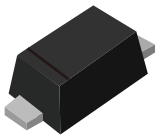
FEATURES

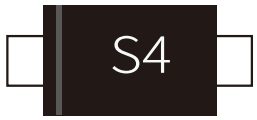
- High Current Capability
- Low Forward Voltage Drop



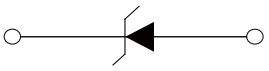
SOD-523

MECHANICAL DATA

- SOD-523 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Mounting Position: Any



Marking



Schematic Symbol

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS (T_A=25°C)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	40	V
RMS Reverse Voltage	$V_{R(RMS)}$	28	V
Maximum DC Blocking Voltage	V_{DC}	40	V
Maximum Average Forward Rectified Current	I_{FM}	350	mA
Peak Forward Surge Current 8.3ms Single Half Sine-wave	I_{FSM}	2	A
Power Dissipation	P_D	150	mW
Typical Thermal Resistance	$R_{\theta JA}$	667	°C/W
Operating Junction Temperature	T_J	125	°C
Storage Temperature Range	T_{STG}	-50-+150	°C

ELECTRICAL CHARACTERISTICS(T_A=25°C)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Maximum Forward Voltage	V_F	I_F=1mA		0.27		V
		I_F=5mA		0.32		V
		I_F=20mA			0.37	V
		I_F=200mA			0.60	V
Reverse Breakdown Voltage	V_R	I_R=100μA	40			V
Reverse Leakage Current	I_R	V_R=30V			5	μA
		V_R=20V			2	μA
		V_R=10V			1	μA
Total Capacitance	C_{tot}	V_R=0V, f =1MHz		50		pF
Reverse Recovery Time	T_{RR}	I_F = I_R=200mA,R_L=100Ω I_{RR}=0.1×I_R		10		nS

