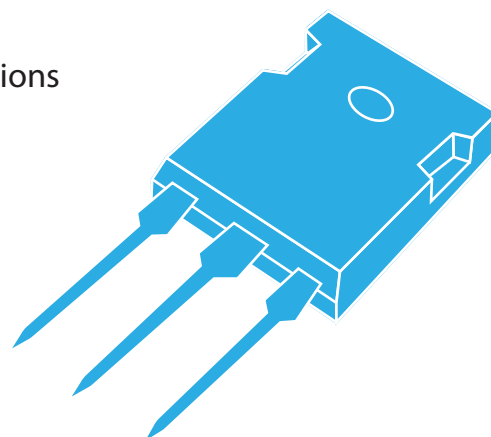


P CHANNEL LATERAL MOSFET

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(Ω) |
| I_{DSX} | Drain-Source Cut-Off Current | $V_{GS} = 10V$ | $V_{DS} = *200V$ | | | -10 | mA |

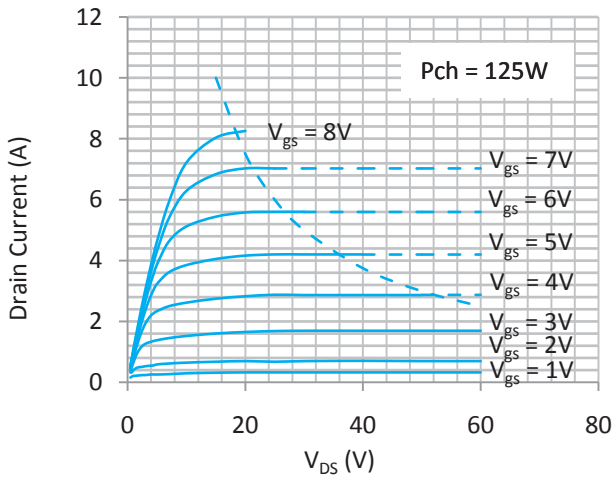
* Pulse Test: Pulse Width = 300 μ s, Duty Cycle \leq 2%

DYNAMIC CHARACTERISTICS

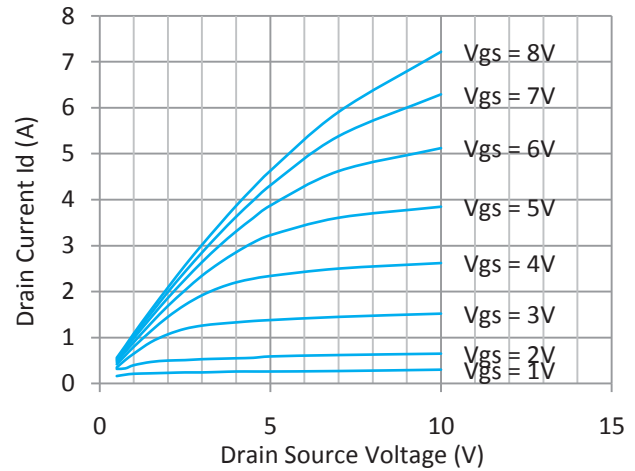
| Symbols | Parameters | Test Conditions | | Min. | Typ | Max. | Units |
|-----------|------------------------------|-----------------|--------------|------|-----|------|-------|
| C_{iss} | Input Capacitance | | | | 500 | | pF |
| C_{oss} | Output Capacitance | $V_{GS} = 0$ | | | 300 | | pF |
| C_{rss} | 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)

