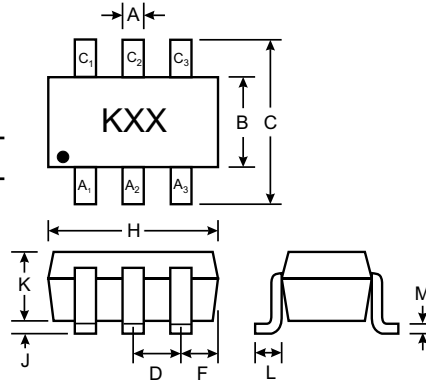


### Features

- Zener Voltages from 2.4 - 39V
- Three Isolated Diode Elements in a Single Ultra-Small Surface Mount Package.

### Mechanical Data

- Case: SOT-363, Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Orientation: See Diagram
- Marking: Marking Code (See Table on Page 2)
- Weight: 0.006 grams (approx.)



| SOT-363              |              |      |
|----------------------|--------------|------|
| Dim                  | Min          | Max  |
| A                    | 0.10         | 0.30 |
| B                    | 1.15         | 1.35 |
| C                    | 2.00         | 2.20 |
| D                    | 0.65 Nominal |      |
| F                    | 0.30         | 0.40 |
| H                    | 1.80         | 2.20 |
| J                    | —            | 0.10 |
| K                    | 0.90         | 1.00 |
| L                    | 0.25         | 0.40 |
| M                    | 0.10         | 0.25 |
| All Dimensions in mm |              |      |

### Maximum Ratings @ T<sub>A</sub> = 25°C unless otherwise specified

| Characteristic                                       | Symbol                            | Value       | Unit |
|--|-----------------------------------|-------------|------|
| Forward Voltage @ I <sub>F</sub> = 10mA              | V <sub>F</sub>                    | 0.9         | V    |
| Power Dissipation (Note 1)                           | P <sub>d</sub>                    | 200         | mW   |
| Thermal Resistance, Junction to Ambient Air (Note 1) | R <sub>θJA</sub>                  | 625         | K/W  |
| Operating and Storage Temperature Range              | T <sub>J</sub> , T <sub>STG</sub> | -65 to +150 | °C   |

- Notes:
1. Valid provided that device terminals are kept at ambient temperature.
  2. V<sub>Z</sub> measured @ I<sub>ZT</sub> using a pulse test. I<sub>ZT</sub> pulse width = 300μs, period = 5ms.

