

PRIMARY CHARACTERISTICS

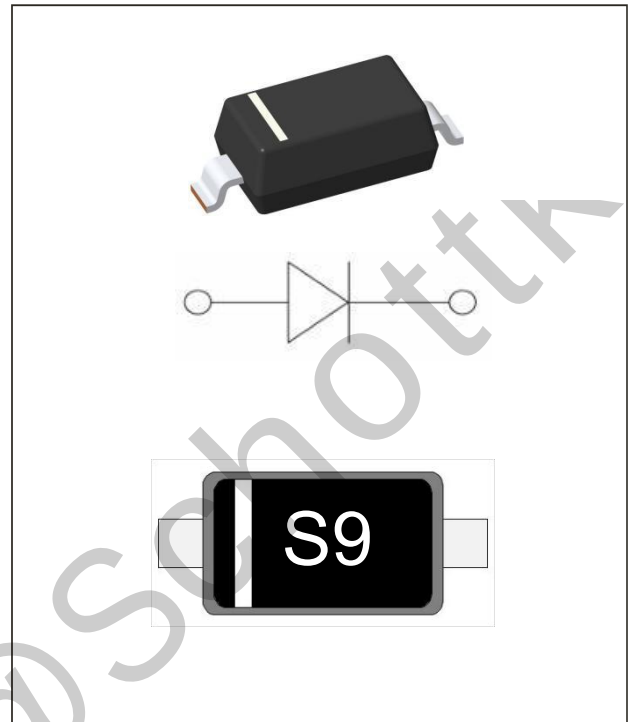
VRRM	IO	VF(type)	I FSM	Tj max
100V	150mA	1.0V	750mA	125°C

Features

- SOD-123 Package
- Epoxy meets UL-94V-0 flammability rating and halogen free
- Moisture Sensitivity Level 3
- Low Reverse Current
- Low Stored Charge, Majority Carrier Conduction
- Low Power Loss / High Efficiency
- RoHS Compliant and Halogen Free

Mechanical Data

- SOD-123 Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any


Package Marking and Ordering Information

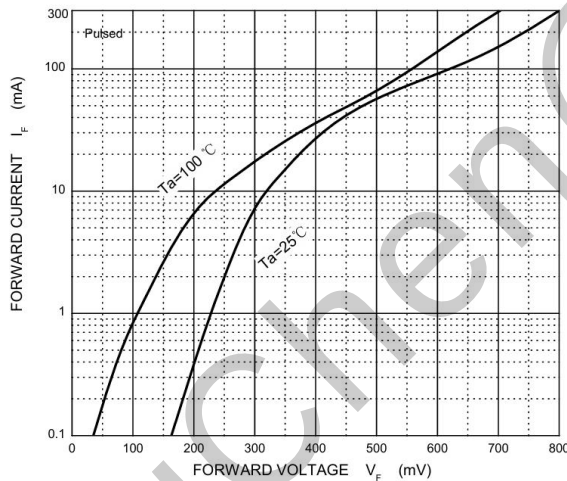
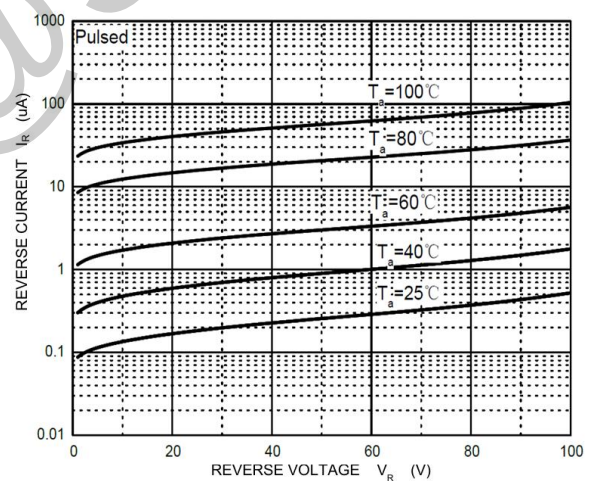
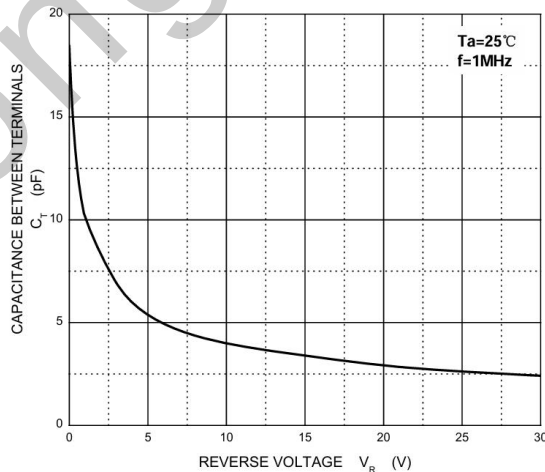
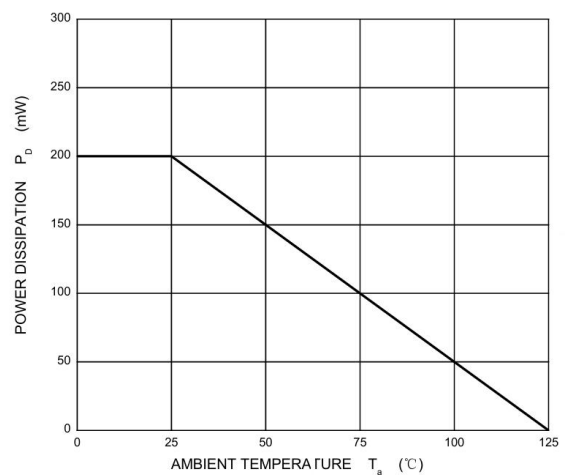
Product ID	Pack	Marking	Qty(PCS)
BAT46W	SOD-123	S9	3000

