



1W Zener Diodes

ZD4728ASA thru ZD4755ASA

Features

- 1W power dissipation
- Voltages range from 3.3 to 43V
- Designed for mounting on small surface
- Extremely thin/leadless package

Mechanical Data

- Case : Molded plastic, SMA/JEDEC DO-214AC(SMA)
- Terminals : Solder plated, solderable per MIL-STD-750 method 2026
- Polarity : Indicated by cathode band.
- Mounting position : Any
- Weight : 0.05 gram (approx.)

Absolute Maximum Ratings(Ta=25°C, unless otherwise specified)

| Parameter | Condition | Symbol | Min | Typ | Max | Unit |
|-----------------------|---|------------------|-----|-----|------|------|
| Forward Voltage | I _F =200mA | V _F | - | - | 1.2 | V |
| Power Dissipation | | P _D | - | - | 1 | W |
| Forward surge current | 8.3ms single half sine wave superimposed on rated load (JEDEC method) | I _{FSM} | - | - | 100 | mA |
| Storage temperature | | T _{stg} | -55 | - | +125 | °C |
| Operating temperature | | T _J | -55 | - | +125 | °C |



Electrical Characteristics(Rating at 25°C ambient temperature unless otherwise specified.)

| Device | Marking Code | Zener voltage | Test current | Zener impedance | | | Leakage current | | Surge current |
|---------|--------------|---------------|--------------|-----------------|---------|------|-----------------|------|---------------|
| | | Vz@IzT | IzT | ZzT@IzT | ZzK@IzK | IzK | IR | VR | Isurge |
| | | V | mA | Ω | Ω | mA | μA | V | mA |
| ZD4728A | Z3V3 | 3.3 | 76 | 10 | 400 | 1.0 | 100 | 1.0 | 1380 |
| ZD4729A | Z3V6 | 3.6 | 69 | 10 | 400 | 1.0 | 100 | 1.0 | 1260 |
| ZD4730A | Z3V9 | 3.9 | 64 | 9 | 400 | 1.0 | 50 | 1.0 | 1190 |
| ZD4731A | Z4V3 | 4.3 | 58 | 9 | 400 | 1.0 | 10 | 1.0 | 1070 |
| ZD4732A | Z4V7 | 4.7 | 53 | 8 | 500 | 1.0 | 10 | 1.0 | 970 |
| ZD4733A | Z5V1 | 5.1 | 49 | 7 | 550 | 1.0 | 10 | 1.0 | 890 |
| ZD4734A | Z5V6 | 5.6 | 45 | 5 | 600 | 1.0 | 10 | 2.0 | 810 |
| ZD4735A | Z6V2 | 6.2 | 41 | 2 | 700 | 1.0 | 10 | 3.0 | 730 |
| ZD4736A | Z6V8 | 6.8 | 37 | 3.5 | 700 | 1.0 | 10 | 4.0 | 660 |
| ZD4737A | Z7V5 | 7.5 | 34 | 4.0 | 700 | 0.5 | 10 | 5.0 | 605 |
| ZD4738A | Z8V2 | 8.2 | 31 | 4.5 | 700 | 0.5 | 10 | 6.0 | 550 |
| ZD4739A | Z9V1 | 9.1 | 28 | 5 | 700 | 0.5 | 10 | 7.0 | 500 |
| ZD4740A | Z10 | 10 | 25 | 7 | 700 | 0.25 | 10 | 7.6 | 454 |
| ZD4741A | Z11 | 11 | 23 | 8 | 700 | 0.25 | 5 | 8.4 | 414 |
| ZD4742A | Z12 | 12 | 21 | 9 | 700 | 0.25 | 5 | 9.1 | 380 |
| ZD4743A | Z13 | 13 | 19 | 10 | 700 | 0.25 | 5 | 9.9 | 344 |
| ZD4744A | Z15 | 15 | 17 | 14 | 700 | 0.25 | 5 | 11.4 | 304 |
| ZD4745A | Z16 | 16 | 15.5 | 16 | 700 | 0.25 | 5 | 12.2 | 285 |
| ZD4746A | Z18 | 18 | 14 | 20 | 750 | 0.25 | 5 | 13.7 | 250 |
| ZD4747A | Z20 | 20 | 12.5 | 22 | 750 | 0.25 | 5 | 15.2 | 225 |
| ZD4748A | Z22 | 22 | 11.5 | 23 | 750 | 0.25 | 5 | 16.7 | 205 |
| ZD4749A | Z24 | 24 | 10.5 | 25 | 750 | 0.25 | 5 | 18.2 | 190 |
| ZD4750A | Z27 | 27 | 9.5 | 35 | 750 | 0.25 | 5 | 20.6 | 170 |
| ZD4751A | Z30 | 30 | 8.5 | 40 | 1000 | 0.25 | 5 | 22.8 | 150 |
| ZD4752A | Z33 | 33 | 7.5 | 45 | 1000 | 0.25 | 5 | 25.4 | 135 |
| ZD4753A | Z36 | 36 | 7.0 | 50 | 1000 | 0.25 | 5 | 27.4 | 125 |
| ZD4754A | Z39 | 39 | 6.5 | 60 | 1000 | 0.25 | 5 | 29.7 | 115 |
| ZD4755A | Z43 | 43 | 6.0 | 70 | 1500 | 0.25 | 5 | 32.7 | 105 |

