

484 349 / 337

**MAGNATEC****NEW PRODUCT**

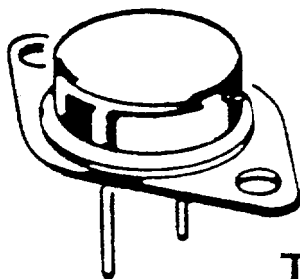
BUZ 900D

BUZ 901D

SILICON N-CHANNEL POWER MOSFET

DESIGNED FOR USE AS COMPLEMENTARY PAIR FOR HIGH QUALITY,
HIGH POWER AMPLIFIER APPLICATION

FEATURES

**TO-3**

- 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 AS BUZ905D & BUZ906D

MAGNATEC introduces their latest addition to power devices for high quality audio amplifier application with double die package for maximum power and heatsink space.

Designed with integral protection diode for added protection during handling and high gain making an ideal choice for designers.

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

		BUZ 900D	BUZ 901D
BV_{DSX}	Drain - source voltage	160	200 V
BV_{GSS}	Gate - source voltage	± 14	V
I_D	Drain - current	16	A
$I_D (PK)$	Body Drain Diode	16	A
P_{tot}	Total dissipation at $T_{case} = 25^{\circ}C$	250	W
T_{stg}	Storage Temperature	$-55^{\circ}C$ to $150^{\circ}C$	
T_j	Maximum operating junction temperature	150	$^{\circ}C$
R_{th}	Thermal resistance (junction - case) Max	0.5	$^{\circ}C/W$

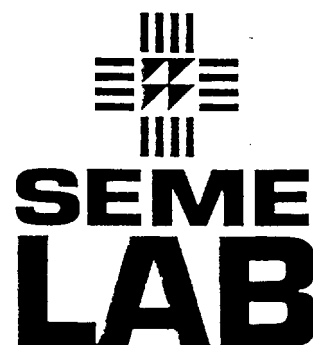
TENTATIVE 02/93

ISSUE 2

Magnatec is a division of Semelab plc. Registered in England number 1033308
Registered Office: Coventry Road, Lutterworth, Leicestershire. LE17 4JB England

SEMELAB

PLC



BS5750
Stockist Level A
Qualification Pending

Magna Park, Coventry Road, Lutterworth
Leicestershire, LE17 4JB, England
Sales telephone: 0455 554711
Admin telephone: 0455 552505
Telex: 341927 SMLLUT G Fax: 0455 552612



LATERAL MOSFETS FOR THE AUDIO MARKET

FROM MAGNATEC

Magnatec, a company within the SEMELAB Group introduces a range of complimentary lateral MOSFET Power Transistors.

Supplied in either TO3 or TO3P outlines, the 8 amp/16 amp; 160 volt/200volt series of devices have been designed especially for audio Amplifier Applications. The devices are particularly rugged, the single chip version being continuously rated at 125 W whilst the double chip variant dissipates up to 250 W per device. The single die BUZ900/905 are optimized for use in amplifiers up to 1 kW, the double die types being designed to achieve true output powers of 2 kW.

Further developments in packaging techniques will allow the Company to offer SMARTPACK™ power modules capable of 500 W of audio power from each module.

Further information:-

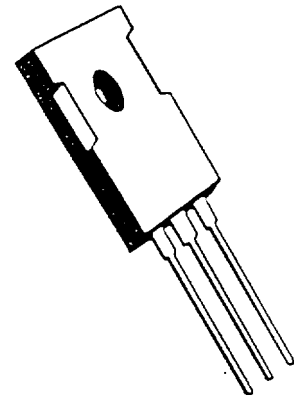
Mr. R. Bacon
MAGNATEC
COVENTRY ROAD
LUTTERWORTH
LEICESTERSHIRE
LE17 4JB

TEL:- +44 455 55 47 11
FAX:- +44 455 55 26 12
TELEX:- 341927

NEW POWER MOSFETS FOR AUDIO

NEW — Easy to use package design
— Fast - on Connectors
— Screw Connectors
or
Solder Terminals

N-Channel
P-Channel
N & P Channel

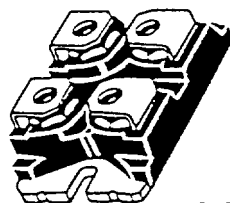
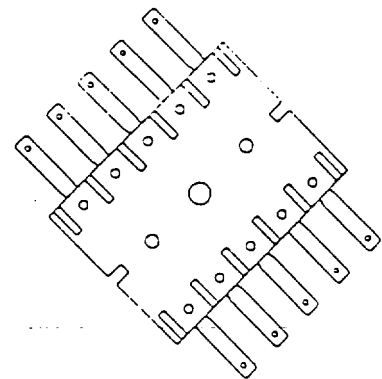
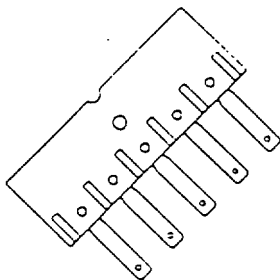


TO-3PBL

250W to 500W
UNDER DEVELOPMENT

NEW PRODUCT

SMARTPACK™



SOT-227

Magna Park, Coventry Road, Lutterworth
Leicestershire, LE17 4JB, England

Sales Telephone: 0455 554711

Admin Telephone: 0455 552505

Fax: 0455 552612

Telex: 341927 SMLLUT G

BS5750
Stockist Level A
Qualification Pending

Magna Park, Coventry Road, Lutterworth
Leicestershire, LE17 4JB, England
Sales telephone: 01455 554711
Admin telephone: 01455 552505
Telex: 341927 Fax: 01455 552612



LATERAL MOSFETS FOR AUDIO APPLICATIONS BULLETIN NO.1

LATERAL MOSFETS CIRCUIT MODIFICATIONS

Magnatec lateral mosfets series are designed to replace Hitachi devices. In most cases the devices drop in without any circuit modification and continue to give similar or better performance.

However feedback from some customers has indicated that a minor modification has been made to the gate drive circuit.

1. Gate resistor increased to around 1.0 - 1.5 kohms. This depends on individual design and experience.
2. Zener voltage for the gate drive limited to around 6.2 - 6.8V, but mainly applies to double die devices.
3. Some customers have found matching on VGS(th) to further improve reliability of amplifier where high quantity of devices are in parallel.
4. Oscillation in the circuit experienced by some customer has been eliminated by a small capacitor across the gate biasing long tail pair resistor.
5. A capacitor (22 - 47pF) between drain and gate for any VHF oscillation.

Further modification to be added as they are known if any.

PROBLEMS AND SUPPORTIVE INFORMATION TO DALIP PARMAR WILL BE APPRECIATED.

NOVEMBER 1993

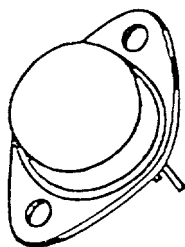
L A T E R A L M O S F E T C R O S S R E F E R E N C E G U I D E

SM PART NUMBER	PACKAGE	(V) BV	(A) ID	(W) PD	CHANNEL	EQUIVALENT
BUZ900	TO3	160V	8A	125W	N	2SK135
BUZ900D	TO3	160V	16A	250W	N	2 X 2SK135
BUZ900P	TO247	160V	8A	125W	N	2SK1058
BUZ901	TO3	200V	8A	125W	N	2SK176
BUZ901D	TO3	200V	16A	250W	N	2 X 2SK176
BUZ901P	TO247	200V	8A	125W	N	-
BUZ905	TO3	160V	8A	125W	P	2SJ50
BUZ905D	TO3	160V	16A	250W	P	2 X 2SJ50
BUZ905P	TO247	160V	8A	125W	P	2SJ162
BUZ906	TO3	200V	8A	125W	P	2SJ56
BUZ906D	TO3	200V	16A	250W	P	2 X 2SJ56
BUZ906P	TO247	200V	8A	125W	P	-

L A T E R A L M O S F E T P R I C I N G

SM PART NUMBER	£UK	£UK	£UK	£UK	£UK	£UK
	25+	100+	1K+	5K	10K	25K
BUZ900	4.75	3.799	3.399	2.90	2.70	2.50
BUZ900D	7.36	5.895	5.274	4.50	4.19	3.879
BUZ900P	4.75	3.799	3.399	2.90	2.70	2.50
BUZ901	6.22	4.978	4.454	3.80	3.54	3.276
BUZ901D	8.87	7.10	6.352	5.42	5.05	4.672
BUZ901P	6.22	4.978	4.454	3.80	3.54	3.276
BUZ905	4.75	3.799	3.399	2.90	2.70	2.50
BUZ905D	7.36	5.895	5.274	4.50	4.19	3.879
BUZ905P	4.75	3.799	3.399	2.90	2.70	2.50
BUZ906	6.22	4.978	4.454	3.80	3.54	3.276
BUZ906D	8.87	7.10	6.352	5.42	5.05	4.672
BUZ906P	6.22	4.978	4.454	3.80	3.54	3.276

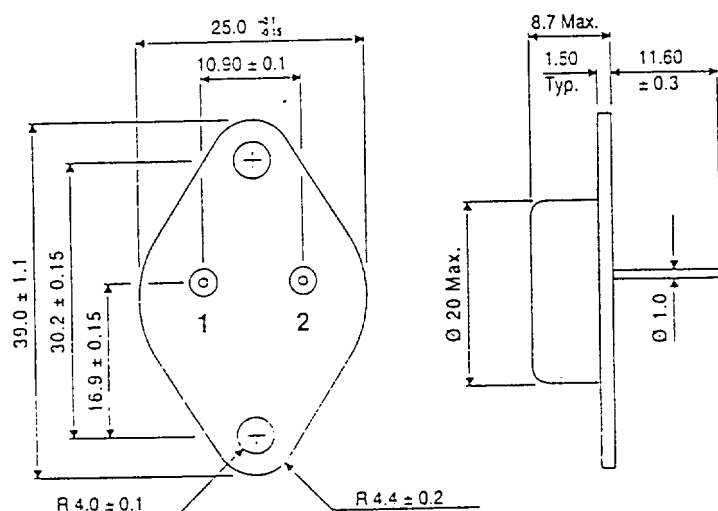
10/09/01 10:00:00



BUZ900
BUZ901

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

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

(T _{case} = 25°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°C	125W	
T _{stg}	Storage Temperature Range	-55 to 150°C	
T _j	Maximum Operating Junction Temperature	150°C	
R _{θJC}	Thermal Resistance Junction – Case	1°C/W	

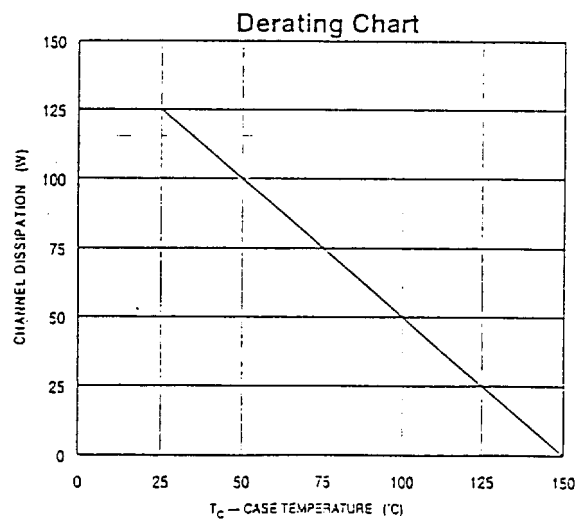
STATIC CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

Characteristic	Test Conditions	Min.	Typ.	Max.	Unit
BV _{DSX} Drain – Source Breakdown Voltage	V _{GS} = -10V	BUZ900	160		V
	I _D = 10mA	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

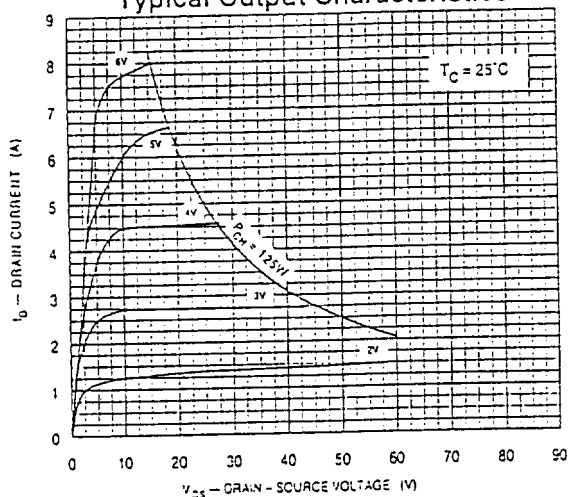
DYNAMIC CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

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		100		ns
t _{off} Turn-off Time	I _D = 5A		50		

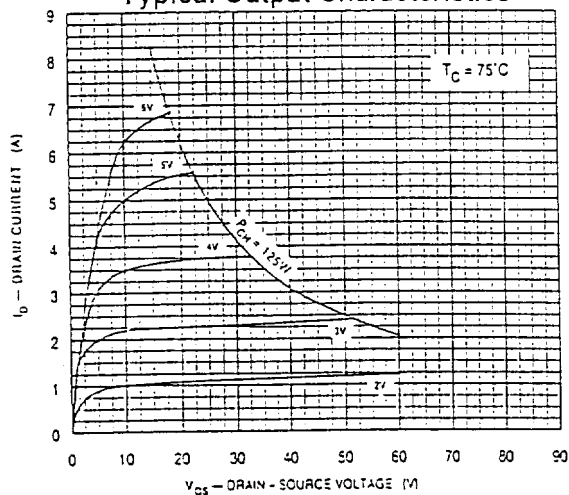
* Pulse Test: Pulse Width = 300μs , Duty Cycle ≤ 2%.



