

SCHOTTKY BARRIER DIODE

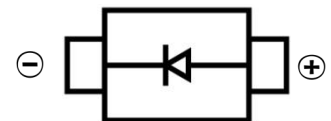
FEATURES

- Low Forward Voltage
- Fast Switching
- Small Surface Mount device
- PN Junction Guard Ring for Transient and ESD Protection

SOD-123

MECHANICAL DATA

- Case: SOD-123
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Weight: 0.005 grams (approximate)



MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

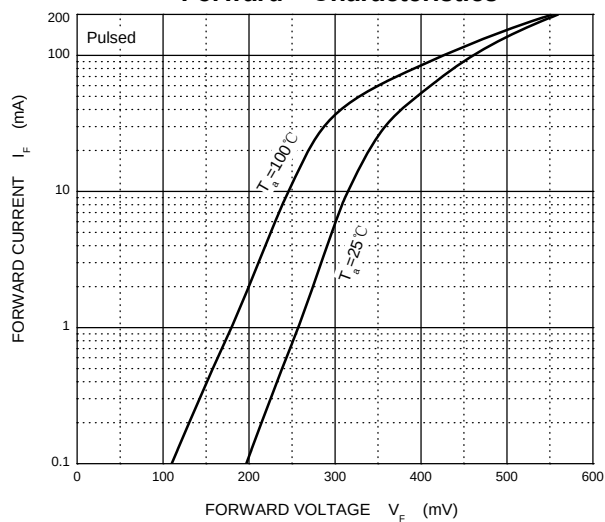
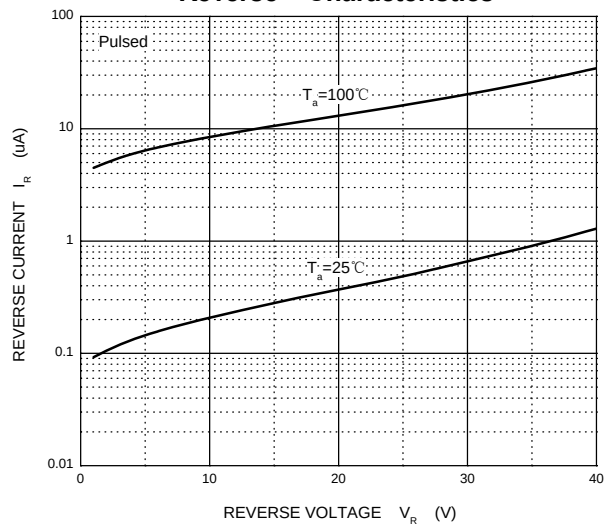
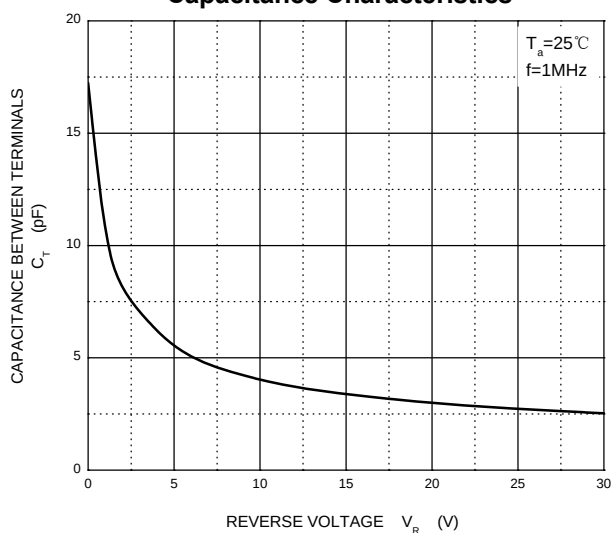
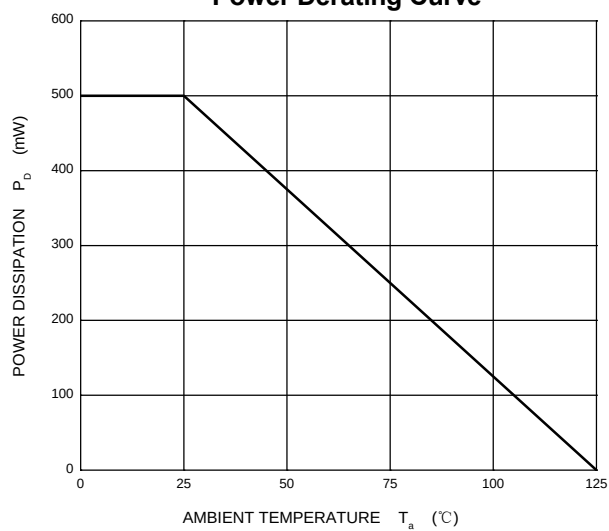
Parameter	Symbol	Value	Unit
Peak Reverse Voltage	V_R	30	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	V
Forward Current	I_F	200	mA
Average rectified output current	I_O	100	mA
Non-Repetitive Peak Forward Surge Current @ $t = 8.3 \text{ ms}$	I_{FSM}	600	mA
Power Dissipation	P_D	500	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	200	$^\circ\text{C/W}$
Junction Temperature	T_J	125	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~+150	$^\circ\text{C}$

