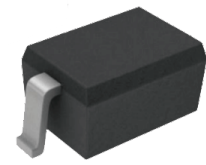


FEATURES

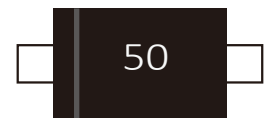
- | Surface Mount Package Ideally Suited for Automatic Insertion
- | Very Low reverse leakage



SOD-123

MECHANICAL DATA

- | SOD-123 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	
Reverse Breakdown Voltage	V _{RRM}	130	V	
Working Peak Reverse Voltage	V _{RWM}	130		
DC Blocking Voltage	V _R	130		
RMS Reverse Voltage	V _{R(RMS)}	90	V	
Power Dissipation(note 2)	P _d	250	mW	
Forward Continuous Current	I _{FM}	215	mA	
Repetitive Peak Forward Current	I _{FRM}	500	mA	
Thermal Resistance from Junction to Ambient	R _{θJA}	500	°C/W	
Peak Forward Surge Current T _A =25°C @	I _{FSM}	tp=1.0us	4.0	A
		tp=1.0ms	1.0	
		tp=1.0s	0.5	
Junction Temperature	T _J	150	°C	
Storage Temperature Range	T _{STG}	-65 to +150	°C	

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

Parameter	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Voltage(note 1)	$I_R = 100\mu\text{A}, T_J = 25^{\circ}\text{C}$	V_{BR}	130			V
	$I_R = 100\mu\text{A}, T_J = 125^{\circ}\text{C}$		130			
Reverse Leakage Current(note 1)	$V_R = 75\text{V}, T_J = 25^{\circ}\text{C}$	I_R			5.0	nA
	$V_R = 75\text{V}, T_J = 125^{\circ}\text{C}$				80	
Forward Voltage(note 1)	$I_F = 1.0\text{mA}, T_J = 25^{\circ}\text{C}$	V_F			0.9	V
	$I_F = 10\text{mA}, T_J = 25^{\circ}\text{C}$				1.0	
	$I_F = 50\text{mA}, T_J = 25^{\circ}\text{C}$				1.1	
	$I_F = 150\text{mA}, T_J = 25^{\circ}\text{C}$				1.25	
	$I_F = 10\text{mA}, T_J = 125^{\circ}\text{C}$				1.0	
Total Capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$	C_T		2.4	5	pF
Reverse Recovery Time	$I_F = I_R = 10\text{mA}$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	t_{rr}			3	μs

Notes: 1. Short duration pulse to minimize self-heating effect
 2. Part mounted on FR-4 PC board with recommended pad layout.

