



**Microsemi Corp.**

The diode experts

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**1N5728  
thru  
1N5757**

## FEATURES

- ZENER VOLTAGE 4.7 TO 75 V
- SMALL RUGGED DOUBLE SLUG CONSTRUCTION DO-35
- CONSTRUCTED WITH AN OXIDE PASSIVATED ALL DIFFUSED DIE

## MAXIMUM RATINGS

Operating Temperature:  $-65^{\circ}\text{C}$  to  $+200^{\circ}\text{C}$

DC Power Dissipation: 400 mW

Power Derating: 2.63 mW/ $^{\circ}\text{C}$  above  $50^{\circ}\text{C}$

Forward Voltage @ 10 mA: 0.9 Volts

**SILICON  
400 mW  
ZENER DIODES**

## \*ELECTRICAL CHARACTERISTICS @ $25^{\circ}\text{C}$

| TYPE<br>NUMBER<br>(Note 1) | REGULATOR<br>VOLTAGE | TEST<br>CURRENT | DYNAMIC<br>IMPEDANCE | REVERSE<br>CURRENT         | $I_k$ TEST<br>VOLTAGE | MAXIMUM<br>REGULATOR<br>CURRENT | TEMPERATURE<br>COEFFICIENT                  |
|----------------------------|----------------------|-----------------|----------------------|----------------------------|-----------------------|---------------------------------|---|
|                            | ( $V_z$ )<br>VOLTS   | ( $I_z$ )<br>MA | ( $Z_z$ )<br>OHMS    | ( $I_r$ )<br>$\mu\text{A}$ | ( $V_k$ )<br>VOLTS    | ( $I_{z\max}$ )<br>mA           | ( $\alpha_{Vz}$ )<br>mV/ $^{\circ}\text{C}$ |
| 1N5728B                    | 4.7                  | 10              | 70                   | 3.0                        | 2                     | 70                              | -1.0  |
| 1N5729B                    | 5.1                  | 10              | 50                   | 3.0                        | 2                     | 65                              | -0.2  |
| 1N5730B                    | 5.6                  | 10              | 25                   | 3.0                        | 2                     | 60                              | +1.2  |
| 1N5731B                    | 6.2                  | 10              | 10                   | 3.0                        | 4                     | 55                              | +2.3  |
| 1N5732B                    | 6.8                  | 10              | 10                   | 3.0                        | 4                     | 50                              | +3.0  |
| 1N5733B                    | 7.5                  | 10              | 10                   | 2.0                        | 5                     | 45                              | +4.0  |
| 1N5734B                    | 8.2                  | 10              | 15                   | 1.0                        | 5                     | 40                              | +5.0  |
| 1N5735B                    | 9.1                  | 10              | 15                   | 0.5                        | 6                     | 40                              | +6.0  |
| 1N5736B                    | 10                   | 10              | 20                   | 0.2                        | 7                     | 35                              | +7.0  |
| 1N5737B                    | 11                   | 5               | 20                   | 0.1                        | 8                     | 30                              | +8.0  |
| 1N5738B                    | 12                   | 5               | 25                   | 0.1                        | 8                     | 30                              | +9.0  |
| 1N5739B                    | 13                   | 5               | 30                   | 0.1                        | 9                     | 25                              | +10.5                                       |
| 1N5740B                    | 15                   | 5               | 30                   | 0.1                        | 10                    | 25                              | +12.9                                       |
| 1N5741B                    | 16                   | 5               | 40                   | 0.1                        | 11                    | 20                              | +13   |
| 1N5742B                    | 18                   | 5               | 45                   | 0.1                        | 12                    | 20                              | +15   |
| 1N5743B                    | 20                   | 5               | 55                   | 0.1                        | 14                    | 15                              | +17   |
| 1N5744B                    | 22                   | 5               | 55                   | 0.1                        | 15                    | 15                              | +19   |
| 1N5745B                    | 24                   | 5               | 70                   | 0.1                        | 17                    | 15                              | +21   |
| 1N5746B                    | 27                   | 2               | 80                   | 0.1                        | 19                    | 10                              | +23.5                                       |
| 1N5747B                    | 30                   | 2               | 80                   | 0.1                        | 21                    | 10                              | +26   |
| 1N5748B                    | 33                   | 2               | 90                   | 0.1                        | 23                    | 10                              | +29   |
| 1N5749B                    | 36                   | 2               | 90                   | 0.1                        | 25                    | 10                              | +31   |
| 1N5750B                    | 39                   | 2               | 130                  | 0.1                        | 27                    | 9                               | +34   |
| 1N5751B                    | 43                   | 2               | 150                  | 0.1                        | 30                    | 9                               | +37   |
| 1N5752B                    | 47                   | 2               | 170                  | 0.1                        | 33                    | 8                               | +40   |
| 1N5753B                    | 51                   | 2               | 180                  | 0.1                        | 36                    | 7                               | +44   |
| 1N5754B                    | 56                   | 2               | 200                  | 0.1                        | 39                    | 6                               | +47   |
| 1N5755B                    | 62                   | 2               | 215                  | 0.1                        | 43                    | 6                               | +51   |
| 1N5756B                    | 68                   | 2               | 240                  | 0.1                        | 48                    | 5                               | +56   |
| 1N5757B                    | 75                   | 2               | 255                  | 0.1                        | 53                    | 5                               | +60   |

