

### ZENER DIODES

Vz RANGE: 1.0, 3.9 - 200V  
POWER DISSIPATION: 3.0 W

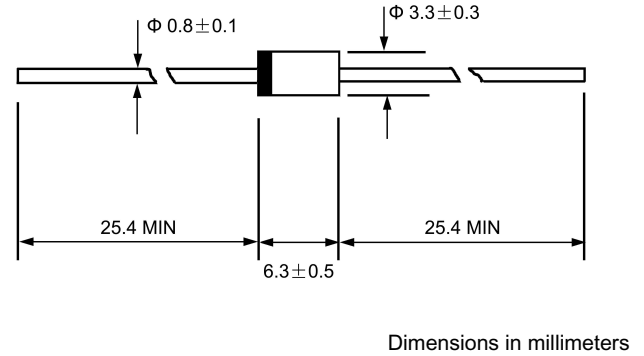
#### FEATURES

- ◇ For use in stabilizing and clipping circuits with high power rating.
- ◇ The zener voltages are graded according to the international E 12 standard. Smaller voltage tolerances are available upon request.

#### MECHANICAL DATA

- ◇ Case: DO-15, Plastic case
- ◇ Terminals: Solderable per MIL-STD-202, method 208
- ◇ Polarity: Cathode band
- ◇ Marking: Type number
- ◇ Approx. Weight: 0.39 grams.

#### DO - 15



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

|   | SYMBOL           | VALUE             | UNIT             |
|---|------------------|-------------------|------------------|
| Zener current (see Table "Characteristics") |                  |                   |                  |
| Power dissipation at Tamb=25°C              | P <sub>tot</sub> | 3 <sup>(1)</sup>  | W                |
| Thermal resistance junction to ambient air  | R <sub>OJA</sub> | 40 <sup>(1)</sup> | °C/W             |
| Junction temperature                        | T <sub>J</sub>   | -55---+150        | °C               |
| Storage temperature range                   | T <sub>s</sub>   | -55---+150        | °C               |
| Thermal resistance junction to ambient air  | R <sub>thA</sub> | <40               | K/W <sup>1</sup> |
| Thermal resistance junction to Lead         | R <sub>thL</sub> | <15               | K/W              |

NOTES: (1) Valid provided that leads are kept at ambient temperature at a distance of 10mm from case .

