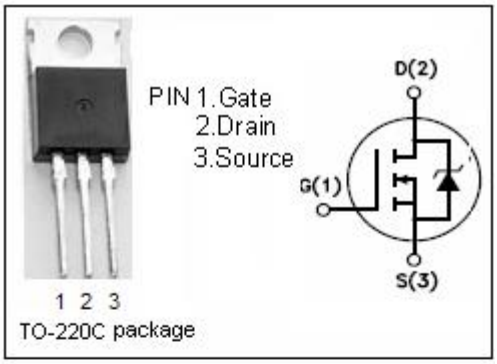
# isc N-Channel MOSFET Transistor 2SK1022

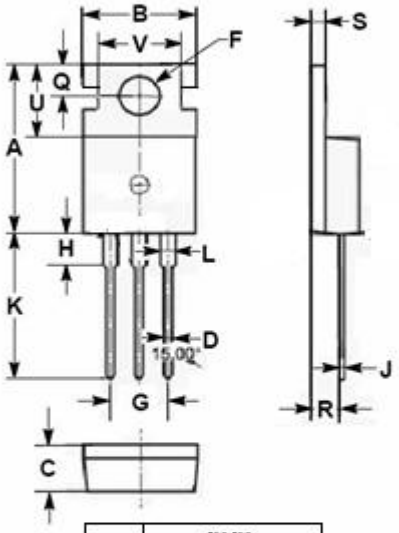



## DESCRIPTION

- Drain Current –$I_D$=2.5A@ $T_C$=25℃
- Drain Source Voltage-
  : $V_{DSS}$=900V(Min)
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

- high voltage, high speed power switching




| 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 |

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

| SYMBOL | ARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{DSS}$ | Drain-Source Voltage ($V_{GS}$=0) | 900 | V |
| $V_{GS}$ | Gate-Source Voltage | ±30 | V |
| $I_D$ | Drain Current-continuous@ TC=25℃ | 2.5 | A |
| $P_{tot}$ | Total Dissipation@TC=25℃ | 60 | 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 | 2.08 | ℃/W |
| $R_{th\ j\text{-}a}$ | Thermal Resistance,Junction to Ambient | 75 | ℃/W |

# isc N-Channel Mosfet Transistor 2SK1022

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

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---|---|---|---|---|---|---|
| $V_{(BR)DSS}$ | Drain-Source Breakdown Voltage | $V_{GS}$= 0; $I_D$= 1mA | 800 | | | V |
| $V_{GS(th)}$ | Gate Threshold Voltage | $V_{DS}$= $V_{GS}$; $I_D$=1mA | 2.5 | 3.5 | 5.0 | V |
| $R_{DS(on)}$ | Drain-Source On-stage Resistance | $V_{GS}$=10V; $I_D$=1.5A | | | 7.3 | Ω |
| $I_{GSS}$ | Gate Source Leakage Current | $V_{GS}$= ±30V;$V_{DS}$= 0 | | | ±100 | nA |
| $I_{DSS}$ | Zero Gate Voltage Drain Current | $V_{DS}$=900V; $V_{GS}$= 0 | | | 500 | uA |
| $V_{SD}$ | Forward On-Voltage | $I_S$=2.5A; $V_{GS}$=0 | | 1.0 | 1.50 | V |
| tr | Rise time | VGS=10V;ID=2.5A; RL=25Ω | | 60 | 90 | ns |
| ton | Turn-on time | | | 85 | 128 | ns |
| tf | Fall time | | | 60 | 90 | ns |
| toff | Turn-off time | | | 160 | 240 | ns |