

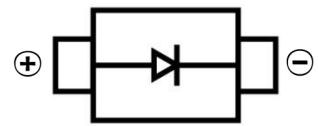
---

**SCHOTTKY BARRIER DIODE**
**FEATURES**

- Small Surface Mount device
- Low power loss, high efficiency
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Guard ring for over voltage protection
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications


**SOD-123FL**
**MECHANICAL DATA**

- Case: SOD-123FL
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.0155 grams (approximate)


**MAXIMUM RATINGS (T<sub>A</sub> = 25°C unless otherwise noted)**

Parameter	Symbol	Value	Unit
Repetitive peak reverse voltage	V <sub>RRM</sub>	100	V
DC Reverse Voltage	V <sub>R</sub>	100	V
RMS Reverse Voltage	V <sub>RMS</sub>	70	V
Non-Repetitive Peak Forward Surge Current @ t = 8.3 ms	I <sub>FSM</sub>	30	A
Mean rectifying current	I <sub>F</sub>	1	A
Thermal Resistance From Junction To Ambient	R <sub>θJA</sub>	110	°C/W
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>STG</sub>	-55 ~+175	°C

**ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise specified)**

Parameter	Symbol	Min	Max	Unit	Conditions
Forward voltage	V <sub>F</sub>		0.85	V	I <sub>F</sub> =1A
Reverse current T=25°C	I <sub>R</sub>		0.50	mA	V <sub>R</sub> =100V
Reverse current T=100°C	I <sub>R</sub>		10	mA	V <sub>R</sub> =100V
Junction capacitance	C <sub>J</sub>		160	pF	V=4V,f=1MH

