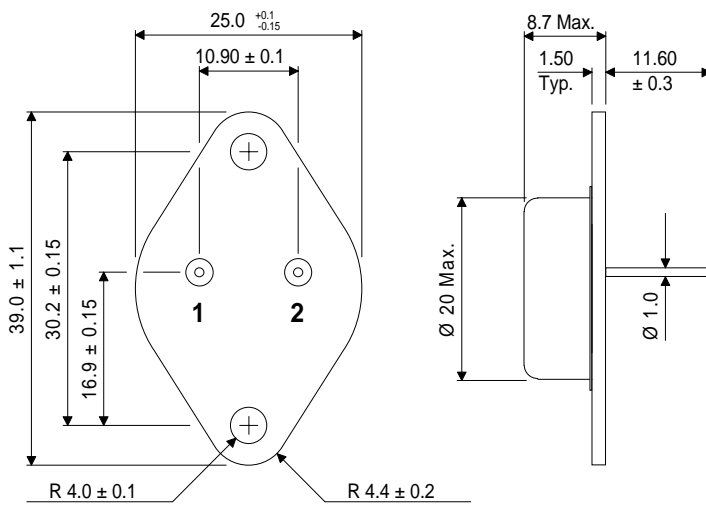


MECHANICAL DATA
Dimensions in mm

N-CHANNEL
POWER MOSFET



POWER MOSFETS FOR
AUDIO APPLICATIONS

FEATURES

- HIGH SPEED SWITCHING
- SEMEFAB DESIGNED AND DIFFUSED
- HIGH VOLTAGE (220V & 250V)
- HIGH ENERGY RATING
- ENHANCEMENT MODE
- INTEGRAL PROTECTION DIODES
- COMPLIMENTARY P-CHANNEL BUZ907D & BUZ908D

TO-3

Pin 1 – Gate

Pin 2 – Drain

Case – Source

ABSOLUTE MAXIMUM RATINGS

($T_{case} = 25^{\circ}C$ unless otherwise stated)

| | | BUZ902D | BUZ903D |
|-----------------|--|----------------|----------------|
| V_{DSX} | Drain – Source Voltage | 220V | 250V |
| V_{GSS} | Gate – Source Voltage | ±14V | |
| I_D | Continuous Drain Current | 16A | |
| $I_{D(PK)}$ | Body Drain Diode | 16A | |
| P_D | Total Power Dissipation @ $T_{case} = 25^{\circ}C$ | 250W | |
| T_{stg} | Storage Temperature Range | -55 to 150°C | |
| T_j | Maximum Operating Junction Temperature | 150°C | |
| $R_{\theta JC}$ | Thermal Resistance Junction – Case | 0.5°C/W | |

STATIC CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

| Characteristic | Test Conditions | | Min. | Typ. | Max. | Unit |
|--|---|-----------------------------------|------|------|------|------|
| BV _{DSX} Drain – Source Breakdown Voltage | V _{GS} = -10V I _D = 10mA | BUZ902D | 220 | | | V |
| | | BUZ903D | 250 | | | V |
| BV _{GSS} Gate – Source Breakdown Voltage | V _{DS} = 0 | I _G = ±100μA | ±14 | | | V |
| V _{GS(OFF)} Gate – Source Cut-Off Voltage | V _{DS} = 10V | I _D = 100mA | 0.10 | | 1.5 | V |
| V _{DS(SAT)} * Drain – Source Saturation Voltage | V _{GD} = 0 | I _D = 16A | | | 12 | V |
| R _{DS(on)} * Static – Source Resistance | V _{GS} = 10 | I _D = 16A | | | 0.75 | Ω |
| I _{DSX} Drain – Source Cut-Off Current | V _{GS} = -10V | V _{DS} = 220V BUZ902D | | | 10 | mA |
| | | V _{DS} = 250V BUZ903D | | | 10 | mA |
| y _{fs} * Forward Transfer Admittance | V _{DS} = 10V | I _D = 3A | 1.4 | | 4 | S |

DYNAMIC CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

| Characteristic | Test Conditions | | Min. | Typ. | Max. | Unit |
|---|-----------------------------------|--|------|------|------|------|
| C _{iss} Input Capacitance | V _{DS} = 10V f = 1MHz | | | TBA | | pF |
| C _{oss} Output Capacitance | | | | TBA | | |
| C _{rss} Reverse Transfer Capacitance | | | | TBA | | |
| t _{on} Turn-on Time | V _{DS} = 20V | | | TBA | | ns |
| t _{off} Turn-off Time | I _D = 7A | | | TBA | | |

* Pulse Test: Pulse Width = 300μs , Duty Cycle ≤ 2%.

