

isc N-Channel MOSFET Transistor

IRFU2405

• FEATURES

- With TO-251(IPAK) packaging
- High speed switching
- Easy to use
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

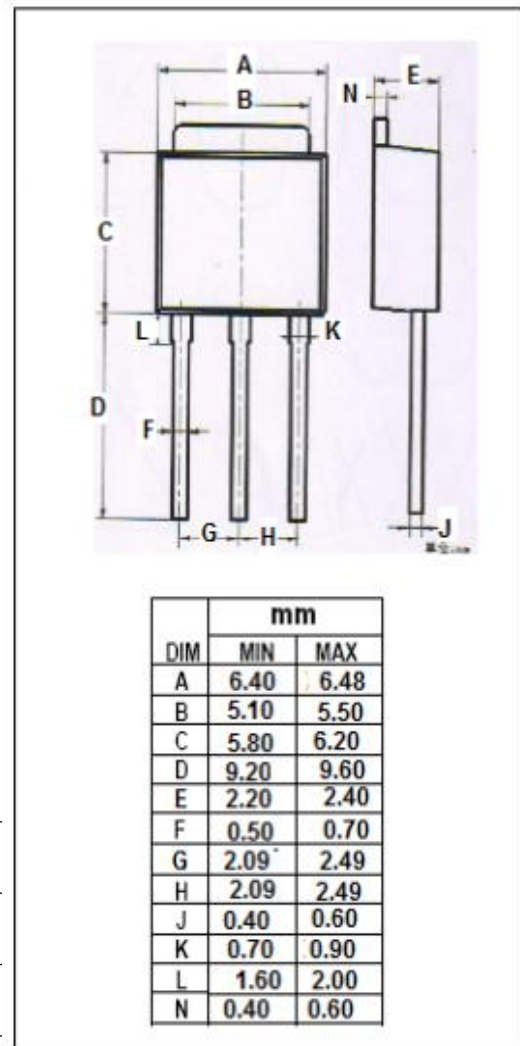
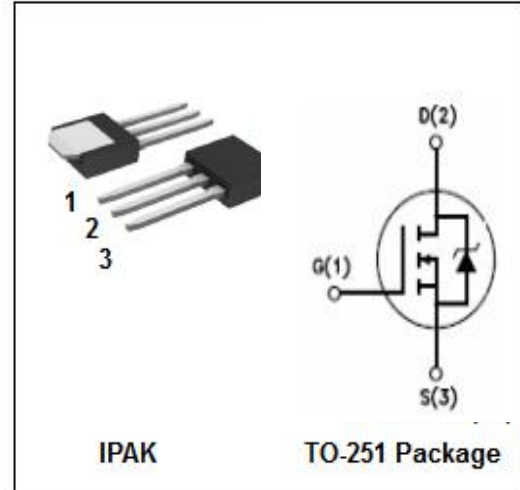
- Power supply
- DC-DC converters
- Motor control
- Switching applications

• ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

| SYMBOL | PARAMETER | VALUE | UNIT |
|------------------|--------------------------------|---------|------|
| V _{DSS} | Drain-Source Voltage | 55 | V |
| V _{GSS} | Gate-Source Voltage | ±20 | V |
| I _D | Drain Current-Continuous | 56 | A |
| I _{DM} | Drain Current-Single Pulsed | 220 | A |
| P _D | Total Dissipation | 110 | W |
| T _j | Operating Junction Temperature | -55~175 | °C |
| T _{stg} | Storage Temperature | -55~175 | °C |

• THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|-----------------------|---------------------------------------|-----|------|
| R _{th(ch-c)} | Channel-to-case thermal resistance | 1.4 | °C/W |
| R _{th(ch-a)} | Channel-to-ambient thermal resistance | 50 | °C/W |



isc N-Channel MOSFET Transistor**IRFU2405****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP | MAX | UNIT |
|--------------|--------------------------------|---|-----|------|-----------|-----------|
| BV_{DSS} | Drain-Source Breakdown Voltage | $V_{GS}=0V; I_D=0.25mA$ | 55 | | | V |
| $V_{GS(th)}$ | Gate Threshold Voltage | $V_{DS}=V_{GS}; I_D=0.25mA$ | 2.0 | | 4.0 | V |
| $R_{DS(on)}$ | Drain-Source On-Resistance | $V_{GS}=10V; I_D=34A$ | | 11.8 | 16 | $m\Omega$ |
| I_{GSS} | Gate-Source Leakage Current | $V_{GS}=\pm 20V; V_{DS}=0V$ | | | ± 0.2 | μA |
| I_{DSS} | Drain-Source Leakage Current | $V_{DS}=55V; V_{GS}=0V; T_j=25^{\circ}\text{C}$ $V_{DS}=45V; V_{GS}=0V; T_j=125^{\circ}\text{C}$ | | | 20 250 | μA |
| V_{SDF} | Diode forward voltage | $I_{SD}=34A, V_{GS}=0V$ | | | 1.3 | V |

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