



SSCZXXXHD1 Series

Zener Voltage Regulator

● Description

The SSCZXXXHD1 is packaged in a SOD-123 surface mount package that has a power dissipation of 500mW. They are designed to provide voltage regulation protection and are especially attractive in situations where space is at a premium. It is applicable to mobile phones, hand-held portable devices, high-density PC boards.

● Feature

- ✧ Low profile package
- ✧ Ideal for automated placement
- ✧ Low Zener Impedance
- ✧ Steady state power rating of 500mW
- ✧ RoHS compliant transient

● Applications

- ✧ Hand held portables
- ✧ Cellular phones
- ✧ High density PC boards

● PIN configuration



SOD-123



Circuit diagram

● Mechanical data

- ✧ Package: SOD-123
- ✧ Lead finish:100% matte Sn(Tin)
- ✧ Mounting position: Any
- ✧ Qualified max reflow temperature:260℃
- ✧ Device meets MSL 3 requirements
- ✧ Pure tin plating: 7 ~ 17 um
- ✧ Pin flatness:≤3mil

● Absolute maximum rating @T_A=25℃

| Parameter | Symbol | Value | Unit |
|--|------------------|----------|------|
| Total Device Dissipation FR-5 Board | P _D | 500 | mW |
| Thermal Resistance,Junction-to-Ambient | R _{θJA} | 340 | ℃/W |
| Storage Temperature | T _{STG} | -55/+150 | ℃ |
| Operating Temperature | T _J | -55/+150 | ℃ |



