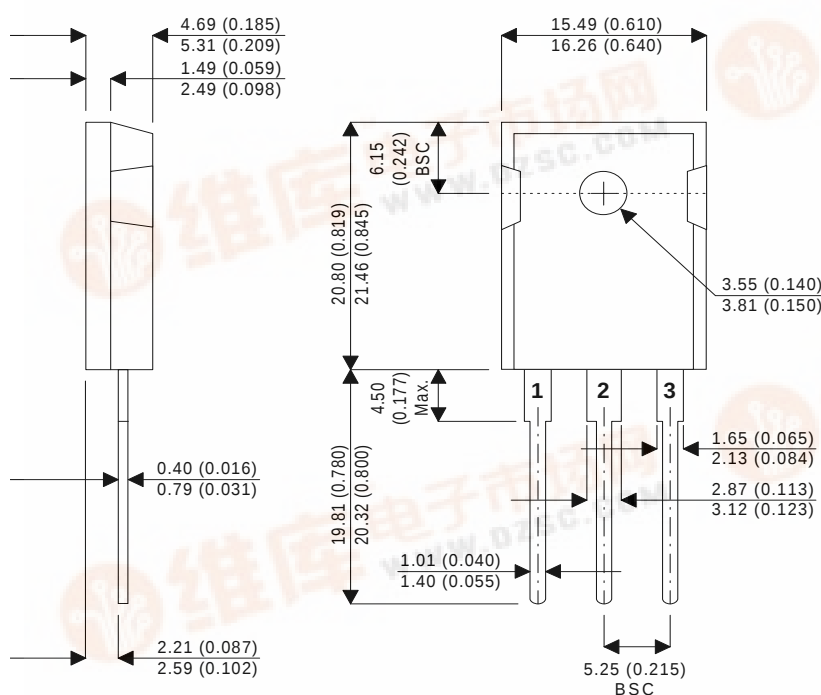
**BUZ902P**  
**BUZ903P****MECHANICAL DATA**

Dimensions in mm

**TO-247**

Pin 1 – Gate

Pin 2 – Source

Pin 3 – Drain

Case – Source

**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  
BUZ907P & BUZ908P

**ABSOLUTE MAXIMUM RATINGS**(T<sub>case</sub> = 25°C unless otherwise stated)

|                    |                                                    | <b>BUZ902P</b> | <b>BUZ903P</b> |
|--------------------|----------------------------------------------------|----------------|----------------|
| V <sub>DSX</sub>   | Drain – Source Voltage                             | 220V           | 250V           |
| V <sub>GSS</sub>   | Gate – Source Voltage                              | ±14V           |                |
| I <sub>D</sub>     | Continuous Drain Current                           | 8A             |                |
| I <sub>D(PK)</sub> | Body Drain Diode                                   | 8A             |                |
| P <sub>D</sub>     | Total Power Dissipation @ T <sub>case</sub> = 25°C | 125W           |                |
| T <sub>stg</sub>   | Storage Temperature Range                          | –55 to 150°C   |                |
| T <sub>j</sub>     | Maximum Operating Junction Temperature             | 150°C          |                |
| R <sub>θJC</sub>   | Thermal Resistance Junction – Case                 | 1°C/W          |                |



## STATIC CHARACTERISTICS (T<sub>case</sub> = 25°C unless otherwise stated)

| Characteristic                                           | Test Conditions                                 |                                   | Min. | Typ. | Max. | Unit |
|----------------------------------------------------------|-------------------------------------------------|-----------------------------------|------|------|------|------|
| BV <sub>DSX</sub> Drain – Source Breakdown Voltage       | V <sub>GS</sub> = -10V<br>I <sub>D</sub> = 10mA | BUZ902P                           | 220  |      |      | V    |
|                                                          |                                                 | BUZ903P                           | 250  |      |      | V    |
| BV <sub>GSS</sub> Gate – Source Breakdown Voltage        | V <sub>DS</sub> = 0                             | I <sub>G</sub> = ±100μA           | ±14  |      |      | V    |
| V <sub>GS(OFF)</sub> Gate – Source Cut-Off Voltage       | V <sub>DS</sub> = 10V                           | I <sub>D</sub> = 100mA            | 0.15 |      | 1.5  | V    |
| V <sub>DS(SAT)</sub> * Drain – Source Saturation Voltage | V <sub>GD</sub> = 0                             | I <sub>D</sub> = 8A               |      |      | 12   | V    |
| R <sub>DS(on)</sub> * Static – Source Resistance         | V <sub>GS</sub> = 10                            | I <sub>D</sub> = 8A               |      |      | 1.5  | Ω    |
| I <sub>DSX</sub> Drain – Source Cut-Off Current          | V <sub>GS</sub> = -10V                          | V <sub>DS</sub> = 220V<br>BUZ902P |      |      | 10   | mA   |
|                                                          |                                                 | V <sub>DS</sub> = 250V<br>BUZ903P |      |      | 10   | mA   |
| y <sub>fs</sub> * Forward Transfer Admittance            | V <sub>DS</sub> = 10V                           | I <sub>D</sub> = 3A               | 0.7  |      | 2    | S    |

## DYNAMIC CHARACTERISTICS (T<sub>case</sub> = 25°C unless otherwise stated)

| Characteristic                                | Test Conditions                              |  | Min. | Typ. | Max. | Unit |
|-----------------------------------------------|----------------------------------------------|--|------|------|------|------|
| C <sub>iss</sub> Input Capacitance            | V <sub>DS</sub> = 10V<br>f = 1MHz            |  |      | TBA  |      | pF   |
| C <sub>oss</sub> Output Capacitance           |                                              |  |      | TBA  |      |      |
| C <sub>rss</sub> Reverse Transfer Capacitance |                                              |  |      | TBA  |      |      |
| t <sub>on</sub> Turn-on Time                  | V <sub>DS</sub> = 20V<br>I <sub>D</sub> = 5A |  |      | TBA  |      | ns   |
| t <sub>off</sub> Turn-off Time                |                                              |  |      | TBA  |      |      |

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

