



**Microsemi Corp.**  
The diode experts

SCOTTSDALE, AZ

**1N4460 thru  
1N4496  
and  
1N6485 thru  
1N6491**



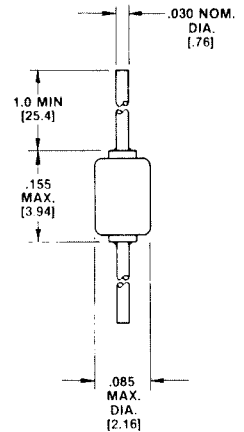
**FEATURES**

- Microminiature package.
- High performance characteristics.
- Stable operation at temperatures to 200°C.
- Voidless hermetically sealed glass package.
- Triple layer passivation.
- Very low thermal impedance.
- Metallurgically bonded.
- JAN/S/TX/TXV Types available per MIL-S-19500/406.

**1.5 WATT  
GLASS ZENER DIODES**

**MAXIMUM RATINGS**

Operating Temperature: -65°C to +175°C.  
Storage Temperature: -65°C to +200°C.  
Power Dissipation: 1.5 Watts @ 30°C Air Ambient.



**FIGURE 1  
PACKAGE A**

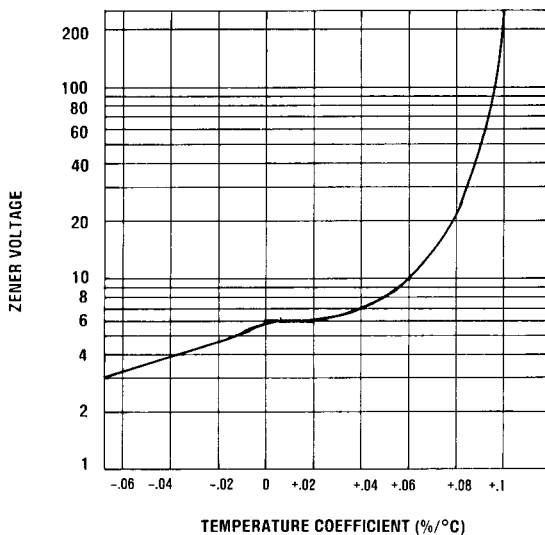
**ELECTRICAL CHARACTERISTICS @ 25°C**

| TYPE   | ZENER VOLTAGE (NOM.) V <sub>Z</sub> | TEST CURRENT I <sub>ZT</sub> | DYNAMIC IMPEDANCE (MAX.) Z <sub>zt</sub> @ I <sub>ZT</sub> | KNEE IMPEDANCE (MAX.) Z <sub>zk</sub> @ I <sub>ZK</sub> | TEST CURRENT I <sub>ZK</sub> | REVERSE CURRENT I <sub>R</sub> @ V <sub>R</sub> | TEST VOLTAGE V <sub>R</sub> | MAXIMUM CONT. I <sub>ZM</sub> | MAXIMUM SURGE I <sub>S</sub> | MAXIMUM SURGE T <sub>A</sub> @ 100°C |
|--------|-------------------------------------|------------------------------|--|---|------------------------------|---|-----------------------------|-------------------------------|------------------------------|--------------------------------------|
|        | VOLTS                               | mA                           | OHMS   | OHMS  | mA                           | μA  | VOLTS                       | mA                            | Amps                         | AMPS                                 |
| 1N6485 | 3.3                                 | 76.0                         | 10   | 400   | 1.0                          | 50  | 1.0                         | 433                           | -                            | 4.2                                  |
| 1N6486 | 3.6                                 | 69.0                         | 10   | 400   | 1.0                          | 50  | 1.0                         | 397                           | -                            | 3.9                                  |
| 1N6487 | 3.9                                 | 64.0                         | 9  | 400   | 1.0                          | 35  | 1.0                         | 366                           | -                            | 3.6                                  |
| 1N6488 | 4.3                                 | 58.0                         | 9  | 400   | 1.0                          | 5.0   | 1.0                         | 332                           | -                            | 3.3                                  |
| 1N6489 | 4.7                                 | 53.0                         | 8  | 500   | 1.0                          | 4.0   | 1.0                         | 304                           | -                            | 3.0                                  |
| 1N6490 | 5.1                                 | 49.0                         | 7  | 500   | 1.0                          | 1.0   | 1.0                         | 280                           | -                            | 2.7                                  |
| 1N6491 | 5.6                                 | 45.0                         | 5  | 600   | 1.0                          | 0.5   | 2.0                         | 255                           | -                            | 2.5                                  |
| 1N4460 | 6.2                                 | 40.0                         | 4  | 200   | 1.0                          | 10.0  | 3.72                        | 230                           | -                            | 2.3                                  |
| 1N4461 | 6.8                                 | 37.0                         | 2.5  | 200   | 1.0                          | 5.0   | 4.08                        | 210                           | 5.0                          | 2.1                                  |
| 1N4462 | 7.5                                 | 34.0                         | 2.5  | 400   | .5                           | 1.0   | 4.50                        | 191                           | 4.5                          | 1.9                                  |
| 1N4463 | 8.2                                 | 31.0                         | 3  | 400   | .5                           | .50   | 4.92                        | 174                           | 3.9                          | 1.7                                  |
