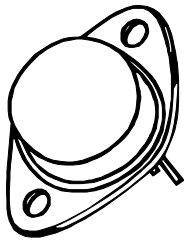
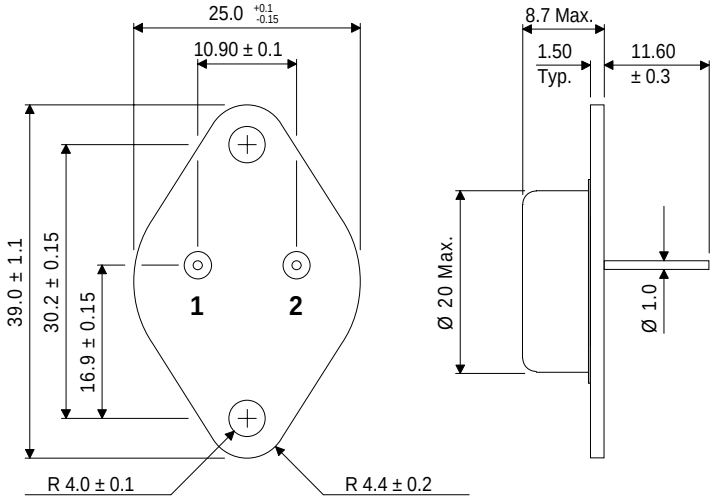
MAGNA TEC



BUZ905D
BUZ906D

MECHANICAL DATA
Dimensions in mm

P–CHANNEL POWER MOSFET



TO–3

Pin 1 – Gate Pin 2 – Drain Case – Source

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 BUZ900D & BUZ901D**
- **DOUBLE DIE PACKAGE FOR MAXIMUM POWER AND HEATSINK SPACE**

ABSOLUTE MAXIMUM RATINGS

(T_{case} = 25°C unless otherwise stated)			BUZ905D	BUZ906D
V_{DSX}	Drain – Source Voltage		-160V	-200V
V_{GSS}	Gate – Source Voltage		±14V	
I_D	Continuous Drain Current		-16A	
$I_{D(PK)}$	Body Drain Diode		-16A	
P_D	Total Power Dissipation	@ T_{case} = 25°C	250W	
T_{stg}	Storage Temperature Range		–55 to 150°C	
T_j	Maximum Operating Junction Temperature		150°C	
$R_{\theta JC}$	Thermal Resistance Junction – Case		0.5°C/W	

MAGNA TEC

BUZ905D
BUZ906D

STATIC CHARACTERISTICS (T_{case} = 25°C unless otherwise stated)

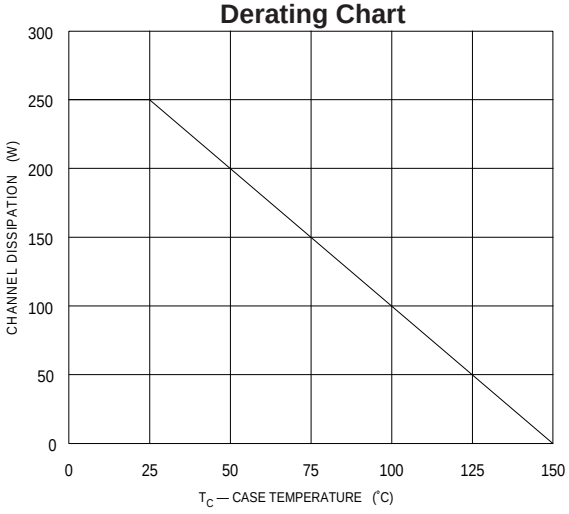
	Characteristic	Test Conditions		Min.	Typ.	Max.	Unit
BV_{DSX}	Drain – Source Breakdown Voltage	V_{GS} = 10V I_D = -10mA	BUZ905D	-160			V
			BUZ906D	-200			
BV_{GSS}	Gate – Source Breakdown Voltage	V_{DS} = 0	I_G = ±100µA	±14			V
$V_{GS(OFF)}$	Gate – Source Cut–Off Voltage	V_{DS} = -10V	I_D = -100mA	-0.1		-1.5	V
$V_{DS(SAT)}$*	Drain – Source Saturation Voltage	V_{GD} = 0	I_D = -16A			-12	V
I_{DSX}	Drain – Source Cut–Off Current	V_{GS} = 10V	V_{DS} = -160V BUZ905D			-10	mA
			V_{DS} = -200V BUZ906D			-10	
yfs*	Forward Transfer Admittance	V_{DS} = -10V	I_D = -3A	1.4		4	S

DYNAMIC CHARACTERISTICS (T_{case} = 25°C unless otherwise stated)

	Characteristic	Test Conditions	Min.	Typ.	Max.	Unit
C_{iss}	Input Capacitance	V_{DS} = 10V f = 1MHz		1900		pF
C_{oss}	Output Capacitance			900		
C_{rss}	Reverse Transfer Capacitance			60		
t_{on}	Turn–on Time	V_{DS} = 20V I_D = 7A		150		ns
t_{off}	Turn-off Time			110		