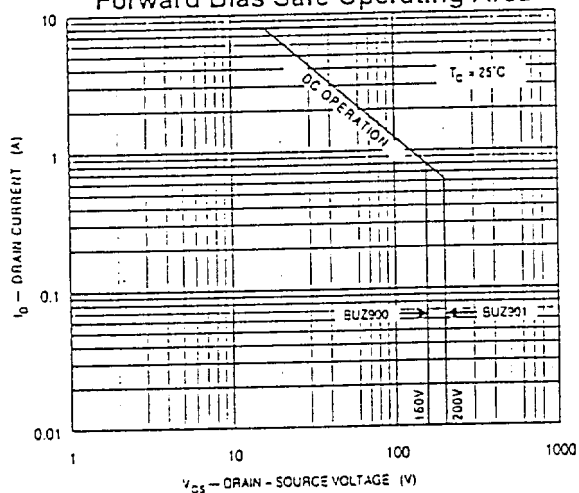
Typical Output Characteristics



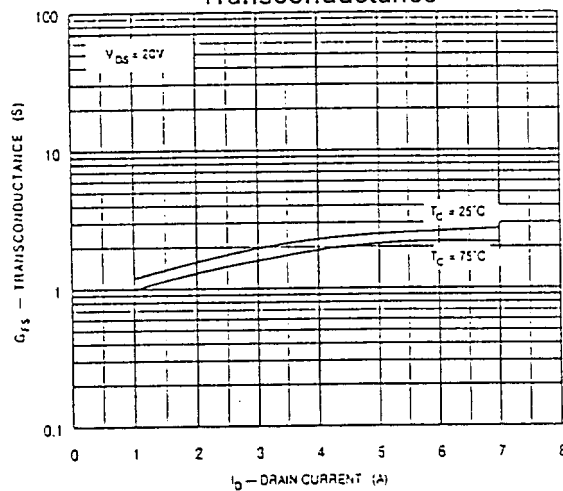
Typical Output Characteristics



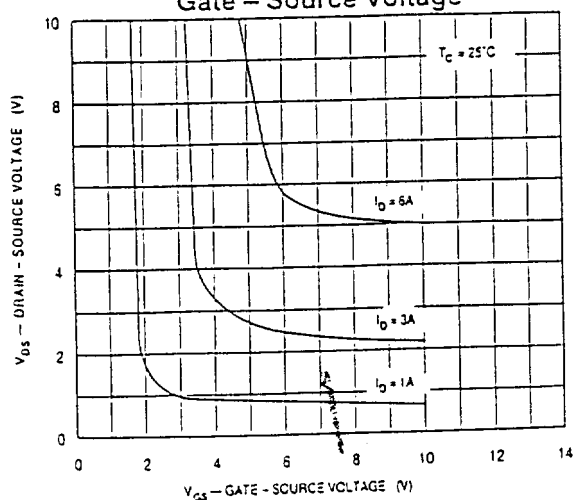
Forward Bias Safe Operating Area



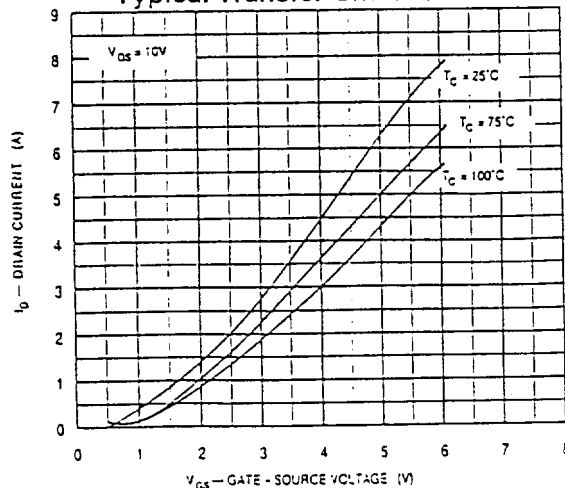
Transconductance

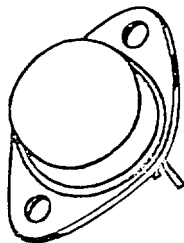


Drain - Source Voltage
vs
Gate - Source Voltage



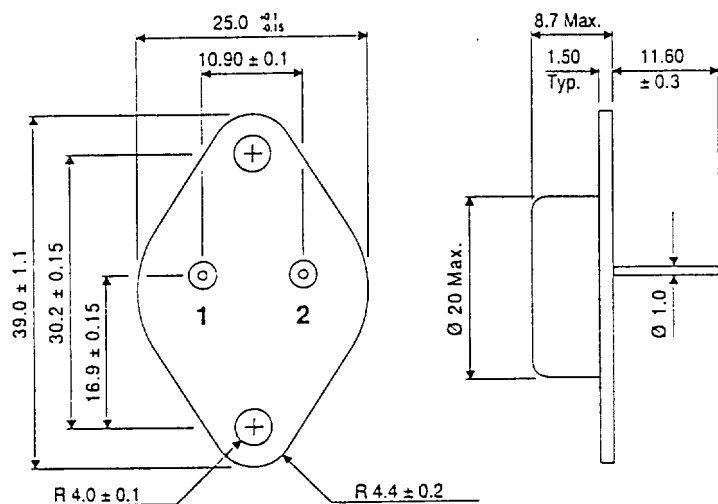
Typical Transfer Characteristics





MECHANICAL DATA
Dimensions in mm

**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 BUZ900 & BUZ901

TO-3

Pin 1 – Gate

Pin 2 – Drain

Case – Source

ABSOLUTE MAXIMUM RATINGS

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

		- BUZ905	BUZ906
V_{DSX}	Drain – Source Voltage	-160V	-200V
V_{GSS}	Gate – Source Voltage	$\pm 14\text{V}$	
I_{D}	Continuous Drain Current	-8A	
$I_{\text{D(PK)}}$	Body Drain Diode	-8A	
P_{D}	Total Power Dissipation @ $T_{\text{case}} = 25^{\circ}\text{C}$	125W	
T_{stg}	Storage Temperature Range	-55 to 150°C	
T_{j}	Maximum Operating Junction Temperature	150°C	
$R_{\theta\text{JC}}$	Thermal Resistance Junction – Case	1.0°C/W	

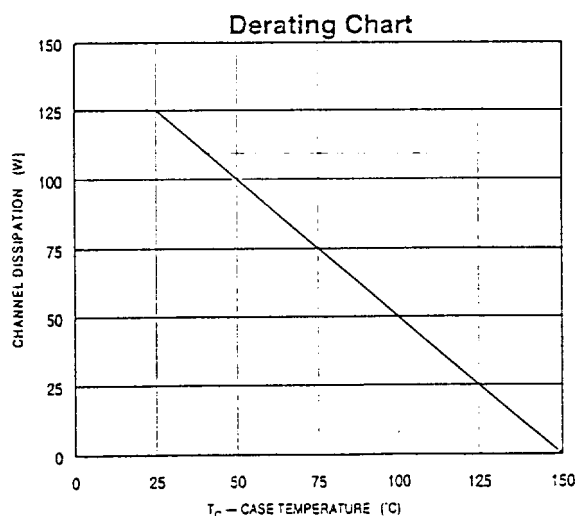
STATIC CHARACTERISTICS ($T_{\text{case}} = 25^{\circ}\text{C}$ unless otherwise stated)

Characteristic	Test Conditions		Min.	Typ.	Max.	Unit
BV _{DSX} Drain – Source Breakdown Voltage	V _{GS} = 10V I _D = -10mA	BUZ905	-160			V
		BUZ906	-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} = -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 BUZ905			-10	mA
		V _{DS} = -200V BUZ906			-10	
yfs* Forward Transfer Admittance	V _{DS} = -10V	I _D = -3A	0.7		2	S

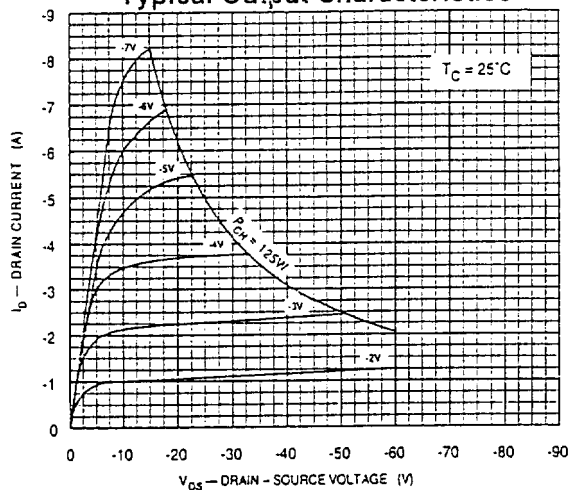
DYNAMIC CHARACTERISTICS ($T_{\text{case}} = 25^{\circ}\text{C}$ unless otherwise stated)

Characteristic	Test Conditions		Min.	Typ.	Max.	Unit
C _{iss} Input Capacitance	V _{DS} = -10V f = 1MHz			734		pF
C _{oss} Output Capacitance				300		
C _{rss} Reverse Transfer Capacitance				26		
t _{on} Turn-on Time	V _{DS} = -20V I _D = -5A			120		ns
t _{off} Turn-off Time				60		

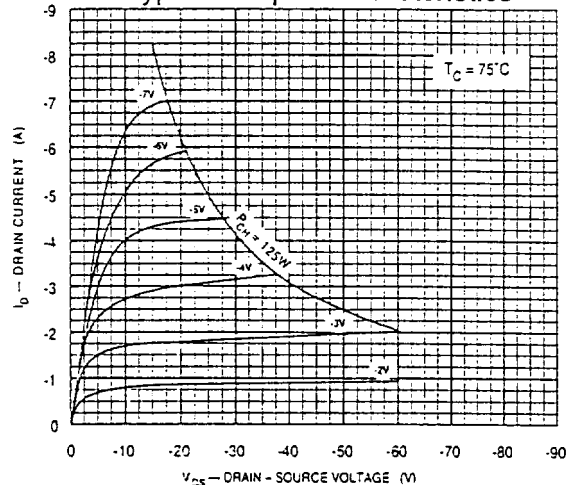
* Pulse Test: Pulse Width = 300 μs , Duty Cycle $\leq 2\%$.



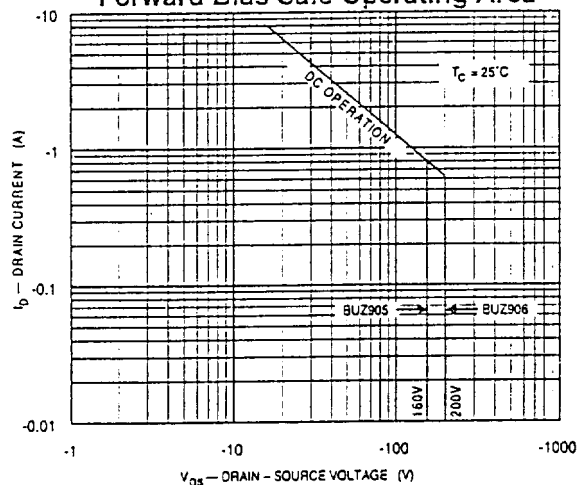
Typical Output Characteristics



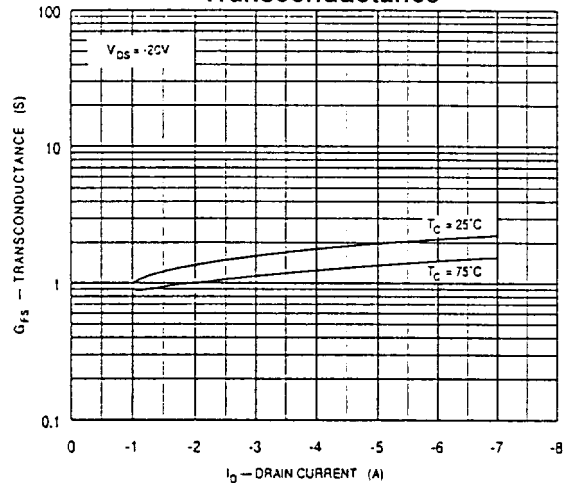
Typical Output Characteristics



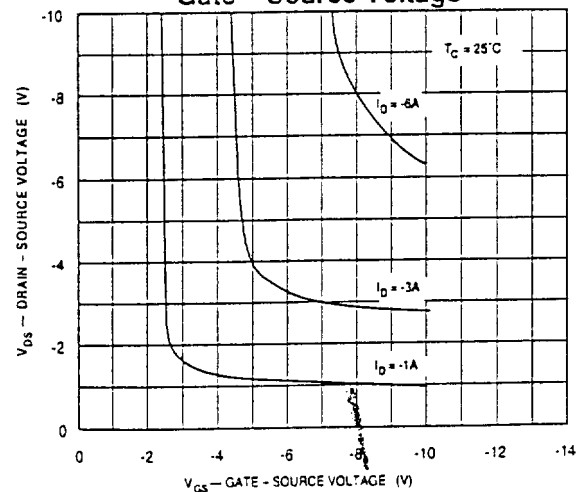
Forward Bias Safe Operating Area



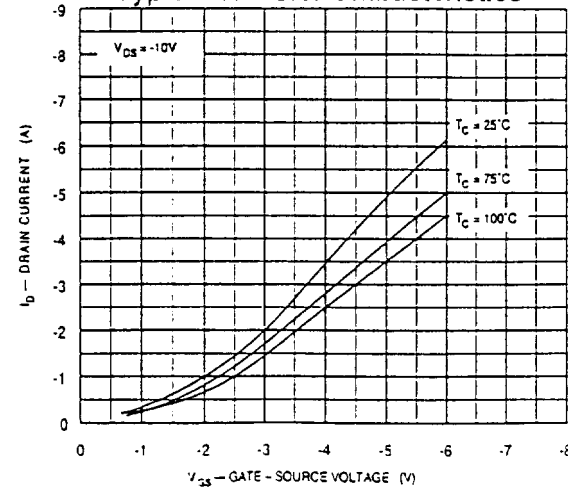
Transconductance



Drain - Source Voltage
vs
Gate - Source Voltage



Typical Transfer Characteristics



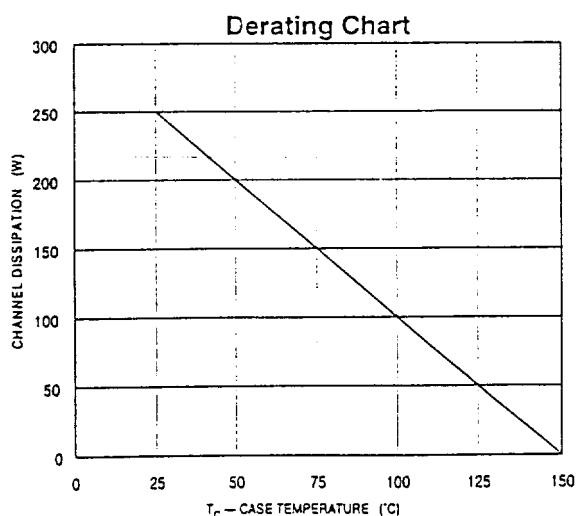
STATIC CHARACTERISTICS ($T_{\text{case}} = 25^{\circ}\text{C}$ unless otherwise stated)

