

isc N-Channel MOSFET Transistor

BUZ11A

DESCRIPTION

- Static Drain-Source On-Resistance
: $R_{DS(on)} = 0.045 \Omega$ (Max)
- Avalanche rugged technology
- High current capability
- 175°C Operating Temperature

APPLICATIONS

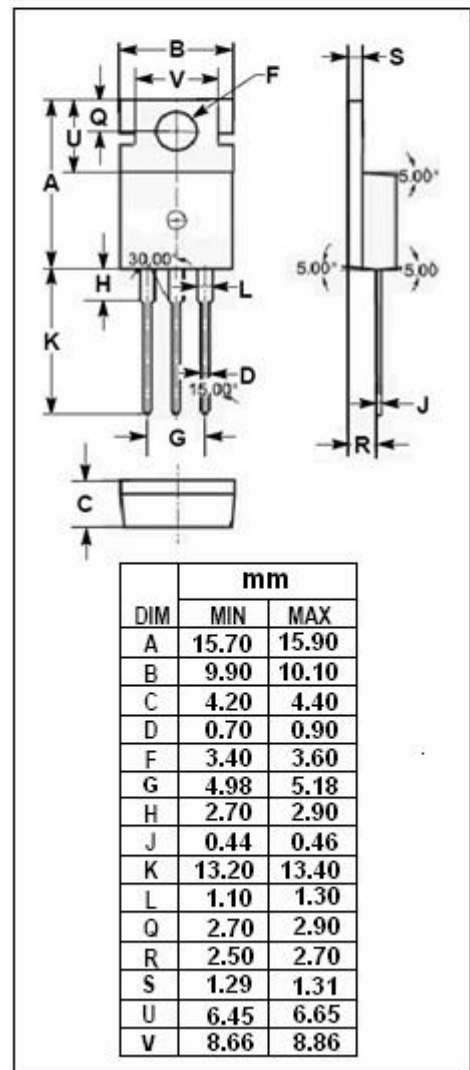
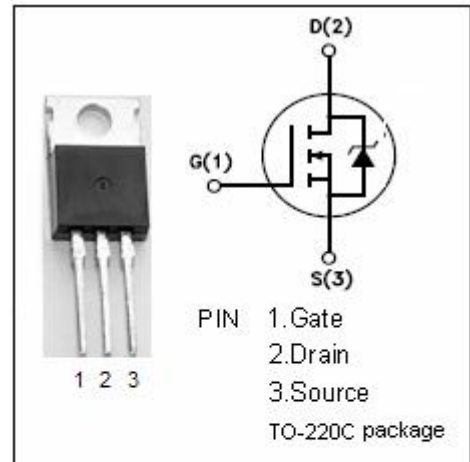
- High current,high speed switching
- Solenoid and relay drivers
- Regulators
- DC-DC & DC-AC converters

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ C$)

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|-------------------------------------------|----------|------|
| V_{DSS} | Drain-Source Voltage ($V_{GS}=0$) | 50 | V |
| V_{GS} | Gate-Source Voltage | ± 20 | V |
| I_D | Drain Current-continuous@ $TC=37^\circ C$ | 26 | A |
| P_{tot} | Total Dissipation@ $TC=25^\circ C$ | 75 | W |
| T_j | Max. Operating Junction Temperature | -55~175 | °C |
| T_{stg} | Storage Temperature Range | -55~175 | °C |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|--------------|----------------------------------------|------|------|
| $R_{th j-c}$ | Thermal Resistance,Junction to Case | 1.67 | °C/W |
| $R_{th j-a}$ | Thermal Resistance,Junction to Ambient | 75 | °C/W |



isc N-Channel Mosfet Transistor**BUZ11A****• ELECTRICAL CHARACTERISTICS (T_C=25°C)**

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYPE | MAX | UNIT |
|----------------------|----------------------------------|---------------------------------------------------------------------------------------------|-----|-------|-------|------|
| V _{(BR)DSS} | Drain-Source Breakdown Voltage | V _{GS} = 0; I _D = 0.25mA | 50 | | | V |
| V _{GS(TH)} | Gate Threshold Voltage | V _{DS} = V _{GS} ; I _D = 1mA | 2.1 | | 4 | V |
| R _{DS(ON)} | Drain-Source On-stage Resistance | V _{GS} = 10V; I _D = 19A | | 0.045 | 0.055 | Ω |
| I _{GSS} | Gate Source Leakage Current | V _{GS} = ±20V; V _{DS} = 0 | | | ±100 | nA |
| I _{DSS} | Zero Gate Voltage Drain Current | V _{DS} = 50V; V _{GS} = 0 | | | 1 | uA |
| V _{SD} | Diode Forward Voltage | I _F = 60A; V _{GS} = 0 | | | 1.8 | V |
| T _{d(on)} | Turn-on Time | V _{DD} = 30 V I _D = 3A R _{GS} = 50 Ω V _{GS} = 10 V | | 15 | 25 | ns |
| tr | Rise Time | | | 55 | 85 | ns |
| T _{d(off)} | Turn-off Delay Time | | | 120 | 160 | ns |
| tf | Rise Time | | | 80 | 110 | ns |