

Schottky Barrier Diode with low forward voltage drop

PRIMARY CHARACTERISTICS

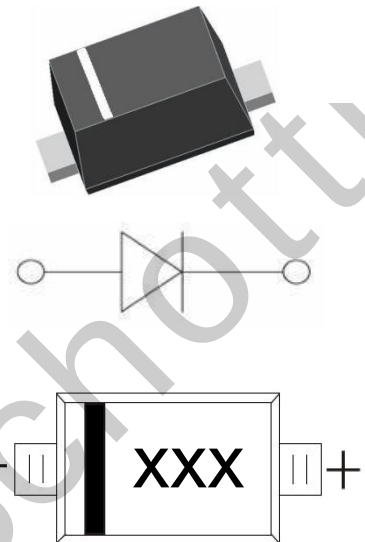
VRRM	IO	VF(type)	I FSM	Tj max
40V	350mA	0.6V	15A	125°C

Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Low Reverse Recovery Time
- Low Reverse Capacitance
- RoHS Compliant and Halogen Free

Mechanical Data

- SOD-523 Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any

SOD-523

Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
B5819WT	SOD-523	S4	3000

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

Parameters	Symbols	Limits	Units
Maximum repetitive peak reverse voltage	VRRM	40	V
Maximum RMS voltage	VRMS	28	V
Reverse Voltage	VR	40	V
Maximum DC blocking voltage	VDC	40	V
Non-repetitive Peak Forward Current	IFM	1000	mA
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	IFSM	15	A
Average Rectified Current	IO	350	mA
Power Dissipation	PD	150	mW
Typical junction capacitance (Note1)	CJ	50	pF
Typical thermal resistance (Note2)	RthJA	667	°C/W
Operating junction temperature range	TJ	125	°C
Storage temperature range	TSTG	-55~+150	°C

