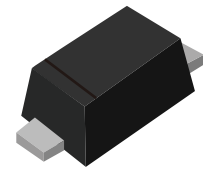


FEATURES

- | Low Forward Voltage Drop

- | Cathode Band / Device marking

- | Surface Mount Package Ideally Suited for Automatic Insertion



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
Repetitive Peak Reverse Voltage	V _{RRM}	40	V
Average Forward Rectified Current	I _{F(AV)}	1	A
Non-Repetitive Peak Forward Surge Current (@t=8..3ms)	I _{FSM}	6	A
Operating junction temperature range	T _J	125	°C
Storage temperature range	T _{STG}	-50 to 125	°C

ELECTRICAL CHARACTERISTICS($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Reverse breakdown voltage	V_{BR}	$I_R=0.5\text{mA}$	40			V
Reverse current	I_R	$V_R=40\text{V}$			100	μA
Forward Voltage	V_F	$I_F=0.3\text{mA}$			0.5	V
		$I_F=1\text{A}$			0.68	
Capacitance	C_J	$V_R=0\text{V}$, $f=1\text{MHz}$			100	pF

CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

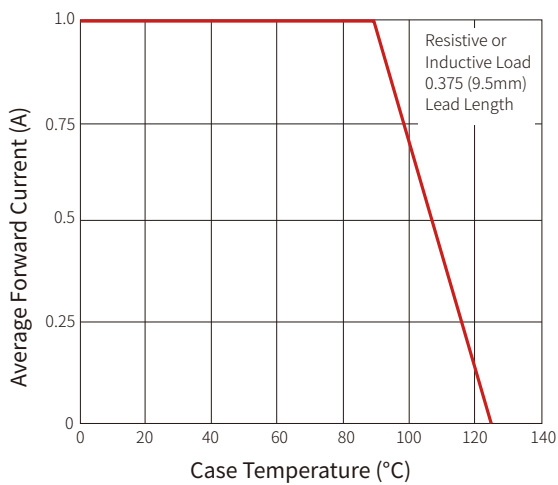


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

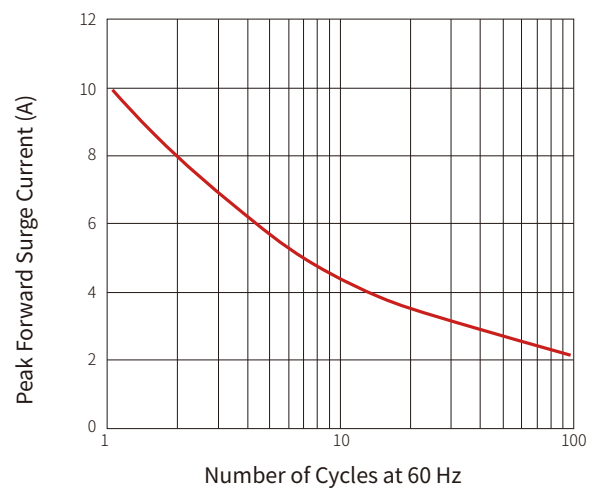


