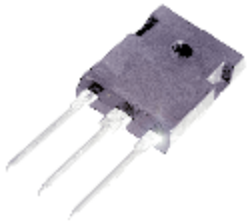
N Channel Lateral Mosfet



- Designed specifically for linear audio amplifier applications
- High-speed for high bandwidth amplifiers
- High voltage rating - 160V
- TO-247 plastic package
- Enhanced oscillation suppression in multi-device applications
- Complementary P-channel available – ECX08P16-Z

ABSOLUTE MAXIMUM RATINGS

(T_C = 25°C unless otherwise stated)

V_{DSS}	Drain – Source Voltage		160V
V_{GSS}	Gate – Source Voltage		+/- 20V
I_D	Continuous Drain Current		8A
I_{DR}	Body Drain Diode Current		8A
P_D	Allowable Power Dissipation*	T_{case} = 25°C	125W
T_{ch}	Channel Temperature		150°C
T_{stg}	Storage Temperature Range		-55 to +150°C

*Thermal Resistance, Junction To Case 1.0 deg/watt

WARNING: These lateral mosfets do not include a G-S protection network and care must therefore be taken with static handling precautions and the appropriate protection in the amplifier circuit.

ELECTRICAL CHARACTERISTICS (T_C = 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	160			V
I_{GSS}	Gate-Source Leakage Current	V_{DS} = 0 V_{GS} = ±20V			100	µA
$V_{GS(off)}$	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 = 16A			12	V
$\|y_{fs}\|$*	Forward Transfer Admittance	V_{DS} = 10V I_{DS} = 3A	0.7		2	S(℧)
I_{DSX}	Drain-Source Cut-Off Current	V_{GS} = 10V V_{DS} = 200V			10	mA

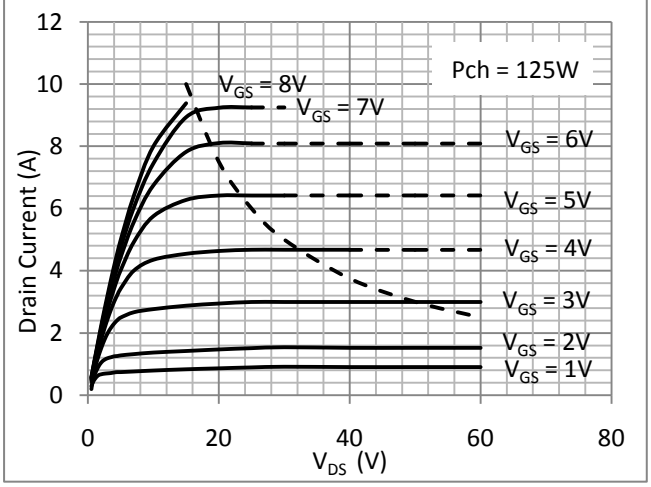
* Pulse Test: Pulse Width = 300µs, Duty Cycle ≤ 2%

DYNAMIC CHARACTERISTICS

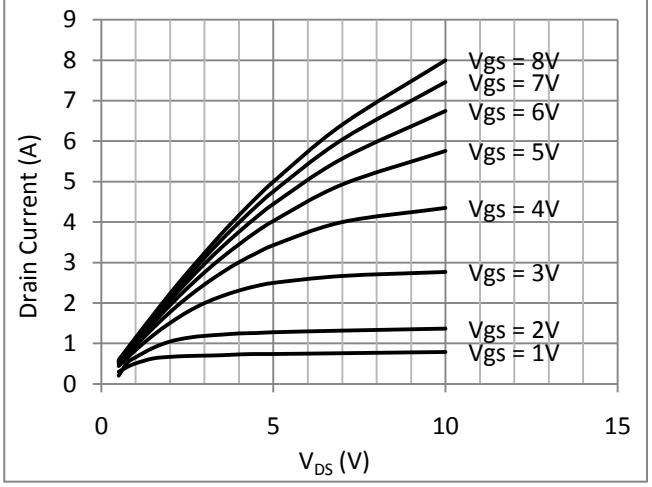
C_{iss}	Input Capacitance	V_{GS} = 0		500		pF
C_{oss}	Output Capacitance	V_{DS} = 10V		300		
C_{rss}	Reverse Transfer Capacitance	f = 1.0MHz		10		
t_{on}	Turn-On Time	V_{DS} = 20V		100		ns
t_{off}	Turn-Off Time	I_D = 7A		50		

GENERAL CHARACTERISTICS (T_C = 25°C unless otherwise stated)

