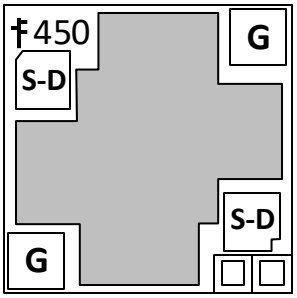
N0450L Process Geometry

Features

- Low Noise: 0.9 nV/√Hz Typical
- Typical Input Capacitance: 35pF
- Typical Breakdown Voltage: -30V
- High Input Impedance
- Small Die: 670um X 670um X 203um
- Bond Pads: 90um X 90um
- Substrate Connected to Gate
- Au Back-Side Finish

Geometry Top View



Test Pattern

Applications

- Low-Current
- Low Gate Leakage Current
- High Input Impedance
- Low Noise Amplifier
- Audio Amplifiers
- Mid to High-Gain Applications
- Matched Pair Applications
- Custom Part Options

Standard Parts

- 2N6550
- IF4500
- IF4520
- IFN860

Description

The InterFET N0450L Geometry is ideal for low noise high gain applications.

Product Summary

Parameters		Min	Typ	Max	Unit
BV_{GSS}	Gate to Source Breakdown Voltage	-25	-30		V
I_{DSS}	Drain to Source Saturation Current	5		750	mA
$V_{GS(off)}$	Gate to Source Cutoff Voltage	-0.5		-10	V
G_{FS}	Forward Transconductance		100		mS

Maximum Ratings (@ T_A = 25°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	°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

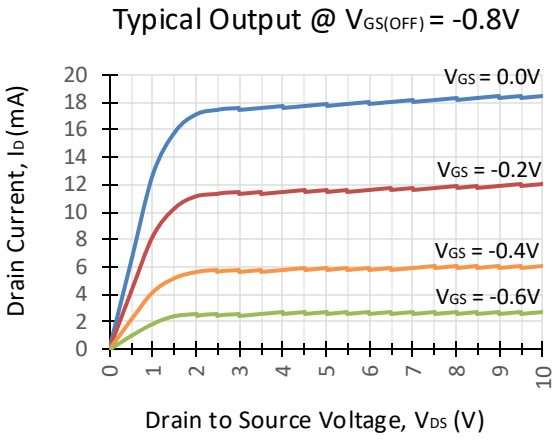
Static Characteristics (@ TA = 25°C, Unless otherwise specified)

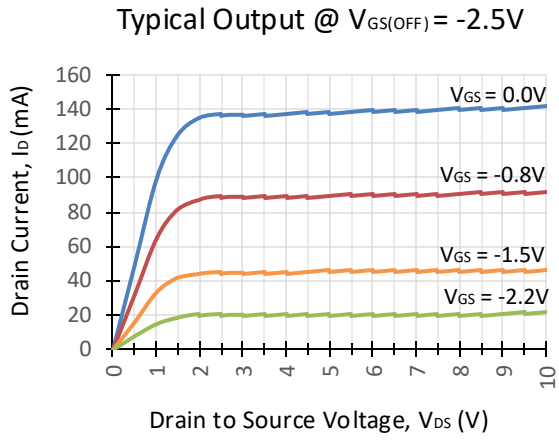
Parameters		Conditions	Min	Typ	Max	Unit
BV_{GSS}	Gate to Source Breakdown Voltage	I_G = -1µA, V_{DS} = 0V	-25	-30		V
I_{GSS}	Gate to Source Reverse Current	V_{GS} = -15V, V_{DS} = 0V		-50		pA
$V_{GS(OFF)}$	Gate to Source Cutoff Voltage	V_{DS} = 15V, I_D = 1nA	-0.5		-10	V
I_{DSS}	Drain to Source Saturation Current	V_{DS} = 15V, V_{GS} = 0V	5		750	mA

