

**Maximum Ratings** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

| Characteristic                           | Symbol         | Value | Unit |
|------------------------------------------|----------------|-------|------|
| Forward Voltage @ I <sub>F</sub> = 200mA | V <sub>F</sub> | 1.2   | V    |

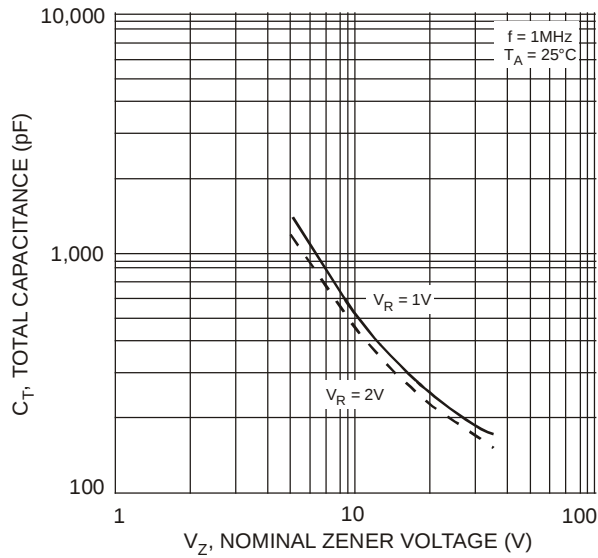
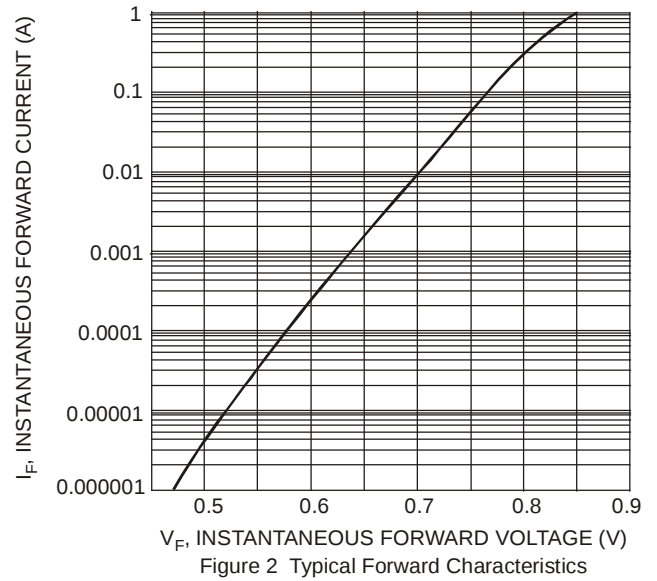
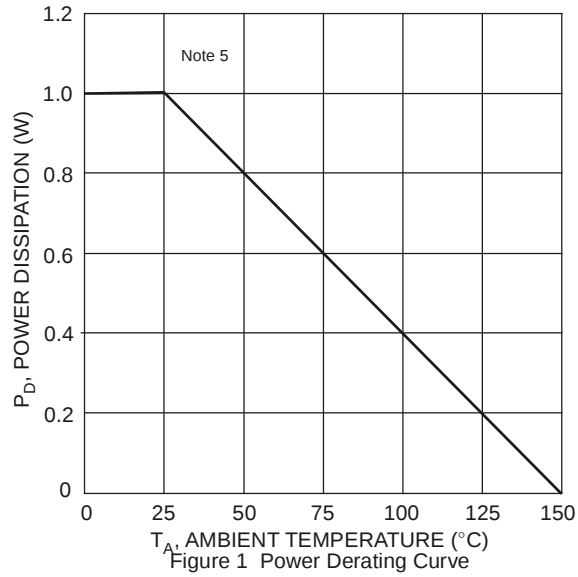
**Thermal Characteristics**

| Characteristic                                          | Symbol                            | Typ | Value       | Unit |
|---------------------------------------------------------|-----------------------------------|-----|-------------|------|
| Power Dissipation (Note 5)                              | P <sub>D</sub>                    | —   | 1.0         | W    |
| Thermal Resistance Junction to Ambient Air (Note 5)     | R <sub>θJA</sub>                  | 110 | —           | °C/W |
| Thermal Resistance Junction to Soldering Point (Note 6) | R <sub>θJS</sub>                  | —   | 9           | °C/W |
| Operating and Storage Temperature Range                 | T <sub>J</sub> , T <sub>STG</sub> | —   | -55 to +150 | °C   |

