



## SILICON PLANAR ZENER DIODE

**1N4728A-  
1N4758A**

### FEATURES

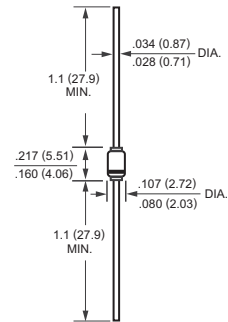
- \* Zener Voltage Range 3.3 to 56 Volts
- \* DO-41 Package (JEDEC)
- \* Through-Hole Device Type Mounting
- \* Hermetically Sealed Glass
- \* Compression Bonded Construction
- \* All external surfaces are corrosion resistant and leads are readily solderable

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.



**DO-41**



### MAXIMUM RATINGS ( @ TA = 25°C unless otherwise noted )

| RATINGS                   | SYMBOL           | VALUE       | UNITS |
|---------------------------|------------------|-------------|-------|
| Power Dissipation         | P <sub>D</sub>   | 1000        | mW    |
| Junction Temperature      | T <sub>J</sub>   | 200         | °C    |
| Storage Temperature Range | T <sub>stg</sub> | -65 to +200 | °C    |

Note: 1."Fully RoHS Compliant", "100% Sn Plating (Pb-free)".

2.Standard tolerance : Vz +/- 5%

2012-3  
Rev.A

## ELECTRICAL CHARACTERISTICS (@TA=25°C unless otherwise specified)

| TYPE    | $V_{ZT}@I_{ZT}$<br>(Volts)<br>Nominal | $I_{ZT}$<br>(mA) | $Z_{ZT}@I_{ZT}$<br>( $\Omega$ )<br>MAX | $I_{ZK}$<br>(mA) | $Z_{Zk}@I_{Zk}$<br>( $\Omega$ )<br>MAX | $I_R@V_R$<br>(mA)<br>MAX | $V_R$<br>(Volts) |
|---------|---------------------------------------|------------------|----------------------------------------|------------------|----------------------------------------|--------------------------|------------------|
| 1N4728A | 3.3                                   | 76               | 10                                     | 1                | 400                                    | 100                      | 1                |
| 1N4729A | 3.6                                   | 69               | 10                                     | 1                | 400                                    | 100                      | 1                |
| 1N4730A | 3.9                                   | 64               | 9                                      | 1                | 400                                    | 50                       | 1                |
| 1N4731A | 4.3                                   | 58               | 9                                      | 1                | 400                                    | 10                       | 1                |
| 1N4732A | 4.7                                   | 53               | 8                                      | 1                | 500                                    | 10                       | 1                |
| 1N4733A | 5.1                                   | 49               | 7                                      | 1                | 550                                    | 10                       | 1                |
| 1N4734A | 5.6                                   | 45               | 5                                      | 1                | 600                                    | 10                       | 2                |
| 1N4735A | 6.2                                   | 41               | 2                                      | 1                | 700                                    | 10                       | 3                |
| 1N4736A | 6.8                                   | 37               | 3.5                                    | 1                | 700                                    | 10                       | 4                |
| 1N4737A | 7.5                                   | 34               | 4                                      | 0.5              | 700                                    | 10                       | 5                |
| 1N4738A | 8.2                                   | 31               | 4.5                                    | 0.5              | 700                                    | 10                       | 6                |
| 1N4739A | 9.1                                   | 28               | 5                                      | 0.5              | 700                                    | 10                       | 7                |
| 1N4740A | 10                                    | 25               | 7                                      | 0.25             | 700                                    | 10                       | 7.6              |
| 1N4741A | 11                                    | 23               | 8                                      | 0.25             | 700                                    | 5                        | 8.4              |
| 1N4742A | 12                                    | 21               | 9                                      | 0.25             | 700                                    | 5                        | 9.1              |
| 1N4743A | 13                                    | 19               | 10                                     | 0.25             | 700                                    | 5                        | 9.9              |
| 1N4744A | 15                                    | 17               | 14                                     | 0.25             | 700                                    | 5                        | 11.4             |
| 1N4745A | 16                                    | 15.5             | 16                                     | 0.25             | 700                                    | 5                        | 12.2             |
| 1N4746A | 18                                    | 14               | 20                                     | 0.25             | 700                                    | 5                        | 13.7             |
| 1N4747A | 20                                    | 12.5             | 22                                     | 0.25             | 750                                    | 5                        | 15.2             |
| 1N4748A | 22                                    | 11.5             | 23                                     | 0.25             | 750                                    | 5                        | 16.7             |
| 1N4749A | 24                                    | 10.5             | 25                                     | 0.25             | 750                                    | 5                        | 18.2             |
| 1N4750A | 27                                    | 9.5              | 35                                     | 0.25             | 750                                    | 5                        | 20.6             |
| 1N4751A | 30                                    | 8.5              | 40                                     | 0.25             | 1000                                   | 5                        | 22.8             |
| 1N4752A | 33                                    | 7.5              | 45                                     | 0.25             | 1000                                   | 5                        | 25.1             |
| 1N4753A | 36                                    | 7.0              | 50                                     | 0.25             | 1000                                   | 5                        | 27.4             |
| 1N4754A | 39                                    | 6.5              | 60                                     | 0.25             | 1000                                   | 5                        | 29.7             |
| 1N4755A | 43                                    | 6.0              | 70                                     | 0.25             | 1500                                   | 5                        | 32.7             |
| 1N4756A | 47                                    | 5.5              | 80                                     | 0.25             | 1500                                   | 5                        | 35.8             |
| 1N4757A | 51                                    | 5.0              | 95                                     | 0.25             | 1500                                   | 5                        | 38.8             |
| 1N4758A | 56                                    | 4.5              | 110                                    | 0.25             | 2000                                   | 5                        | 42.6             |

