

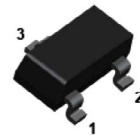
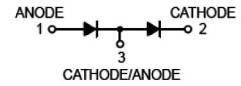
# Dual Surface Mount Low Leakage Diode

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## Features:

- Medium Speed Current Applications
- Very Low Leakage Current
- Surface Mount Package Ideally Suited for Automatic Insertion
- MSL level - MSL1



SOT-23

## Applications:

Small signal switching

Part Number	Marking	Package Code
BAV199	JY	SOT-23

## Max. Rating @ TA = 25°C unless otherwise specified

Parameter	Symbol	Value	Unit
Repetitive peak reverse voltage Working peak reverse voltage DC reverse voltage	VRRM VRMS VR	85	V
RMS reverse voltage	VR(RMS)	60	V
Peak forward surge current	IFSM	4	A
@t=1.0µs		1	
@t=1.0ms		0.5	
Forward continuous current	IFM	160	mA
Single diode Double diode		140	
Repetitive peak forward current	IFRM	500	mA
Power dissipation	PD	250	mW
Thermal resistance junction to ambient air	RθJA	500	°C/W
Operating and storage temperature range	Tj, TSTG	-65 to +150	°C

## Electrical Characteristics @ TA = 25°C unless otherwise specified

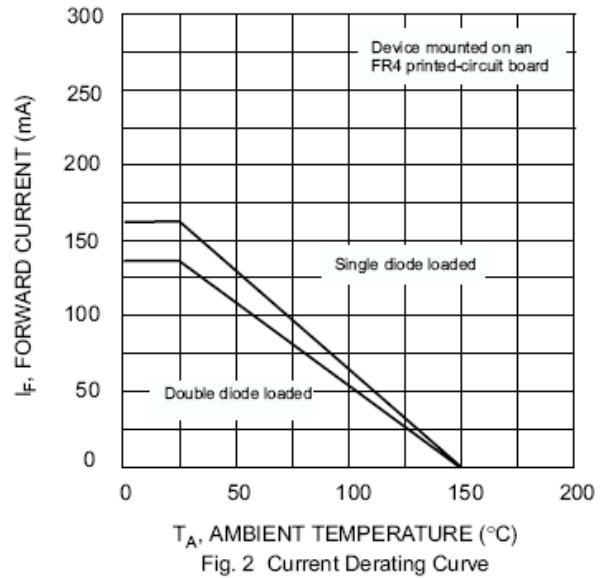
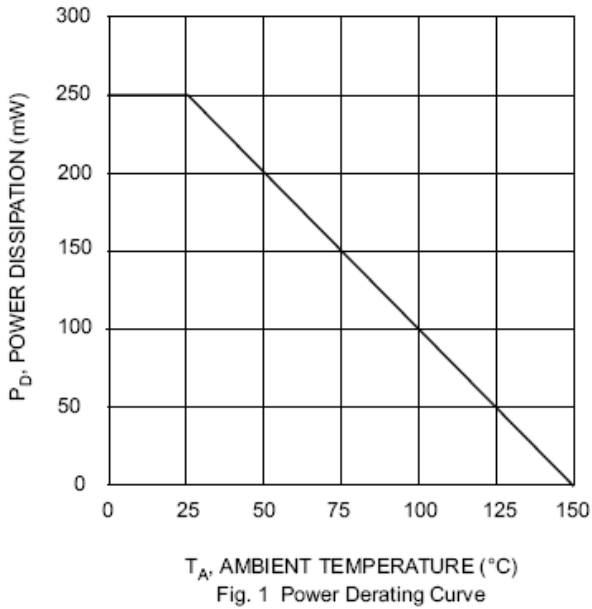
Parameter	Symbol	Test conditions	Min.	Max.	Unit
Reverse breakdown voltage	V(BR)	IR = 100µA	85	-	V
Reverse voltage leakage current	IR	Vr = 75V Vr = 75V, Tj = 150°C	-	5 80	nA
Forward voltage	VF	IF = 1mA IF = 10mA IF = 50mA IF = 150mA	-	900 1,000 1,100 1,250	mV
Junction capacitance	CJ	VR = 0V, f = 1MHz	-	2	pF
Reverse recovery time	trr	IF = IR = 10mA, Irr = 0.1 × IR, RL = 100Ω	-	3	µS

