

## N3600L Process Geometry

### Features

- Low Noise: 0.5 nV/√Hz Typical
- Typical Breakdown Voltage: -22V
- Low On Resistance: 2.0Ω Typical
- Die Size: 1838um X 1838um X 203um
- Oversized Bond Pads
- Substrate Connected to Gate
- Au Back-Side Finish

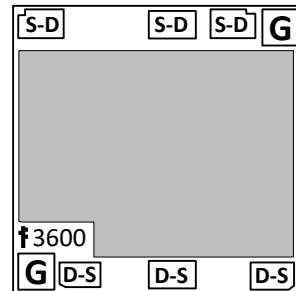
### Applications

- Large Capacitance Detector Pre-Amplifier
- Matched Pair Applications
- Custom Part Options

### Description

The InterFET N3600L Geometry is ideal for low noise high gain applications.

Geometry Top View



### Standard Parts

- IF3601
- IF3602

### Product Summary

Parameters	Min	Typ	Max	Unit
BV <sub>GSS</sub> Gate to Source Breakdown Voltage	-15	-22		V
I <sub>DSS</sub> Drain to Source Saturation Current	50		1000	mA
V <sub>GS(off)</sub> Gate to Source Cutoff Voltage	-0.5		-3	V
G <sub>FS</sub> Forward Transconductance		750		mS

### Maximum Ratings (@ T<sub>A</sub> = 25°C, Unless otherwise specified)

Parameters	Min	Typ	Max	Unit
V <sub>RGS</sub> Reverse Gate to Source or Drain Voltage	-15	-22		V
I <sub>FG</sub> Continuous Forward Gate Current			10	mA
T <sub>J</sub> Operating Junction Temperature	-55		150	°C
T <sub>STG</sub> Storage Temperature	-65		175	°C



**Disclaimer:** It is the Buyers responsibility for designing, validating and testing the end application under all field use cases and extreme use conditions. Guaranteeing the application meets required standards, regulatory compliance, and all safety and security requirements is the responsibility of the Buyer. These resources are subject to change without notice.

