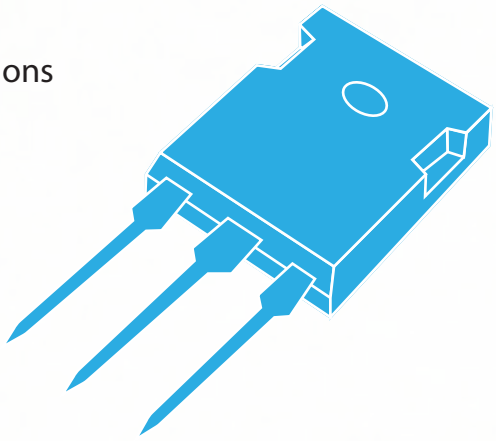
N CHANNEL LATERAL MOSFET

N Channel Lateral Mosfet



- Designed specifically for linear audio amplifier applications
- High-speed for high bandwidth amplifiers
- Reduced Vds sat
- High voltage rating - 200V
- TO-247 plastic package
- Enhanced oscillation suppression in multi-device applications
- Complementary P-channel available – ECX10P20R

ABSOLUTE MAXIMUM RATINGS		(T_C = 25°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°C	125W
T_{ch}	Channel Temperature	150°C
T_{stg}	Storage Temperature Range	-55 to +150°C

**Thermal Resistance, Junction To Case* *0.5 deg/watt*

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
|yfs|*	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

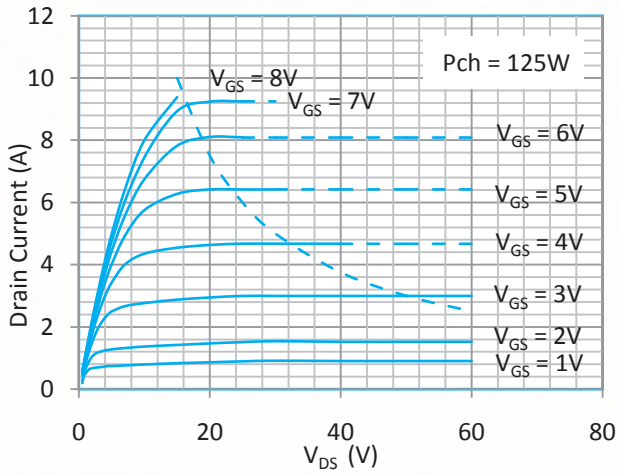
* Pulse Test: Pulse Width = 300µs, Duty Cycle ≤ 2%

DYNAMIC CHARACTERISTICS

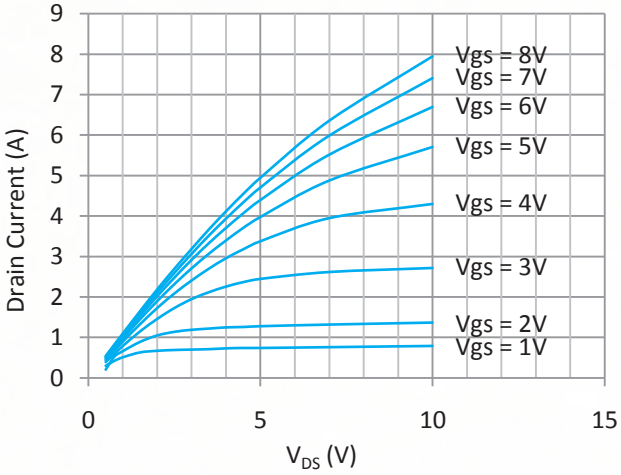
Symbols	Parameters	Test Conditions	Min.	Typ	Max.	Units
C_{iss}	Input Capacitance	V_{GS} = 0 V_{DS} = 10V f = 1.0MHz		500		pF
C_{oss}	Output Capacitance			300		pF
C_{rss}	Reverse Transfer Capacitance			10		pF
t_{on}	Turn-On Time	V_{DS} = 20V I_D = 7A		100		ns
t_{off}	Turn-Off Time			50		ns