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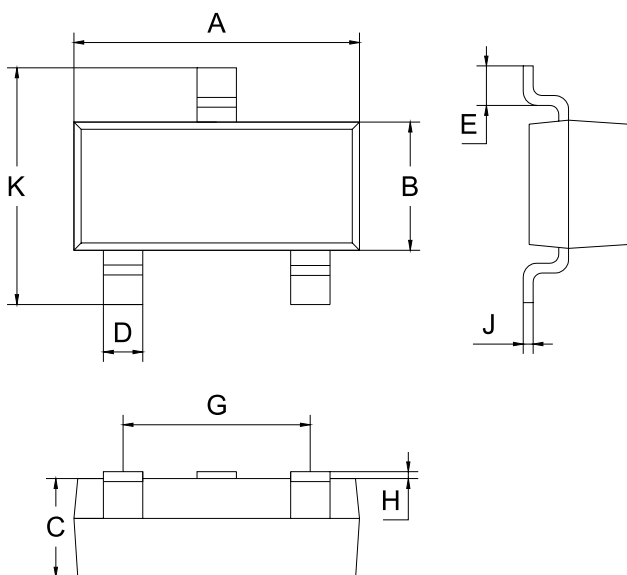
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# Dual Surface Mount Low Leakage Diode

Typical Characteristics @  $T_A = 25^\circ\text{C}$  unless otherwise specified



## Plastic surface mounted package

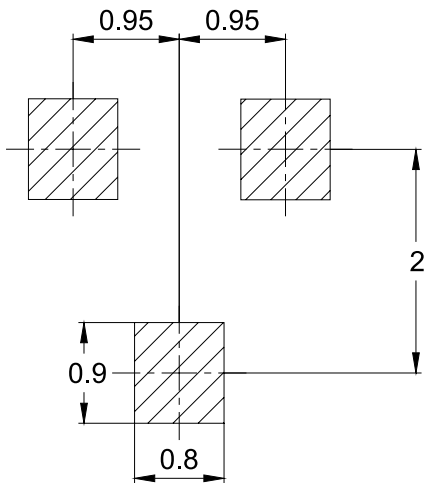


SOT-23		
Dim	Min	Max
A	2.7	3.1
B	1.1	1.5
C	1 Typical	
D	0.4 Typical	
E	0.35	0.48
G	1.8	2
H	0.02	0.1
J	0.1 Typical	
K	2.2	2.6
All Dimensions in mm		

# Dual Surface Mount Low Leakage Diode

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## Soldering Footprint



## Package Information

Device	Package	Shipping
BAV199	SOT-23	3,000 / Tape & Reel

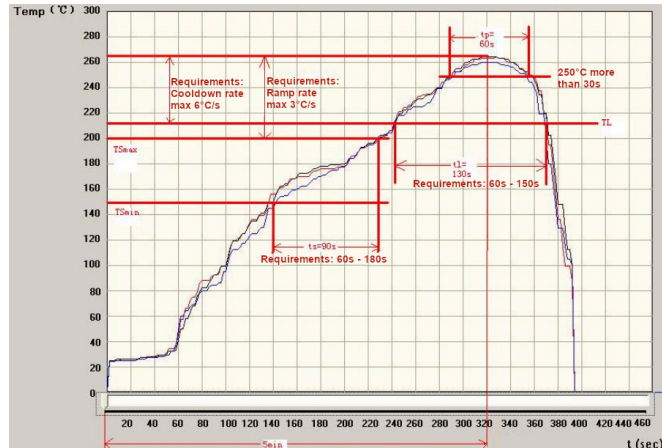
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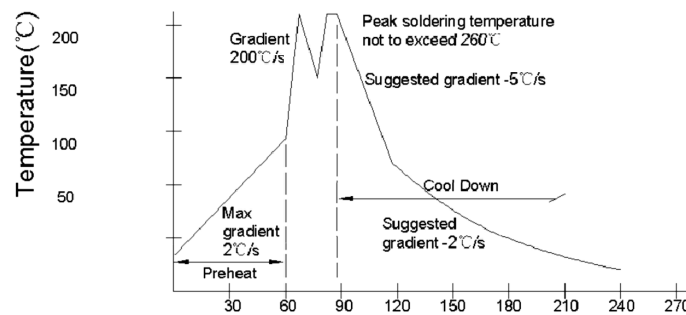


## Welding curve

### 1. Lead-free device reflow curve



### 2. Lead-free device flow curve (Double wave soldering)



### 3. Hand welding

no more than 400°C welding temperature, welding time does not exceed 3s.

### 4. Storage and Handling Requirements

#### (1) Storage period

Use the products within 12 months after delivered. The first reflow soldering should be performed within 168 hours after opening the moisture-proof.

#### (2) Storage conditions

Products should be stored in the warehouse on the following conditions. Temperature : 0~ 35°C. Humidity : 30 to 70% relative humidity. No rapid change on temperature and humidity. Don't keep products in corrosive gases such as sulfur, chlorine gas or acid, or it may cause oxidization of electrode, resulting in poor solderability.

### Part Number Table

Description	Part Number
Dual surface mount low leakage diode	BAV199-7-F

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