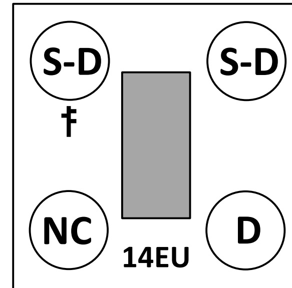
N0014EU Process Geometry

Features

- Low Input Capacitance: 2.3pF Typical
- Low Gate Leakage: 1.5pA Typical
- High Breakdown Voltage: -30V Typical
- High Input Impedance
- Die Size: 482um X 482um X 203um
- Bond Pads: 90um Diameter
- Substrate Connected to Gate
- Au Back Side Finish
- Flip Chip Bumped Package Option

Geometry Top View

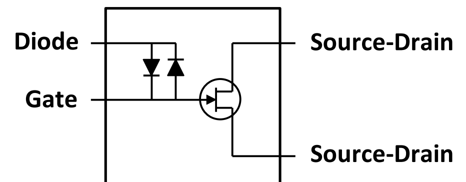


Note: Gate connected to backside metal

Applications

- Small Signal Amplifiers
- Audio Amplifiers
- Low Noise High Gain Amplifier
- RF Amplifiers
- Custom Part Options

Connection Configuration



Description

The InterFET N0014EU Geometry is targeted for low noise high gain amplifier applications. The low input capacitance makes it ideal for higher frequency applications.

Product Summary

Parameters		Min	Typ	Max	Unit
BV_{GSS}	Gate to Source Breakdown Voltage	-15	-30		V
I_{DSS}	Drain to Source Saturation Current	0.5	10	20	mA
$V_{GS(off)}$	Gate to Source Cutoff Voltage	-0.5		-7	V
G_{FS}	Forward Transconductance		4.0		mS

Maximum Ratings (@ T_A = 25°C, Unless otherwise specified)

Parameters		Min	Typ	Max	Unit
V_{RGS}	Reverse Gate to Source or Drain Voltage	-15	-30		V
I_{FG}	Continuous Forward Gate Current			10	mA
T_J	Operating Junction Temperature	-55		150	°C
T_{STG}	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

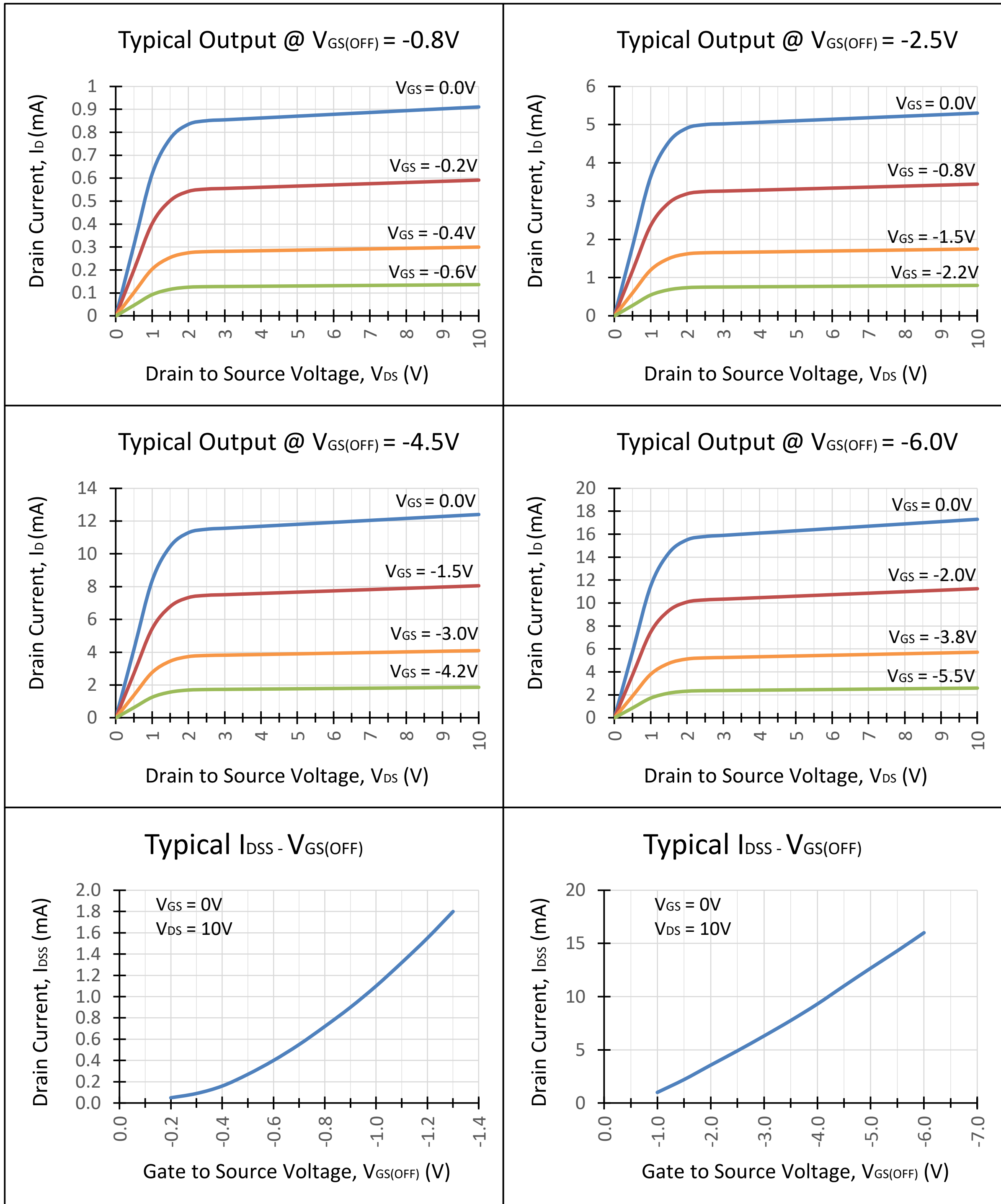
Static Characteristics (@ TA = 25°C, Unless otherwise specified)

