

isc N-Channel MOSFET Transistor

2N7081

DESCRIPTION

- TO-220 ISOLATED HERMETIC PACKAGE
- LOW RDS(ON)
- SIMPLE DRIVE REQUIREMENTS

APPLICATIONS

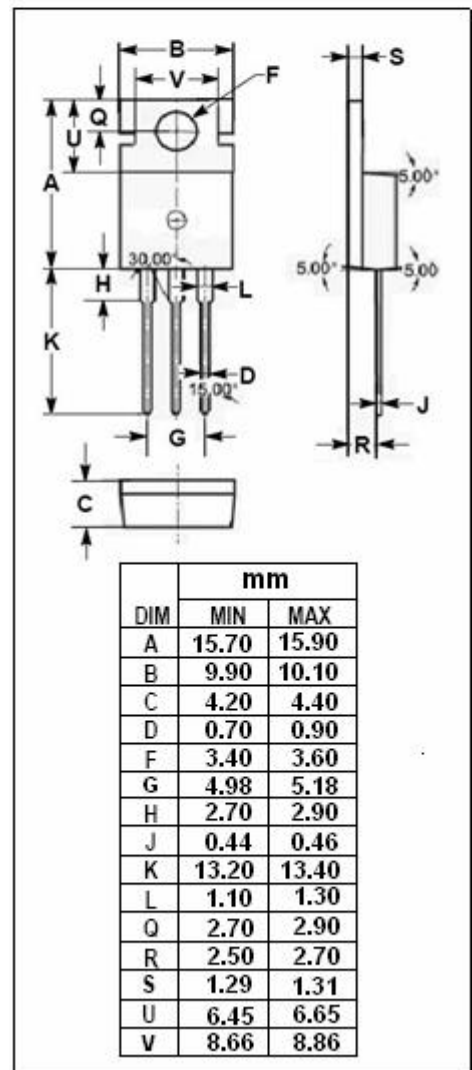
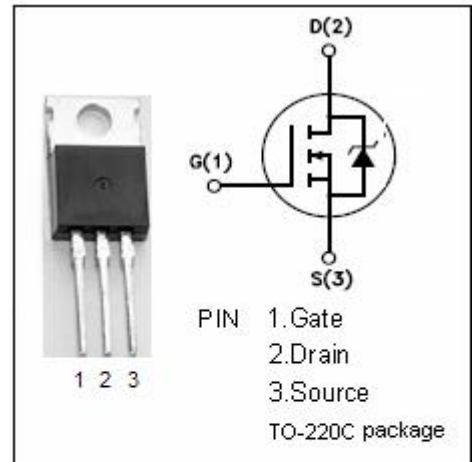
- Automotive power actuator drivers
- Motor controls
- DC-DC converters

ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)

| SYMBOL           | PARAMETER                                 | VALUE   | UNIT |
|------------------|---|---------|------|
| V <sub>DSS</sub> | Drain-Source Voltage (V <sub>GS</sub> =0) | 100     | V    |
| V <sub>GS</sub>  | Gate-Source Voltage                       | ±20     | V    |
| I <sub>D</sub>   | Drain Current-continuous@ TC=37°C         | 11      | A    |
| P <sub>tot</sub> | Total Dissipation@TC=25°C                 | 45      | W    |
| T <sub>j</sub>   | Max. Operating Junction Temperature       | -55~150 | °C   |
| T <sub>stg</sub> | Storage Temperature Range                 | -55~150 | °C   |

THERMAL CHARACTERISTICS

| SYMBOL              | PARAMETER                              | MAX | UNIT |
|---------------------|--|-----|------|
| R <sub>th j-c</sub> | Thermal Resistance,Junction to Case    | 2.8 | °C/W |
| R <sub>th j-a</sub> | Thermal Resistance,Junction to Ambient | 80  | °C/W |



**isc N-Channel Mosfet Transistor****2N7081****• ELECTRICAL CHARACTERISTICS (T<sub>C</sub>=25°C)**

| SYMBOL               | PARAMETER                        | CONDITIONS  | MIN | MAX  | UNIT |
|----------------------|----------------------------------|---|-----|------|------|
| V <sub>(BR)DSS</sub> | Drain-Source Breakdown Voltage   | V <sub>GS</sub> = 0; I <sub>D</sub> = 0.25mA                | 100 |      | V    |
| V <sub>GS(TH)</sub>  | Gate Threshold Voltage           | V <sub>DS</sub> = V <sub>GS</sub> ; I <sub>D</sub> = 0.25mA | 2   | 4    | V    |
| R <sub>DS(ON)</sub>  | Drain-Source On-stage Resistance | V <sub>GS</sub> = 10V; I <sub>D</sub> = 7.7A                |     | 0.15 | Ω    |
| I <sub>GSS</sub>     | Gate Source Leakage Current      | V <sub>GS</sub> = ±20V; V <sub>DS</sub> = 0                 |     | ±100 | nA   |
| I <sub>DSS</sub>     | Zero Gate Voltage Drain Current  | V <sub>DS</sub> = 80V; V <sub>GS</sub> = 0                  |     | 25   | uA   |
| V <sub>SD</sub>      | Diode Forward Voltage            | I <sub>F</sub> = 11A; V <sub>GS</sub> = 0                   |     | 2.5  | V    |