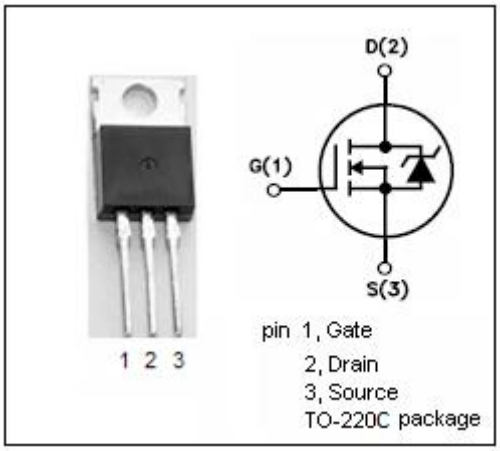
# isc N-Channel MOSFET Transistor FQP20N06L

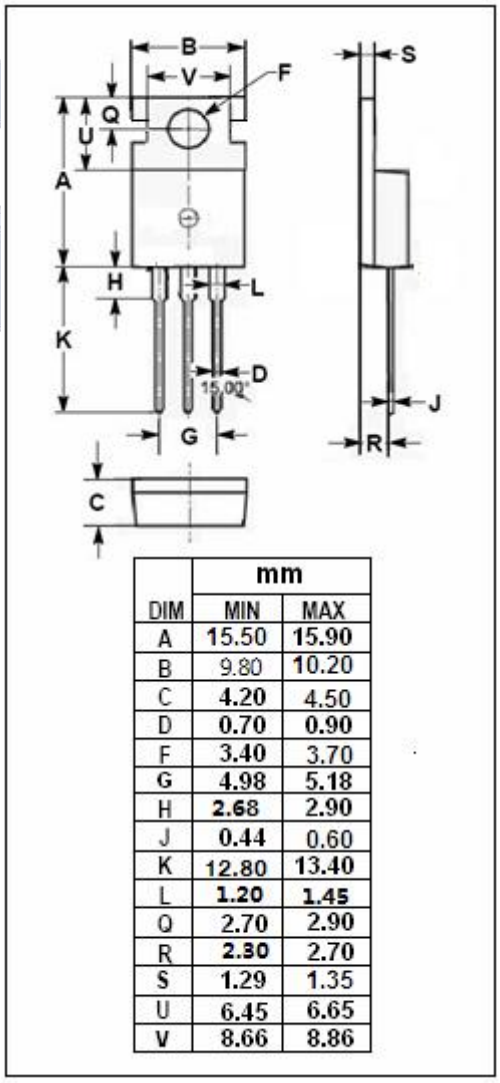



## DESCRIPTION

- Drain Current $I_D$=21A@ $T_C$=25℃
- Drain Source Voltage-
  : $V_{DSS}$=60V(Min)
- Static Drain-Source On-Resistance
  : $R_{DS(on)}$ = 55mΩ (Max)
- 100% Avalanche Tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

- High current , high speed switching
- Switch mode power supplies




| DIM | mm MIN | 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 | 60 | V |
| $V_{GS}$ | Gate-Source Voltage | ±20 | V |
| $I_D$ | Drain Current-continuous@ $T_C$=25℃ | 21 | A |
| $I_{DM}$ | Pulse Drain Current | 84 | A |
| $P_D$ | Power Dissipation @TC=25℃ | 60 | W |
| $T_j$ | Max. Operating Junction Temperature | -55~175 | ℃ |
| $T_{stg}$ | Storage Temperature Range | -55~175 | ℃ |

## THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---|---|---|---|
| $R_{th\ j\text{-}c}$ | Thermal Resistance,Junction to case | 2.5 | ℃/W |

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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; $I_D$= 250uA | 60 | | | V |
| $V_{GS(TH)}$ | Gate Threshold Voltage | $V_{DS}$= $V_{GS}$; $I_D$= 250uA | 1 | 1.6 | 2.5 | V |
| $R_{DS(ON)}$ | Drain-Source On-stage Resistance | $V_{GS}$= 10V; $I_D$= 10A | | 35 | 55 | mΩ |
| $I_{GSS}$ | Gate Source Leakage Current | $V_{GS}$= ±20V; $V_{DS}$= 0 | | | ±100 | nA |
| $I_{DSS}$ | Zero Gate Voltage Drain Current | $V_{DS}$= 60V; $V_{GS}$= 0 | | | 1 | uA |
| $V_{SD}$ | Diode Forward Voltage | $I_S$= 21A; $V_{GS}$= 0 | | | 1.5 | V |