Parameters		Conditions	Min	Typ	Max	Unit
BV_{GSS}	Gate to Source Breakdown Voltage	I_G = -1µA, V_{DS} = 0V	-15	-30		V
I_{GSS}	Gate to Source Reverse Current	V_{GS} = -10V, V_{DS} = 0V		-1.5	-100	pA
$V_{GS(OFF)}$	Gate to Source Cutoff Voltage	V_{DS} = 10V, I_D = 1nA	-0.5		-7	V
I_{DSS}	Drain to Source Saturation Current	V_{DS} = 10V, V_{GS} = 0V	0.5	10	20	mA
$V_{(BR)Gdiode}$	Gate to Diode Breakdown Voltage +	I_G = 10µA, V_{DS} = 0V	0.4		0.8	V
$V_{(BR)Gdiode}$	Gate to Diode Breakdown Voltage -	I_G = -10µA, V_{DS} = 0V	-0.4		-0.8	V

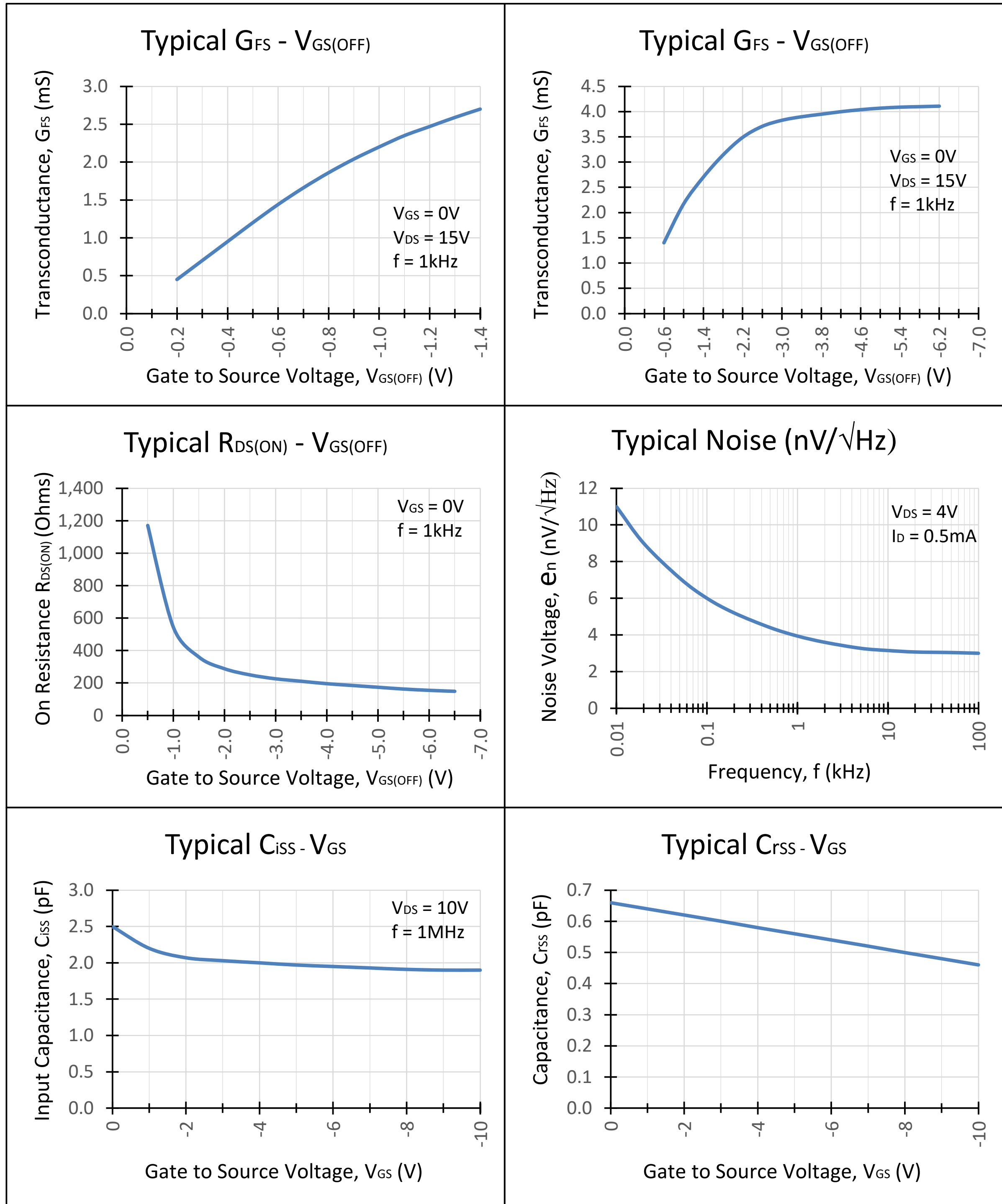
Dynamic Characteristics (@ TA = 25°C, Unless otherwise specified)

