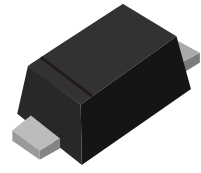


FEATURES

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



SOD-523



Marking



Schematic Symbol

MECHANICAL DATA

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

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 _{θJA}	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($T_A=25^\circ\text{C}$)

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

CHARACTERISTIC CURVES

Fig.1 Forward Characteristics

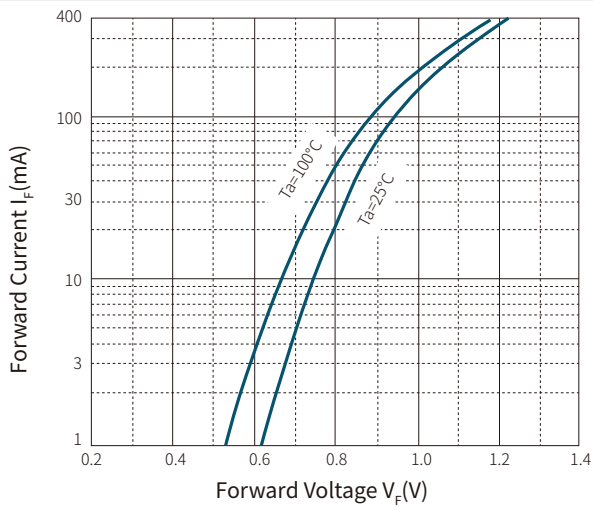


Fig.2 Reverse Characteristics

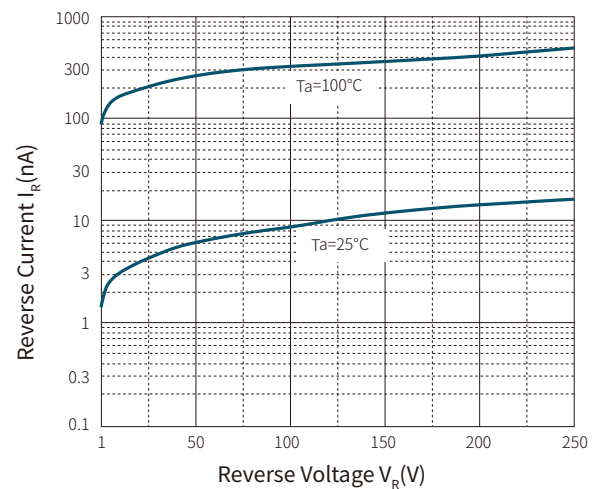
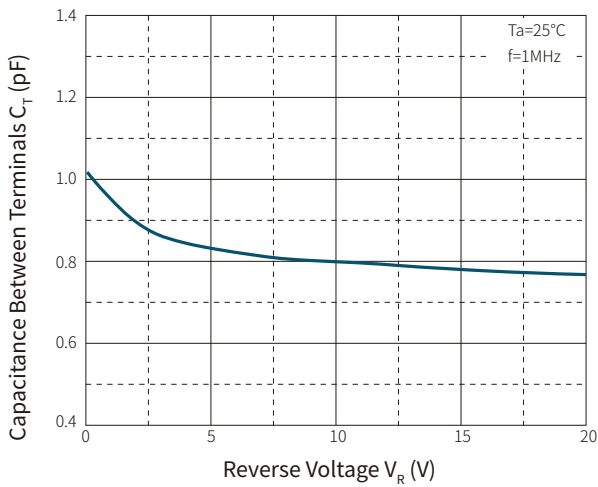
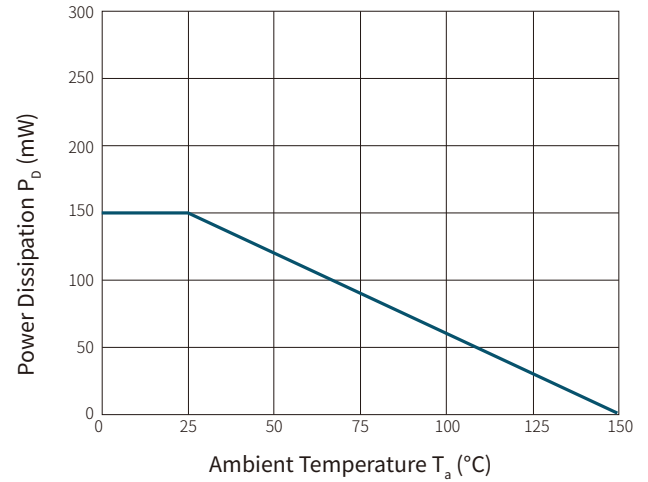
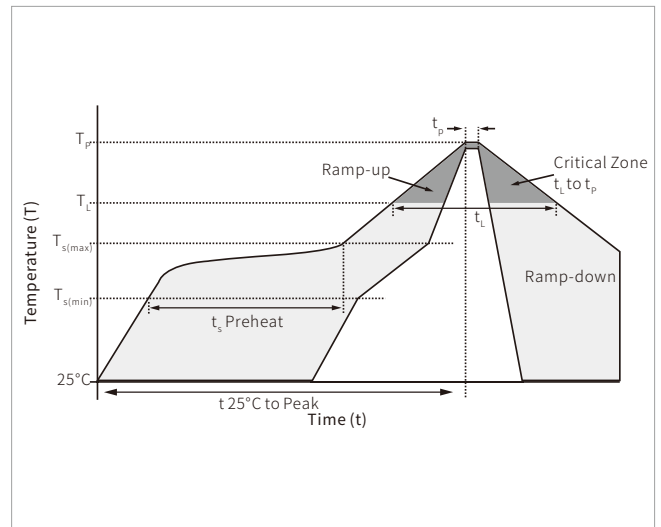


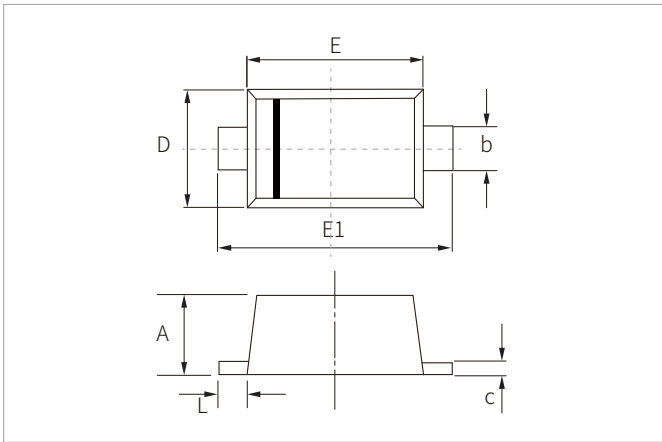
Fig.3 Capacitance Characteristics

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

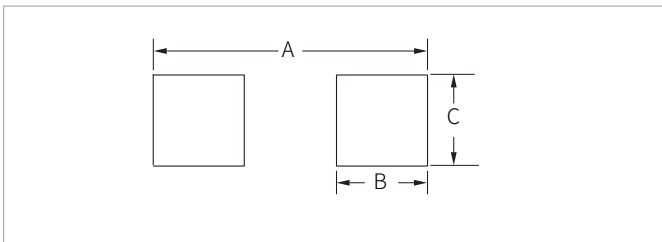


SOD-523 PACKAGE INFORMATION



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"

To find your local partner within Semiwell' s website : www.semiwell.com

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