## Electrical Characteristics

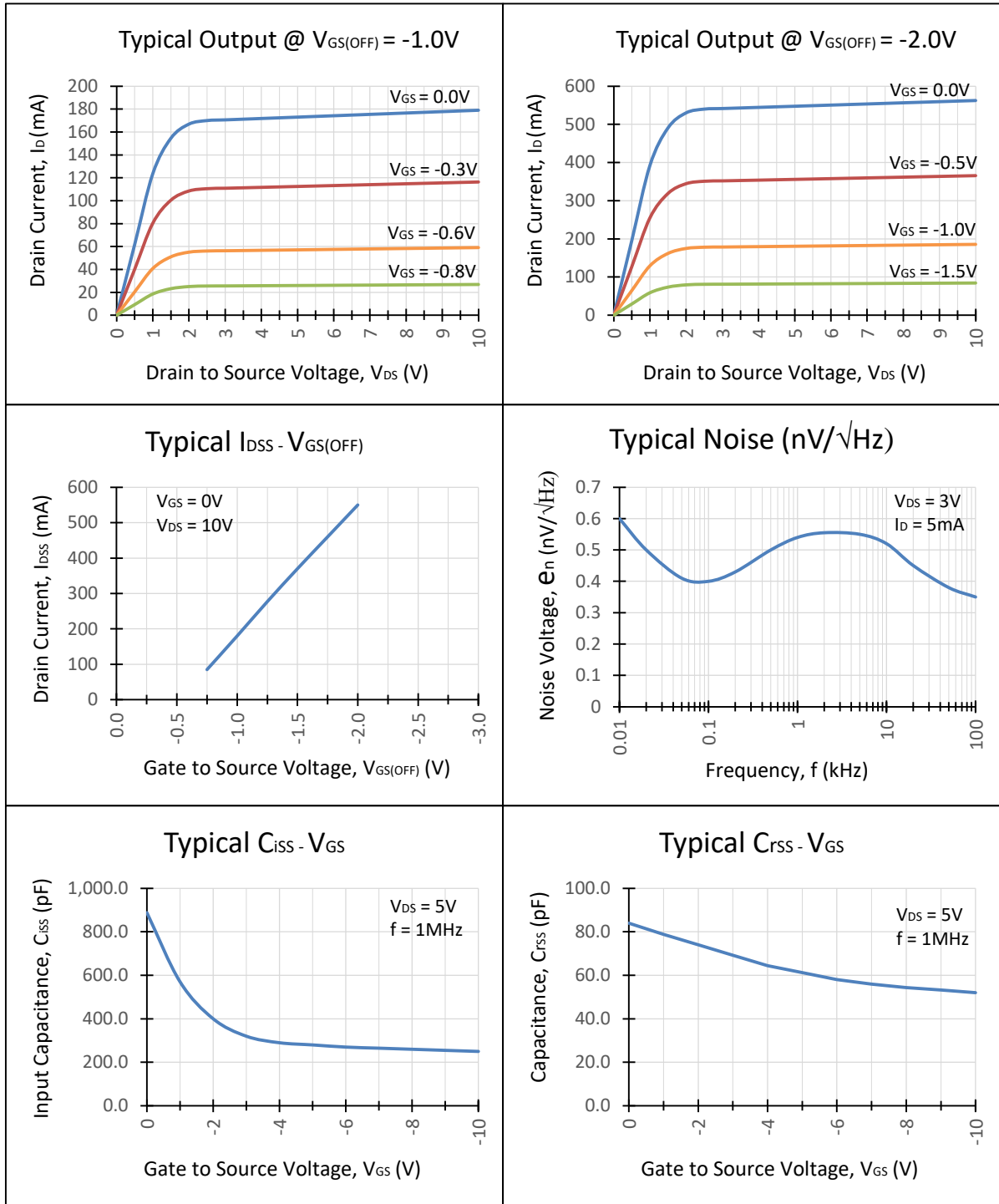
### Static Characteristics (@ TA = 25°C, Unless otherwise specified)

Parameters	Conditions	Min	Typ	Max	Unit
BV <sub>GSS</sub> Gate to Source Breakdown Voltage	I <sub>G</sub> = -1μA, V <sub>DS</sub> = 0V	-15	-22		V
I <sub>GSS</sub> Gate to Source Reverse Current	V <sub>GS</sub> = -10V, V <sub>DS</sub> = 0V		-100	-1000	pA
V <sub>GS(OFF)</sub> Gate to Source Cutoff Voltage	V <sub>DS</sub> = 10V, I <sub>D</sub> = 1nA	-0.5		-3	V
I <sub>DSS</sub> Drain to Source Saturation Current	V <sub>DS</sub> = 10V, V <sub>GS</sub> = 0V	50		1000	mA

