

N0030L Process Geometry

Features

- Low Input Capacitance: 5.0pF Typical
- Low Gate Leakage: 10pA Typical
- High Breakdown Voltage: -30V Typical
- High Input Impedance
- Small Die: 365um X 365um X 203um
- Bond Pads: 90um X 90um
- Substrate Connected to Gate
- Au Back-Side Finish

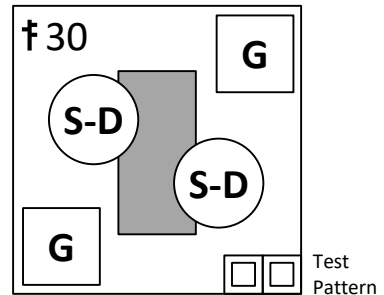
Applications

- Low-Noise, High Gain Amplifier
- Small Signal Amplifier
- Custom Part Options

Description

The InterFET N0030L Geometry is targeted high impedance low leakage applications. The low input capacitance makes it ideal for higher frequency applications.

Geometry Top View



Standard Parts

- IFN5911, IFN5912

Product Summary

Parameters	Min	Typ	Max	Unit
BV_{GSS} Gate to Source Breakdown Voltage	-25	-30		V
I_{DSS} Drain to Source Saturation Current	2		40	mA
$V_{GS(off)}$ Gate to Source Cutoff Voltage	-0.5		-10	V
G_{FS} Forward Transconductance		11		mS

Maximum Ratings (@ $T_A = 25^\circ\text{C}$, Unless otherwise specified)

Parameters	Min	Typ	Max	Unit
V_{RGS} Reverse Gate to Source or Drain Voltage	-25	-30		V
I_{FG} Continuous Forward Gate Current			10	mA
T_J Operating Junction Temperature	-55		150	$^\circ\text{C}$
T_{STG} Storage Temperature	-65		175	$^\circ\text{C}$



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

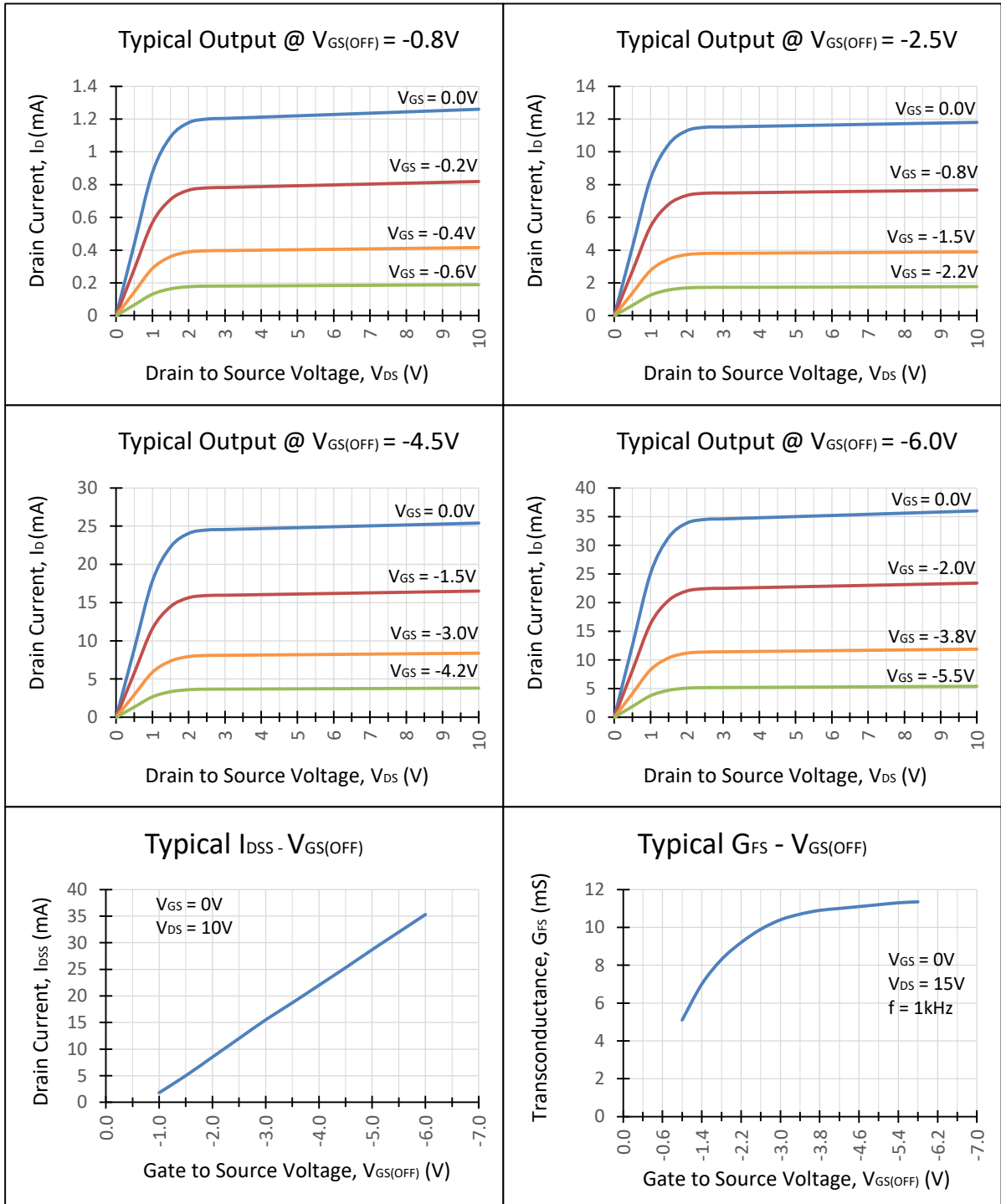
Static Characteristics (@ TA = 25°C, Unless otherwise specified)

