

SOD-123FL Surface Mount Schottky Barrier Rectifier

Features

- High forward surge current capability
- Low power loss, high efficiency
- Low profile package
- Ideal for automated placement
- Low forward and reverse recovery times

Applications

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

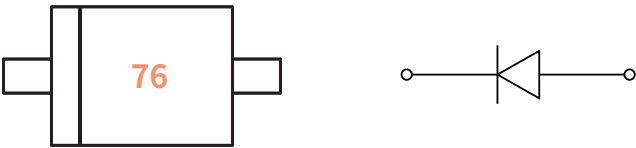
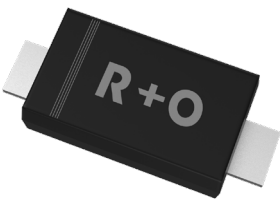
Mechanical Data

- 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

Reverse Voltage
60 V
Forward Current
1.0 Ampere

SOD-123FL



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

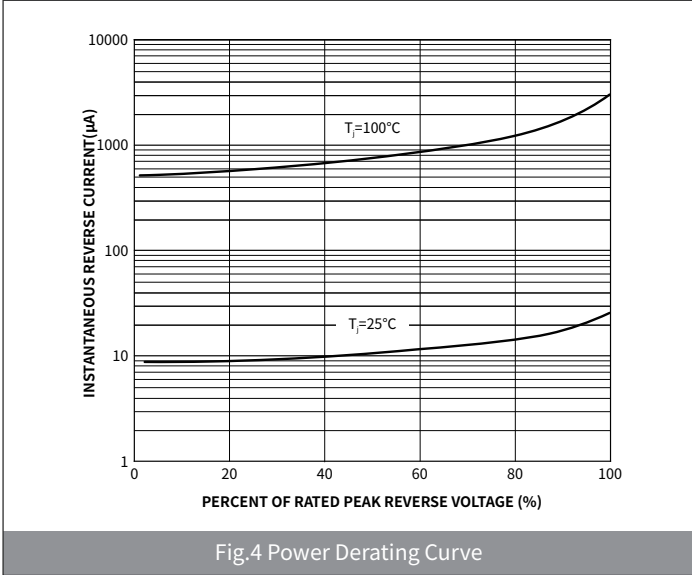
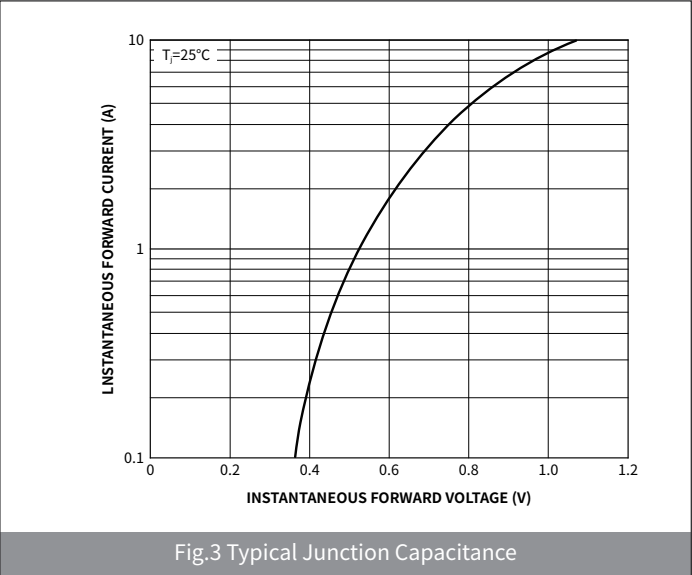
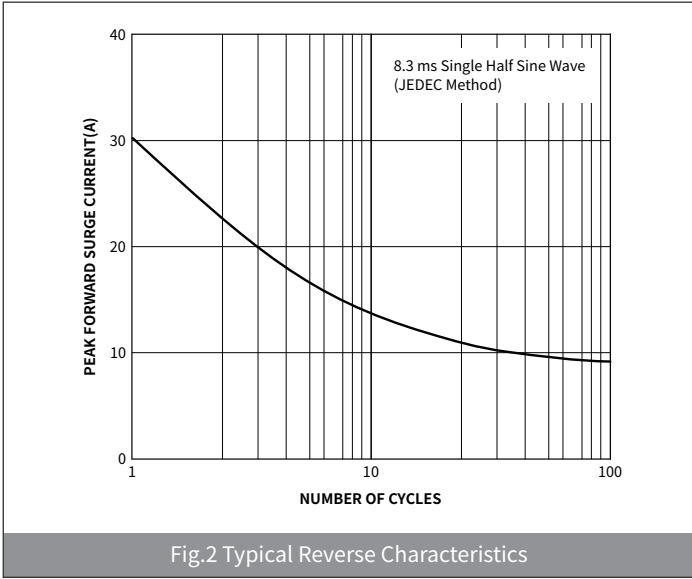
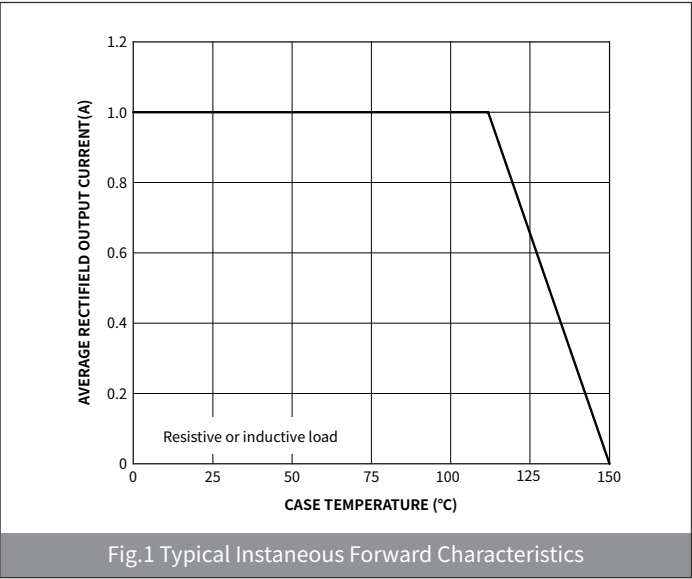
PARAMETER	SYMBOL	UNIT	RB160M-60
Maximum repetitive peak reverse voltage	V_{RRM}	V	60
Maximum RMS voltage	V_{RMS}	V	42
Maximum DC blocking voltage	V_{DC}	V	60
Maximum Average Forward Rectified Current	$I_{F(AV)}$	A	1
Non-repetitive Peak Forward Surge Current @t=8.3ms Half-sine wave	I_{FSM}	A	30
I^2t Rating for fusing(3ms ≤ t ≤ 8.3ms)	I^2t	A ² S	3.7
Storage temperature	T_{stg}	°C	-55~+150
Junction temperature	T_j	°C	-55~+150
Typical Thermal Resistance ⁽¹⁾	$R_{\theta J-A}$	°C /W	105
	$R_{\theta J-C}$		25
	$R_{\theta J-L}$		32

Note:(1)P.C.B. mounted with 0.2"×0.2"(5×5mm) copper pad areas.

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

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	RB160M-60
Maximum instantaneous forward voltage	$I_F=1A$	V_F	V	0.55
Maximum DC reverse currentat rated DC blocking voltage	$V_R=V_{DC}, T_A=25^{\circ}C$	I_{R1}	mA	0.05
	$V_R=V_{DC}, T_A=100^{\circ}C$	I_{R2}		10
Typical Thermal Resistance	4.0V DC,1MHz	C_j	pF	75

● **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

● 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	-