

**Small Signal Product**
**Surface Mount Zener Voltage Regulator**
**FEATURES**

- Zener voltage range : 2.4V to 75V
- Surface device type mounting
- Hermetically sealed glass
- Compression bonded construction
- Matte Tin (Sn) lead finish
- Pb free and RoHS compliant
- All external surfaces are corrosion resistant and terminals are readily solderable


**Mini-MELF (LL34)**

Hermetically Sealed Glass

**MECHANICAL DATA**

- Case: Mini-MELF Package (JEDEC DO-213AC)
- High temperature soldering guaranteed: 260°C/10s
- Polarity: Indicated by cathode band
- Weight: 12 mg (approximately)

| MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted) |                                   |              |      |
|----------------------------------------------------------------------------------------------|-----------------------------------|--------------|------|
| PARAMETER                                                                                    | SYMBOL                            | VALUE        | UNIT |
| Power Dissipation                                                                            | P <sub>D</sub>                    | 500          | mW   |
| Forward Voltage<br>I <sub>F</sub> = 100 mA                                                   | V <sub>F</sub>                    | 1.5          | V    |
| Junction and Storage Temperature Range                                                       | T <sub>J</sub> , T <sub>STG</sub> | - 65 to +200 | °C   |

Notes: These ratings are limiting values above which the serviceability of the diode may be impaired.

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**ELECTRICAL CHARACTERISTICS** (  $T_A = 25^\circ\text{C}$  unless otherwise noted )

| Device Type | $V_Z$ @ $I_{ZT}$ (Volt) |      | $I_{ZT}$<br>(mA) | $Z_{ZT}$ @ $I_{ZT}$ ( $\Omega$ )<br>Max | $I_{ZK}$<br>(mA) | $Z_{ZK}$ @ $I_{ZK}$ ( $\Omega$ )<br>Max | $I_R$ @ $V_R$ ( $\mu\text{A}$ )<br>Max | $V_R$<br>(V) |
|-------------|-------------------------|------|------------------|-----------------------------------------|------------------|-----------------------------------------|----------------------------------------|--------------|
|             | Min                     | Max  |                  |                                         |                  |                                         |                                        |              |
| BZV79C 2V4  | 2.28                    | 2.56 | 5                | 100                                     | 1                | 600                                     | 100                                    | 1            |
| BZV79C 2V7  | 2.51                    | 2.89 | 5                | 100                                     | 1                | 600                                     | 75                                     | 1            |
| BZV79C 3V0  | 2.8                     | 3.2  | 5                | 95                                      | 1                | 600                                     | 50                                     | 1            |
| BZV79C 3V3  | 3.1                     | 3.5  | 5                | 95                                      | 1                | 600                                     | 25                                     | 1            |
| BZV79C 3V6  | 3.4                     | 3.8  | 5                | 90                                      | 1                | 600                                     | 15                                     | 1            |
| BZV79C 3V9  | 3.7                     | 4.1  | 5                | 90                                      | 1                | 600                                     | 10                                     | 1            |
| BZV79C 4V3  | 4                       | 4.6  | 5                | 90                                      | 1                | 600                                     | 5                                      | 1            |
| BZV79C 4V7  | 4.4                     | 5    | 5                | 80                                      | 1                | 500                                     | 3                                      | 2            |
| BZV79C 5V1  | 4.8                     | 5.4  | 5                | 60                                      | 1                | 480                                     | 2                                      | 2            |
| BZV79C 5V6  | 5.2                     | 6    | 5                | 40                                      | 1                | 400                                     | 1                                      | 2            |
| BZV79C 6V2  | 5.8                     | 6.6  | 5                | 10                                      | 1                | 150                                     | 3                                      | 4            |
| BZV79C 6V8  | 6.4                     | 7.2  | 5                | 15                                      | 1                | 80                                      | 2                                      | 4            |
| BZV79C 7V5  | 7                       | 7.9  | 5                | 15                                      | 1                | 80                                      | 1                                      | 5            |
| BZV79C 8V2  | 7.7                     | 8.7  | 5                | 15                                      | 1                | 80                                      | 0.7                                    | 5            |
| BZV79C 9V1  | 8.5                     | 9.6  | 5                | 15                                      | 1                | 100                                     | 0.5                                    | 6            |
| BZV79C 10   | 9.4                     | 10.6 | 5                | 20                                      | 1                | 150                                     | 0.2                                    | 7            |
| BZV79C 11   | 10.4                    | 11.6 | 5                | 20                                      | 1                | 150                                     | 0.1                                    | 8            |
| BZV79C 12   | 11.4                    | 12.7 | 5                | 25                                      | 1                | 150                                     | 0.1                                    | 8            |
| BZV79C 13   | 12.4                    | 14.1 | 5                | 30                                      | 1                | 170                                     | 0.1                                    | 8            |
| BZV79C 15   | 13.8                    | 15.6 | 5                | 30                                      | 1                | 200                                     | 0.05                                   | 10.5         |
| BZV79C 16   | 15.3                    | 17.1 | 5                | 40                                      | 1                | 200                                     | 0.05                                   | 11.2         |
| BZV79C 18   | 16.8                    | 19.1 | 5                | 45                                      | 1                | 225                                     | 0.05                                   | 12.6         |
| BZV79C 20   | 18.8                    | 21.2 | 5                | 55                                      | 1                | 225                                     | 0.05                                   | 14           |
| BZV79C 22   | 20.8                    | 23.3 | 5                | 55                                      | 1                | 250                                     | 0.05                                   | 15.4         |
| BZV79C 24   | 22.8                    | 25.6 | 5                | 70                                      | 1                | 250                                     | 0.05                                   | 16.8         |
| BZV79C 27   | 25.1                    | 28.9 | 2                | 80                                      | 0.5              | 300                                     | 0.05                                   | 18.9         |
| BZV79C 30   | 28                      | 32   | 2                | 80                                      | 0.5              | 300                                     | 0.05                                   | 21           |
| BZV79C 33   | 31                      | 35   | 2                | 80                                      | 0.5              | 325                                     | 0.05                                   | 23.1         |
| BZV79C 36   | 34                      | 38   | 2                | 90                                      | 0.5              | 350                                     | 0.05                                   | 25.2         |
| BZV79C 39   | 37                      | 41   | 2                | 130                                     | 0.5              | 350                                     | 0.05                                   | 27.3         |
| BZV79C 43   | 40                      | 46   | 2                | 150                                     | 0.5              | 375                                     | 0.05                                   | 30.1         |
| BZV79C 47   | 44                      | 50   | 2                | 170                                     | 0.5              | 375                                     | 0.05                                   | 32.9         |
| BZV79C 51   | 48                      | 54   | 2                | 180                                     | 0.5              | 400                                     | 0.05                                   | 35.7         |
| BZV79C 56   | 52                      | 60   | 2                | 200                                     | 0.5              | 425                                     | 0.05                                   | 39.2         |
| BZV79C 62   | 58                      | 66   | 2.5              | 215                                     | 0.5              | 1000                                    | 0.05                                   | 43.4         |
| BZV79C 68   | 64                      | 72   | 2.5              | 240                                     | 0.5              | 1000                                    | 0.05                                   | 47.6         |
| BZV79C 75   | 70                      | 80   | 2.5              | 255                                     | 0.5              | 1000                                    | 0.05                                   | 52.5         |

