

•M•C•C•

Micro Commercial Components  
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H2 Series  
THRU  
H36 Series

Features

- Low Leakage
- Low Zener Impedance
- High Reliability

500 mW  
Zener Diode  
1.7 to 37.2 Volts

Maximum Ratings

| Symbol    | Rating                    | Rating      | Unit |
|-----------|---------------------------|-------------|------|
| $P_D$     | Power dissipation         | 500         | W    |
| $T_J$     | Junction Temperature      | -55 to +150 | °C   |
| $T_{STG}$ | Storage Temperature Range | -55 to +150 | °C   |

DO-35

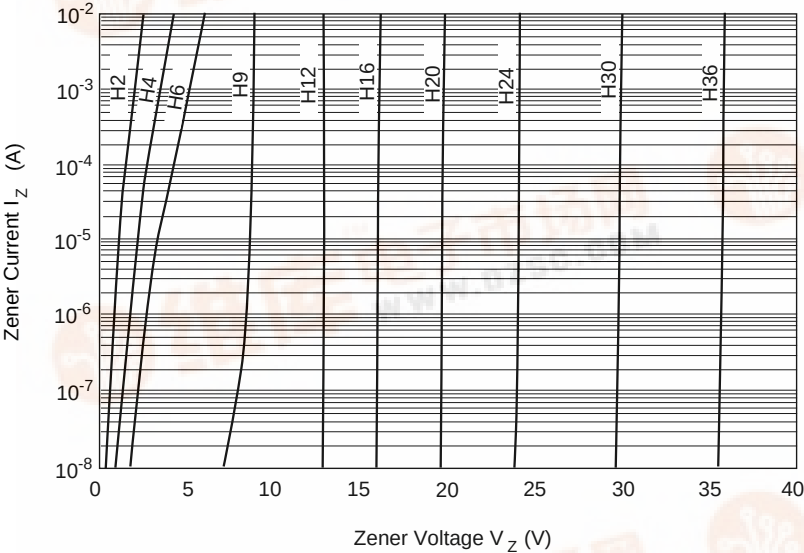
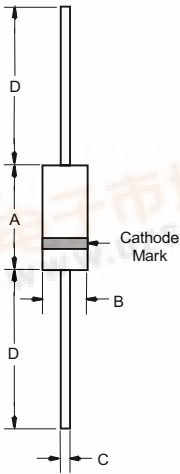
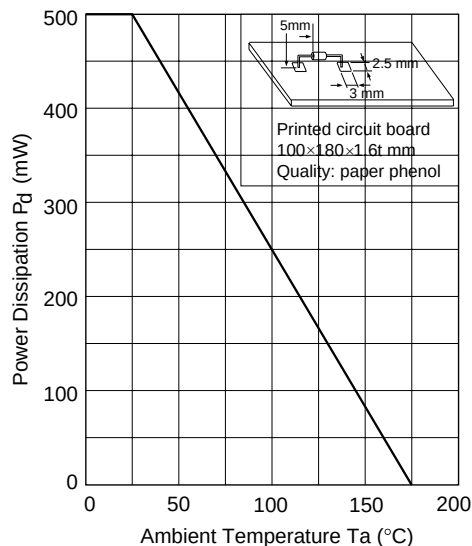
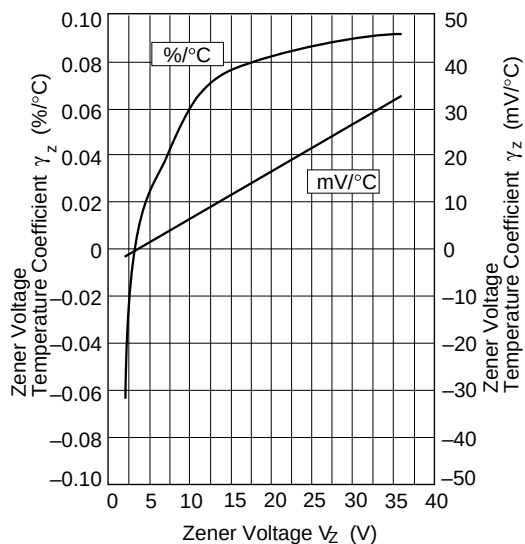


