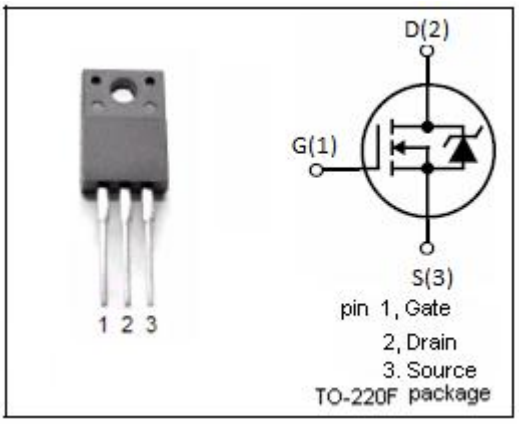
# isc N-Channel Mosfet Transistor BUZ80FI

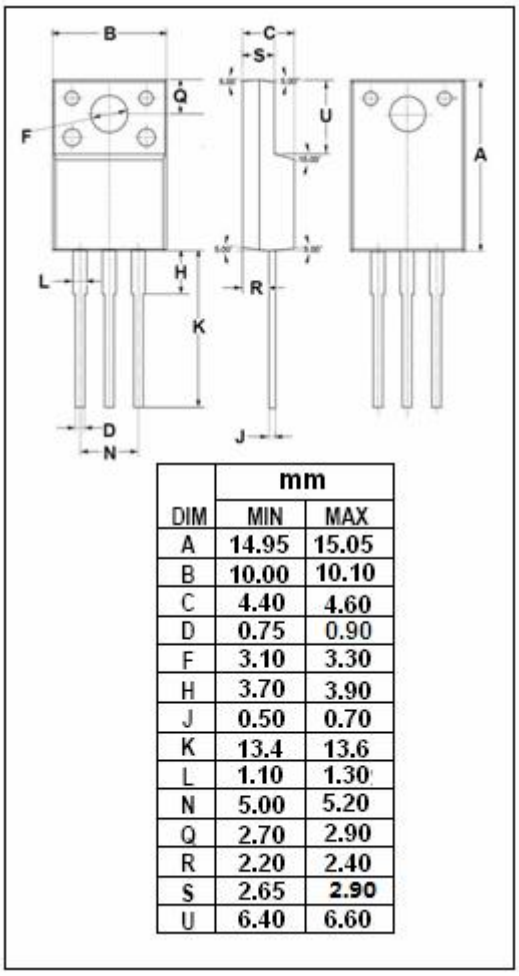
- **FEATURES**
- High speed switching
- Low $R_{DS(ON)}$
- Easy driver for cost effective application
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation




- **DESCRITION**
- High current , high speed switching
- Switching mode power supplies
- DC-DC & DC-AC converter

- **ABSOLUTE MAXIMUM RATINGS($T_a$=25℃)**

| SYMBOL | ARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{DSS}$ | Drain-Source Voltage ($V_{GS}$=0) | 800 | V |
| $V_{GS}$ | Gate-Source Voltage | ±20 | V |
| $I_D$ | Drain Current-continuous@ TC=25℃ | 2.1 | A |
| $I_{DM}$ | Drain Current-Single Plused | 13 | A |
| $P_{tot}$ | Total Dissipation@TC=25℃ | 40 | W |
| $T_j$ | Max. Operating Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Storage Temperature Range | -65~150 | ℃ |




| DIM | mm MIN | mm 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 |

## THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---|---|---|---|
| $R_{th\ j\text{-}c}$ | Thermal Resistance,Junction to Case | 3.12 | ℃/W |
| $R_{th\ j\text{-}a}$ | Thermal Resistance,Junction to Ambient | 62.5 | ℃/W |

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## 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; $I_D$=0.25mA | 800 | | | V |
| $V_{GS(th)}$ | Gate Threshold Voltage | $V_{DS}$= $V_{GS}$; $I_D$=1mA | 2.0 | | 4.0 | V |
| $V_{SD}$ | Diode Forward On-voltage | $I_S$= 6A ;$V_{GS}$= 0 | | | 2.5 | V |
| $R_{DS(on)}$ | Drain-Source On-Resistance | $V_{GS}$= 10V; $I_D$= 1.7A | | | 4 | Ω |
| $I_{GSS}$ | Gate-Body Leakage Current | $V_{GS}$= ±20V;$V_{DS}$= 0 | | | ±100 | nA |
| $I_{DSS}$ | Zero Gate Voltage Drain Current | $V_{DS}$=800V; $V_{GS}$= 0 | | | 25 | μA |
| Gfs | Forward Transconductance | $V_{DS}$= 25V； $I_D$=1.7A | 1 | | | S |