| 1N4464 | 9.1                                 | 28.0                         | 4  | 500   | .5                           | .30   | 5.46                        | 157                           | 3.4                          | 1.6                                  |
| 1N4465 | 10.0                                | 25.0                         | 5  | 500   | .25                          | .30   | 8.00                        | 143                           | 3.0                          | 1.4                                  |
| 1N4466 | 11.0                                | 23.0                         | 6  | 550   | .25                          | .30   | 8.80                        | 130                           | 2.6                          | 1.3                                  |
| 1N4467 | 12.0                                | 21.0                         | 7  | 550   | .25                          | .20   | 9.60                        | 119                           | 2.4                          | 1.2                                  |
| 1N4468 | 13.0                                | 19.0                         | 8  | 550   | .25                          | .05   | 10.40                       | 110                           | 2.2                          | 1.1                                  |
| 1N4469 | 15.0                                | 17.0                         | 9  | 600   | .25                          | .05   | 12.00                       | 95                            | 1.8                          | .95                                  |
| 1N4470 | 16.0                                | 15.5                         | 10   | 600   | .25                          | .05   | 12.80                       | 90                            | 1.6                          | .80                                  |
| 1N4471 | 18.0                                | 14.0                         | 11   | 650   | .25                          | .05   | 14.40                       | 79                            | 1.4                          | .79                                  |
| 1N4472 | 20.0                                | 12.5                         | 12   | 650   | .25                          | .05   | 16.00                       | 71                            | 1.2                          | .71                                  |
| 1N4473 | 22.0                                | 11.5                         | 14   | 650   | .25                          | .05   | 17.60                       | 65                            | 1.1                          | .65                                  |
| 1N4474 | 24.0                                | 10.5                         | 16   | 700   | .25                          | .05   | 19.20                       | 60                            | .90                          | .60                                  |
| 1N4475 | 27.0                                | 9.5                          | 18   | 700   | .25                          | .05   | 21.60                       | 53                            | .80                          | .53                                  |
| 1N4476 | 30.0                                | 8.5                          | 20   | 750   | .25                          | .05   | 24.00                       | 48                            | .75                          | .48                                  |
| 1N4477 | 33.0                                | 7.5                          | 25   | 800   | .25                          | .05   | 26.40                       | 43                            | .66                          | .43                                  |
| 1N4478 | 36.0                                | 7.0                          | 27   | 850   | .25                          | .05   | 28.80                       | 40                            | .60                          | .40                                  |
| 1N4479 | 39.0                                | 6.5                          | 30   | 900   | .25                          | .05   | 31.2                        | 37                            | .54                          | .37                                  |
| 1N4480 | 43.0                                | 6.0                          | 40   | 950   | .25                          | .05   | 34.4                        | 33                            | .48                          | .33                                  |
