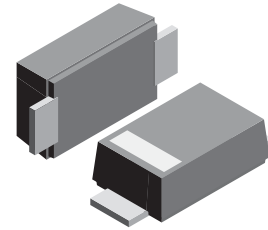


**VOLTAGE RANGE: 3.0 - 200V**

**POWER: 1.3Watts**

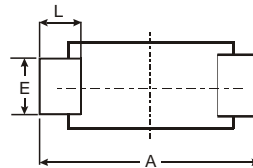
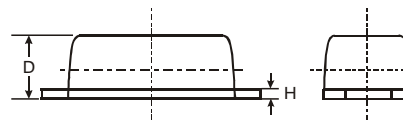
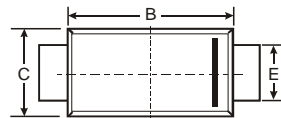


### Features

- Complete Voltage Range 3.0 to 200 Volts
- High peak reverse power dissipation
- High reliability
- Low leakage current

### Mechanical Data

- Case: JEDEC SOD-123FL, molded plastic over passivated chip
- Polarity: Color band denotes positive end ( cathode ) except for bidirectional
- Mounting position: Any
- Weight: 0.0007 ounce, 0.02 grams



| SOD-123FL            |       |      |      |
|----------------------|-------|------|------|
| Dim                  | Min   | Max  | Typ  |
| A                    | 3.58  | 3.72 | 3.65 |
| B                    | 2.72  | 2.78 | 2.75 |
| C                    | 1.77  | 1.83 | 1.80 |
| D                    | 1.02  | 1.08 | 1.05 |
| E                    | 0.097 | 1.03 | 1.00 |
| H                    | 0.13  | 0.17 | 0.15 |
| L                    | 0.53  | 0.57 | 0.55 |
| All Dimensions in mm |       |      |      |

### Maximum Ratings

Rating at 25 °C ambient temperature unless otherwise specified

| Rating   | Symbol          | Value         | Unit             |
|--|-----------------|---------------|------------------|
| DC Power Dissipation at $T_L = 50\text{ }^\circ\text{C}$ (Note1) | PD              | 1.3           | Watts            |
| Maximum Forward Voltage at $I_F = 200\text{ mA}$                 | $V_F$           | 1.0           | Volts            |
| Maximum Thermal Resistance Junction to Ambient Air (Note2)       | $R_{\theta JA}$ | 130           | K / W            |
| Junction Temperature Range                                       | $T_J$           | - 55 to + 175 | $^\circ\text{C}$ |
| Storage Temperature Range  | $T_s$           | - 55 to + 175 | $^\circ\text{C}$ |

**Note :**

- (1)  $T_L$  = Lead temperature at 3/8 " (9.5mm) from body
- (2) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case.