Characteristic	Test Conditions		Min.	Typ.	Max.	Unit
BV_{DSX} Drain – Source Breakdown Voltage	$V_{\text{GS}} = -10\text{V}$ $I_{\text{D}} = 10\text{mA}$	BUZ900D	160			V
		BUZ901D	200			
BV_{GSS} Gate – Source Breakdown Voltage	$V_{\text{DS}} = 0$	$I_{\text{G}} = \pm 100\mu\text{A}$	± 14			V
$V_{\text{GS(OFF)}}$ Gate – Source Cut-Off Voltage	$V_{\text{DS}} = 10\text{V}$	$I_{\text{D}} = 100\text{mA}$	0.1		1.5	V
$V_{\text{DS(SAT)}}$ * Drain – Source Saturation Voltage	$V_{\text{GD}} = 0$	$I_{\text{D}} = 16\text{A}$			12	V
I_{DSX} Drain – Source Cut-Off Current	$V_{\text{GS}} = -10\text{V}$	$V_{\text{DS}} = 160\text{V}$ BUZ900D			10	mA
		$V_{\text{DS}} = 200\text{V}$ BUZ901D			10	
y_{fs} * Forward Transfer Admittance	$V_{\text{DS}} = 10\text{V}$	$I_{\text{D}} = 3\text{A}$	1.4		4	S

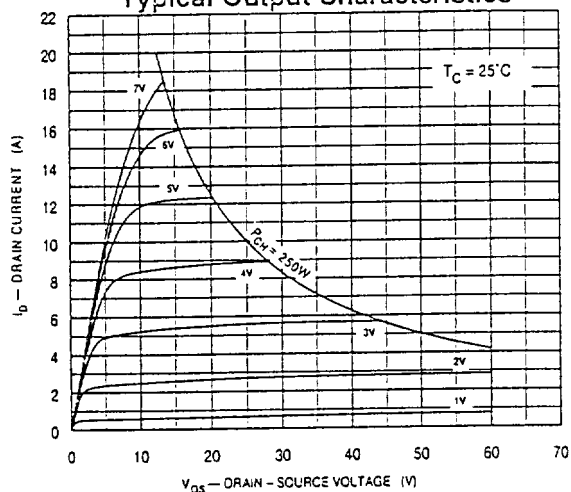
DYNAMIC CHARACTERISTICS ($T_{\text{case}} = 25^{\circ}\text{C}$ unless otherwise stated)

Characteristic	Test Conditions	Min.	Typ.	Max.	Unit
C_{iss} Input Capacitance	$V_{\text{DS}} = 10\text{V}$ $f = 1\text{MHz}$		950		pF
C_{oss} Output Capacitance			550		
C_{rss} Reverse Transfer Capacitance			18		
t_{on} Turn-on Time	$V_{\text{DS}} = 20\text{V}$ $I_{\text{D}} = 7\text{A}$		160		ns
t_{off} Turn-off Time			80		

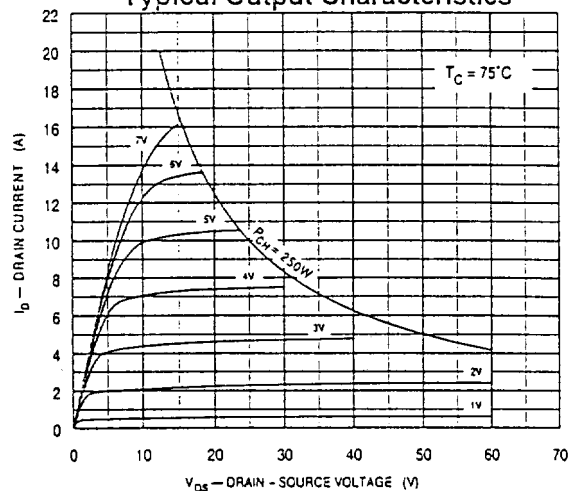
* Pulse Test: Pulse Width = $300\mu\text{s}$, Duty Cycle $\leq 2\%$.



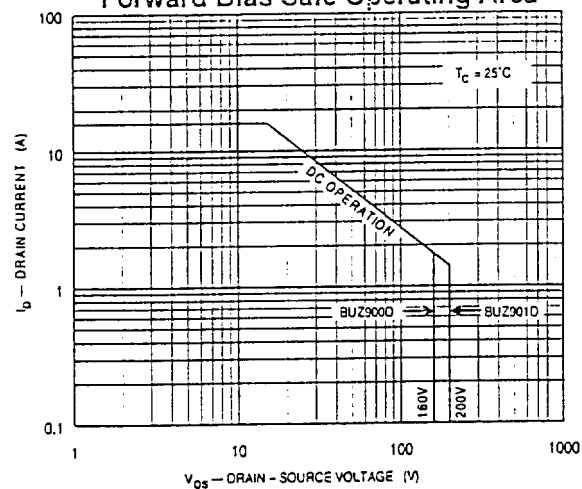
Typical Output Characteristics



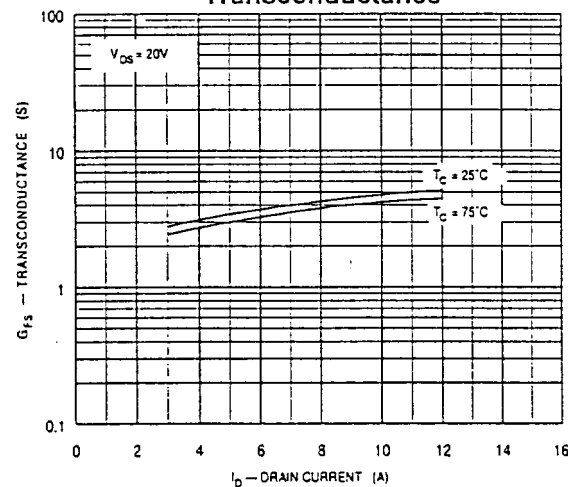
Typical Output Characteristics



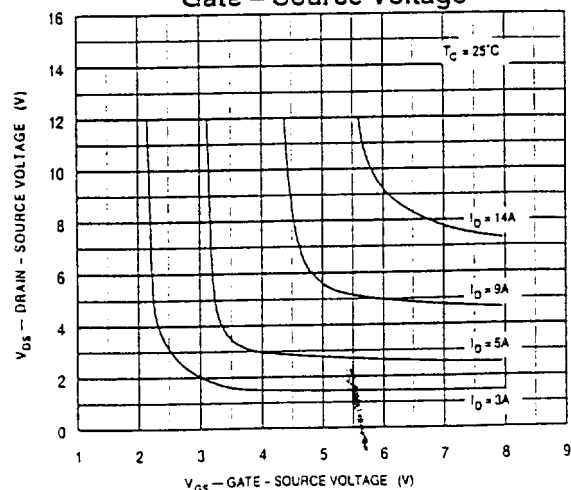
Forward Bias Safe Operating Area



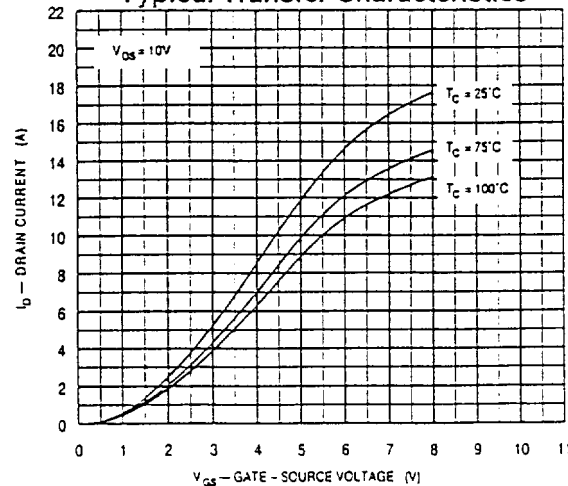
Transconductance

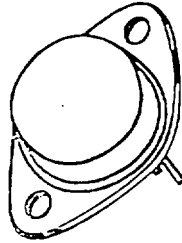


Drain - Source Voltage
vs
Gate - Source Voltage



Typical Transfer Characteristics



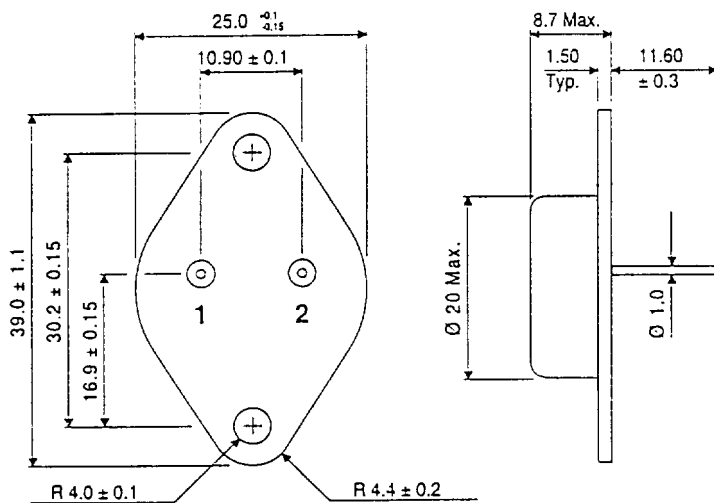


BUZ905D
BUZ906D

MECHANICAL DATA

Dimensions in mm

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

TO-3

Pin 1 – Gate Pin 2 – Drain Case – Source

ABSOLUTE MAXIMUM RATINGS

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

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

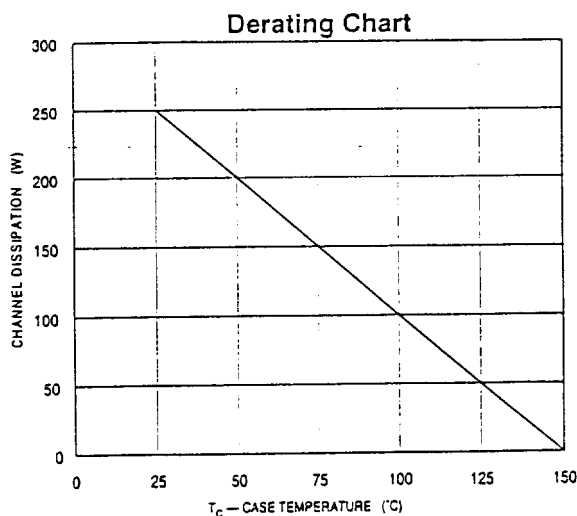
STATIC CHARACTERISTICS ($T_{case} = 25^{\circ}\text{C}$ unless otherwise stated)

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

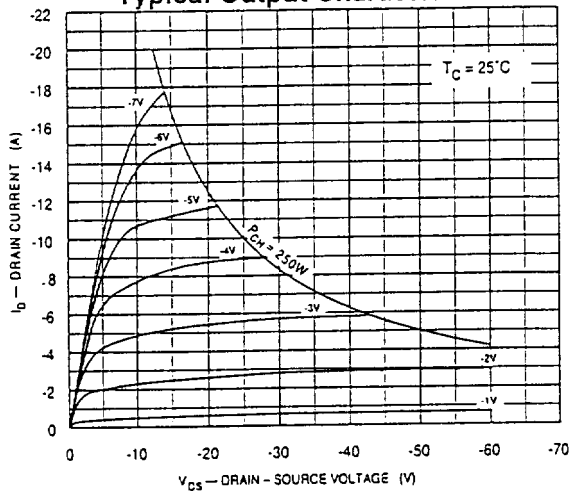
DYNAMIC CHARACTERISTICS ($T_{case} = 25^{\circ}\text{C}$ unless otherwise stated)

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

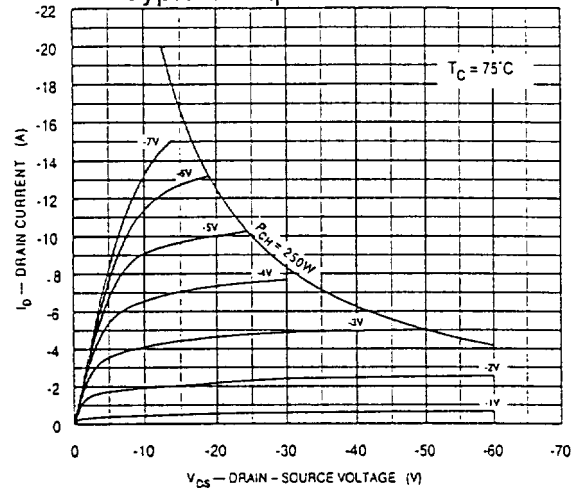
* Pulse Test: Pulse Width = $300\mu\text{s}$, Duty Cycle $\leq 2\%$.