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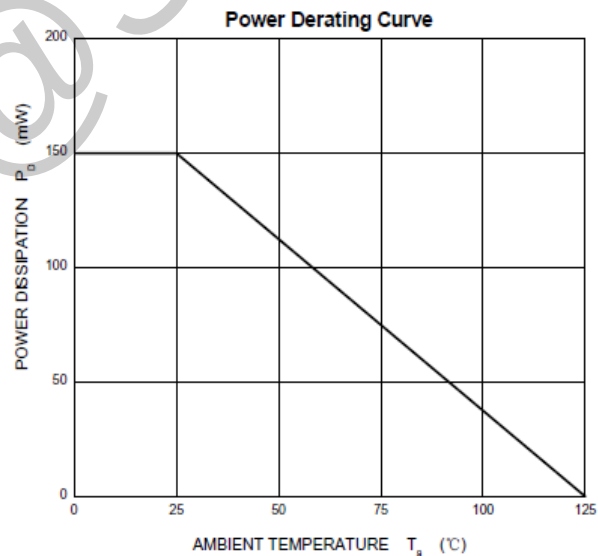
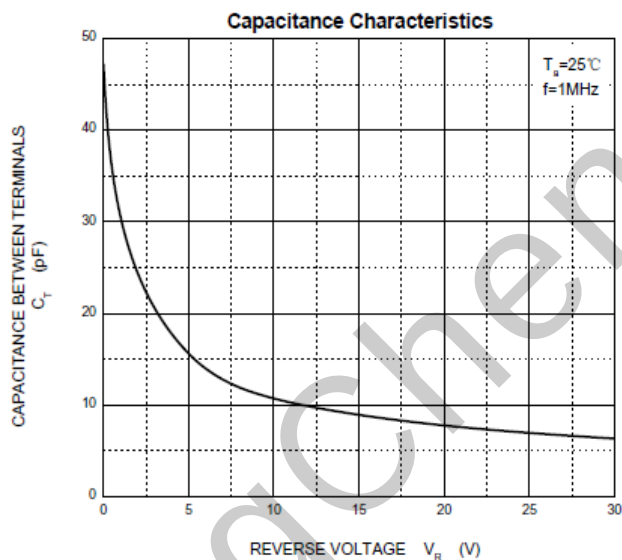
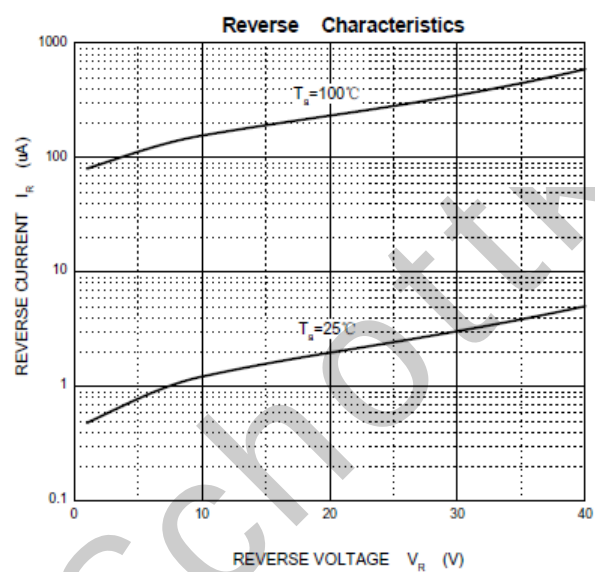
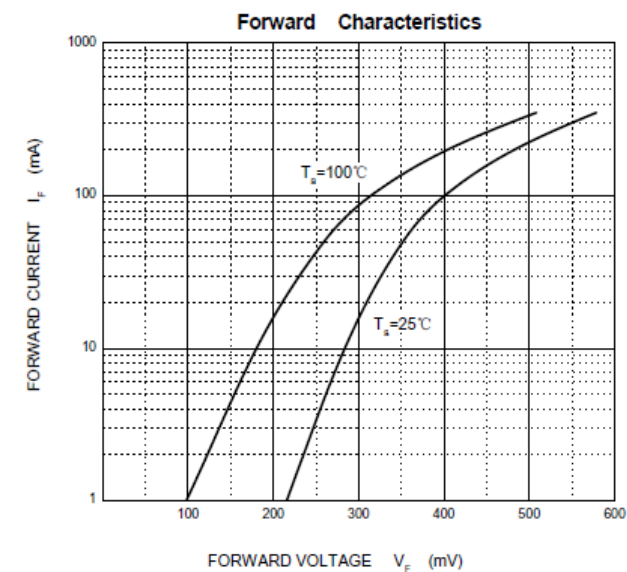
Electrical Characteristics (T_J=25°C , unless otherwise noted)

Parameter	Symbols	Test Conditions	Min	Type	Max	Units
Minimum reverse breakdown voltage	VR	IR=100μA	40	-	-	V
Maximum instantaneous forward voltage	VF	IF=1mA	-	-	0.27	V
		IF=25mA	-	-	0.32	
		IF=50mA	-	-	0.37	
		IF=200mA	-	-	0.60	
Maximum DC reverse current at rated DC blocking voltage	IR	VR=30V	-	-	5.0	uA
Reverse Recovery Time	TRR	IF=IR=200mA, Irr=0.1 × IR, RL=100 Ω	-	-	10	ns
Capacitance between terminals	CT	VR=4V, f=1MHz	-	-	50	pF



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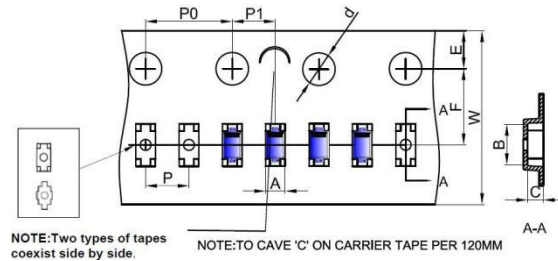
RATING AND CHARACTERISTIC CURVES