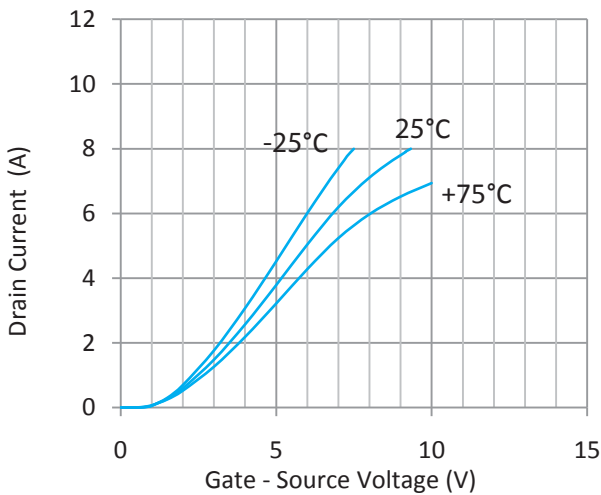
Typical Output Characteristics



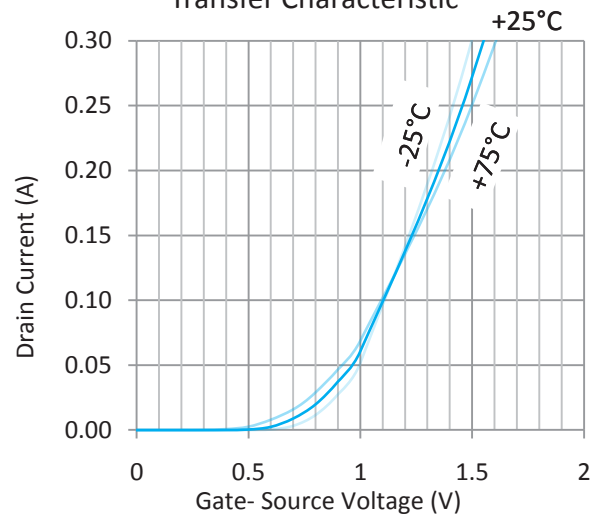
Typical Output Characteristics



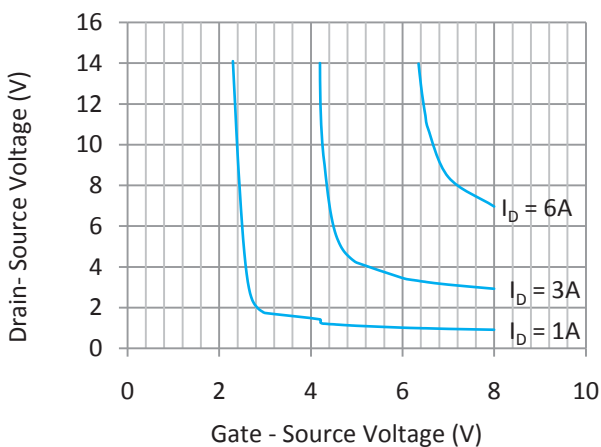
Transfer Characteristic



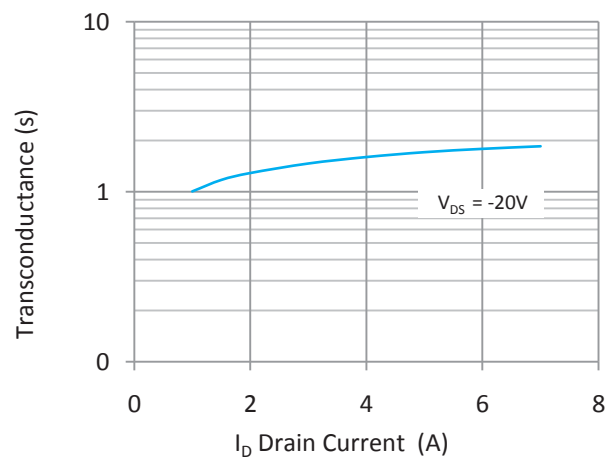
Transfer Characteristic



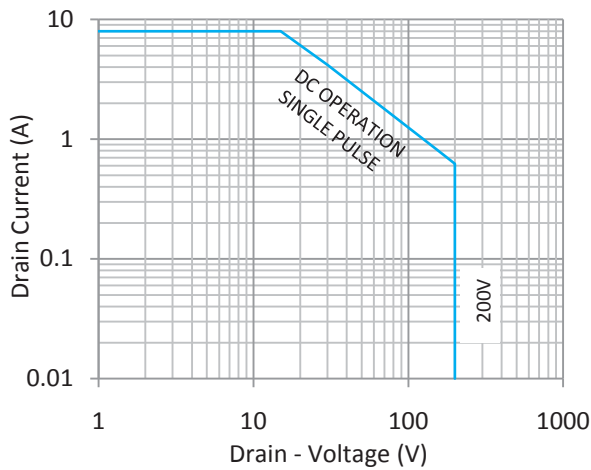
Drain - Source Voltage
vs Gate - Source Voltage



Transconductance



Safe Operating Area



Typical Capacitance vs Gate -Source Voltage

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