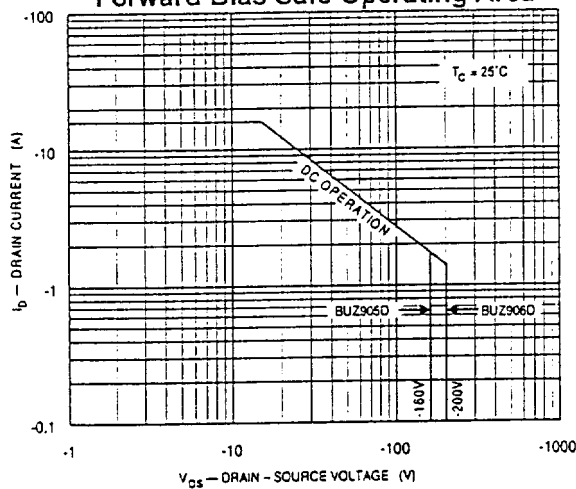
Typical Output Characteristics



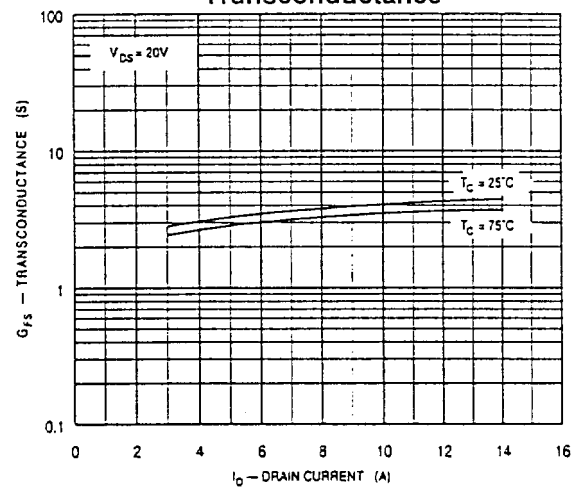
Typical Output Characteristics



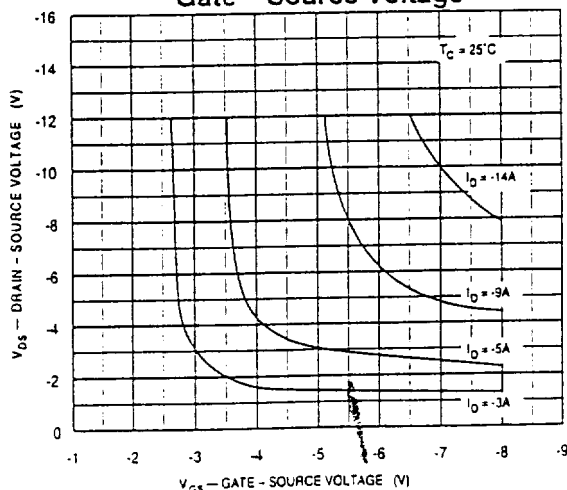
Forward Bias Safe Operating Area



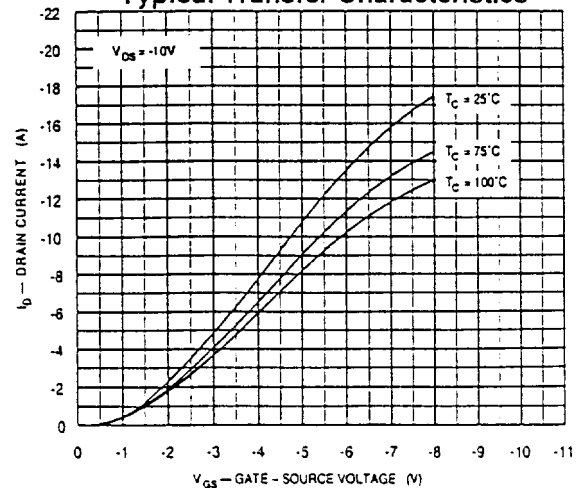
Transconductance

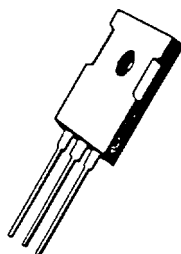


Drain - Source Voltage
vs
Gate - Source Voltage



Typical Transfer Characteristics





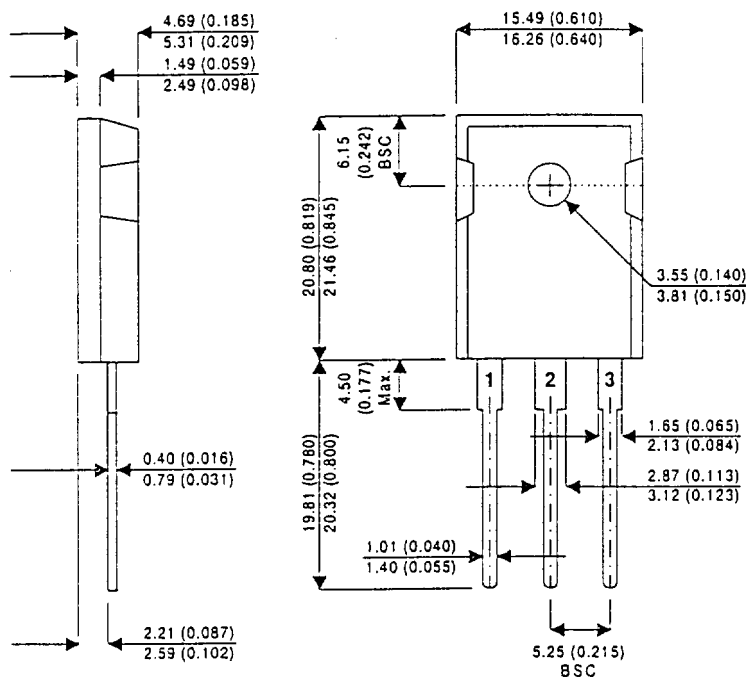
MECHANICAL DATA

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 BUZ905P & BUZ906P



TO-247

Pin 1 – Gate

Pin 2 – Source

Pin 3 – Drain

ABSOLUTE MAXIMUM RATINGS

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

(T _{case} = 25°C unless otherwise stated)		BUZ900P	BUZ901P
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°C	125W	
T _{stg}	Storage Temperature Range	–55 to 150°C	
T _j	Maximum Operating Junction Temperature	150°C	
R _{θJC}	Thermal Resistance Junction – Case	1.0°C/W	

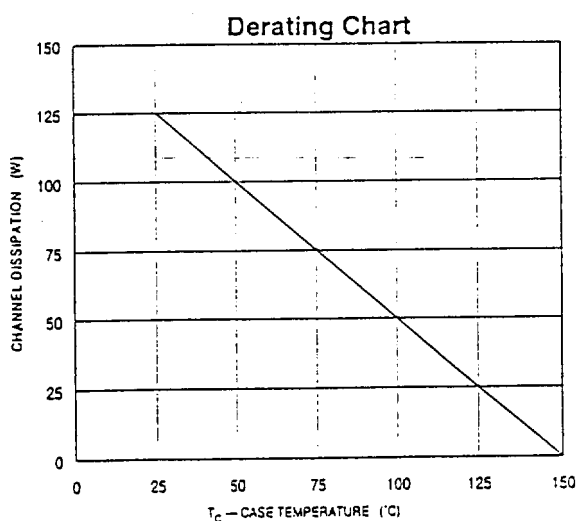
STATIC CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

Characteristic	Test Conditions		Min.	Typ.	Max.	Unit
BV _{DSX} Drain – Source Breakdown Voltage	V _{GS} = -10V I _D = 10mA	BUZ900P	160			V
		BUZ901P	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 BUZ900P			10	mA
		V _{DS} = 200V BUZ901P			10	
yfs* Forward Transfer Admittance	V _{DS} = 10V	I _D = 3A	0.7		2	S

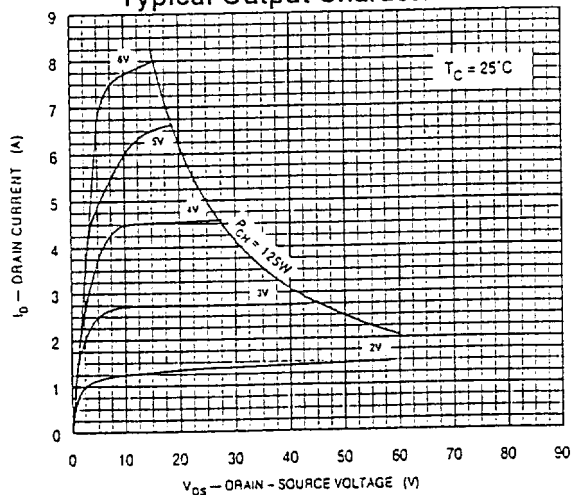
DYNAMIC CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

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		

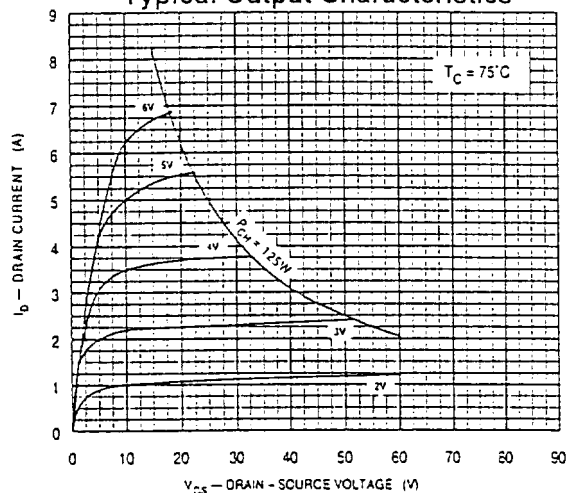
* Pulse Test: Pulse Width = 300μs , Duty Cycle ≤ 2%.



