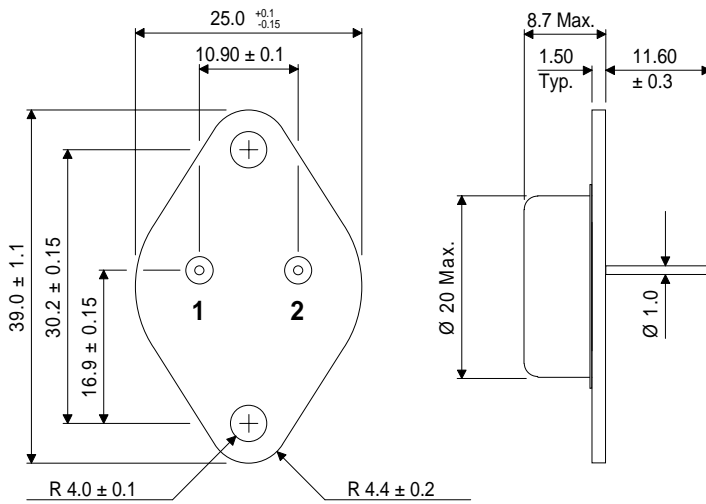


MECHANICAL DATA
Dimensions in mm

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 BUZ907 & BUZ908

TO-3

Pin 1 – Gate

Pin 2 – Drain

Case – Source

ABSOLUTE MAXIMUM RATINGS

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

| | | BUZ902 | BUZ903 |
|-----------------|--|---------------|---------------|
| V_{DSX} | Drain – Source Voltage | 220V | 250V |
| V_{GSS} | Gate – Source Voltage | ±14V | |
| I_D | Continuous Drain Current | 8A | |
| $I_{D(PK)}$ | Body Drain Diode | 8A | |
| P_D | Total Power Dissipation @ $T_{case} = 25^{\circ}C$ | 125W | |
| T_{stg} | Storage Temperature Range | -55 to 150°C | |
| T_j | Maximum Operating Junction Temperature | 150°C | |
| $R_{\theta JC}$ | Thermal Resistance Junction – Case | 1°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 | BUZ902 | 220 | | | V |
| | | BUZ903 | 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 | 0.15 | | 1.5 | V |
| V _{DS(SAT)} * Drain – Source Saturation Voltage | V _{GD} = 0 | I _D = 8A | | | 12 | V |
| R _{DS(on)} * Static – Source Resistance | V _{GS} = 10 | I _D = 8A | | | 1.5 | Ω |
| I _{DSX} Drain – Source Cut-Off Current | V _{GS} = -10V | V _{DS} = 220V BUZ902 | | | 10 | mA |
| | | V _{DS} = 250V BUZ903 | | | 10 | mA |
| y _{fs} * Forward Transfer Admittance | V _{DS} = 10V | I _D = 3A | 0.7 | | 2 | 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 I _D = 5A | | | TBA | | ns |
| t _{off} Turn-off Time | | | | TBA | | |

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