Absolute Maximum Ratings (TC=25°C unless otherwise noted)

Parameters	Symbols	Limits	Units
Maximum repetitive peak reverse voltage	VRRM	100	V
Reverse Voltage	VR	100	V
Maximum DC blocking voltage	VDC	100	V
Non-repetitive Peak Forward Current	IFM	350	mA
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	IFSM	0.75	A
Average Rectified Current	IO	150	mA
Power Dissipation	PD	200	mW
Typical junction capacitance (Note1)	CJ	12	pF
Typical thermal resistance (Note2)	RthJA	500	°C/W
Operating junction temperature range	TJ	-40~+125	°C
Storage temperature range	TSTG	-55~+150	°C

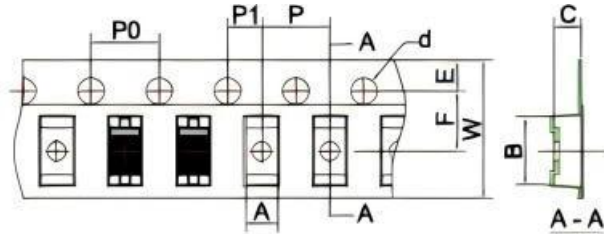
Electrical Characteristics (T_J=25°C , unless otherwise noted)

Parameter	Symbols	Test Conditions	Min	Type	Max	Units
Minimum reverse breakdown voltage	VR	IR=100μA	100	-	-	V
Maximum instantaneous forward voltage	VF	IF=0.1mA	-	-	0.25	V
		IF=10mA	-	-	0.45	
		IF=250mA	-	-	1.0	
Maximum DC reverse current at rated DC blocking voltage	IR	VR=75V	-	-	2.0	uA
Capacitance between terminals	CT	VR=0V, f=1MHz	-	-	20	pF

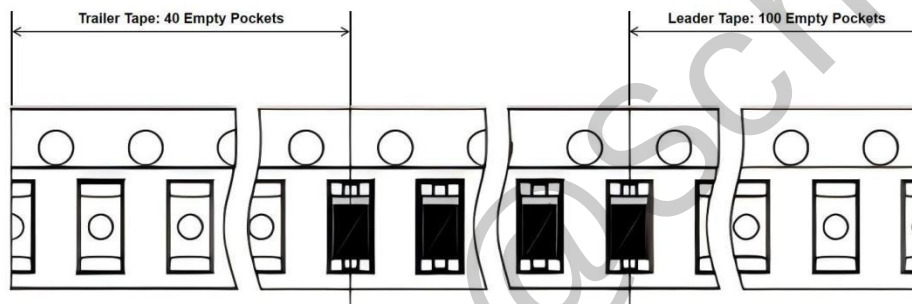
Typical Characteristics
Forward Characteristics

