



## BAV199

Preliminary

DIODE

### DUAL SURFACE MOUNT LOW LEAKAGE DIODE

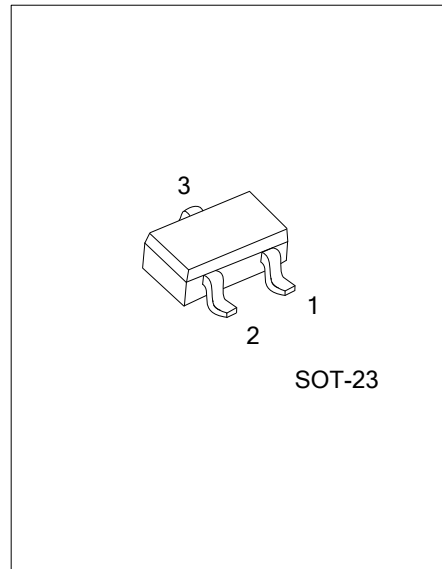
#### DESCRIPTION

The UTC **BAV199** is a dual surface mount diode providing the designers with extremely low leakage current.

The UTC **BAV199** is suitable for automatic insertion

#### FEATURES

\* Extremely Low Leakage Current



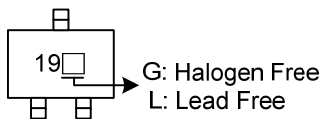
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
BAV199L-AE3-R	BAV199G-AE3-R	SOT-23	K1	A2	A1K2	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

<p>BAV199L-AE3-R</p> <ul style="list-style-type: none"> <li>(1) Packing Type</li> <li>(2) Package Type</li> <li>(3) Lead Free</li> </ul>	<ul style="list-style-type: none"> <li>(1) R: Tape Reel</li> <li>(2) AE3 : SOT-23</li> <li>(3) Halogen Free, L: Lead Free</li> </ul>
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#### MARKING



■ ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ , unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Peak Repetitive Reverse Voltage		$V_{RRM}$	85	V
Working Peak Reverse Voltage		$V_{RWM}$	85	V
DC Blocking Voltage		$V_R$	85	V
RMS Reverse Voltage		$V_{R(RMS)}$	60	V
Forward Continuous Current	Single diode	$I_{FM}$	160	mA
	Double diode		140	
Repetitive Peak Forward Current		$I_{FRM}$	500	mA
Non-Repetitive Peak Forward Surge Current	@ $t = 1.0\mu\text{s}$	$I_{FSM}$	4.0	A
	@ $t = 1.0\text{ms}$		1.0	
	@ $t = 1.0\text{s}$		0.5	
Power Dissipation (Note 2)		$P_D$	250	mW
Junction Temperature		$T_J$	-65~+150	$^\circ\text{C}$
Storage Temperature		$T_{STG}$	-65~+150	$^\circ\text{C}$

Note: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

2. Part mounted on FR-4 PC board with recommended pad layout

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Thermal Resistance Junction to Ambient Air (Note 2)	$\theta_{JA}$	500	$^\circ\text{C/W}$

■ ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ , unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	$I_R = 100\mu\text{A}$	85			V
Forward Voltage (Note 1)	$V_F$	$I_F = 1.0\text{mA}$			0.90	V
		$I_F = 10\text{mA}$			1.0	
		$I_F = 50\text{mA}$			1.1	
		$I_F = 150\text{mA}$			1.25	
Leakage Current (Note 1)	$I_R$	$V_R = 75\text{V}$			5.0	nA
		$V_R = 75\text{V}, T_J = 150^\circ\text{C}$			80	
Total Capacitance	$C_T$	$V_R = 0, f = 1.0\text{MHz}$		2		pF
Reverse Recovery Time	$t_{rr}$	$I_F = I_R = 10\text{mA}, I_{rr} = 0.1 \times I_R,$ $R_L = 100\Omega$			3.0	$\mu\text{s}$

Note: 1. Short duration test pulse to minimize self-heating effect.

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