

# BZV55 series

## Voltage regulator diodes

Rev. 5 — 26 January 2011

Product data sheet

## 1. Product profile

### 1.1 General description

Low-power voltage regulator diodes in small hermetically sealed glass SOD80C Surface-Mounted Device (SMD) packages. The diodes are available in the normalized E24  $\pm 2\%$  (BZV55-B) and approximately  $\pm 5\%$  (BZV55-C) tolerance range. The series consists of 37 types with nominal working voltages from 2.4 V to 75 V.

### 1.2 Features and benefits

- Non-repetitive peak reverse power dissipation:  $\leq 40$  W
- Total power dissipation:  $\leq 500$  mW
- Two tolerance series:  $\pm 2\%$  and  $\pm 5\%$
- Wide working voltage range: nominal 2.4 V to 75 V (E24 range)
- Low differential resistance
- Small hermetically sealed glass SMD package

### 1.3 Applications

- General regulation functions

### 1.4 Quick reference data

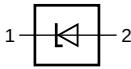
Table 1. Quick reference data

| Symbol    | Parameter                                     | Conditions    | Min | Typ | Max | Unit |
|-----------|-----------------------------------------------|---------------|-----|-----|-----|------|
| $V_F$     | forward voltage                               | $I_F = 10$ mA | -   | -   | 0.9 | V    |
| $P_{ZSM}$ | non-repetitive peak reverse power dissipation | [1]           | -   | -   | 40  | W    |

[1]  $t_p = 100$   $\mu$ s; square wave;  $T_j = 25$  °C prior to surge

## 2. Pinning information

Table 2. Pinning

| Pin | Description | Simplified outline                                                                    | Graphic symbol                                                                        |
|-----|-------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 1   | cathode     |  |  |
| 2   | anode       |                                                                                       |                                                                                       |

[1] The marking band indicates the cathode.



### 3. Ordering information

**Table 3. Ordering information**

| Type number                            | Package |                                                                 |         |
|----------------------------------------|---------|-----------------------------------------------------------------|---------|
|                                        | Name    | Description                                                     | Version |
| BZV55-B2V4 to BZV55-C75 <sup>[1]</sup> | -       | hermetically sealed glass surface-mounted package; 2 connectors | SOD80C  |

[1] The series consists of 74 types with nominal working voltages from 2.4 V to 75 V.

### 4. Marking

**Table 4. Marking codes**

| Type number             | Marking code |
|-------------------------|--------------|
| BZV55-B2V4 to BZV55-C75 | marking band |

### 5. Limiting values

**Table 5. Limiting values**

*In accordance with the Absolute Maximum Rating System (IEC 60134).*

| Symbol    | Parameter                                     | Conditions                  | Min              | Max                                               | Unit |
|-----------|-----------------------------------------------|-----------------------------|------------------|---------------------------------------------------|------|
| $I_F$     | forward current                               |                             | -                | 250                                               | mA   |
| $I_{ZSM}$ | non-repetitive peak reverse current           |                             | <sup>[1]</sup> - | see <a href="#">Table 8</a> and <a href="#">9</a> |      |
| $P_{ZSM}$ | non-repetitive peak reverse power dissipation |                             | <sup>[1]</sup> - | 40                                                | W    |
| $P_{tot}$ | total power dissipation                       | $T_{amb} \leq 50\text{ °C}$ | <sup>[2]</sup> - | 400                                               | mW   |
|           |                                               | $T_{tp} \leq 50\text{ °C}$  | <sup>[2]</sup> - | 500                                               | mW   |
| $T_{stg}$ | storage temperature                           |                             | -65              | +200                                              | °C   |
| $T_j$     | junction temperature                          |                             | -65              | +200                                              | °C   |

[1]  $t_p = 100\text{ }\mu\text{s}$ ; square wave;  $T_j = 25\text{ °C}$  prior to surge

[2] Device mounted on a ceramic substrate of  $10 \times 10 \times 0.6\text{ mm}$ .

### 6. Thermal characteristics

**Table 6. Thermal characteristics**

| Symbol         | Parameter                                        | Conditions  | Min              | Typ | Max | Unit |
|----------------|--------------------------------------------------|-------------|------------------|-----|-----|------|
| $R_{th(j-a)}$  | thermal resistance from junction to ambient      | in free air | <sup>[1]</sup> - | -   | 380 | K/W  |
| $R_{th(j-sp)}$ | thermal resistance from junction to solder point |             | -                | -   | 300 | K/W  |

[1] Device mounted on a ceramic substrate of  $10 \times 10 \times 0.6\text{ mm}$ .

