

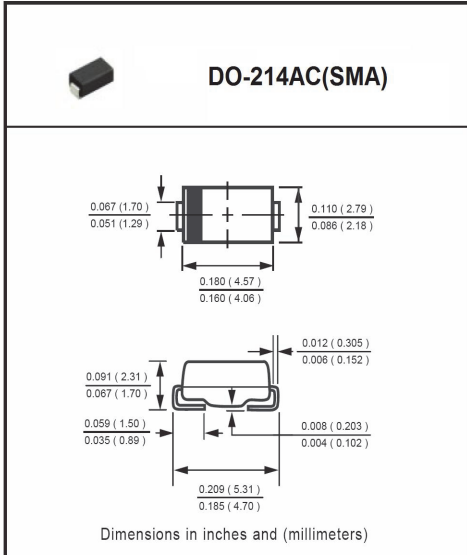


SHANGSI

# SZ153D thru SZ15D0

表面安装稳压二极管  
 稳压电压3.3--200 V  
 功率1.0 W

Surface Mount Zener Rectifiers  
 Reverse Voltage 3.3 to 200 V  
 Power 1.0 W



## Features

- Plastic package has Underwriters Laboratory Flammability Classification 94 V-0
- For surface mounted applications
- Low Zener impedance
- Low regulation factor
- High temperature soldering guaranteed: 260 °C/10 seconds at terminal
- Lead and body according with RoHS standard
- Standard voltage tolerance is 10 %, Suffix 5 is ± 5 %

## Mechanical Data

- Case: Molded plastic body
- Terminals: Solder plated
- Polarity: Color band denotes cathode end
- Mounting Position: Any

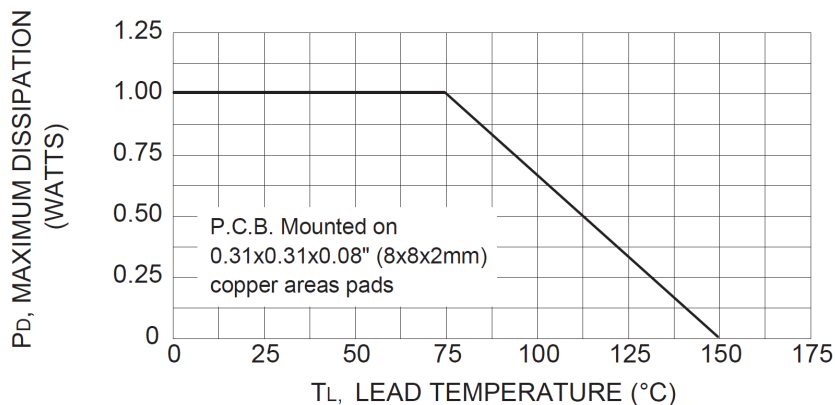
Maximum Ratings  $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

| Rating   | Symbol          | Value         | Unit  |
|--|-----------------|---------------|-------|
| DC Power Dissipation at $T_L = 75\text{ }^{\circ}\text{C}$ (Note1) | PD              | 1.0           | Watt  |
| Maximum Forward Voltage at $I_F = 200\text{ mA}$                   | VF              | 1.2           | Volts |
| Maximum Thermal Resistance Junction to Ambient Air                 | $R_{\theta JA}$ | 170           | K / W |
| Junction Temperature Range   | $T_J$           | - 55 to + 150 | C     |
| Storage Temperature Range  | TSTG            | - 55 to + 150 | C     |

**Note :**

(1)  $T_L$  = Lead temperature at 5.0 mm $\times$  ( 0.013 mm thick ) copper land areas.

