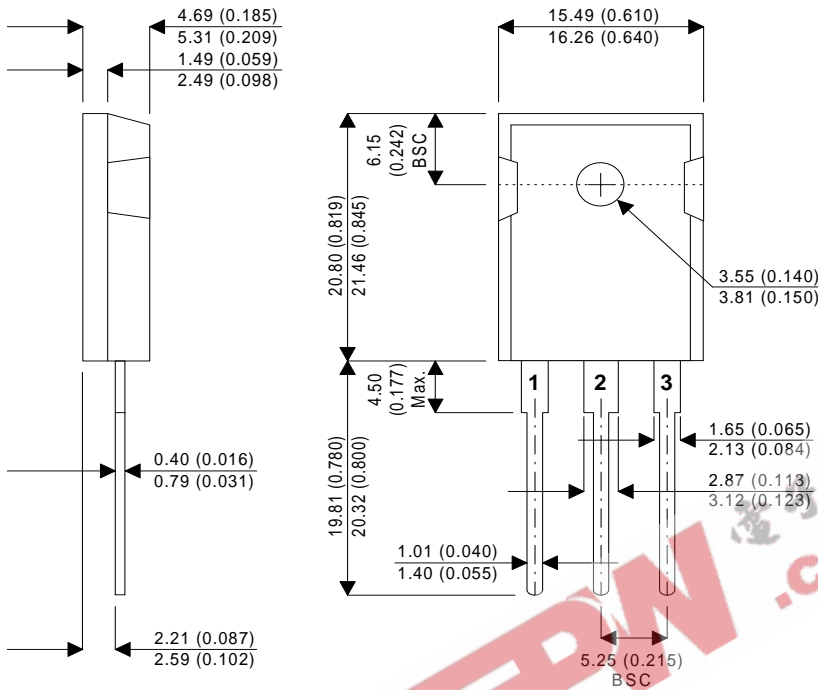


**MECHANICAL DATA**  
Dimensions in mm



**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 BUZ907P & BUZ908P

Pin 1 – Gate

Pin 2 – Source

Pin 3 – Drain

Case – Source

**ABSOLUTE MAXIMUM RATINGS**

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

		<b>BUZ902P</b>	<b>BUZ903P</b>
$V_{DSX}$	Drain – Source Voltage	220V	250V
$V_{GSS}$	Gate – Source Voltage	$\pm 14V$	
$I_D$	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 $150^{\circ}C$	
$T_j$	Maximum Operating Junction Temperature	$150^{\circ}C$	
$R_{\theta JC}$	Thermal Resistance Junction – Case	$1^{\circ}C/W$	

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

Characteristic	Test Conditions		Min.	Typ.	Max.	Unit
BV <sub>DSX</sub> Drain – Source Breakdown Voltage	V <sub>GS</sub> = -10V	BUZ902P	220			V
	I <sub>D</sub> = 10mA	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 BUZ902P			10	mA
		V <sub>DS</sub> = 250V 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** ( $T_{\text{case}} = 25^{\circ}\text{C}$  unless otherwise stated)

Characteristic	Test Conditions		Min.	Typ.	Max.	Unit
C <sub>iss</sub> Input Capacitance	V <sub>DS</sub> = 10V 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			TBA		ns
t <sub>off</sub> Turn-off Time	I <sub>D</sub> = 5A			TBA		

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