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

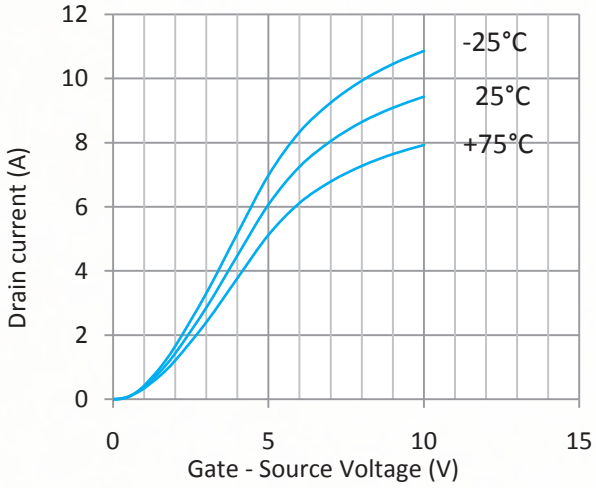
Typical Output Characteristics



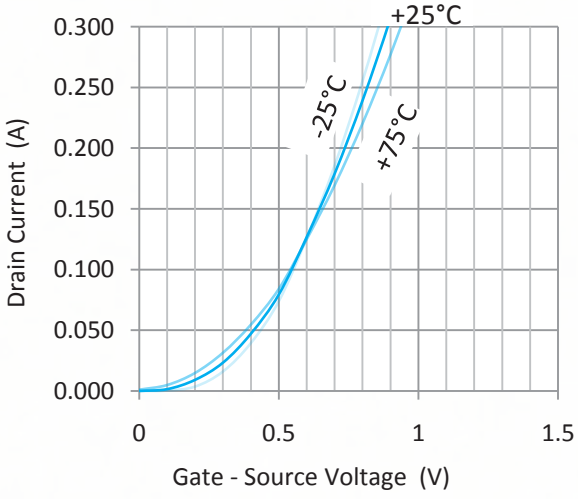
Typical Output Characteristics



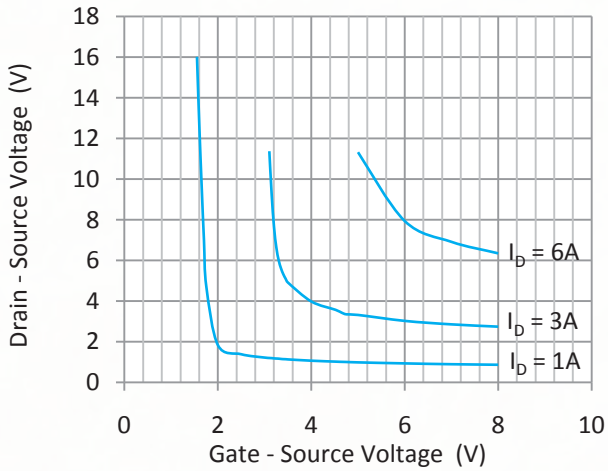
Transfer Characteristic



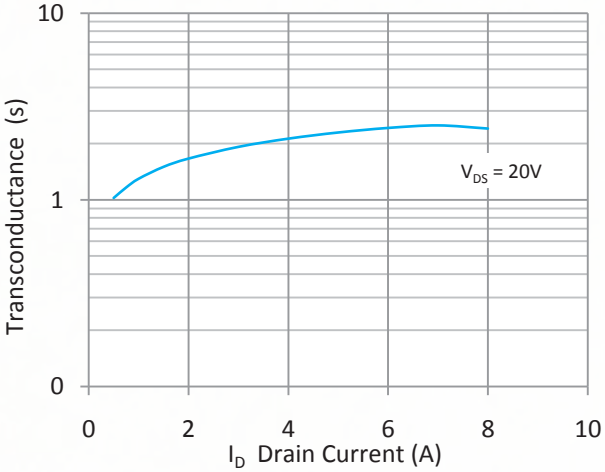
Transfer Characteristic



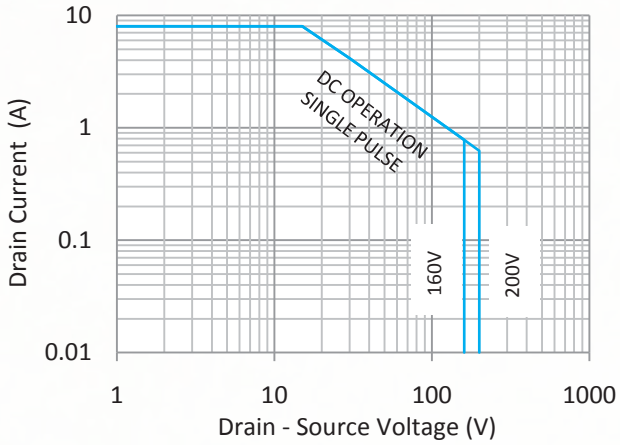
Drain - Source Voltage
vs Gate - Source Voltage