Fig. 1 POWER TEMPERATURE DERATING CURVE





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## ELECTRICAL CHARACTERISTICS (Rating at 25 °C ambient temperature unless otherwise specified)

| Type   | Nominal Zener Voltage |      | Maximum Zener Impedance |           |      | Maximum Reverse Leakage Current |       | Maximum DC Zener Current |
|--------|-----------------------|------|-------------------------|-----------|------|---------------------------------|-------|--------------------------|
|        | Vz @ IZT              | IZT  | ZzT @ IZT               | Zzk @ Izk | Izk  | IR @ VR                         | IZM   |                          |
|        | (V)                   | (mA) | (Ω)                     | (Ω)       | (mA) | (μA)                            | (V)   | (mA)                     |
| SZ153D | 3.3                   | 76.0 | 10                      | 400       | 1.0  | 100                             | 1.0   | 276                      |
| SZ153G | 3.6                   | 69.0 | 10                      | 400       | 1.0  | 100                             | 1.0   | 252                      |
| SZ153J | 3.9                   | 64.0 | 9.0                     | 400       | 1.0  | 50                              | 1.0   | 234                      |
| SZ154D | 4.3                   | 58.0 | 9.0                     | 400       | 1.0  | 10                              | 1.0   | 217                      |
| SZ154H | 4.7                   | 53.0 | 8.0                     | 500       | 1.0  | 10                              | 1.0   | 193                      |
| SZ155B | 5.1                   | 49.0 | 7.0                     | 550       | 1.0  | 10                              | 1.0   | 178                      |
| SZ155G | 5.6                   | 45.0 | 5.0                     | 600       | 1.0  | 10                              | 2.0   | 162                      |
| SZ156C | 6.2                   | 41.0 | 2.0                     | 700       | 1.0  | 10                              | 3.0   | 146                      |
| SZ156I | 6.8                   | 37.0 | 3.5                     | 700       | 1.0  | 50                              | 4.0   | 133                      |
| SZ157F | 7.5                   | 34.0 | 4.0                     | 700       | 0.5  | 50                              | 5.0   | 121                      |
| SZ158C | 8.2                   | 31.0 | 4.5                     | 700       | 0.5  | 50                              | 6.0   | 110                      |
| SZ159B | 9.1                   | 28.0 | 5.0                     | 700       | 0.5  | 50                              | 7.0   | 100                      |
| SZ1510 | 10                    | 25.0 | 7.0                     | 700       | 0.25 | 50                              | 7.6   | 91                       |
| SZ1511 | 11                    | 23.0 | 8.0                     | 700       | 0.25 | 50                              | 8.4   | 83                       |
| SZ1512 | 12                    | 21.0 | 9.0                     | 700       | 0.25 | 5.0                             | 9.1   | 76                       |
| SZ1513 | 13                    | 19.0 | 10                      | 700       | 0.25 | 5.0                             | 9.9   | 69                       |
| SZ1515 | 15                    | 17.0 | 14                      | 700       | 0.25 | 5.0                             | 11.4  | 61                       |
| SZ1516 | 16                    | 15.5 | 16                      | 700       | 0.25 | 5.0                             | 12.2  | 57                       |
| SZ1518 | 18                    | 14.0 | 20                      | 750       | 0.25 | 5.0                             | 13.7  | 50                       |
| SZ1520 | 20                    | 12.5 | 22                      | 750       | 0.25 | 5.0                             | 15.2  | 45                       |
| SZ1522 | 22                    | 11.5 | 23                      | 750       | 0.25 | 5.0                             | 16.7  | 41                       |
| SZ1524 | 24                    | 10.5 | 25                      | 750       | 0.25 | 5.0                             | 18.2  | 38                       |
| SZ1527 | 27                    | 9.5  | 35                      | 750       | 0.25 | 5.0                             | 20.6  | 34                       |
| SZ1530 | 30                    | 8.5  | 40                      | 1000      | 0.25 | 5.0                             | 22.8  | 30                       |
| SZ1533 | 33                    | 7.5  | 45                      | 1000      | 0.25 | 5.0                             | 25.1  | 27                       |
| SZ1536 | 36                    | 7.0  | 50                      | 1000      | 0.25 | 5.0                             | 27.4  | 25                       |
| SZ1539 | 39                    | 6.5  | 60                      | 1000      | 0.25 | 5.0                             | 29.7  | 23                       |
| SZ1543 | 43                    | 6.0  | 70                      | 1500      | 0.25 | 5.0                             | 32.7  | 22                       |
| SZ1547 | 47                    | 5.5  | 80                      | 1500      | 0.25 | 5.0                             | 35.8  | 19                       |
| SZ1551 | 51                    | 5.0  | 95                      | 1500      | 0.25 | 5.0                             | 38.8  | 18                       |
| SZ1556 | 56                    | 4.5  | 110                     | 2000      | 0.25 | 5.0                             | 42.6  | 16                       |
| SZ1562 | 62                    | 4.0  | 125                     | 2000      | 0.25 | 5.0                             | 47.1  | 14                       |
| SZ1568 | 68                    | 3.7  | 150                     | 2000      | 0.25 | 5.0                             | 51.7  | 13                       |
| SZ1575 | 75                    | 3.3  | 175                     | 2000      | 0.25 | 5.0                             | 56.0  | 12                       |
| SZ1582 | 82                    | 3.0  | 200                     | 3000      | 0.25 | 5.0                             | 62.2  | 11                       |
| SZ1591 | 91                    | 2.8  | 250                     | 3000      | 0.25 | 5.0                             | 69.2  | 10                       |
| SZ15B0 | 100                   | 2.5  | 350                     | 3000      | 0.25 | 5.0                             | 76.0  | 9.0                      |
| SZ15B1 | 110                   | 2.3  | 450                     | 4000      | 0.25 | 5.0                             | 83.6  | 8.6                      |
| SZ15B2 | 120                   | 2.0  | 550                     | 4500      | 0.25 | 5.0                             | 91.2  | 7.8                      |
| SZ15B3 | 130                   | 1.9  | 700                     | 5000      | 0.25 | 5.0                             | 98.8  | 7.0                      |
| SZ15B5 | 150                   | 1.7  | 1000                    | 6000      | 0.25 | 5.0                             | 114.0 | 6.4                      |
| SZ15B6 | 160                   | 1.6  | 1100                    | 6500      | 0.25 | 5.0                             | 121.6 | 5.8                      |
| SZ15B8 | 180                   | 1.4  | 1200                    | 7000      | 0.25 | 5.0                             | 136.8 | 5.2                      |
| SZ15D0 | 200                   | 1.2  | 1500                    | 8000      | 0.25 | 5.0                             | 152.0 | 4.7                      |

