

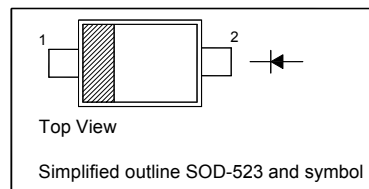


Features

- Fast switching speed
- Ultra-small surface mount package
- For general purpose switching applications
- High conductance
- ROHS compliant
- MSL: 3

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

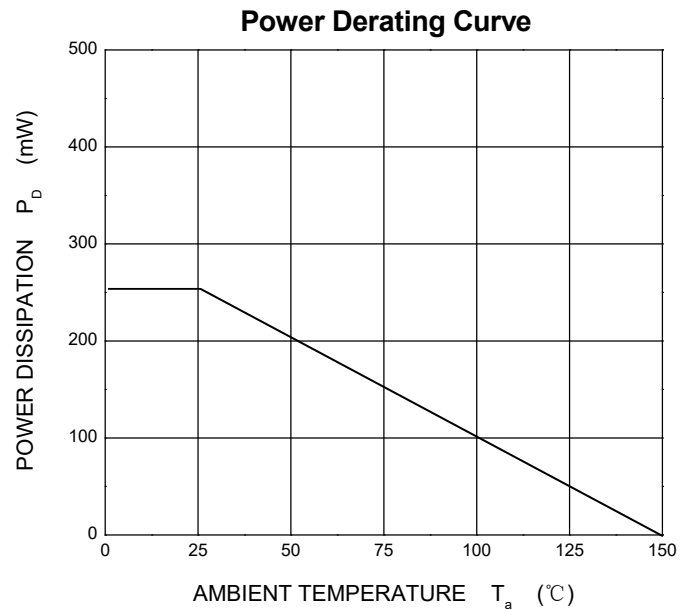
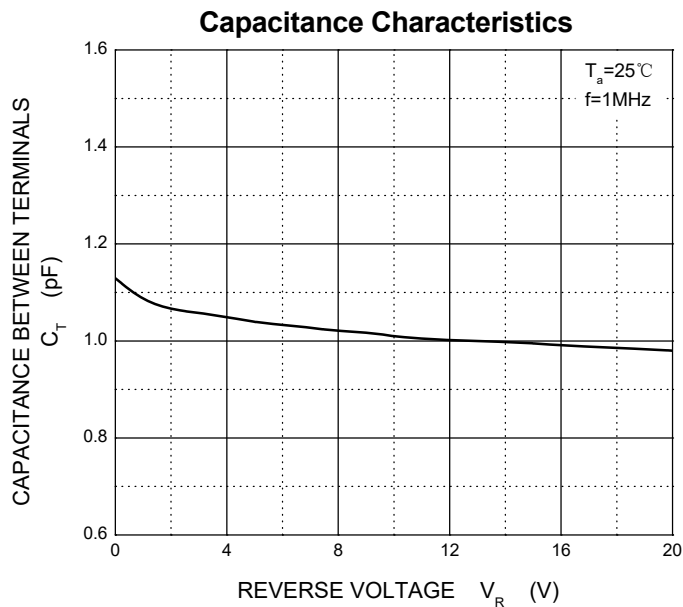
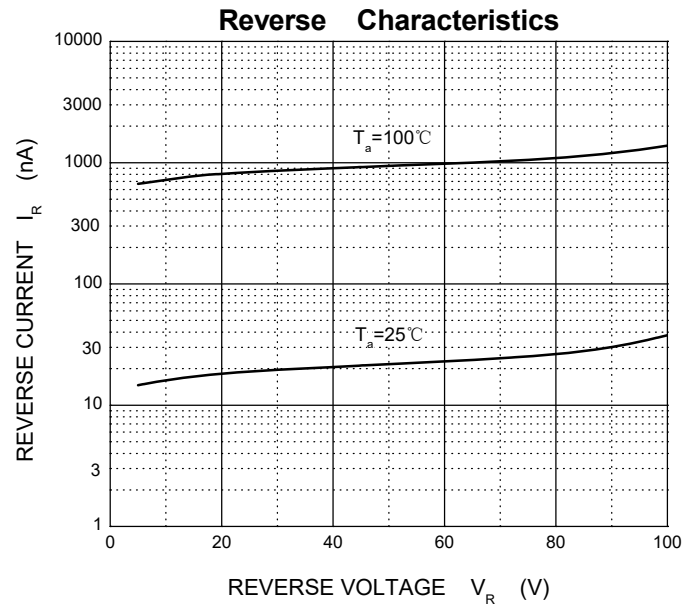
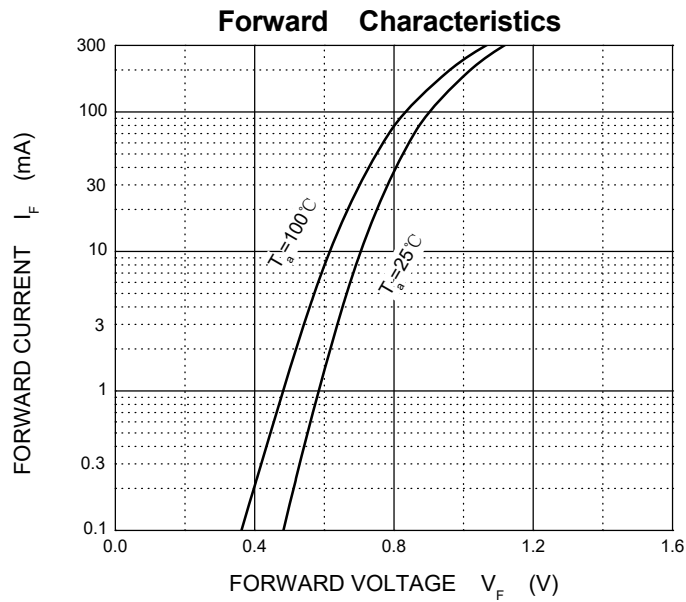
Parameter	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Reverse Voltage	V_R	100	V
Average Rectified Forward Current	$I_{F(AV)}$	125	mA
Forward Continuous Current	I_{FM}	250	mA
Non-repetitive Peak Forward Surge Current at $t = 1 \mu\text{s}$ at $t = 100 \text{ ms}$	I_{FSM}	2 1	A
Power Dissipation	P_{tot}	200	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	833	$^\circ\text{C/W}$
Operating Temperature Range	T_j	- 65 to + 150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 150	$^\circ\text{C}$

Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100 \mu\text{A}$	$V_{(BR)R}$	80	-	V
Forward Voltage at $I_F = 1 \text{ mA}$ at $I_F = 10 \text{ mA}$ at $I_F = 50 \text{ mA}$ at $I_F = 150 \text{ mA}$	V_F	- - - -	0.715 0.855 1 1.25	V
Peak Reverse Current at $V_R = 75 \text{ V}$ at $V_R = 20 \text{ V}$ at $V_R = 75 \text{ V}$, $T_J = 150^\circ\text{C}$ at $V_R = 25 \text{ V}$, $T_J = 150^\circ\text{C}$	I_R	- - - -	1 25 50 30	μA nA μA μA
Total Capacitance at $V_R = 0 \text{ V}$, $f = 1 \text{ MHz}$	C_T	-	2	pF
Reverse Recovery Time at $I_{rr} = 0.1 \times I_R$, $I_F = I_R = 10 \text{ mA}$, $R_L = 100 \Omega$	t_{rr}	-	4	ns



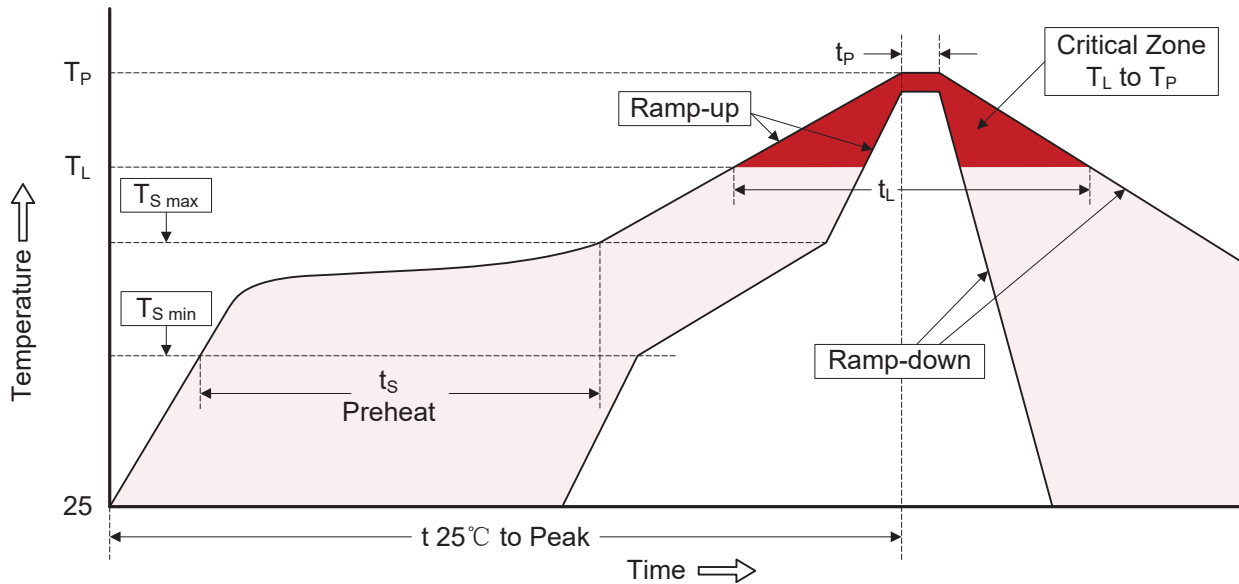
Typical Characteristics





Recommended Soldering Conditions

Reflow Soldering



Recommended Conditions

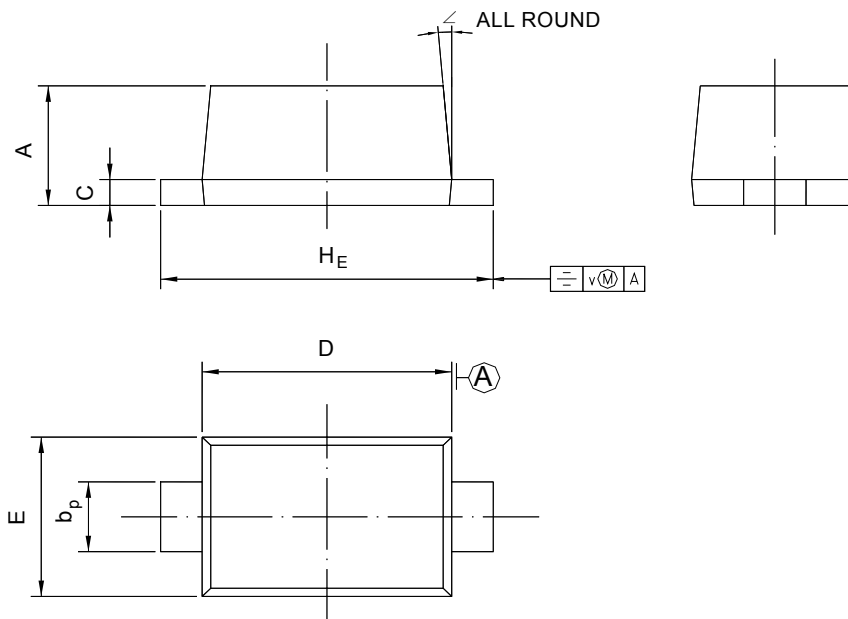
Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3°C/second max.
Preheat -Temperature Min ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max) (t_s)	150°C 200°C 60-180 seconds
$T_{S\ max}$ to T_L -Ramp-up Rate	3°C/second max.
Time maintained above: -Temperature (T_L) -Time (t_L)	217°C 60-150 seconds
Peak Temperature (T_P)	260°C
Time within 5°C of actual Peak Temperature (t_P)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.



PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-523

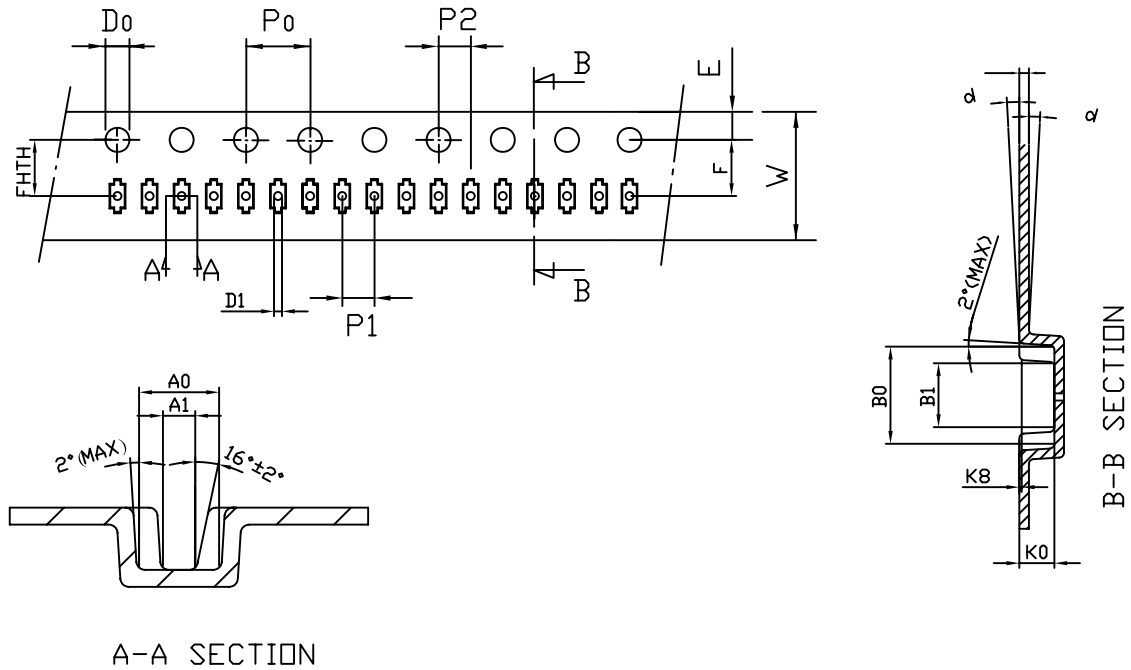


UNIT	A	b _p	C	D	E	E	V	∠
mm	0.70 0.60	0.4 0.3	0.135 0.100	1.25 1.15	0.85 0.75	1.7 1.5	0.1	5°

Marking Codes



Tape and Reel Specification



unit:mm

symbol	A0	B0	K0	P0	P1	P2	A1	T
Spec	0.90±0.05	1.95±0.05	0.73±0.05	4.0±0.10	2.0±0.05	2.0±0.05	0.39±0.05	0.20±0.02
symbol	E	F	D0	D1	B2	W	10P0	K8
Spec	1.75±0.10	3.50±0.05	1.50 ^{+0.10} ₋₀	0.50±0.05	1.40±0.05	8.0 ^{+0.3} _{-0.1}	40.0±0.10	0.15MAX
symbol	FHTH							
Spec	3.50±0.05							