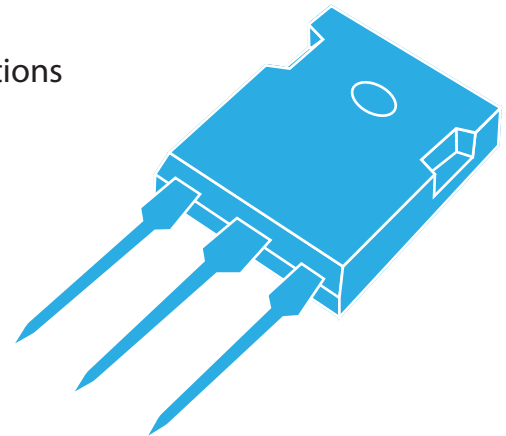


## P CHANNEL LATERAL MOSFET

### P Channel Lateral Mosfet

- Designed specifically for linear audio amplifier applications
- High-speed for high bandwidth amplifiers
- Reduced  $V_{ds\ sat}$
- High voltage rating - 200V
- TO-247 plastic package
- Enhanced oscillation suppression in multi-device applications
- Complementary N-channel available – ECX10N20



### ABSOLUTE MAXIMUM RATINGS

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

$V_{DSS}$	Drain – Source Voltage	-200V
$V_{GSS}$	Gate – Source Voltage	+/-14V
$I_D$	Continuous Drain Current	-8A
$I_{DR}$	Body Drain Diode Current	-8A
$P_D$	Allowable Power Dissipation* $T_{case} = 25^\circ\text{C}$	125W
$T_{ch}$	Channel Temperature	150°C
$T_{stg}$	Storage Temperature Range	-55 to +150°C

\*Thermal Resistance, Junction To Case      1.0°C/W

## ELECTRICAL CHARACTERISTICS (TC = 25°C unless otherwise stated)

Symbols	Parameters	Test Conditions		Min.	Typ	Max.	Units
$BV_{DSX}$	Drain-Source Breakdown Voltage	$V_{GS} = 10V$	$I_D = -10mA$	-200			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	$V_{GD} = 0$	$I_D = -8A$			-10	V
$ y_{fs} ^*$	Forward Transfer Admittance	$V_{DS} = 10V$	$I_{DS} = *3A$	0.7		2	S( $\Omega$ )
$I_{DSX}$	Drain-Source Cut-Off Current	$V_{GS} = 10V$	$V_{DS} = *200V$			-10	mA

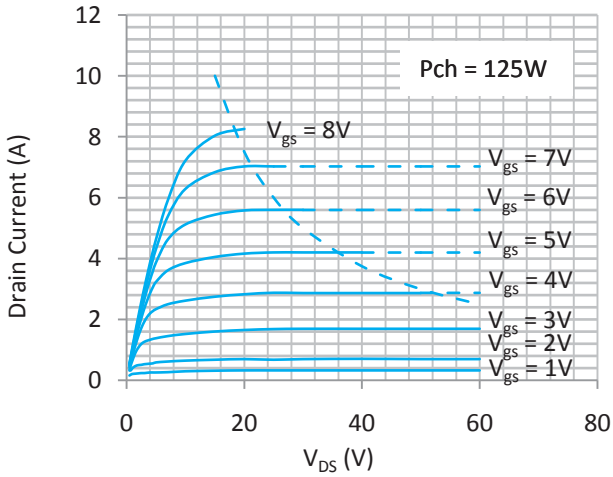
\* Pulse Test: Pulse Width = 300 $\mu$ s, Duty Cycle  $\leq$  2%

## DYNAMIC CHARACTERISTICS

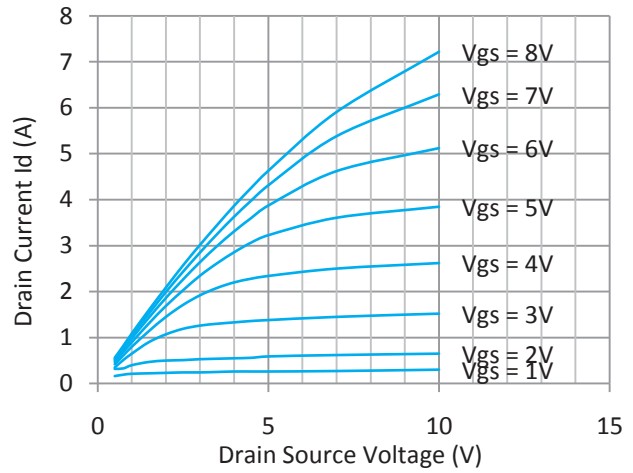
Symbols	Parameters	Test Conditions		Min.	Typ	Max.	Units
$C_{iss}$	Input Capacitance				500		pF
$C_{oss}$	Output Capacitance	$V_{GS} = 0$			300		pF
$C_{rss}$	Reverse Transfer Capacitance	$V_{DS} = 10V$	$f = 1.0MHz$		10		pF
$t_{on}$	Turn-On Time	$V_{DS} = -20V$			100		ns
$t_{off}$	Turn-Off Time	$I_D = -7A$			50		ns