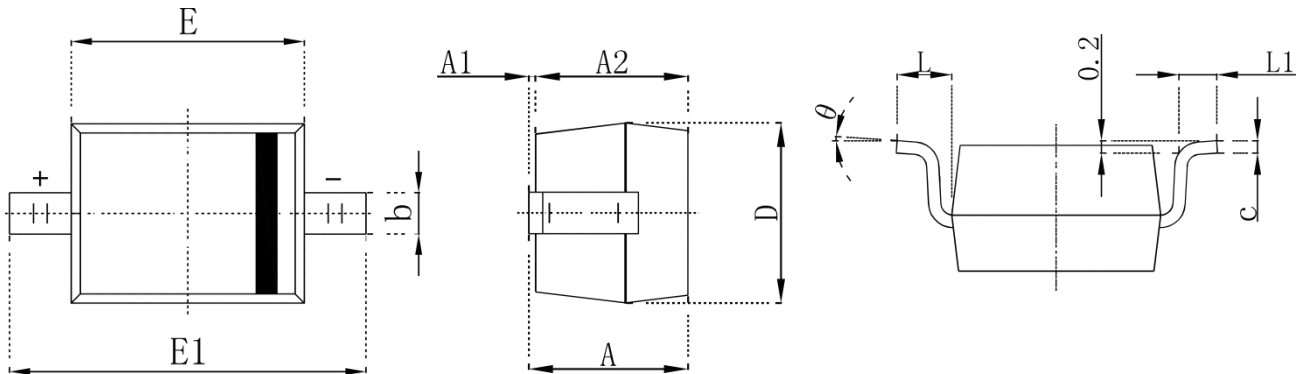
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min	Max	Unit	Conditions
Forward voltage	V_F		0.24	V	$I_F=0.10\text{mA}$
			0.32		$I_F=1\text{mA}$
			0.40		$I_F=10\text{mA}$
			0.50		$I_F=30\text{mA}$
			1.00		$I_F=100\text{mA}$
Reverse voltage	V_R	30		V	$I_R=100\mu\text{A}$
Reverse voltage leakage current	I_R		2	μA	$V_R=25\text{V}$
Diode capacitance	C_D		10	pF	$V_R=1\text{V}, f=1\text{MHz}$
Reverse recovery time	T_{RR}		5	nS	$I_F=10\text{mA}, I_R=10\text{mA to }1\text{mA}, R_L=100\Omega$

