

SOD-123FL Surface Mount Schottky Barrier Rectifier

Features

- Low power loss,high efficiency
- High forward surge current capability
- High Current Capability
- For surface mounted applications
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

Reverse Voltage
20-200 V
Forward Current
3 Ampere

Applications

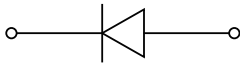
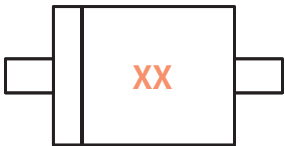
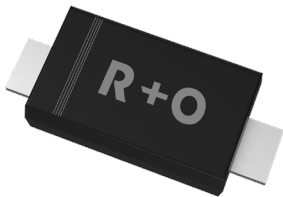
These Schottky barrier diodes are designed for high speed switching applications, circuit protection, and voltage clamping.

Mechanical Data

- Case: SOD-123FL
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026
- Polarity: Cathode line denotes the cathode end

Function Diagram

SOD-123FL



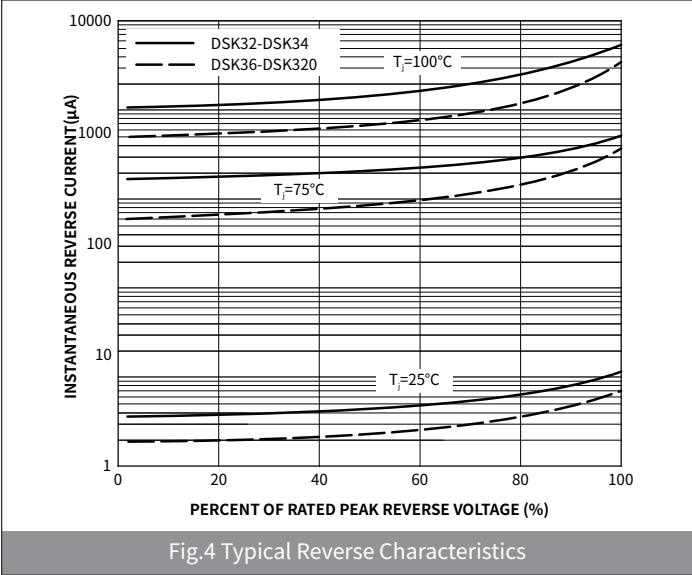
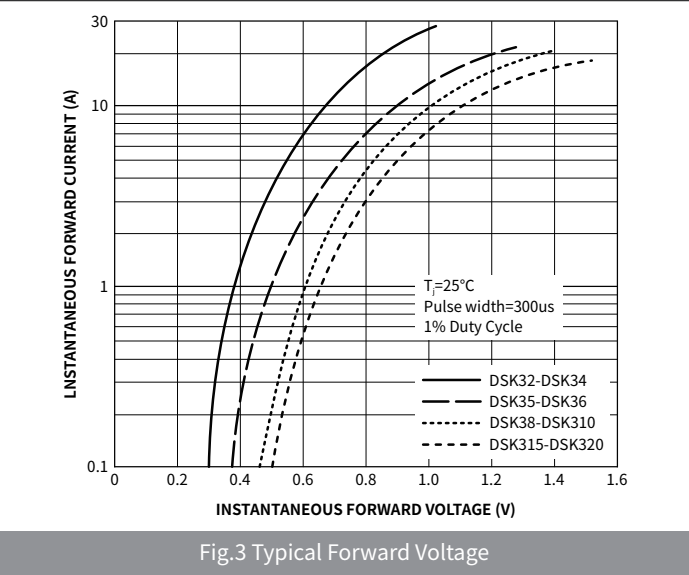
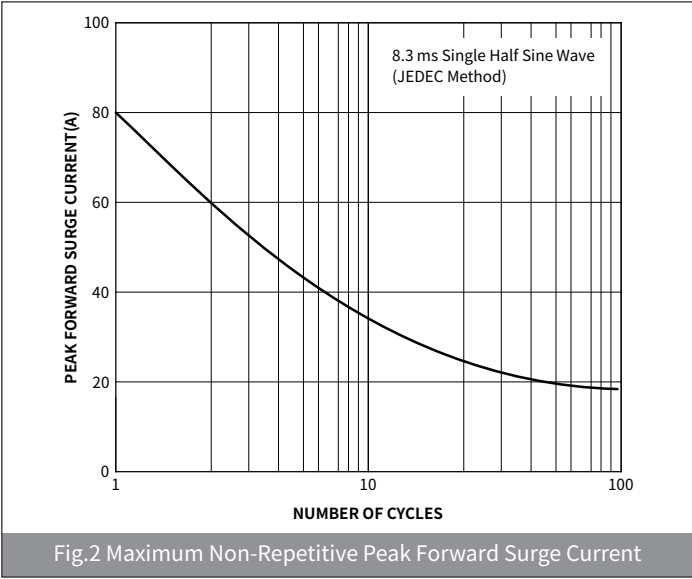
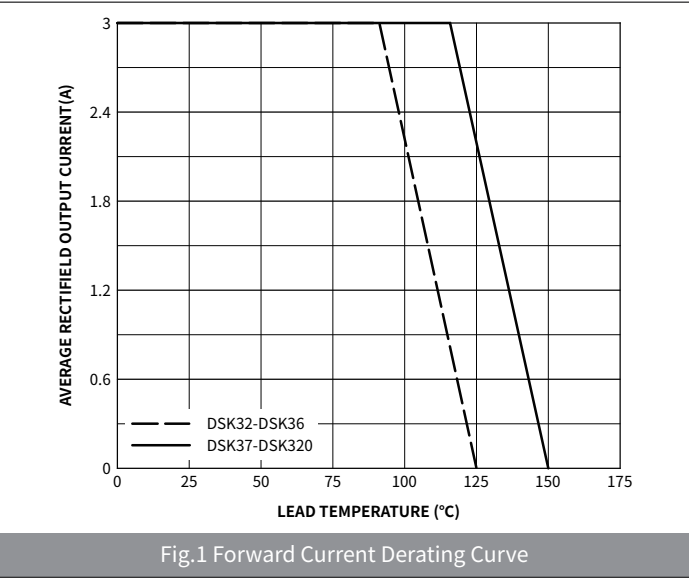
Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	DSK32	DSK34	DSK35	DSK36	DSK38	DSK310	DSK315	DSK320
Marking Code			K32	K34	K35	K36	K38	K310	K315	K320
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	20	40	50	60	80	100	150	200
Maximum RMS Voltage	V_{RMS}	V	14	28	35	42	56	70	105	140
Maximum DC Blocking Voltage	V_{DC}	V	20	40	50	60	80	100	150	200
Maximum Average Forward Rectified Current	$I_{F(AV)}$	A	3.0							
Non-repetitive Peak Forward Surge Current @t=8.3ms Half-sine wave	I_{FSM}	A	80							
Storage temperature	T_{stg}	°C	-55 ~+150							
Junction temperature	T_j	°C	-55 ~+150							
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	80							

