

isc N-Channel MOSFET Transistor

RFP25N05

• FEATURES

- With TO-220 packaging
- High speed switching
- Low gate input resistance
- Standard level gate drive
- Easy to use
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• APPLICATIONS

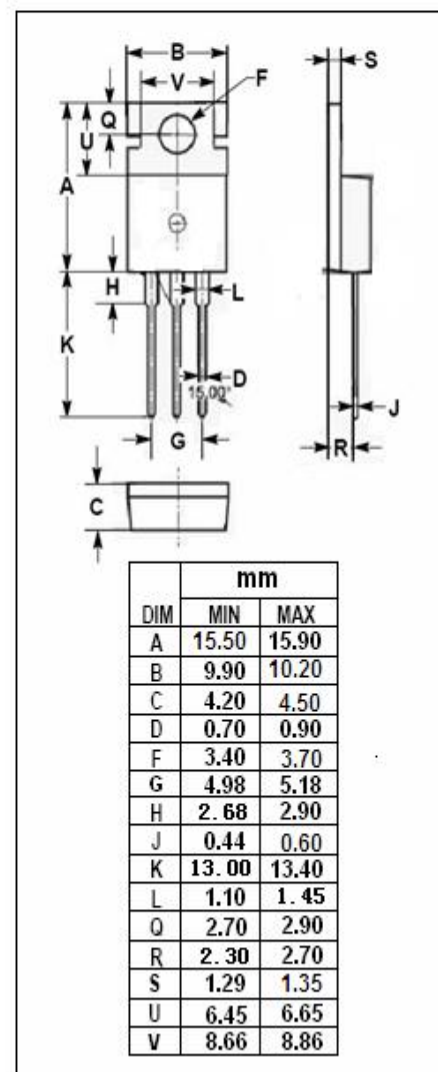
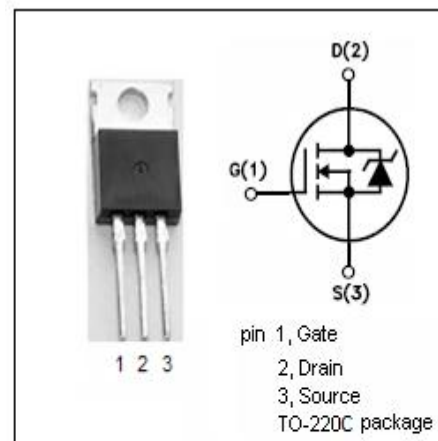
- Power supply
- Switching applications

• ABSOLUTE MAXIMUM RATINGS($T_a=25^{\circ}\text{C}$)

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|--------------------------------|----------|--------------------|
| V_{DS} | Drain-Source Voltage | 50 | V |
| V_{GS} | Gate-Source Voltage | ± 20 | V |
| I_D | Drain Current-Continuous | 25 | A |
| I_{DM} | Drain Current-Single Pulsed | 125 | A |
| P_D | Total Dissipation | 72 | W |
| T_j | Operating Junction Temperature | 175 | $^{\circ}\text{C}$ |
| T_{stg} | Storage Temperature | -55~175 | $^{\circ}\text{C}$ |

• THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|----------------|---------------------------------------|------|----------------------|
| $R_{th(ch-c)}$ | Channel-to-case thermal resistance | 2.08 | $^{\circ}\text{C/W}$ |
| $R_{th(ch-a)}$ | Channel-to-ambient thermal resistance | 80 | $^{\circ}\text{C/W}$ |



isc N-Channel MOSFET Transistor**RFP25N05****ELECTRICAL CHARACTERISTICS****T_c=25°C unless otherwise specified**

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP | MAX | UNIT |
|---------------------|--------------------------------|---|-----|-----|------|------|
| BV _{DSS} | Drain-Source Breakdown Voltage | V _{GS} =0V; I _D = 0.25mA | 50 | | | 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 =25A | | | 47 | mΩ |
| I _{GSS} | Gate-Source Leakage Current | V _{GS} = ±20V; V _{DS} = 0V | | | ±0.1 | μA |
| I _{DSS} | Drain-Source Leakage Current | V _{DS} = 50V; V _{GS} = 0V; T _j =25°C | | | 1 | μA |
| V _{SDF} | Diode forward voltage | I _{SD} =25A, V _{GS} = 0 V | | | 1.5 | V |

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