

PHASE CONTROL THYRISTORS

- Junction Size: Square 210 mils
- Wafer Size: 4"
- V_{RRM} Class: 1200 V
- Passivation Process: Glassivated MESA
- Reference IR Packaged Part: 25RIA Series

Major Ratings and Characteristics

Parameters	Units	Test Conditions
V_{TM} Maximum On-state Voltage	1.5 V	$T_J = 25^\circ\text{C}$, $I_T = 25\text{ A}$
V_{RRM} Reverse Breakdown Voltage	1200 V	$T_J = 25^\circ\text{C}$, $I_{RRM} = 100\text{ }\mu\text{A}$ (1)
I_{GT} Max. Required DC Gate Current to Trigger	60 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	10 to 125 mA	Anode supply = 6 V, resistive load
I_L Maximum Latching Current	200 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	210 x 210 mils (see drawing)
Wafer Diameter	100 mm, with std. < 100 > flat
Wafer Thickness	370 $\mu\text{m} \pm 10\text{ }\mu\text{m}$
Maximum Width of Sawing Line	130 μm
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

Bulletin I0204J 02/97

IOR Rectifier

Device Code

IR	210	S	G	12	H	CB
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- 1** - International Rectifier Device
- 2** - Chip Dimension in Mils
- 3** - Type of Device: S = Solderable SCR
- 4** - Passivation Process: G = Glassivated MESA
- 5** - Voltage code: Code x 100 = V_{RRM}
- 6** - Metallization: H = Silver (Anode) - Silver (Cathode)
- 7** - CB = Probed Uncut Die (wafer in box)
None = Probed Die in chip carrier

Figure 1: Schematic diagram of the test chip layout. The diagram shows a square chip with dimensions 5334 (210) microns (mils) on the top and left, and 4216 (166) microns (mils) on the top and right. A central circular feature has a diameter of 1727 (68) microns (mils). A smaller circular feature has a diameter of 812 (32) microns (mils). A rectangular region is defined by dimensions 4216 (166) microns (mils) on the top and 2000 (79) microns (mils) on the right. A horizontal dimension of 1000 (39) microns (mils) is shown below the chip, and a vertical dimension of 1200 (47) microns (mils) is shown to the right. A label 'INK DOT WITH LOCATION SITE' points to a small dot on the right side of the chip. A side view of the chip shows a thickness of 370 ± 10 microns (15 ± 0.39 mils) and two layers labeled 'Ag'.

Wafer Layout

