SOD-123FL Surface Mount Schottky Barrier Rectifier

Features

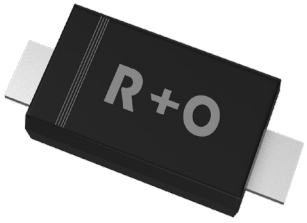
- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

Reverse Voltage
20-200 V
Forward Current
2 Ampere

Applications

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

SOD-123FL



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

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

PARAMETER	SYMBOL	UNIT	DSK22	DSK24	DSK25	DSK26	DSK28	DSK210	DSK215	DSK220
Device marking code			K22	K24	K25	K26	K28	K210	K215	K220
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 @ 60Hz sinewave, Resistance load,TL (Fig.1)	$I_{F(AV)}$	A	2.0							
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	50							
Storage temperature	T_{stg}	°C	-55 ~ +150							
Junction temperature	T_j	°C	-55 ~ +125			-55 ~ +150				
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	85							
	$R_{\theta J-L}$	°C /W	20							

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

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	DSK22	DSK24	DSK25	DSK26	DSK28	DSK210	DSK215	DSK220
Maximum instantaneous forward voltage	I_F=2.0A	V_F	V	0.55		0.70		0.85		0.95	
Maximum DC reverse currentat rated DC blocking voltage	V_R=V_{DC}, T_A=25°C	I_{R1}	mA	0.2				0.05			
	V_R=V_{DC}, T_A=100°C	I_{R2}		20				5			
Typical junction capacitance	4.0V DC,1MHz	C_J	pF	220		80					

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

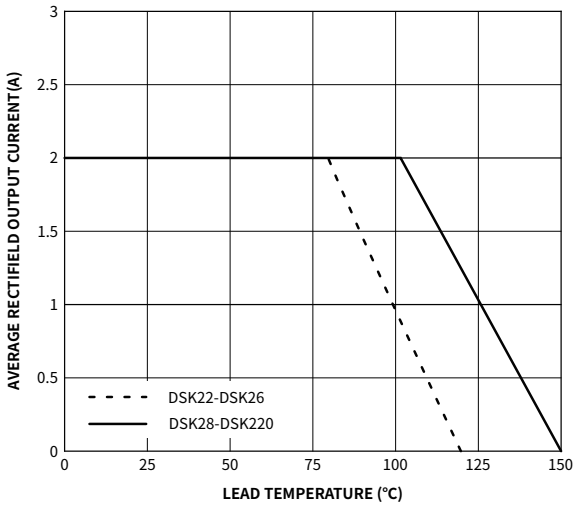


Fig.1 Forward Current Derating Curve

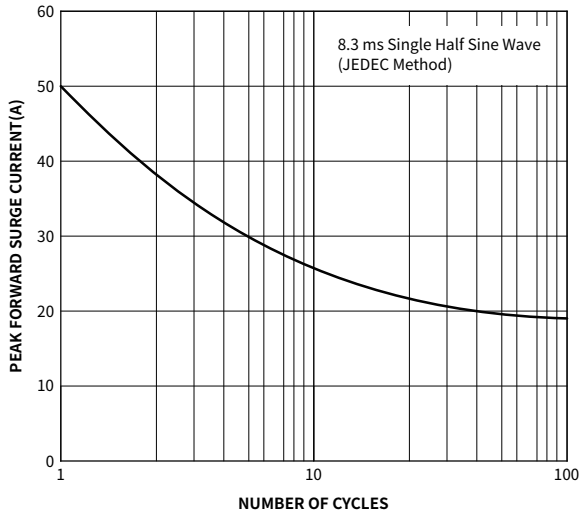


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

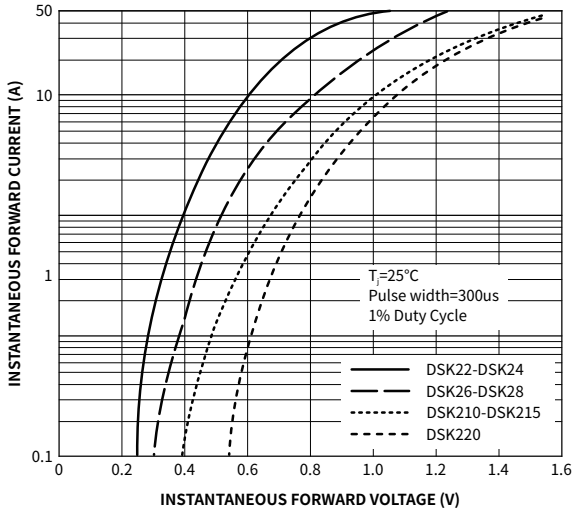


Fig.3 Typical Forward Voltage

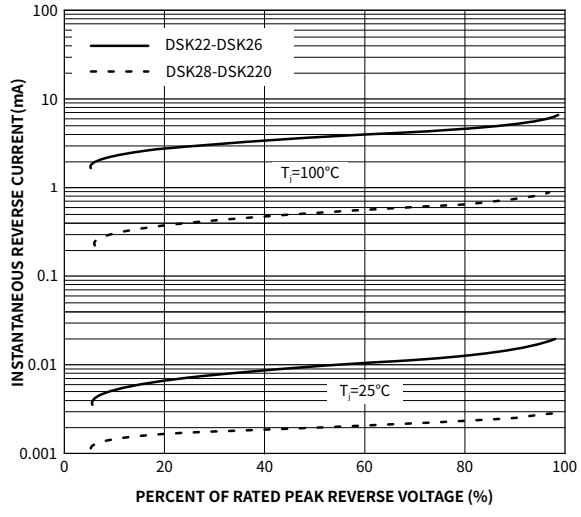
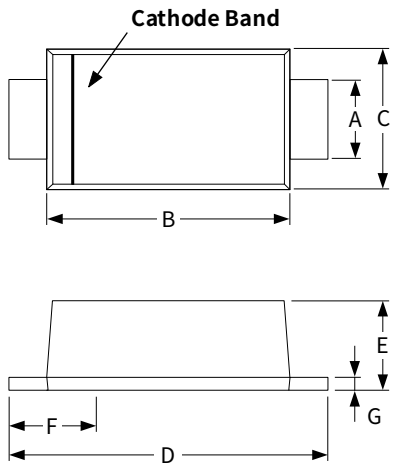


Fig.4 Typical Reverse Characteristics

Ordering Information

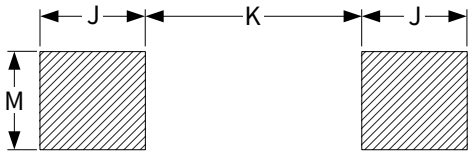
PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOD-123FL	R1	0.0169	3000	30000	120000	7''

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

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	-