

General Characteristics



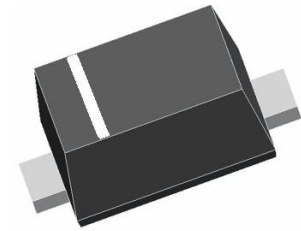
V_R	I_O	$V_{F(Max)}$	I_{FSM}	T_{jMax}
75V	150mA	1.25V@ $I_F=150mA$	2A	150°C

Features

- SOD523 Package
- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 3
- High temperature soldering guaranteed 260°C/10seconds at terminals

Applications

- Extreme fast switches
- Automotive



Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
1N4148WT	SOD-523	T4	3000

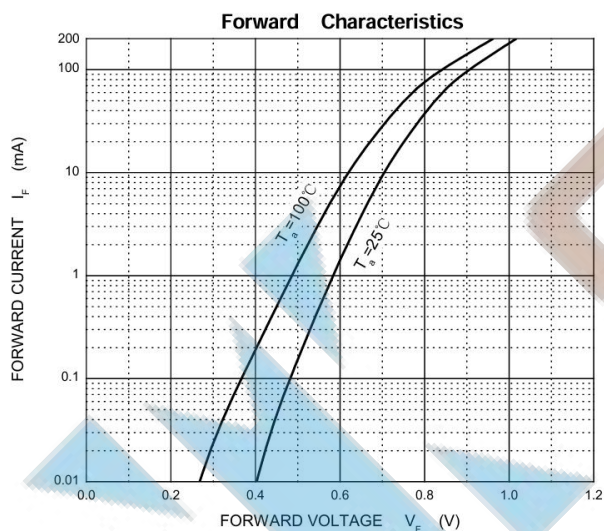
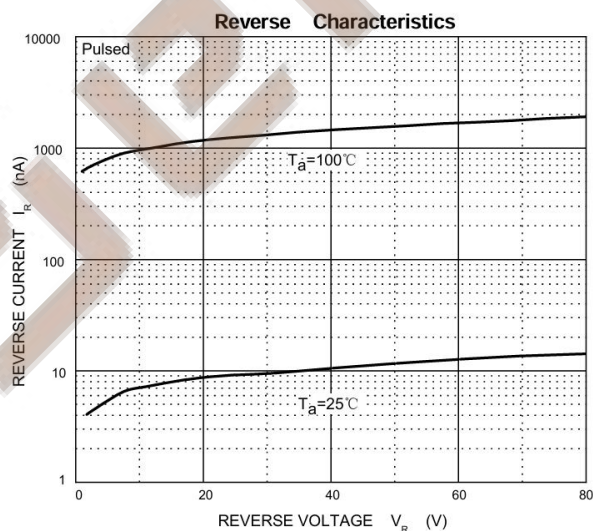
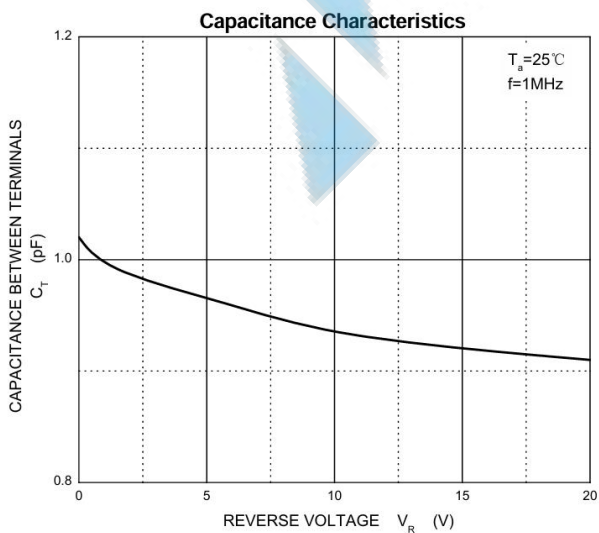
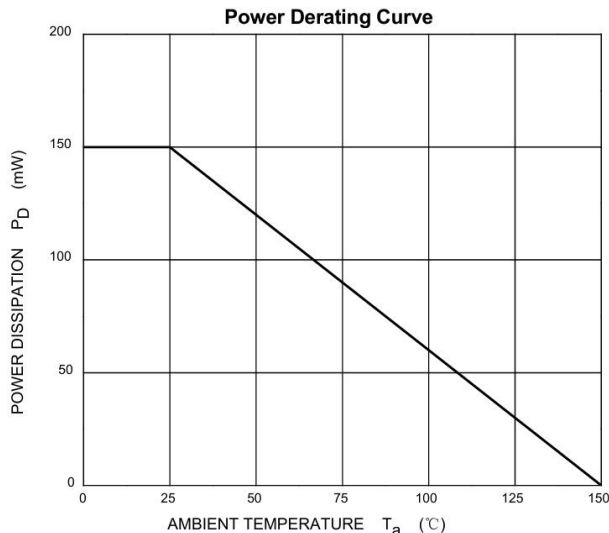
Absolute Maximum Ratings (Ta=25°C unless otherwise noted)

