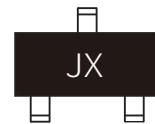


FEATURES

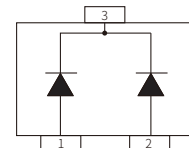
- | Low Leakage Current
- | High Switching Speed
- | Low-leakage Current Applications
- | in Surface Mounted Circuits



SOT-23



Marking



Schematic Symbol

MECHANICAL DATA

- | SOT-23 Small Outline Plastic Package
- | Epoxy UL: 94V-0
- | Mounting Position: Any

APPROVALS

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

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Value	Unit
DC Blocking Voltage	V_R	75	V
Repetitive Peak Reverse Voltage	V_{RRM}	85	V
Power Dissipation	P_D	250	mW
Forward Current(single diode)	I_F	215	mA
Forward Current(double diode)		125	
Non-Repetitive Peak Forward Surge Current@ $t=8.3\text{ms}$	I_{FSM}	1	A
Repetitive Peak Forward Current	I_{FRM}	500	mA
Operation Junction and Storage Temperature Range	$T_J T_{stg}$	-55 to +150	$^{\circ}\text{C}$
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	500	$^{\circ}\text{C/W}$

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

Parameter	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Voltage	$I_B = 100\mu\text{A}$	V_{RB}	75			V
Reverse Leakage Current	$V_R = 75\text{V}$	I_R			5	nA
Forward Voltage	$I_F = 1\text{mA}$	V_F			0.90	V
	$I_F = 10\text{mA}$				1.00	
	$I_F = 50\text{mA}$				1.10	
	$I_F = 150\text{mA}$				1.25	
Reverse Recovery Time	$I_F = I_R = 10\text{mA}, R_L = 100\Omega$ $I_{RR} = 0.1 \times I_R$	T_{RR}			3	μS
Capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$	C_T		2.0		pF

