Obsolete

Micro Commercial Components

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# ERD3.3F THRU ERD75F

## 1000 mW Zener Diode 3.3 to 75 Volts

## Features

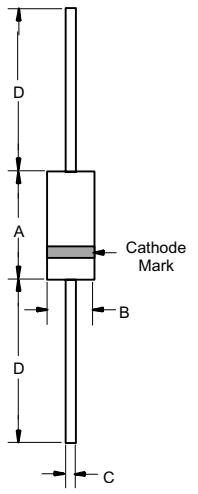
- DO-41 Glass sealed package
- Planar process
- High Reliability
- Marking : Cathode band and type number
- Lead Free Finish/RoHS Compliant (Note1) ("P"Suffix designates Compliant. See ordering information)

## Maximum Ratings

| Symbol | Rating | Rating | Unit |
|---|---|---|---|
| $I_F$ | Forward Current | 200 | mA |
| $P_D$ | Power dissipation | 1000 | mW |
| $T_J$ | Junction Temperature | 175 | ℃ |
| $T_{STG}$ | Storage Temperature Range | -65 to +175 | ℃ |

Note: 1. Lead in Glass Solder Exemption Applied, see EU Directive Annex 5.

DO-41G




| DIMENSIONS | | | | | |
|---|---|---|---|---|---|
| DIM | INCHES | | MM | | NOTE |
| | MIN | MAX | MIN | MAX | |
| A | ----- | 0.177 | ----- | 4.50 | |
| B | ----- | 0.110 | ----- | 2.80 | Diameter |
| C | 0.026 | 0.034 | 0.70 | 0.90 | Diameter |
| D | 1.000 | ----- | 25.40 | ----- | |

## ELECTRICAL CHARACTERISTICS @25°C

| MCC PART NUMBER | | ZENER VOLTAGE $V_Z$ @ $I_{ZT}$ VOLTS | | TEST CURRENT $I_{ZT}$ | Dynamic Resistance Zzt (Max.) | | REVERSE CURRENT $I_R$ (Max.) | |
|---|---|---|---|---|---|---|---|---|
| Type | Suffix | Min | Max | $I_Z$ (mA) | OHMS. | mA | μA | $V_R$(V) |
| ERD3.3F | B | 3.13 | 3.51 | 40 | 15 | 40 | 80 | 1.0 |
| | B1 | 3.13 | 3.37 | 40 | 15 | 40 | 80 | 1.0 |
| | B2 | 3.27 | 3.51 | 40 | 15 | 40 | 80 | 1.0 |
| ERD3.6F | B | 3.43 | 3.83 | 40 | 15 | 40 | 60 | 1.0 |
| | B1 | 3.43 | 3.68 | 40 | 15 | 40 | 60 | 1.0 |
| | B2 | 3.58 | 3.83 | 40 | 15 | 40 | 60 | 1.0 |
| ERD3.9F | B | 3.73 | 4.15 | 40 | 15 | 40 | 40 | 1.0 |
| | B1 | 3.73 | 4.00 | 40 | 15 | 40 | 40 | 1.0 |
| | B2 | 3.88 | 4.15 | 40 | 15 | 40 | 40 | 1.0 |
| ERD4.3F | B | 4.03 | 4.55 | 40 | 15 | 40 | 20 | 1.0 |
| | B1 | 4.03 | 4.28 | 40 | 15 | 40 | 20 | 1.0 |
| | B2 | 4.15 | 4.41 | 40 | 15 | 40 | 20 | 1.0 |
| | B3 | 4.28 | 4.55 | 40 | 15 | 40 | 20 | 1.0 |
| ERD4.7F | B | 4.41 | 4.91 | 40 | 10 | 40 | 20 | 1.0 |
| | B1 | 4.41 | 4.65 | 40 | 10 | 40 | 20 | 1.0 |
| | B2 | 4.53 | 4.78 | 40 | 10 | 40 | 20 | 1.0 |
| | B3 | 4.66 | 4.91 | 40 | 10 | 40 | 20 | 1.0 |
| ERD5.1F | B | 4.79 | 5.38 | 40 | 8 | 40 | 20 | 1.0 |
| | B1 | 4.79 | 5.05 | 40 | 8 | 40 | 20 | 1.0 |
| | B2 | 4.95 | 5.22 | 40 | 8 | 40 | 20 | 1.0 |
| | B3 | 5.10 | 5.38 | 40 | 8 | 40 | 20 | 1.0 |
| ERD5.6F | B | 5.28 | 5.95 | 40 | 8 | 40 | 20 | 1.5 |
| | B1 | 5.28 | 5.56 | 40 | 8 | 40 | 20 | 1.5 |
| | B2 | 5.46 | 5.75 | 40 | 8 | 40 | 20 | 1.5 |
| | B3 | 5.65 | 5.95 | 40 | 8 | 40 | 20 | 1.5 |
| ERD6.2F | B | 5.76 | 6.52 | 40 | 6 | 40 | 20 | 3.0 |
| | B1 | 5.76 | 6.14 | 40 | 6 | 40 | 20 | 3.0 |
| | B2 | 5.98 | 6.33 | 40 | 6 | 40 | 20 | 3.0 |
| | B3 | 6.17 | 6.52 | 40 | 6 | 40 | 20 | 3.0 |
| ERD6.8F | B | 6.35 | 8.10 | 40 | 6 | 40 | 20 | 3.5 |
| | B1 | 6.35 | 6.71 | 40 | 6 | 40 | 20 | 3.5 |
| | B2 | 6.55 | 6.90 | 40 | 6 | 40 | 20 | 3.5 |
| | B3 | 6.74 | 7.10 | 40 | 6 | 40 | 20 | 3.5 |
| ERD7.5F | B | 6.93 | 7.80 | 40 | 4 | 40 | 20 | 4.0 |
| | B1 | 6.93 | 7.33 | 40 | 4 | 40 | 20 | 4.0 |
| | B2 | 7.17 | 7.55 | 40 | 4 | 40 | 20 | 4.0 |
| | B3 | 7.39 | 7.80 | 40 | 4 | 40 | 20 | 4.0 |
| ERD8.2F | B | 7.58 | 8.54 | 40 | 4 | 40 | 20 | 5.0 |
| | B1 | 7.58 | 8.03 | 40 | 4 | 40 | 20 | 5.0 |
| | B2 | 7.87 | 8.28 | 40 | 4 | 40 | 20 | 5.0 |
| | B3 | 8.12 | 8.54 | 40 | 4 | 40 | 20 | 5.0 |
| ERD9.1F | B | 8.34 | 9.38 | 40 | 6 | 40 | 20 | 6.0 |
| | B1 | 8.34 | 8.80 | 40 | 6 | 40 | 20 | 6.0 |
| | B2 | 8.64 | 9.08 | 40 | 6 | 40 | 20 | 6.0 |
| | B3 | 8.91 | 9.38 | 40 | 6 | 40 | 20 | 6.0 |
| ERD10F | B | 9.16 | 10.40 | 40 | 6 | 40 | 10 | 7.0 |
| | B1 | 9.16 | 9.67 | 40 | 6 | 40 | 10 | 7.0 |
| | B2 | 9.50 | 9.99 | 40 | 6 | 40 | 10 | 7.0 |
| | B3 | 9.83 | 10.40 | 40 | 6 | 40 | 10 | 7.0 |
| ERD11F | B | 10.22 | 11.43 | 20 | 8 | 20 | 10 | 8.0 |
| | B1 | 10.22 | 10.75 | 20 | 8 | 20 | 10 | 8.0 |
| | B2 | 10.54 | 11.09 | 20 | 8 | 20 | 10 | 8.0 |
| | B3 | 10.87 | 11.43 | 20 | 8 | 20 | 10 | 8.0 |

