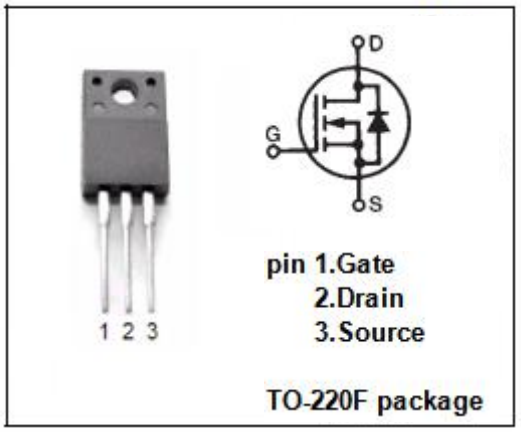
# isc N-Channel Mosfet Transistor STF20NM60D

## • FEATURES

- Drain Current $I_D$= 20A@ $T_C$=25℃
- Drain Source Voltage-
  : $V_{DSS}$= 600V(Min)
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## • APPLICATIONS

- Switching applications

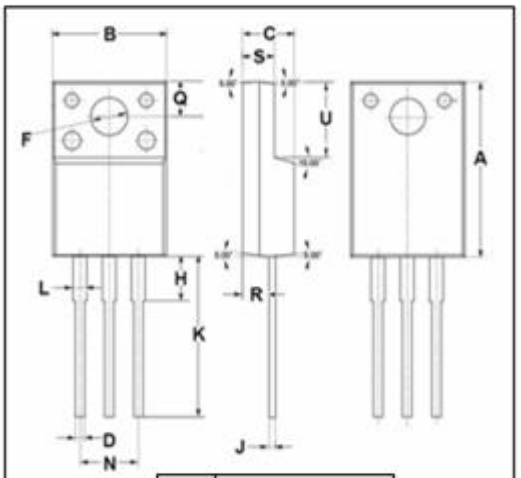



## • ABSOLUTE MAXIMUM RATINGS($T_a$=25℃)

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{DSS}$ | Drain-Source Voltage | 600 | V |
| $V_{GS}$ | Gate-Source Voltage | ±30 | V |
| $I_D$ | Drain Current-continuous@ $T_C$=25℃ | 20 | A |
| $I_{DM}$ | Pulse Drain Current | 80 | A |
| $P_{tot}$ | Total Dissipation@$T_C$=25℃ | 45 | W |
| $T_j$ | Max. Operating Junction Temperature | -65~150 | ℃ |
| $T_{stg}$ | Storage Temperature Range | -65~150 | ℃ |

## • THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---|---|---|---|
| $R_{th\ j\text{-}c}$ | Thermal Resistance, Junction to Case | 2.8 | ℃/W |




| DIM | mm MIN | MAX |
|---|---|---|
| A | 14.95 | 15.05 |
| B | 10.00 | 10.10 |
| C | 4.40 | 4.60 |
| D | 0.75 | 0.90 |
| F | 3.10 | 3.30 |
| H | 3.70 | 3.90 |
| J | 0.50 | 0.70 |
| K | 13.4 | 13.6 |
| L | 1.10 | 1.30 |
| N | 5.00 | 5.20 |
| Q | 2.70 | 2.90 |
| R | 2.20 | 2.40 |
| S | 2.65 | 2.90 |
| U | 6.40 | 6.60 |

# isc N-Channel Mosfet Transistor STF20NM60D

## ELECTRICAL CHARACTERISTICS

**$T_C$=25℃ unless otherwise specified**

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYPE | MAX | UNIT |
|---|---|---|---|---|---|---|
| $V_{(BR)DSS}$ | Drain-Source Breakdown Voltage | $V_{GS}$= 0; $I_D$= 1mA | 600 | | | V |
| $V_{GS(th)}$ | Gate Threshold Voltage | $V_{DS}$= $V_{GS}$; $I_D$=250μA | 3 | | 5 | V |
| $R_{DS(on)}$ | Drain-Source On-Resistance | $V_{GS}$= 10V; $I_D$= 10A | | | 290 | mΩ |
| $I_{GSS}$ | Gate-Body Leakage Current | $V_{GS}$= ±30V;$V_{DS}$= 0 | | | ±100 | nA |
| $I_{DSS}$ | Zero Gate Voltage Drain Current | $V_{DS}$= Max rating | | | 1 | μA |
| | | $V_{DS}$= Max rating; $T_C$=125℃ | | | 10 | |
| $V_{SD}$ | Diode Forward On-Voltage | $I_S$= 20A ;$V_{GS}$= 0 | | | 1.5 | V |

**NOTICE：**

ISC reserves the rights to make changes of the content herein the datasheet at any time without notification. The information contained herein is presented only as a guide for the applications of our products.

ISC products are intended for usage in general electronic equipment. The products are not designed for use in equipment which require specialized quality and/or reliability, or in equipment which could have applications in hazardous environments, aerospace industry, or medical field. Please contact us if you intend our products to be used in these special applications.

ISC makes no warranty or guarantee regarding the suitability of its products for any particular purpose, nor does ISC assume any liability arising from the application or use of any products, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.