

isc N-Channel Mosfet Transistor

BUZ11A

• FEATURES

- Static Drain-Source On-Resistance
: $R_{DS(on)} = 0.055 \Omega$ (Max)
- Avalanche rugged technology
- High current capability
- 175°C Operating Temperature
- High speed switching
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

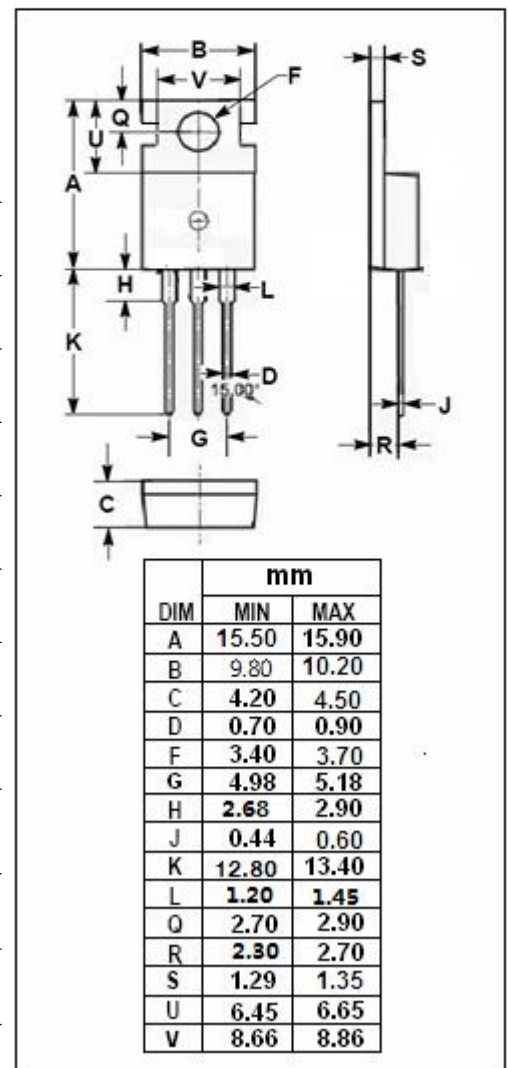
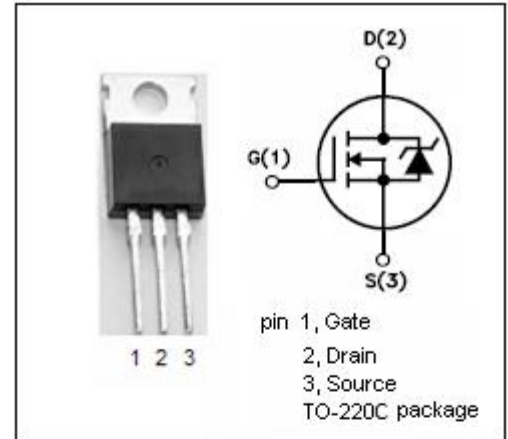
- High current,high speed switching
- Solenoid and relay drivers
- Regulators
- DC-DC & DC-AC converters

• ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

| SYMBOL | ARAMETER | VALUE | UNIT |
|-----------|---|----------|------------------|
| V_{DS} | Drain-Source Voltage ($V_{GS}=0$) | 50 | V |
| V_{GS} | Gate-Source Voltage | ± 20 | V |
| I_D | Drain Current-continuous@ $TC=25^\circ\text{C}$ | 26 | A |
| I_{DM} | Drain Current-Single Plused | 104 | A |
| P_{tot} | Total Dissipation@ $TC=25^\circ\text{C}$ | 75 | W |
| T_j | Max. Operating Junction Temperature | 175 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature Range | -55~175 | $^\circ\text{C}$ |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|--------------|--|------|--------------------|
| $R_{th j-c}$ | Thermal Resistance,Junction to Case | 1.67 | $^\circ\text{C/W}$ |
| $R_{th j-a}$ | Thermal Resistance,Junction to Ambient | 62.5 | $^\circ\text{C/W}$ |



isc N-Channel Mosfet Transistor**BUZ11A****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

| 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 | | 4.0 | V |
| V _{SD} | Diode Forward On-voltage | I _S = 60A; V _{GS} = 0 | | | 1.8 | V |
| R _{DS(on)} | Drain-Source On-Resistance | V _{GS} = 10V; I _D = 19A | | | 0.055 | Ω |
| I _{GSS} | Gate-Body Leakage Current | V _{GS} = ±20V; V _{DS} = 0 | | | ±100 | nA |
| I _{DSS} | Zero Gate Voltage Drain Current | V _{DS} =50V; V _{GS} = 0 | | | 1 | μA |
| G _{fs} | Forward Transconductance | V _{DS} = 25V; I _D =19A | 10 | | | S |
| t _r | Rise Time | V _{GS} =10V; I _D =15A; V _{GS} =10V; R _{GS} =4.7 Ω | | 95 | | ns |
| t _{d(on)} | Turn-on Delay Time | | | 18 | | |
| t _f | Fall Time | | | 20 | | |
| t _{d(off)} | Turn-off Delay Time | | | 50 | | |

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