

**High Voltage Trench Schottky Diode****FEATURES**

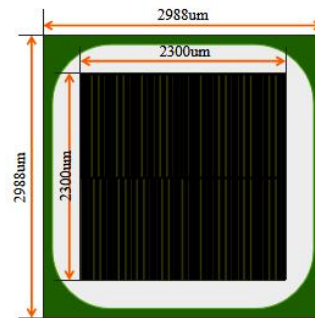
- Trench MOS Schottky technology
- Die in 6" Wafer Form
- 100V, 20A\*
- $V_F=0.68V(\text{typ.})^{**}$

**Electrical Characteristics** ( $T_j=25^\circ\text{C}$ )

| Parameter                                 | Description                             | Min.               | Typ. | Max. | Unit          | Test Condition       |
|---|---|--------------------|------|------|---------------|----------------------|
| $V_{RRM}$                                 | Maximum repetitive peak reverse voltage | 108                | 115  | —    | V             | $I_R=500\mu\text{A}$ |
| $V_F$                                     | Static Forward Voltage                  | —                  | 0.38 | 0.47 | V             | $I_F=1\text{A}$      |
|   |   | —                  | 0.55 | 0.57 | V             | $I_F=10\text{A}$     |
|   |   | —                  | 0.68 | 0.72 | V             | $I_F=20\text{A}$     |
| $I_R^{***}$                               | Cathode-To-Anode Leakage Current        | —                  | 15   | 30   | $\mu\text{A}$ | $V_R=100\text{V}$    |
| $T_j, T_{STG}$                            | Operating and Storage Temperature Range | -55°C to 150°C Max |      |      |               |                      |
| *** Pulse width < 300 uS, Duty cycle < 2% |   |                    |      |      |               |                      |

**Mechanical Data**

|                                 |  |                 |  |
|---------------------------------|--|-----------------|--|
| Die Size                        | 3048×3048  | $\mu\text{m}^2$ | <b>CHIP DRAWING</b><br>(Scribe Line is Excluded) |
| Source Pad Size                 | 2300× 2300   | $\mu\text{m}^2$ |  |
| Scribe Line Size                | 60   | $\mu\text{m}$   |  |
| Wafer Diameter                  | 6  | in              |  |
| Wafer Thickness                 | 250  | $\mu\text{m}$   |  |
| Estimated Gross Die             | 1699(Yield>97%)  |                 |  |
| Anode Metal Thickness           | Al/Ti/Ni/Ag (2.8um\0.1um\0.2um\1.8um)  |                 |  |
| Cathode Metal Thickness         | Ti/Ni/Ag (0.2um\0.3um\2um)   |                 |  |
| Recommended Storage Environment | Store in original container, in dry nitrogen,<br>< 6 months at an ambient temperature of $23^\circ\text{C}\pm 3^\circ\text{C}$ > |                 |  |



\* Electrical characteristics are reported for the reference packaged part (TO-220) and can not be guaranteed in die sales form.

\*\* Electrical characteristics are reported for the bare die. Variations in customer packaging materials, dimensions and processes may affect parametric performance.