| 1N4481 | 47.0                                | 5.5                          | 50   | 1000  | .25                          | .05   | 37.6                        | 30                            | .45                          | .30                                  |
| 1N4482 | 51.0                                | 5.0                          | 60   | 1100  | .25                          | .05   | 40.8                        | 28                            | .42                          | .28                                  |
| 1N4483 | 56.0                                | 4.5                          | 70   | 1300  | .25                          | .25   | 44.8                        | 26                            | .39                          | .26                                  |
| 1N4484 | 62.0                                | 4.0                          | 80   | 1500  | .25                          | .25   | 49.6                        | 23                            | .35                          | .23                                  |
| 1N4485 | 68.0                                | 3.7                          | 100  | 1700  | .25                          | .25   | 54.4                        | 21                            | .32                          | .21                                  |
| 1N4486 | 75.0                                | 3.3                          | 130  | 2000  | .25                          | .25   | 60.4                        | 19                            | .29                          | .19                                  |
| 1N4487 | 82.0                                | 3.0                          | 160  | 2500  | .25                          | .25   | 65.6                        | 17                            | .26                          | .17                                  |
| 1N4488 | 91.0                                | 2.8                          | 200  | 3000  | .25                          | .25   | 72.8                        | 16                            | .23                          | .16                                  |
| 1N4489 | 100.0                               | 2.5                          | 250  | 3100  | .25                          | .25   | 80.0                        | 14                            | .20                          | .14                                  |
| 1N4490 | 110.0                               | 2.0                          | 300  | 4000  | .25                          | .25   | 88.0                        | 13                            | .19                          | .13                                  |
| 1N4491 | 120.0                               | 2.0                          | 400  | 4500  | .25                          | .25   | 96.0                        | 12                            | .18                          | .12                                  |
| 1N4492 | 130.0                               | 1.9                          | 500  | 5000  | .25                          | .25   | 104.0                       | 11                            | .16                          | .11                                  |
| 1N4493 | 150.0                               | 1.7                          | 700  | 6000  | .25                          | .25   | 120.0                       | 9.5                           | .14                          | .095                                 |
| 1N4494 | 160.0                               | 1.6                          | 1000   | 6500  | .25                          | .25   | 128.0                       | 8.9                           | .12                          | .089                                 |
| 1N4495 | 180.0                               | 1.4                          | 1300   | 7000  | .25                          | .25   | 144.0                       | 7.9                           | .10                          | .079                                 |
| 1N4496 | 200.0                               | 1.2                          | 1500   | 8000  | .25                          | .25   | 160.0                       | 7.2                           | .08                          | .072                                 |

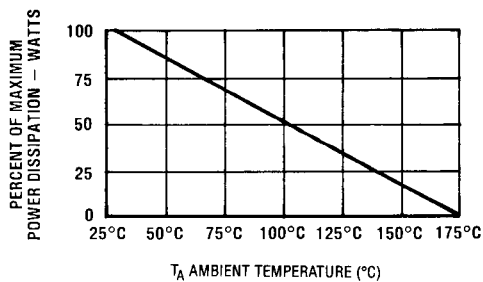
**MECHANICAL CHARACTERISTICS**

Case: Hermetically sealed glass case.  
Lead Material: Tinned copper.  
Marking: Body painted, alpha numeric with JEDEC number.  
Polarity: Cathode band.

# 1N4460 thru 1N4496 and 1N6485 thru 1N6491



**FIGURE 2**  
**TYPICAL TEMPERATURE**  
**COEFFICIENT CHARACTERISTICS**



**FIGURE 3**  
**POWER TEMPERATURE DERATING CURVE**