## GENERAL CHARACTERISTICS (T = 25°C unless otherwise stated)

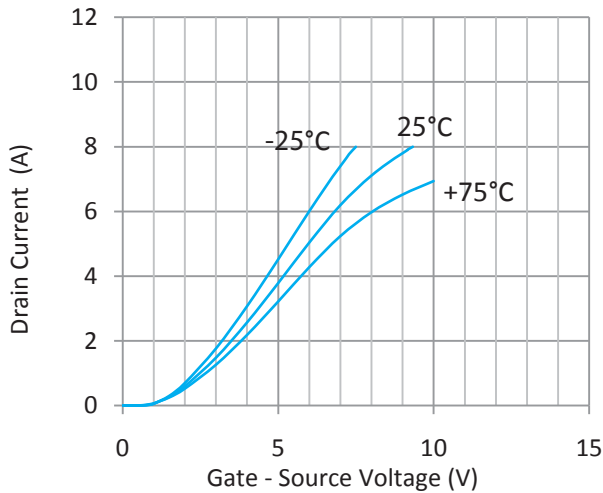
Typical Output Characteristics



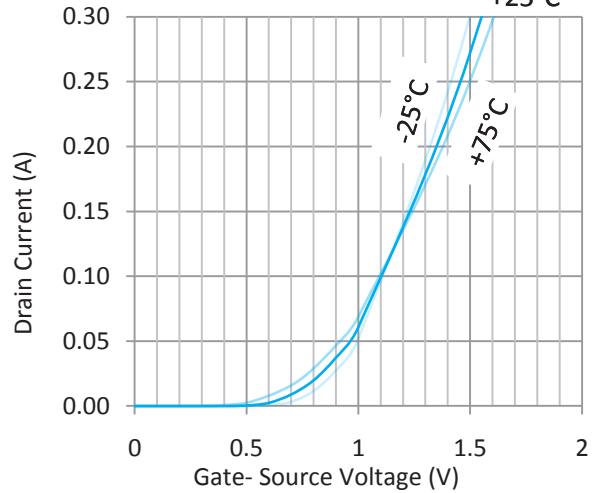
Typical Output Characteristics



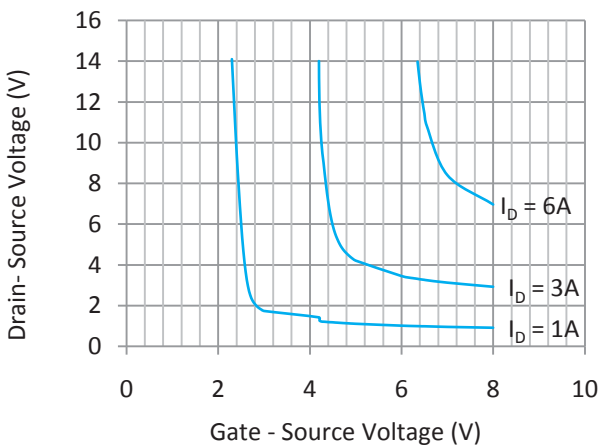
Transfer Characteristic



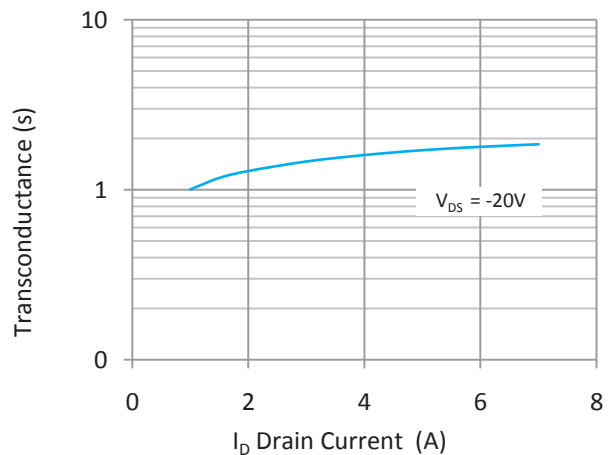
Transfer Characteristic



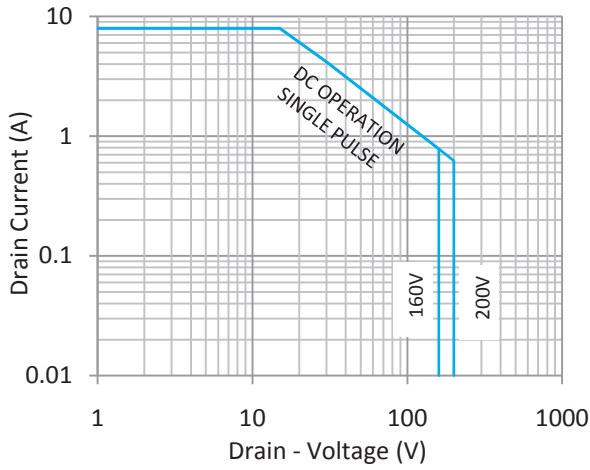
Drain - Source Voltage vs Gate - Source Voltage



Transconductance



Safe Operating Area



Typical Capacitance vs Gate -Source Voltage

$V_{DS} = 10$   
 $f = 1 \text{ MHz}$