CHARACTERISTIC CURVES

Fig 1. Forward Characteristics

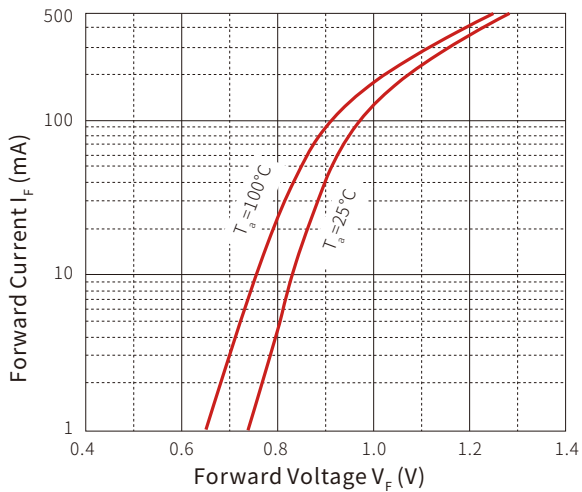


Fig 2. Reverse Characteristics

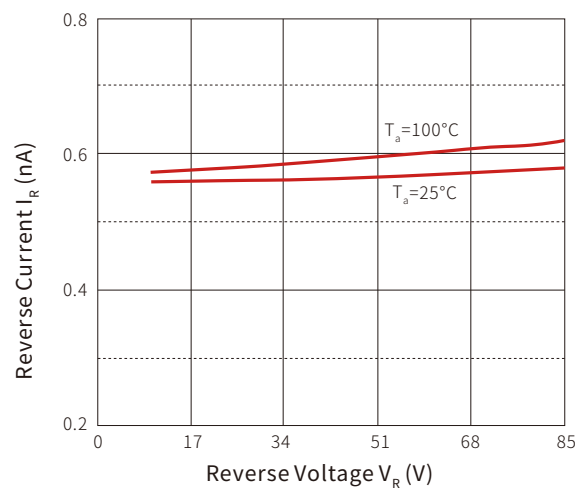




Fig 3. Capacitance Characteristics

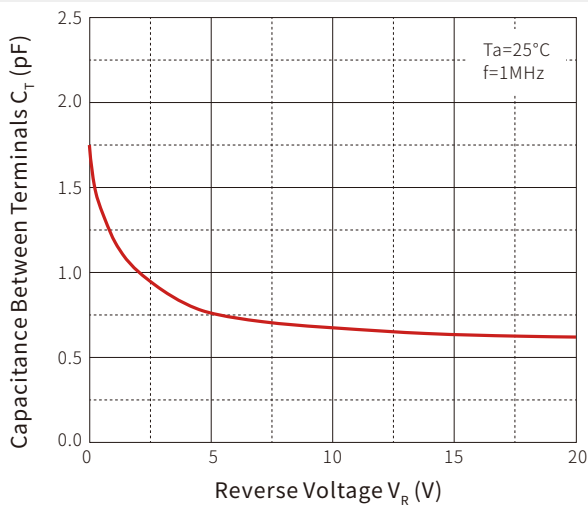
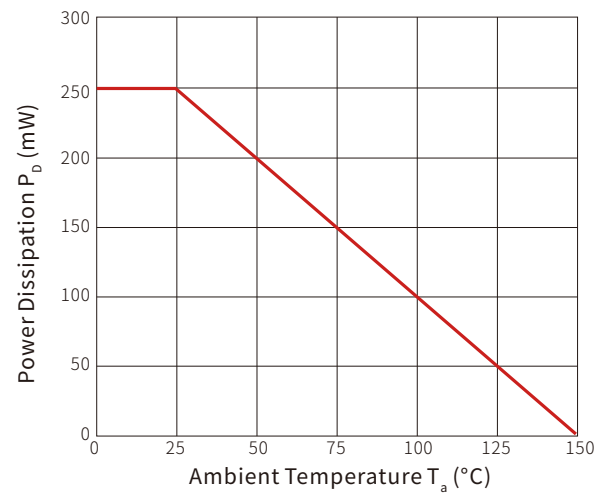
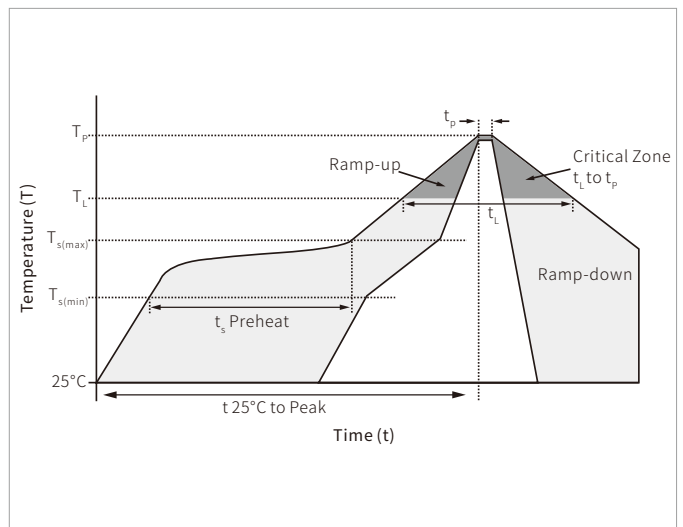


Fig 4. Power Derating Curve

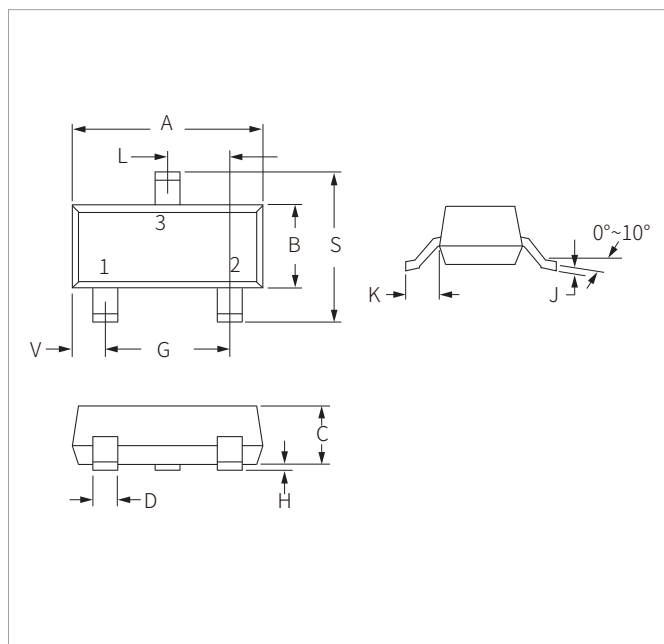


SOLDERING PARAMETERS

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

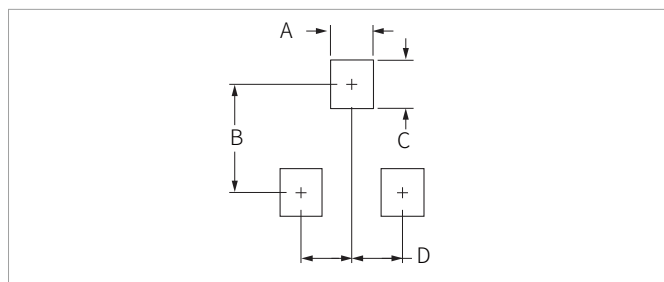


SOT-23 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.80	3.05	0.110	0.120
B	1.20	1.40	0.047	0.055
C	0.90	1.15	0.035	0.045
D	0.37	0.50	0.015	0.020
G	1.75	2.05	0.069	0.081
H	0.01	0.100	0.001	0.004
J	0.085	0.180	0.003	0.007
K	0.35	0.69	0.014	0.029
L	0.89	1.02	0.035	0.040
S	2.10	2.65	0.083	0.104
V	0.45	0.60	0.018	0.024

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.71	0.97	0.028	0.038
B	1.88	2.13	0.074	0.084
C	0.71	0.97	0.028	0.038
D	0.81	1.07	0.032	0.042

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
BAV170	SOT-23	3000PCS	7"

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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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