Parameters	Conditions	Min	Typ	Max	Unit
BV _{GSS} Gate to Source Breakdown Voltage	I _G = -1μA, V _{DS} = 0V	-25	-30		V
I _{GSS} Gate to Source Reverse Current	V _{GS} = -20V, V _{DS} = 0V		-10	-100	pA
V _{GS(OFF)} Gate to Source Cutoff Voltage	V _{DS} = 15V, I _D = 1nA	-0.5		-10	V
I _{DSS} Drain to Source Saturation Current	V _{DS} = 15V, V _{GS} = 0V	2		40	mA

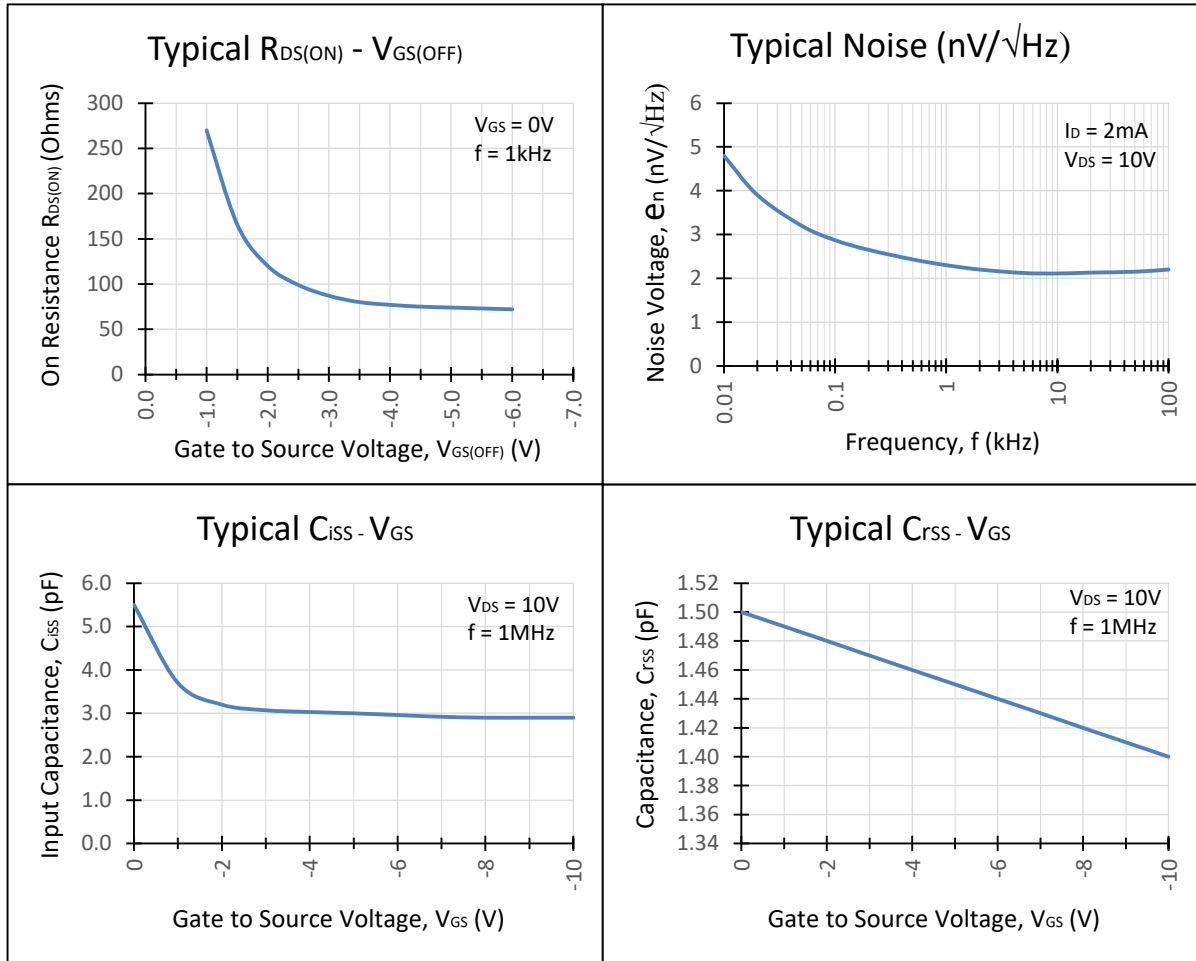
Dynamic Characteristics (@ TA = 25°C, Unless otherwise specified)

