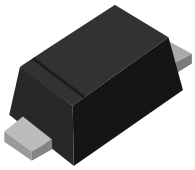
FEATURES

- Fast Switching Device (TRR <50nS)
- Power Dissipation of 150mW
- High Stability and High Reliability
- Low reverse leakage

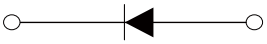


SOD-523

Marking

MECHANICAL DATA

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



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
Reverse Voltage	V_R	250	V
Peak Reverse Voltage	V_{RM}	250	V
Power Dissipation	Pd	150	mW
Thermal Resistance From Junction to Ambient	$R_{\theta JA}$	833	°C/W
Average Rectified Current	I_o	200	mA
Non-repetitive Peak Forward Current	I_{FM}	400	mA
Peak Forward Surge Current @tp=1ms; T_A=25°C	I_{FSM}	1.0	A
Operating Junction Temperature Range	T_J	150	°C
Storage Temperature Range	T_{STG}	-65 to 150	°C

ELECTRICAL CHARACTERISTICS(T_A=25°C)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Reverse Voltage	V_{RB}	I_B=100μA	250			V
Reverse Leakage Current	I_R	V_R=200V			0.1	μA
Forward Voltage	V_F	I_F=100mA			1.00	V
		I_F=200mA			1.25	V
Capacitance	C_J	V_R=0V, f=1MHz			5	pF
Reverse Recovery Time	t_{rr}	I_F= 30mA, I_R=30mA R_L=100Ω ,I_{RR}=3mA			50	nS

