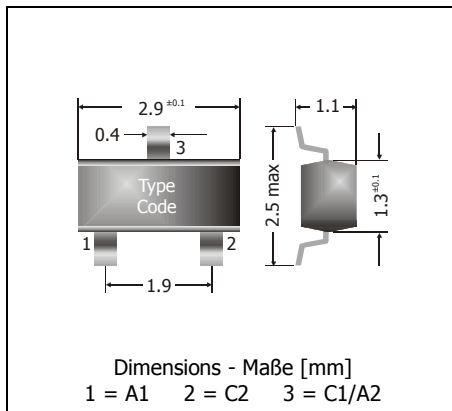


## BAV199

### Surface Mount Low Leakage Double-Diodes Doppel-Dioden mit niedrigem Sperrstrom für die Oberflächenmontage

Version 2012-09-03



|   |                    |
|---|--------------------|
| Power dissipation – Verlustleistung   | 250 mW             |
| Repetitive peak reverse voltage<br>Periodische Spitzensperrspannung                   | 85 V               |
| Plastic case<br>Kunststoffgehäuse   | SOT-23<br>(TO-236) |
| Weight approx. – Gewicht ca.  | 0.01 g             |
| Plastic material has UL classification 94V-0<br>Gehäusematerial UL94V-0 klassifiziert |                    |
| Standard packaging taped and reeled<br>Standard Lieferform gegurtet auf Rolle         |                    |



#### Maximum ratings (T<sub>A</sub> = 25°C)

#### Grenzwerte (T<sub>A</sub> = 25°C)

| per diode / pro Diode  |                       | BAV199           |                      |
|--|-----------------------|------------------|----------------------|
| Power dissipation – Verlustleistung <sup>1)</sup>                  |                       | P <sub>tot</sub> | 250 mW <sup>2)</sup> |
| Max. average forward current – Dauergrenzstrom (dc)                |                       | I <sub>FAV</sub> | 140 mA <sup>2)</sup> |
| Repetitive peak forward current – Periodischer Spitzenstrom        |                       | I <sub>FRM</sub> | 500 mA <sup>2)</sup> |
| Non repetitive peak forward surge current<br>Stoßstrom-Grenzwert   | t <sub>p</sub> ≤ 1 s  | I <sub>FSM</sub> | 0.5 A                |
|  | t <sub>p</sub> ≤ 1 ms | I <sub>FSM</sub> | 1 A                  |
|  | t <sub>p</sub> ≤ 1 μs | I <sub>FSM</sub> | 4 A                  |
| Repetitive peak reverse voltage – Periodische Spitzensperrspannung |                       | V <sub>RRM</sub> | 85 V                 |
| Reverse voltage – Sperrspannung (dc)                               |                       | V <sub>R</sub>   | 85 V                 |
| Junction temperature – Sperrschichttemperatur                      |                       | T <sub>j</sub>   | -65...+150°C         |
| Storage temperature – Lagerungstemperatur                          |                       | T <sub>s</sub>   | -65...+150°C         |

#### Characteristics (T<sub>j</sub> = 25°C)

#### Kennwerte (T<sub>j</sub> = 25°C)

|   |  |                |          |
|---|--|----------------|----------|
| Forward voltage<br>Durchlass-Spannung       | I <sub>F</sub> = 1 mA                        | V <sub>F</sub> | < 900 mV |
|   | I <sub>F</sub> = 10 mA                       | V <sub>F</sub> | < 1 V    |
|   | I <sub>F</sub> = 50 mA                       | V <sub>F</sub> | < 1.1 V  |
|   | I <sub>F</sub> = 150 mA                      | V <sub>F</sub> | < 1.25 V |
| Leakage current <sup>3)</sup><br>Sperrstrom | T <sub>j</sub> = 25°C V <sub>R</sub> = 75 V  | I <sub>R</sub> | < 5 nA   |
|   | T <sub>j</sub> = 150°C V <sub>R</sub> = 75 V | I <sub>R</sub> | < 80 nA  |

1 Total power dissipation of both diodes – Summe der Verlustleistungen beider Dioden

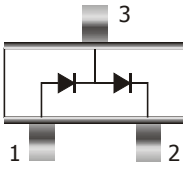
2 Mounted on P.C. board with 3 mm<sup>2</sup> copper pad at each terminal  
Montage auf Leiterplatte mit 3 mm<sup>2</sup> Kupferbelag (Löt-pad) an jedem Anschluss

