

# SMK12 - SMK1B

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

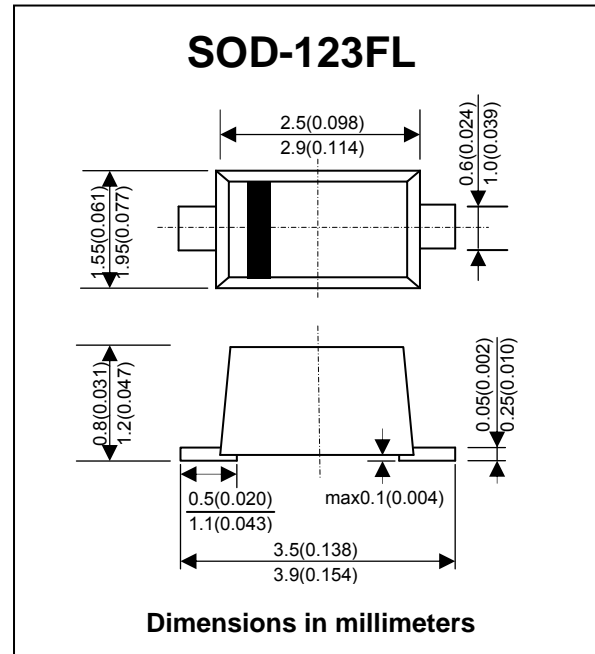
**PRV : 20 - 100 Volts**  
**I<sub>o</sub> : 1.0 Ampere**

### FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* High efficiency
- \* Low power loss
- \* Low forward voltage drop
- \* Low leakage
- \* Pb Free / RoHS Compliant

### MECHANICAL DATA :

- \* Case: JEDEC SOD-123FL, molded plastic over passivated chip
- \* Terminals: Solder Plated, solderable per MIL-STD-750, Method 2026
- \* Polarity: Color band denotes cathode end
- \* Mounting position : Any
- \* Weight: 0.02 gram (Approximate)



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

RATING	SYMBOL	SMK 12	SMK 13	SMK 14	SMK 15	SMK 16	SMK 18	SMK 1B	UNIT
Marking		K2	K3	K4	K5	K6	K8	KB	
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	80	100	V
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	35	42	56	70	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	50	60	80	100	V
Maximum Average Forward Rectified Current	I <sub>F(AV)</sub>	1.0							A
Maximum Peak Forward Surge Current, 8.3ms single half sine wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	35							A
Maximum Instantaneous Forward Voltage at I <sub>F</sub> = 1.0 A	V <sub>F</sub>	0.55		0.70		0.85		V	
Maximum Reverse Current at Ta = 25 °C	I <sub>R</sub>	1.0							mA
Rated DC Blocking Voltage Ta = 100 °C	I <sub>R(H)</sub>	10							mA
Typical Thermal Resistance	R <sub>θJA</sub>	50							°C/W
Operating Junction Temperature Range	T <sub>J</sub>	- 65 to + 125			- 65 to + 150				°C
Storage Temperature Range	T <sub>STG</sub>	- 65 to + 150							°C

Note : (1) Pulse Test : Pulse Width = 300 μs, Duty Cycle = 1%.

## RATING AND CHARACTERISTIC CURVES (SMK12 - SMK1B0)

FIG.1 - FORWARD CURRENT DERATING CURVE

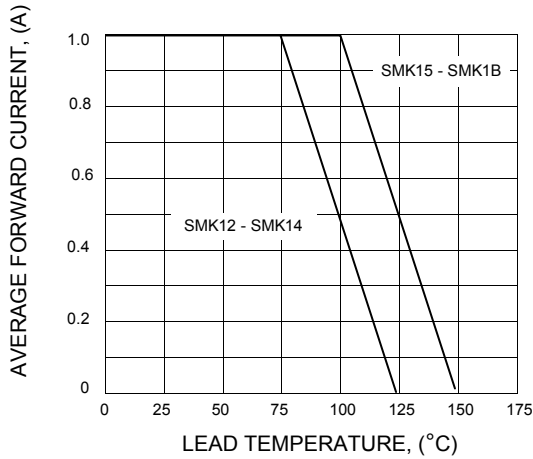


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

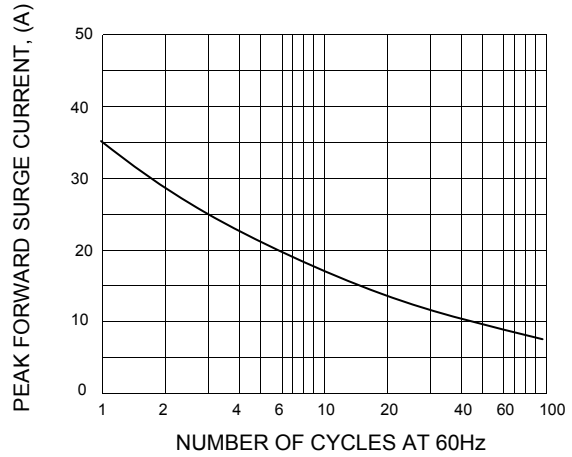


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

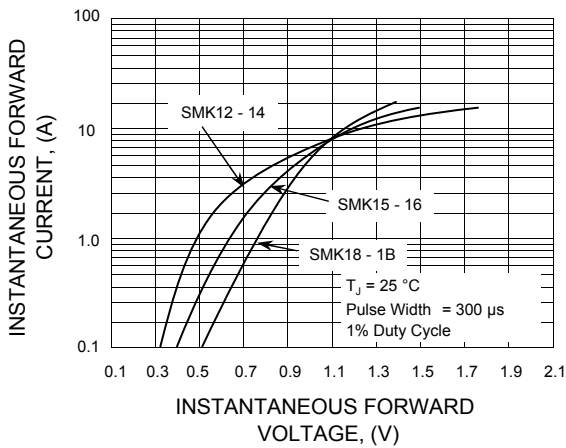


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

