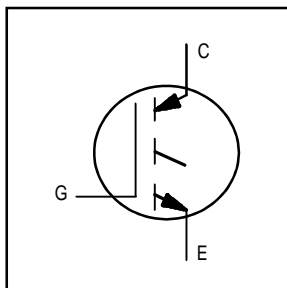


IRG4CH40SB IGBT Die in Wafer Form



1200 V
 Size 4
 Standard Speed
 6" Wafer

Electrical Characteristics (Wafer Form)

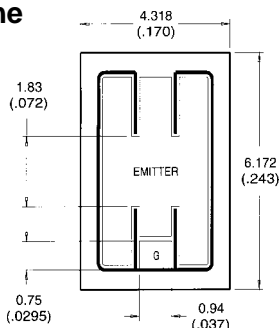
Parameter	Description	Guaranteed (Min/Max)	Test Conditions
$V_{CE(on)}$	Collector-to-Emitter Saturation Voltage	4.5V Max.	$I_C = 10A, T_J = 25^\circ C, V_{GE} = 15V$
$V_{(BR)CES}$	Collector-to-Emitter Breakdown Voltage	1200V Min.	$T_J = 25^\circ C, I_{CES} = 250\mu A, V_{GE} = 0V$
$V_{GE(th)}$	Gate Threshold 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	300 μA Max.	$T_J = 25^\circ C, V_{CE} = 1200V$
I_{GES}	Gate-to-Emitter Leakage Current	$\pm 11 \mu A$ Max.	$T_J = 25^\circ C, V_{GE} = \pm 20V$

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:	0.170" x 0.243"
Wafer Diameter:	150mm, with std. < 100 > flat
Wafer thickness:	.015" + / -.003"
Relevant Die Mechanical Dwg. Number	01-5242
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) : IRG4PH40S

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 < (.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