Note: 5% tolerance of Zener voltage

Characteristic Curves

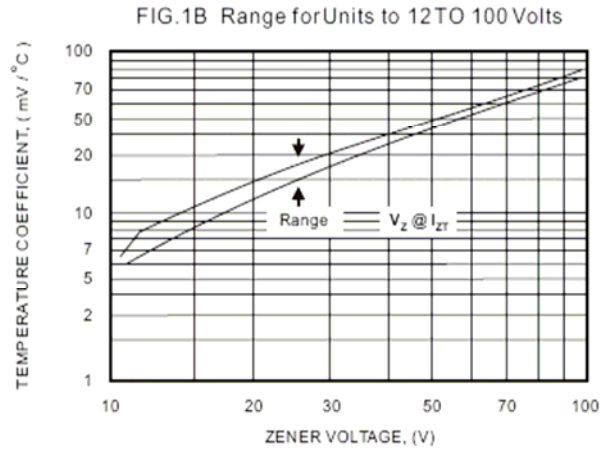
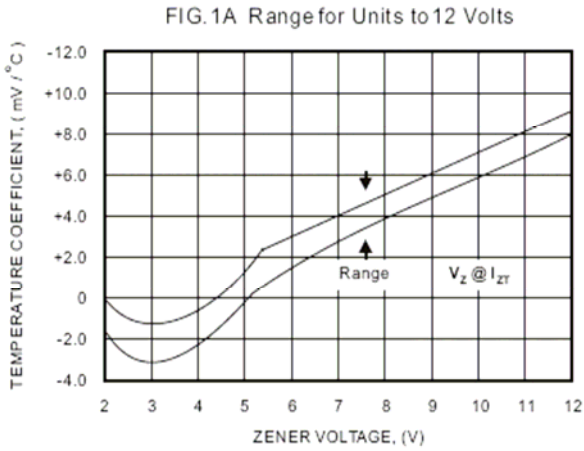


Fig. 2 Temperature Coefficients (-55°C to +150°C temperature change; 90% of the units are in the ranges indicated.)