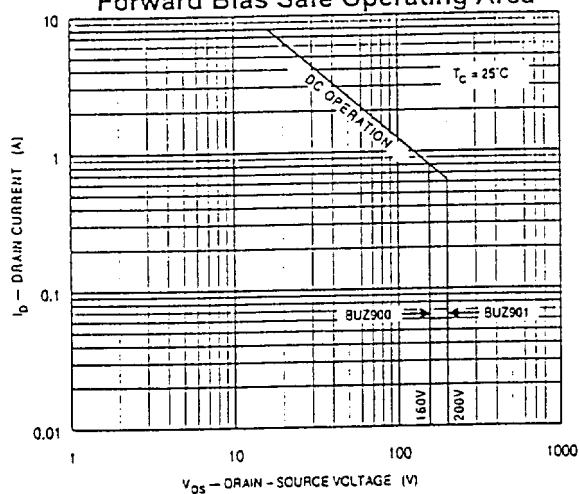
Typical Output Characteristics



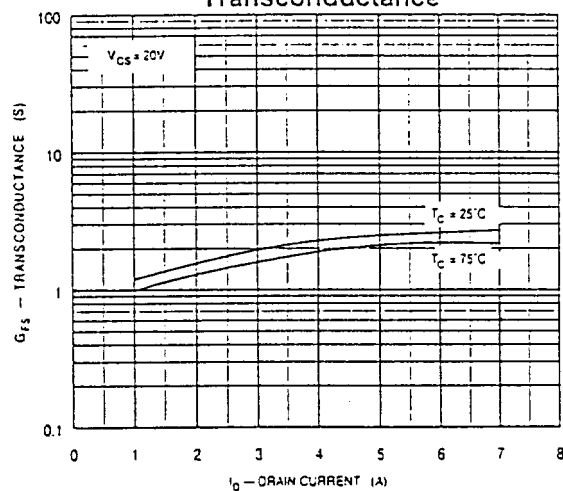
Typical Output Characteristics



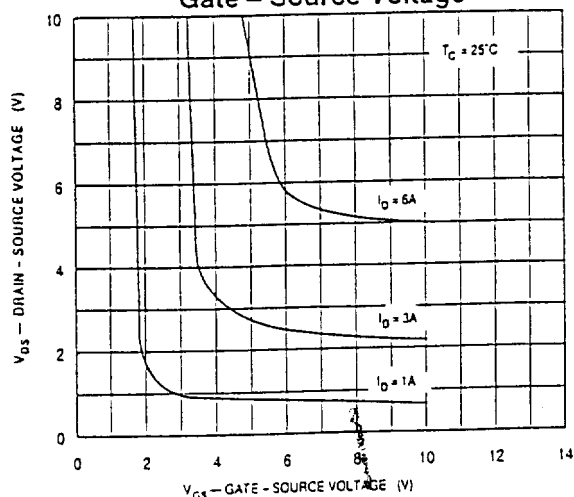
Forward Bias Safe Operating Area



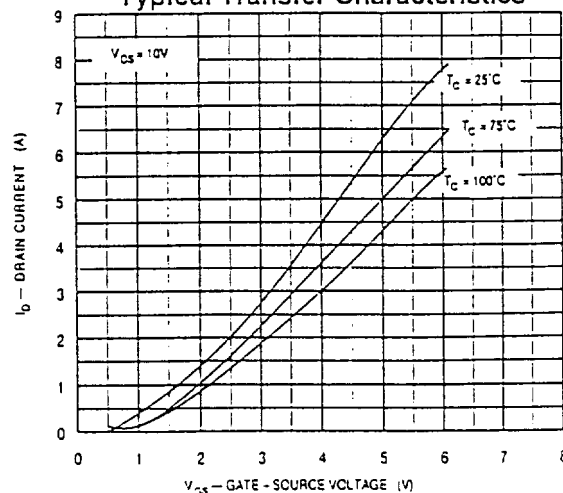
Transconductance

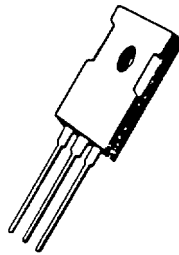


Drain - Source Voltage
vs
Gate - Source Voltage



Typical Transfer Characteristics

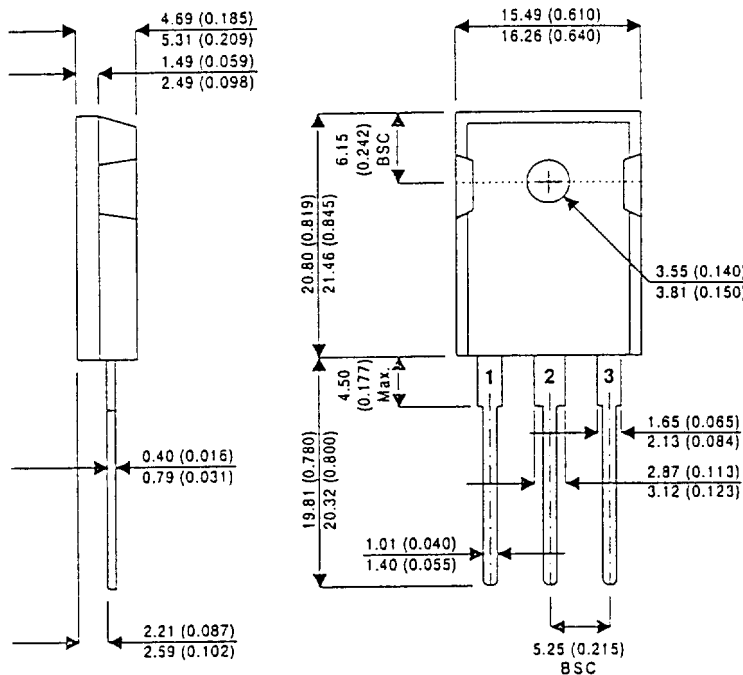




BUZ905P
BUZ906P

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 $150^{\circ}C$	
T_j	Maximum Operating Junction Temperature	$150^{\circ}C$	
$R_{\theta JC}$	Thermal Resistance Junction – Case	$1.0^{\circ}C/W$	

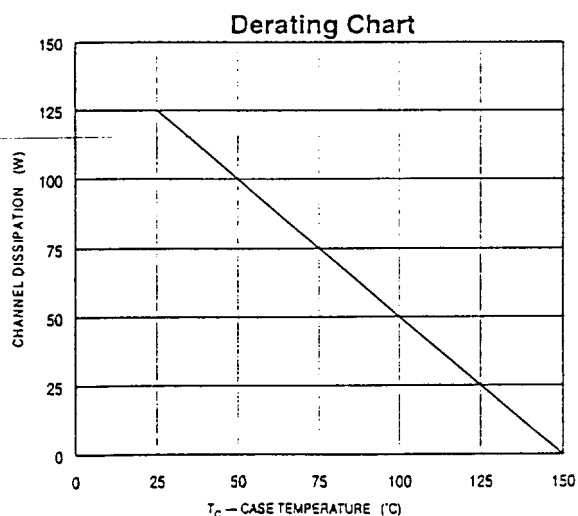
STATIC CHARACTERISTICS ($T_{case} = 25^{\circ}\text{C}$ unless otherwise stated)

Characteristic	Test Conditions		Min.	Typ.	Max.	Unit
BV_{DSX} Drain – Source Breakdown Voltage	$V_{GS} = 10\text{V}$ $I_D = -10\text{mA}$	BUZ905P	-160			V
		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

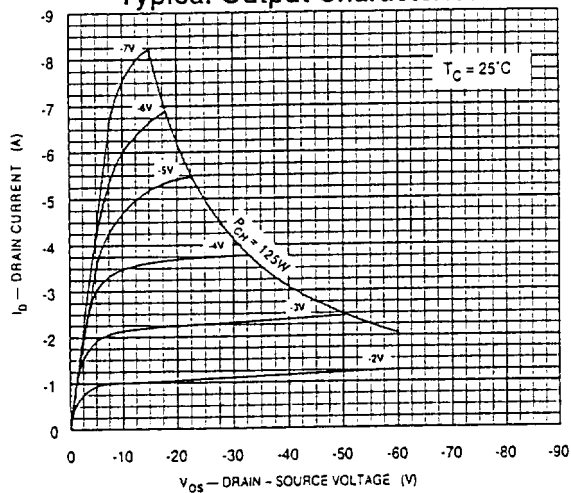
DYNAMIC CHARACTERISTICS ($T_{case} = 25^{\circ}\text{C}$ unless otherwise stated)

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		

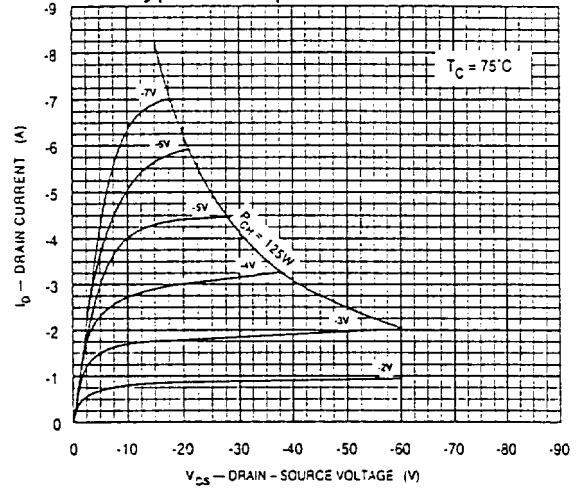
* Pulse Test: Pulse Width = $300\mu\text{s}$, Duty Cycle $\leq 2\%$.



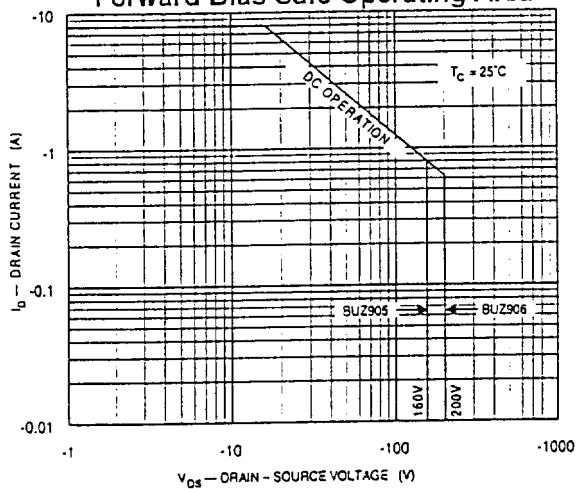
Typical Output Characteristics



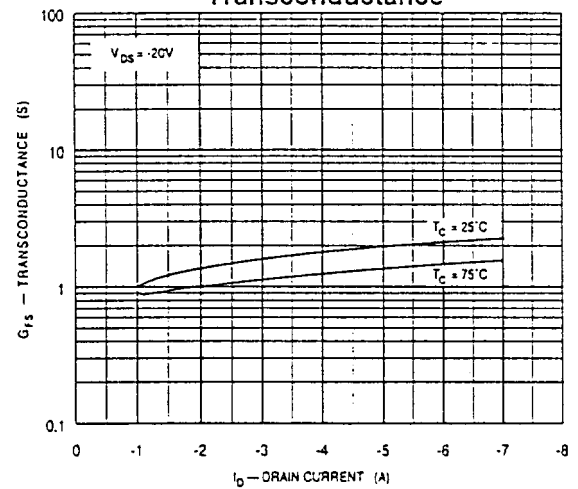
Typical Output Characteristics



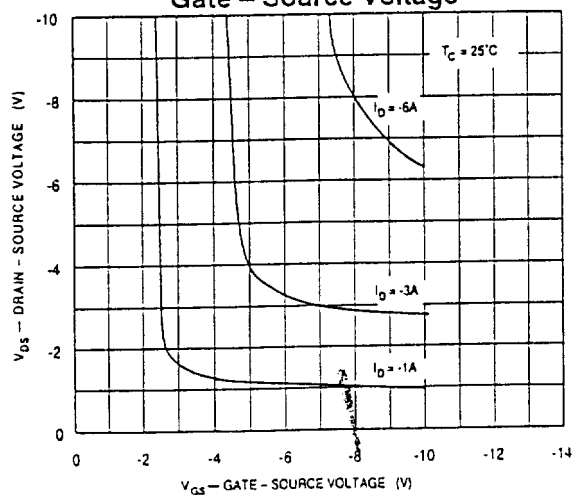
Forward Bias Safe Operating Area



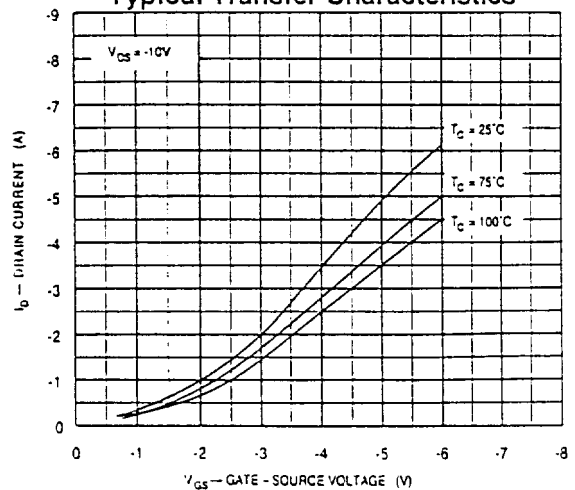
Transconductance

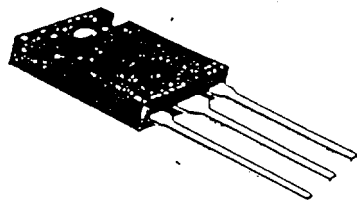


Drain - Source Voltage
vs
Gate - Source Voltage



Typical Transfer Characteristics



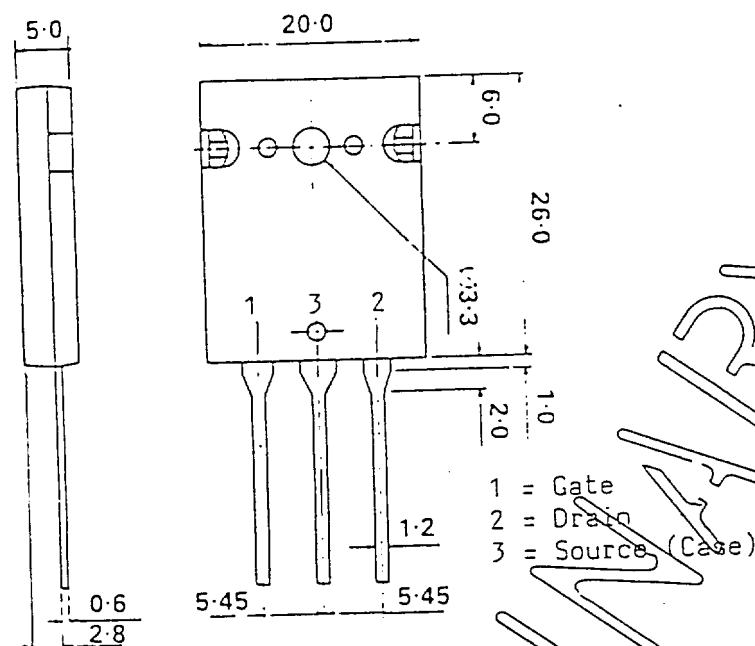


BUZ900DP
BUZ901DP

NEW PRODUCT

MECHANICAL DATA

Dimensions in mm



TO3 PBL (Back of device live to connector)

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 BUZ905DP & BUZ906DP
- DOUBLE DIE PACKAGE FOR MAXIMUM POWER AND HEATSINK SPACE

ABSOLUTE MAXIMUM RATINGS

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

		BUZ900DP	BUZ901DP
V_{DSX}	Drain - Source Voltage	160V	200V
V_{GSS}	Gate - Source Voltage	$\pm 14V$	
I_D	Continuous Drain Current	16A	
$I_{D(PK)}$	Body Drain Diode	16A	
P_D	Total Power Dissipation @ $T_{case} = 25^{\circ}C$	250W	
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	$0.5^{\circ}C/W$	

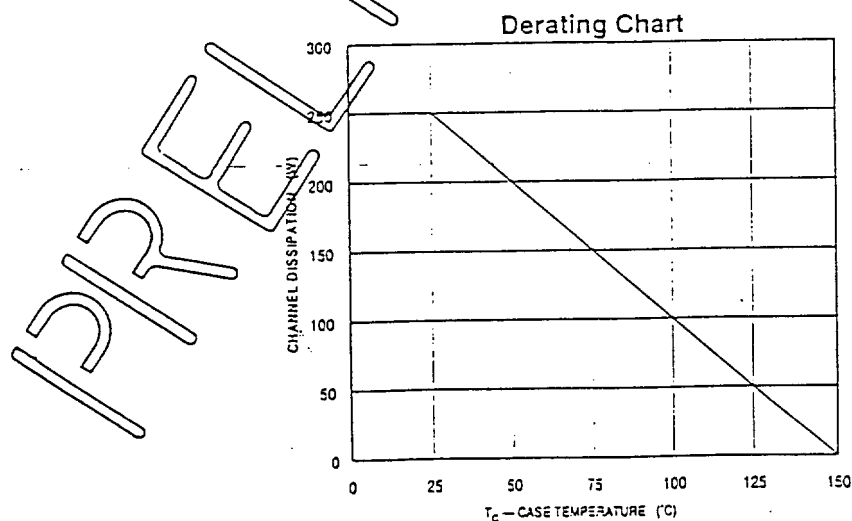
STATIC CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

