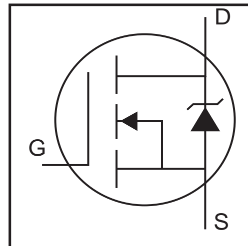
International
IOR Rectifier

PD - 93776

IRFC1404

HEXFET® Power MOSFET Die in Wafer Form



40V
Size 4.0
$R_{DS(on)}$=0.0029Ω
6" Wafer

Electrical Characteristics (Wafer Form)

Parameter	Description	Guaranteed (Min/Max)	Test Conditions
$V_{(BR)DSS}$	Drain-to-Source Breakdown Voltage	40V Min.	V_{GS} = 0V, I_D = 250μA
$R_{DS(on)}$	Static Drain-to-Source On-Resistance	2.9mΩ Max.	V_{GS} = 10V, I_D = 45A
$V_{GS(th)}$	Gate Threshold Voltage	2.0V Min., 4.0V Max.	V_{DS} = V_{GS}, I_D = 250μA
I_{DSS}	Drain-to-Source Leakage Current	25μA Max.	V_{DS} = 40V, V_{GS} = 0V, T_J = 25°C
I_{GSS}	Gate-to-Source Leakage Current	± 200nA Max.	V_{GS} = ±20V
T_J T_{STG}	Operating Junction and Storage Temperature Range	-55°C to 175°C Max.	

Mechanical Data

Nominal Back Metal Composition, Thickness:	Cr-NiV-Ag (1kA°-2kA°-2.5kA°)
Nominal Front Metal Composition, Thickness:	100% Al (0.008 mm)
Dimensions:	.170" x .230" [4.32 mm x 5.84 mm]
Wafer Diameter:	150 mm, with 100 flat
Wafer Thickness:	0.356 mm ± 0.025 mm
Relevant Die Mechanical Drawing Number	01-5384
Minimum Street Width	0.109 mm
Reject Ink Dot Size	0.51 mm Diameter Minimum
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

4.32
[.170]
SOURCE
5.84
[.230]
G
2X 0.51
[.020]

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]
5. UNLESS OTHERWISE NOTED ALL DIE ARE GEN III

10/12/99