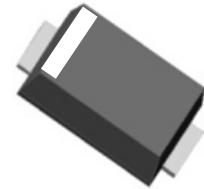


Small Signal Zener Diode

Features and Benefits

- Silicon planar power Zener diode
- Low Zener impedance and low leakage current
- High reliability and very high stability
- “Green” device and RoHS compliant device



SOD-123



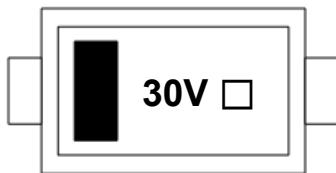
Applications

- Constant voltage regulation
- Reference voltage application

Ordering Information

| Part Number | Marking Code | Package | Packaging |
|-------------|--------------|---------|-------------|
| SDZ30VG | 30V □ | SOD-123 | Tape & Reel |

Marking Information



30V = Specific Device Code

□ = Year & Week Code Marking

■ = Color band denote cathode

Pinning Information

| Pin | Description | Simplified Outline | Graphic Symbol |
|-----|-------------|--------------------|----------------|
| 1 | Cathode | | |
| 2 | Anode | | |

Absolute Maximum Ratings (T_{amb}=25°C, Unless otherwise specified)

| Characteristic | Symbol | Ratings | Unit |
|---------------------------------|------------------|-----------------|------|
| Power dissipation ¹⁾ | P _D | 500 | mW |
| Operating junction temperature | T _J | 150 | °C |
| Storage temperature range | T _{stg} | -55°C to +150°C | °C |

¹⁾ Device mounted on FR4 PCB, Single Side Copper, Mounting Pad for 2.5x2.5 mm.

Electrical Characteristics ($T_{amb}=25^{\circ}\text{C}$, Unless otherwise specified)

| Device | Marking Info. | V_Z | | | Z_{ZT} | | Z_{ZK} | | I_R | |
|---------|---------------|------------|-------|-------|----------|------------|----------|------------|---------------|---------|
| | | @ I_{ZT} | Min | Max | Max | @ I_{ZT} | Max | @ I_{ZK} | Max | @ V_R |
| | | mA | V | | Ω | mA | Ω | mA | μA | V |
| SDZ3V0G | 3V0 | 20 | 2.85 | 3.15 | 29 | 20 | 1600 | 0.25 | 50 | 1.0 |
| SDZ3V3G | 3V3 | 20 | 3.14 | 3.50 | 28 | 20 | 1600 | 1.0 | 25 | 1.0 |
| SDZ3V6G | 3V6 | 20 | 3.42 | 3.78 | 24 | 20 | 1700 | 0.25 | 15 | 1.0 |
| SDZ3V9G | 3V9 | 20 | 3.71 | 4.10 | 23 | 20 | 1900 | 0.25 | 5 | 1.0 |
| SDZ5V1G | 5V1 | 20 | 4.94 | 5.20 | 17 | 20 | 1600 | 0.25 | 5 | 1.5 |
| SDZ5V6G | 5V6 | 20 | 5.45 | 5.73 | 40 | 20 | 500 | 1.0 | 5 | 2.5 |
| SDZ6V2G | 6V2 | 20 | 6.08 | 6.35 | 7 | 20 | 1600 | 0.25 | 5 | 4.0 |
| SDZ6V8G | 6V8 | 20 | 6.66 | 7.01 | 15 | 20 | 75 | 1.0 | 1.8 | 4.0 |
| SDZ7V5G | 7V5 | 20 | 7.29 | 7.67 | 6 | 20 | 500 | 0.25 | 3 | 6.0 |
| SDZ8V2G | 8V2 | 20 | 8.04 | 8.40 | 15 | 20 | 120 | 1.0 | 0.7 | 5.0 |
| SDZ9V1G | 9V1 | 20 | 8.85 | 9.28 | 10 | 20 | 600 | 0.25 | 3 | 7.0 |
| SDZ12VG | 12V | 10 | 11.44 | 12.24 | 25 | 10 | 150 | 1.0 | 0.2 | 9.0 |
| SDZ13VG | 13V | 10 | 12.70 | 13.30 | 30 | 10 | 160 | 1.0 | 0.2 | 10.0 |
| SDZ15VG | 15V | 8.5 | 14.25 | 15.75 | 16 | 8.5 | 600 | 0.25 | 0.1 | 11.0 |
| SDZ16VG | 16V | 10 | 15.64 | 16.38 | 40 | 10 | 188 | 1.0 | 0.2 | 12.0 |
| SDZ18VG | 18V | 7.0 | 16.80 | 19.10 | 21 | 7.0 | 600 | 0.25 | 0.1 | 14.0 |
| SDZ20VG | 20V | 6.2 | 19.00 | 21.00 | 25 | 6.2 | 600 | 0.25 | 0.1 | 15.0 |
| SDZ24VG | 24V | 5.2 | 22.80 | 25.20 | 33 | 5.2 | 600 | 0.25 | 0.1 | 18.0 |
| SDZ28VG | 28V | 4.5 | 26.60 | 29.40 | 44 | 4.5 | 600 | 0.25 | 0.1 | 21.0 |
| SDZ30VG | 30V | 4.2 | 28.50 | 31.50 | 49 | 4.2 | 600 | 0.25 | 0.1 | 23.0 |
| SDZ33VG | 33V | 3.8 | 31.35 | 34.65 | 58 | 3.8 | 700 | 0.25 | 0.1 | 25.0 |
| SDZ36VG | 36V | 3.4 | 34.2 | 37.8 | 70 | 3.4 | 700 | 0.25 | 0.1 | 27.0 |

