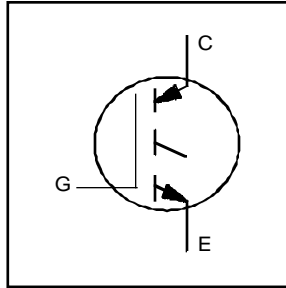


**IRGCC20UE IGBT Die in Wafer Form**



600 V  
 Size 2  
 Ultra-Fast Speed  
 5" Wafer

**Electrical Characteristics ( Wafer Form )**

Parameter	Description	Guaranteed (Min/Max)	Test Conditions
$V_{CE(on)}$	Collector-to-Emitter Saturation Voltage	3.1V Max.	$I_C = 6.5A, T_J = 25^\circ C, V_{GE} = 15V$
$V_{(BR)CES}$	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., 5.5V 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	$\pm 500$ nA Max.	$T_J = 25^\circ C, V_{GE} = \pm 20V$

**Mechanical Data**

Norminal Backmetal Composition, Thickness:	Cr-Ni-Ag (1 kA-4kA-6kA )
Norminal Front Metal Composition, Thickness:	99% Al, 1% Si (3 microns)
Dimensions:	0.107" x 0.134"
Wafer Diameter:	125mm, with std. < 100 > flat
Wafer thickness:	.015" + / -.003"
Relevant Die Mechanical Dwg. Number	01-5198
Minimum Street Width	100 Microns
Reject Ink Dot Size	0.25mm Diameter Minimum
Ink Dot Location	See Die Outline drawing below
Recommended Storage Environment:	Store in original container, in dessicated nitrogen, with no contamination

Reference Standard IR packaged part ( for design ) : IRGBC20U

**Die Outline**

The drawing shows a rectangular die with an overall width of 0.107 inches (2.72 mm) and a height of 0.134 inches (3.40 mm). The emitter terminal is located 0.94 inches (0.037 inches) from the top edge and 0.75 inches (0.029 inches) from the left edge. The gate terminal is 0.76 inches (0.030 inches) from the right edge. The collector terminal is 1.66 inches (0.066 inches) from the top edge. An ink dot location is marked on the left side.

NOTES :

- ALL DIMENSIONS ARE SHOWN IN MILLIMETERS ( INCHES )
- CONTROLLING DIMENSION : ( INCH )
- LETTER DESIGNATION :  
 S = SOURCE  
 G = GATE
- DIMENSIONAL TOLERANCES  
 BONDING PADS : < 0.635 TOLERANCE = +/- 0.013  
 WIDTH < (0.250) TOLERANCE = +/- (.0005)  
 & > 0.635 TOLERANCE = +/- 0.025  
 LENGTH > (0.250) TOLERANCE = +/- (.0010)  
 OVERALL DIE < 1.270 TOLERANCE = +/- 0.102  
 WIDTH < (0.050) TOLERANCE = +/- (.004)  
 & > 0.635 TOLERANCE = +/- 0.203  
 LENGTH > (.050) TOLERANCE = +/- (.008)
- UNLESS OTHERWISE NOTED ALL DIE ARE GEN III