**Note :**

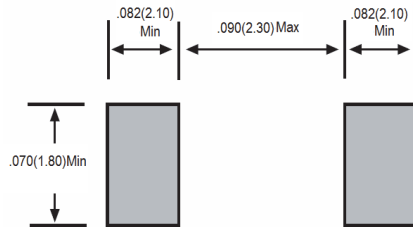
(1) The type number listed have a standard tolerance on the nominal zener voltage of ± 5%.



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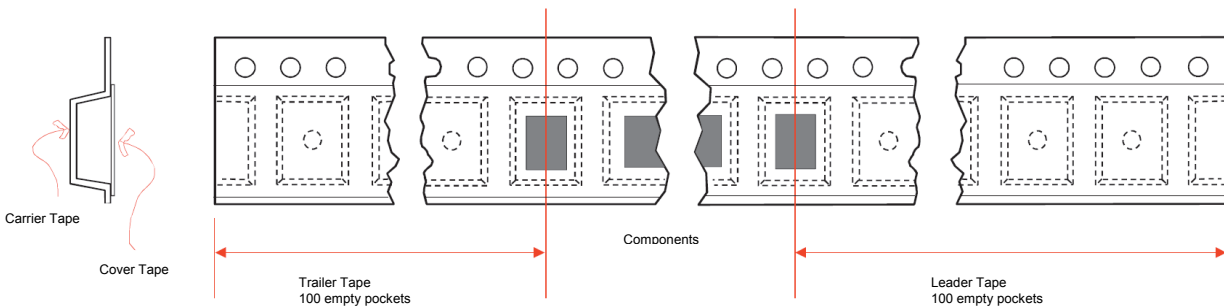
## Mounting Pad Layout



## Packing

| Part number   | Component Package | Quantity | Packaging Option           |
|---------------|-------------------|----------|----------------------------|
| SZ153G-SZ15D0 | SMA DO-214AC      | 5000     | Tape & Reel – 8mm/13" tape |

## DO-214AC(SMA) Tape Leader and Trailer Configuration



## Tape and Reel Specification