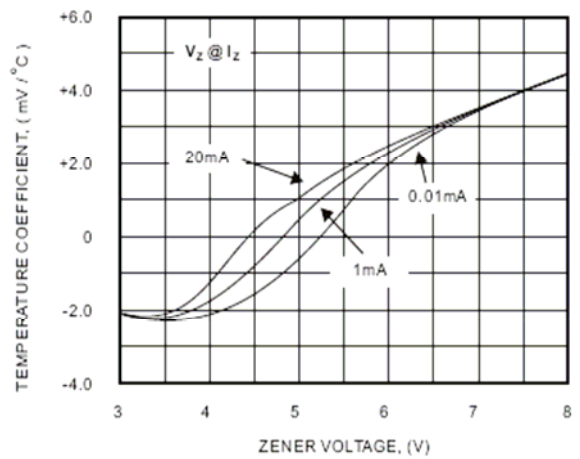
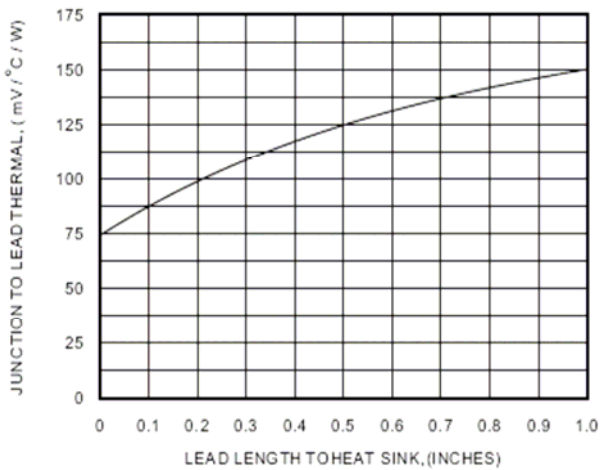