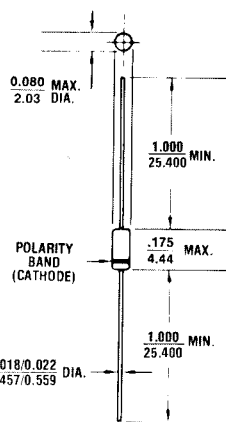


FIGURE 1

All dimensions in INCH  
m.m.

## MECHANICAL CHARACTERISTICS

CASE: Hermetically sealed glass case. DO-35.

FINISH: All external surfaces are corrosion resistant and leads solderable.

THERMAL RESISTANCE:  $200^{\circ}\text{C}/\text{W}$  (Typical) junction to lead at 0.375-inches from body.

POLARITY: Diode to be operated with the banded end positive with respect to the opposite end.

WEIGHT: 0.2 grams.

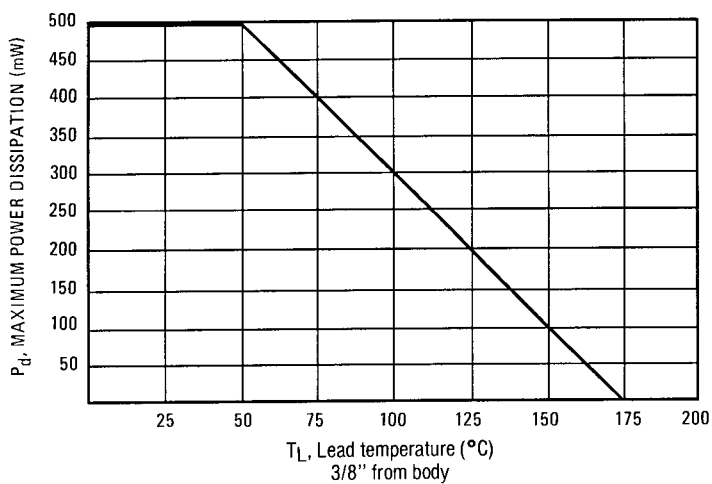
MOUNTING POSITION: Any.

## 1N5728 thru 1N5757

**NOTE 1** Devices listed have a  $\pm 5\%$  voltage tolerance on nominal  $V_Z$ . Suffix C denotes a  $\pm 2\%$  tolerance and suffix D denotes a  $\pm 1\%$  tolerance.

**NOTE 2** All static parameters measured under pulsed conditions,  $t_p = 300 \mu\text{sec}$ .

**NOTE 3** Dynamic Impedance measured by superimposing 0.2 mA  $I_{ac}$  rms at 1000 hz on  $I_{DC}$ .



**FIGURE 2** POWER DERATING CURVE