● Electrical Characteristics @T_A=25°C

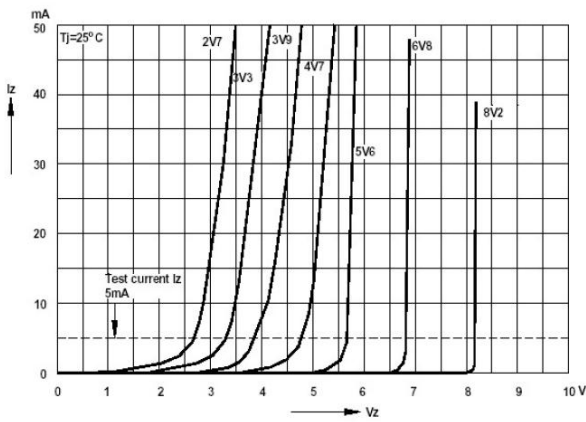
| Device | Marking | Zener Voltage Range | | | | Maximum Zener Impedance | | | Maximum Reverse Current | | Typical Temperature coefficient @ I _{ZTC} =mV/°C | | Test Current I _{ZTC} |
|------------|---------|----------------------------------|--------|--------|-----------------|----------------------------------|----------------------------------|-----------------|-------------------------|----------------|---|------|-------------------------------|
| | | V _Z @ I _{ZT} | | | I _{ZT} | Z _{ZT} @I _{ZT} | Z _{ZK} @I _{ZK} | I _{ZK} | I _R | V _R | Min | Max | |
| | | Nom(V) | Min(V) | Max(V) | mA | Ω | | mA | μA | V | Min | Max | |
| SSCZ2V4HD1 | WX | 2.4 | 2.2 | 2.6 | 5 | 100 | 600 | 1.0 | 50 | 1.0 | -3.5 | 0 | 5 |
| SSCZ2V7HD1 | W1 | 2.7 | 2.5 | 2.9 | 5 | 100 | 600 | 1.0 | 20 | 1.0 | -3.5 | 0 | 5 |
| SSCZ3V0HD1 | W2 | 3.0 | 2.8 | 3.2 | 5 | 95 | 600 | 1.0 | 10 | 1.0 | -3.5 | 0 | 5 |
| SSCZ3V3HD1 | W3 | 3.3 | 3.1 | 3.5 | 5 | 95 | 600 | 1.0 | 5 | 1.0 | -3.5 | 0 | 5 |
| SSCZ3V6HD1 | W4 | 3.6 | 3.4 | 3.8 | 5 | 90 | 600 | 1.0 | 5 | 1.0 | -3.5 | 0 | 5 |
| SSCZ3V9HD1 | W5 | 3.9 | 3.7 | 4.1 | 5 | 90 | 600 | 1.0 | 3 | 1.0 | -3.5 | 0 | 5 |
| SSCZ4V3HD1 | W6 | 4.3 | 4.0 | 4.6 | 5 | 90 | 600 | 1.0 | 3 | 1.0 | -3.5 | 0 | 5 |
| SSCZ4V7HD1 | W7 | 4.7 | 4.4 | 5.0 | 5 | 80 | 500 | 1.0 | 3 | 2.0 | -3.5 | 0.2 | 5 |
| SSCZ5V1HD1 | 5V1H | 5.1 | 4.8 | 5.4 | 5 | 60 | 480 | 1.0 | 2 | 2.0 | -2.7 | 1.2 | 5 |
| SSCZ5V6HD1 | W9 | 5.6 | 5.2 | 6.0 | 5 | 40 | 400 | 1.0 | 1 | 2.0 | -2.0 | 2.5 | 5 |
| SSCZ6V2HD1 | WA | 6.2 | 5.8 | 6.6 | 5 | 10 | 150 | 1.0 | 3 | 4.0 | 0.4 | 3.7 | 5 |
| SSCZ6V8HD1 | WB | 6.8 | 6.4 | 7.2 | 5 | 15 | 80 | 1.0 | 2 | 4.0 | 1.2 | 4.5 | 5 |
| SSCZ7V5HD1 | WC | 7.5 | 7.0 | 7.9 | 5 | 15 | 80 | 1.0 | 1 | 5.0 | 2.5 | 5.3 | 5 |
| SSCZ8V2HD1 | WD | 8.2 | 7.7 | 8.7 | 5 | 15 | 80 | 1.0 | 0.7 | 5.0 | 3.2 | 6.2 | 5 |
| SSCZ9V1HD1 | WE | 9.1 | 8.5 | 9.6 | 5 | 15 | 100 | 1.0 | 0.5 | 6.0 | 3.8 | 7.0 | 5 |
| SSCZ10VHD1 | WF | 10 | 9.4 | 10.6 | 5 | 20 | 150 | 1.0 | 0.2 | 7.0 | 4.5 | 8.0 | 5 |
| SSCZ11VHD1 | WG | 11 | 10.4 | 11.6 | 5 | 20 | 150 | 1.0 | 0.1 | 8.0 | 5.4 | 9.0 | 5 |
| SSCZ12VHD1 | WH | 12 | 11.4 | 12.7 | 5 | 25 | 150 | 1.0 | 0.1 | 8.0 | 6.0 | 10.0 | 5 |
| SSCZ13VHD1 | WI | 13 | 12.4 | 14.1 | 5 | 30 | 170 | 1.0 | 0.1 | 8.0 | 7.0 | 11.0 | 5 |
| SSCZ15VHD1 | WJ | 15 | 13.8 | 15.6 | 5 | 30 | 200 | 1.0 | 0.1 | 10.5 | 9.2 | 13.0 | 5 |
| SSCZ16VHD1 | WK | 16 | 15.3 | 17.1 | 5 | 40 | 200 | 1.0 | 0.1 | 11.2 | 10.4 | 14.0 | 5 |
| SSCZ18VHD1 | WL | 18 | 16.8 | 19.1 | 5 | 45 | 225 | 1.0 | 0.1 | 12.6 | 12.4 | 16.0 | 5 |
| SSCZ20VHD1 | WM | 20 | 18.8 | 21.2 | 5 | 55 | 225 | 1.0 | 0.1 | 14.0 | 14.4 | 18.0 | 5 |
| SSCZ22VHD1 | WN | 22 | 20.8 | 23.3 | 5 | 55 | 250 | 1.0 | 0.1 | 15.4 | 16.4 | 20.0 | 5 |
| SSCZ24VHD1 | WO | 24 | 22.8 | 25.6 | 5 | 70 | 250 | 1.0 | 0.1 | 16.8 | 18.4 | 22.0 | 5 |
| SSCZ27VHD1 | WP | 27 | 25.1 | 28.9 | 2 | 80 | 300 | 0.5 | 0.1 | 18.9 | 21.4 | 25.3 | 2 |
| SSCZ30VHD1 | WQ | 30 | 28.0 | 32.0 | 2 | 80 | 300 | 0.5 | 0.1 | 21.0 | 24.4 | 29.4 | 2 |
| SSCZ33VHD1 | WR | 33 | 31.0 | 35.0 | 2 | 80 | 325 | 0.5 | 0.1 | 23.1 | 27.4 | 33.4 | 2 |
| SSCZ36VHD1 | WS | 36 | 34.0 | 38.0 | 2 | 90 | 350 | 0.5 | 0.1 | 25.2 | 30.4 | 37.4 | 2 |
| SSCZ39VHD1 | WT | 39 | 37.0 | 41.0 | 2 | 130 | 350 | 0.5 | 0.1 | 27.3 | 33.4 | 41.2 | 2 |
| SSCZ43VHD1 | WU | 43 | 40.0 | 46.0 | 2 | 150 | 375 | 0.5 | 0.1 | 32.0 | 10.0 | 12.0 | 5 |
| SSCZ47VHD1 | WV | 47 | 44.0 | 50.0 | 2 | 170 | 375 | 0.5 | 0.1 | 35.0 | 10.0 | 12.0 | 5 |
| SSCZ51VHD1 | WW | 51 | 48.0 | 54.0 | 2 | 180 | 400 | 0.5 | 0.1 | 38.0 | 10.0 | 12.0 | 5 |
| SSCZ56VHD1 | XW | 56 | 52.0 | 60.0 | 2 | 200 | 425 | 0.5 | 0.1 | 39.0 | 10.0 | 12.0 | 5 |
| SSCZ62VHD1 | 6E | 62 | 58.0 | 66.0 | 2 | 215 | 450 | 0.5 | 0.2 | 47.0 | 10.0 | 12.0 | 5 |
| SSCZ68VHD1 | 6F | 68 | 64.0 | 72.0 | 2 | 240 | 475 | 0.5 | 0.2 | 52.0 | 10.0 | 12.0 | 5 |