Parameters	Conditions	Min	Typ	Max	Unit
G _{FS} Forward Transconductance	V _{DS} = 15V, V _{GS} = 0V, f = 1kHz		11		mS
C _{iss} Input Capacitance	V _{DS} = 15V, V _{GS} = 0V, f = 1MHz		4.3	5	pF
C _{rss} Reverse Transfer Capacitance	V _{DS} = 15V, V _{GS} = 0V, f = 1MHz		1	1.5	pF
e _n Noise Voltage	V _{DS} = 15V, I _D = 2mA, f = 1kHz		2.3		nV/√Hz

Typical N0030L Characteristics

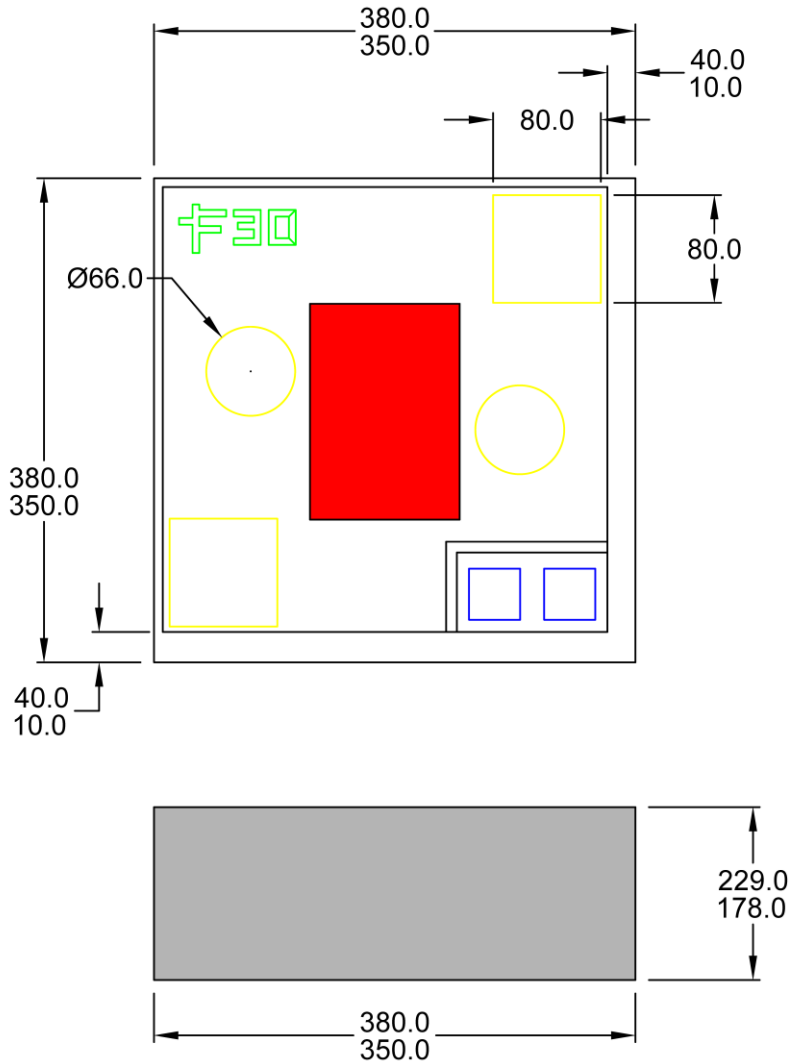


Typical N0030L Characteristics (Continued)



N0030L Die Geometry Mechanical

Raw Die Dimensions



1. All linear dimensions are in micrometers.