International
IOR Rectifier

PD - 94409

IRGC10B60KB

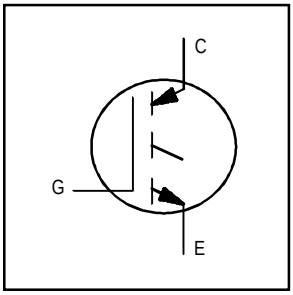
Die in Wafer Form

Features

- GEN5 Non Punch Through (NPT) Technology
- Low $V_{CE(on)}$
- 10µs 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°C
Motor Control IGBT
Short Circuit Rated
150mm Wafer

Reference Standard IR Package Part: IRGS10B60KD

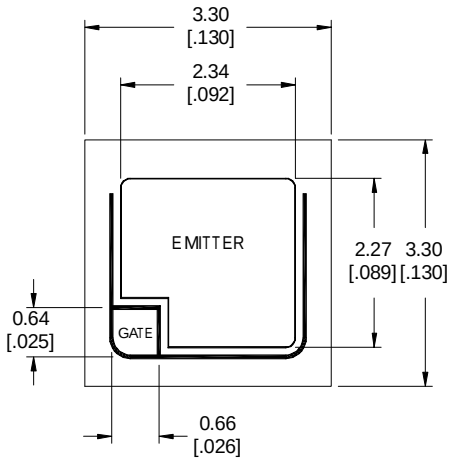
Electrical Characteristics (Wafer Form)

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°C, V_{GE} = 15V
$V_{(BR)CES}$	Colletor-to-Emitter Breakdown Voltage	600V min	T_J = 25°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°C, I_C = 250µA
I_{CES}	Zero Gate Voltage Collector Current	10µA max	T_J = 25°C, V_{CE} = 600V
I_{GES}	Gate-to-Emitter Leakage Current	± 1.1µA max	T_J = 25°C, V_{GE} = +/-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, (4µm)
Dimensions	0.130" x 0.130"
Wafer Diameter	150mm, with std. < 100 > flat
Wafer Thickness, Tolerance	85µm, +/- 7µm
Relevant Die Mechanical Dwg. Number	01-5514
Minimum Street Width	100µm
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°C

Die Outline



NOTES:

1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS [INCHES].
2. CONTROLLING DIMENSION: [INCH].
3. LETTER DESIGNATION:
   S = SOURCE SK = SOURCE KELVIN E = EMITTER
   G = GATE IS = CURRENTSENSE
4. 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]
&	> 1.270 TOLERANCE = +/- 0.203
LENGTH	> [.050] TOLERANCE = +/- [.008]