## ELECTRICAL CHARACTERISTICS @25°C

| MCC PART NUMBER | | ZENER VOLTAGE $V_Z$ @ $I_{ZT}$ VOLTS | | TEST CURRENT $I_{ZT}$ | Dynamic Resistance Zzt (Max.) | | REVERSE CURRENT $I_R$ (Max.) | |
|---|---|---|---|---|---|---|---|---|
| Type | Suffix | Min | Max | $I_Z$ (mA) | OHMS. | mA | μA | $V_R$ (V) |
| ERD12F | B | 11.19 | 12.41 | 20 | 8 | 20 | 10 | 8.0 |
| | B1 | 11.19 | 11.77 | 20 | 8 | 20 | 10 | 8.0 |
| | B2 | 11.50 | 12.09 | 20 | 8 | 20 | 10 | 8.0 |
| | B3 | 11.80 | 12.41 | 20 | 8 | 20 | 10 | 8.0 |
| ERD13F | B | 12.19 | 13.83 | 20 | 10 | 20 | 10 | 10 |
| ERD15F | B | 13.55 | 15.26 | 20 | 10 | 20 | 10 | 11 |
| ERD16F | B | 14.98 | 16.71 | 20 | 12 | 20 | 10 | 12 |
| ERD18F | B | 16.37 | 18.55 | 20 | 12 | 20 | 10 | 13 |
| ERD20F | B | 18.26 | 20.84 | 20 | 14 | 20 | 10 | 15 |
| ERD22F | B | 20.45 | 22.86 | 10 | 14 | 10 | 10 | 17 |
| ERD24F | B | 22.44 | 25.14 | 10 | 16 | 10 | 10 | 19 |
| ERD27F | B | 24.63 | 28.43 | 10 | 16 | 10 | 10 | 21 |
| ERD30F | B | 27.43 | 31.26 | 10 | 18 | 10 | 10 | 23 |
| ERD33F | B | 30.35 | 34.15 | 10 | 18 | 10 | 10 | 25 |
| ERD36F | B | 33.24 | 37.01 | 10 | 20 | 10 | 10 | 27 |
| ERD39F | B | 36.11 | 40.80 | 10 | 20 | 10 | 10 | 30 |
| ERD43F | B | 40.00 | 45.00 | 10 | 50 | 10 | 5 | 33 |
| ERD47F | B | 44.00 | 49.00 | 10 | 50 | 10 | 5 | 36 |
| ERD51F | B | 48.00 | 54.00 | 10 | 50 | 10 | 5 | 39 |
| ERD56F | B | 53.00 | 60.00 | 10 | 50 | 10 | 5 | 43 |
| ERD62F | B | 58.00 | 66.00 | 10 | 50 | 10 | 5 | 47 |
| ERD68F | B | 64.00 | 72.00 | 10 | 70 | 10 | 5 | 52 |
| ERD75F | B | 70.00 | 79.00 | 10 | 90 | 10 | 5 | 57 |

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## Ordering Information

| Device | Packing |
|---|---|
| (Part Number)-TP | Tape&Reel; 5Kpcs/Reel |
| (Part Number)-AP | Ammo Packing;2.5Kpcs/AmmoBox |
| (Part Number)-BP | Bulk;1Kpcs/Box |


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