K12 THRU K120

1.0 AMP SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

FEATURES

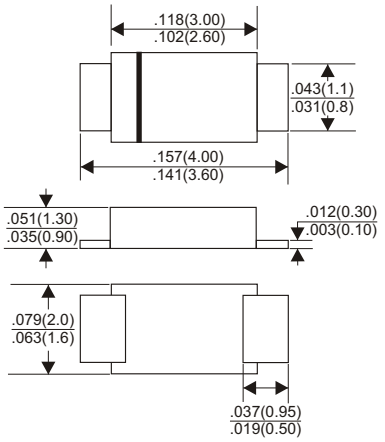
* The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
* Idea for printed circuit board
* Glass passivated Junction chip
* Low reverse leakage
* High forward surge current capability
* High temperature soldering guaranteed 250°C/10 seconds at terminals

MECHANICAL DATA

* **Case:** SOD-123FL, molded plastic
* **Terminals:** plated leads solderable per MIL-STD-750, Method 2026
* **Polarity:** Polarity symbol marking on body
* **Mounting position:** Any

VOLTAGE RANGE
20 to 200 Volts
CURRENT
1.0 Amperes

SOD-123FL



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature uniess otherwies specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

TYPE NUMBER	K12	K14	K16	K18	K110	K115	K120	UNITS
Maximum Recurrent Peak Reverse Voltage	20	40	60	80	100	150	200	V
Maximum RMS Voltage	14	28	42	56	70	105	140	V
Maximum DC Blocking Voltage	20	40	60	80	100	150	200	V
Maximum Average Forward Rectified Current at T_L=100°C	1.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	30							A
Maximum Instantaneous Forward Voltage at 1.0A	0.55		0.70	0.85		0.95		V
Maximum DC Reverse Current Ta=25°C	0.5			0.05				μA
at Rated DC Blocking Voltage Ta=125°C	50			10				μA
Typical Junction Capacitance	9.0							pF
Typical Thermal Resistance RθJA	85							°C/W
Operating Junction Temperature Range T_J	-55 — +125			-55 — +150				°C
Storage Temperature Range T_{STG}	-55 — +150							°C

RATING AND CHARACTERISTIC CURVES (K12 THRU K120)

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

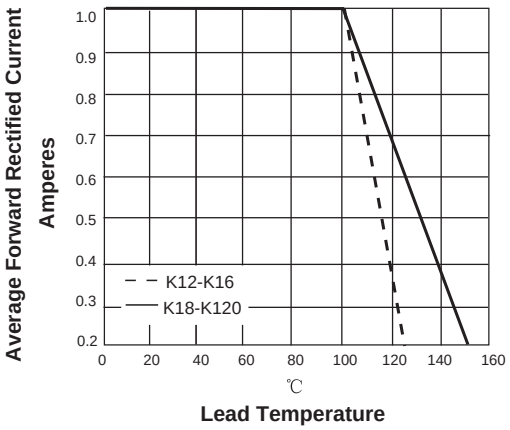


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PERLEG

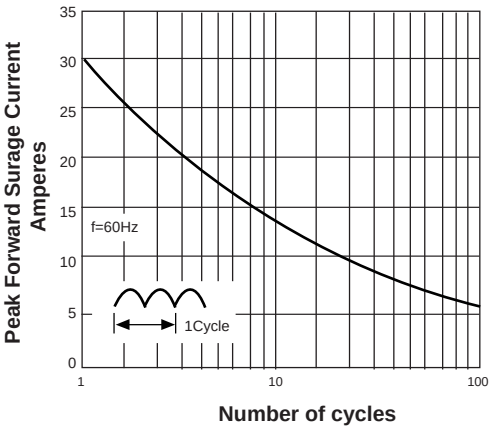


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

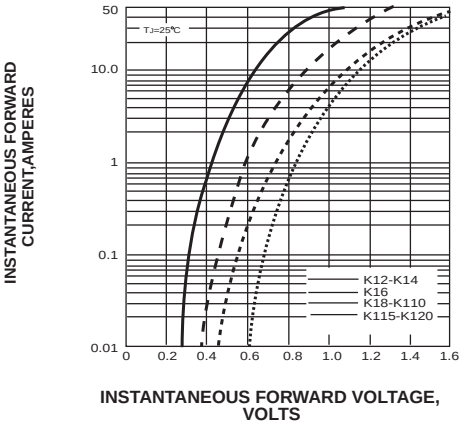
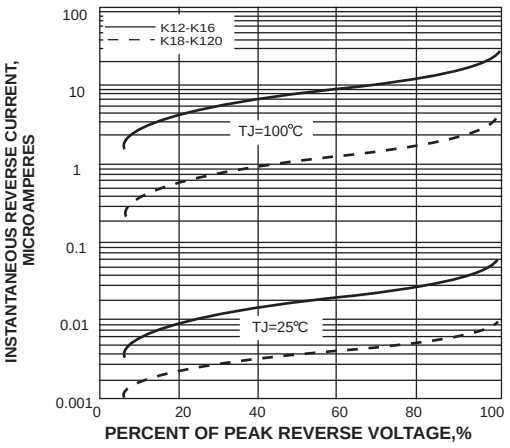
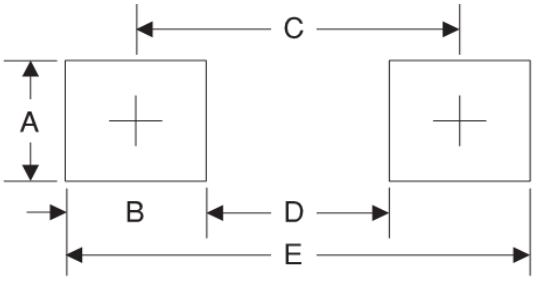


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.2	0.048
B	1.15	0.045
C	3.10	0.122
D	1.95	0.077
E	4.25	0.167