Rating and Characteristic Curves

Fig. 1) Typical Zener Characteristics

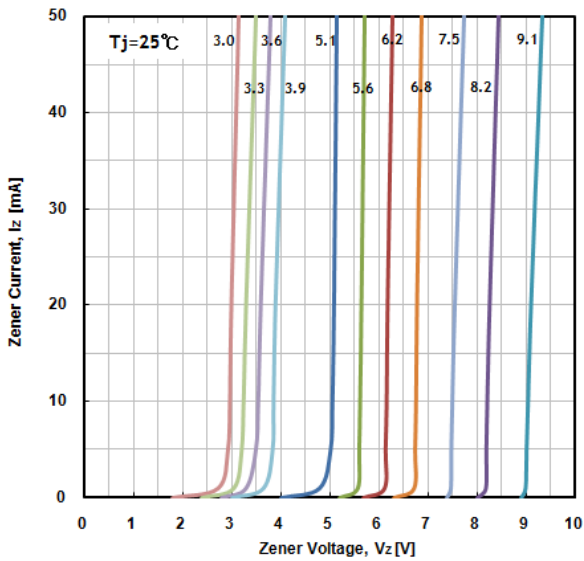


Fig. 2) Typical Zener Characteristics

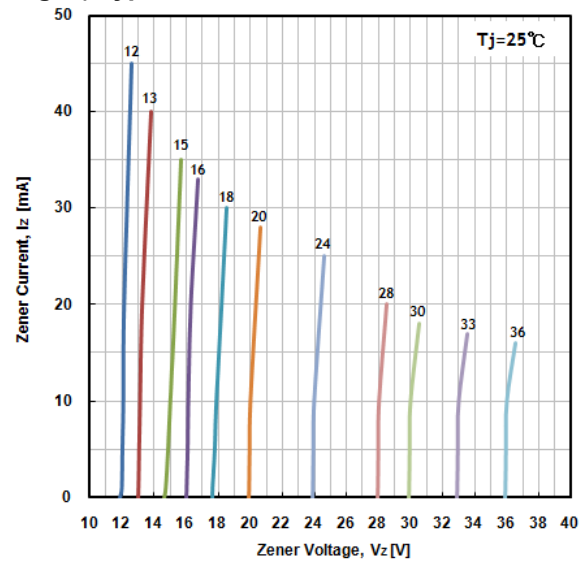


Fig. 3) Typical Forward Characteristics

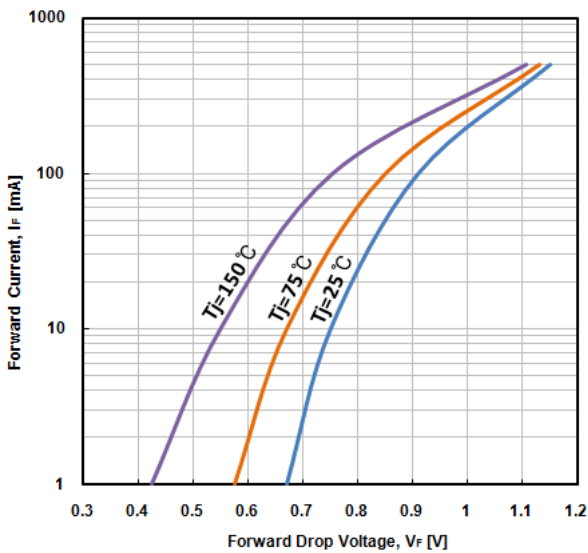


Fig. 4) Power Dissipation vs. Ambient Temperature

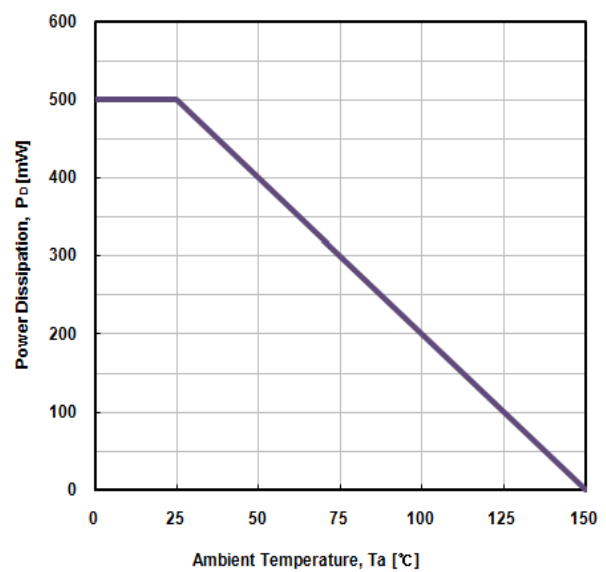
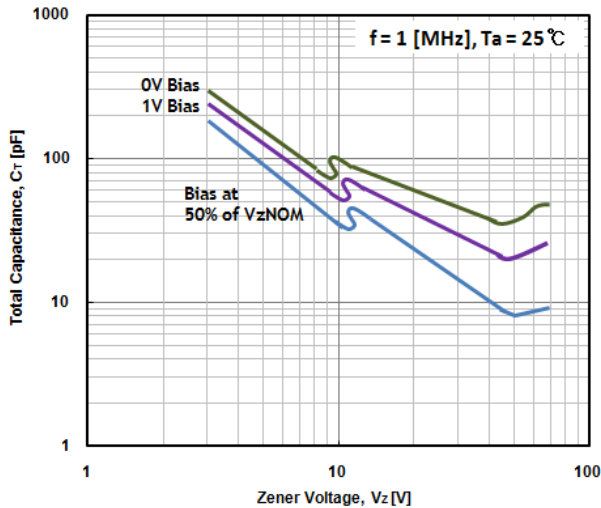
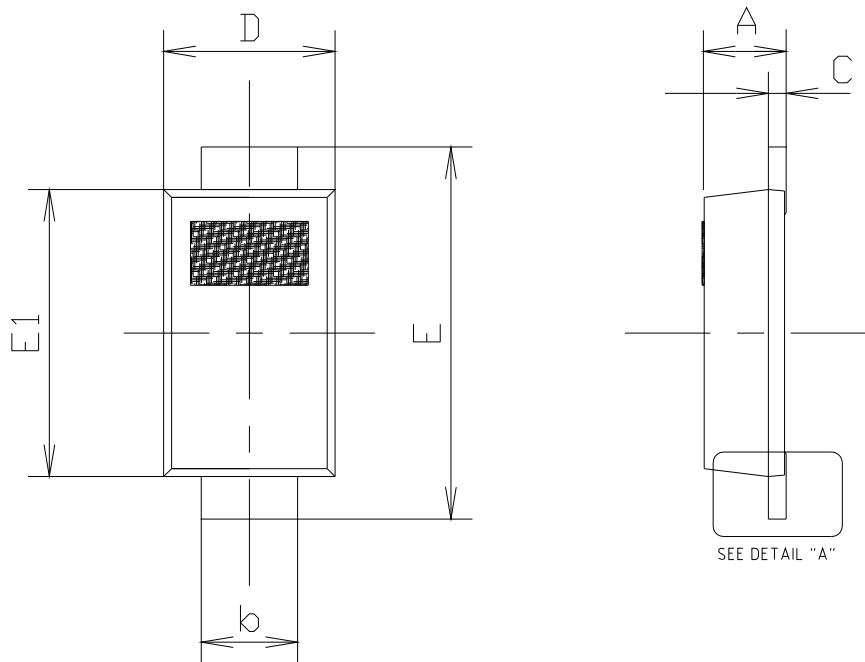


Fig. 5) Typical Capacitance Characteristics

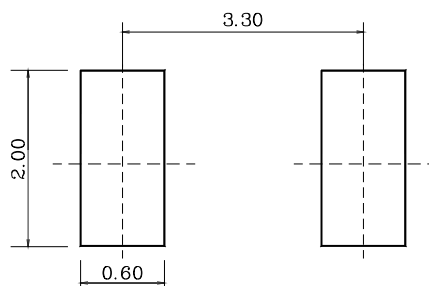


Package Outline Dimensions



| SYMBOL | MILLIMETERS | | | NOTE |
|--------|-------------|---------|---------|------|
| | MINIMUM | NOMINAL | MAXIMUM | |
| A | 0.70 | 0.85 | 1.00 | |
| b | 0.50 | 0.75 | 1.00 | |
| c | 0.12 | 0.16 | 0.20 | |
| D | 1.50 | 1.60 | 1.70 | |
| E | 3.30 | 3.50 | 3.70 | |
| E1 | 2.50 | 2.65 | 2.80 | |

※ Recommend PCB solder land (Unit : mm)



The AUK Corp. products are intended for the use as components in general electronic equipment (Office and communication equipment, measuring equipment, home appliance, etc.).

Please make sure that you consult with us before you use these AUK Corp. products in equipments which require high quality and / or reliability, and in equipments which could have major impact to the welfare of human life(atomic energy control, airplane, spaceship, transportation, combustion control, all types of safety device, etc.). AUK Corp. cannot accept liability to any damage which may occur in case these AUK Corp. products were used in the mentioned equipments without prior consultation with AUK Corp..

Specifications mentioned in this publication are subject to change without notice.