SCHOTTKY BARRIER DIODE

**Typical Characteristics**

FIG.1 FORWARD CURRENT DERATING CURVE

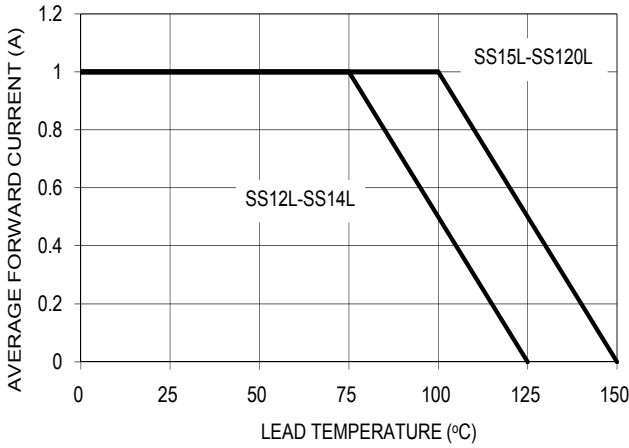


FIG. 2 MAXIMUM FORWARD SURGE CURRENT

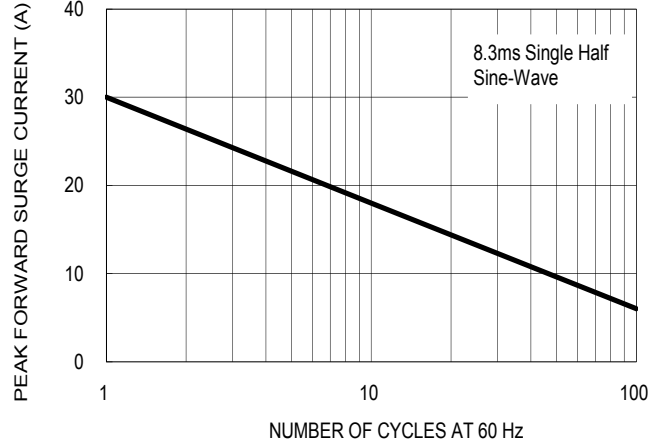


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

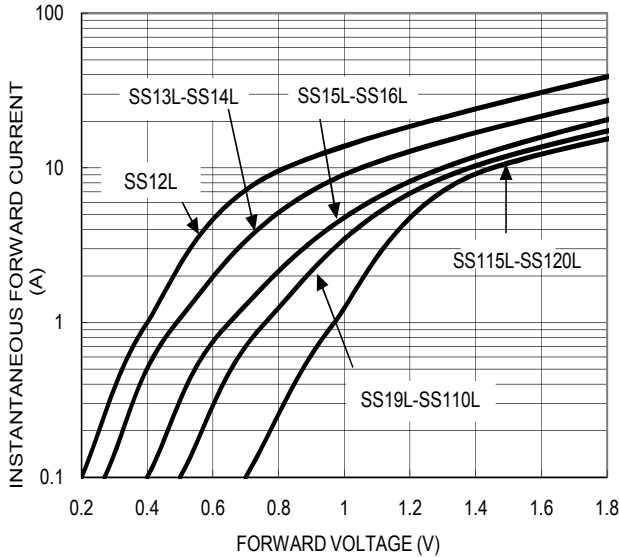


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

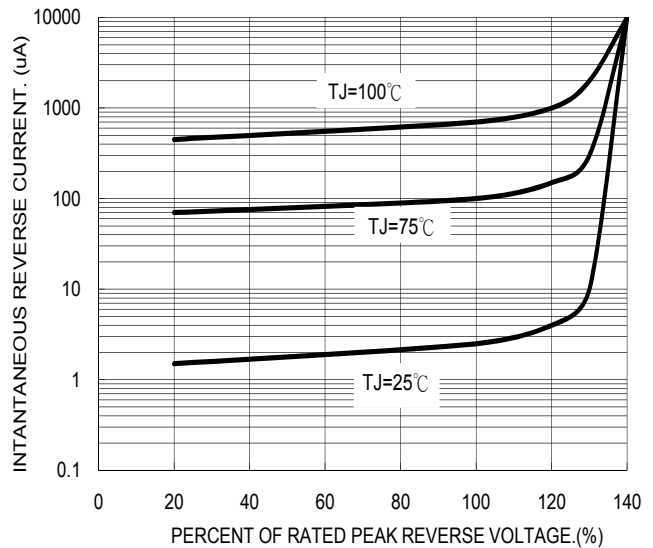


FIG. 5 TYPICAL JUNCTION CAPACITANCE

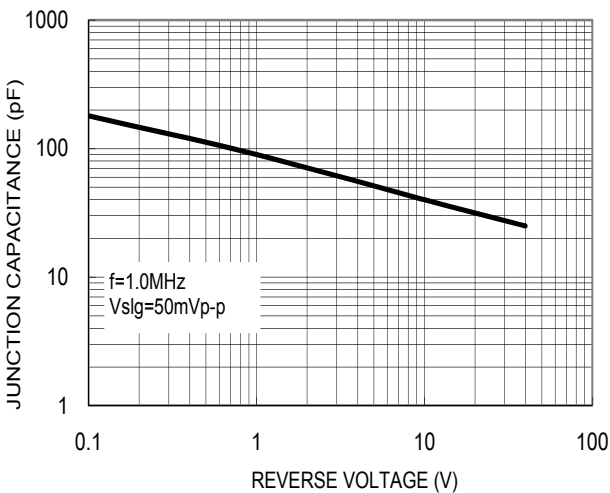