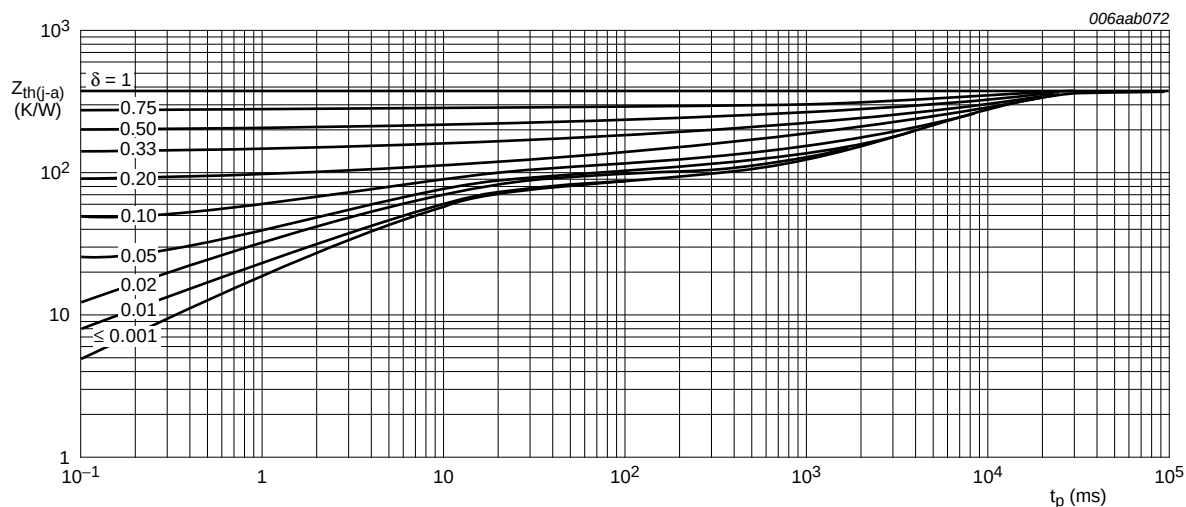


Fig 1. Transient thermal impedance from junction to ambient as a function of pulse duration; typical values

## 7. Characteristics

**Table 7. Characteristics**

$T_j = 25\text{ }^{\circ}\text{C}$  unless otherwise specified.

| Symbol | Parameter                  | Conditions                   | Min | Typ | Max | Unit          |
|--------|----------------------------|------------------------------|-----|-----|-----|---------------|
| $V_F$  | forward voltage            | $I_F = 10\text{ mA}$         | -   | -   | 0.9 | V             |
| $I_R$  | reverse current            |                              |     |     |     |               |
|        | BZV55-B/C2V4               | $V_R = 1\text{ V}$           | -   | -   | 50  | $\mu\text{A}$ |
|        | BZV55-B/C2V7               | $V_R = 1\text{ V}$           | -   | -   | 20  | $\mu\text{A}$ |
|        | BZV55-B/C3V0               | $V_R = 1\text{ V}$           | -   | -   | 10  | $\mu\text{A}$ |
|        | BZV55-B/C3V3               | $V_R = 1\text{ V}$           | -   | -   | 5   | $\mu\text{A}$ |
|        | BZV55-B/C3V6               | $V_R = 1\text{ V}$           | -   | -   | 5   | $\mu\text{A}$ |
|        | BZV55-B/C3V9               | $V_R = 1\text{ V}$           | -   | -   | 3   | $\mu\text{A}$ |
|        | BZV55-B/C4V3               | $V_R = 1\text{ V}$           | -   | -   | 3   | $\mu\text{A}$ |
|        | BZV55-B/C4V7               | $V_R = 2\text{ V}$           | -   | -   | 3   | $\mu\text{A}$ |
|        | BZV55-B/C5V1               | $V_R = 2\text{ V}$           | -   | -   | 2   | $\mu\text{A}$ |
|        | BZV55-B/C5V6               | $V_R = 2\text{ V}$           | -   | -   | 1   | $\mu\text{A}$ |
|        | BZV55-B/C6V2               | $V_R = 4\text{ V}$           | -   | -   | 3   | $\mu\text{A}$ |
|        | BZV55-B/C6V8               | $V_R = 4\text{ V}$           | -   | -   | 2   | $\mu\text{A}$ |
|        | BZV55-B/C7V5               | $V_R = 5\text{ V}$           | -   | -   | 1   | $\mu\text{A}$ |
|        | BZV55-B/C8V2               | $V_R = 5\text{ V}$           | -   | -   | 700 | nA            |
|        | BZV55-B/C9V1               | $V_R = 6\text{ V}$           | -   | -   | 500 | nA            |
|        | BZV55-B/C10                | $V_R = 7\text{ V}$           | -   | -   | 200 | nA            |
|        | BZV55-B/C11                | $V_R = 8\text{ V}$           | -   | -   | 100 | nA            |
|        | BZV55-B/C12                | $V_R = 8\text{ V}$           | -   | -   | 100 | nA            |
|        | BZV55-B/C13                | $V_R = 8\text{ V}$           | -   | -   | 100 | nA            |
|        | BZV55-B/C15 to BZV55-B/C75 | $V_R = 0.7V_{Z(\text{nom})}$ | -   | -   | 50  | nA            |

