

International IOR Rectifier

IRGC75B120UB

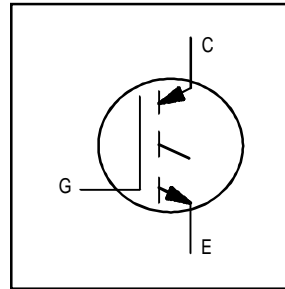
Die in Wafer Form

Features

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

Benefits

- Benchmark Efficiency above 20KHz
- Optimized for Welding, UPS, and Induction Heating
- Rugged with UltraFast Performance
- Excellent Current Sharing in Parallel Operation



1200V
 $I_{C(nom)}=75A$
 $V_{CE(on)}$ typ. = 3.1V @
 $I_{C(nom)}$ @ 25°C
 UltraFast IGBT
 Short Circuit Rated
 150mm Wafer

Electrical Characteristics (Wafer Form)

Parameter	Description	Guaranteed (min, max)	Test Conditions
$V_{CE(on)}$	Collector-to-Emitter Saturation Voltage	1.54V min, 1.78V max	$I_C = 10A, T_J = 25^\circ C, V_{GE} = 15V$
$V_{(BR)CES}$	Collector-to-Emitter Breakdown Voltage	1200V min	$T_J = 25^\circ C, I_{CES} = 750\mu A, V_{GE} = 0V$
$V_{GE(th)}$	Gate Threshold Voltage	4.4V min, 6.0V max	$V_{GE} = V_{CE}, T_J = 25^\circ C, I_C = 750\mu A$
I_{CES}	Zero Gate Voltage Collector Current	30µA max	$T_J = 25^\circ C, V_{CE} = 1200V$
I_{CES}	Gate-to-Emitter Leakage Current	± 2 µA max	$T_J = 25^\circ C, V_{GE} = +/-20V$

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	0.443" x 0.443"
Wafer Diameter	150mm, with std. < 100 > flat
Wafer Thickness, Tolerance	185µm, +/-15µm
Relevant Die Mechanical Dwg. Number	01-5378
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]

01-5378