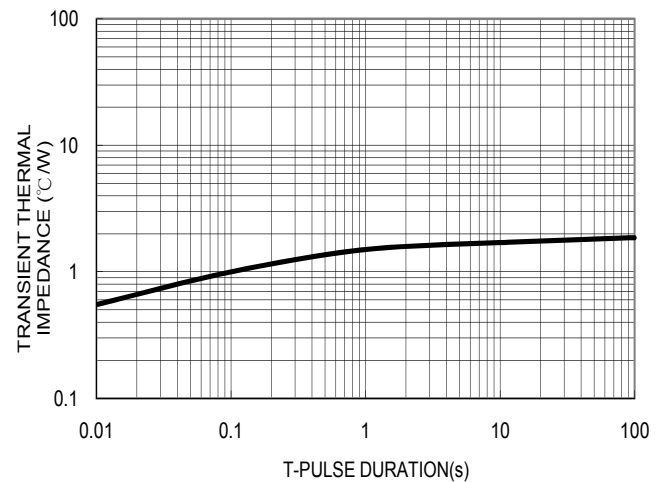
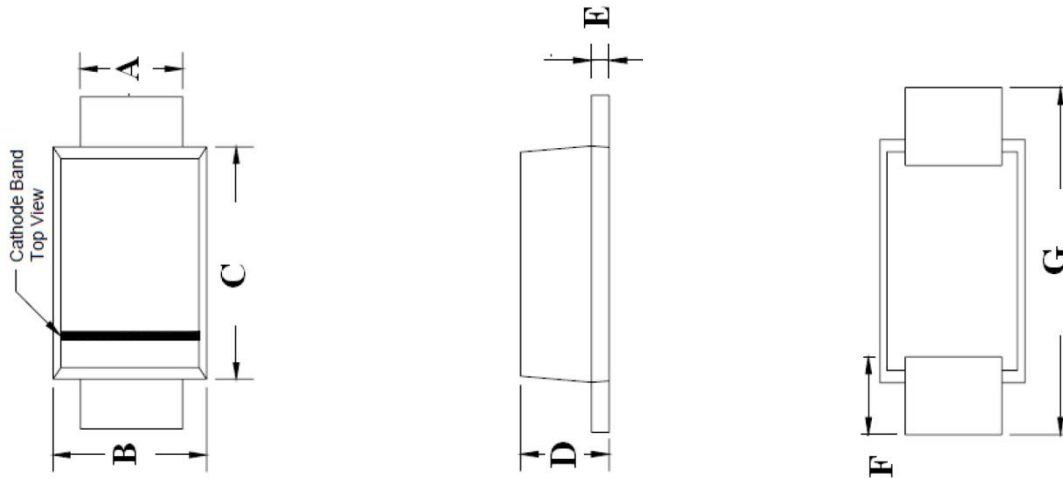


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE



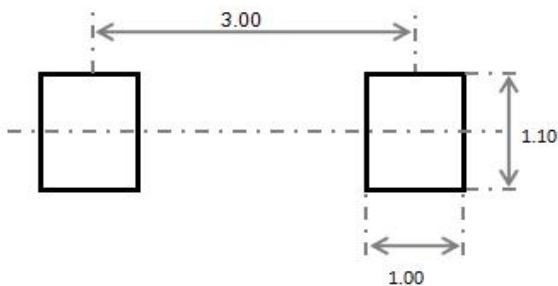
SCHOTTKY BARRIER DIODE

**SOD-123FL Package Outline Dimensions**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.75	0.95	0.029	0.037
B	1.60	2.00	0.063	0.079
C	2.60	3.00	0.103	0.119
D	0.90	1.20	0.036	0.047
E	0.12	0.22	0.005	0.009
F	0.8Typ		0.032Typ	
G	3.50	3.90	0.138	0.159

