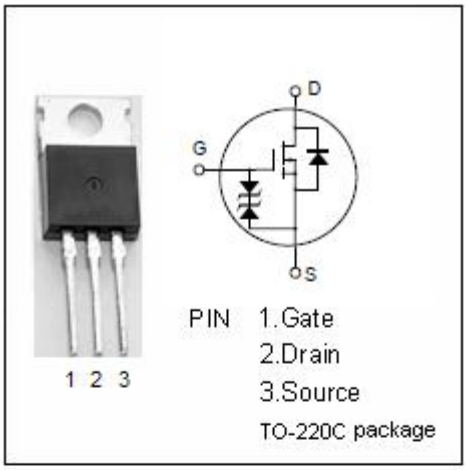
# isc N-Channel MOSFET Transistor 2SK741

## DESCRIPTION

- Drain Current –$I_D$=7A@ $T_C$=25℃
- Drain Source Voltage-
  : $V_{DSS}$= 250V(Min)
- Fast Switching Speed

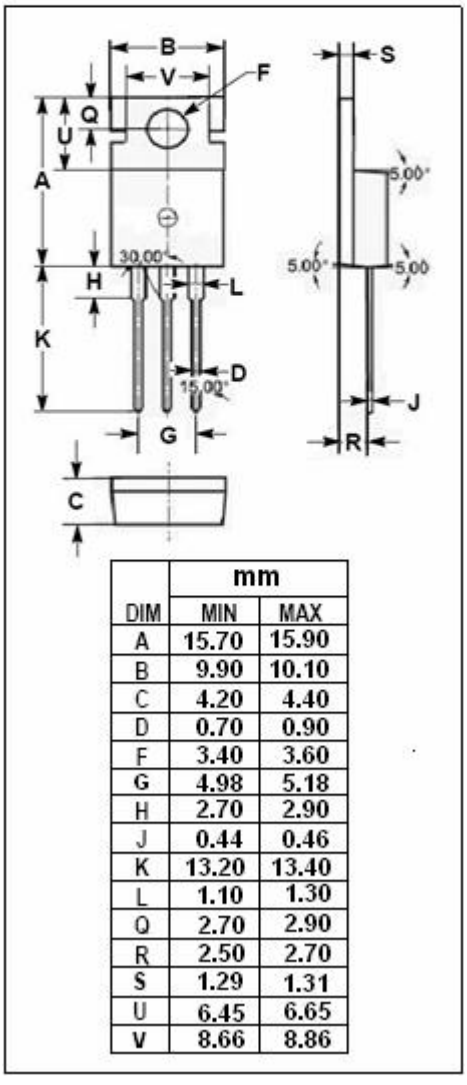



## APPLICATIONS

- high speed power switching

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

| SYMBOL | ARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{DSS}$ | Drain-Source Voltage ($V_{GS}$=0) | 250 | V |
| $V_{GS}$ | Gate-Source Voltage | ±20 | V |
| $I_D$ | Drain Current-continuous@ TC=25℃ | 7 | A |
| $P_{tot}$ | Total Dissipation@TC=25℃ | 50 | W |
| $T_j$ | Max. Operating Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Storage Temperature Range | -55~150 | ℃ |




| DIM | mm MIN | MAX |
|---|---|---|
| A | 15.70 | 15.90 |
| B | 9.90 | 10.10 |
| C | 4.20 | 4.40 |
| D | 0.70 | 0.90 |
| F | 3.40 | 3.60 |
| G | 4.98 | 5.18 |
| H | 2.70 | 2.90 |
| J | 0.44 | 0.46 |
| K | 13.20 | 13.40 |
| L | 1.10 | 1.30 |
| Q | 2.70 | 2.90 |
| R | 2.50 | 2.70 |
| S | 1.29 | 1.31 |
| U | 6.45 | 6.65 |
| V | 8.66 | 8.86 |

## THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---|---|---|---|
| $R_{th\ j\text{-}c}$ | Thermal Resistance,Junction to Case | 1.0 | ℃/W |
| $R_{th\ j\text{-}a}$ | Thermal Resistance,Junction to Ambient | 62.5 | ℃/W |

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

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP | MAX | UNIT |
|---|---|---|---|---|---|---|
| $V_{(BR)DSS}$ | Drain-Source Breakdown Voltage | $V_{GS}$=0; $I_D$= 10mA | 250 | | | V |
| $V_{GS(th)}$ | Gate Threshold Voltage | $V_{DS}$=10 $V_{GS}$; $I_D$=1mA | 2.0 | | 4.0 | V |
| $R_{DS(on)}$ | Drain-Source On-stage Resistance | $V_{GS}$=10V; $I_D$=4A | | 0.40 | 0.55 | Ω |
| $I_{GSS}$ | Gate Source Leakage Current | $V_{GS}$= ±16V;$V_{DS}$= 0 | | | ±10 | uA |
| $I_{DSS}$ | Zero Gate Voltage Drain Current | $V_{DS}$=200V; $V_{GS}$= 0 | | | 250 | uA |
| $V_{SD}$ | Diode Forward Voltage | $I_F$=7A; $V_{GS}$=0 | | 1.2 | | V |
| tr | Rise time | $V_{GS}$=10V;$I_D$=4A; $R_L$=7.5Ω | | 48 | | ns |
| ton | Turn-on time | | | 60 | | ns |
| tf | Fall time | | | 50 | | ns |
| toff | Turn-off time | | | 120 | | ns |