

$V_Z$  : 2.4 to 75V

 $P_D$  : 500mW

#### FEATURES :

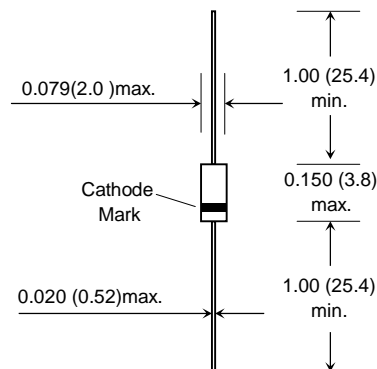
- Higher zener voltages available on request.
- Standard zener voltage tolerance is  $\pm 5\%$
- Other tolerances are available upon request.
- Pb / RoHS Free

#### MECHANICAL DATA :

Case: DO-35 Glass Case

Weight: approx. 0.13g

### ZENER DIODES

DO - 35 Glass  
(DO-204AH)


Dimensions in inches and ( millimeters )

#### Maximum Ratings and Thermal Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

| Parameter   | Symbol          | Value              | Unit                      |
|---|-----------------|--------------------|---------------------------|
| Zener Current see Table "Characteristics"   |                 |                    |                           |
| Forward Voltage at $I_F = 10$ mA.   | $V_F$           | 0.9                | V                         |
| Power Dissipation at $T_L = 25^\circ\text{C}$   | $P_D$           | 500 <sup>(1)</sup> | mW                        |
| Thermal Resistance Junction to Ambient Air  | $R_{\theta JA}$ | 300 <sup>(1)</sup> | $^\circ\text{C}/\text{W}$ |
| Continuous Forward Current  | $I_F$           | 250                | mA                        |
| Peak reverse power dissipation (non-repetitive)<br>$t_p = 100\mu\text{s}$ square wave | $P_{ZSM}$       | 40                 | W                         |
| Junction temperature  | $T_J$           | -65 to + 200       | $^\circ\text{C}$          |
| Storage temperature range   | $T_S$           | -65 to + 200       | $^\circ\text{C}$          |

Note:

(1) Valid provided that leads at a distance of 3/8" from case are kept at ambient temperature.



# ELECTRICAL CHARACTERISTICS

(Rating at 25°C ambient temperature unless otherwise specified)

