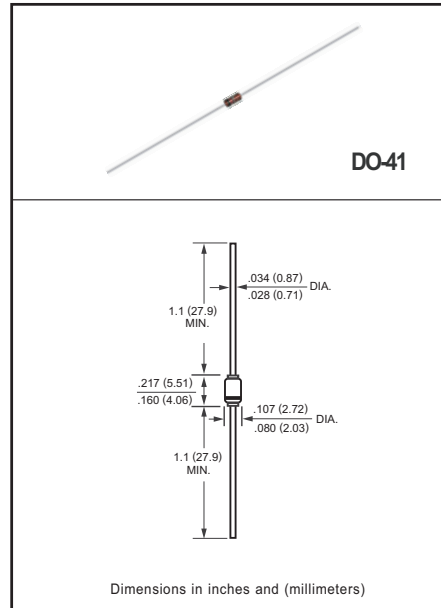




**SILICON PLANAR ZENER DIODE**

**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.

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 <sub>ZT@I<sub>ZT</sub></sub><br>(Volts)<br>Nominal | I <sub>ZT</sub><br>(mA) | Z <sub>ZT@I<sub>ZT</sub></sub><br>(Ω)<br>MAX | I <sub>ZK</sub><br>(mA) | Z <sub>Zk@I<sub>Zk</sub></sub><br>(Ω)<br>MAX | I <sub>R@V<sub>R</sub></sub><br>(mA)<br>MAX | V <sub>R</sub><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 )

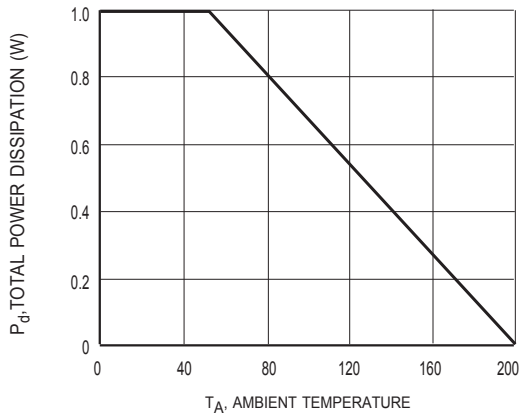


Figure1 Power Dissipation vs Ambient Temperature



Figure2 Typical Thermal Resistance vs Lead Length

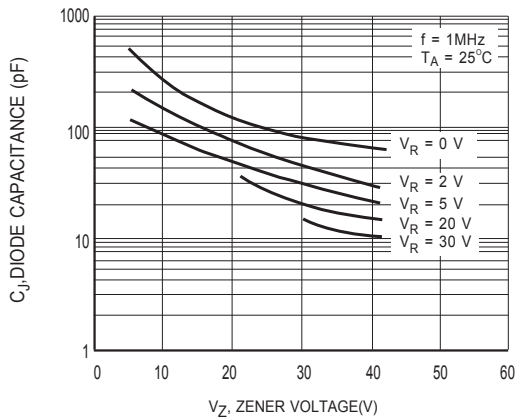


Figure3 Junction Capacitance vs Zener Voltage

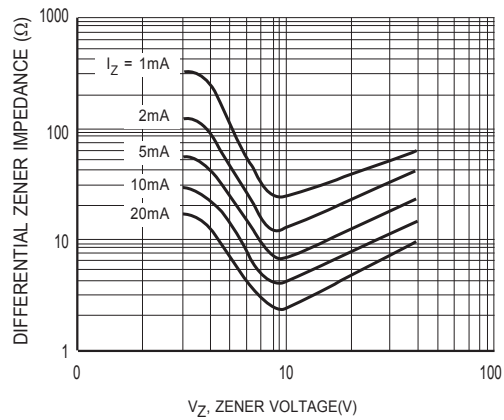


Figure4 Typical Zener Impedance vs Zener Voltage

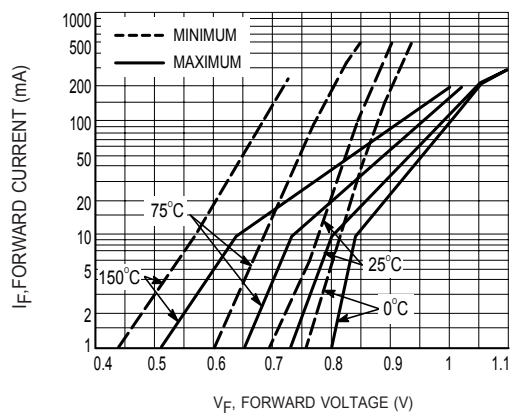


Figure5 Typical Forward Characteristics



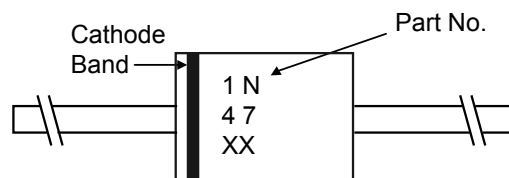


## Attachment information about 1N47XXA

### 1. Internal Circuit



### 2. Marking on the body



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