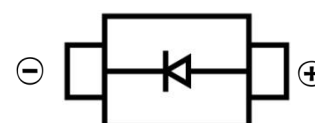


SCHOTTKY BARRIER DIODE
FEATURES

- High Breakdown Voltage
- Low Turn-on Voltage
- Guard Ring Construction for Transient Protection


SOD-123

MECHANICAL DATA

- Case: SOD-123
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.005 grams (approximate)
- Marking: S7

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

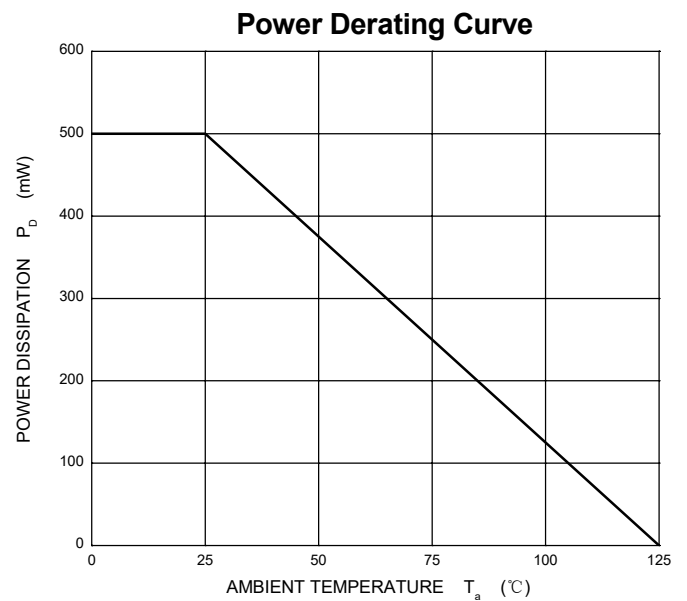
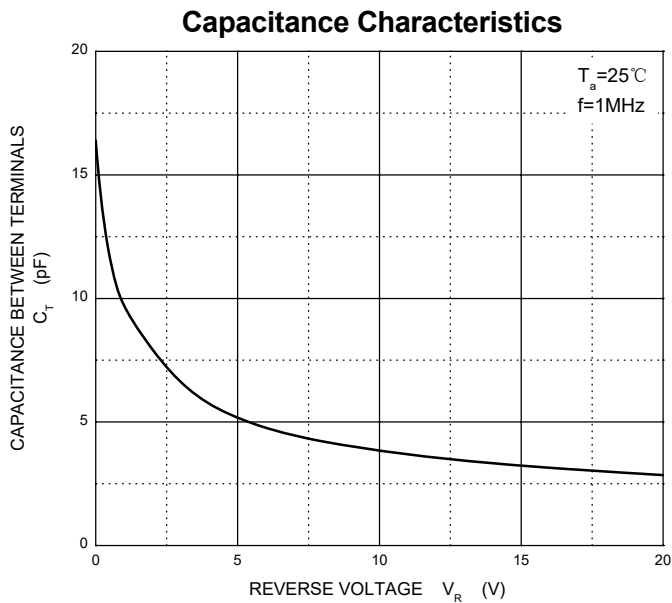
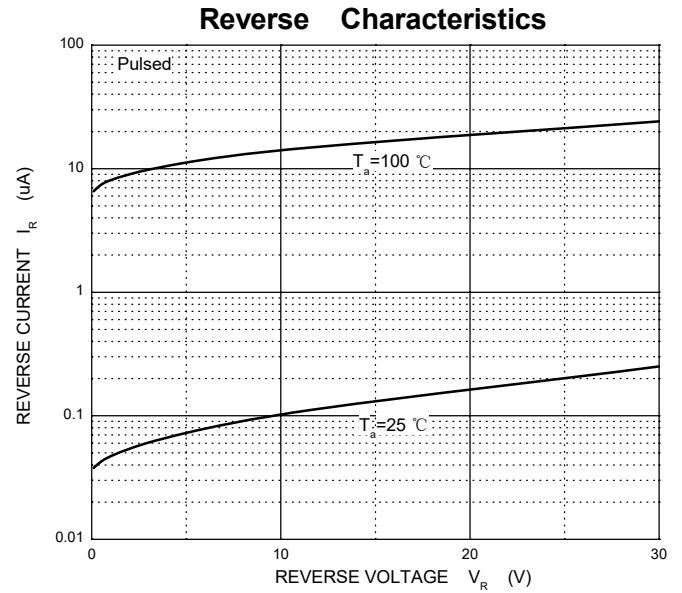
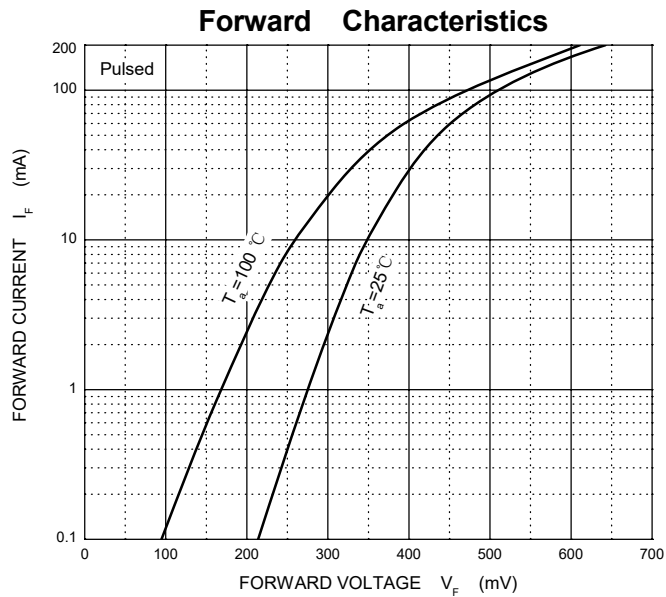
Parameter	Symbol	BAT42W	Unit
Peak Repetitive Peak Reverse Voltage	V_{RRM}	30	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	$V_{R(RMS)}$	21	V
Forward Continuous Current	I_{FM}	200	mA
Repetitive Peak Forward Current @ $t < 1.0s$	I_{FRM}	500	mA
Non-repetitive Peak Forward Surge Current @ $t = 8.3ms$	I_{FSM}	4.0	A
Power Dissipation	P_D	200	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	200	/W
Junction temperature	T_J	125	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55~+150	