Characteristic		Test Conditions		Min.	Typ.	Max.	Unit
BV_{DSX}	Drain – Source Breakdown Voltage	$V_{GS} = -10V$ $I_D = 10mA$	BUZ900DP	160			V
			BUZ901DP	200			
BV_{GSS}	Gate – Source Breakdown Voltage	$V_{DS} = 0$	$I_G = \pm 100\mu A$	± 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_{OSX}	Drain – Source Cut-Off Current	$V_{GS} = -10V$	$V_{DS} = 160V$ BUZ900DP			10	mA
			$V_{DS} = 200V$ BUZ901DP			10	
y_{fs}^*	Forward Transfer Admittance	$V_{DS} = 10V$	$I_D = 3A$	1.4		4	S

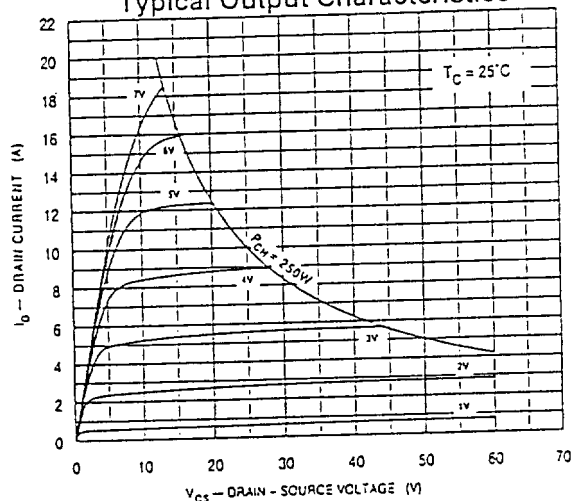
DYNAMIC CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

Characteristic		Test Conditions		Min.	Typ.	Max.	Unit
C_{iss}	Input Capacitance	$V_{GS} = 10V$ $f = 1MHz$			950		pF
C_{oss}	Output Capacitance				550		
C_{rss}	Reverse Transfer Capacitance				18		
t_{on}	Turn-on Time	$V_{DS} = 20V$ $I_D = 7A$			160		ns
t_{off}	Turn-off Time				80		

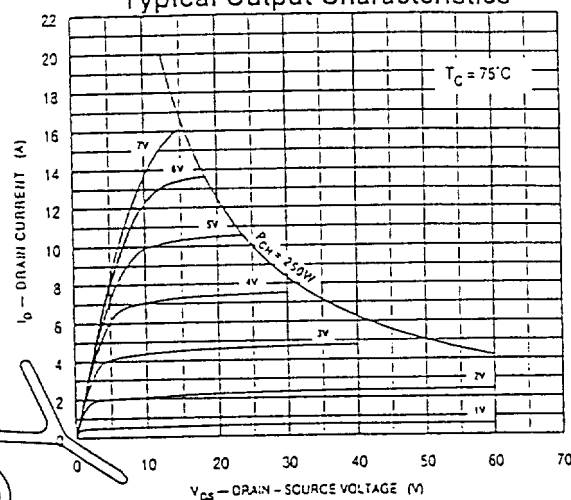
* Pulse Test: Pulse Width = 300 μs , Duty Cycle $\leq 2\%$.



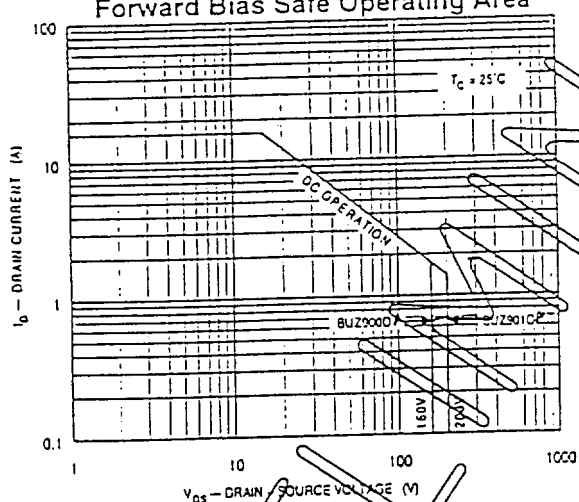
Typical Output Characteristics



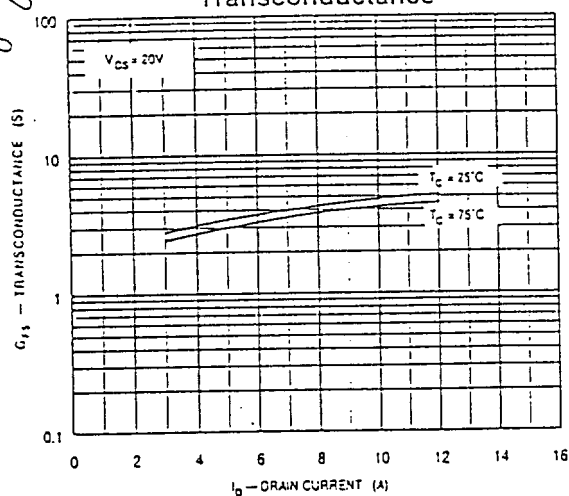
Typical Output Characteristics



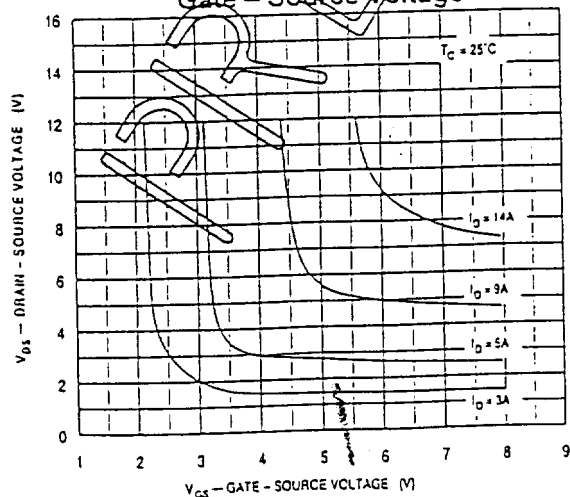
Forward Bias Safe Operating Area



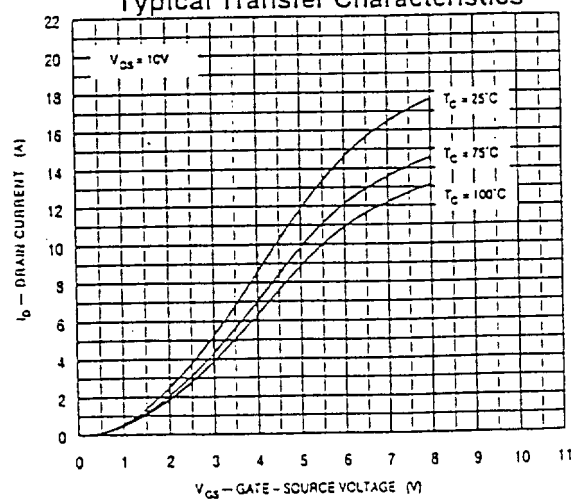
Transconductance

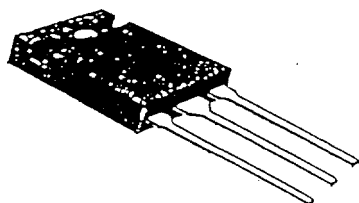


Drain-Source Voltage
Gate-Source Voltage



Typical Transfer Characteristics



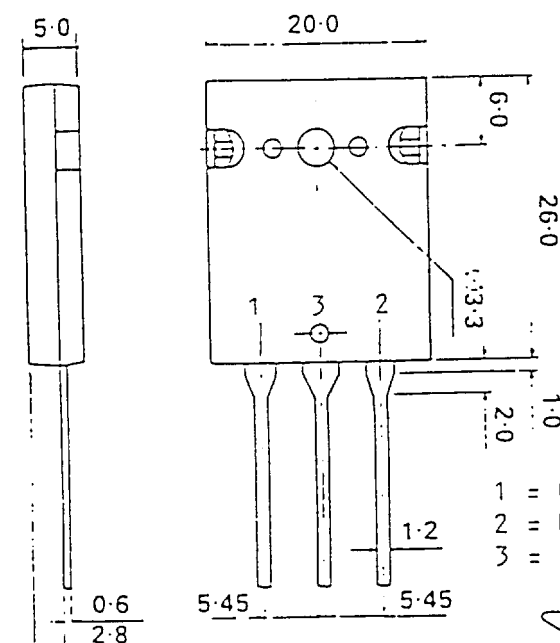


BUZ905DP
BUZ906DP

NEW PRODUCT

MECHANICAL DATA

Dimensions in mm



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 BUZ900DP & BUZ901DP
- DOUBLE DIE PACKAGE FOR MAXIMUM POWER AND HEATSINK SPACE

TO3 PBL (Back of device live to connector)

ABSOLUTE MAXIMUM RATINGS

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

		BUZ905DP	BUZ906DP
V_{DSX}	Drain - Source Voltage	-160V	-200V
V_{GSS}	Gate - Source Voltage	$\pm 14V$	
I_D	Continuous Drain Current	-16A	
$I_{D(PK)}$	Body Drain Diode	-16A	
P_D	Total Power Dissipation @ $T_{case} = 25^{\circ}C$	250W	
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	$0.5^{\circ}C/W$	

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

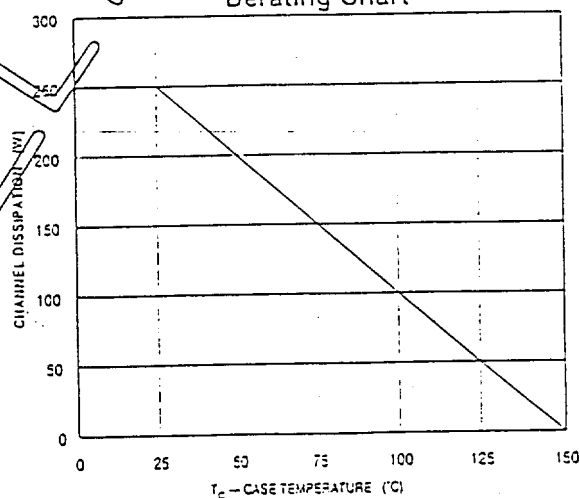
Characteristic	Test Conditions		Min.	Typ.	Max.	Unit
V_{DSX} Drain – Source Breakdown Voltage	$V_{GS} = 10V$ $I_D = -10mA$	BUZ905DP	-160			V
		BUZ906DP	-200			
V_{GSS} Gate – Source Breakdown Voltage	$V_{DS} = 0$	$I_G = \pm 100\mu A$	± 14			V
$V_{GS(OFF)}$ Gate – Source Cut-Off Voltage	$V_{DS} = -10V$	$I_D = -100mA$	-0.1		-1.5	V
$V_{DS(SAT)}^*$ Drain – Source Saturation Voltage	$V_{GS} = 0$	$I_D = -16A$			-12	V
I_{OSX} Drain – Source Cut-Off Current	$V_{GS} = 10V$	$V_{DS} = -160V$ BUZ905DP			-10	mA
		$V_{DS} = -200V$ BUZ906DP			-10	
y_{fs}^* Forward Transfer Admittance	$V_{DS} = -10V$	$I_D = -3A$	1.4		4	S

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

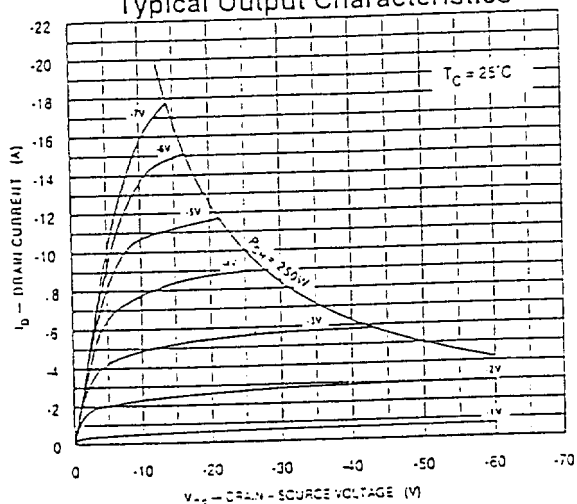
Characteristic	Test Conditions	Min.	Typ.	Max.	Unit
C_{iss} Input Capacitance	$V_{GS} = 10V$ $f = 1MHz$		1900		pF
C_{oss} Output Capacitance			900		
C_{rss} Reverse Transfer Capacitance			60		
t_{on} Turn-on Time	$V_{GS} = 20V$		150		ns
t_{off} Turn-off Time	$I_D = 7A$		110		