**Electrical Characteristics** @  $T_A = 25^\circ\text{C}$  unless otherwise specified

| Type Number | Marking Code | Zener Voltage Range (Note 2) |         |         |          | Maximum Zener Impedance |                   |               | Maximum Reverse Current |       | Temperature Coefficient of Zener Voltage @ $I_{ZT} = 5\text{mA}$ $\text{mV}/^\circ\text{C}$ |      |
|-------------|--------------|------------------------------|---------|---------|----------|-------------------------|-------------------|---------------|-------------------------|-------|---|------|
|             |              | $V_Z @ I_{ZT}$               |         |         | $I_{ZT}$ | $Z_{ZT} @ I_{ZT}$       | $Z_{ZK} @ I_{ZK}$ | $I_{ZK}$      | $I_R$                   | $V_R$ | Min   | Max  |
|             |              | Nom (V)                      | Min (V) | Max (V) | mA       | $\Omega$                | mA                | $\mu\text{A}$ | @ V                     |       |   |      |
| BZX84C2V4TS | KRB          | 2.4                          | 2.2     | 2.6     | 5        | 100                     | 600               | 0.5           | 50                      | 1.0   | -3.5  | 0    |
| BZX84C2V7TS | KRC          | 2.7                          | 2.5     | 2.9     | 5        | 100                     | 600               | 1.0           | 20                      | 1.0   | -3.5  | 0    |
| BZX84C3V0TS | KRD          | 3.0                          | 2.8     | 3.2     | 5        | 95                      | 600               | 1.0           | 10                      | 1.0   | -3.5  | 0    |
| BZX84C3V3TS | KRE          | 3.3                          | 3.1     | 3.5     | 5        | 95                      | 600               | 1.0           | 5.0                     | 1.0   | -3.5  | 0    |
| BZX84C3V6TS | KRF          | 3.6                          | 3.4     | 3.8     | 5        | 90                      | 600               | 1.0           | 5.0                     | 1.0   | -3.5  | 0    |
| BZX84C3V9TS | KRG          | 3.9                          | 3.7     | 4.1     | 5        | 90                      | 600               | 1.0           | 3.0                     | 1.0   | -3.5  | 0    |
| BZX84C4V3TS | KRH          | 4.3                          | 4.0     | 4.6     | 5        | 90                      | 600               | 1.0           | 3.0                     | 1.0   | -3.5  | 0    |
| BZX84C4V7TS | KR1          | 4.7                          | 4.4     | 5.0     | 5        | 80                      | 500               | 1.0           | 3.0                     | 2.0   | -3.5  | 0.2  |
| BZX84C5V1TS | KR2          | 5.1                          | 4.8     | 5.4     | 5        | 60                      | 480               | 1.0           | 2.0                     | 2.0   | -2.7  | 1.2  |
| BZX84C5V6TS | KR3          | 5.6                          | 5.2     | 6.0     | 5        | 40                      | 400               | 1.0           | 1.0                     | 2.0   | -2.0  | 2.5  |
| BZX84C6V2TS | KR4          | 6.2                          | 5.8     | 6.6     | 5        | 10                      | 150               | 1.0           | 3.0                     | 4.0   | 0.4   | 3.7  |
| BZX84C6V8TS | KR5          | 6.8                          | 6.4     | 7.2     | 5        | 15                      | 80                | 1.0           | 2.0                     | 4.0   | 1.2   | 4.5  |
| BZX84C7V5TS | KR6          | 7.5                          | 7.0     | 7.9     | 5        | 15                      | 80                | 1.0           | 1.0                     | 5.0   | 2.5   | 5.3  |
| BZX84C8V2TS | KR7          | 8.2                          | 7.7     | 8.7     | 5        | 15                      | 80                | 1.0           | 0.7                     | 5.0   | 3.2   | 6.2  |
| BZX84C9V1TS | KR8          | 9.1                          | 8.5     | 9.6     | 5        | 15                      | 100               | 1.0           | 0.5                     | 6.0   | 3.8   | 7.0  |
| BZX84C10TS  | KR9          | 10.0                         | 9.4     | 10.6    | 5        | 20                      | 150               | 1.0           | 0.2                     | 7.0   | 4.5   | 8.0  |
| BZX84C11TS  | KP1          | 11.0                         | 10.4    | 11.6    | 5        | 20                      | 150               | 1.0           | 0.1                     | 8.0   | 5.4   | 9.0  |
| BZX84C12TS  | KP2          | 12.0                         | 11.4    | 12.7    | 5        | 25                      | 150               | 1.0           | 0.1                     | 8.0   | 6.0   | 10.0 |
| BZX84C13TS  | KP3          | 13.0                         | 12.4    | 14.1    | 5        | 30                      | 170               | 1.0           | 0.1                     | 8.0   | 7.0   | 11.0 |
| BZX84C15TS  | KP4          | 15.0                         | 13.8    | 15.6    | 5        | 30                      | 200               | 1.0           | 0.1                     | 10.5  | 9.2   | 13.0 |
| BZX84C16TS  | KP5          | 16.0                         | 15.3    | 17.1    | 5        | 40                      | 200               | 1.0           | 0.1                     | 11.2  | 10.4  | 14.0 |
| BZX84C18TS  | KP6          | 18.0                         | 16.8    | 19.1    | 5        | 45                      | 225               | 1.0           | 0.1                     | 12.6  | 12.4  | 16.0 |
| BZX84C20TS  | KP7          | 20.0                         | 18.8    | 21.2    | 5        | 55                      | 225               | 1.0           | 0.1                     | 14.0  | 14.4  | 18.0 |
| BZX84C22TS  | KP8          | 22.0                         | 20.8    | 23.3    | 5        | 55                      | 250               | 1.0           | 0.1                     | 15.4  | 16.4  | 20.0 |
| BZX84C24TS  | KP9          | 24.0                         | 22.8    | 25.6    | 5        | 70                      | 250               | 1.0           | 0.1                     | 16.8  | 18.4  | 22.0 |
| BZX84C27TS  | KPA          | 27.0                         | 25.1    | 28.9    | 2        | 80                      | 300               | 0.5           | 0.1                     | 18.9  | 21.4  | 25.3 |
| BZX84C30TS  | KPB          | 30.0                         | 28.0    | 32.0    | 2        | 80                      | 300               | 0.5           | 0.1                     | 21.0  | 24.4  | 29.4 |
| BZX84C33TS  | KPC          | 33.0                         | 31.0    | 35.0    | 2        | 80                      | 325               | 0.5           | 0.1                     | 23.1  | 27.4  | 33.4 |
| BZX84C36TS  | KPD          | 36.0                         | 34.0    | 38.0    | 2        | 90                      | 350               | 0.5           | 0.1                     | 25.2  | 30.4  | 37.4 |
| BZX84C39TS  | KPE          | 39.0                         | 37.0    | 41.0    | 2        | 130                     | 350               | 0.5           | 0.1                     | 27.3  | 33.4  | 41.2 |

- Notes: 1. Valid provided that device terminals are kept at ambient temperature.  
2.  $V_Z$  measured @  $I_{ZT}$  using a pulse test.  $I_{ZT}$  pulse width = 300 $\mu\text{s}$ , period = 5ms.

