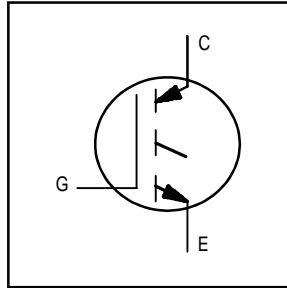


IRG4CC10UB IGBT Die in Wafer Form



600 V  
 Size 1  
 Ultra-Fast Speed  
 6" Wafer

### Electrical Characteristics ( Wafer Form )

Parameter	Description	Guaranteed (Min/Max)	Test Conditions
$V_{CE(on)}$	Collector-to-Emitter Saturation Voltage	4.5V Max.	$I_C = 1.5A, T_J = 25^\circ C, V_{GE} = 15V$
$V_{(BR)CES}$	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., 6.0V Max.	$V_{GE} = V_{CE}, T_J = 25^\circ C, I_C = 250\mu A$
$I_{CES}$	Zero Gate Voltage Collector Current	250 $\mu A$ Max.	$T_J = 25^\circ C, V_{CE} = 600V$
$I_{GES}$	Gate-to-Emitter Leakage Current	$\pm 1.1\mu A$ Max.	$T_J = 25^\circ C, V_{GE} = \pm 20V$

### Mechanical Data

Nominal Backmetal Composition, Thickness:	Cr-NiV-Ag (1 kA-2kA-2.5kA )
Nominal Front Metal Composition, Thickness:	99% Al, 1% Si (4 microns)
Dimensions:	.080" x .120"
Wafer Diameter:	150mm, with std. < 100 > flat
Wafer thickness:	.015" + / -.003"
Relevant Die Mechanical Dwg. Number	01-5236
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 desiccated 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 ) : IRG4BC10U

### Die Outline

Diagram of the die outline with dimensions:

- Top width: 3.05 [mm], [.120] [inches]
- Right side width: 0.89 [mm], [.035] [inches]
- Left side width: 0.55 [mm], [.021] [inches]
- Bottom width: 0.57 [mm], [.022] [inches]
- Emitter region height: 2.03 [mm], [.080] [inches]

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 < [.0250] TOLERANCE = +/- [.0005]  
 & > 0.635 TOLERANCE = +/- 0.025  
 LENGTH > [.0250] TOLERANCE = +/- [.0010]  
 OVERALL DIE: < 1.270 TOLERANCE = +/- 0.102  
 WIDTH < [.050] TOLERANCE = +/- [.004]  
 & > 1.270 TOLERANCE = +/- 0.203  
 LENGTH > [.050] TOLERANCE = +/- [.008]
- UNLESS OTHERWISE NOTED ALL DIE ARE GEN III