

# International IOR Rectifier

PD - 94409

## IRGC10B60KB

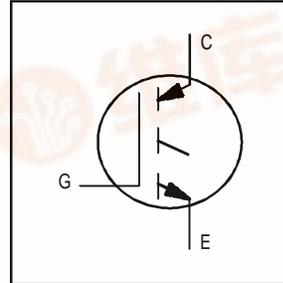
Die in Wafer Form

### Features

- GEN5 Non Punch Through (NPT) Technology
- Low  $V_{CE(on)}$
- 10 $\mu$ s Short Circuit Capability
- Square RBSOA
- Positive  $V_{CE(on)}$  Temperature Coefficient

### Benefits

- Benchmark Efficiency for Motor Control Applications
- Rugged Transient Performance
- Excellent Current Sharing in Parallel Operation
- Qualified for Industrial Market



600V  
 $I_{C(nom)} = 10A$   
 $V_{CE(on) typ.} = 1.8V @$   
 $I_{C(nom)} @ 25^{\circ}C$   
 Motor Control IGBT  
 Short Circuit Rated  
 150mm Wafer

Reference Standard IR Package Part: IRGS10B60KD

### Electrical Characteristics (Wafer Form)

Parameter	Description	Guaranteed (min, max)	Test Conditions
$V_{CE(on)}$	Collector-to-Emitter Saturation Voltage	0.95V min, 1.3V max	$I_C = 2A, T_J = 25^{\circ}C, V_{GE} = 15V$
$V_{(BR)CES}$	Collector-to-Emitter Breakdown Voltage	600V min	$T_J = 25^{\circ}C, I_{CES} = 1mA, V_{GE} = 0V$
$V_{GE(th)}$	Gate Threshold Voltage	3.5V 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	10 $\mu A$ 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)	Al - Ti - Ni/V - Ag, (1kA - 1kA - 4kA - 6kA)
Nominal Front Metal Composition, (Thickness)	99% Al/1% Si, (4 $\mu$ m)
Dimensions	0.130" x 0.130"
Wafer Diameter	150mm, with std. < 100 > flat
Wafer Thickness, Tolerance	85 $\mu$ m, +/- 7 $\mu$ m
Relevant Die Mechanical Dwg. Number	01-5514
Minimum Street Width	100 $\mu$ m
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 300 $^{\circ}C$

### Die Outline

