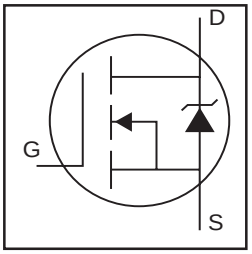
International
IOR Rectifier

PD- 91873

# IRFC240

HEXFET® Power MOSFET Die in Wafer Form




200 V
Size 4.0
Rds(on)=0.18Ω
5" Wafer

## Electrical Characteristics ( Wafer Form )

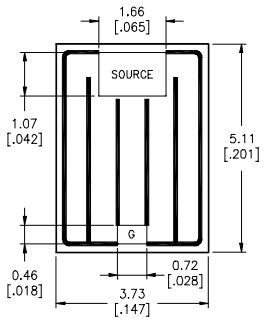
| Parameter | Description | Guaranteed (Min/Max) | Test Conditions |
|---|---|---|---|
| $V_{(BR)DSS}$ | Drain-to-Source Breakdown Voltage | 200V Min. | $V_{GS}$ = 0V, $I_D$ = 100µA |
| $R_{DS(on)}$ | Static Drain-to-Source On-Resistance | 0.180Ω Max. | $V_{GS}$ = 10V, $I_D$ = 10A |
| $V_{GS(th)}$ | Gate Threshold Voltage | 2.3V Min., 4.0V Max. | $V_{DS}$ = $V_{GS}$, $I_D$ = 250µA |
| $I_{DSS}$ | Drain-to-Source Leakage Current | 25µA Max. | $V_{DS}$ = 200V, $V_{GS}$ = 0V, $T_J$ = 25°C |
| $I_{GSS}$ | Gate-to-Source Leakage | ± 10µA Max. | $V_{GS}$ = ±20V |
| $T_J$<br>$T_{STG}$ | Operating Junction and<br>Storage Temperature Range | 125°C Max. | |

## Mechanical Data

| | |
|---|---|
| Nominal Backmetal Composition, Thickness: | Cr-NiV-Ag ( 1kA°-2kA°-2.5kA° ) |
| Nominal Front Metal Composition, Thickness: | 99% Al, 1% Si (0.004 mm) |
| Dimensions: | 0.147" x 0.201" ( 3.73mm x 5.11 mm) |
| Wafer Diameter: | 125mm with 100 flat |
| Wafer thickness: | 0.375mm + / -0.020mm |
| Relevant Die Mechanical Dwg. Number | 01-5331 |
| Minimum Street Width | 0.084 mm |
| Reject Ink Dot Size | 0.51mm 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 300C |

Reference Standard IR packaged part ( for design ) : IRF640

## Die Outline




NOTES:
1. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS [INCHES].
2. CONTROLLING DIMENSION: [INCH].
3. LETTER DESIGNATION:
S = SOURCE SK = SOURCE KELVIN
G = GATE IS = CURRENT SENSE
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

3/23/99