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

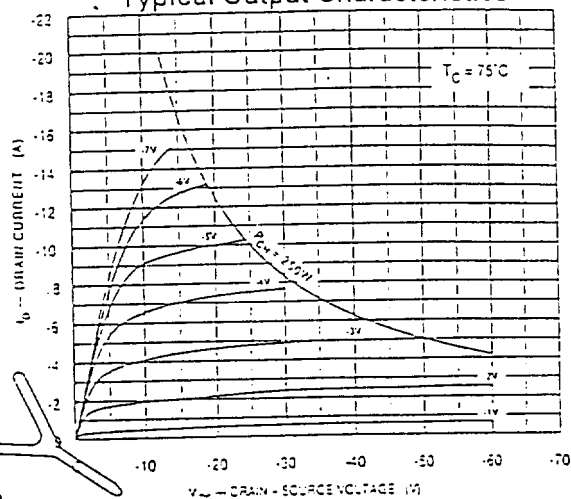
Derating Chart



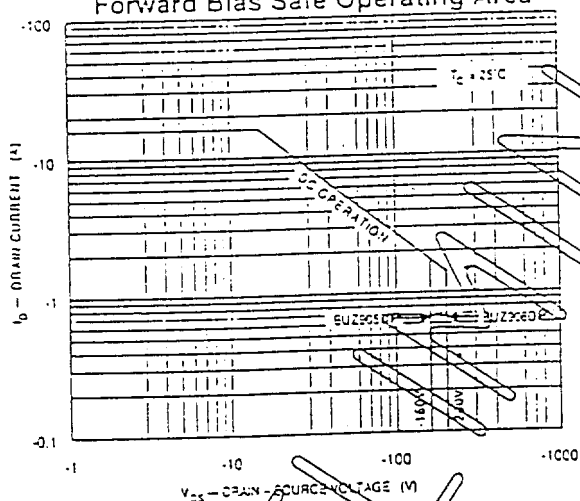
Typical Output Characteristics



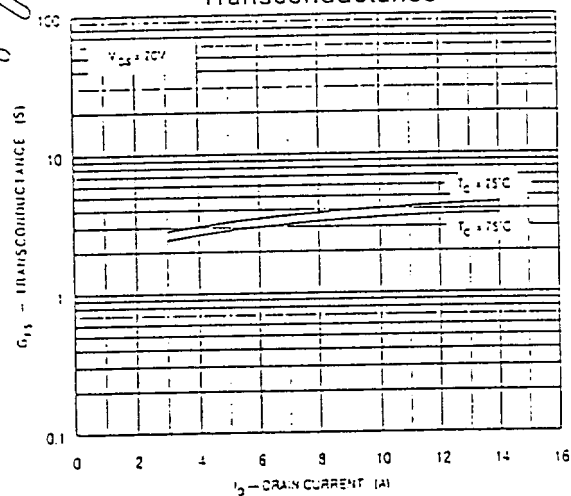
Typical Output Characteristics



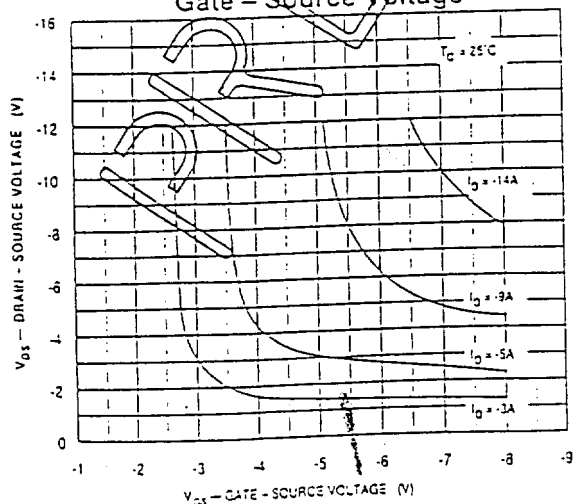
Forward Bias Safe Operating Area



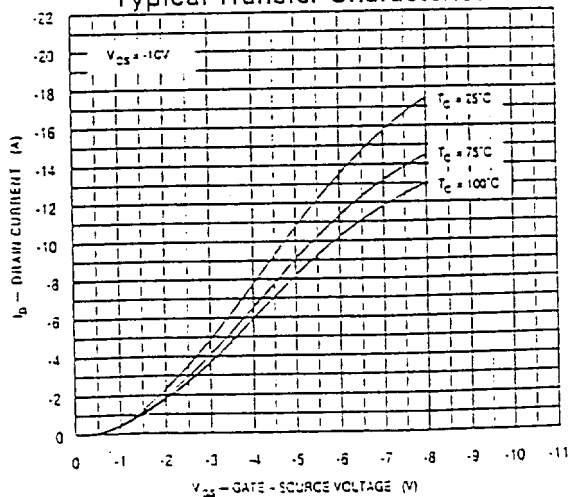
Transconductance

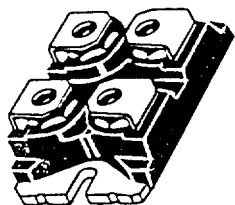


Drain - Source Voltage
Gate - Source Voltage



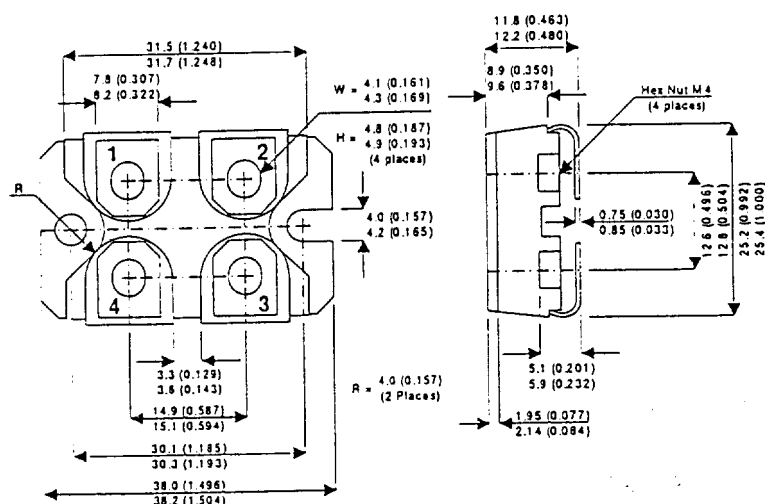
Typical Transfer Characteristics





MECHANICAL DATA

Dimensions in mm (inches)



SOT227

Pin 1	— Drain
Pin 2	— Source
Pin 3	— Gate
Pin 4	— Drain

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

ABSOLUTE MAXIMUM RATINGS

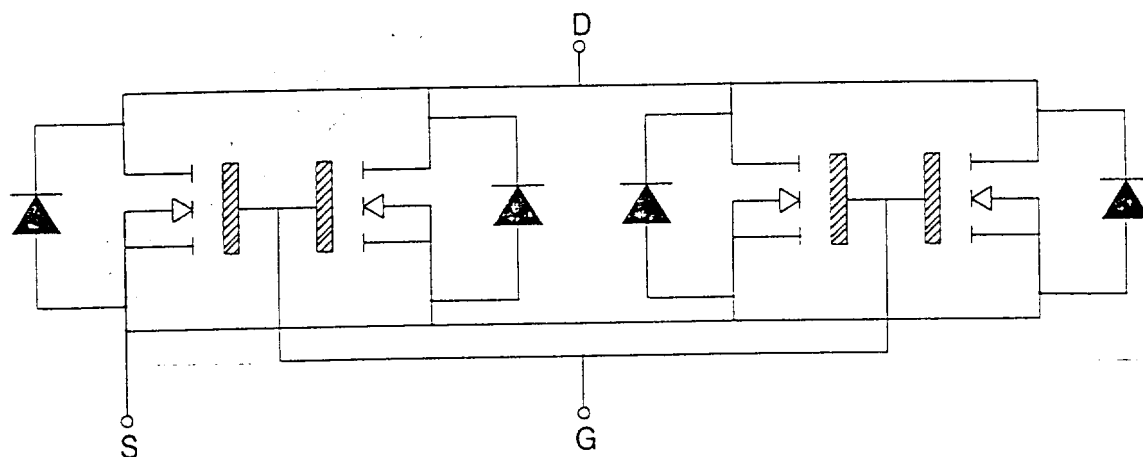
($T_{case} = 25^{\circ}C$ unless otherwise stated)

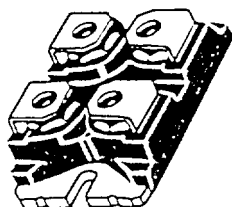
		BUZ900X4S	BUZ901X4S
V_{DSX}	Drain – Source Voltage	160V	200V
V_{GS}	Gate – Source Voltage		$\pm 14V$
I_D	Continuous Drain Current		32A
$I_{D(PK)}$	Body Drain Diode		32A
P_D	Total Power Dissipation @ $T_{case} = 25^{\circ}C$		500W
T_{stg}	Storage Temperature Range		-55 to $150^{\circ}C$
T_j	Maximum Operating Junction Temperature		$150^{\circ}C$
$R_{\theta JC}$	Thermal Resistance Junction – Case		$0.3^{\circ}C/W$

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

	Characteristic	Test Conditions		Min.	Typ.	Max.	Unit
BV _{DSX}	Drain – Source Breakdown Voltage	V _{GS} = -10V	BUZ900X4S	160			V
		I _D = 10mA	BUZ901X4S	200			
BV _{GSS}	Gate – Source Breakdown Voltage	V _{DS} = 0	I _G = $\pm 100\mu A$	± 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 = 32A			12	V
I _{DSX}	Drain – Source Cut-Off Current	V _{GS} = -10V				10	mA
		V _{DS} = 160V	BUZ900X4S			10	mA
		V _{DS} = 200V	BUZ901X4S				
yfs*	Forward Transfer Admittance	V _{DS} = 10V	I _D = 5A	2		6	S
C _{iss}	Input Capacitance	V _{DS} = 10V	f = 1MHz		TBE		pF
C _{oss}	Output Capacitance				TBE		
C _{rss}	Reverse Transfer Capacitance				TBE		
t _{on}	Turn-on Time	V _{DS} = 20V	I _D = 7A		TBE		nS
t _{off}	Turn-off Time				TBE		

* Pulse Test: Pulse Width = 300 μ S , Duty Cycle $\leq$ 2%





BUZ905X4S
BUZ906X4S

NEW PRODUCT UNDER DEVELOPMENT

MECHANICAL DATA

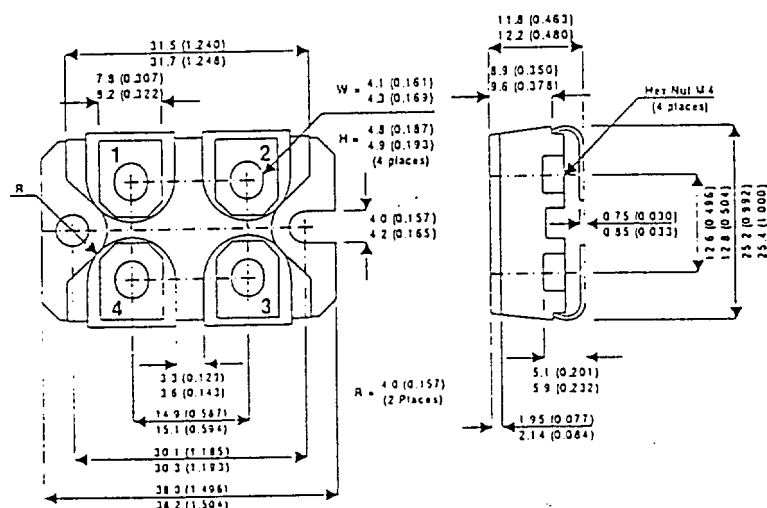
Dimensions in mm (inches)

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



SOT227

Pin 1 – Drain
Pin 2 – Source
Pin 3 – Gate
Pin 4 – Drain

ABSOLUTE MAXIMUM RATINGS

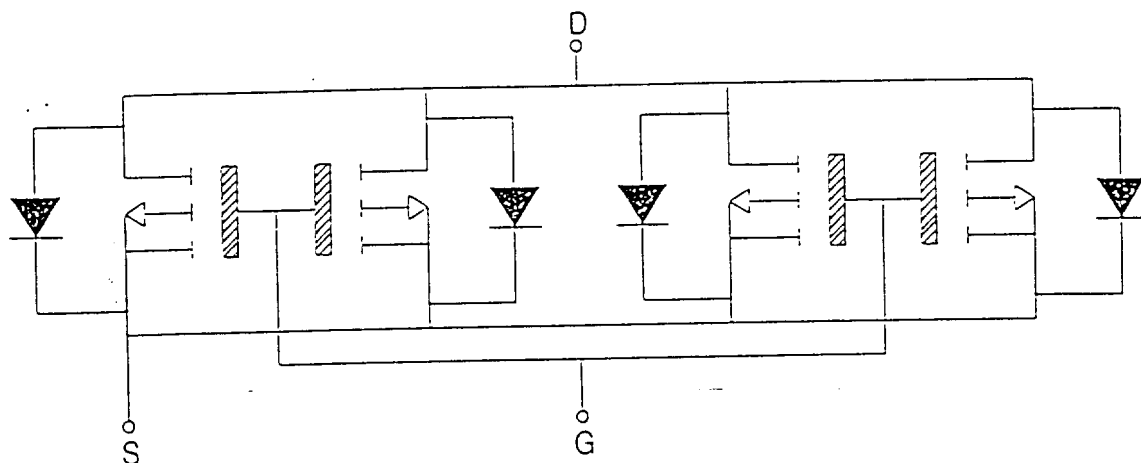
($T_{\text{case}} = 25^{\circ}\text{C}$ unless otherwise stated)

(T _{case} = 25°C unless otherwise stated)		BUZ905X4S	BUZ906X4S
V _{DSX}	Drain – Source Voltage	–160V	–200V
V _{GS}	Gate – Source Voltage		±14V
I _D	Continuous Drain Current		–32A
I _{D(PK)}	Body Drain Diode		–32A
P _D	Total Power Dissipation @ T _{case} = 25°C		500W
T _{stg}	Storage Temperature Range		–55 to 150°C
T _j	Maximum Operating Junction Temperature		150°C
R _{θJC}	Thermal Resistance Junction – Case		0.3°C/W