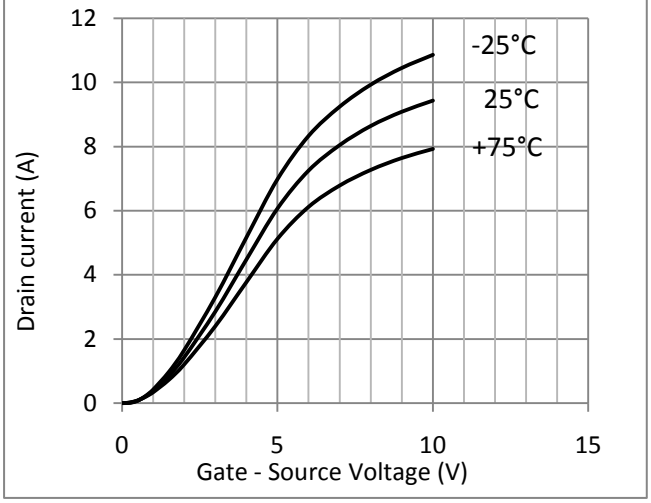
Typical Output Characteristics



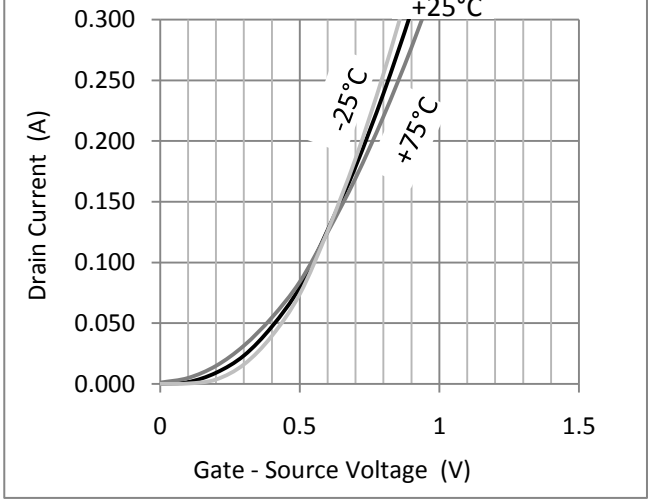
Typical Output Characteristics



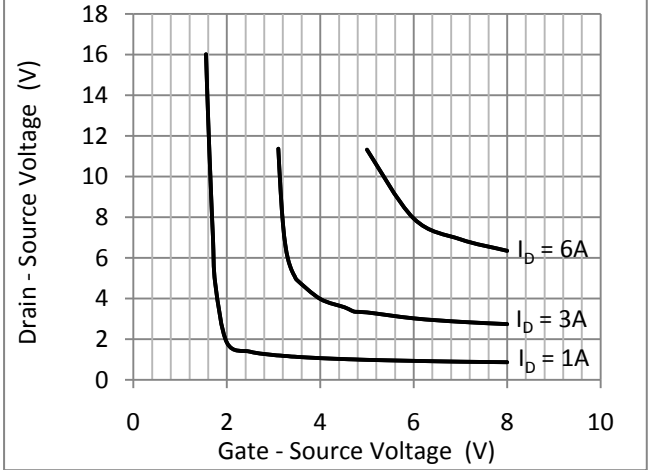
Transfer Characteristic



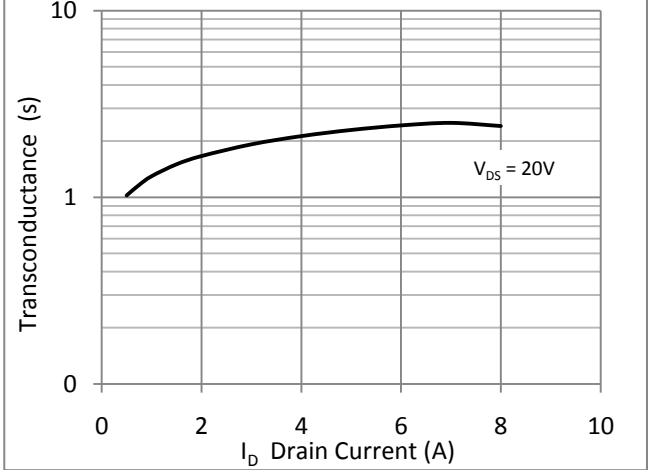
Transfer Characteristic



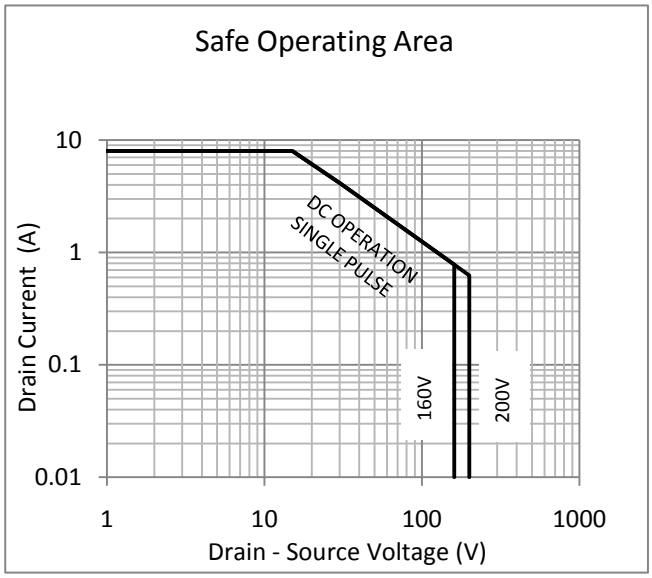