**SOD-123FL Suggested Pad Layout**



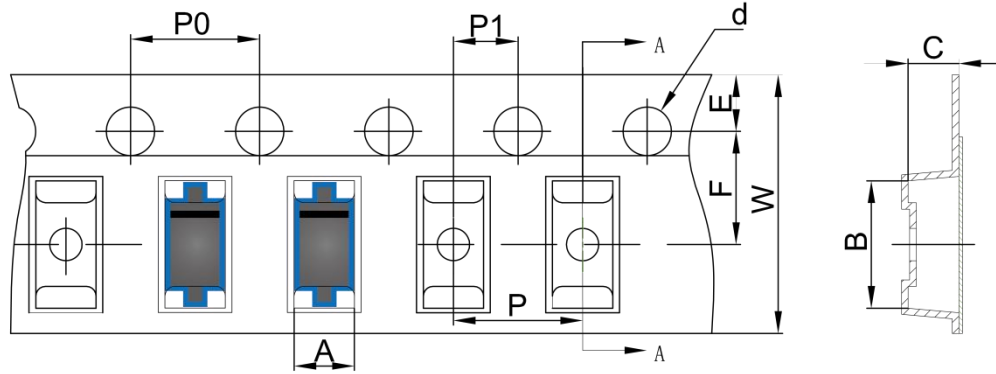
**Note:**

1. Controlling dimension: in millimeters
2. General tolerance:  $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

SCHOTTKY BARRIER DIODE

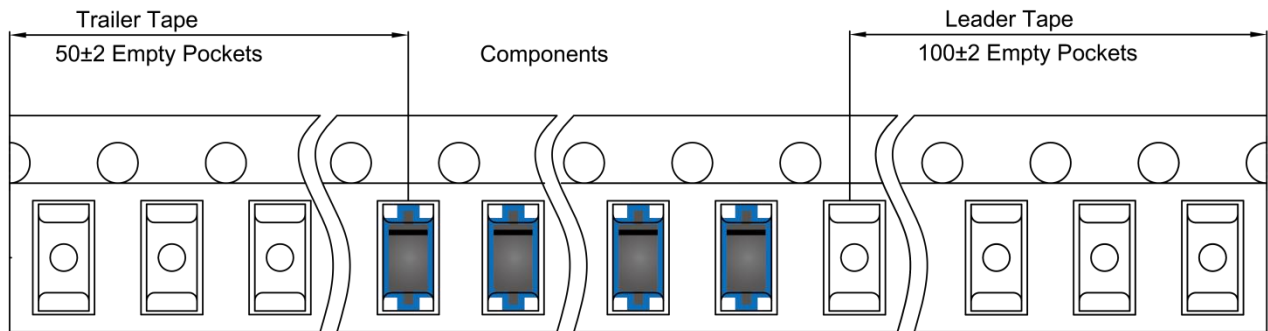
**SOD-123FL Tape and Reel**

SOD-123FL Embossed Carrier Tape

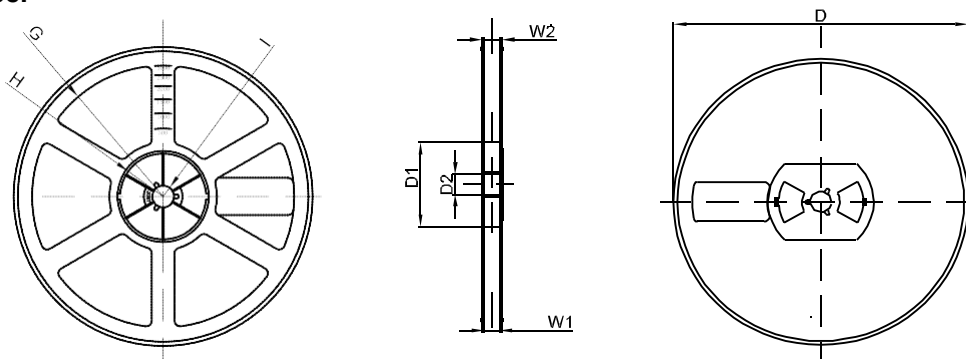


DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SOD-123FL	2.10	4.00	1.25	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

**SOD-123FL Tape Leader and Trailer**



**SOD-123FL Reel**



DIMENSIONS ARE IN MILLIMETER								
REEL OPTION	D	D1	D2	G	H	I	W1	W2
7" DIA	Ø178	54.40	13.00	R78	R25.60	R6.50	9.50	12.30
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1