**Table 8. Characteristics per type; BZV55-B2V4 to BZV55-C24** $T_j = 25\text{ }^{\circ}\text{C}$  unless otherwise specified.

| BZV55-<br>xxx | Sel | Working<br>voltage<br>V <sub>Z</sub> (V) |      | Differential resistance<br>r <sub>dif</sub> (Ω) |     |                       |     | Temperature<br>coefficient<br>S <sub>Z</sub> (mV/K) |      |      | Diode<br>capacitance<br>C <sub>d</sub> (pF) <sup>[1]</sup> | Non-repetitive<br>peak reverse<br>current<br>I <sub>ZSM</sub> (A) <sup>[2]</sup> |
|---------------|-----|------------------------------------------|------|-------------------------------------------------|-----|-----------------------|-----|-----------------------------------------------------|------|------|------------------------------------------------------------|----------------------------------------------------------------------------------|
|               |     | I <sub>Z</sub> = 5 mA                    |      | I <sub>Z</sub> = 1 mA                           |     | I <sub>Z</sub> = 5 mA |     | I <sub>Z</sub> = 5 mA                               |      |      |                                                            |                                                                                  |
|               |     | Min                                      | Max  | Typ                                             | Max | Typ                   | Max | Min                                                 | Typ  | Max  |                                                            |                                                                                  |
| 2V4           | B   | 2.35                                     | 2.45 | 275                                             | 600 | 70                    | 100 | −3.5                                                | −1.6 | 0    | 450                                                        | 6.0                                                                              |
|               | C   | 2.2                                      | 2.6  |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 2V7           | B   | 2.65                                     | 2.75 | 300                                             | 600 | 75                    | 100 | −3.5                                                | −2.0 | 0    | 450                                                        | 6.0                                                                              |
|               | C   | 2.5                                      | 2.9  |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 3V0           | B   | 2.94                                     | 3.06 | 325                                             | 600 | 80                    | 95  | −3.5                                                | −2.1 | 0    | 450                                                        | 6.0                                                                              |
|               | C   | 2.8                                      | 3.2  |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 3V3           | B   | 3.23                                     | 3.37 | 350                                             | 600 | 85                    | 95  | −3.5                                                | −2.4 | 0    | 450                                                        | 6.0                                                                              |
|               | C   | 3.1                                      | 3.5  |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 3V6           | B   | 3.53                                     | 3.67 | 375                                             | 600 | 85                    | 90  | −3.5                                                | −2.4 | 0    | 450                                                        | 6.0                                                                              |
|               | C   | 3.4                                      | 3.8  |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 3V9           | B   | 3.82                                     | 3.98 | 400                                             | 600 | 85                    | 90  | −3.5                                                | −2.5 | 0    | 450                                                        | 6.0                                                                              |
|               | C   | 3.7                                      | 4.1  |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 4V3           | B   | 4.21                                     | 4.39 | 410                                             | 600 | 80                    | 90  | −3.5                                                | −2.5 | 0    | 450                                                        | 6.0                                                                              |
|               | C   | 4.0                                      | 4.6  |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 4V7           | B   | 4.61                                     | 4.79 | 425                                             | 500 | 50                    | 80  | −3.5                                                | −1.4 | 0.2  | 300                                                        | 6.0                                                                              |
|               | C   | 4.4                                      | 5.0  |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 5V1           | B   | 5.0                                      | 5.2  | 400                                             | 480 | 40                    | 60  | −2.7                                                | −0.8 | 1.2  | 300                                                        | 6.0                                                                              |
|               | C   | 4.8                                      | 5.4  |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 5V6           | B   | 5.49                                     | 5.71 | 80                                              | 400 | 15                    | 40  | −2.0                                                | 1.2  | 2.5  | 300                                                        | 6.0                                                                              |
|               | C   | 5.2                                      | 6.0  |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 6V2           | B   | 6.08                                     | 6.32 | 40                                              | 150 | 6                     | 10  | 0.4                                                 | 2.3  | 3.7  | 200                                                        | 6.0                                                                              |
|               | C   | 5.8                                      | 6.6  |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 6V8           | B   | 6.66                                     | 6.94 | 30                                              | 80  | 6                     | 15  | 1.2                                                 | 3.0  | 4.5  | 200                                                        | 6.0                                                                              |
|               | C   | 6.4                                      | 7.2  |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 7V5           | B   | 7.35                                     | 7.65 | 30                                              | 80  | 6                     | 15  | 2.5                                                 | 4.0  | 5.3  | 150                                                        | 4.0                                                                              |
|               | C   | 7.0                                      | 7.9  |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 8V2           | B   | 8.04                                     | 8.36 | 40                                              | 80  | 6                     | 15  | 3.2                                                 | 4.6  | 6.2  | 150                                                        | 4.0                                                                              |
|               | C   | 7.7                                      | 8.7  |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 9V1           | B   | 8.92                                     | 9.28 | 40                                              | 100 | 6                     | 15  | 3.8                                                 | 5.5  | 7.0  | 150                                                        | 3.0                                                                              |
|               | C   | 8.5                                      | 9.6  |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 10            | B   | 9.8                                      | 10.2 | 50                                              | 150 | 8                     | 20  | 4.5                                                 | 6.4  | 8.0  | 90                                                         | 3.0                                                                              |
|               | C   | 9.4                                      | 10.6 |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 11            | B   | 10.8                                     | 11.2 | 50                                              | 150 | 10                    | 20  | 5.4                                                 | 7.4  | 9.0  | 85                                                         | 2.5                                                                              |
|               | C   | 10.4                                     | 11.6 |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 12            | B   | 11.8                                     | 12.2 | 50                                              | 150 | 10                    | 25  | 6.0                                                 | 8.4  | 10.0 | 85                                                         | 2.5                                                                              |
|               | C   | 11.4                                     | 12.7 |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |

**Table 8.** Characteristics per type; BZV55-B2V4 to BZV55-C24 ...continued $T_j = 25\text{ }^{\circ}\text{C}$  unless otherwise specified.

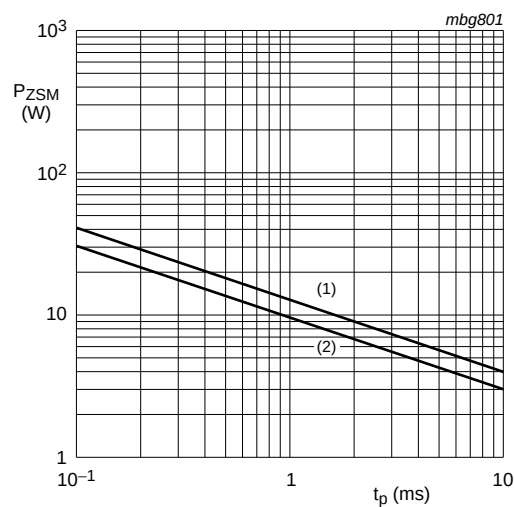
| BZV55-<br>xxx | Sel | Working<br>voltage<br>V <sub>Z</sub> (V) |      | Differential resistance<br>r <sub>dif</sub> (Ω) |     |                       |     | Temperature<br>coefficient<br>S <sub>Z</sub> (mV/K) |      |      | Diode<br>capacitance<br>C <sub>d</sub> (pF) <sup>[1]</sup> | Non-repetitive<br>peak reverse<br>current<br>I <sub>ZSM</sub> (A) <sup>[2]</sup> |
|---------------|-----|------------------------------------------|------|-------------------------------------------------|-----|-----------------------|-----|-----------------------------------------------------|------|------|------------------------------------------------------------|----------------------------------------------------------------------------------|
|               |     | I <sub>Z</sub> = 5 mA                    |      | I <sub>Z</sub> = 1 mA                           |     | I <sub>Z</sub> = 5 mA |     | I <sub>Z</sub> = 5 mA                               |      |      |                                                            |                                                                                  |
|               |     | Min                                      | Max  | Typ                                             | Max | Typ                   | Max | Min                                                 | Typ  | Max  | Max                                                        | Max                                                                              |
| 13            | B   | 12.7                                     | 13.3 | 50                                              | 170 | 10                    | 30  | 7.0                                                 | 9.4  | 11.0 | 80                                                         | 2.5                                                                              |
|               | C   | 12.4                                     | 14.1 |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 15            | B   | 14.7                                     | 15.3 | 50                                              | 200 | 10                    | 30  | 9.2                                                 | 11.4 | 13.0 | 75                                                         | 2.0                                                                              |
|               | C   | 13.8                                     | 15.6 |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 16            | B   | 15.7                                     | 16.3 | 50                                              | 200 | 10                    | 40  | 10.4                                                | 12.4 | 14.0 | 75                                                         | 1.5                                                                              |
|               | C   | 15.3                                     | 17.1 |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 18            | B   | 17.6                                     | 18.4 | 50                                              | 225 | 10                    | 45  | 12.4                                                | 14.4 | 16.0 | 70                                                         | 1.5                                                                              |
|               | C   | 16.8                                     | 19.1 |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 20            | B   | 19.6                                     | 20.4 | 60                                              | 225 | 15                    | 55  | 12.3                                                | 15.6 | 18.0 | 60                                                         | 1.5                                                                              |
|               | C   | 18.8                                     | 21.2 |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 22            | B   | 21.6                                     | 22.4 | 60                                              | 250 | 20                    | 55  | 14.1                                                | 17.6 | 20.0 | 60                                                         | 1.25                                                                             |
|               | C   | 20.8                                     | 23.3 |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 24            | B   | 23.5                                     | 24.5 | 60                                              | 250 | 25                    | 70  | 15.9                                                | 19.6 | 22.0 | 55                                                         | 1.25                                                                             |
|               | C   | 22.8                                     | 25.6 |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |

[1]  $f = 1\text{ MHz}$ ;  $V_R = 0\text{ V}$ [2]  $t_p = 100\text{ }\mu\text{s}$ ; square wave;  $T_j = 25\text{ }^{\circ}\text{C}$  prior to surge

**Table 9. Characteristics per type; BZV55-B27 to BZV55-C75** $T_j = 25\text{ }^{\circ}\text{C}$  unless otherwise specified.

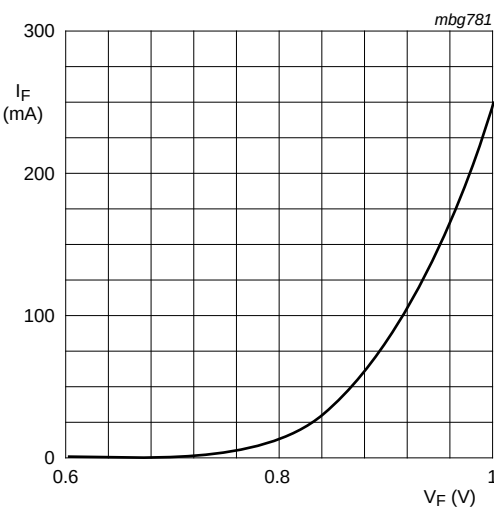
| BZV55-<br>xxx | Sel | Working<br>voltage<br>V <sub>Z</sub> (V) |      | Differential resistance<br>r <sub>dif</sub> (Ω) |     |                       |     | Temperature<br>coefficient<br>S <sub>Z</sub> (mV/K) |      |      | Diode<br>capacitance<br>C <sub>d</sub> (pF) <sup>[1]</sup> | Non-repetitive<br>peak reverse<br>current<br>I <sub>ZSM</sub> (A) <sup>[2]</sup> |
|---------------|-----|------------------------------------------|------|-------------------------------------------------|-----|-----------------------|-----|-----------------------------------------------------|------|------|------------------------------------------------------------|----------------------------------------------------------------------------------|
|               |     | I <sub>Z</sub> = 2 mA                    |      | I <sub>Z</sub> = 0.5 mA                         |     | I <sub>Z</sub> = 2 mA |     | I <sub>Z</sub> = 2 mA                               |      |      |                                                            |                                                                                  |
|               |     | Min                                      | Max  | Typ                                             | Max | Typ                   | Max | Min                                                 | Typ  | Max  | Max                                                        | Max                                                                              |
| 27            | B   | 26.5                                     | 27.5 | 65                                              | 300 | 25                    | 80  | 18.0                                                | 22.7 | 25.3 | 50                                                         | 1.0                                                                              |
|               | C   | 25.1                                     | 28.9 |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 30            | B   | 29.4                                     | 30.6 | 70                                              | 300 | 30                    | 80  | 20.6                                                | 25.7 | 29.4 | 50                                                         | 1.0                                                                              |
|               | C   | 28.0                                     | 32.0 |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 33            | B   | 32.3                                     | 33.7 | 75                                              | 325 | 35                    | 80  | 23.3                                                | 28.7 | 33.4 | 45                                                         | 0.9                                                                              |
|               | C   | 31.0                                     | 35.0 |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 36            | B   | 35.3                                     | 36.7 | 80                                              | 350 | 35                    | 90  | 26.0                                                | 31.8 | 37.4 | 45                                                         | 0.8                                                                              |
|               | C   | 34.0                                     | 38.0 |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 39            | B   | 38.2                                     | 39.8 | 80                                              | 350 | 40                    | 130 | 28.7                                                | 34.8 | 41.2 | 45                                                         | 0.7                                                                              |