www.galaxycn.com

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

| Type   | Nominal zener voltage            | Test current    | Maximum dynamic impedance | Typical temperature coefficient | Reverse voltage     | Maximum regulator current                |
|--------|----------------------------------|-----------------|---------------------------|---------------------------------|---------------------|--|
|        | V <sub>Z</sub> @ I <sub>ZT</sub> | I <sub>ZT</sub> | I <sub>ZT</sub>           | α <sub>VZ</sub>                 | I <sub>R</sub> =1μA | I <sub>ZM</sub> @ T <sub>amb</sub> =50°C |
|        | V                                | mA              | Ω                         | %/°C                            | V                   | mA                                       |
| 3EZ1   | 0.71---0.82                      | 100             | 0.5(<1)                   | -26 --- -16                     | -                   | 2000                                     |
| 3EZ6.2 | 5.8---6.6                        | 100             | 1(<2)                     | -1 --- +6                       | > 1.5               | 424                                      |
| 3EZ6.8 | 6.4---7.2                        | 100             | 1(<2)                     | 0 --- +7                        | > 2                 | 389                                      |
| 3EZ7.5 | 7.0---7.9                        | 100             | 1(<2)                     | 0 --- +7                        | > 2                 | 354                                      |
| 3EZ8.2 | 7.7---8.7                        | 100             | 1(<2)                     | +3 --- +8                       | > 3.5               | 322                                      |
| 3EZ9.1 | 8.5---9.6                        | 50              | 2(<4)                     | +3 --- +8                       | > 3.5               | 292                                      |
| 3EZ10  | 9.4---10.6                       | 50              | 2(<4)                     | +5 --- +9                       | > 5                 | 264                                      |
| 3EZ11  | 10.4---11.6                      | 50              | 4(<7)                     | +5 --- +10                      | > 5                 | 241                                      |
| 3EZ12  | 11.4---12.7                      | 50              | 4(<7)                     | +5 --- +10                      | > 7                 | 220                                      |
| 3EZ13  | 12.4---14.1                      | 50              | 5(<10)                    | +5 --- +10                      | > 7                 | 199                                      |
| 3EZ15  | 13.8---15.6                      | 50              | 5(<10)                    | +5 --- +10                      | > 10                | 179                                      |
| 3EZ16  | 15.3---17.1                      | 25              | 6(<15)                    | +6 --- +11                      | > 10                | 164                                      |
| 3EZ18  | 16.8---19.1                      | 25              | 6(<15)                    | +6 --- +11                      | > 10                | 147                                      |
| 3EZ20  | 18.8---21.2                      | 25              | 6(<15)                    | +6 --- +11                      | > 10                | 132                                      |
| 3EZ22  | 20.8---23.3                      | 25              | 6(<15)                    | +6 --- +11                      | > 12                | 120                                      |
| 3EZ24  | 22.8---25.6                      | 25              | 6(<15)                    | +6 --- +11                      | > 12                | 109                                      |
| 3EZ27  | 25.1---28.9                      | 25              | 7(<15)                    | +6 --- +11                      | > 14                | 97                                       |
| 3EZ30  | 28---32                          | 25              | 8(<15)                    | +6 --- +11                      | > 14                | 88                                       |
| 3EZ33  | 31---35                          | 25              | 8(<15)                    | +6 --- +11                      | > 17                | 80                                       |
| 3EZ36  | 34---38                          | 10              | 16(<40)                   | +6 --- +11                      | > 17                | 74                                       |
| 3EZ39  | 37---41                          | 10              | 20(<40)                   | +6 --- +11                      | > 20                | 68                                       |
| 3EZ43  | 40---46                          | 10              | 24(<45)                   | +7 --- +12                      | > 20                | 61                                       |
| 3EZ47  | 44---50                          | 10              | 24(<45)                   | +7 --- +12                      | > 24                | 56                                       |
| 3EZ51  | 48---54                          | 10              | 25(<60)                   | +7 --- +12                      | > 24                | 52                                       |
| 3EZ56  | 52---60                          | 10              | 25(<60)                   | +7 --- +12                      | > 28                | 47                                       |
| 3EZ62  | 58---66                          | 10              | 25(<80)                   | +8 --- +13                      | > 28                | 42                                       |
| 3EZ68  | 64---72                          | 10              | 25(<80)                   | +8 --- +13                      | > 34                | 39                                       |
| 3EZ75  | 70---79                          | 10              | 30(<100)                  | +8 --- +13                      | > 34                | 35                                       |
| 3EZ82  | 77---88                          | 10              | 30(<100)                  | +8 --- +13                      | > 41                | 32                                       |
| 3EZ91  | 85---96                          | 5               | 40(<200)                  | +9 --- +13                      | > 41                | 29                                       |
| 3EZ100 | 94---106                         | 5               | 60(<200)                  | +9 --- +13                      | > 50                | 26                                       |
| 3EZ110 | 104---116                        | 5               | 80(<250)                  | +9 --- +13                      | > 50                | 24                                       |
| 3EZ120 | 114---127                        | 5               | 80(<250)                  | +9 --- +13                      | > 60                | 22                                       |
| 3EZ130 | 124---141                        | 5               | 90(<300)                  | +9 --- +13                      | > 60                | 20                                       |
| 3EZ150 | 138---156                        | 5               | 100(<300)                 | +9 --- +13                      | > 75                | 18                                       |
| 3EZ160 | 153---171                        | 5               | 110(<350)                 | +9 --- +13                      | > 75                | 16                                       |
| 3EZ180 | 168---191                        | 5               | 120(<350)                 | +9 --- +13                      | > 90                | 15                                       |
| 3EZ200 | 188---212                        | 5               | 150(<350)                 | +9 --- +13                      | > 90                | 13                                       |

www.galaxycn.com