RATING AND CHARACTERISTICS CURVES ( 1N4728A-1N4758A )

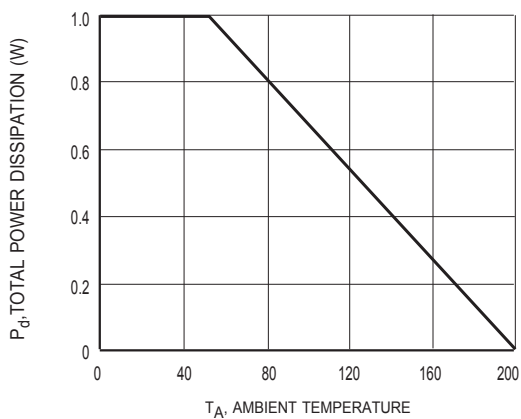


Figure1 Power Dissipation vs Ambient Temperature

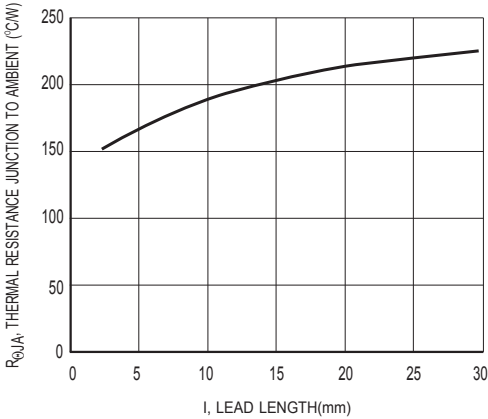


Figure2 Typical Thermal Resistance vs Lead Length

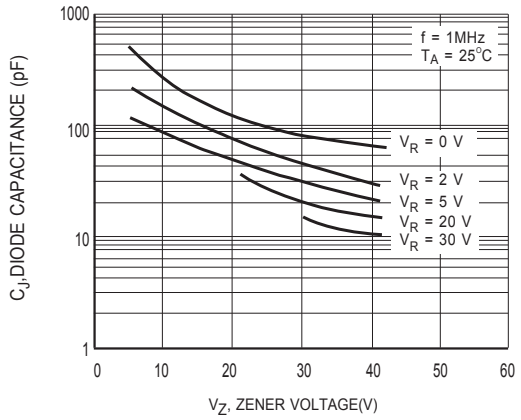


Figure3 Junction Capacitance vs Zener Voltage

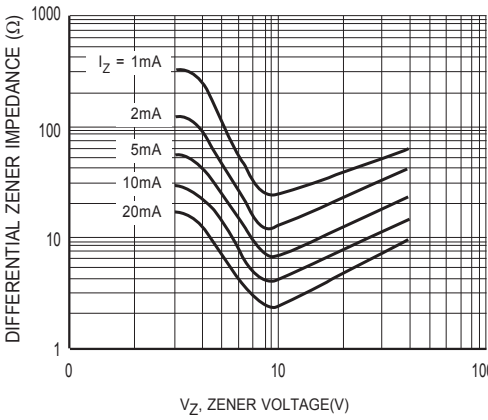


Figure4 Typical Zener Impedance vs Zener Voltage

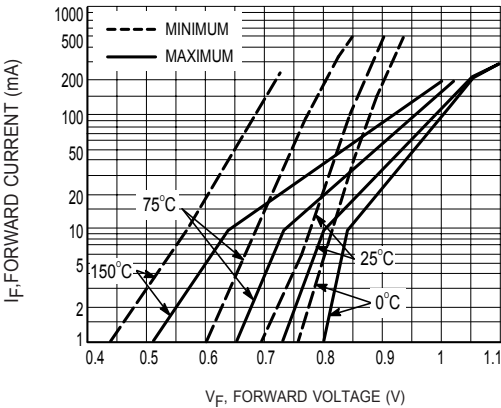


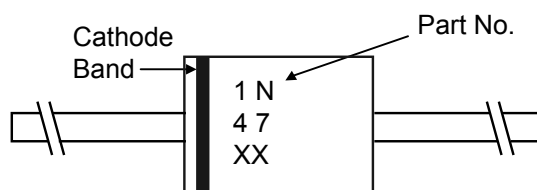
Figure5 Typical Forward Characteristics

# Attachment information about 1N47XXA

## 1. Internal Circuit



## 2. Marking on the body



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