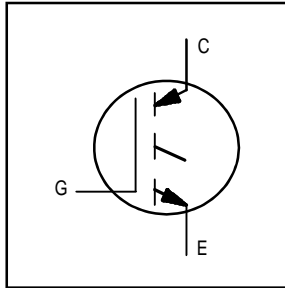


# International IR Rectifier

# IRG4CH40SB

## IRG4CH40SB IGBT Die in Wafer Form



1200 V  
Size 4  
Standard Speed  
6" Wafer

### Electrical Characteristics ( Wafer Form )

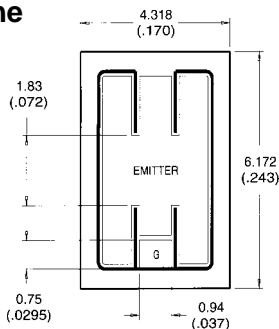
Parameter	Description	Guaranteed (Min/Max)	Test Conditions
$V_{CE(on)}$	Collector-to-Emitter Saturation Voltage	4.5V Max.	$I_C = 10A, T_J = 25^\circ C, V_{GE} = 15V$
$V_{(BR)CES}$	Collector-to-Emitter Breakdown Voltage	1200V Min.	$T_J = 25^\circ C, I_{CES} = 250\mu A, V_{GE} = 0V$
$V_{GE(th)}$	Gate Threshold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