Transconductance

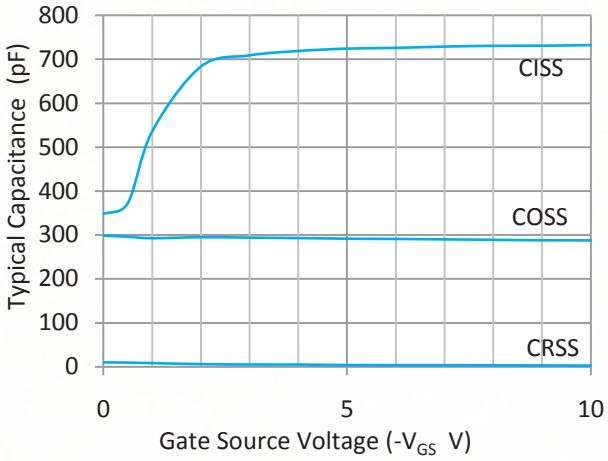


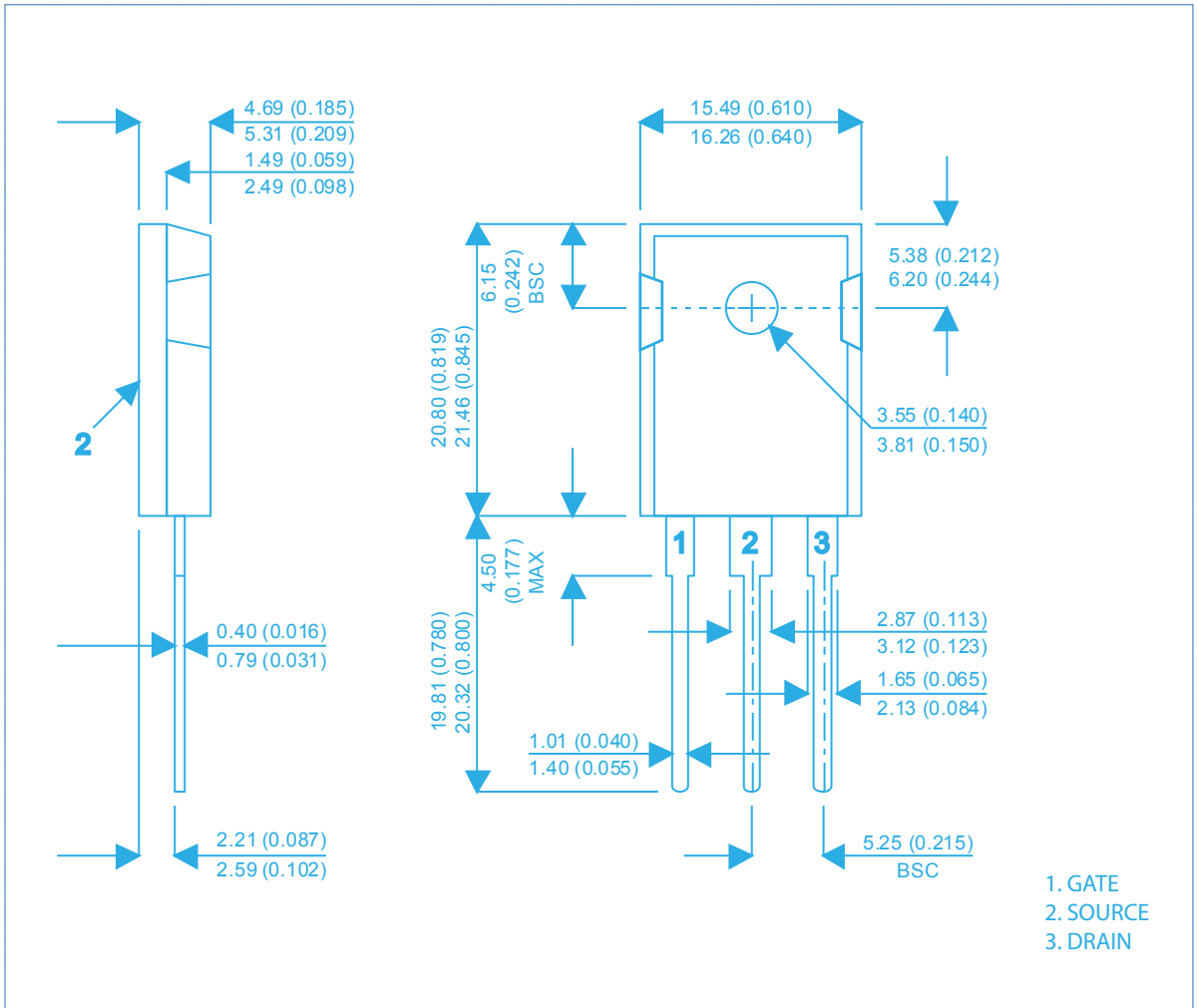
Safe Operating Area



Typical Capacitance
vs Gate Source Voltage

V_{DS} = 10
f = 1 Mhz





MECHANICAL DATA dimensions in mm(inches)