

### PHASE CONTROL THYRISTORS

- Junction Size: Square 180 mils
- Wafer Size: 4"
- $V_{RRM}$  Class: 600 and 1200 V
- Passivation Process: Glassivated MESA
- Reference IR Packaged Part: n. a.

### Major Ratings and Characteristics

| Parameters                                        | Units          | Test Conditions                                                   |
|---------------------------------------------------|----------------|-------------------------------------------------------------------|
| $V_{TM}$ Maximum On-state Voltage                 | 1.3 V          | $T_J = 25^\circ\text{C}$ , $I_T = 25\text{ A}$                    |
| $V_{RRM}$ Reverse Breakdown Voltage               | 600 and 1200 V | $T_J = 25^\circ\text{C}$ , $I_{RRM} = 300\text{ }\mu\text{A}$ (1) |
| $I_{GT}$ Max. Required DC Gate Current to Trigger | 45 mA          | $T_J = 25^\circ\text{C}$ , anode supply = 6 V, resistive load     |
| $V_{GT}$ Max. Required DC Gate Voltage to Trigger | 1.9 V          | $T_J = 25^\circ\text{C}$ , anode supply = 6 V, resistive load     |
| $I_H$ Holding Current Range                       | 5 to 150 mA    | Anode supply = 6 V, resistive load                                |
| $I_L$ Maximum Latching Current                    | 400 mA         | Anode supply = 6 V, resistive load                                |

(1) Nitrogen flow on die edge.

### Mechanical Characteristics

|                                            |                                                                              |
|--------------------------------------------|------------------------------------------------------------------------------|
| Nominal Back Metal Composition, Thickness  | Cr - Ni - Ag (1 KA - 4 KA - 6 KA)                                            |
| Nominal Front Metal Composition, Thickness | Cr - Ni - Ag (1 KA - 4 KA - 6 KA)                                            |
| Chip Dimensions                            | 180 x 180 mils (see drawing)                                                 |
| Wafer Diameter                             | 100 mm, with std. < 100 > flat                                               |
| Wafer Thickness                            | 350 $\mu\text{m} \pm 10\text{ }\mu\text{m}$                                  |
| Maximum Width of Sawing Line               | 130 $\mu\text{m}$                                                            |
| Reject Ink Dot Size                        | 0.25 mm diameter minimum                                                     |
| Ink Dot Location                           | See drawing                                                                  |
| Recommended Storage Environment            | Storage in original container, in dessicated nitrogen, with no contamination |

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# IOR Rectifier

**Device Code**

| Digit | Character | Description                                                               |
|-------|-----------|---------------------------------------------------------------------------|
| 1     | IR        | International Rectifier Device                                            |
| 2     | 180       | Chip Dimension in Mils                                                    |
| 3     | S         | Type of Device: S = Solderable SCR                                        |
| 4     | G         | Passivation Process: G = Glassivated MESA                                 |
| 5     | 12        | Voltage code: Code x 100 = $V_{RRM}$                                      |
| 6     | H         | Metallization: H = Silver (Anode) - Silver (Cathode)                      |
| 7     | CB        | CB = Probed Uncut Die (wafer in box)<br>None = Probed Die in chip carrier |

**Available Class**

06 = 600 V

12 = 1200 V

0.35 ± 0.01

0.02 Typ.

Ag

Ag

4.6

1.7

1.2

3.6

3.6

4.6

1.2

1.7

INK DOT WITH LOCATION SITE.

All dimensions are in millimeters

## Wafer Layout