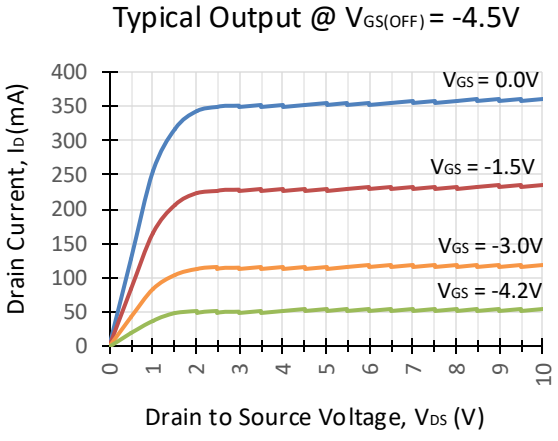
Dynamic Characteristics (@ TA = 25°C, Unless otherwise specified)

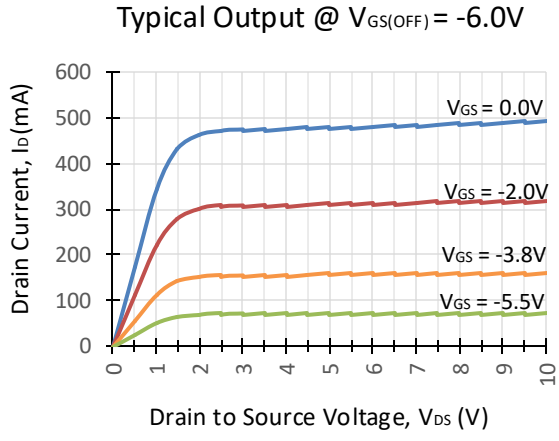
Parameters		Conditions	Min	Typ	Max	Unit
G_{FS}	Forward Transconductance	V_{DS} = 15V, V_{GS} = 0V, f = 1kHz		100		mS
C_{iss}	Input Capacitance	V_{DS} = 0V, V_{GS} = -10V, f = 1MHz		35		pF
C_{rss}	Reverse Transfer Capacitance	V_{DS} = 0V, V_{GS} = -10V, f = 1MHz		12		pF
e_n	Noise Voltage	V_{DS} = 4V, I_D = 5mA f = 1kHz		0.9		nV/√Hz