Notes : 1. The type numbers listed have zener voltage min/max limits as shown.

2. For detailed information on price, availability and delivery of nominal zener voltages between the voltages shown and tighter voltage tolerances, contact your nearest Taiwan Semiconductor representative.

3. The zener impedance is derived from the 60-cycle ac voltage, which results when an ac current having an RMS value equal to 10% of the dc zener current ( $I_{ZT}$  or  $I_{ZK}$ ) is superimposed to  $I_{ZT}$  or  $I_{ZK}$ .

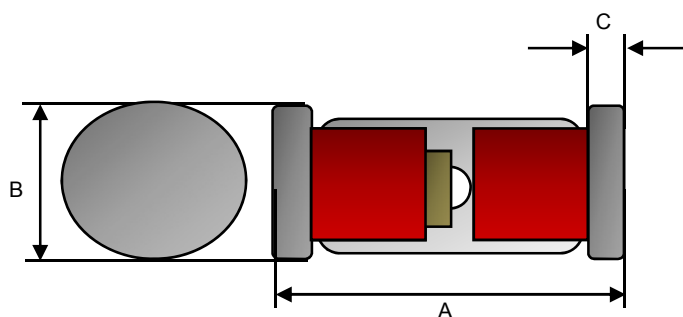
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| ORDERING INFORMATION |                  |              |                     |         |                |
|----------------------|------------------|--------------|---------------------|---------|----------------|
| PART NO.             | MANUFACTURE CODE | PACKING CODE | GREEN COMPOUND CODE | PACKAGE | PACKING        |
| BZV79Cxxx<br>(Note1) | (Note 2)         | L0           | G                   | LL34    | 10K / 13" Reel |
|                      |                  | L1           |                     |         | 2.5K / 7" Reel |

Note 1: "xxx" defines voltage from 2.4V (BZV79C2V4) to 75V (BZV79C75)  
 Note 2: Manufacture special control, if empty means no special control requirement.

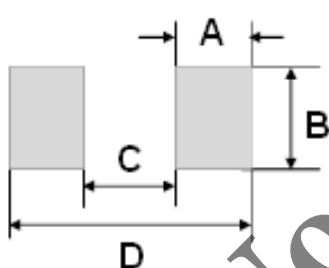
| EXAMPLE         |          |                  |              |                     |                |
|-----------------|----------|------------------|--------------|---------------------|----------------|
| PREFERRED P/N   | PART NO. | MANUFACTURE CODE | PACKING CODE | GREEN COMPOUND CODE | DESCRIPTION    |
| BZV79C75 L0G    | BZV79C75 |                  | L0           | G                   | Green compound |
| BZV79C75-L0 L0G | BZV79C75 | L0               | L0           | G                   | Green compound |

PACKAGE OUTLINE DIMENSION



| DIM. | Unit (mm) |      | Unit (inch) |       |
|------|-----------|------|-------------|-------|
|      | Min       | Max  | Min         | Max   |
| A    | 3.30      | 3.70 | 0.130       | 0.146 |
| B    | 1.40      | 1.60 | 0.055       | 0.063 |
| C    | 0.20      | 0.50 | 0.008       | 0.020 |

SUGGEST PAD LAYOUT



| DIM. | Unit (mm) | Unit (inch) |
|------|-----------|-------------|
|      | Typ.      | Typ.        |
| A    | 1.25      | 0.049       |
| B    | 2.00      | 0.079       |
| C    | 2.50      | 0.098       |
| D    | 5.00      | 0.197       |

**Not Recommended**

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