Fig.1 Zener current Vs. Zener voltage

| DIM | INCHES |      | MM    |      | NOTE |
|-----|--------|------|-------|------|------|
|     | MIN    | MAX  | MIN   | MAX  |      |
| A   | ---    | .166 | ---   | 4.2  |      |
| B   | ---    | .079 | ---   | 2.00 |      |
| C   | ---    | .020 | ---   | .52  |      |
| D   | 1.000  | ---  | 25.40 | ---  |      |

## H2 Series thru H36 Series



## ELECTRICAL CHARACTERISTICS @25°C

| MCC<br>PART NUMBER |       | ZENER VOLTAGE<br>$V_Z$ @ $I_{ZT}$<br>VOLTS |     | TEST CURRENT<br>$I_{ZT}$ | Dynamic Resistance<br>$r_d$ (Max) $I_Z$ |     | REVERSE CURRENT<br>$I_R$ (Max) @ $V_R$ |       |
|--------------------|-------|--------------------------------------------|-----|--------------------------|-----------------------------------------|-----|----------------------------------------|-------|
| Type               | Grade | Min                                        | Max | mA                       | OHMS                                    | mA  | $\mu A$                                | VOLTS |
| H2                 | A1    | 1.6                                        | 1.8 | 5.0                      | 100                                     | 5.0 | 25                                     | 0.5   |
|                    | A2    | 1.7                                        | 1.9 | 5.0                      | 100                                     | 5.0 | 25                                     | 0.5   |
|                    | A3    | 1.8                                        | 2.0 | 5.0                      | 100                                     | 5.0 | 25                                     | 0.5   |
|                    | B1    | 1.9                                        | 2.1 | 5.0                      | 100                                     | 5.0 | 5.0                                    | 0.5   |
|                    | B2    | 2.0                                        | 2.2 | 5.0                      | 100                                     | 5.0 | 5.0                                    | 0.5   |
|                    | B3    | 2.1                                        | 2.3 | 5.0                      | 100                                     | 5.0 | 5.0                                    | 0.5   |
|                    | C1    | 2.2                                        | 2.4 | 5.0                      | 100                                     | 5.0 | 5.0                                    | 0.5   |
|                    | C2    | 2.3                                        | 2.5 | 5.0                      | 100                                     | 5.0 | 5.0                                    | 0.5   |
| H3                 | A1    | 2.5                                        | 2.7 | 5.0                      | 100                                     | 5.0 | 5.0                                    | 0.5   |
|                    | A2    | 2.6                                        | 2.8 | 5.0                      | 100                                     | 5.0 | 5.0                                    | 0.5   |
|                    | A3    | 2.7                                        | 2.9 | 5.0                      | 100                                     | 5.0 | 5.0                                    | 0.5   |
|                    | B1    | 2.8                                        | 3.0 | 5.0                      | 100                                     | 5.0 | 5.0                                    | 0.5   |
|                    | B2    | 2.9                                        | 3.1 | 5.0                      | 100                                     | 5.0 | 5.0                                    | 0.5   |
|                    | B3    | 3.0                                        | 3.2 | 5.0                      | 100                                     | 5.0 | 5.0                                    | 0.5   |
|                    | C1    | 3.1                                        | 3.3 | 5.0                      | 100                                     | 5.0 | 5.0                                    | 0.5   |
|                    | C2    | 3.2                                        | 3.4 | 5.0                      | 100                                     | 5.0 | 5.0                                    | 0.5   |
| H4                 | A1    | 3.4                                        | 3.6 | 5.0                      | 100                                     | 5.0 | 5.0                                    | 1.0   |
|                    | A2    | 3.5                                        | 3.7 | 5.0                      | 100                                     | 5.0 | 5.0                                    | 1.0   |
|                    | A3    | 3.6                                        | 3.8 | 5.0                      | 100                                     | 5.0 | 5.0                                    | 1.0   |
|                    | B1    | 3.7                                        | 3.9 | 5.0                      | 100                                     | 5.0 | 5.0                                    | 1.0   |
|                    | B2    | 3.8                                        | 4.0 | 5.0                      | 100                                     | 5.0 | 5.0                                    | 1.0   |
|                    | B3    | 3.9                                        | 4.1 | 5.0                      | 100                                     | 5.0 | 5.0                                    | 1.0   |
|                    | C1    | 4.0                                        | 4.2 | 5.0                      | 100                                     | 5.0 | 5.0                                    | 1.0   |
|                    | C2    | 4.1                                        | 4.3 | 5.0                      | 100                                     | 5.0 | 5.0                                    | 1.0   |



