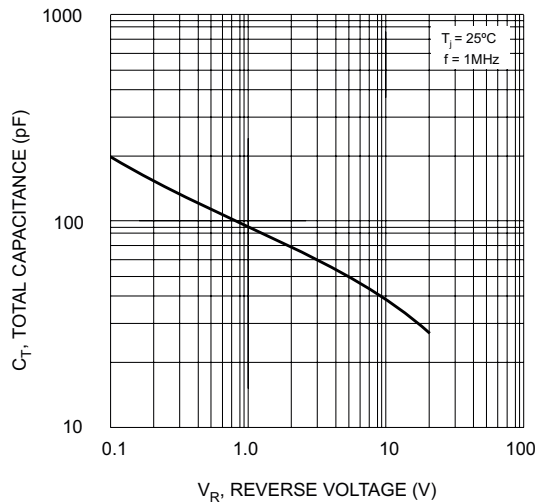


Fig. 4, Typical Total Capacitance vs. Reverse Voltage

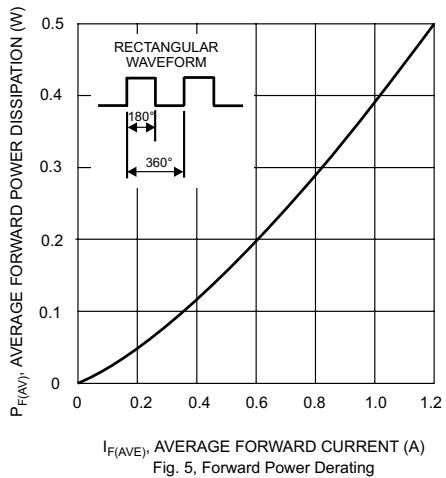


Fig. 5, Forward Power Derating

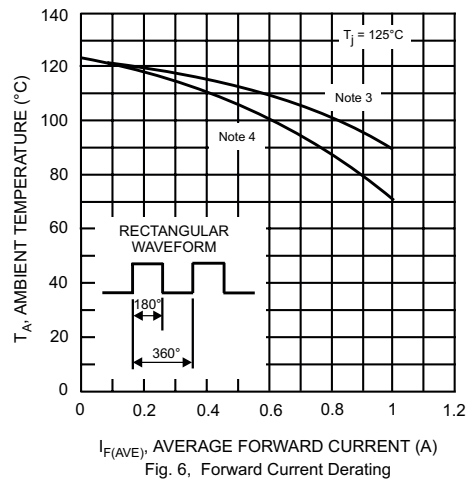


Fig. 6, Forward Current Derating