● **Electrical Characteristics** (Ta=25°C Unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	DSK32	DSK34	DSK35	DSK36	DSK38	DSK310	DSK315	DSK320
Maximum instantaneous forward voltage	$I_F=3.0A$	V_F	V	0.55		0.70		0.85			0.95
Maximum DC reverse current at rated DC blocking voltage	$V_R=V_{DC}, T_A=25^{\circ}C$	I_{R1}	mA	0.2				0.05			
	$V_R=V_{DC}, T_A=100^{\circ}C$	I_{R2}		20				5.0			
Typical junction capacitance	$V_R=4.0V, f=1MHz$	C_J	pF	250				160			

● **Ratings And Characteristics Curves** (Ta=25°C Unless otherwise specified)

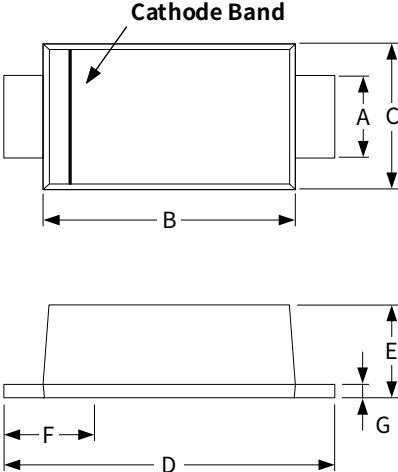


● Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOD-123FL	R1	0.0169	3000	45000	180000	7"

● Package Outline Dimensions (SOD -123FL)

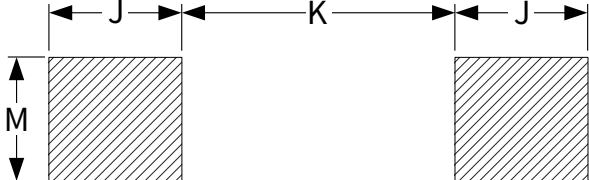
Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.90	1.10	0.035	0.430
B	2.55	2.85	0.100	0.111
C	1.60	1.90	0.063	0.074
D	3.60	3.90	0.031	0.043
E	1.00	1.20	0.031	0.035
F	0.40	0.90	0.047	0.055
G	0.10	0.25	0.003	0.007



The diagram shows two views of the SOD-123FL package. The top view is a rectangle with dimensions B (width) and C (height). A vertical line on the left side is labeled 'Cathode Band'. The bottom view is a trapezoid with dimensions D (width), E (height), F (width of the base), and G (height of the base).

● Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	1.00	-	0.040	-
K	-	1.90	-	0.074
M	1.50	-	0.059	-



The diagram shows a suggested pad layout with two shaded rectangular pads. The width of each pad is J, the distance between the pads is K, and the height of each pad is M.