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

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Reverse breakdown voltage	$V_{(BR)}$	30			V	$I_R = 0.1mA$
Forward voltage	V_F			0.23	V	$I_F = 0.1mA$
	V_F			0.3	V	$I_F = 1mA$
	V_F			0.4	V	$I_F = 10mA$
	V_F			0.5	V	$I_F = 30mA$
	V_F			1.0	V	$I_F = 100mA$
Reverse current	I_R			2	μA	$V_R = 25V$
Capacitance between terminals	C_T			10	pF	$V_R = 1.0V, f = 1.0MHz$
Reverse recovery time	t_{rr}			5	ns	$I_F = I_R = 10mA$ $I_{rr} = 0.1I_R, R_L = 100\Omega$

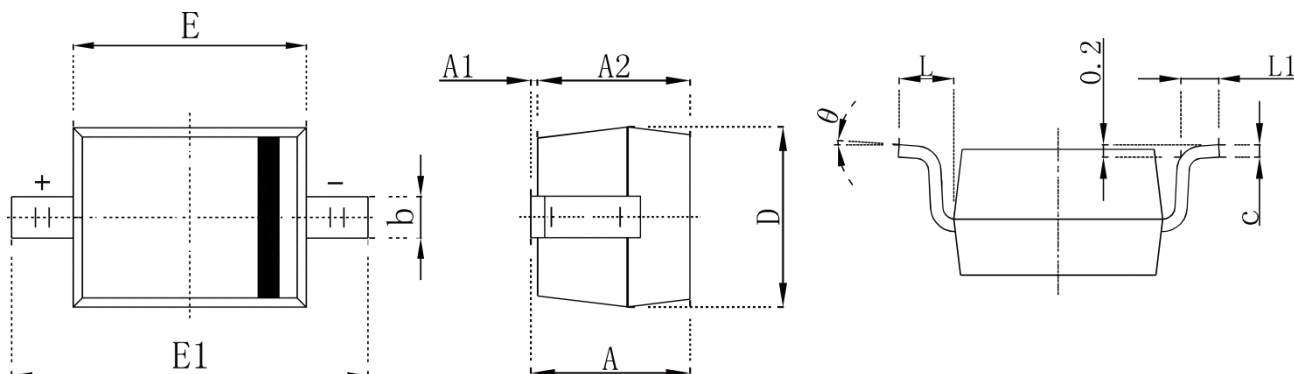
SCHOTTKY BARRIER DIODE

Typical Characteristics



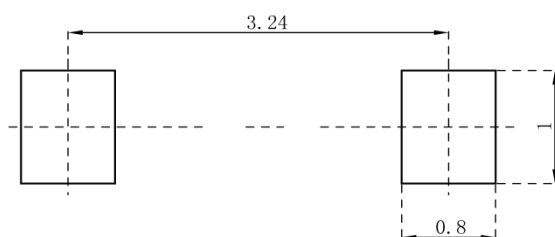
SCHOTTKY BARRIER DIODE

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



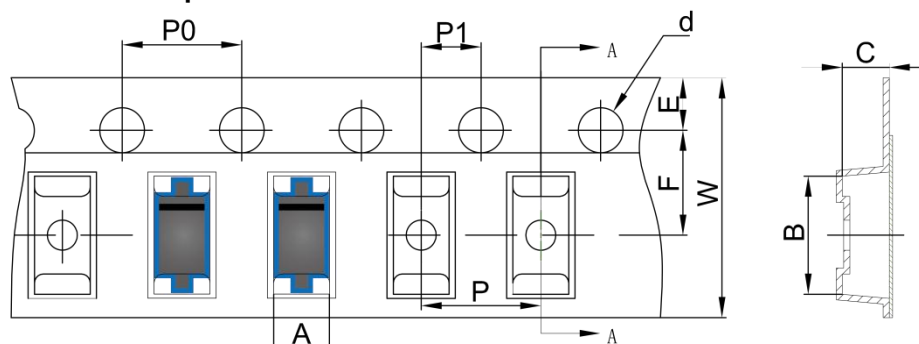
Note:

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

SCHOTTKY BARRIER DIODE

SOD-123 Tape and Reel

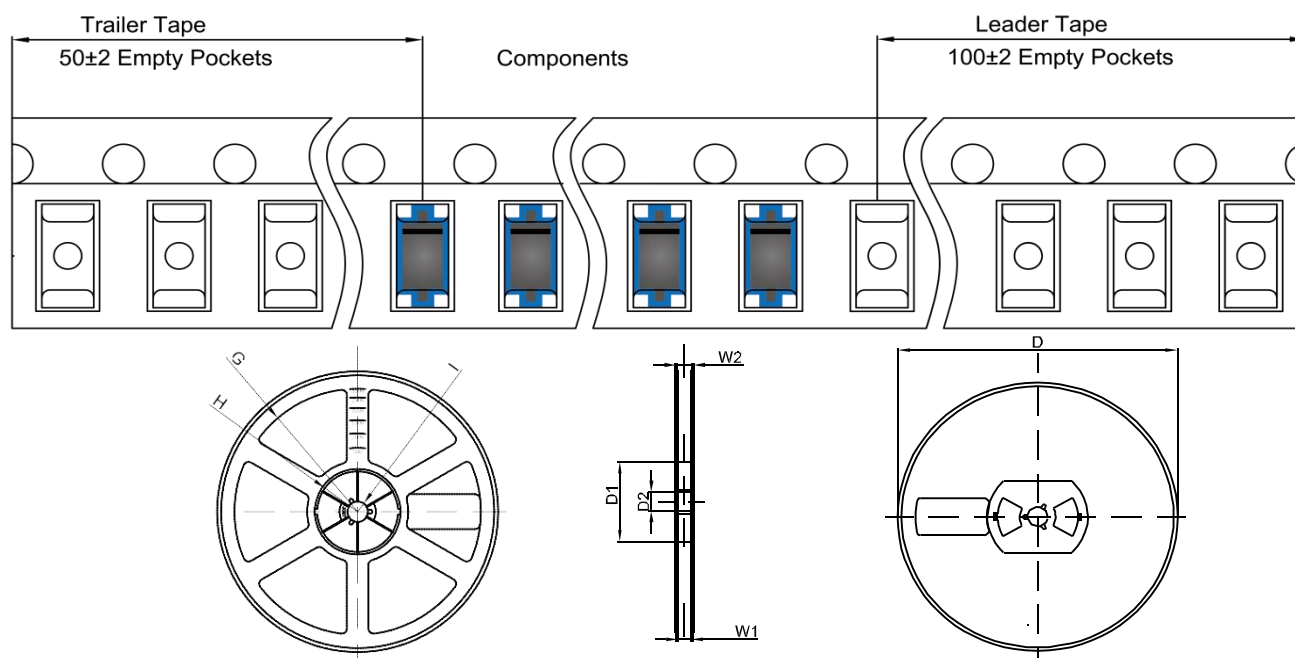
SOD-123 Embossed Carrier Tape



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