

3.0Amp Surface Mounted Schottky Barrier Rectifiers

Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Built-in strain relief, ideal for automated placement
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed
250°C/10 seconds at terminals
- High reliability application and automotive grade

Mechanical Data

Case : Molded plastic body

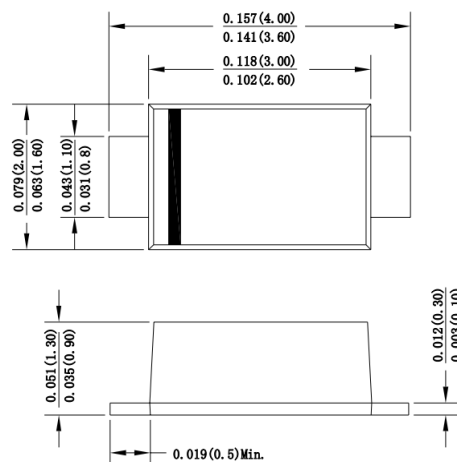
Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.0007 ounce, 0.02 grams

SOD123FL



Dimensions in inches and (millimeters)

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	SYMBOLS	K32	K34	K36	K38	K310	K315	K320	UNITS
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°C	I _(AV)	3.0							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	70.0							A
Maximum instantaneous forward voltage at 3.0A	V _F	0.55		0.70	0.85		0.95		V
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =125°C	I _R	0.5 50			0.05 10			mA	
Typical thermal resistance	R _{qJA}	85.0							°C/W
Operating junction temperature range	T _J	-55 to +125			-55 to +150				°C
Storage temperature range	T _{STG}	-55 to +150							°C

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Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

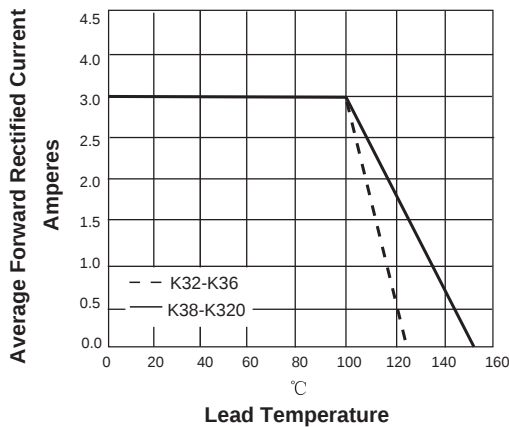


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

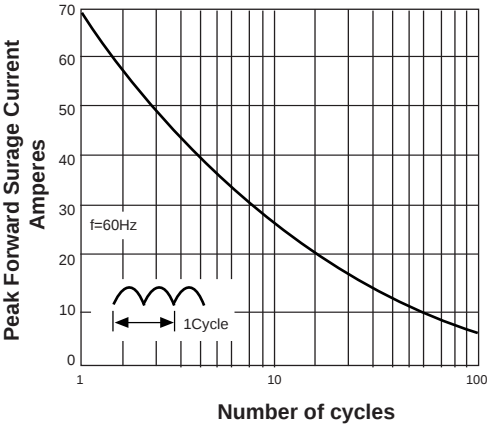


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

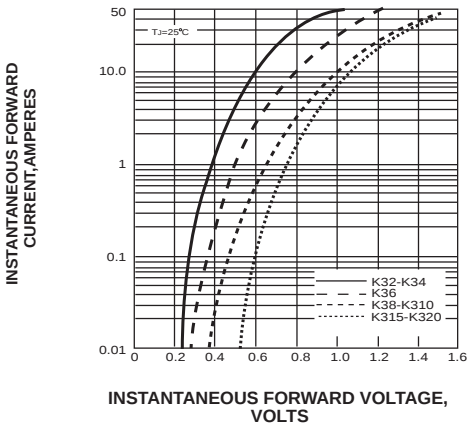
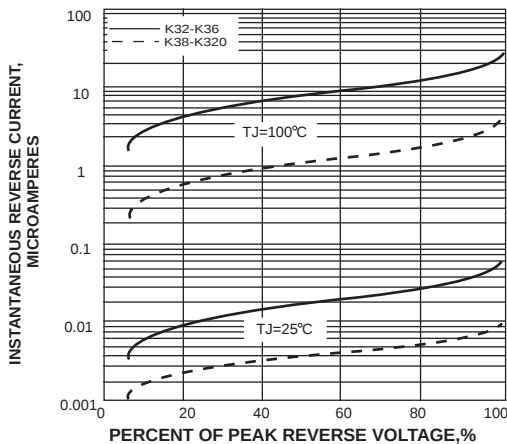
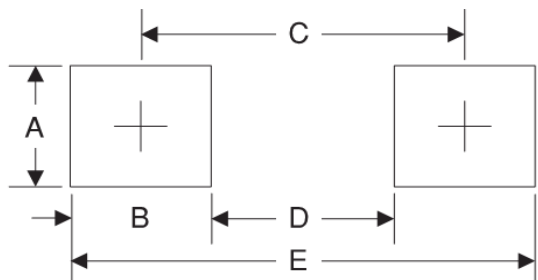


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

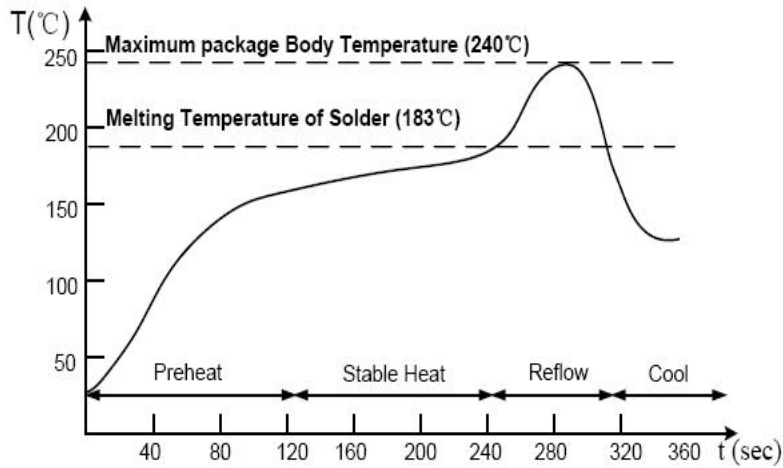


Suggested Pad Layout



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

Suggested Soldering Temperature Profile

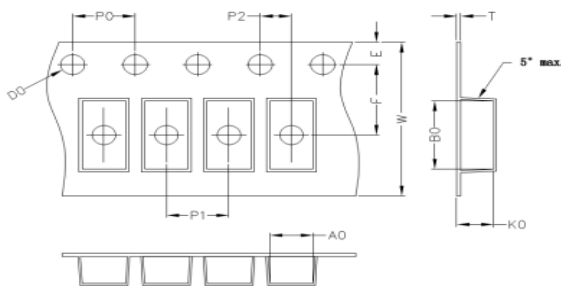


Note

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 265°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

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