|               | C   | 37.0                                     | 41.0 |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 43            | B   | 42.1                                     | 43.9 | 85                                              | 375 | 45                    | 150 | 31.4                                                | 38.8 | 46.6 | 40                                                         | 0.6                                                                              |
|               | C   | 40.0                                     | 46.0 |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 47            | B   | 46.1                                     | 47.9 | 85                                              | 375 | 50                    | 170 | 35.0                                                | 42.9 | 51.8 | 40                                                         | 0.5                                                                              |
|               | C   | 44.0                                     | 50.0 |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 51            | B   | 50.0                                     | 52.0 | 90                                              | 400 | 60                    | 180 | 38.6                                                | 46.9 | 57.2 | 40                                                         | 0.4                                                                              |
|               | C   | 48.0                                     | 54.0 |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 56            | B   | 54.9                                     | 57.1 | 100                                             | 425 | 70                    | 200 | 42.2                                                | 52.0 | 63.8 | 40                                                         | 0.3                                                                              |
|               | C   | 52.0                                     | 60.0 |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 62            | B   | 60.8                                     | 63.2 | 120                                             | 450 | 80                    | 215 | 58.8                                                | 64.4 | 71.6 | 35                                                         | 0.3                                                                              |
|               | C   | 58.0                                     | 66.0 |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 68            | B   | 66.6                                     | 69.4 | 150                                             | 475 | 90                    | 240 | 65.6                                                | 71.7 | 79.8 | 35                                                         | 0.25                                                                             |
|               | C   | 64.0                                     | 72.0 |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |
| 75            | B   | 73.5                                     | 76.5 | 170                                             | 500 | 95                    | 255 | 73.4                                                | 80.2 | 88.6 | 35                                                         | 0.2                                                                              |
|               | C   | 70.0                                     | 79.0 |                                                 |     |                       |     |                                                     |      |      |                                                            |                                                                                  |

[1]  $f = 1\text{ MHz}$ ;  $V_R = 0\text{ V}$ [2]  $t_p = 100\text{ }\mu\text{s}$ ; square wave;  $T_j = 25\text{ }^{\circ}\text{C}$  prior to surge



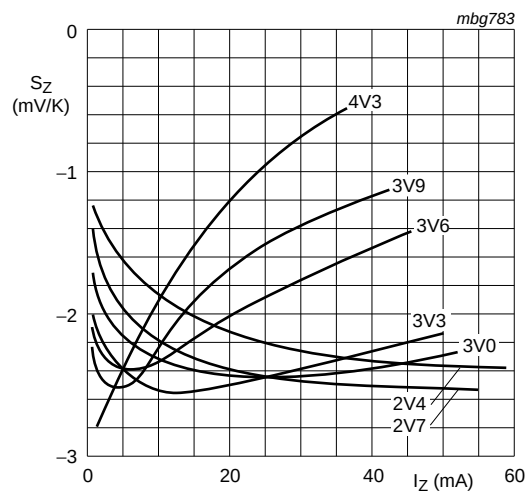
- (1)  $T_j = 25^\circ\text{C}$  (prior to surge)
- (2)  $T_j = 150^\circ\text{C}$  (prior to surge)

Fig 2. Non-repetitive peak reverse power dissipation as a function of pulse duration; maximum values