## H2 Series thru H36 Series

### ELECTRICAL CHARACTERISTICS @25°C

| MCC<br>PART NUMBER |       | ZENER VOLTAGE<br>$V_Z$ @ $I_{ZT}$<br>VOLTS |      | TEST CURRENT<br>$I_{ZT}$ | Dynamic Resistance<br>$r_d$ (Max) $I_Z$ |     | REVERSE CURRENT<br>$I_R$ (Max) @ $V_R$ |       |
|--------------------|-------|--------------------------------------------|------|--------------------------|-----------------------------------------|-----|----------------------------------------|-------|
| Type               | Grade | Min                                        | Max  | mA                       | OHMS                                    | mA  | $\mu A$                                | VOLTS |
| H5                 | A1    | 4.3                                        | 4.5  | 5.0                      | 100                                     | 5.0 | 5.0                                    | 1.5   |
|                    | A2    | 4.4                                        | 4.6  | 5.0                      | 100                                     | 5.0 | 5.0                                    | 1.5   |
|                    | A3    | 4.5                                        | 4.7  | 5.0                      | 100                                     | 5.0 | 5.0                                    | 1.5   |
|                    | B1    | 4.6                                        | 4.8  | 5.0                      | 100                                     | 5.0 | 5.0                                    | 1.5   |
|                    | B2    | 4.7                                        | 4.9  | 5.0                      | 100                                     | 5.0 | 5.0                                    | 1.5   |
|                    | B3    | 4.8                                        | 5.0  | 5.0                      | 100                                     | 5.0 | 5.0                                    | 1.5   |
|                    | C1    | 4.9                                        | 5.1  | 5.0                      | 100                                     | 5.0 | 5.0                                    | 1.5   |
|                    | C2    | 5.0                                        | 5.2  | 5.0                      | 100                                     | 5.0 | 5.0                                    | 1.5   |
|                    | C3    | 5.1                                        | 5.3  | 5.0                      | 100                                     | 5.0 | 5.0                                    | 1.5   |
| H6                 | A1    | 5.2                                        | 5.5  | 5.0                      | 40                                      | 5.0 | 5.0                                    | 2.0   |
|                    | A2    | 5.3                                        | 5.6  | 5.0                      | 40                                      | 5.0 | 5.0                                    | 2.0   |
|                    | A3    | 5.4                                        | 5.7  | 5.0                      | 40                                      | 5.0 | 5.0                                    | 2.0   |
|                    | B1    | 5.5                                        | 5.8  | 5.0                      | 40                                      | 5.0 | 5.0                                    | 2.0   |
|                    | B2    | 5.6                                        | 5.9  | 5.0                      | 40                                      | 5.0 | 5.0                                    | 2.0   |
|                    | B3    | 5.7                                        | 6.0  | 5.0                      | 40                                      | 5.0 | 5.0                                    | 2.0   |
|                    | C1    | 5.8                                        | 6.1  | 5.0                      | 40                                      | 5.0 | 5.0                                    | 2.0   |
|                    | C2    | 6.0                                        | 6.3  | 5.0                      | 40                                      | 5.0 | 5.0                                    | 2.0   |
|                    | C3    | 6.1                                        | 6.4  | 5.0                      | 40                                      | 5.0 | 5.0                                    | 2.0   |
| H7                 | A1    | 6.3                                        | 6.6  | 5.0                      | 15                                      | 5.0 | 1.0                                    | 3.5   |
|                    | A2    | 6.4                                        | 6.7  | 5.0                      | 15                                      | 5.0 | 1.0                                    | 3.5   |
|                    | A3    | 6.6                                        | 6.9  | 5.0                      | 15                                      | 5.0 | 1.0                                    | 3.5   |
|                    | B1    | 6.7                                        | 7.0  | 5.0                      | 15                                      | 5.0 | 1.0                                    | 3.5   |
|                    | B2    | 6.9                                        | 7.2  | 5.0                      | 15                                      | 5.0 | 1.0                                    | 3.5   |
|                    | B3    | 7.0                                        | 7.3  | 5.0                      | 15                                      | 5.0 | 1.0                                    | 3.5   |
|                    | C1    | 7.2                                        | 7.6  | 5.0                      | 15                                      | 5.0 | 1.0                                    | 3.5   |
|                    | C2    | 7.3                                        | 7.7  | 5.0                      | 15                                      | 5.0 | 1.0                                    | 3.5   |
|                    | C3    | 7.5                                        | 7.9  | 5.0                      | 15                                      | 5.0 | 1.0                                    | 3.5   |
| H9                 | A1    | 7.7                                        | 8.1  | 5.0                      | 20                                      | 5.0 | 1.0                                    | 5.0   |
|                    | A2    | 7.9                                        | 8.3  | 5.0                      | 20                                      | 5.0 | 1.0                                    | 5.0   |
|                    | A3    | 8.1                                        | 8.5  | 5.0                      | 20                                      | 5.0 | 1.0                                    | 5.0   |
|                    | B1    | 8.3                                        | 8.7  | 5.0                      | 20                                      | 5.0 | 1.0                                    | 5.0   |
