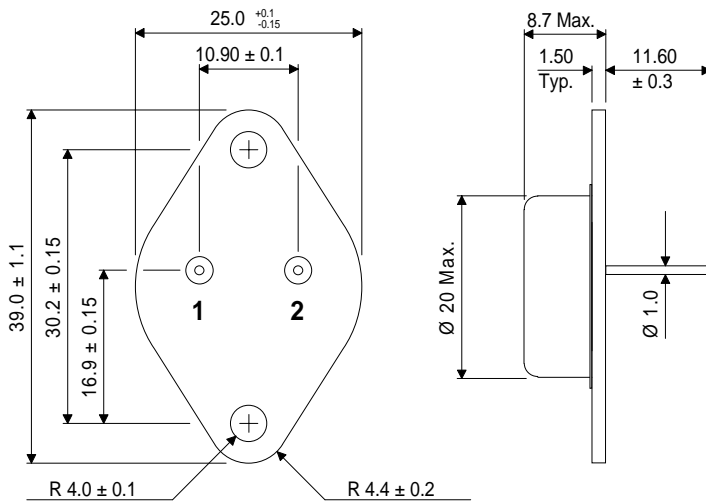


MECHANICAL DATA
Dimensions in mm

N-CHANNEL
POWER MOSFET



POWER MOSFETS FOR
AUDIO APPLICATIONS

FEATURES

- HIGH SPEED SWITCHING
- N-CHANNEL POWER MOSFET
- SEMEFAB DESIGNED AND DIFFUSED
- HIGH VOLTAGE (160V & 200V)
- HIGH ENERGY RATING
- ENHANCEMENT MODE
- INTEGRAL PROTECTION DIODE
- P-CHANNEL ALSO AVAILABLE AS BUZ905 & BUZ906

TO-3

Pin 1 – Gate

Pin 2 – Drain

Case – Source

ABSOLUTE MAXIMUM RATINGS

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

		BUZ900	BUZ901
V_{DSX}	Drain – Source Voltage	160V	200V
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	

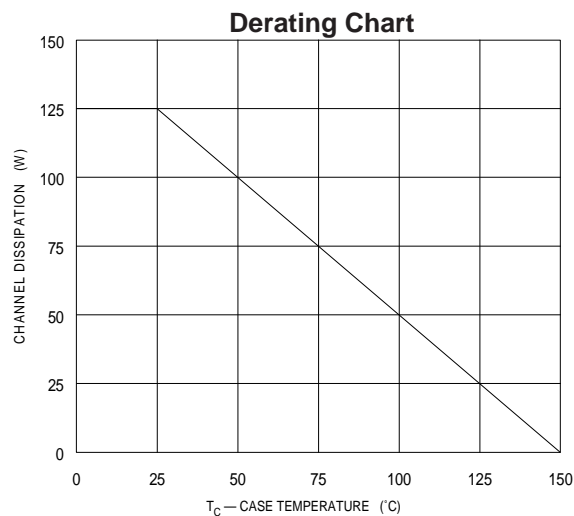
STATIC CHARACTERISTICS ($T_{case} = 25^{\circ}\text{C}$ unless otherwise stated)

Characteristic		Test Conditions		Min.	Typ.	Max.	Unit
BV _{DSX}	Drain – Source Breakdown Voltage	V _{GS} = -10V I _D = 10mA	BUZ900	160			V
			BUZ901	200			
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
I _{DSX}	Drain – Source Cut-Off Current	V _{GS} = -10V	V _{DS} = 160V BUZ900			10	mA
			V _{DS} = 200V BUZ901			10	
yfs*	Forward Transfer Admittance	V _{DS} = 10V	I _D = 3A	0.7		2	S

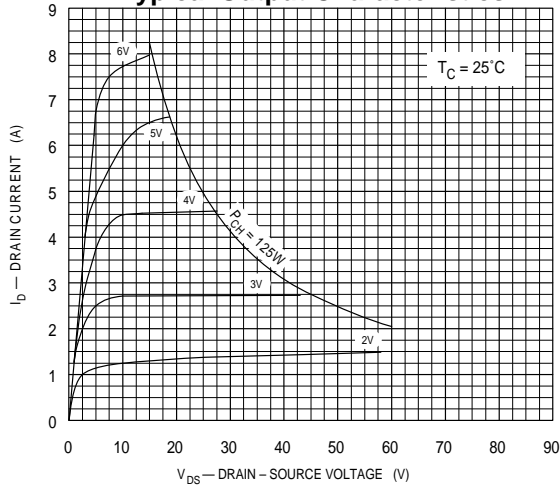
DYNAMIC CHARACTERISTICS ($T_{case} = 25^{\circ}\text{C}$ unless otherwise stated)

