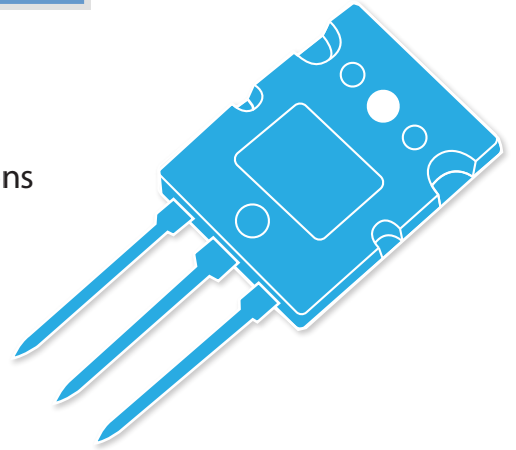


## N CHANNEL LATERAL MOSFET

### N Channel Lateral Mosfet

- Designed specifically for linear audio amplifier applications
- High-speed for high bandwidth amplifiers
- High voltage rating - 200V
- TO-264 plastic package
- Enhanced oscillation suppression in multi-device applications
- Complementary P-channel available – ECW20P20



### 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                                   | 16A           |
| $I_{DR}$  | Body Drain Diode Current                                   | 16A           |
| $P_D$     | Allowable Power Dissipation* $T_{case} = 25^\circ\text{C}$ | 250W          |
| $T_{ch}$  | Channel Temperature  | 150°C         |
| $T_{stg}$ | Storage Temperature Range                                  | -55 to +150°C |

\*Thermal Resistance, Junction To Case

0.5 deg/watt

Exicon products are available at [www.profusionplc.com](http://www.profusionplc.com)

## 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                   |
| $I_{GSS}$       | Gate-Source Leakage Current     | $V_{DS} = 0$    | $V_{GS} = \pm 20V$ |      |     | 100  | $\mu A$             |
| $V_{GS(off)}$   | 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                   |
| $ y_{fs} ^*$    | Forward Transfer Admittance     | $V_{DS} = 10V$  | $I_{DS} = 3A$      | 1.4  |     | 4    | S( $\bar{\omega}$ ) |
| $I_{DSX}$       | Drain-Source Cut-Off Current    | $V_{GS} = -10V$ | $V_{DS} = 200V$    |      |     | 10   | mA                  |

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

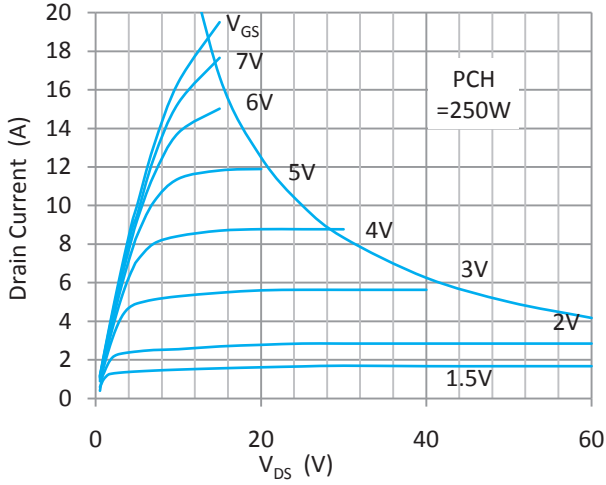
## DYNAMIC CHARACTERISTICS

| Symbols   | Parameters                   | Test Conditions                | Min. | Typ | Max. | Units |
|-----------|------------------------------|--------------------------------|------|-----|------|-------|
| $C_{iss}$ | Input Capacitance            |                                |      | 900 |      | pF    |
| $C_{oss}$ | Output Capacitance           | $V_{GS} = 0$                   |      | 500 |      | pF    |
| $C_{rss}$ | Reverse Transfer Capacitance | $V_{DS} = 10V$<br>$f = 1.0MHz$ |      | 16  |      | pF    |
| $t_{on}$  | Turn-On Time                 | $V_{DS} = 20V$                 |      | 155 |      | ns    |
| $t_{off}$ | Turn-Off Time                | $I_D = 7A$                     |      | 90  |      | ns    |

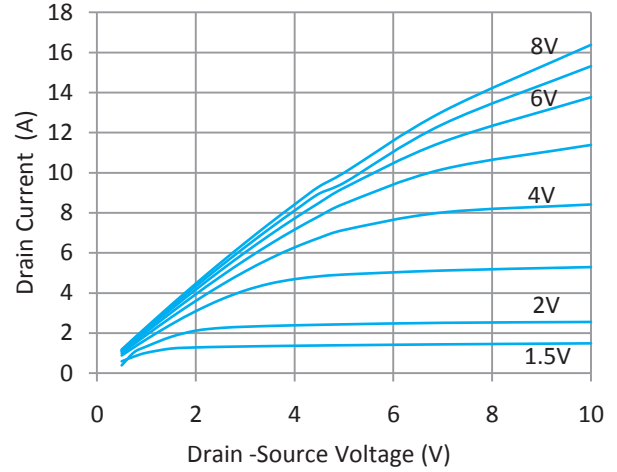
Exicon products are available at [www.profusionplc.com](http://www.profusionplc.com)