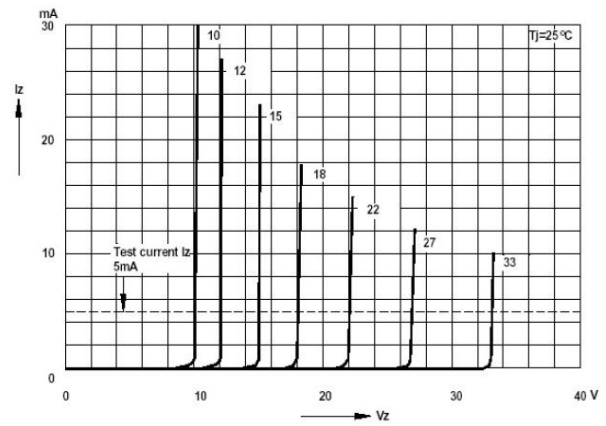
SSCZXXXHD1

| | | | | | | | | | | | | | |
|------------|----|----|------|------|---|-----|-----|-----|-----|------|------|------|---|
| SSCZ75VHD1 | 6H | 75 | 70.0 | 79.0 | 2 | 255 | 500 | 0.5 | 0.2 | 57.0 | 10.0 | 12.0 | 5 |
|------------|----|----|------|------|---|-----|-----|-----|-----|------|------|------|---|