| Type Number | Zener Voltage<br>$V_Z @ I_{ZT}$ |                  | Maximum Zener Impedance , $f = 1\text{kHz}$ |                             |                  | Maximum Reverse Leakage Current |                 | Temp. coefficient of Zener Voltage<br>$\alpha_{mvz}(\% / ^\circ\text{C})$ | Admissible Zener Current<br>$I_Z$ (mA) | Maximum Capacitance<br>$V_R=0, f=1\text{MHz}$<br>(pF) |
|-------------|---------------------------------|------------------|---|-----------------------------|------------------|---------------------------------|-----------------|---|--|---|
|             | Nom <sup>1)</sup><br>(V)        | $I_{ZT}$<br>(mA) | $Z_{ZT} @ I_{ZT}$<br>(Ohms)                 | $Z_{ZK} @ I_{ZK}$<br>(Ohms) | $I_{ZK}$<br>(mA) | $I_R$<br>(mA)                   | at $V_R$<br>(V) |   |  |   |
| BZX79C2V4   | 2.4                             | 5                | 100   | 600                         | 1                | 50                              | 1               | -0.08...-0.06   | 167                                    | 450   |
| BZX79C2V7   | 2.7                             | 5                | 100   | 600                         | 1                | 20                              | 1               | -0.08...-0.06   | 135                                    | 450   |
| BZX79C3V0   | 3.0                             | 5                | 95  | 600                         | 1                | 10                              | 1               | -0.08...-0.05   | 125                                    | 450   |
| BZX79C3V3   | 3.3                             | 5                | 95  | 600                         | 1                | 5                               | 1               | -0.08...-0.05   | 115                                    | 450   |
| BZX79C3V6   | 3.6                             | 5                | 90  | 600                         | 1                | 5                               | 1               | -0.08...-0.04   | 105                                    | 450   |
| BZX79C3V9   | 3.9                             | 5                | 90  | 600                         | 1                | 3                               | 1               | -0.07...-0.03   | 95                                     | 450   |
| BZX79C4V3   | 4.3                             | 5                | 90  | 600                         | 1                | 3                               | 1               | -0.04...-0.01   | 90                                     | 450   |
| BZX79C4V7   | 4.7                             | 5                | 80  | 500                         | 1                | 3                               | 1               | -0.03...+0.01   | 85                                     | 300   |
| BZX79C5V1   | 5.1                             | 5                | 60  | 480                         | 1                | 2                               | 1               | -0.02...+0.05   | 80                                     | 300   |
| BZX79C5V6   | 5.6                             | 5                | 40  | 400                         | 1                | 1                               | 1               | -0.01...+0.06   | 70                                     | 300   |
| BZX79C6V2   | 6.2                             | 5                | 10  | 150                         | 1                | 3                               | 2               | 0.00...0.07   | 64                                     | 200   |
| BZX79C6V8   | 6.8                             | 5                | 15  | 80                          | 1                | 2                               | 3               | 0.01...0.08   | 58                                     | 200   |
| BZX79C7V5   | 7.5                             | 5                | 15  | 80                          | 1                | 1                               | 5               | 0.01...0.09   | 53                                     | 150   |
| BZX79C8V2   | 8.2                             | 5                | 15  | 80                          | 1                | 0.7                             | 6               | 0.01...0.09   | 47                                     | 150   |
| BZX79C9V1   | 9.1                             | 5                | 15  | 100                         | 1                | 0.5                             | 7               | 0.02...0.10   | 43                                     | 150   |
| BZX79C10    | 10                              | 5                | 20  | 150                         | 1                | 0.2                             | 7.5             | 0.03...0.11   | 40                                     | 90  |
| BZX79C11    | 11                              | 5                | 20  | 150                         | 1                | 0.1                             | 8.5             | 0.03...0.11   | 36                                     | 85  |
| BZX79C12    | 12                              | 5                | 25  | 150                         | 1                | 0.1                             | 9               | 0.03...0.11   | 32                                     | 85  |
| BZX79C13    | 13                              | 5                | 30  | 170                         | 1                | 0.1                             | 10              | 0.03...0.11   | 29                                     | 80  |
| BZX79C15    | 15                              | 5                | 30  | 200                         | 1                | 0.05                            | 11              | 0.03...0.11   | 27                                     | 75  |
| BZX79C16    | 16                              | 5                | 40  | 200                         | 1                | 0.05                            | 12              | 0.03...0.11   | 24                                     | 75  |
| BZX79C18    | 18                              | 5                | 45  | 225                         | 1                | 0.05                            | 14              | 0.03...0.11   | 21                                     | 70  |
| BZX79C20    | 20                              | 5                | 55  | 225                         | 1                | 0.05                            | 15              | 0.03...0.11   | 20                                     | 60  |
| BZX79C22    | 22                              | 5                | 55  | 250                         | 1                | 0.05                            | 17              | 0.03...0.11   | 18                                     | 60  |
| BZX79C24    | 24                              | 5                | 70  | 250                         | 1                | 0.05                            | 18              | 0.04...0.12   | 16                                     | 55  |
| BZX79C27    | 27                              | 2                | 80  | 300                         | 0.5              | 0.05                            | 20              | 0.04...0.12   | 14                                     | 50  |
| BZX79C30    | 30                              | 2                | 80  | 300                         | 0.5              | 0.05                            | 22              | 0.04...0.12   | 13                                     | 50  |
| BZX79C33    | 33                              | 2                | 80  | 325                         | 0.5              | 0.05                            | 24              | 0.04...0.12   | 12                                     | 45  |
| BZX79C36    | 36                              | 2                | 90  | 350                         | 0.5              | 0.05                            | 27              | 0.04...0.12   | 11                                     | 45  |
| BZX79C39    | 39                              | 2                | 130   | 350                         | 0.5              | 0.05                            | 28              | 0.04...0.12   | 10                                     | 45  |
| BZX79C43    | 43                              | 2                | 150   | 375                         | 0.5              | 0.05                            | 32              | 0.04...0.12   | 9.2                                    | 40  |
| BZX79C47    | 47                              | 2                | 170   | 375                         | 0.5              | 0.05                            | 35              | 0.04...0.12   | 8.5                                    | 40  |
| BZX79C51    | 51                              | 2                | 180   | 400                         | 0.5              | 0.05                            | 38              | 0.04...0.12   | 7.8                                    | 40  |
| BZX79C56    | 56                              | 2                | 200   | 425                         | 0.5              | 0.05                            | 39              | 0.1(typ.)   | 7.1                                    | 40  |
| BZX79C62    | 62                              | 2                | 215   | 450                         | 0.5              | 0.05                            | 43              | 0.1(typ.)   | 6.4                                    | 35  |
| BZX79C68    | 68                              | 2                | 240   | 475                         | 0.5              | 0.05                            | 48              | 0.1(typ.)   | 5.8                                    | 35  |
| BZX79C75    | 75                              | 2                | 255   | 500                         | 0.5              | 0.05                            | 53              | 0.1(typ.)   | 5.3                                    | 35  |

Notes (1) Tested with pulses  $t_p = 5\text{ms}$

(2) Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.

(3) The type number listed have a standard tolerance on the nominal zener voltage of  $\pm 5\%$ .

For  $\pm 2\%$  tolerance altered the sixth letter of type from "C" to be "B"