SuperDiode – 1.0 A Surface Mount Schottky Barrier Rectifier

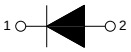
1. Features

- Flammability Classification 94V-0
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed
  250 C/10 seconds at terminals

2. Mechanical Data

- Case: SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- 0.002 grams

3. Marking and Circuit

Outline	Circuit
	

4. Specification

Absolute Maximum Rating & Electrical Characteristics

Ratings at 25 ℃ ambient temperature unless otherwise specified.

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

Parameters		Symbol	K12	K14	K16	K18	K110	K115	K120	Unit
Maximum repetitive peak reverse voltage		V_{RRM}	20	40	60	80	100	150	200	V
Maximum RMS voltage		V_{RMS}	14	28	42	56	70	105	140	V
Maximum DC blocking voltage		V_{DC}	20	40	60	80	100	150	200	V
Maximum average forward rectified current at T_L=100℃		$I_{F(AV)}$	1.0							A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave (JEDEC method)		I_{FSM}	30.0							A
Maximum instantaneous forward voltage at 1A		V_F	0.55		0.70	0.85		0.95		V
Maximum DC Reverse Current at rated DC blocking voltage	T_A=25℃	I_R	0.5			0.05				mA
	T_A=125℃		50			10				
Typical thermal resistance		$R_{\theta JA}$	85.0							℃/W
Operating junction temperature range		T_J	-55 ~ 125			-55 ~ 150				℃
Storage temperature range		T_{STG}	-55 ~ 150							℃

5. Typical Characteristic

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

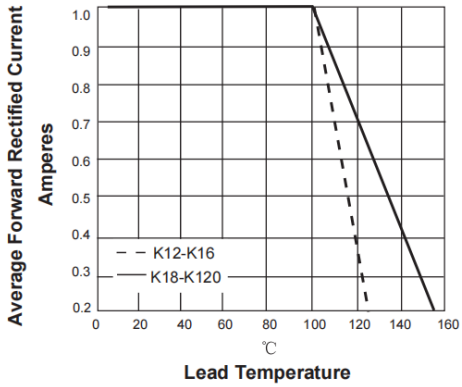


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PERLEG

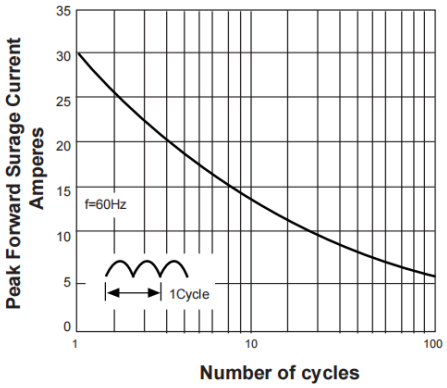


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

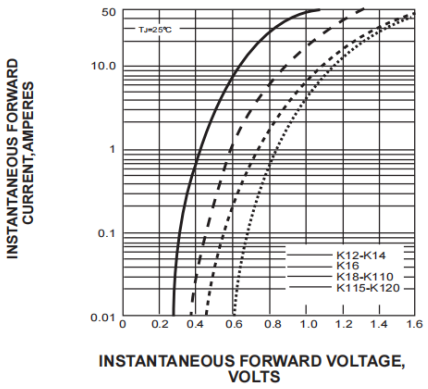
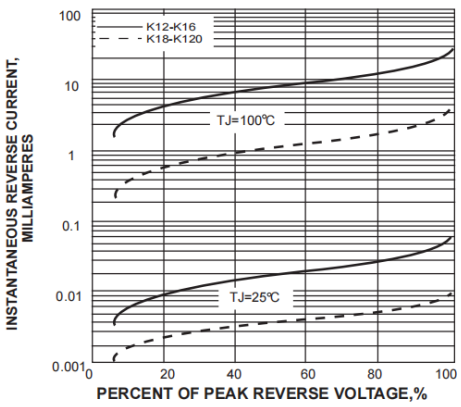
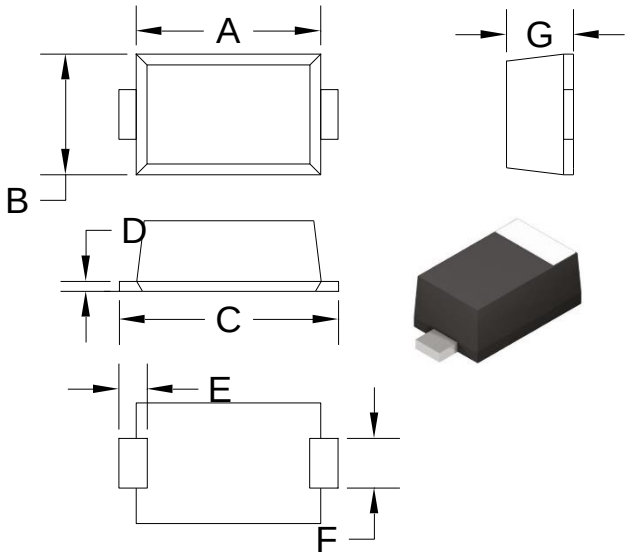


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

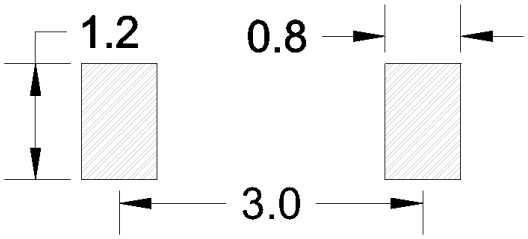


6. Dimension and Patterns (SOD-123FL)



Units: mm

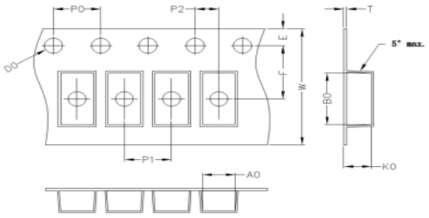
Symbol	Min.	Max.
A	2.50	2.70
B	1.70	1.90
C	3.50	3.70
D	0.10	0.20
E	0.50	0.70
F	0.90	1.10
G	0.88	1.08



Note:
1. Controlling dimension: in millimeters
2. General tolerance: ±0.05mm
3. The pad layout is for reference only
4. Unit: mm

7. Package Information

Carrier Dimension(mm)



A0	B0	K0	D0	E	F
2.15	3.95	1.35	1.55	1.75	3.50
P0	**P1**	**P2**	**T**	**W**	**Tolerance**
4.0	4.0	2.0	0.25	8	0.1

Package Specifications

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SOD123FL	7'	178	3	180	15	380*200*200	150

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