Characteristic		Test Conditions		Min.	Typ.	Max.	Unit
C _{iSS}	Input Capacitance	V _{DS} = 10V f = 1MHz			500		pF
C _{oss}	Output Capacitance				300		
C _{rSS}	Reverse Transfer Capacitance					10	
t _{on}	Turn-on Time	V _{DS} = 20V I _D = 5A			100		ns
t _{off}	Turn-off Time				50		

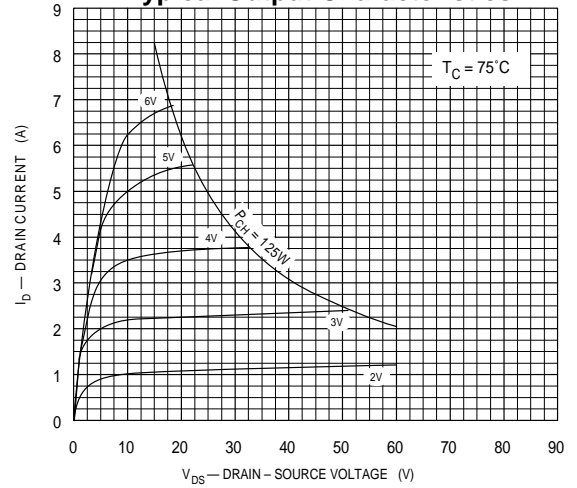
* Pulse Test: Pulse Width = 300µs , Duty Cycle ≤ 2%.



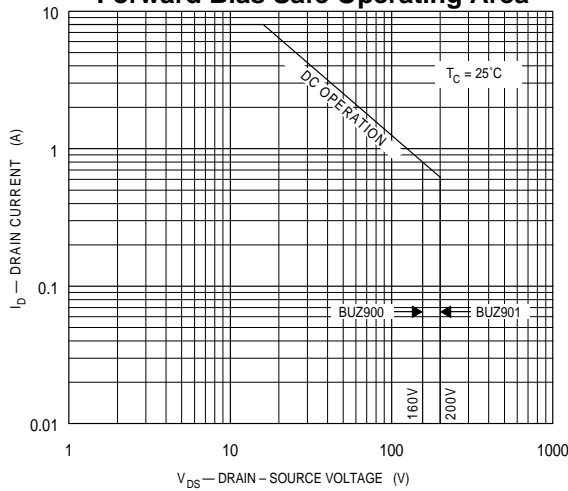
Typical Output Characteristics



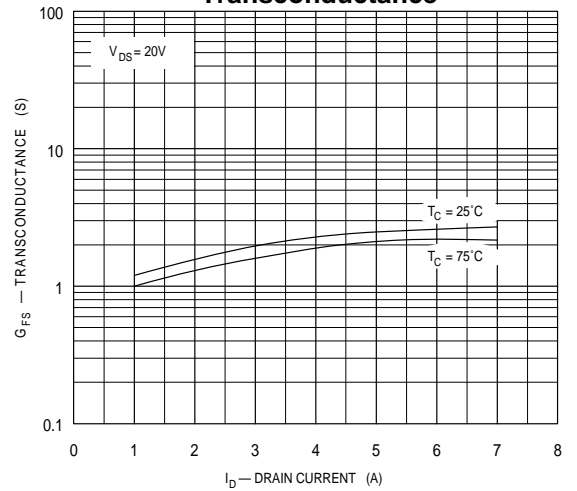
Typical Output Characteristics



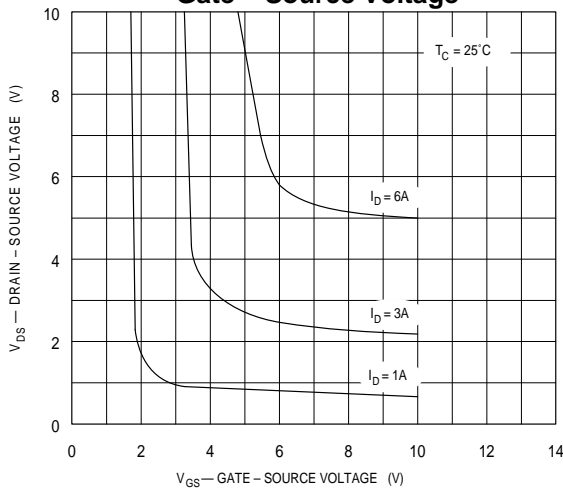
Forward Bias Safe Operating Area



Transconductance



Drain - Source Voltage vs Gate - Source Voltage



Typical Transfer Characteristics

