

## STABISTORS

## BZX75 SERIES

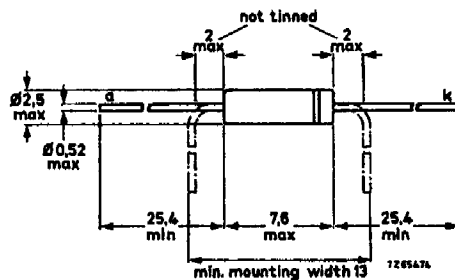
Diodes with controlled conductance in a all-glass DO-7 envelope intended for low voltage regulation in circuits for clipping, coupling, clamping, meter protection, bias regulation and in many applications which require tight tolerances and low voltage levels. The series consists of 4 types with nominal voltages ranging from 1,4 to 3,6V with a tolerance of  $\pm 5\%$ .

| QUICK REFERENCE DATA                                 |           |      |                |
|------------------------------------------------------|-----------|------|----------------|
| Regulation voltage range                             | $V_F$     | nom. | 1,4 to 3,6 V   |
| Regulation voltage tolerance                         |           |      | $\pm 5\%$      |
| Continuous reverse voltage                           | $V_R$     | max. | 10 V           |
| Repetitive peak reverse voltage                      | $V_{RRM}$ | max. | 10 V           |
| Repetitive peak forward current                      | $I_{FRM}$ | max. | 250 mA         |
| Total power dissipation up to $T_{amb} = 32^\circ C$ | $P_{tot}$ | max. | 400 mW         |
| Operating junction temperature                       | $T_j$     | max. | 200 $^\circ C$ |

### MECHANICAL DATA

Dimensions in mm

DO-7



Cathode indicated by coloured band

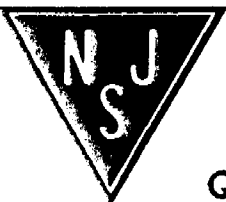
**RATINGS** Limiting values in accordance with the Absolute Maximum System (IEC134)

|                                                      |           |             |                |
|------------------------------------------------------|-----------|-------------|----------------|
| Continuous reverse voltage                           | $V_R$     | max.        | 10 V           |
| Repetitive peak reverse voltage                      | $V_{RRM}$ | max.        | 10 V           |
| Repetitive peak forward current                      | $I_{FRM}$ | max.        | 250 mA         |
| Total power dissipation up to $T_{amb} = 32^\circ C$ | $P_{tot}$ | max.        | 400 mW         |
| Storage temperature                                  | $T_{stg}$ | -65 to +175 | $^\circ C$     |
| Operating junction temperature                       | $T_j$     | max.        | 200 $^\circ C$ |

### THERMAL RESISTANCE

|                                      |              |   |           |
|--------------------------------------|--------------|---|-----------|
| From junction to ambient in free air | $R_{th j-a}$ | = | 0,42 K/mW |
|--------------------------------------|--------------|---|-----------|

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# CHARACTERISTICS

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

| Regulation voltage |       |       | Temperature coefficient | Differential resistance              |      |    |
|--------------------|-------|-------|-------------------------|--------------------------------------|------|----|
| $V_F$ (V)          |       |       | $S_F$ (mV/K)            | $r_{diff}$ ( $\Omega$ ); $f = 1$ kHz |      |    |
| at $I_F = 1$ mA    |       |       | at $I_F = 1$ mA         | at $I_F = 1$ mA                      |      |    |
| BZX75-....         | min.  | max.  | typ.                    | typ.                                 |      |    |
| C1V4               | 1, 16 | 1, 34 | -4                      | 60                                   |      |    |
| C2V1               | 1, 75 | 2, 05 | -6                      | 90                                   |      |    |
| C2V8               | 2, 33 | 2, 70 | -8                      | 120                                  |      |    |
| C3V6               | 3, 02 | 3, 45 | -10                     | 150                                  |      |    |
| at $I_F = 10$ mA   |       |       | at $I_F = 10$ mA        | at $I_F = 10$ mA                     |      |    |
|                    | min.  | nom.  | max.                    | typ.                                 | max. |    |
| C1V4               | 1, 33 | 1, 40 | 1, 47                   | -3, 3                                | 6    | 10 |
| C2V1               | 1, 99 | 2, 10 | 2, 21                   | -5, 0                                | 9    | 15 |
| C2V8               | 2, 66 | 2, 80 | 2, 94                   | -6, 6                                | 12   | 20 |
| C3V6               | 3, 42 | 3, 60 | 3, 78                   | -8, 2                                | 15   | 25 |

## Reverse current

$V_R = 5\text{ V}$

|            |   |       |   |     |    |
|------------|---|-------|---|-----|----|
| BZX75-C1V4 | } | $I_R$ | < | 500 | nA |
| BZX75-C2V1 |   |       |   |     |    |
| BZX75-C2V8 | } | $I_R$ | < | 200 | nA |
| BZX75-C3V6 |   |       |   |     |    |

## Recovered charge when switched from

$I_F = 10\text{ mA}$  to  $V_R = 5\text{ V}$ ;  $R_L = 500\text{ }\Omega$

$Q_s > 600\text{ pC}$

## Diode capacitance

$V_R = 0$ ;  $f = 1\text{ MHz}$

$C_d < 250\text{ pF}$