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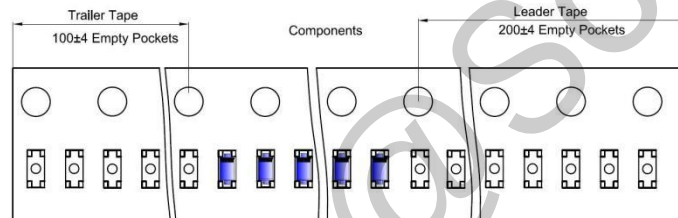
Package Information

Carrier Dimension(mm)

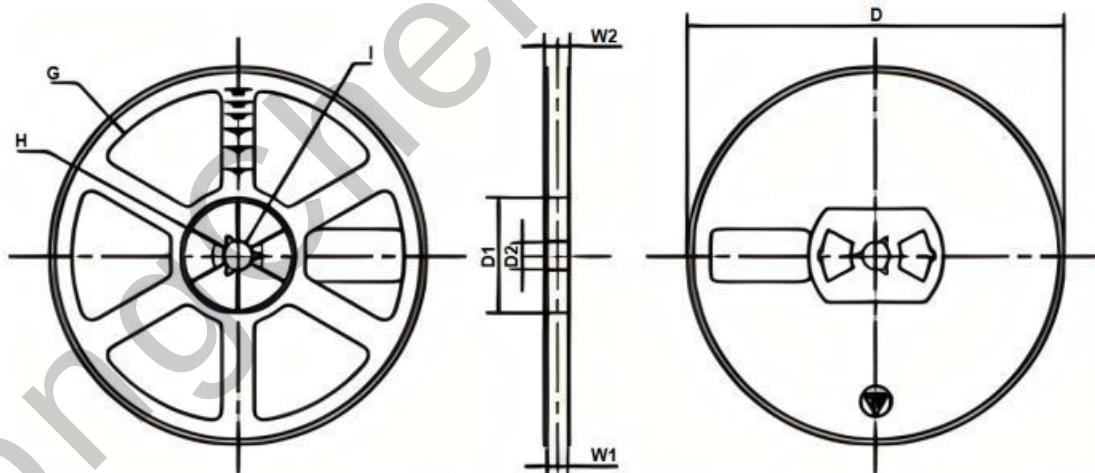


Dimensions are in millimeter

Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOD-523	0.9	1.94	0.73	Ø1.50	1.75	3.50	4.00	2.00	2.00	8.00



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

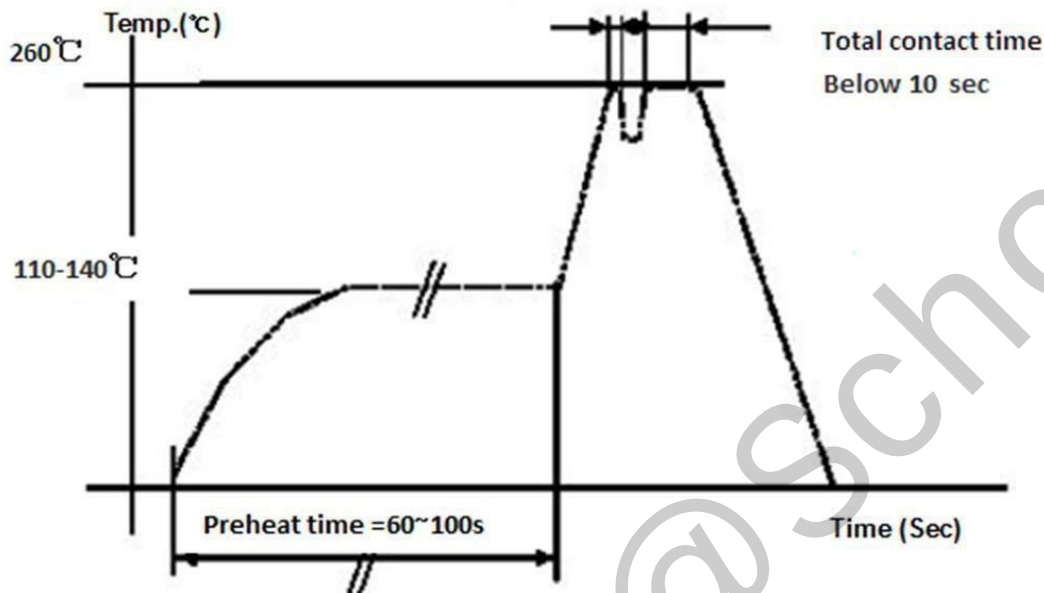
Package Specifications

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SOD523	7'	178	3	210*208*203	45	440*400*230	180