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

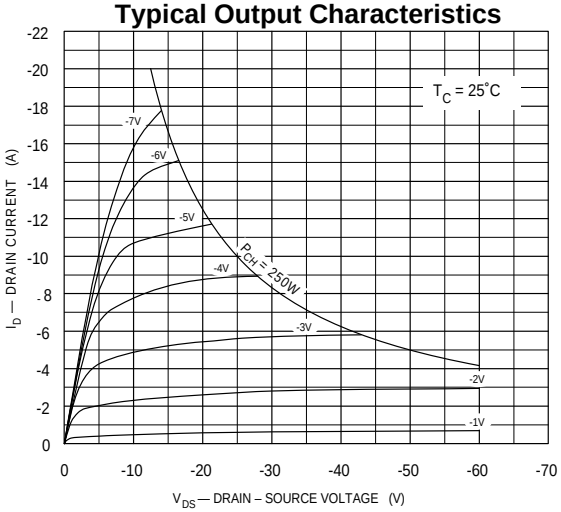
Derating Chart



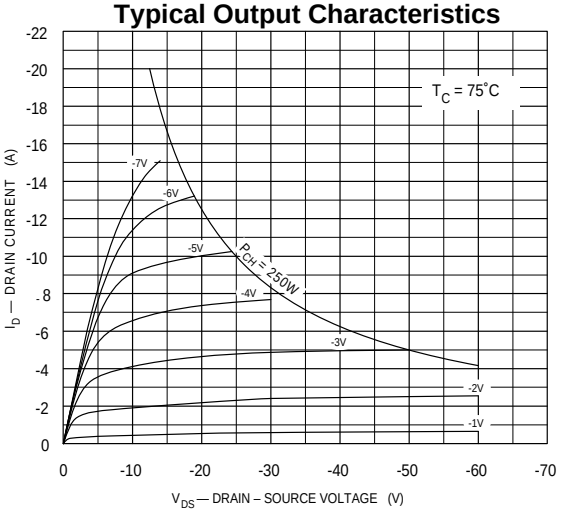
MAGNA TEC

BUZ905D
BUZ906D

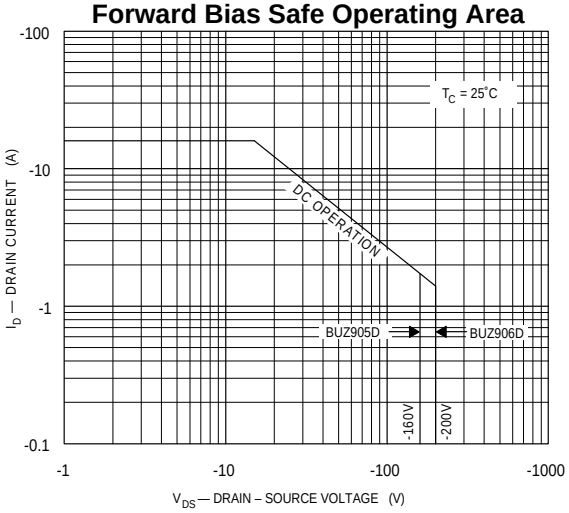
Typical Output Characteristics



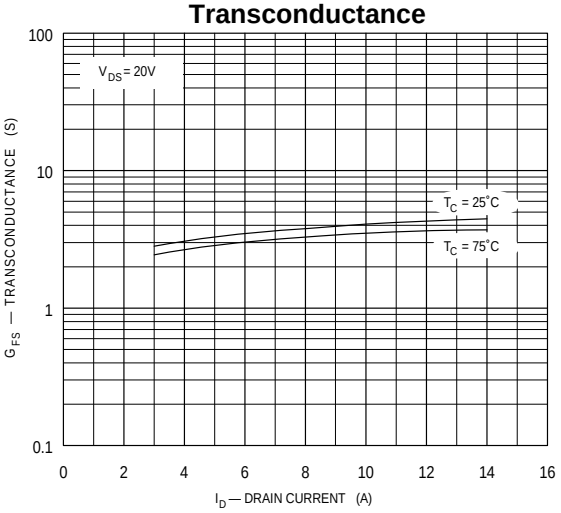
Typical Output Characteristics



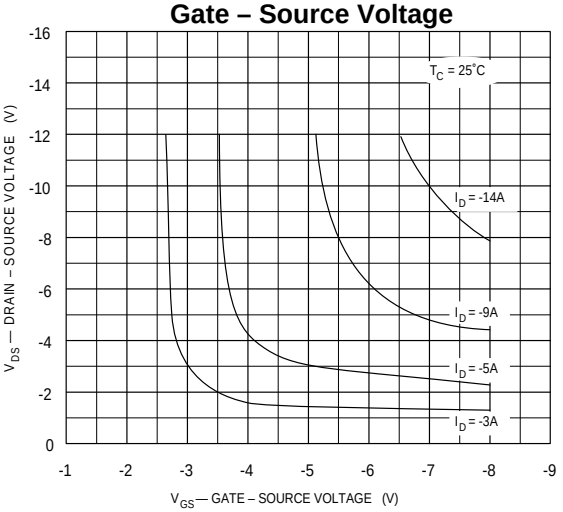
Forward Bias Safe Operating Area



Transconductance



Drain – Source Voltage vs Gate – Source Voltage



Typical Transfer Characteristics