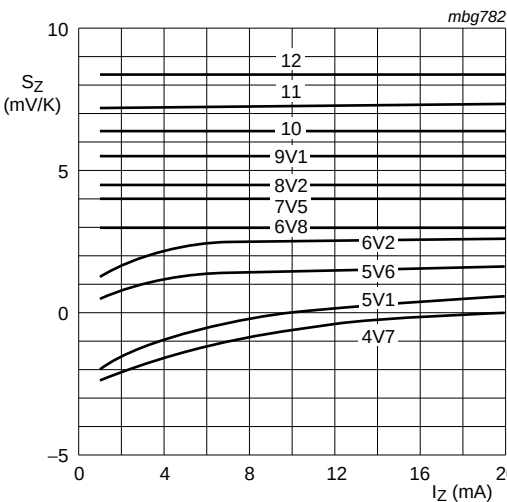
$T_j = 25^\circ\text{C}$

Fig 3. Forward current as a function of forward voltage; typical values



BZV55-B/C2V4 to BZV55-B/C4V3  
 $T_j = 25^\circ\text{C}$  to  $150^\circ\text{C}$

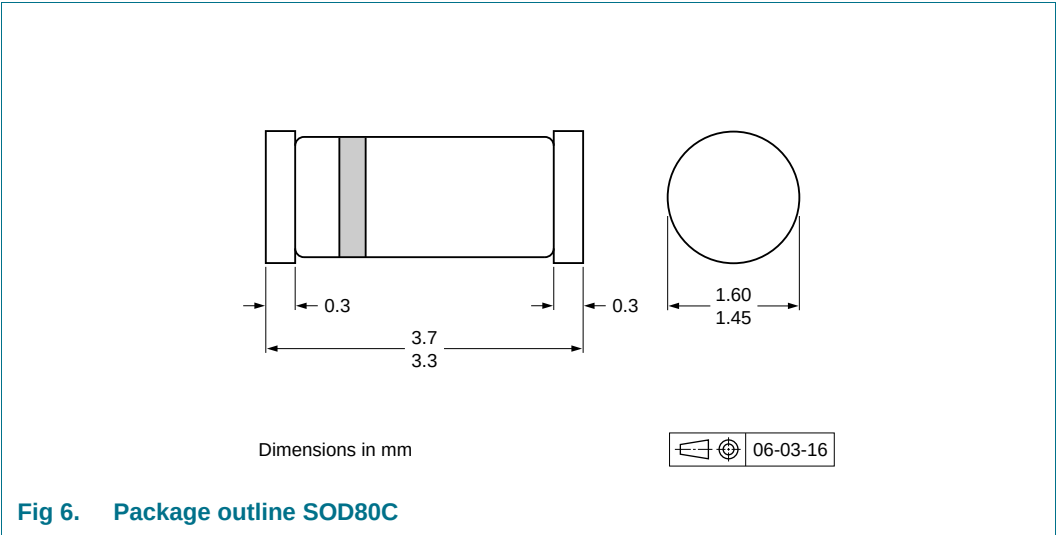
Fig 4. Temperature coefficient as a function of working current; typical values



BZV55-B/C4V7 to BZV55-B/C12  
 $T_j = 25^\circ\text{C}$  to  $150^\circ\text{C}$

Fig 5. Temperature coefficient as a function of working current; typical values

8. Package outline



9. Packing information

**Table 10. Packing methods**  
The indicated -xxx are the last three digits of the 12NC ordering code.<sup>[1]</sup>

| Type number             | Package | Description                    | Packing quantity |       |
|-------------------------|---------|--------------------------------|------------------|-------|
|                         |         |                                | 2500             | 10000 |
| BZV55-B2V4 to BZV55-C75 | SOD80C  | 4 mm pitch, 8 mm tape and reel | -115             | -135  |

[1] For further information and the availability of packing methods, see [Section 13](#).



