

**1. Scope :**

This specification applies to N/P silicon zener diode chips,  
Device NO. SD-40812GVA

**2. Structure :**

- 2-1. Planar type : N/P Diode
- 2-2. Electrodes :  
Top side : Gold pad.  
Back side : SnAu alloy.

**3. Size :**

- 3-1. \*<sub>1</sub> Chip size : 8.5 mils x 8.5 mils (0.215 mm x 0.215 mm ).
- 3-2. Chip thickness : 4.0 ± 1.0 mils (0.100 ± 0.025 mm ).
- 3-3. Active area : 5.3 mils x 5.3 mils (0.135 mm x 0.135 mm).
- 3-4. \*<sub>2</sub> Bonding pad : 5.9 mils x 5.9 mils (0.150 mm x 0.150 mm) .
- 3-5. Pattern drawing : Refer to the attached drawing.

\*<sub>1</sub> Including scribing line. The chip size is about (0.190±0.015)<sup>2</sup>mm<sup>2</sup> after dicing.

\*<sub>2</sub> The bonding pad dimension is (0.150±0.015)<sup>2</sup>mm<sup>2</sup>.

**4. Electrical characteristics (Ta = 25 °C)**

| Parameter                              | Symbol         | Condition                                      | Min. | Typ. | Max. | Unit |
|--|----------------|--|------|------|------|------|
| * <sub>3</sub> Reverse Leakage Current | I <sub>R</sub> | V <sub>R</sub> =8V<br>Ee=0mW/cm <sup>2</sup>   |      |      | 100  | nA   |
| * <sub>3</sub> Zener Voltage           | V <sub>Z</sub> | I <sub>Z</sub> =5mA<br>Ee=0mW/cm <sup>2</sup>  | 9    |      | 15   | V    |
| * <sub>3</sub> Forward Voltage         | V <sub>f</sub> | I <sub>F</sub> =20mA<br>Ee=0mW/cm <sup>2</sup> |      |      | 1.2  | V    |

\*<sub>3</sub> Based on 100% probing.

