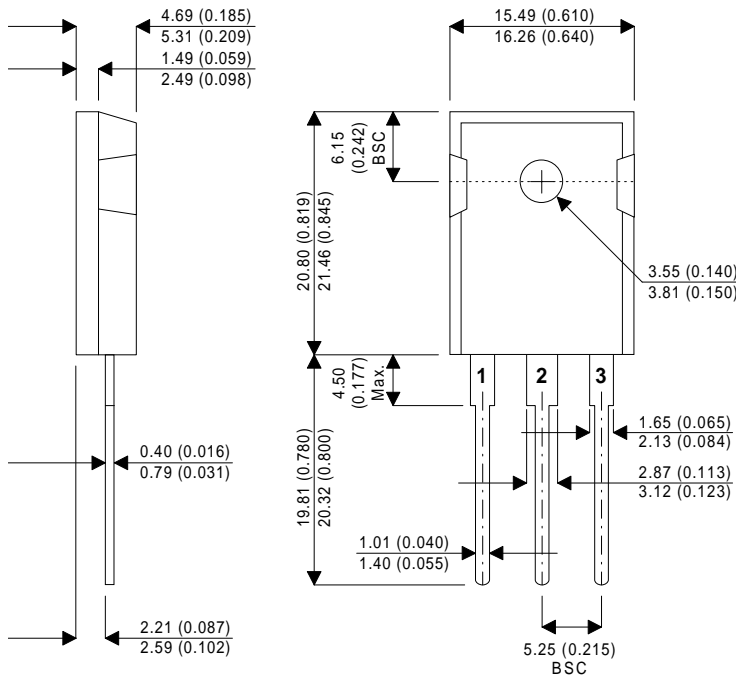


MECHANICAL DATA

Dimensions in mm (inches)



TO-247

Pin 1 – Gate

Pin 2 – Source

Pin 3 – Drain

**P-CHANNEL
POWER MOSFET**

**POWER MOSFETS FOR
AUDIO APPLICATIONS**

FEATURES

- HIGH SPEED SWITCHING
- P-CHANNEL POWER MOSFET
- SEMEFAB DESIGNED AND DIFFUSED
- HIGH VOLTAGE (160V & 200V)
- HIGH ENERGY RATING
- ENHANCEMENT MODE
- INTEGRAL PROTECTION DIODE
- N-CHANNEL ALSO AVAILABLE AS BUZ900P & BUZ901P

ABSOLUTE MAXIMUM RATINGS

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

		BUZ905P	BUZ906P
V_{DSX}	Drain – Source Voltage	-160V	-200V
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°C	
T_j	Maximum Operating Junction Temperature	150°C	
$R_{\theta JC}$	Thermal Resistance Junction – Case	1.0°C/W	

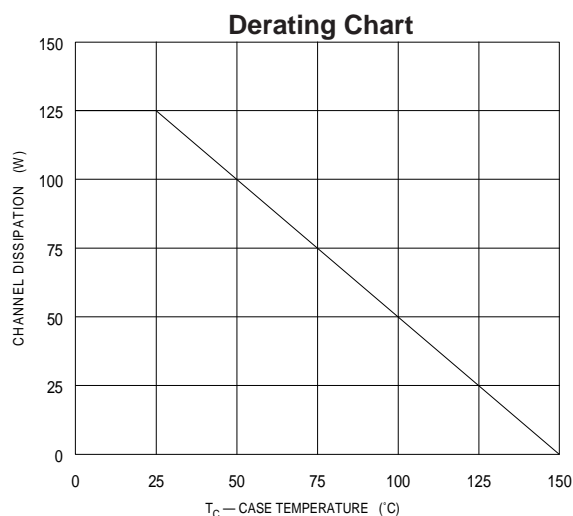
STATIC CHARACTERISTICS ($T_{case} = 25^{\circ}\text{C}$ unless otherwise stated)

Characteristic		Test Conditions		Min.	Typ.	Max.	Unit
BV_{DSX}	Drain – Source Breakdown Voltage	$V_{GS} = 10\text{V}$	BUZ905P	-160			V
		$I_D = -10\text{mA}$	BUZ906P	-200			
BV_{GSS}	Gate – Source Breakdown Voltage	$V_{DS} = 0$	$I_G = \pm 100\mu\text{A}$	± 14			V
$V_{GS(OFF)}$	Gate – Source Cut-Off Voltage	$V_{DS} = -10\text{V}$	$I_D = -100\text{mA}$	-0.15		-1.5	V
$V_{DS(SAT)}^*$	Drain – Source Saturation Voltage	$V_{GD} = 0$	$I_D = -8\text{A}$			-12	V
I_{DSX}	Drain – Source Cut-Off Current	$V_{GS} = -10\text{V}$	$V_{DS} = -160\text{V}$ BUZ905P			-10	mA
			$V_{DS} = -200\text{V}$ BUZ906P			-10	
y_{fs}^*	Forward Transfer Admittance	$V_{DS} = -10\text{V}$	$I_D = -3\text{A}$	0.7		2	S