CHARACTERISTIC CURVES

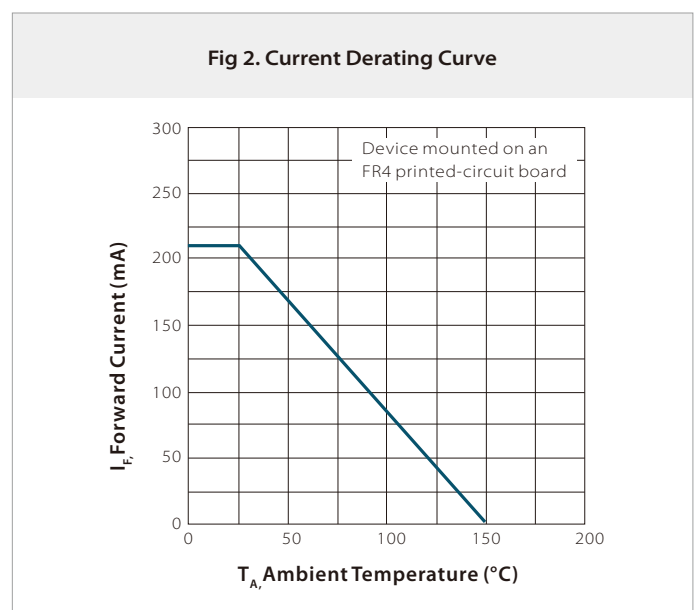
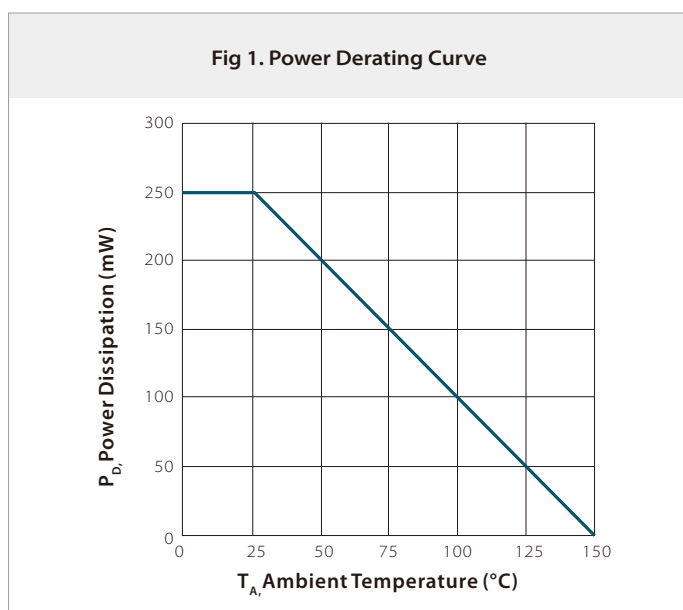
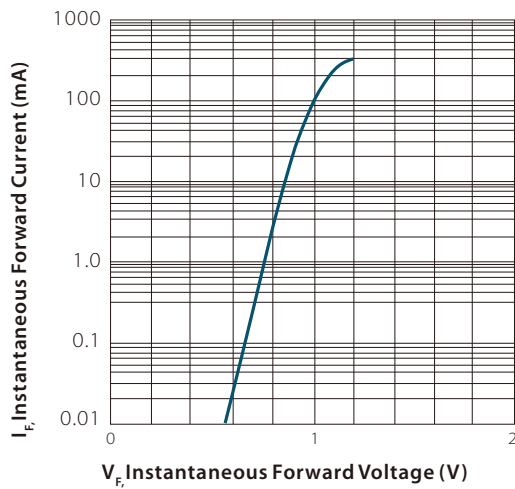
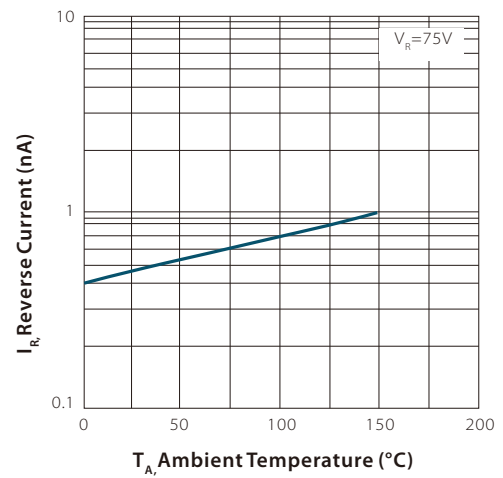
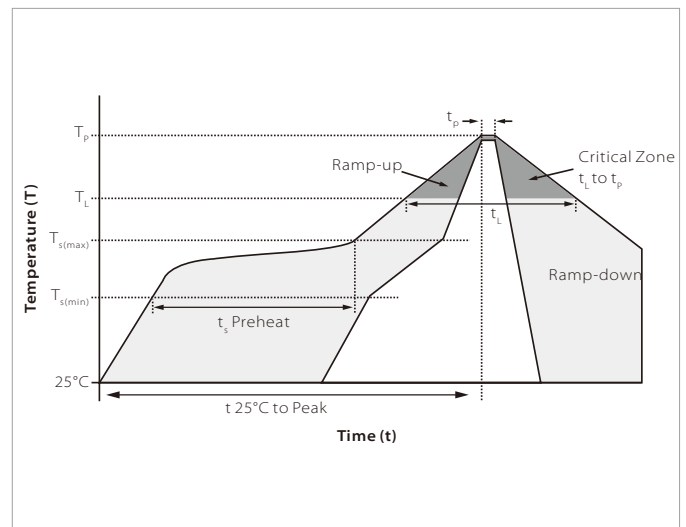


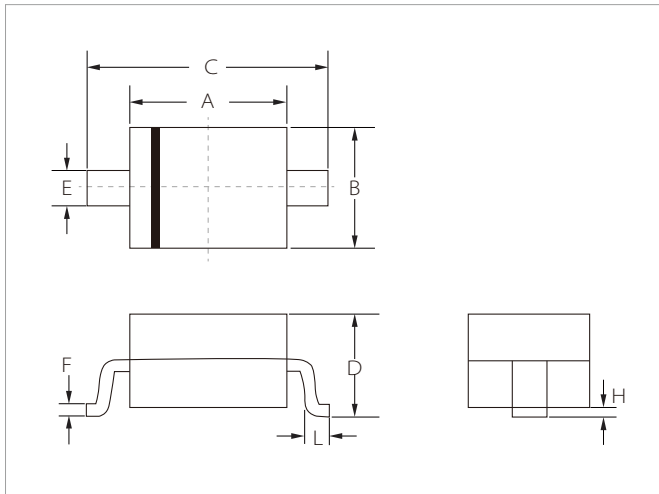
Fig 3. Typical Forward Characteristics

Fig 4. Typical Reverse Characteristics


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_r)	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

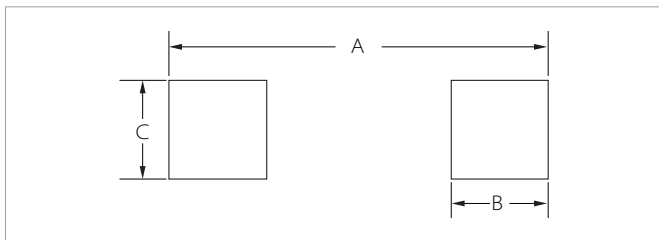


SOD-123 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.60	2.80	0.102	0.110
B	1.50	1.70	0.059	0.067
C	3.55	3.85	0.140	0.152
D	1.05	1.25	0.041	0.049
E	0.45	0.65	0.018	0.026
F	0.08	0.15	0.003	0.006
H	0.00	0.10	0.000	0.004
L	0.25	0.45	0.010	0.018

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.00	4.30	0.157	0.169
B	0.75	0.85	0.030	0.033
C	0.95	1.05	0.037	0.041

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
BAV116W	SOD-123	3000PCS	7"

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