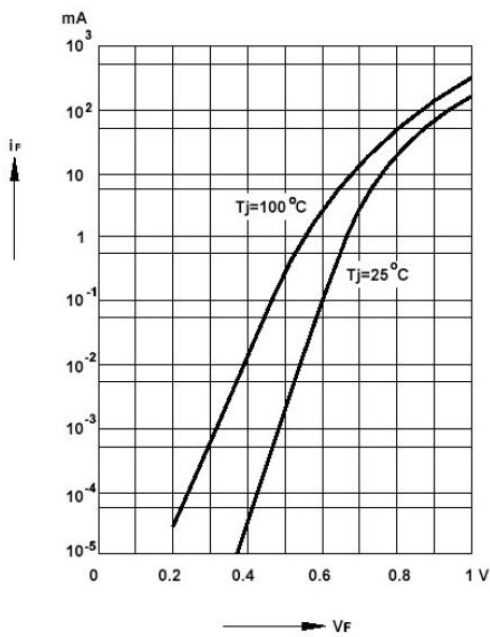
● Typical Performance Characteristics



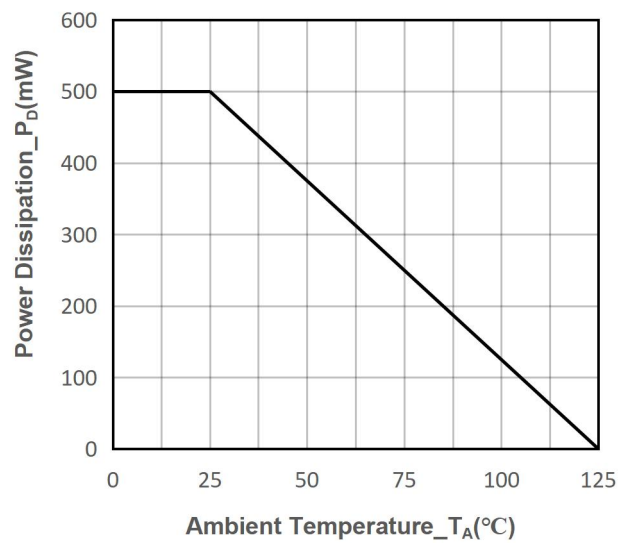
Zener Current vs. Zener Voltage



Zener Current vs. Zener Voltage



Forward Current vs. Forward Voltage



Power Derating vs. Ambient Temperature



● Package Information

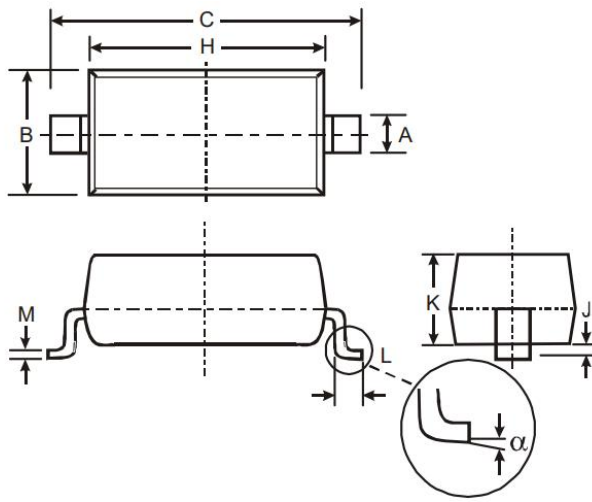
Ordering Information

| Device | Package | Qty per Reel | Reel Size |
|------------|---------|--------------|-----------|
| SSCZXXXHD1 | SOD-123 | 3000 | 7 Inch |

Mechanical Data

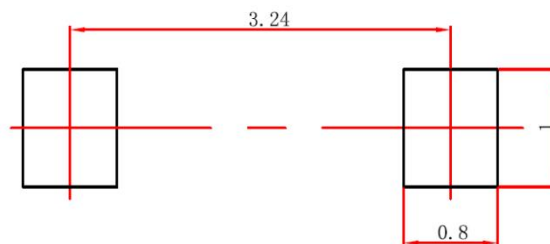
Case:SOD-123

Case Material: Molded Plastic. UL Flammability



| DIM | Millimeters | |
|----------|-------------|------|
| | Min | Max |
| A | 0.45 | 0.65 |
| B | 1.50 | 1.70 |
| C | 3.55 | 3.85 |
| H | 2.6 | 2.8 |
| J | 0.00 | 0.10 |
| K | 1.05 | 1.15 |
| L | 0.25 | 0.45 |
| M | 0.08 | 0.15 |
| α | 0 | 8° |

Recommended Pad outline (Unit:mm)





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