Parameters		Conditions	Min	Typ	Max	Unit
G_{FS}	Forward Transconductance	V_{DS} = 10V, V_{GS} = 0V, f = 1kHz		4.0		mS
C_{iss}	Input Capacitance	V_{DS} = 15V, V_{GS} = 0V, f = 1MHz		2.3		pF
C_{rss}	Reverse Transfer Capacitance	V_{DS} = 15V, V_{GS} = 0V, f = 1MHz		0.5		pF
e_n	Noise Voltage	V_{DS} = 10V, I_D = 0.5mA f = 1kHz		3.5		nV/√Hz

Typical N0014EU Characteristics

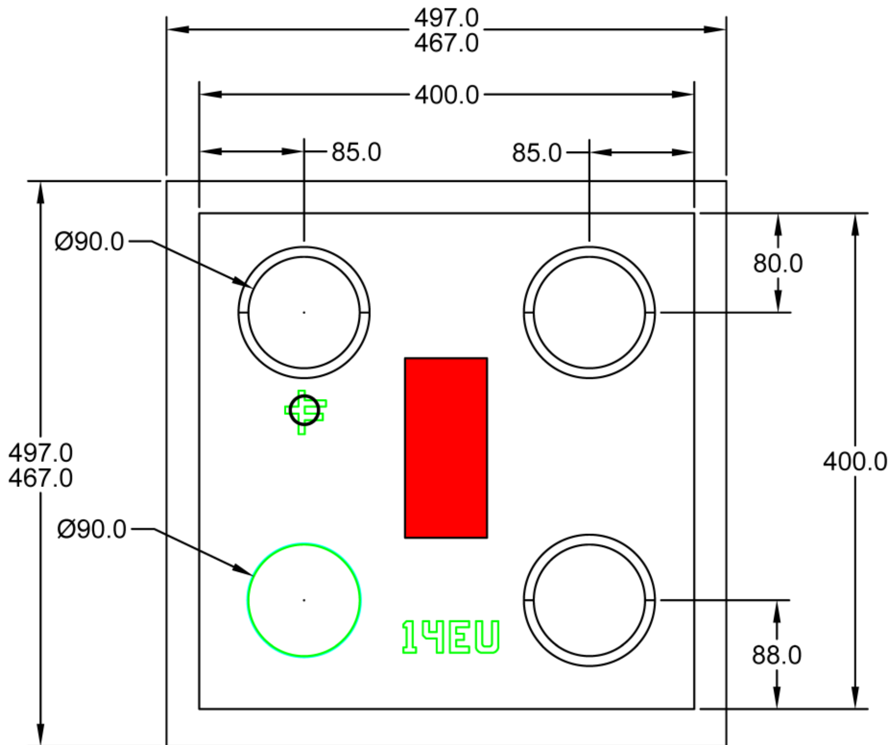


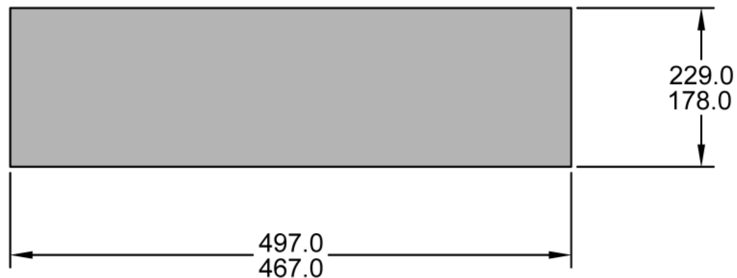
Typical N0014EU Characteristics (Continued)



N0014EU Die Geometry Mechanical

Raw Die Dimensions





1. All linear dimensions are in micrometers.
2. Die package designed for flip chip bumping or wire bonding interconnect.