Reverse Characteristics

Capacitance Characteristics

Power Derating Curve


Package Information

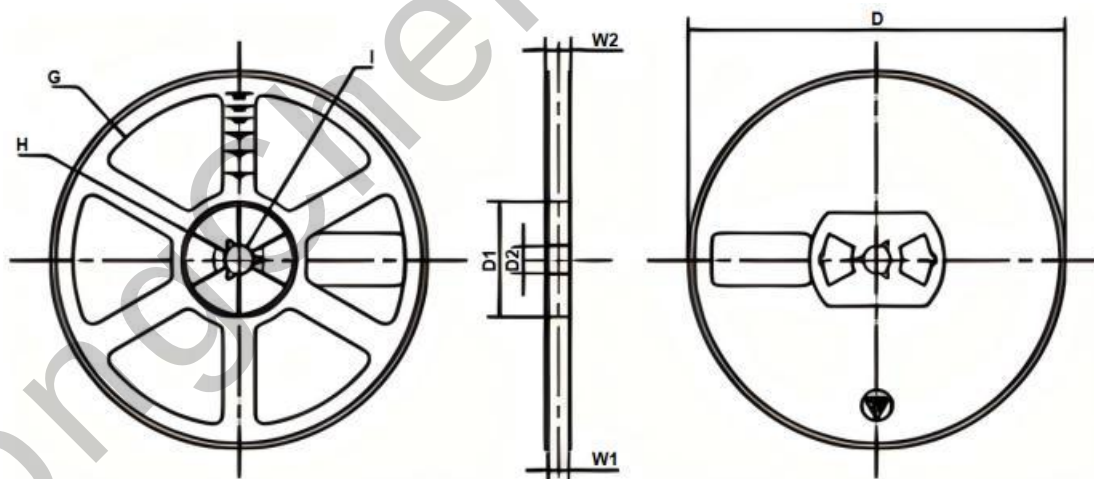
Carrier Dimension(mm)



Dimensions are in millimeter										
Pkg Type	A	B	C	d	E	F	P0	P	P1	W
SOD-123	1.85	3.94	1.57	1.55	1.75	3.50	4.00	4.00	2.00	8.00
(Tolerance)	±0.05	±0.05	±0.05	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	+0.06/-0.1



Reel Dimension(mm)



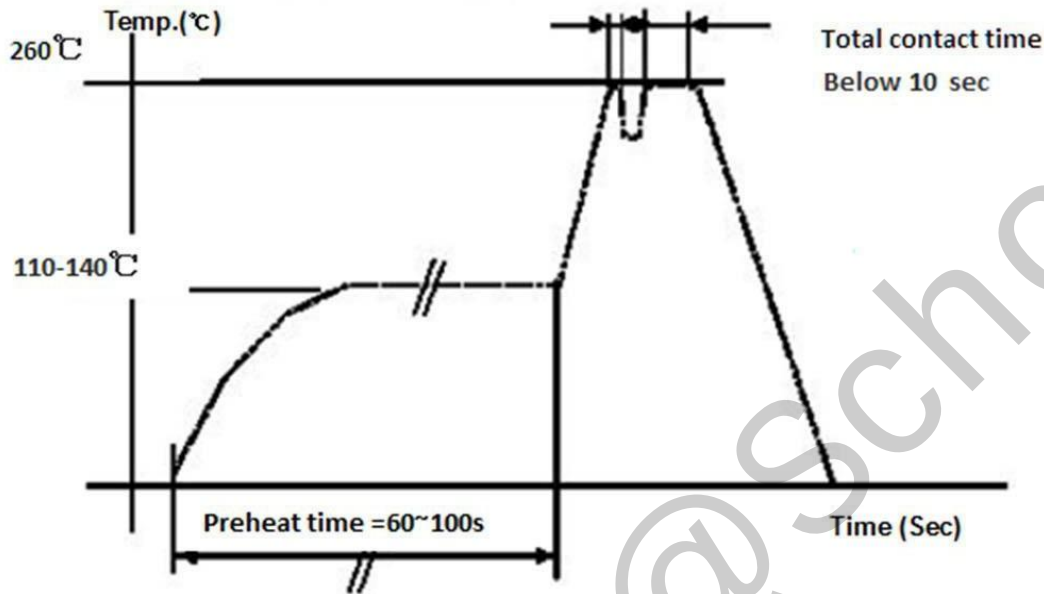
Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Φ178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30
Tolerance	±2	±1	±1	±1	±1	±1	±1	±1