CHARACTERISTIC CURVES

Fig.1 Forward Characteristics

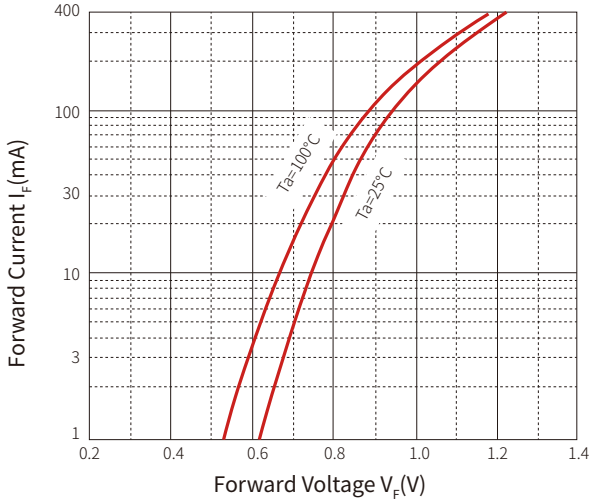


Fig.2 Reverse Characteristics

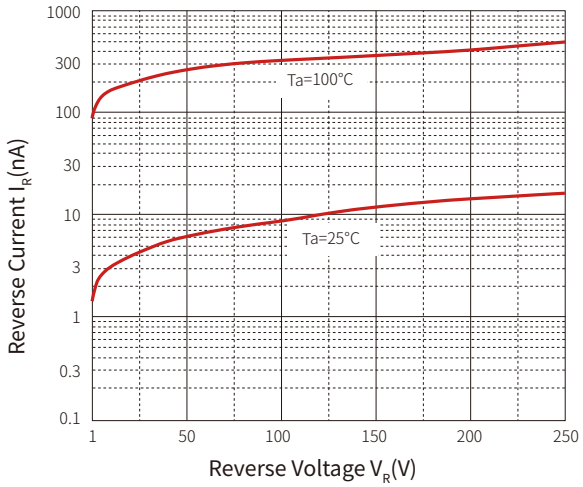


Fig.3 Capacitance Characteristics

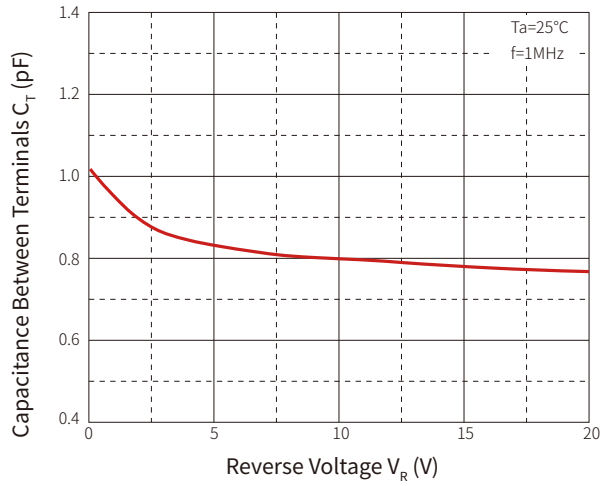
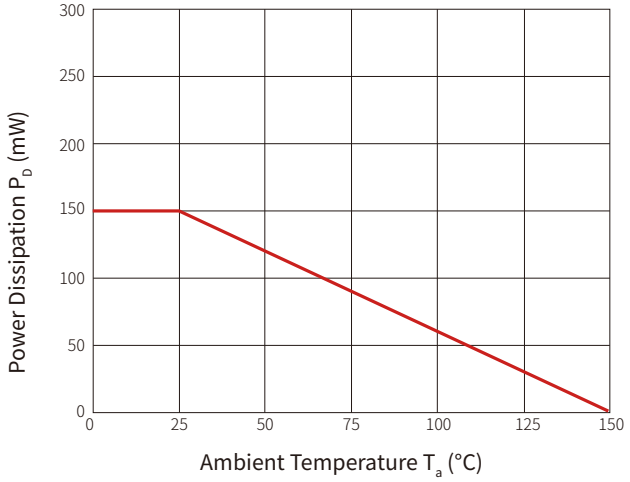
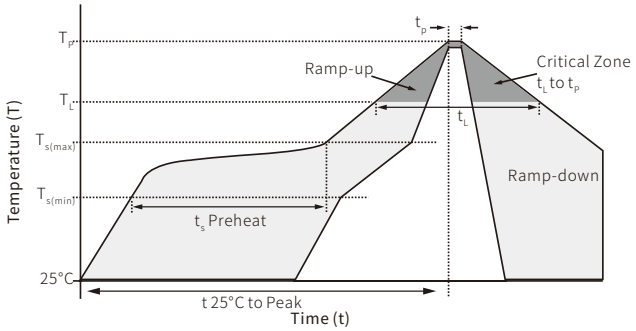


Fig.4 Power Derating Curve

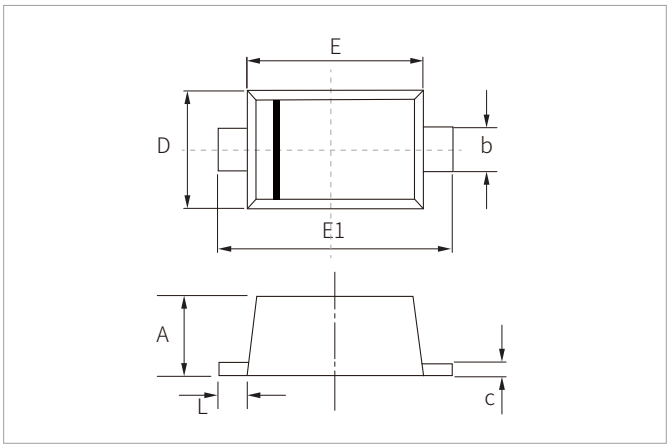


SOLDERING PARAMETERS

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

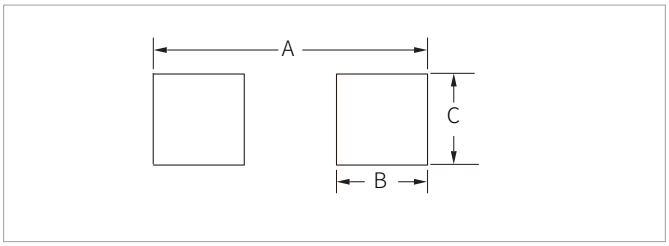


SOD-523 PACKAGE INFORMATION



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
BAV21WT	SOD-523	3000PCS	7”

Headquarters
No.3387 Shendu Road
Pujiang I&E Park
Minhang Shanghai China
201000

Hotline
400-021-5756

Web
Https://www.semiware.com

Sales Center
Tel: 86-21-3463-7458
Email: sales18@semiware.com

Customer Service
Tel: 86-21-5484-1001
Email: sales17@semiware.com

Technical Support
Tel: 86-21-3463-7654
Email: fae01@semiware.com

Complaint & Suggestions
Tel: 86-21-3463-7172
Ext: 8868
Email: cs03@semiware.com

By QR Code
Website
Wechat

To find your local partner within Semiware' s global website: www.semiware.com