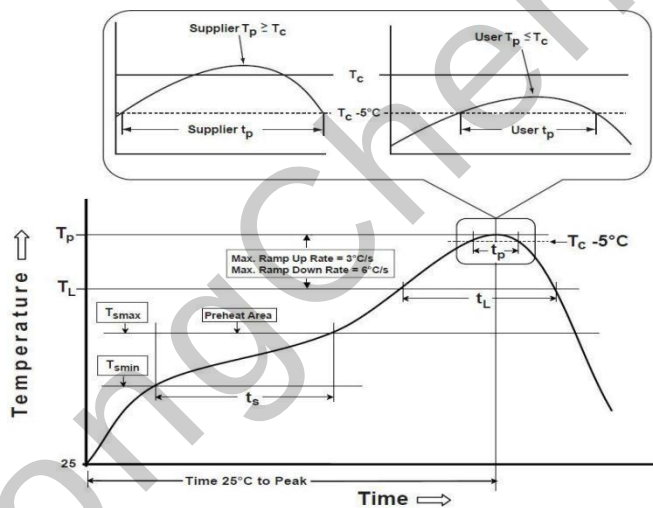
RoHS Compliant and Halogen Free

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



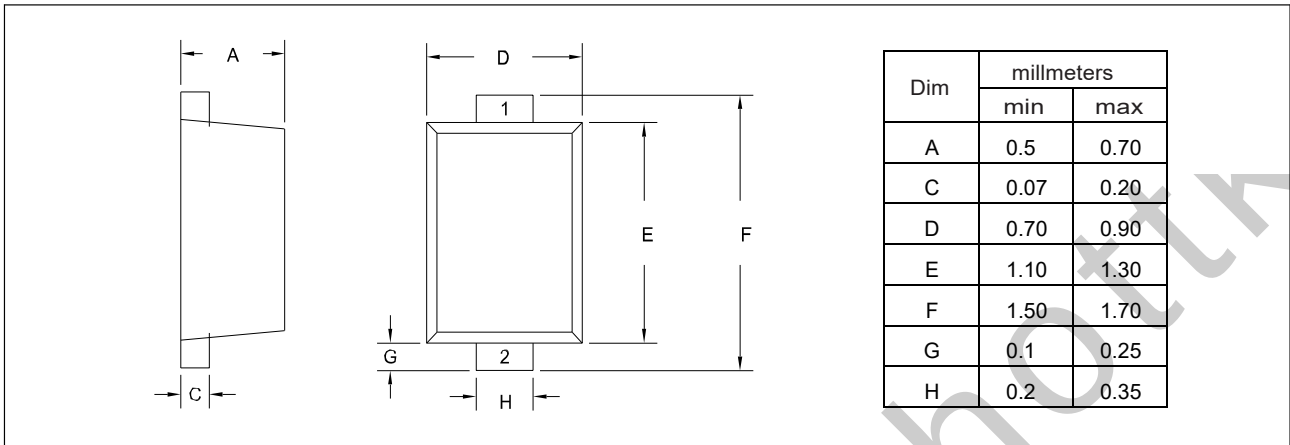
Preheat/Soak Temperature Min (T _{smin}) Temperature Max (T _{smax}) Time (ts) from (T _{smin} to T _{smax})	50 °C 200 °C 60-120 seconds
Melting Point of Solder (Sn Ag Cu)	217°C
Ramp-up Rate to 217°C(Melting Point of Solder)	3°C/sec
Time at Temp.>217°C (Melting Point of Solder)	60~150 Sec
Peak Temperature	255±5°C
Time within 5°Cbelow 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.

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Package Dimensions



Pad Dimensions



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