Package Specifications

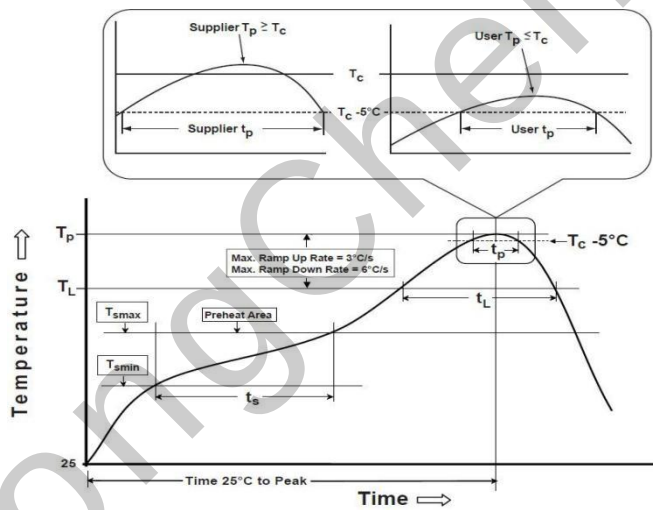
Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SOD123	7'	178	3	210*208*203	45	440*400*230	180

Recommended Soldering Profile for Rectifier Diodes (Pb Free)

a) Wave Soldering Profile



b) Reflow Soldering Profile (Pb Free Application), refer to IPC/JEDEC J-STD-020

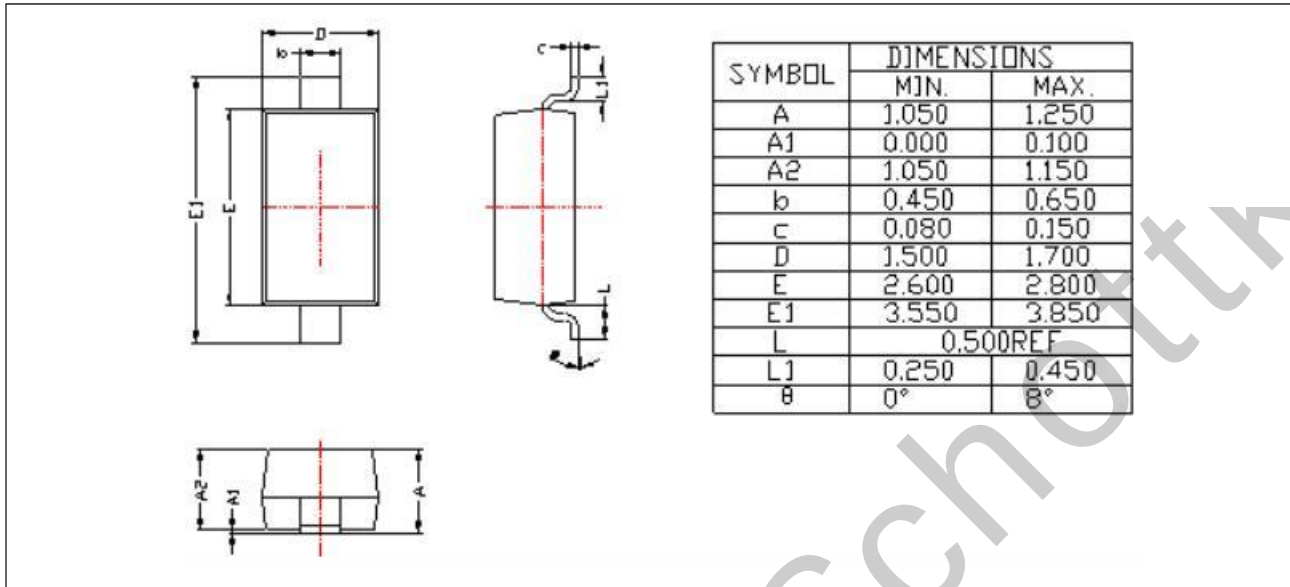


Preheat/Soak Temperature Min (Tsmin) Temperature Max (Tsmax) Time (ts) from (Tsmin to Tsmax)	50 °C 200 °C 60-120 seconds
Melting Point of Solder (Sn Ag Cu)	217°C
Ramp-up Rate to 217°C(Melting Point of Solder)	3°C/sec
Time at Temp. > 217°C (Melting Point of Solder)	60~150 Sec
Peak Temperature	255±5°C
Time within 5°C below Peak Temp.	20~40 Sec
Cooling Rate	6°C/sec (max)
Time from 25°C to Peak Temp.	8min (max)

c) Manual Soldering

When using an electric soldering iron for manual soldering, it is recommended that the temperature does not exceed 300°C and the soldering time is less than 10 seconds.

Package Dimensions



Pad Dimensions



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