**Electrical Characteristics** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

| Type Number | Marking Codes | Zener Voltage Range (Note 7)     |         |         |                 | Zener Impedance                   |         | Maximum Reverse Current (Note 7) |                  | Temperature Coefficient @ I <sub>ZT</sub> %/°C |      |
|-------------|---------------|----------------------------------|---------|---------|-----------------|-----------------------------------|---------|----------------------------------|------------------|------------------------------------------------|------|
|             |               | V <sub>Z</sub> @ I <sub>ZT</sub> |         |         | I <sub>ZT</sub> | Z <sub>ZT</sub> @ I <sub>ZT</sub> |         | I <sub>R</sub>                   | @ V <sub>R</sub> | Min                                            | Max  |
|             |               | Nom (V)                          | Min (V) | Max (V) | mA              | Typ (Ω)                           | Max (Ω) | μA                               | V                |                                                |      |
| DFLZ5V1     | FHK           | 5.1                              | 4.8     | 5.4     | 100             | 2                                 | 6       | 2.5                              | 1                | -0.08                                          | 0.02 |
| DFLZ5V6     | FHL           | 5.6                              | 5.2     | 6.0     | 100             | 1                                 | 4       | 10                               | 2                | -0.04                                          | 0.04 |
| DFLZ6V2     | FHN           | 6.2                              | 5.8     | 6.6     | 100             | 1                                 | 3       | 5                                | 2                | -0.01                                          | 0.06 |
| DFLZ6V8     | FHO           | 6.8                              | 6.4     | 7.2     | 100             | 1                                 | 3       | 5                                | 3                | 0                                              | 0.07 |
| DFLZ7V5     | FHQ           | 7.5                              | 7.0     | 7.9     | 100             | 1                                 | 2       | 5                                | 3                | 0                                              | 0.07 |
| DFLZ8V2     | FHR           | 8.2                              | 7.7     | 8.7     | 100             | 1                                 | 2       | 5                                | 3                | 0.03                                           | 0.08 |
| DFLZ9V1     | FHT           | 9.1                              | 8.5     | 9.6     | 50              | 1                                 | 4       | 5                                | 5                | 0.03                                           | 0.08 |
| DFLZ10      | FHU           | 10                               | 9.4     | 10.6    | 50              | 1                                 | 4       | 5                                | 7.5              | 0.05                                           | 0.09 |
| DFLZ11      | FHV           | 11                               | 10.4    | 11.6    | 50              | 1                                 | 7       | 4                                | 8.2              | 0.05                                           | 0.10 |
| DFLZ12      | FHW           | 12                               | 11.4    | 12.7    | 50              | 1                                 | 7       | 3                                | 9.1              | 0.05                                           | 0.10 |
| DFLZ13      | FHX           | 13                               | 12.4    | 14.1    | 50              | 1                                 | 10      | 2                                | 10               | 0.05                                           | 0.10 |
| DFLZ15      | FHZ           | 15                               | 13.8    | 15.6    | 50              | 1                                 | 10      | 1                                | 11               | 0.05                                           | 0.10 |
| DFLZ16      | FJA           | 16                               | 15.3    | 17.1    | 25              | 1                                 | 15      | 1                                | 12               | 0.06                                           | 0.11 |
| DFLZ18      | FJF           | 18                               | 16.8    | 19.1    | 25              | 2                                 | 15      | 1                                | 13               | 0.06                                           | 0.11 |
| DFLZ20      | FJG           | 20                               | 18.8    | 21.2    | 25              | 3                                 | 15      | 1                                | 15               | 0.06                                           | 0.11 |
| DFLZ22      | FJK           | 22                               | 20.8    | 23.3    | 25              | 3                                 | 15      | 1                                | 16               | 0.06                                           | 0.11 |
| DFLZ24      | FJL           | 24                               | 22.8    | 25.6    | 25              | 2                                 | 15      | 1                                | 18               | 0.06                                           | 0.11 |
| DFLZ27      | FJN           | 27                               | 25.1    | 28.9    | 25              | 3                                 | 15      | 1                                | 20               | 0.06                                           | 0.11 |
| DFLZ30      | FJQ           | 30                               | 28      | 32      | 25              | 8                                 | 15      | 1                                | 22               | 0.06                                           | 0.11 |
| DFLZ33      | FJR           | 33                               | 31      | 35      | 25              | 5                                 | 15      | 1                                | 24               | 0.06                                           | 0.11 |
| DFLZ36      | FJS           | 36                               | 34      | 38      | 10              | 5                                 | 40      | 1                                | 27               | 0.06                                           | 0.11 |
| DFLZ39      | FJT           | 39                               | 37      | 41      | 10              | 5                                 | 40      | 1                                | 30               | 0.06                                           | 0.11 |