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

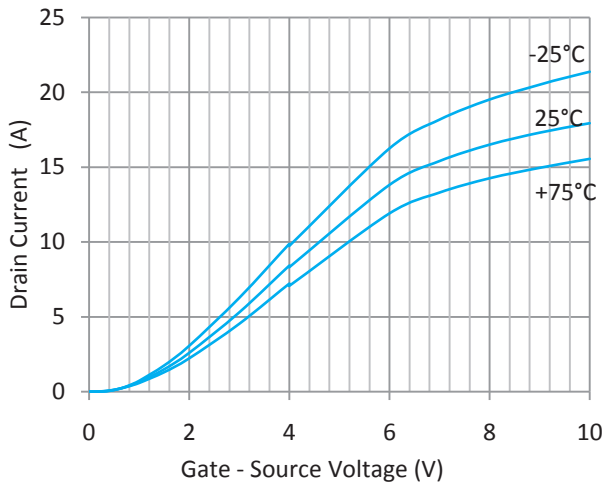
Typical Output Characteristics



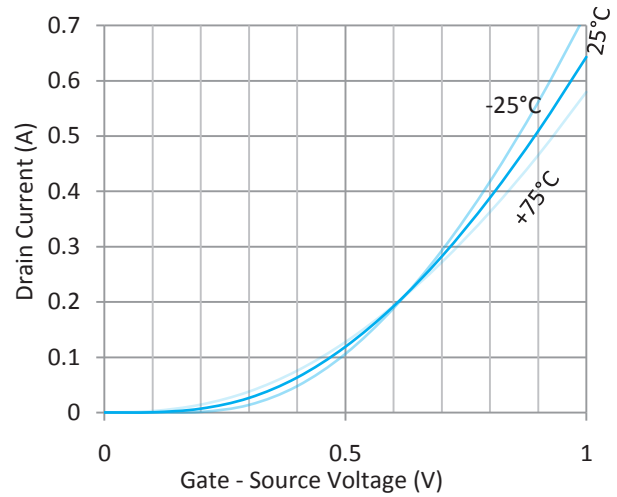
Typical Output Characteristics



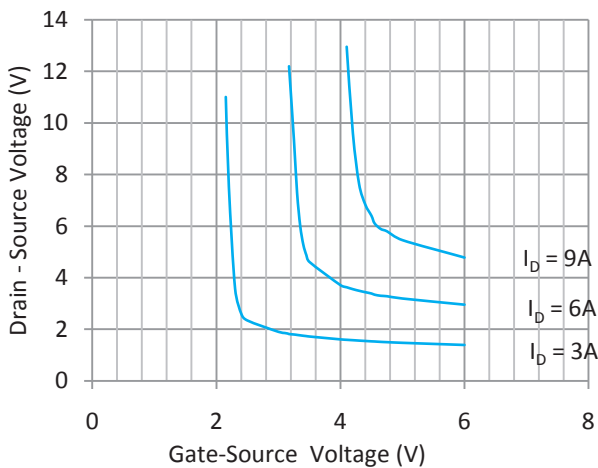
Transfer Characteristics



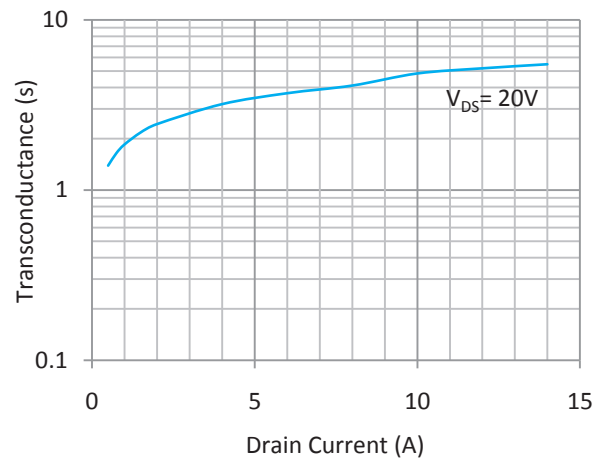
Typical Transfer Characteristic



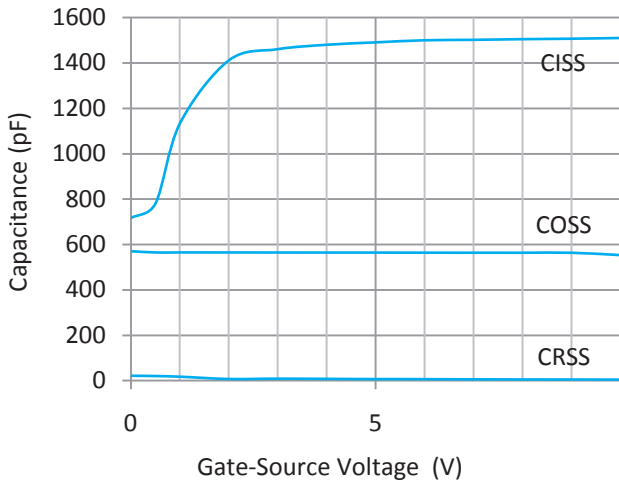
Drain-Source vs Gate-Source Voltage



Transconductance



Typical Capacitance vs Gate -Source Voltage (-V)



Forward Bias Safe Operating Area