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

	Characteristic	Test Conditions	Min.	Typ.	Max.	Unit
BV _{DSX}	Drain – Source Breakdown Voltage	V _{GS} = 10V I _D = -10mA	-160			V
			-200			
BV _{GSS}	Gate – Source Breakdown Voltage	V _{DS} = 0 I _G = $\pm 100\mu A$	± 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 = -32A			-12	V
I _{OSX}	Drain – Source Cut-Off Current	V _{GS} = 10V			-10	mA
		V _{DS} = -160V			-10	mA
		V _{DS} = -200V			-10	mA
y _{fs} *	Forward Transfer Admittance	V _{DS} = -10V I _D = -5A	2		6	S
C _{iss}	Input Capacitance	V _{DS} = -10V f = 1MHz		TBE		pF
C _{oss}	Output Capacitance			TBE		
C _{rss}	Reverse Transfer Capacitance			TBE		
t _{on}	Turn-on Time	V _{DS} = -20V I _D = -7A		TBE		nS
t _{off}	Turn-off Time			TBE		

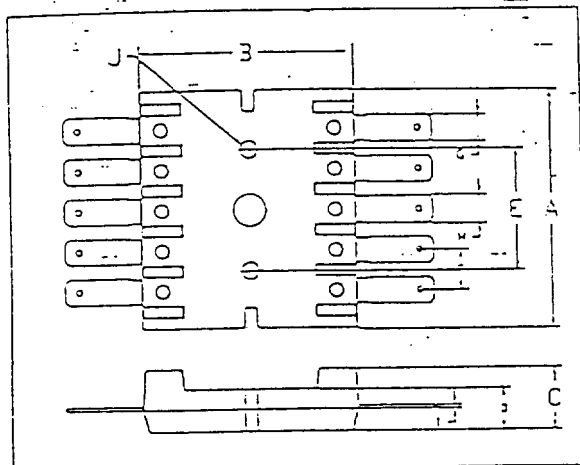
* Pulse Test: Pulse Width = 300 μ S , Duty Cycle $\leq$ 2%



NEW PRODUCT UNDER DEVELOPMENT

MECHANICAL DATA

Dimensions in mm (inches)



Case 4

Dimension	Millimeters
A	57
B	51
C	14
D	10
E	30
F	10
G	8.25
H	7
I	0.3
J	4.25

COMPLEMENTARY POWER MOSFET

POWER MOSFETS FOR
AUDIO APPLICATIONS

FEATURES

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

ABSOLUTE MAXIMUM RATINGS

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

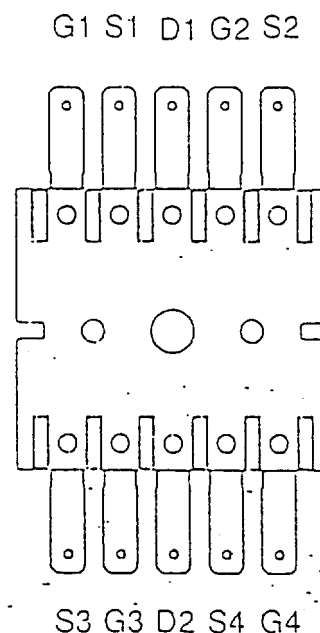
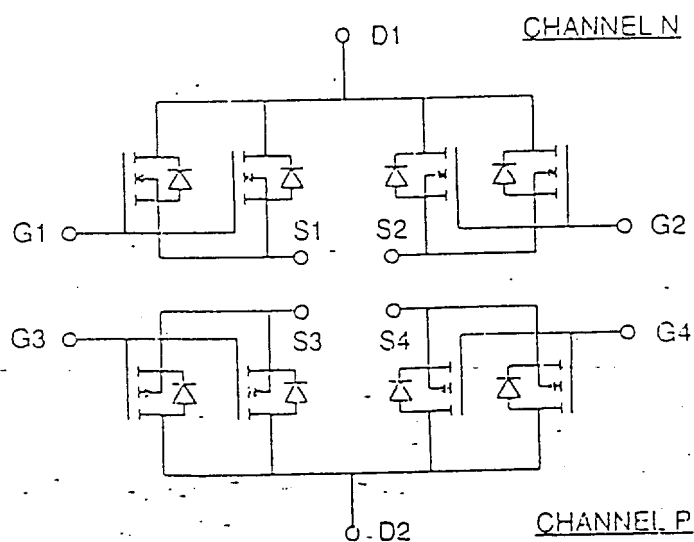
		LC32016-C4	LC32020-C4
V_{DSX}	Drain - Source Voltage	160V	200V
V_{GS}	Gate - Source Voltage	$\pm 14V$	
I_D	Continuous Drain Current	32A	
$I_{D(PK)}$	Body Drain Diode	32A	
P_D	Total Power Dissipation @ $T_{case} = 25^{\circ}C$	500W	
T_{stg}	Storage Temperature Range	-55 to $150^{\circ}C$	
T_j	Maximum Operating Junction Temperature	$150^{\circ}C$	
$R_{\theta JC}$	Thermal Resistance Junction - Case	$0.3^{\circ}C/W$	

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

	Characteristic	Test Conditions	Min.	Typ.	Max.	Unit
BV_{DSX}	Drain - Source Breakdown Voltage	$V_{GS} = -10V$ $I_D = 10mA$	150 200			V
BV_{GSS}	Gate - Source Breakdown Voltage	$V_{DS} = 0$ $I_G = \pm 100\mu A$	± 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	$V_{GD} = 0$ $I_D = 32A$			12	V
I_{DSX}	Drain - Source Cut-Off Current	$V_{GS} = -10V$ $V_{DS} = 160V$ $V_{DS} = 200V$			10 10	mA mA
y_{fs}	Forward Transfer Admittance	$V_{DS} = 10V$ $I_D = 5A$	2		6	S
C_{iss}	Input Capacitance	$V_{DS} = 10V$ $f = 1MHz$		TBE		pF
C_{oss}	Output Capacitance			TBE		
C_{rss}	Reverse Transfer Capacitance			TBE		
t_{on}	Turn-on Time	$V_{DS} = 20V$ $I_D = 7A$		TBE		nS
t_{off}	Turn-off Time			TBE		

* Pulse Test: Pulse Width = 300 μ S, Duty Cycle $\leq 2\%$

REVERSE POLARITY FOR P-CHANNEL





MINT-LB32N16
MINT-LB32N20

NEW PRODUCT UNDER DEVELOPMENT

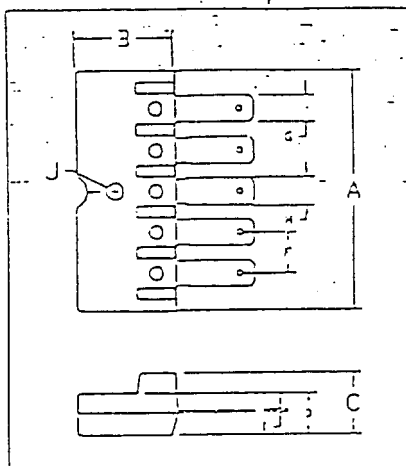
Description: DOUBLE MODULE WITH LATERAL MOSFETS

MECHANICAL DATA

Dimensions in mm (inches)

N-CHANNEL POWER MOSFET

POWER MOSFETS FOR
AUDIO APPLICATIONS



Case 2

Dimension	Millimeters
A	57
B	24
C	12
D	10
E	—
F	10
G	6.35
H	7
I	0.8
J	4.25

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

ABSOLUTE MAXIMUM RATINGS

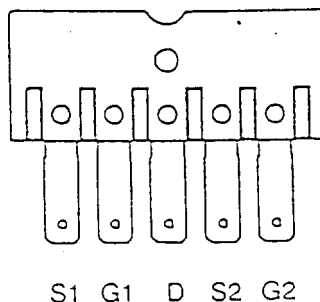
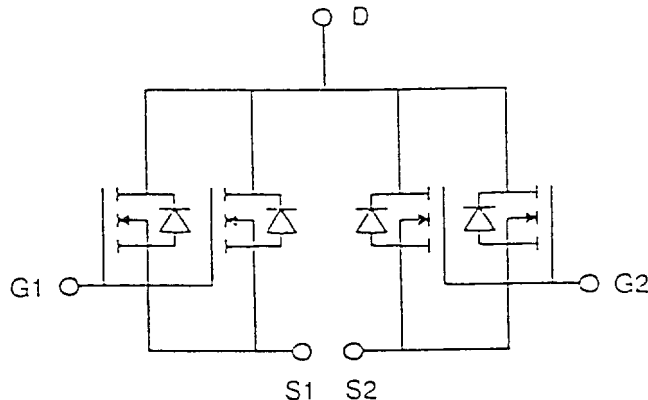
($T_{case} = 25^{\circ}C$ unless otherwise stated)

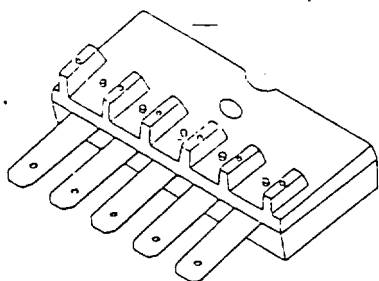
		LB32N16	LB32N20
V_{DSX}	Drain - Source Voltage	160V	200V
V_{GS}	Gate - Source Voltage	$\pm 14V$	
I_D	Continuous Drain Current	32A	
$I_{D(PK)}$	Body Drain Diode	32A	
P_D	Total Power Dissipation @ $T_{case} = 25^{\circ}C$	500W	
T_{stg}	Storage Temperature Range	-55 to $150^{\circ}C$	
T_j	Maximum Operating Junction Temperature	$150^{\circ}C$	
$R_{\theta JC}$	Thermal Resistance Junction - Case	$0.3^{\circ}C/W$	

NEW PRODUCT UNDER DEVELOPMENT

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

	Characteristic	Test Conditions	Min.	Typ.	Max.	Unit
V_{DSX}	Drain - Source Breakdown Voltage	$V_{GS} = -10V$ $I_D = 10mA$	160 [*] 200			V
V_{GSS}	Gate - Source Breakdown Voltage	$V_{DS} = 0$ $I_G = \pm 100\mu A$	± 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	$V_{GD} = 0$ $I_D = 32A$			12	V
I_{DSX}	Drain - Source Cut-Off Current	$V_{GS} = -10V$ $V_{DS} = 160V$ $V_{DS} = 200V$			10 10	mA mA
Y_{fs}^*	Forward Transfer Admittance	$V_{DS} = 10V$ $I_D = 5A$	2		6	S
C_{iss}	Input Capacitance	$V_{DS} = 10V$ $f = 1MHz$		TBE		
C_{oss}	Output Capacitance			TBE		pF
C_{rss}	Reverse Transfer Capacitance			TBE		
t_{on}	Turn-on Time	$V_{DS} = 20V$ $I_D = 7A$		TBE		nS
t_{off}	Turn-off Time			TBE		

^{*} Pulse Test: Pulse Width = 300 μ S, Duty Cycle $\leq$ 2%




MNT-LB32P16
MNT-LB32P20

NEW PRODUCT UNDER DEVELOPMENT

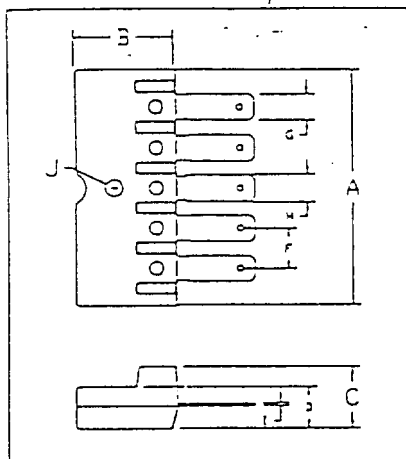
MECHANICAL DATA

Dimensions in mm (inches)

Description : DOUBLE MODULE WITH LATERAL MOSFETS

P-CHANNEL POWER MOSFET

POWER MOSFETS FOR
AUDIO APPLICATIONS



Case 2

Dimension	Millimeters
A	57
B	24
C	14
D	10
E	—
F	10
G	8.35
H	7
I	0.8
J	4.25

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

ABSOLUTE MAXIMUM RATINGS

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

		LB32P16	LB32P20
V_{DSX}	Drain - Source Voltage	-160V	-200V
V_{GS}	Gate - Source Voltage		$\pm 14V$
I_D	Continuous Drain Current		-32A
$I_{D(PK)}$	Body Drain Diode		-32A
P_D	Total Power Dissipation @ $T_{case} = 25^{\circ}C$		500W
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		$0.3^{\circ}C/W$

NEW PRODUCT UNDER DEVELOPMENT

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

	Characteristic	Test Conditions	Min.	Typ.	Max.	Unit
BV_{DSX}	Drain - Source Breakdown Voltage	$V_{GS} = 10V$ $I_D = -10mA$	-160 -200			V
BV_{GSS}	Gate - Source Breakdown Voltage	$V_{DS} = 0$ $I_G = \pm 100\mu A$	± 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	$V_{GD} = 0$ $I_D = -32A$			-12	V
I_{DSX}	Drain - Source Cut-Off Current	$V_{GS} = 10V$ $V_{DS} = -160V$ $V_{DS} = -200V$			-10 -10	mA mA
y_{fs}^*	Forward Transfer Admittance	$V_{DS} = -10V$ $I_D = -5A$	2		6	S
C_{iss}	Input Capacitance	$V_{DS} = -10V$ $f = 1MHz$		TBE		pF
C_{oss}	Output Capacitance			TBE		
C_{rss}	Reverse Transfer Capacitance			TBE		
t_{on}	Turn-on Time	$V_{DS} = -20V$ $I_D = -7A$		TBE		nS
t_{off}	Turn-off Time			TBE		

* Pulse Test: Pulse Width = 300 μ S , Duty Cycle $\leq$ 2%