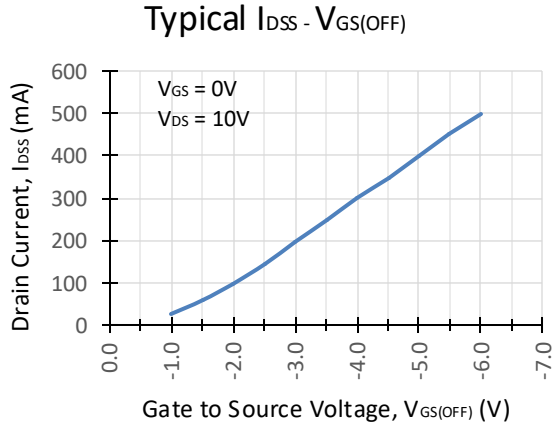
Typical N0450L Characteristics

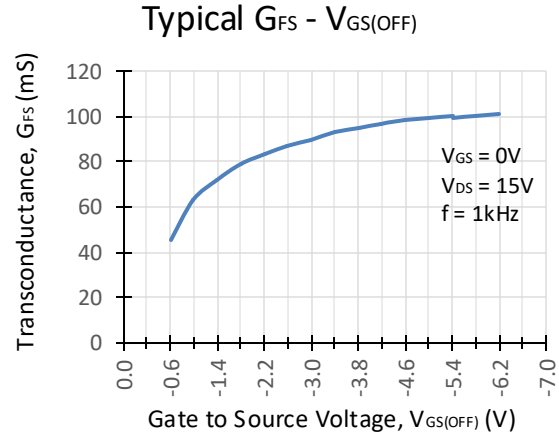




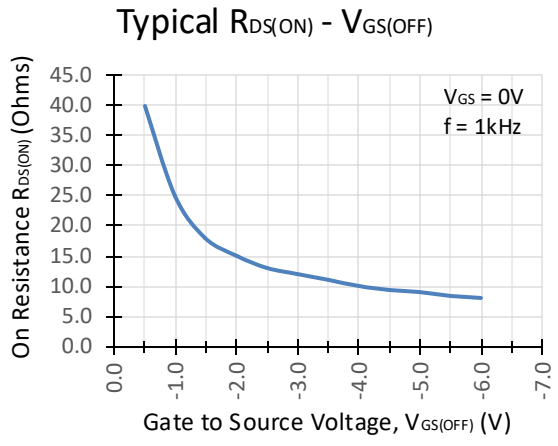


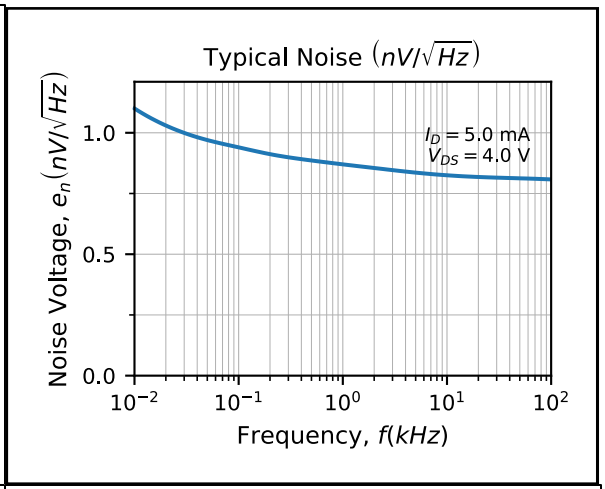


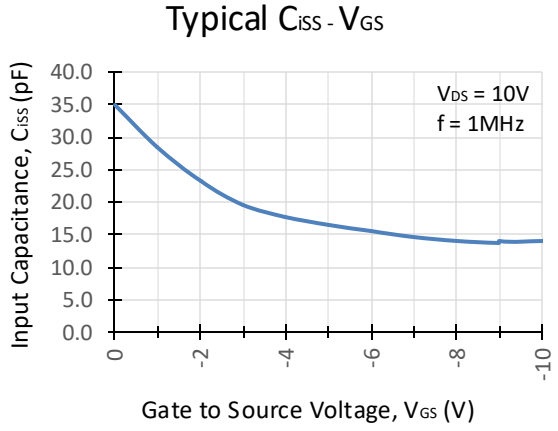


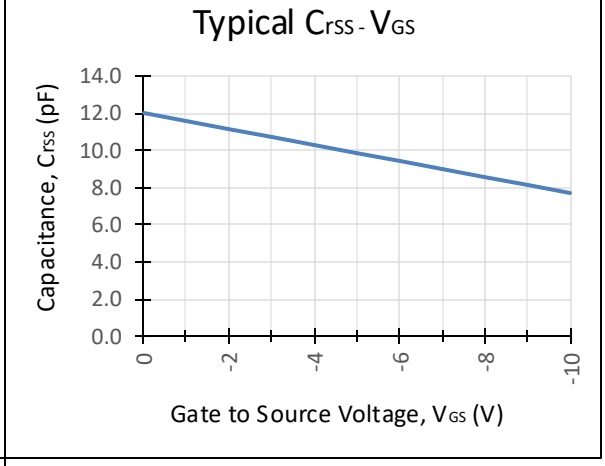


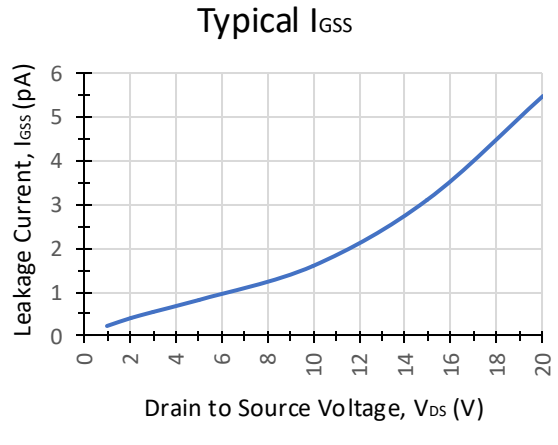
Typical N0450L Characteristics (Continued)