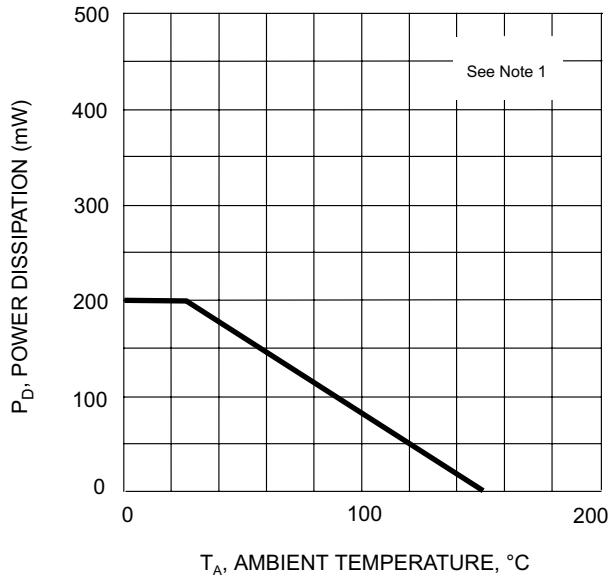


Fig. 1. Power Derating Curve

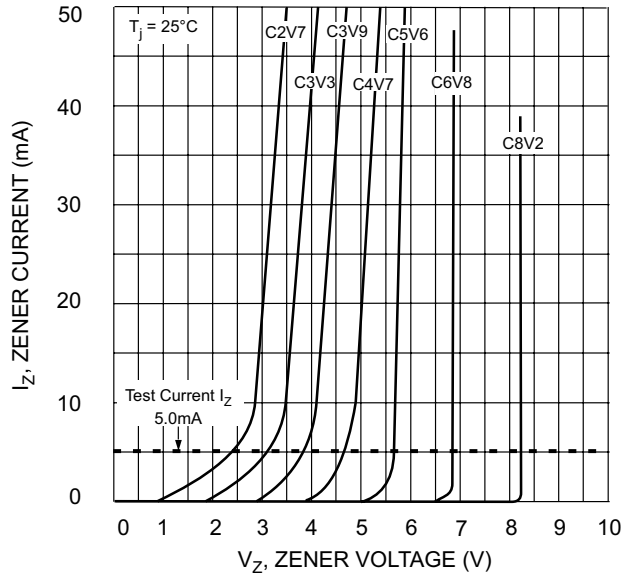


Fig. 2. Zener Breakdown Characteristics

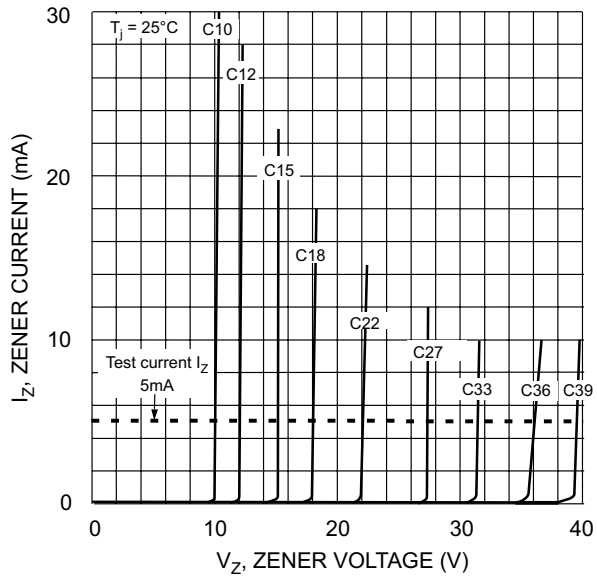


Fig. 3. Zener Breakdown Characteristics

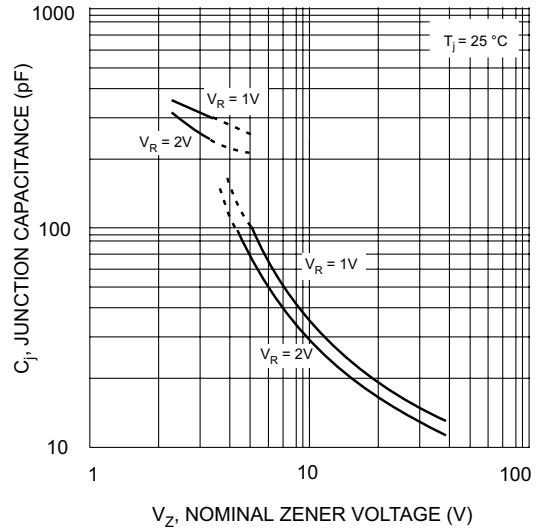


Fig. 4. Junction Capacitance vs Nominal Zener Voltage