CHARACTERISTIC CURVES

Fig.1 Forward Characteristics

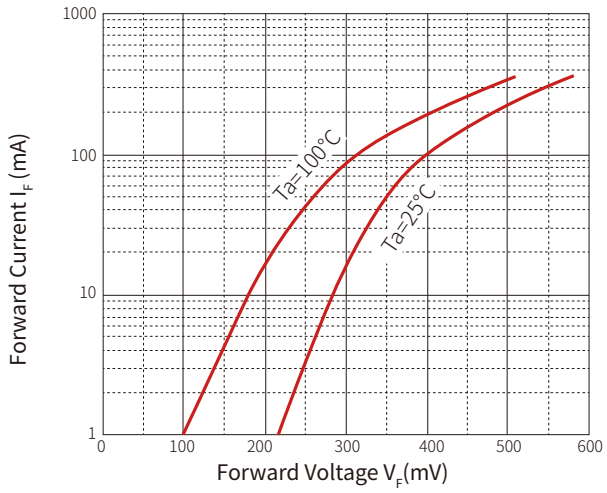


Fig.2 Reverse Characteristics

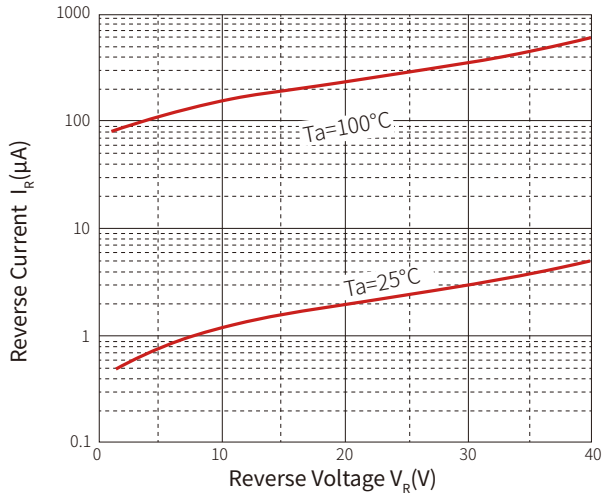


Fig.3 Capacitance Characteristics

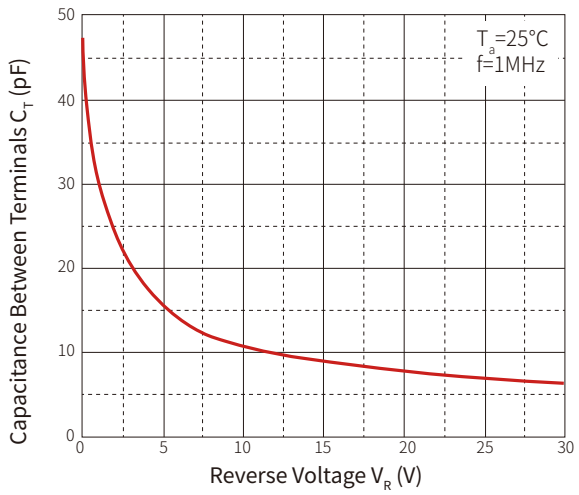
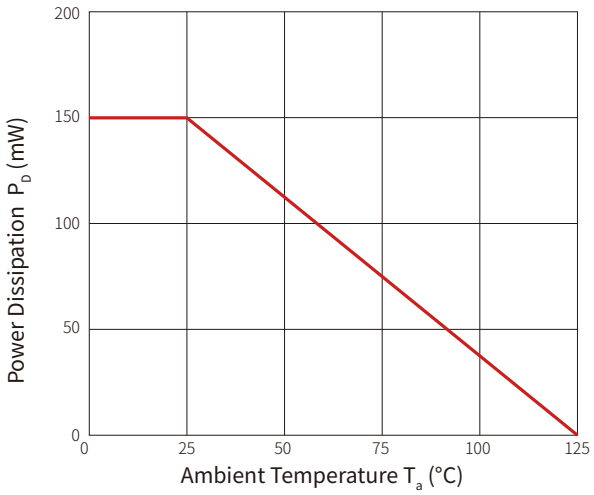
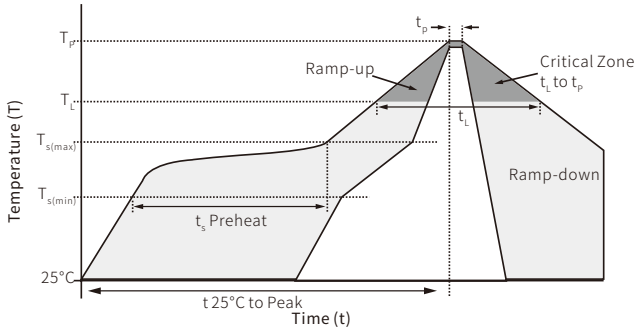


Fig.4 Power Derating Curve

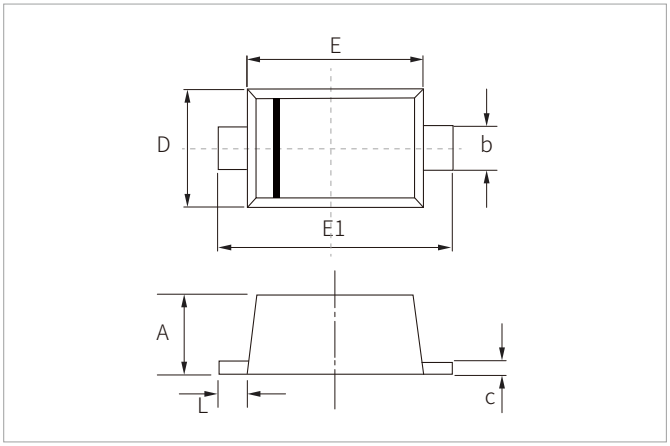


SOLDERING PARAMETERS

Reflow Condition		Lead–free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak		3°C/second max
$T_{S(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	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 (T_P)		8 minutes max.
Do not exceed		260°C

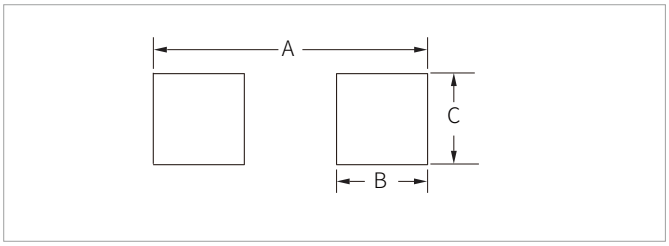


SOD-523 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.50	0.80	0.020	0.031
b	0.25	0.35	0.010	0.014
c	0.07	0.20	0.003	0.008
D	0.70	0.90	0.028	0.035
E	1.10	1.30	0.043	0.051
E1	1.50	1.70	0.059	0.067
L	0.15	0.25	0.006	0.010

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
	Min.	Min.
A	2.00	0.0787
B	0.60	0.0236
C	0.70	0.0276

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SD103AX	SOD-523	3000PCS	7”

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