Parameter	Symbols	Value	Units
Non-Repetitive Peak Reverse Voltage	VRM	100	V
Reverse Voltage	VR	75	V
Peak Repetitive Reverse Voltage	VRRM		
Working Peak Reverse Voltage	VRWM		
RMS Reverse Voltage	VR(RMS)	53	V
Average Rectified Output Current	IO	150	mA
Forward Continuous Current	IFM	300	mA
Non-Repetitive Peak Forward Surge Current @t=8.3ms; TA=25°C	IFSM	2.0	A
Power Dissipation	Pd	150	mW
Operating junction temperature	TJ	150	°C
Storage temperature range	TSTG	-55-+150	°C
Thermal Resistance from Junction to Ambient	RθJA	833	°C/W

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

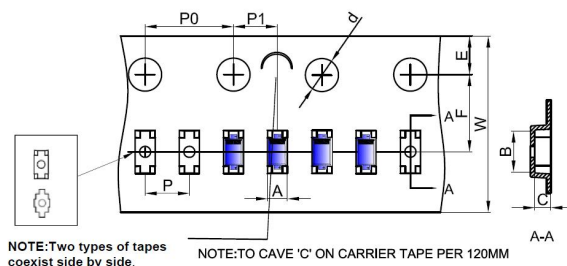
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse Voltage	V(BR)	IR=1uA	75			V
Reverse Leakage Current	IR	VR=20V			25	nA
		VR=75V			1	uA
Forward Voltage	VF	IF=1mA			0.715	V
		IF=10mA			0.855	
		IF=50 mA			1.00	
		IF=150mA			1.25	
Reverse Recovery Time	TRR	IF= IR=10mA, RL=100Ω, IRR=0.1 X IR			4	ns
Total capacitance	CT	VR=0V, f=1MHZ			2	pF

Typical Characteristics

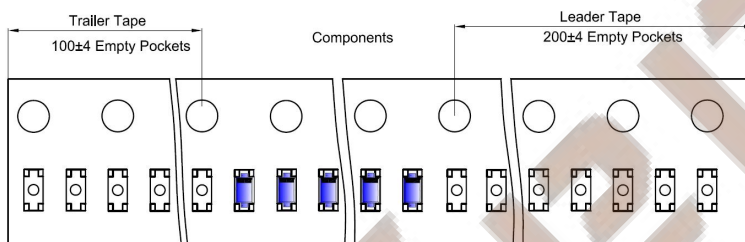


Package Information

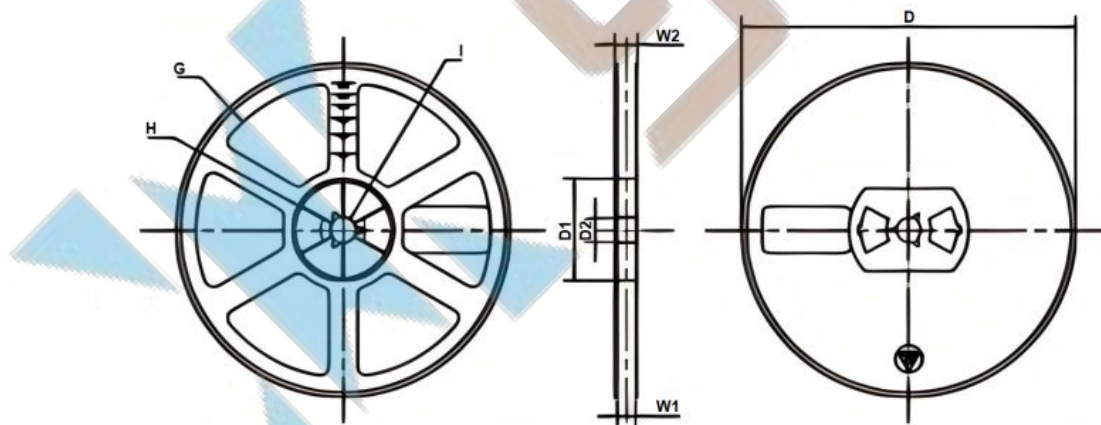
Carrier Dimension(mm)



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)