Fig.3 Typical Instantaneous Forward Characteristics

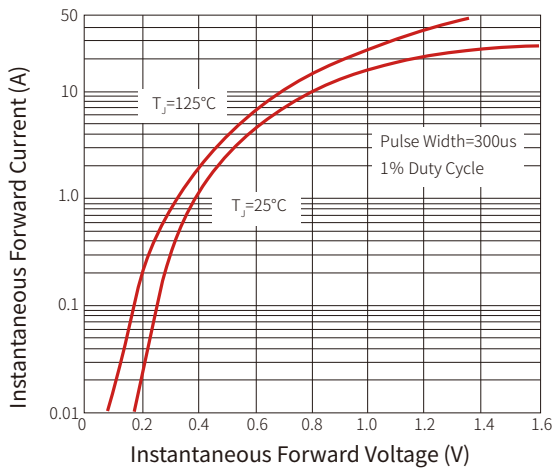


Fig.4 Typical Reverse Characteristics

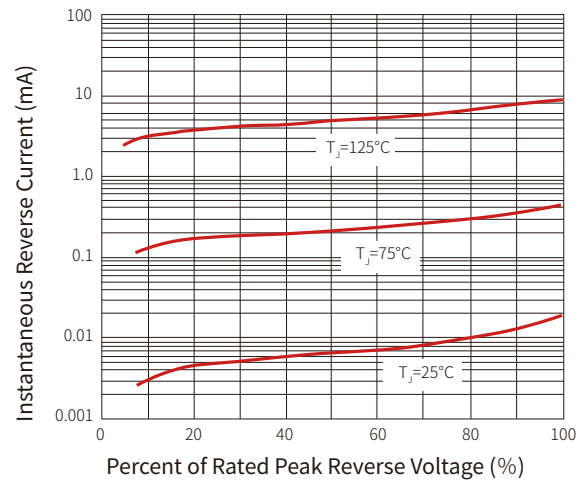


Fig.5 Typical Junction Capacitance

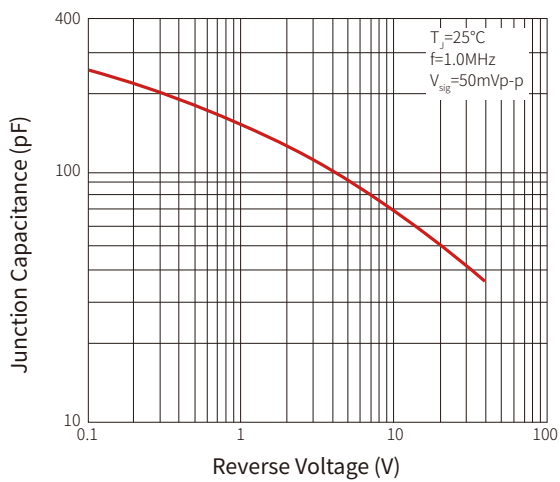
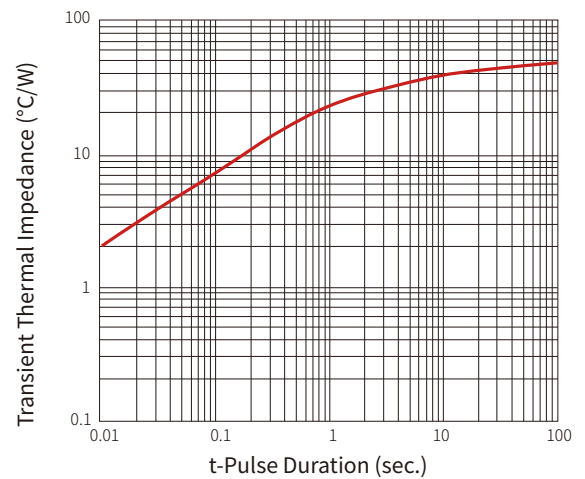
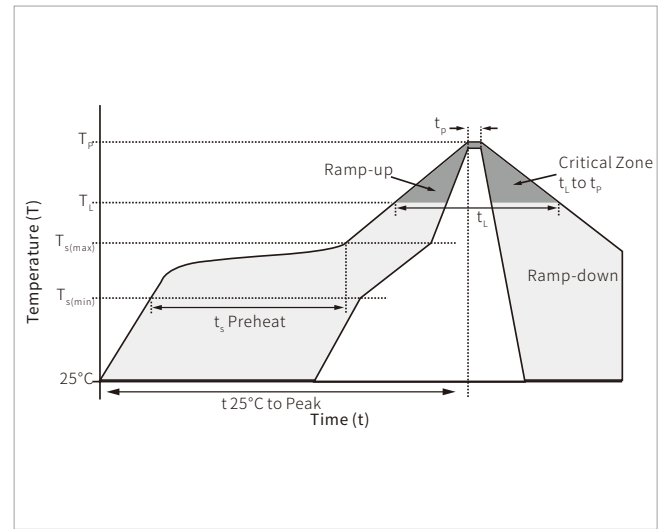


Fig.6 Typical Transient Thermal Impedance

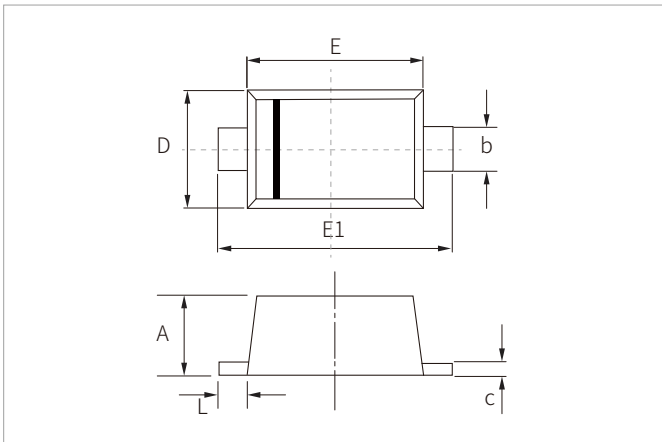


SOLDERING PARAMETERS

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

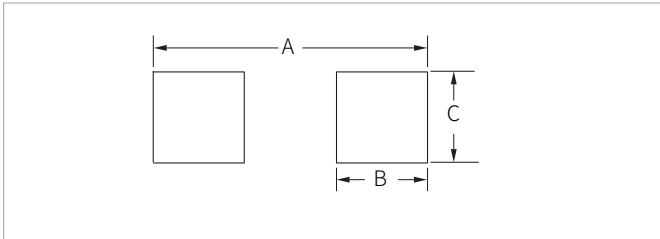


SOD-523 PACKAGE INFORMATION



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
1N5819WT	SOD-523	3000PCS	7"

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Hotline

400-021-5756

Web

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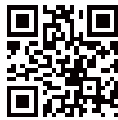
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By QR Code

Website



Wechat

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

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