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

| TYPE   | Nominal Zener Voltage |          | Maximum Zener Impedance |                   |          | Maximum Reverse Leakage Current |     | Maximum DC Zener Current |
|--------|-----------------------|----------|-------------------------|-------------------|----------|---------------------------------|-----|--------------------------|
|        | $V_Z @ I_{ZT}$        | $I_{ZT}$ | $Z_{ZT} @ I_{ZT}$       | $Z_{ZK} @ I_{ZK}$ | $I_{ZK}$ | $I_R @ V_R$                     |     | $I_{ZM}$                 |
|        | (V)                   | (mA)     | ( $\Omega$ )            | ( $\Omega$ )      | (mA)     | ( $\mu$ A)                      | (V) | (mA)                     |
| ZPX3V0 | 3.0                   | 80       | 20                      | 400               | 1.0      | 100                             | 1.0 | 340                      |
| ZPX3V3 | 3.3                   | 80       | 20                      | 400               | 1.0      | 40                              | 1.0 | 320                      |
| ZPX3V6 | 3.6                   | 70       | 20                      | 500               | 1.0      | 20                              | 1.0 | 290                      |
| ZPX3V9 | 3.9                   | 60       | 15                      | 500               | 1.0      | 10                              | 1.0 | 280                      |
| ZPX4V3 | 4.3                   | 50       | 13                      | 500               | 1.0      | 3.0                             | 1.0 | 250                      |
| ZPX4V7 | 4.7                   | 45       | 13                      | 500               | 1.0      | 3.0                             | 1.0 | 215                      |
| ZPX5V1 | 5.1                   | 45       | 10                      | 500               | 1.0      | 1.0                             | 1.5 | 200                      |
| ZPX5V6 | 5.6                   | 45       | 7.0                     | 400               | 1.0      | 1.0                             | 2.0 | 190                      |
| ZPX6V2 | 6.2                   | 35       | 4.0                     | 300               | 1.0      | 1.0                             | 3.0 | 170                      |
| ZPX6V8 | 6.8                   | 35       | 3.5                     | 300               | 1.0      | 50                              | 4.0 | 155                      |
| ZPX7V5 | 7.5                   | 35       | 3.0                     | 200               | 0.5      | 50                              | 4.5 | 140                      |
| ZPX8V2 | 8.2                   | 25       | 5.0                     | 200               | 0.5      | 50                              | 6.2 | 130                      |
| ZPX9V1 | 9.1                   | 25       | 5.0                     | 200               | 0.5      | 50                              | 6.8 | 120                      |
| ZPX10  | 10                    | 25       | 7.0                     | 200               | 0.5      | 50                              | 7.5 | 105                      |
| ZPX11  | 11                    | 20       | 8.0                     | 300               | 0.5      | 50                              | 8.2 | 97                       |
| ZPX12  | 12                    | 20       | 9.0                     | 350               | 0.5      | 0.5                             | 9.1 | 88                       |
| ZPX13  | 13                    | 20       | 10                      | 400               | 0.5      | 0.5                             | 10  | 79                       |
| ZPX15  | 15                    | 15       | 15                      | 500               | 0.5      | 0.5                             | 11  | 71                       |
| ZPX16  | 16                    | 15       | 15                      | 500               | 0.5      | 0.5                             | 12  | 66                       |
| ZPX18  | 18                    | 15       | 20                      | 500               | 0.5      | 0.5                             | 13  | 62                       |
| ZPX19  | 19                    | 15       | 20                      | 550               | 0.5      | 0.5                             | 14  | 58                       |
| ZPX20  | 20                    | 10       | 24                      | 600               | 0.5      | 0.5                             | 15  | 56                       |
| ZPX22  | 22                    | 10       | 25                      | 600               | 0.5      | 0.5                             | 16  | 52                       |
| ZPX24  | 24                    | 10       | 25                      | 600               | 0.5      | 0.5                             | 18  | 47                       |
| ZPX27  | 27                    | 8.0      | 30                      | 750               | 0.25     | 0.5                             | 20  | 41                       |
| ZPX30  | 30                    | 8.0      | 30                      | 1000              | 0.25     | 0.5                             | 22  | 36                       |
| ZPX33  | 33                    | 8.0      | 35                      | 1000              | 0.25     | 0.5                             | 24  | 33                       |
| ZPX36  | 36                    | 8.0      | 40                      | 1000              | 0.25     | 0.5                             | 27  | 30                       |
| ZPX39  | 39                    | 6.0      | 50                      | 1000              | 0.25     | 0.5                             | 30  | 28                       |
| ZPX43  | 43                    | 6.0      | 50                      | 1000              | 0.25     | 0.5                             | 33  | 26                       |
| ZPX47  | 47                    | 4.0      | 90                      | 1500              | 0.25     | 0.5                             | 36  | 23                       |
| ZPX51  | 51                    | 4.0      | 115                     | 1500              | 0.25     | 0.5                             | 39  | 21                       |
| ZPX56  | 56                    | 4.0      | 120                     | 2000              | 0.25     | 0.5                             | 43  | 19                       |
| ZPX62  | 62                    | 4.0      | 125                     | 2000              | 0.25     | 0.5                             | 47  | 16                       |
| ZPX68  | 68                    | 4.0      | 130                     | 2000              | 0.25     | 0.5                             | 51  | 15                       |
| ZPX75  | 75                    | 4.0      | 135                     | 2000              | 0.25     | 0.5                             | 56  | 14                       |
| ZPX82  | 82                    | 2.7      | 200                     | 3000              | 0.25     | 0.5                             | 62  | 12                       |
| ZPX91  | 91                    | 2.7      | 250                     | 3000              | 0.25     | 0.5                             | 68  | 10                       |
| ZPX100 | 100                   | 2.7      | 350                     | 3000              | 0.25     | 0.5                             | 75  | 9.4                      |
| ZPX110 | 110                   | 2.7      | 450                     | 4000              | 0.25     | 0.5                             | 82  | 8.6                      |
| ZPX120 | 120                   | 2.0      | 550                     | 4500              | 0.25     | 0.5                             | 91  | 7.8                      |
| ZPX130 | 130                   | 2.0      | 700                     | 5000              | 0.25     | 0.5                             | 100 | 7.0                      |
| ZPX150 | 150                   | 2.0      | 1000                    | 6000              | 0.25     | 0.5                             | 110 | 6.4                      |
| ZPX160 | 160                   | 1.5      | 1100                    | 6500              | 0.25     | 0.5                             | 120 | 5.8                      |
| ZPX180 | 180                   | 1.5      | 1200                    | 7000              | 0.25     | 0.5                             | 130 | 5.2                      |
| ZPX200 | 200                   | 1.5      | 1900                    | 9990              | 0.25     | 0.5                             | 150 | 4.7                      |

**Note :**

- (1) The type number listed have a standard tolerance on the nominal zener voltage  $\pm 5.0\%$ .