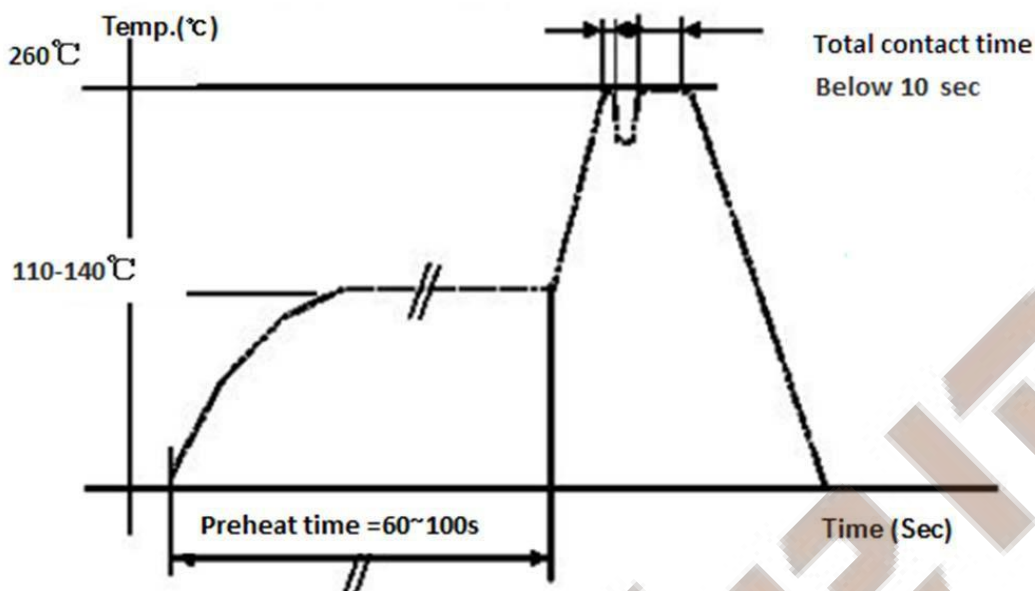
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Φ178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30
Tolerance	±2	±1	±1	±1	±1	±1	±1	±1

Package Specifications

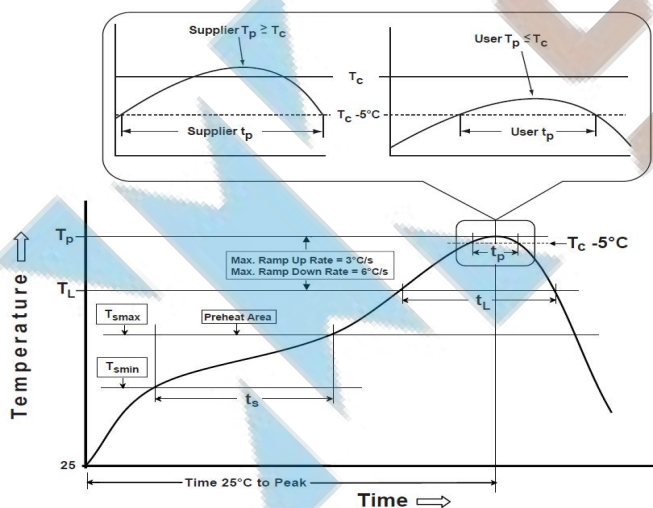
Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SOD523	7'	178	3	210*208*203	45	440*400*230	180

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

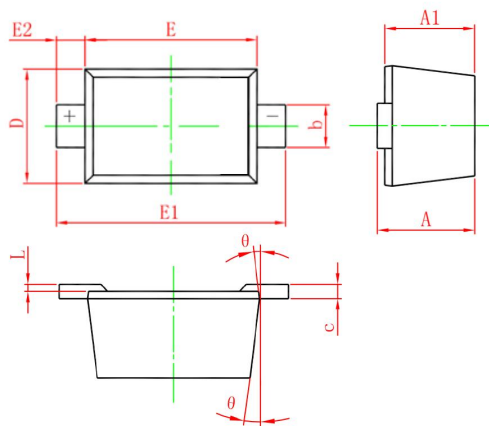


Preheat/Soak Temperature Min (Tsmin) Temperature Max (Tsmax) Time (ts) from (Tsmin to Tsmax)	50 °C 200 °C 60-120 seconds
Melting Point of Solder (Sn Ag Cu)	217°C
Ramp-up Rate to 217°C(Melting Point of Solder)	3°C/sec
Time at Temp.>217°C (Melting Point of Solder)	60~150 Sec
Peak Temperature	255±5°C
Time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

c) Manual Soldering

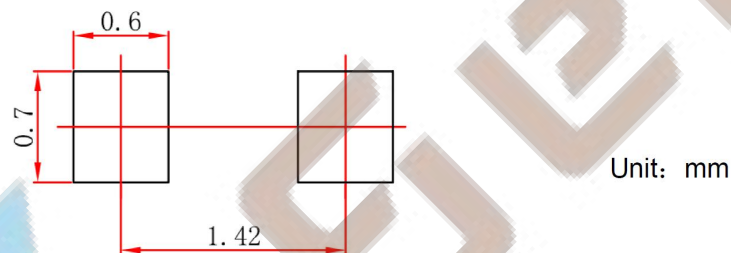
When using an electric soldering iron for manual soldering, it is recommended that the temperature does not exceed 300°C and the soldering time is less than 10 seconds.

Package Mechanical Data



SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.51	--	0.77	0.020	--	0.031
A1	0.50	--	0.70	0.020	--	0.028
b	0.25	--	0.35	0.010	--	0.014
c	0.08	--	0.15	0.003	--	0.006
D	0.75	--	0.85	0.030	--	0.033
E	1.10	--	1.30	0.043	--	0.051
E1	1.50	--	1.70	0.059	--	0.067
E2	0.20REF			0.008REF		
L	0.01	--	0.07	0.001	--	0.003
Θ	7° REF			7° REF		

Suggested Pad Layout



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