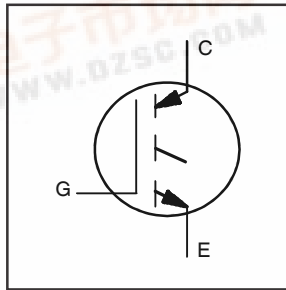


International
IR Rectifier

IRG4CC71KB IGBT Die in Wafer Form

PD- 91834A

IRG4CC71KB



600 V
Size 7.1
Ultra-Fast Speed
Circuit Rated Rated
6" Wafer

Electrical Characteristics (Wafer Form)

Parameter	Description	Guaranteed (Min/Max)	Test Conditions
$V_{CE(on)}$	Collector-to-Emitter Saturation Voltage	1.7V Max.	$I_C = 10A, T_J = 25^\circ C, V_{GE} = 15V$
$V_{(BR)CES}$	Collector-to-Emitter Breakdown Voltage	600V Min.	$T_J = 25^\circ C, I_{CES} = 250\mu A, V_{GE} = 0V$
$V_{GE(th)}$	Gate Threshold Voltage	3.0V Min., 6.5V Max.	$V_{GE} = V_{CE}, T_J = 25^\circ C, I_C = 250\mu A$
I_{CES}	Zero Gate Voltage Collector Current	300 μA Max.	$T_J = 25^\circ C, V_{CE} = 600V$
I_{GES}	Gate-to-Emitter Leakage Current	$\pm 1.1 \mu A$ Max.	$T_J = 25^\circ C, V_{GE} = +/- 20V$

Mechanical Data

Nominal Backmetal Composition, Thickness:	Cr-NiV-Ag (1kA-2kA-.2.5kA)
Nominal Front Metal Composition, Thickness:	99% Al, 1% Si (4 microns)
Dimensions:	0.305" x 0.390"
Wafer Diameter:	150mm, with std. < 100 > flat
Wafer thickness:	.015" + / - .003"
Relevant Die Mechanical Dwg. Number	01-5271
Minimum Street Width	100 Microns
Reject Ink Dot Size	0.25mm Diameter Minimum
Ink Dot Location	Consistent throughout same wafer lot
Recommended Storage Environment:	Store in original container, in dessicated nitrogen, with no contamination
Recommended Die Attach Conditions	For optimum electrical results, die attach temperature should not exceed 300C

Reference Standard IR packaged part (for design) : IRG4PSC71K

Die Outline

NOTES:

- ALL DIMENSIONS ARE SHOWN IN MILLIMETERS [INCHES].
- CONTROLLING DIMENSION: [INCH]
- LETTER DESIGNATION:
S = SOURCE SK = SOURCE KELVIN
G = GATE IS = CURRENT SENSE
- DIMENSIONAL TOLERANCES:
BONDING PADS: < 0.635 TOLERANCE = +/- 0.013
WIDTH < [0.250] TOLERANCE = +/- [0.009]
& > 0.635 TOLERANCE = +/- 0.025
LENGTH > [0.250] TOLERANCE = +/- [0.010]
OVERALL DIE: < 1.270 TOLERANCE = +/- 0.102
WIDTH < [0.50] TOLERANCE = +/- [0.04]
& > 1.270 TOLERANCE = +/- 0.203
LENGTH > [0.50] TOLERANCE = +/- [0.08]
- UNLESS OTHERWISE NOTED ALL DIE ARE GEN III

IRG4CC71KB



Additional Testing and Screening

For Customers requiring product supplied as Known Good Die (KGD) or requiring specific die level testing, please contact your local IR Sales.

Shipping

Three shipping options are offered as standard.

- Un-sawn wafer
- Die in waffle pack
- Die on film

Tape and Reel is also available for some products. Please consult your local IR sales office or email <http://die.irf.com> for additional information.

Please specify your required shipping option when requesting prices and ordering Die product. If not specified, Un-sawn wafer will be assumed.

Handling

- Product must be handled only at ESD safe workstations. Standard ESD precautions and safe work environments are as defined in MIL-HDBK-263.
- Product must be handled only in a class 10,000 or better-designated clean room environment.
- Singulated die are not to be handled with tweezers. A vacuum wand with a non-metallic ESD protected tip should be used.

Wafer/Die Storage

- Proper storage conditions are necessary to prevent product contamination and/or degradation after shipment.
- Un-sawn wafers and singulated die can be stored for up to 12 months when in the original sealed packaging at room temperature (45% +/- 15% RH controlled environment).
- Un-sawn wafers and singulated die that have been opened can be stored when returned to their containers and placed in a Nitrogen purged cabinet, at room temperature (45% +/- 15% RH controlled environment).
- Note: To reduce the risk of contamination or degradation, it is recommended that product not being used in the assembly process be returned to their original containers and resealed with a vacuum seal process.
- Sawn wafers on a film frame are intended for immediate use and have a limited shelf life.
- Die in Surf Tape type carrier tape are intended for immediate use and have a limited shelf life. This is primarily due to the nature of the adhesive tape used to hold the product in the carrier tape cavity. This product can be stored for up to 30 days. This applies whether or not the material has remained in its original sealed container.

Further Information

For further information please contact your local IR Sales office or email your enquiry to <http://die.irf.com>

International
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Visit us at www.irf.com for sales contact information. 11/05