|                    | B2    | 8.5                                        | 8.9  | 5.0                      | 20                                      | 5.0 | 1.0                                    | 5.0   |
|                    | B3    | 8.7                                        | 9.1  | 5.0                      | 20                                      | 5.0 | 1.0                                    | 5.0   |
|                    | C1    | 8.9                                        | 9.3  | 5.0                      | 20                                      | 5.0 | 1.0                                    | 5.0   |
|                    | C2    | 9.1                                        | 9.5  | 5.0                      | 20                                      | 5.0 | 1.0                                    | 5.0   |
|                    | C3    | 9.3                                        | 9.7  | 5.0                      | 20                                      | 5.0 | 1.0                                    | 5.0   |
| H11                | A1    | 9.5                                        | 9.9  | 5.0                      | 25                                      | 5.0 | 1.0                                    | 7.5   |
|                    | A2    | 9.7                                        | 10.1 | 5.0                      | 25                                      | 5.0 | 1.0                                    | 7.5   |
|                    | A3    | 9.9                                        | 10.3 | 5.0                      | 25                                      | 5.0 | 1.0                                    | 7.5   |
|                    | B1    | 10.2                                       | 10.6 | 5.0                      | 25                                      | 5.0 | 1.0                                    | 7.5   |
|                    | B2    | 10.4                                       | 10.8 | 5.0                      | 25                                      | 5.0 | 1.0                                    | 7.5   |
|                    | B3    | 10.7                                       | 11.1 | 5.0                      | 25                                      | 5.0 | 1.0                                    | 7.5   |
|                    | C1    | 10.9                                       | 11.3 | 5.0                      | 25                                      | 5.0 | 1.0                                    | 7.5   |
|                    | C2    | 11.1                                       | 11.6 | 5.0                      | 25                                      | 5.0 | 1.0                                    | 7.5   |
|                    | C3    | 11.4                                       | 11.9 | 5.0                      | 25                                      | 5.0 | 1.0                                    | 7.5   |
| H12                | A1    | 11.6                                       | 12.1 | 5.0                      | 35                                      | 5.0 | 1.0                                    | 9.5   |
|                    | A2    | 11.9                                       | 12.4 | 5.0                      | 35                                      | 5.0 | 1.0                                    | 9.5   |
|                    | A3    | 12.2                                       | 12.7 | 5.0                      | 35                                      | 5.0 | 1.0                                    | 9.5   |
|                    | B1    | 12.4                                       | 12.9 | 5.0                      | 35                                      | 5.0 | 1.0                                    | 9.5   |
|                    | B2    | 12.6                                       | 13.1 | 5.0                      | 35                                      | 5.0 | 1.0                                    | 9.5   |
|                    | B3    | 12.9                                       | 13.4 | 5.0                      | 35                                      | 5.0 | 1.0                                    | 9.5   |
|                    | C1    | 13.2                                       | 13.7 | 5.0                      | 35                                      | 5.0 | 1.0                                    | 9.5   |
|                    | C2    | 13.5                                       | 14.0 | 5.0                      | 35                                      | 5.0 | 1.0                                    | 9.5   |
|                    | C3    | 13.8                                       | 14.3 | 5.0                      | 35                                      | 5.0 | 1.0                                    | 9.5   |
| H15                | 1     | 14.1                                       | 14.7 | 5.0                      | 40                                      | 5.0 | 1.0                                    | 11    |
|                    | 2     | 14.5                                       | 15.1 | 5.0                      | 40                                      | 5.0 | 1.0                                    | 11    |
|                    | 3     | 14.9                                       | 15.5 | 5.0                      | 40                                      | 5.0 | 1.0                                    | 11    |
| H16                | 1     | 15.3                                       | 15.9 | 5.0                      | 45                                      | 5.0 | 1.0                                    | 12    |
|                    | 2     | 15.7                                       | 16.5 | 5.0                      | 45                                      | 5.0 | 1.0                                    | 12    |
|                    | 3     | 16.3                                       | 17.1 | 5.0                      | 45                                      | 5.0 | 1.0                                    | 12    |
| H18                | 1     | 16.9                                       | 17.7 | 5.0                      | 55                                      | 5.0 | 1.0                                    | 13    |
|                    | 2     | 17.5                                       | 18.3 | 5.0                      | 55                                      | 5.0 | 1.0                                    | 13    |
|                    | 3     | 18.1                                       | 19.0 | 5.0                      | 55                                      | 5.0 | 1.0                                    | 13    |
| H20                | 1     | 18.8                                       | 19.7 | 2.0                      | 60                                      | 2.0 | 1.0                                    | 15    |
|                    | 2     | 19.5                                       | 20.4 | 2.0                      | 60                                      | 2.0 | 1.0                                    | 15    |
|                    | 3     | 20.2                                       | 21.1 | 2.0                      | 60                                      | 2.0 | 1.0                                    | 15    |