Drain - Source Voltage
vs Gate - Source Voltage

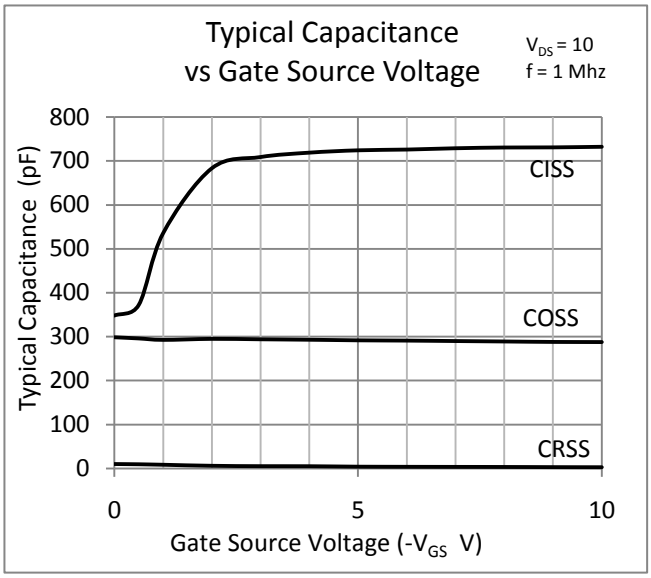


Transconductance

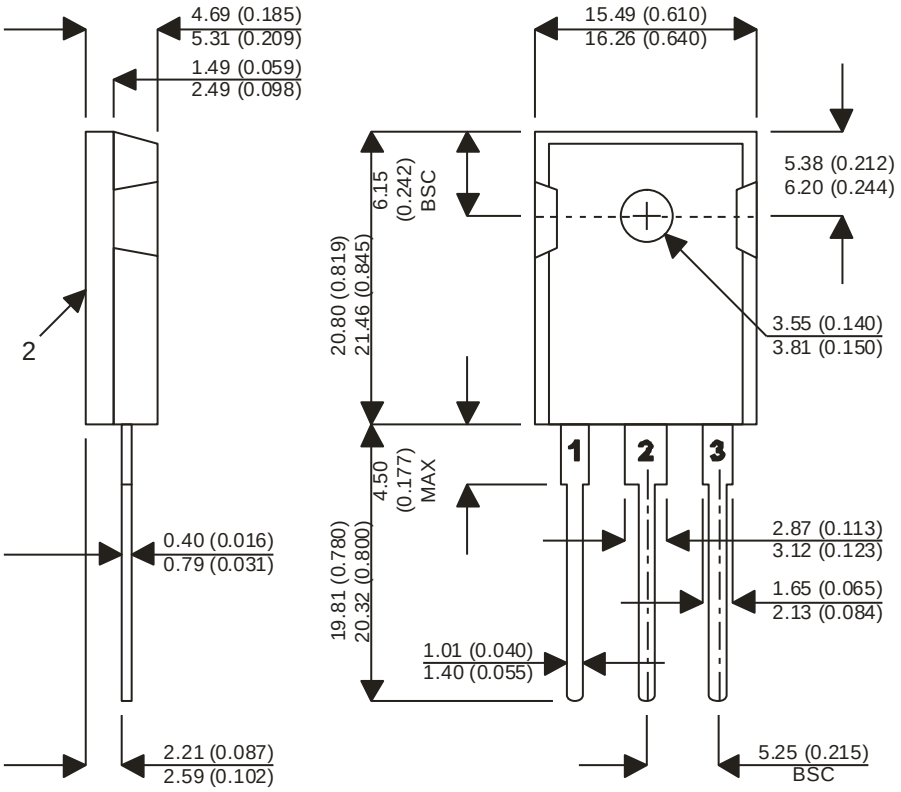


GENERAL CHARACTERISTICS CONTINUED (T_C = 25°C unless otherwise stated)





MECHANICAL DATA
Dimensions in mm (Inches)



TO-247

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