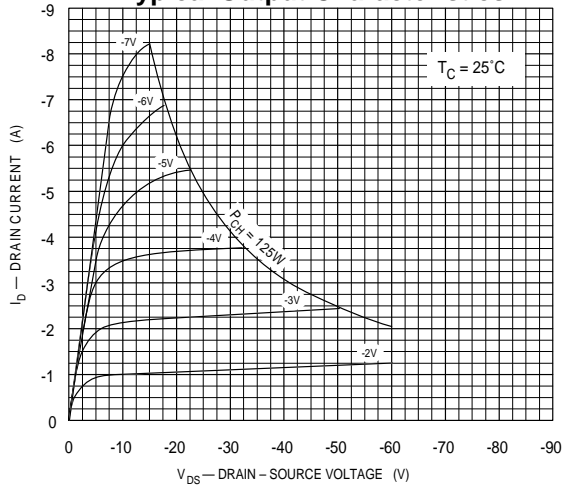
DYNAMIC CHARACTERISTICS ($T_{case} = 25^{\circ}\text{C}$ unless otherwise stated)

Characteristic		Test Conditions		Min.	Typ.	Max.	Unit
C_{iss}	Input Capacitance	$V_{DS} = 10\text{V}$ $f = 1\text{MHz}$			734		pF
C_{oss}	Output Capacitance				300		
C_{rss}	Reverse Transfer Capacitance				26		
t_{on}	Turn-on Time	$V_{DS} = -20\text{V}$ $I_D = -5\text{A}$			120		ns
t_{off}	Turn-off Time				60		

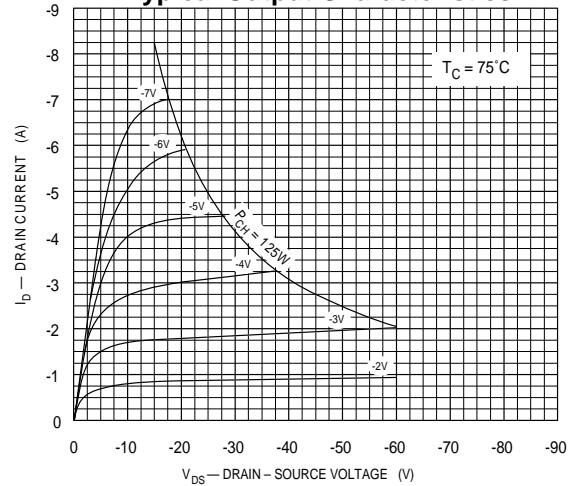
* Pulse Test: Pulse Width = $300\mu\text{s}$, Duty Cycle $\leq 2\%$.



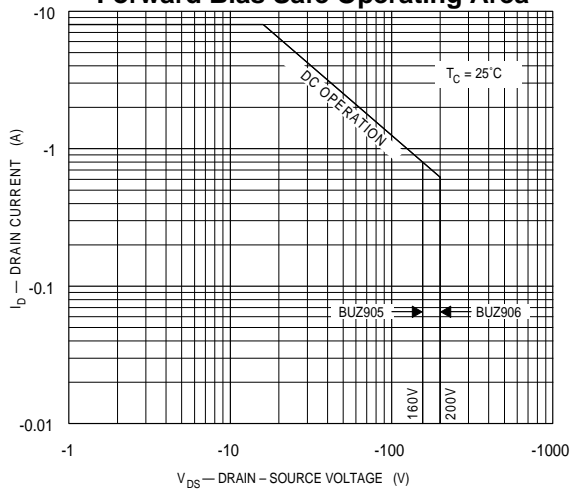
Typical Output Characteristics



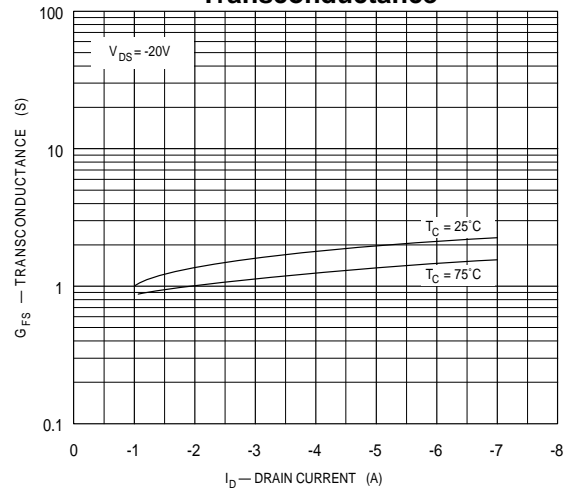
Typical Output Characteristics



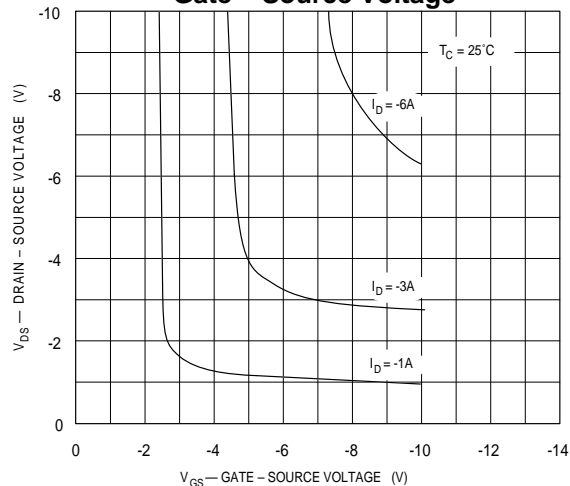
Forward Bias Safe Operating Area



Transconductance



Drain - Source Voltage vs Gate - Source Voltage



Typical Transfer Characteristics