### Dynamic Characteristics (@ TA = 25°C, Unless otherwise specified)

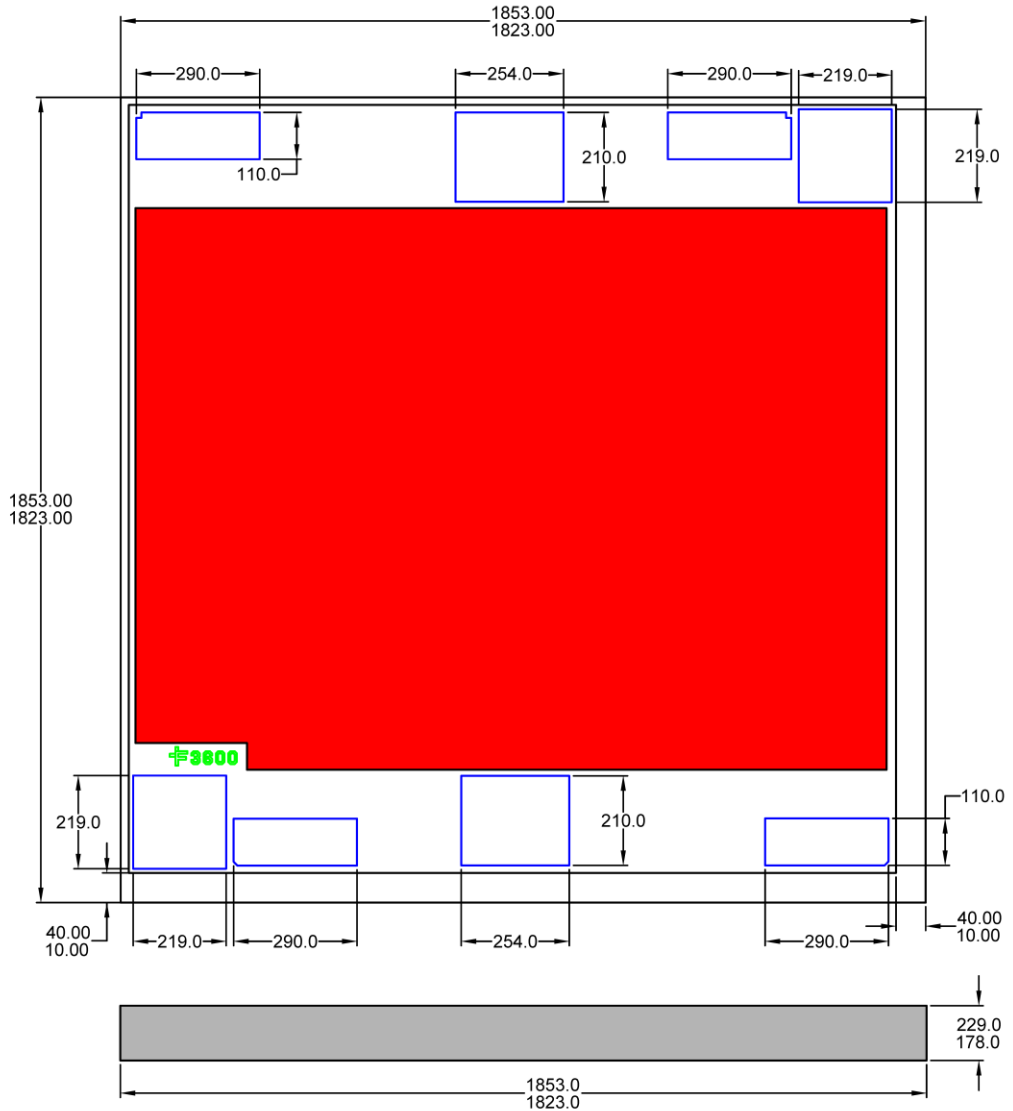
Parameters	Conditions	Min	Typ	Max	Unit
R <sub>DS(ON)</sub> Drain to Source ON Resistance	V <sub>GS</sub> = 0V, I <sub>D</sub> = 1mA	1		4	Ω
G <sub>FS</sub> Forward Transconductance	V <sub>DS</sub> = 10V, V <sub>GS</sub> = 0V, f = 1kHz		750		mS
C <sub>iss</sub> Input Capacitance	V <sub>DS</sub> = 10V, V <sub>GS</sub> = 0V, f = 1kHz		650		pF
C <sub>rss</sub> Reverse Transfer Capacitance	V <sub>DS</sub> = 10V, V <sub>GS</sub> = 0V, f = 1kHz		80		pF
e <sub>n</sub> Noise Voltage	V <sub>DS</sub> = 3V, I <sub>D</sub> = 5mA, f = 30Hz		0.5		nV/√Hz

## Typical N3600L Characteristics



# N3600L Die Geometry Mechanical

## Raw Die Dimensions



1. All linear dimensions are in micrometers.