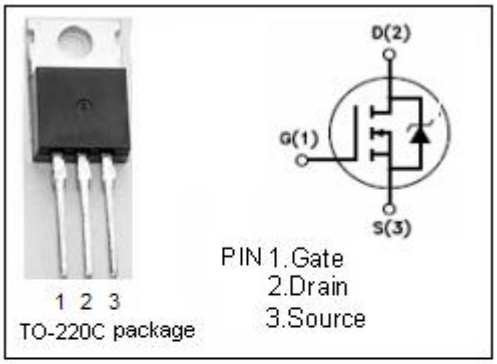
# isc N-Channel MOSFET Transistor 4N65

## DESCRIPTION

- Drain Current $I_D$= 4A@ $T_C$=25℃
- Drain Source Voltage-
  : $V_{DSS}$= 650V(Min)
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation




## APPLICATIONS

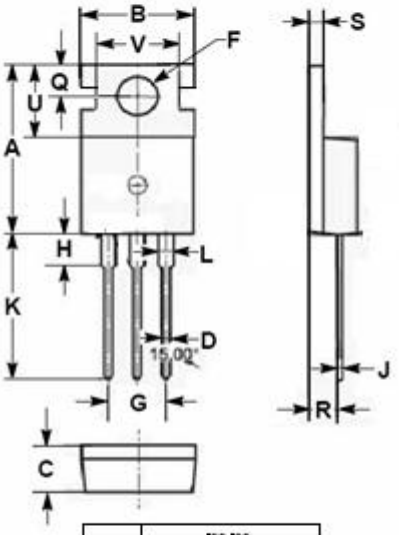
- Designed for high efficiency switch mode power supply.

## ABSOLUTE MAXIMUM RATINGS($T_C$=25℃)

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{DSS}$ | Drain-Source Voltage ($V_{GS}$=0) | 650 | V |
| $V_{GS}$ | Gate-Source Voltage | ±30 | V |
| $I_D$ | Drain Current-continuous@ $T_C$=25℃ | 4 | A |
| $I_{D(puls)}$ | Pulse Drain Current | 16 | A |
| $P_{tot}$ | Total Dissipation@$T_C$=25℃ | 106 | W |
| $T_j$ | Max. Operating Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Storage Temperature Range | -55~150 | ℃ |

## • THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---|---|---|---|
| $R_{th\ j\text{-}c}$ | Thermal Resistance, Junction to Case | 1.18 | ℃/W |
| $R_{th\ j\text{-}a}$ | Thermal Resistance, Junction to Ambient | 62.5 | ℃/W |




| DIM | mm MIN | mm MAX |
|---|---|---|
| A | 15.50 | 15.90 |
| B | 9.80 | 10.20 |
| C | 4.20 | 4.50 |
| D | 0.70 | 0.90 |
| F | 3.40 | 3.70 |
| G | 4.98 | 5.18 |
| H | 2.68 | 2.90 |
| J | 0.44 | 0.60 |
| K | 12.80 | 13.40 |
| L | 1.20 | 1.45 |
| Q | 2.70 | 2.90 |
| R | 2.30 | 2.70 |
| S | 1.29 | 1.35 |
| U | 6.45 | 6.65 |
| V | 8.66 | 8.86 |

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## • ELECTRICAL CHARACTERISTICS ($T_C$=25℃)

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYPE | MAX | UNIT |
|---|---|---|---|---|---|---|
| $V_{(BR)DSS}$ | Drain-Source Breakdown Voltage | $V_{GS}$= 0; $I_D$= 250μA | 650 | | | V |
| $V_{GS(th)}$ | Gate Threshold Voltage | $V_{DS}$= $V_{GS}$; $I_D$=250μA | 2.0 | | 4.0 | V |
| $V_{SD}$ | Diode Forward On-Voltage | $I_S$=4.4A ;$V_{GS}$= 0 | | | 1.4 | V |
| $R_{DS(on)}$ | Drain-Source On-Resistance | $V_{GS}$= 10V; $I_D$=2.2A | | | 2.5 | Ω |
| $I_{GSS}$ | Gate-Body Leakage Current | $V_{GS}$= ±30V;$V_{DS}$= 0 | | | ±100 | nA |
| $I_{DSS}$ | Zero Gate Voltage Drain Current | $V_{DS}$= 650V; $V_{GS}$= 0 | | | 10 | μA |
| $t_r$ | Rise Time | $I_D$=4A; $V_{DD}$=320V; $R_L$=25Ω | | | 100 | ns |
| $t_{d(on)}$ | Turn-on Delay Time | | | | 35 | |
| $t_f$ | Fall Time | | | | 80 | |
| $t_{d(off)}$ | Turn-off Delay Time | | | | 60 | |

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