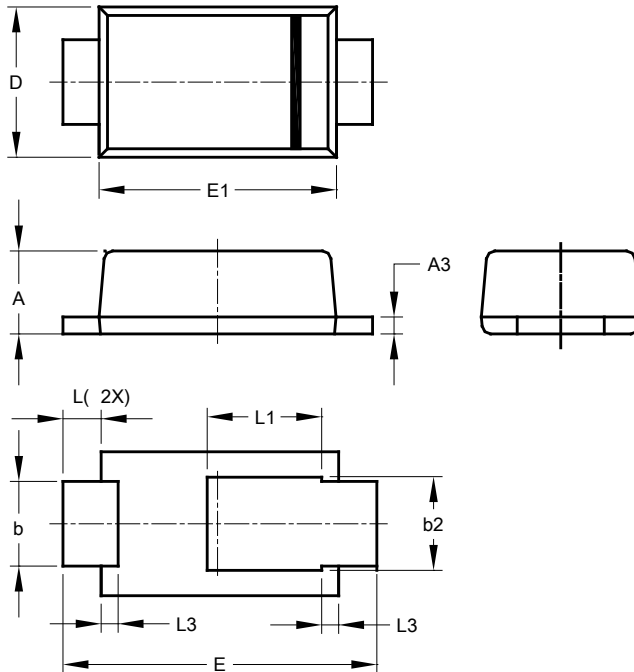
- Notes:
- Device mounted on 1.5" × 1.5", FR-4 PCB; 2 oz. Cu with 1" × 1" pad layout.
  - Theoretical R<sub>θJS</sub> calculated from the top center of the die straight down to the PCB/cathode tab solder junction.
  - Short duration pulse test used to minimize self-heating effect.



## Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

PowerDI123

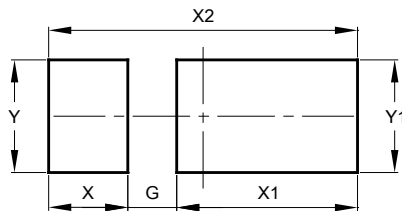


| PowerDI123           |       |       |      |
|----------------------|-------|-------|------|
| Dim                  | Min   | Max   | Typ  |
| A                    | 0.93  | 1.00  | 0.98 |
| A3                   | 0.15  | 0.25  | 0.20 |
| b                    | 0.85  | 1.25  | 1.00 |
| b2                   | 1.025 | 1.125 | 1.10 |
| D                    | 1.63  | 1.93  | 1.78 |
| E                    | 3.50  | 3.90  | 3.70 |
| E1                   | 2.60  | 3.00  | 2.80 |
| L                    | 0.40  | 0.50  | 0.45 |
| L1                   | 1.25  | 1.40  | 1.35 |
| L3                   | 0.125 | 0.275 | 0.20 |
| All Dimensions in mm |       |       |      |

## Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

PowerDI123



| Dimensions | Value (in mm) |
|------------|---------------|
| G          | 0.65          |
| X          | 1.05          |
| X1         | 2.40          |
| X2         | 4.10          |
| Y          | 1.50          |
| Y1         | 1.50          |

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