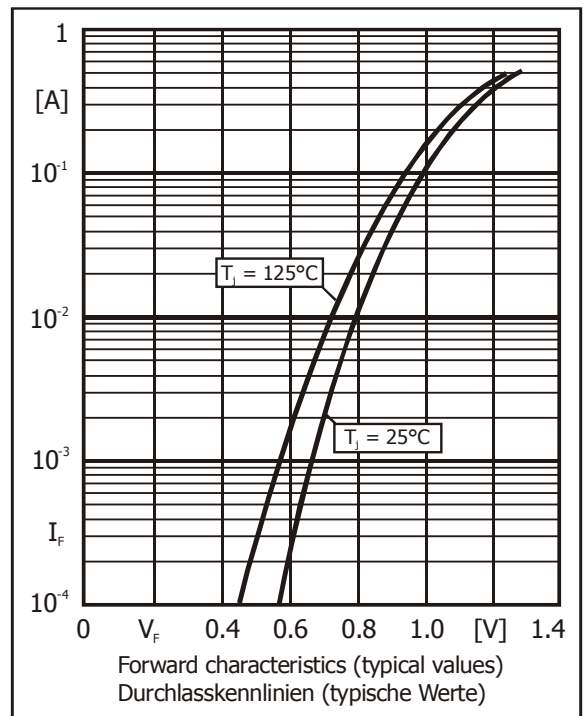
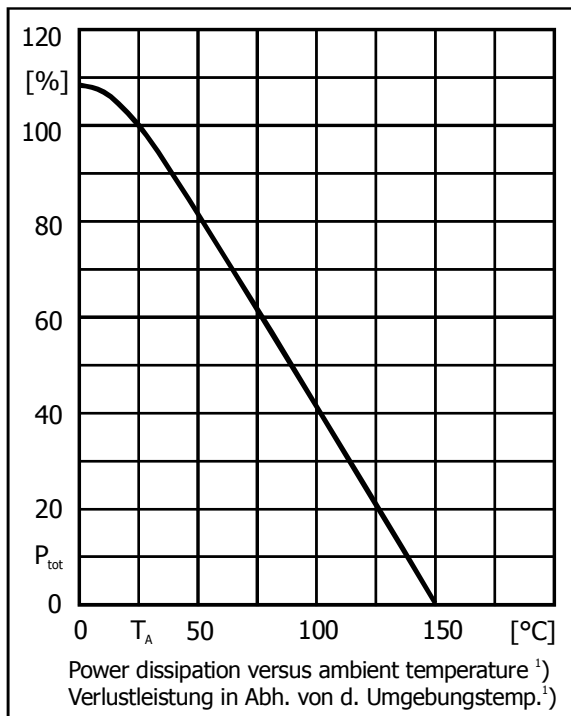
3 Tested with pulses t<sub>p</sub> = 300 μs, duty cycle ≤ 2% – Gemessen mit Impulsen t<sub>p</sub> = 300 μs, Schaltverhältnis ≤ 2%

**Characteristics (T<sub>j</sub> = 25°C)**

**Kennwerte (T<sub>j</sub> = 25°C)**

|  |                  |                         |
|--|------------------|-------------------------|
| Max. junction capacitance – Max. Sperrschichtkapazität<br>V <sub>R</sub> = 0 V, f = 1 MHz                                      | C <sub>T</sub>   | 2 pF                    |
| Reverse recovery time – Sperrverzug<br>I <sub>F</sub> = 10 mA über/through I <sub>R</sub> = 10 mA bis/to I <sub>R</sub> = 1 mA | t <sub>rr</sub>  | < 3 ns                  |
| Thermal resistance junction to ambient air<br>Wärmewiderstand Sperrschicht – umgebende Luft                                    | R <sub>thA</sub> | < 500 K/W <sup>1)</sup> |

| Pinning – Anschlussbelegung   |  | Marking – Stempelung |
|---|--|----------------------|
|  | Double diode, series connection<br>Doppeldiode, Reihenschaltung<br><br>1 = A1    2 = C2    3 = C1/A2 | BAV199 = PX          |



1 Mounted on P.C. board with 3 mm<sup>2</sup> copper pad at each terminal  
 Montage auf Leiterplatte mit 3 mm<sup>2</sup> Kupferbelag (Löt-pad) an jedem Anschluss