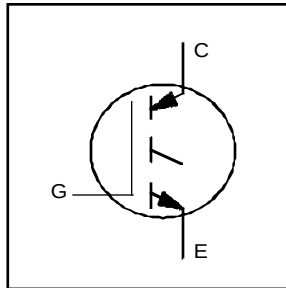


IRGCC40KE IGBT Die in Wafer Form



600 V
Size 4
Ultra-Fast Speed
5" Wafer

Electrical Characteristics (Wafer Form)

Parameter	Description	Guaranteed (Min/Max)	Test Conditions
$V_{CE(on)}$	Collector-to-Emitter Saturation Voltage	4.1V Max.	$I_C = 20A$, $T_J = 25^\circ C$, $V_{GE} = 15V$
$V_{(BR)CES}$	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 μA Max.	$T_J = 25^\circ C$, $V_{CE} = 600V$
I_{GES}	Gate-to-Emitter Leakage Current	± 500 nA Max.	$T_J = 25^\circ C$, $V_{GE} = \pm 20V$

Mechanical Data

Normal Backmetal Composition, Thickness:	Cr-Ni-Ag (1kA-4kA-6kA)
Normal Front Metal Composition, Thickness:	99% Al, 1% Si (3 microns)
Dimensions:	0.170" x 0.232"
Wafer Diameter:	125mm, with std. < 100 > flat
Wafer thickness:	.015" + / -.003"
Relevant Die Mechanical Dwg. Number	01-5101
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) : IRGPC40K

Die Outline

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