10. Soldering

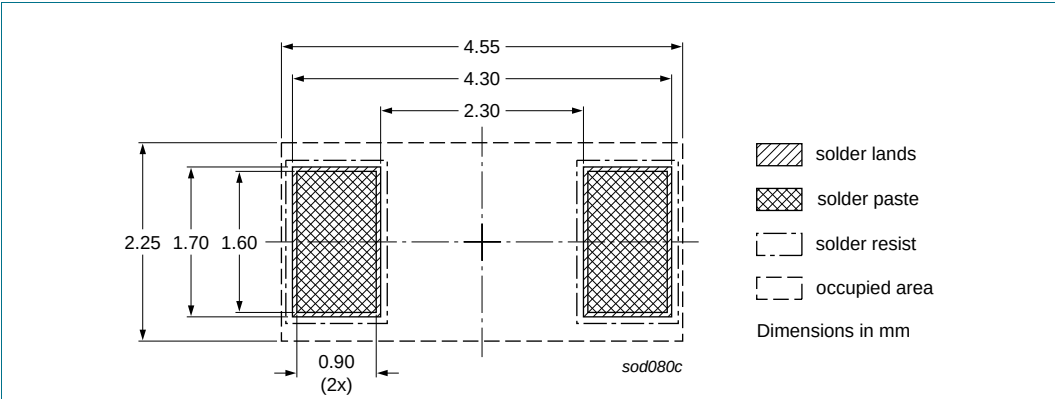


Fig 7. Reflow soldering footprint SOD80C

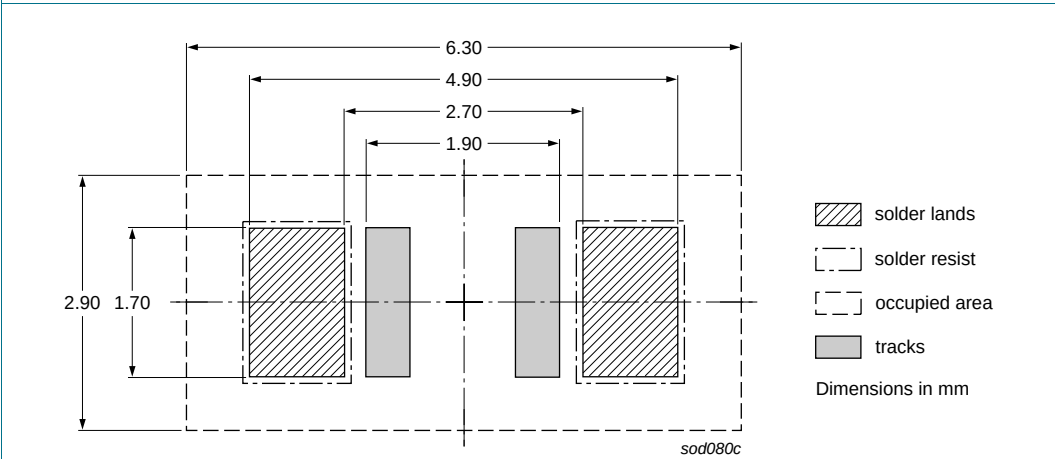


Fig 8. Wave soldering footprint SOD80C

## 11. Revision history

Table 11. Revision history

| Document ID    | Release date                                                                                                                                                                                                                                                                                                                                                             | Data sheet status     | Change notice  | Supersedes    |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------|---------------|
| BZV55_SER v.5  | 20110126                                                                                                                                                                                                                                                                                                                                                                 | Product data sheet    | -              | BZV55_SER v.4 |
| Modifications: | <ul style="list-style-type: none"><li>• <a href="#">Section 4 "Marking"</a>: updated</li><li>• <a href="#">Table 6 "Thermal characteristics"</a>: changed <math>R_{th(j-t)}</math> for <math>R_{th(j-sp)}</math></li><li>• <a href="#">Figure 6</a>: superseded by minimized outline drawing</li><li>• <a href="#">Section 12 "Legal information"</a>: updated</li></ul> |                       |                |               |
| BZV55_SER v.4  | 20070719                                                                                                                                                                                                                                                                                                                                                                 | Product data sheet    | CPCN200508022F | BZV55 v.3     |
| BZV55 v.3      | 20020228                                                                                                                                                                                                                                                                                                                                                                 | Product specification | -              | BZV55 v.2     |
| BZV55 v.2      | 19990521                                                                                                                                                                                                                                                                                                                                                                 | Product specification | -              | BZV55 v.1     |
| BZV55 v.1      | 19960426                                                                                                                                                                                                                                                                                                                                                                 | Product specification | -              | -             |

## 12. Legal information

### 12.1 Data sheet status

| Document status <sup>[1][2]</sup> | Product status <sup>[3]</sup> | Definition                                                                            |
|-----------------------------------|-------------------------------|---------------------------------------------------------------------------------------|
| Objective [short] data sheet      | Development                   | This document contains data from the objective specification for product development. |
| Preliminary [short] data sheet    | Qualification                 | This document contains data from the preliminary specification.                       |
| Product [short] data sheet        | Production                    | This document contains the product specification.                                     |

[1] Please consult the most recently issued document before initiating or completing a design.

[2] The term 'short data sheet' is explained in section "Definitions".

[3] The product status of device(s) described in this document may have changed since this document was published and may differ in case of multiple devices. The latest product status information is available on the Internet at URL <http://www.nxp.com>.

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