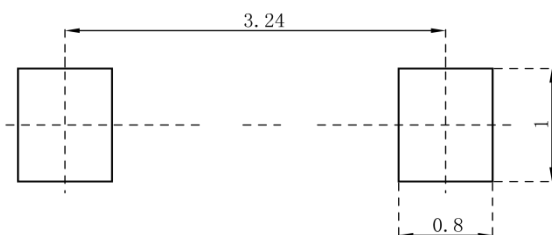
SCHOTTKY BARRIER DIODE

Typical Characteristics

Forward Characteristics

Reverse Characteristics

Capacitance Characteristics

Power Derating Curve


SOD-123 Package Outline Dimensions


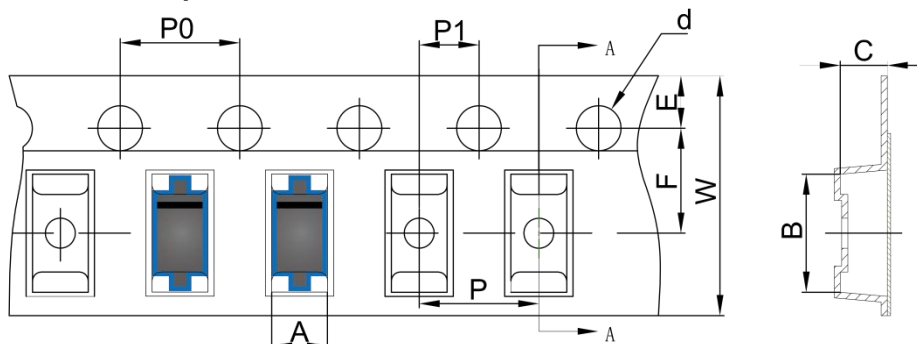
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500REF		0.020 REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°

SOD-123 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

SOD-123 Tape and Reel

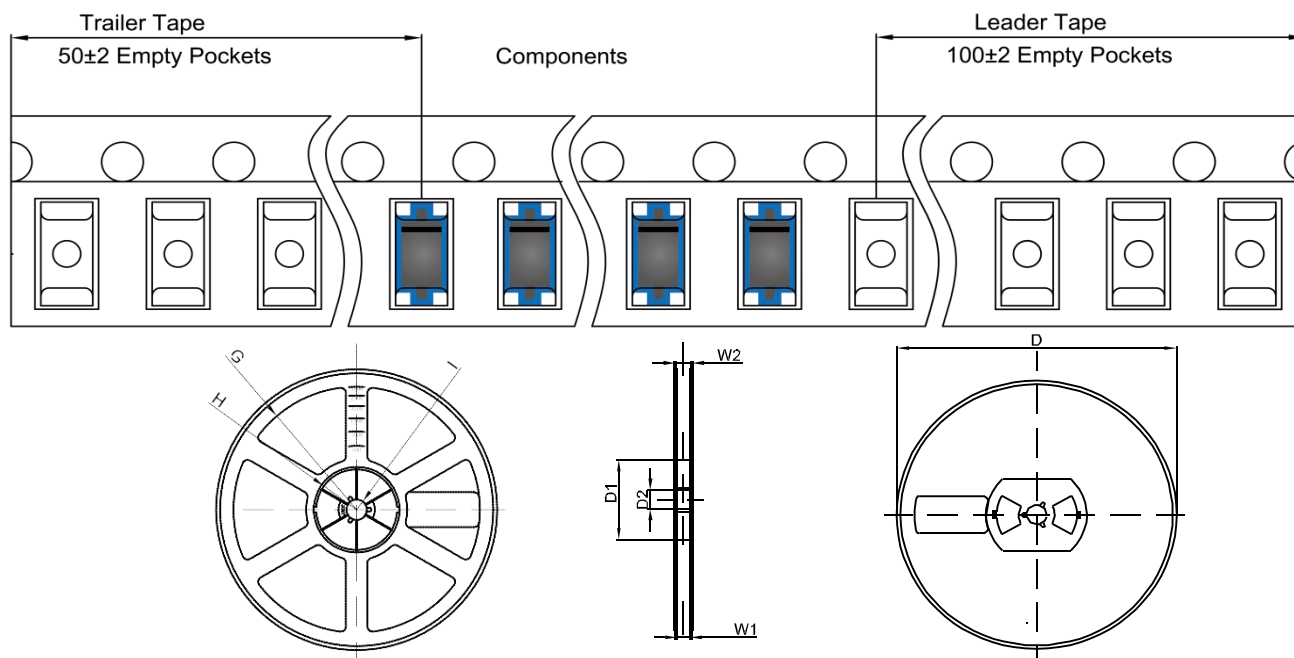
SOD-123 Embossed Carrier Tape



SOD-123 Tape Leader and Trailer

DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SOD-123	1.85	3.95	1.57	Ø1.55	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-123 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