FIG.3 Typical Thermal Resistance versus Lead

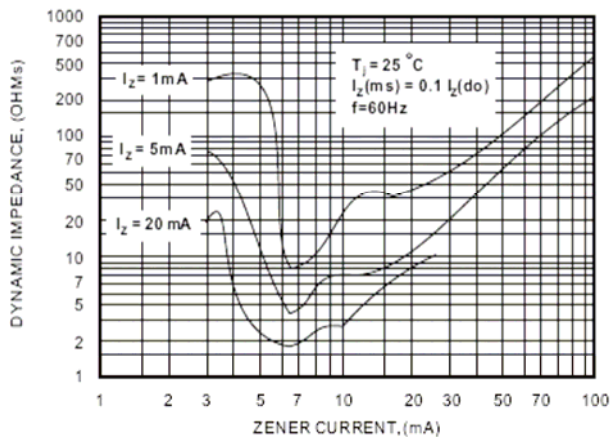
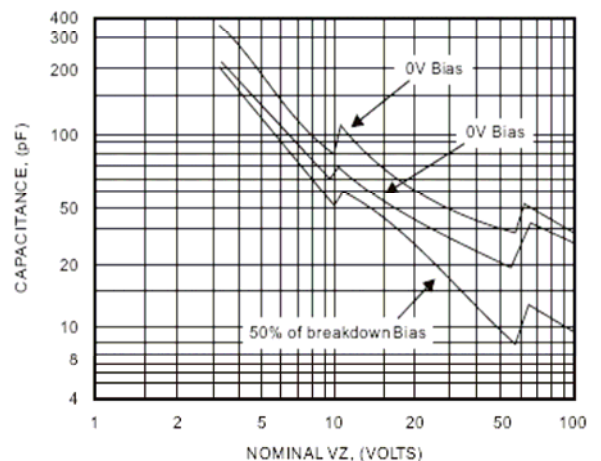
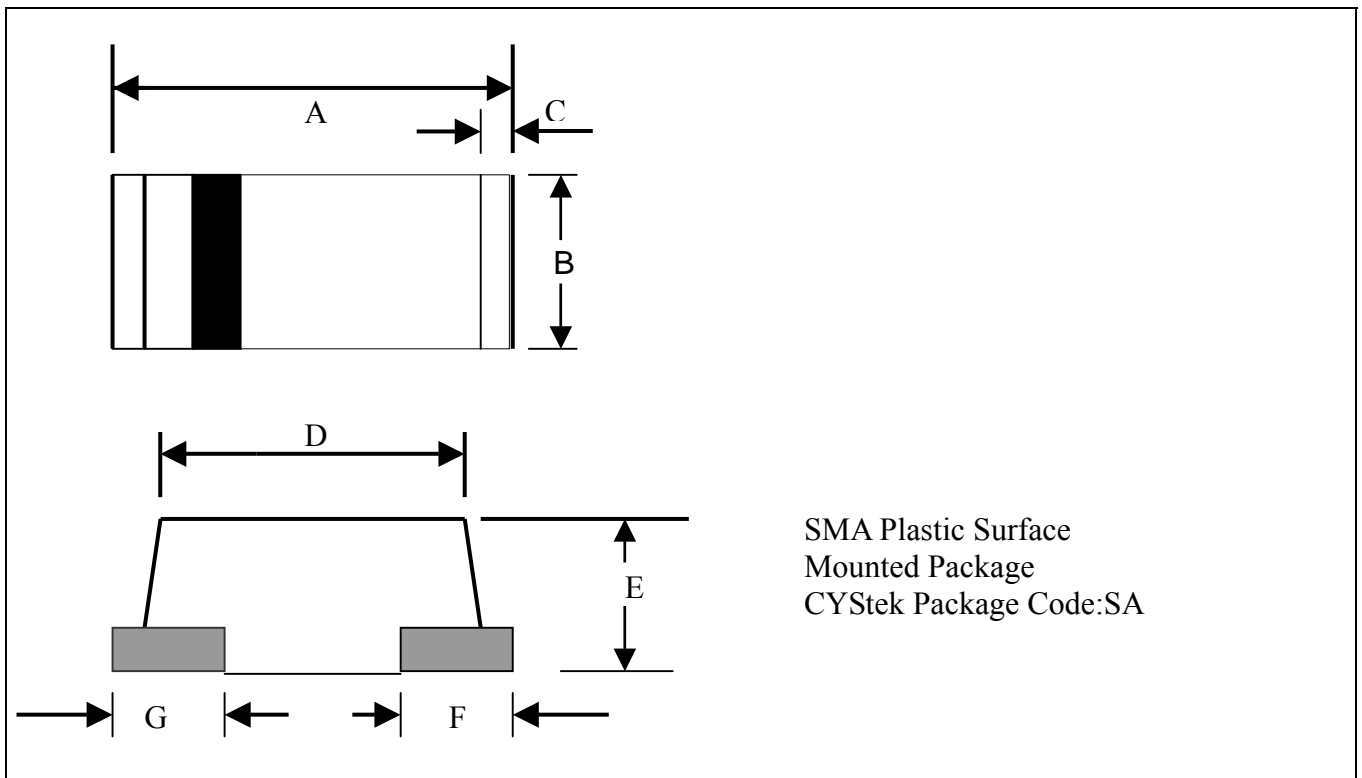


Fig 4. Effect of Zener Current



SMA/DO-214AC Dimension



*:Typical

| DIM | Inches | | Millimeters | | DIM | Inches | | Millimeters | |
|-----|------------|-------|-------------|------|-----|-----------|-------|-------------|------|
| | Min. | Max. | Min. | Max. | | Min. | Max. | Min. | Max. |
| A | 0.177 | 0.185 | 4.4 | 4.8 | E | 0.060 | 0.067 | 1.5 | 1.7 |
| B | 0.094 | 0.110 | 2.4 | 2.8 | F | 0.04(typ) | | 1.0(typ) | |
| C | 0.012(typ) | | 0.3(typ) | | G | 0.04(typ) | | 1.0(typ) | |
| D | 0.150 | 0.165 | 3.8 | 4.2 | - | - | - | - | - |

Notes : 1.Controlling dimension : millimeters.
 2.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
 3.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

Material :

- Lead : 42 Alloy ; solder plating
- Mold Compound : Epoxy resin family, flammability solid burning class:UL94V-0

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