## H2 Series thru H36 Series

### ELECTRICAL CHARACTERISTICS @25°C

| MCC<br>PART NUMBER |       | ZENER VOLTAGE<br>$V_Z$ @ $I_{ZT}$<br>VOLTS |      | TEST CURRENT<br>$I_{ZT}$ | Dynamic Resistance<br>$r_d$ (Max) $I_Z$ |     | REVERSE CURRENT<br>$I_R$ (Max)    @ $V_R$ |       |
|--------------------|-------|--------------------------------------------|------|--------------------------|-----------------------------------------|-----|-------------------------------------------|-------|
| Type               | Grade | Min                                        | Max  | mA                       | OHMS                                    | mA  | $\mu A$                                   | VOLTS |
| H22                | 1     | 20.9                                       | 21.9 | 2.0                      | 65                                      | 2.0 | 1.0                                       | 17    |
|                    | 2     | 21.6                                       | 22.6 | 2.0                      | 65                                      | 2.0 | 1.0                                       | 17    |
|                    | 3     | 22.3                                       | 23.3 | 2.0                      | 65                                      | 2.0 | 1.0                                       | 17    |
| H24                | 1     | 22.9                                       | 24.0 | 2.0                      | 70                                      | 2.0 | 1.0                                       | 19    |
|                    | 2     | 23.6                                       | 24.7 | 2.0                      | 70                                      | 2.0 | 1.0                                       | 19    |
|                    | 3     | 24.3                                       | 25.5 | 2.0                      | 70                                      | 2.0 | 1.0                                       | 19    |
| H27                | 1     | 25.2                                       | 26.6 | 2.0                      | 80                                      | 2.0 | 1.0                                       | 21.0  |
|                    | 2     | 26.2                                       | 27.6 | 2.0                      | 80                                      | 2.0 | 1.0                                       | 21.0  |
|                    | 3     | 27.2                                       | 28.6 | 2.0                      | 80                                      | 2.0 | 1.0                                       | 21.0  |
| H30                | 1     | 28.2                                       | 29.6 | 2.0                      | 100                                     | 2.0 | 1.0                                       | 23.0  |
|                    | 2     | 29.2                                       | 30.6 | 2.0                      | 100                                     | 2.0 | 1.0                                       | 23.0  |
|                    | 3     | 30.2                                       | 31.6 | 2.0                      | 100                                     | 2.0 | 1.0                                       | 23.0  |
| H33                | 1     | 31.2                                       | 32.6 | 2.0                      | 120                                     | 2.0 | 1.0                                       | 25.0  |
|                    | 2     | 32.2                                       | 33.6 | 2.0                      | 120                                     | 2.0 | 1.0                                       | 25.0  |
|                    | 3     | 33.2                                       | 34.6 | 2.0                      | 120                                     | 2.0 | 1.0                                       | 25.0  |
| H36                | 1     | 34.2                                       | 35.7 | 2.0                      | 140                                     | 2.0 | 1.0                                       | 27.0  |
|                    | 2     | 35.3                                       | 36.8 | 2.0                      | 140                                     | 2.0 | 1.0                                       | 27.0  |
|                    | 3     | 36.4                                       | 38.0 | 2.0                      | 140                                     | 2.0 | 1.0                                       | 27.0  |