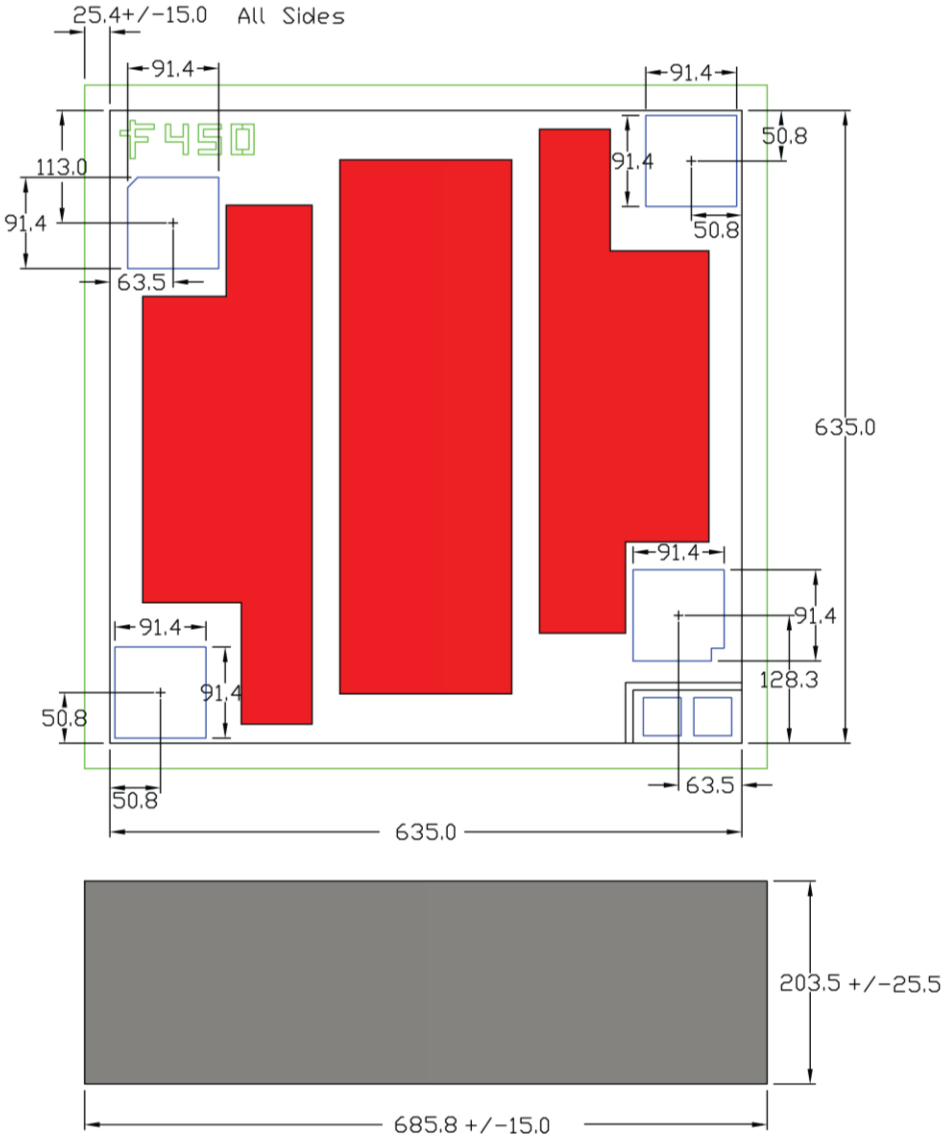






N0450L Die Geometry Mechanical

Raw Die Dimensions



1. All linear dimensions are in micrometers.