

## P0099F Process Geometry

### Features

- Low Noise: 2.0 nV/√Hz Typical
- Typical Input Capacitance: 18pF
- Typical Breakdown Voltage: 60V
- High Input Impedance
- Small Die: 492um X 492um X 203um
- Bond Pads: 90um X 90um
- Substrate Connected to Gate
- Au Back-Side Finish

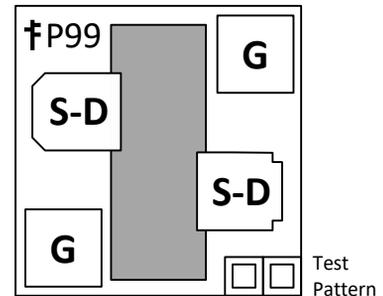
### Applications

- General Purpose Amplifier
- Switching
- Matched Pair Applications
- Custom Part Options

### Description

The InterFET P0099F Geometry is ideal for switching and general purpose amplification applications.

Geometry Top View



### Standard Parts

- 2N3993/A, 2N3994/A
- 2N5114, 2N5115, 2N5116
- IFN44
- J174, J175, J176, J177
- P1086, P1087
- 2N5019
- VCR3P

### Product Summary

Parameters	Min	Typ	Max	Unit
BV <sub>GSS</sub> Gate to Source Breakdown Voltage	45	60		V
I <sub>DSS</sub> Drain to Source Saturation Current	-5		-60	mA
V <sub>GS(off)</sub> Gate to Source Cutoff Voltage	1		8	V
G <sub>FS</sub> Forward Transconductance		13		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	45	60		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

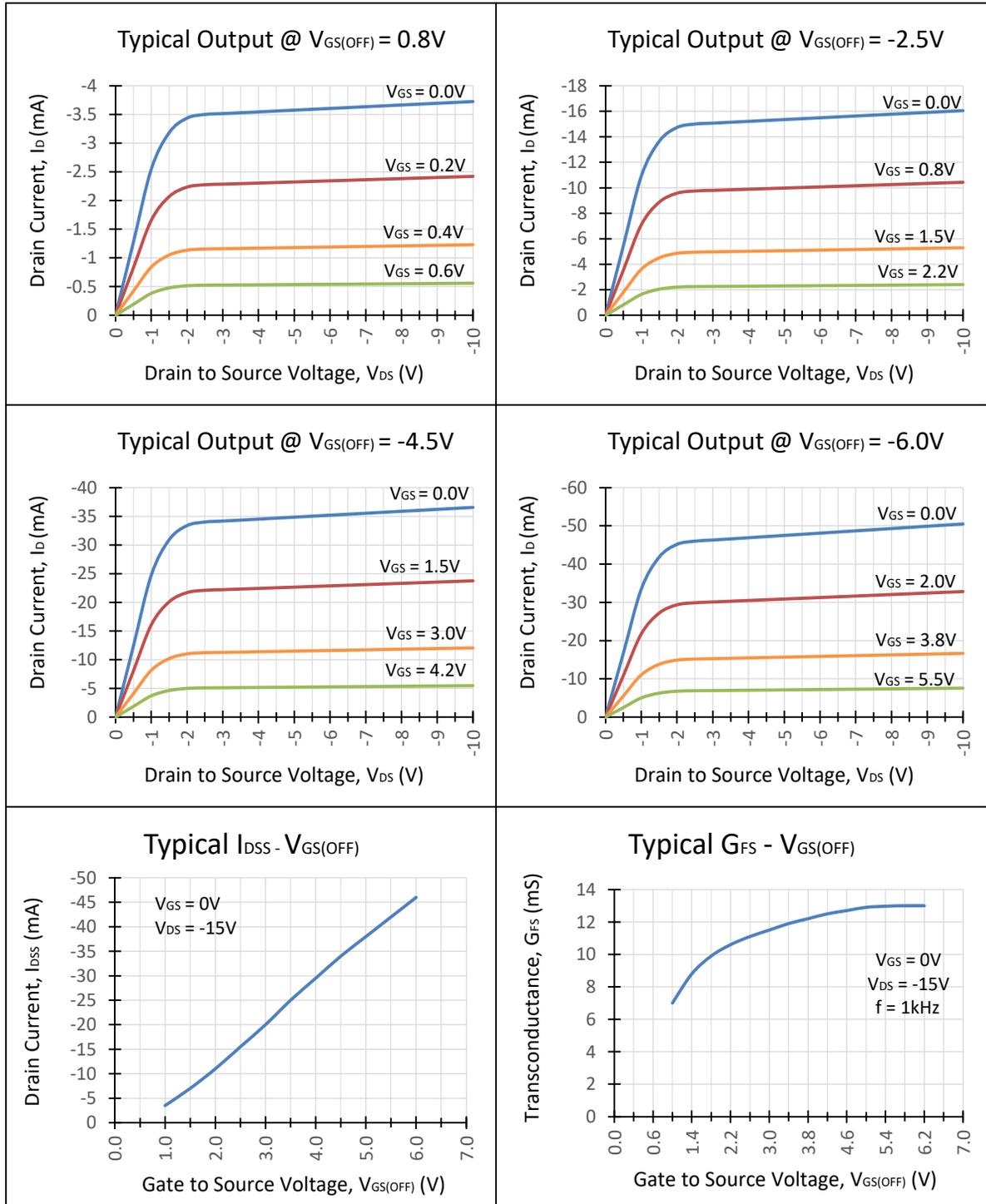
### Static Characteristics (@ TA = 25°C, Unless otherwise specified)

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	45	60		V
I <sub>GSS</sub> Gate to Source Reverse Current	V <sub>GS</sub> = -10V, V <sub>DS</sub> = 0V		500	1000	pA
V <sub>GS(OFF)</sub> Gate to Source Cutoff Voltage	V <sub>DS</sub> = 10V, I <sub>D</sub> = 1nA	1		8	V
I <sub>DSS</sub> Drain to Source Saturation Current	V <sub>DS</sub> = 10V, V <sub>GS</sub> = 0V	5		60	mA

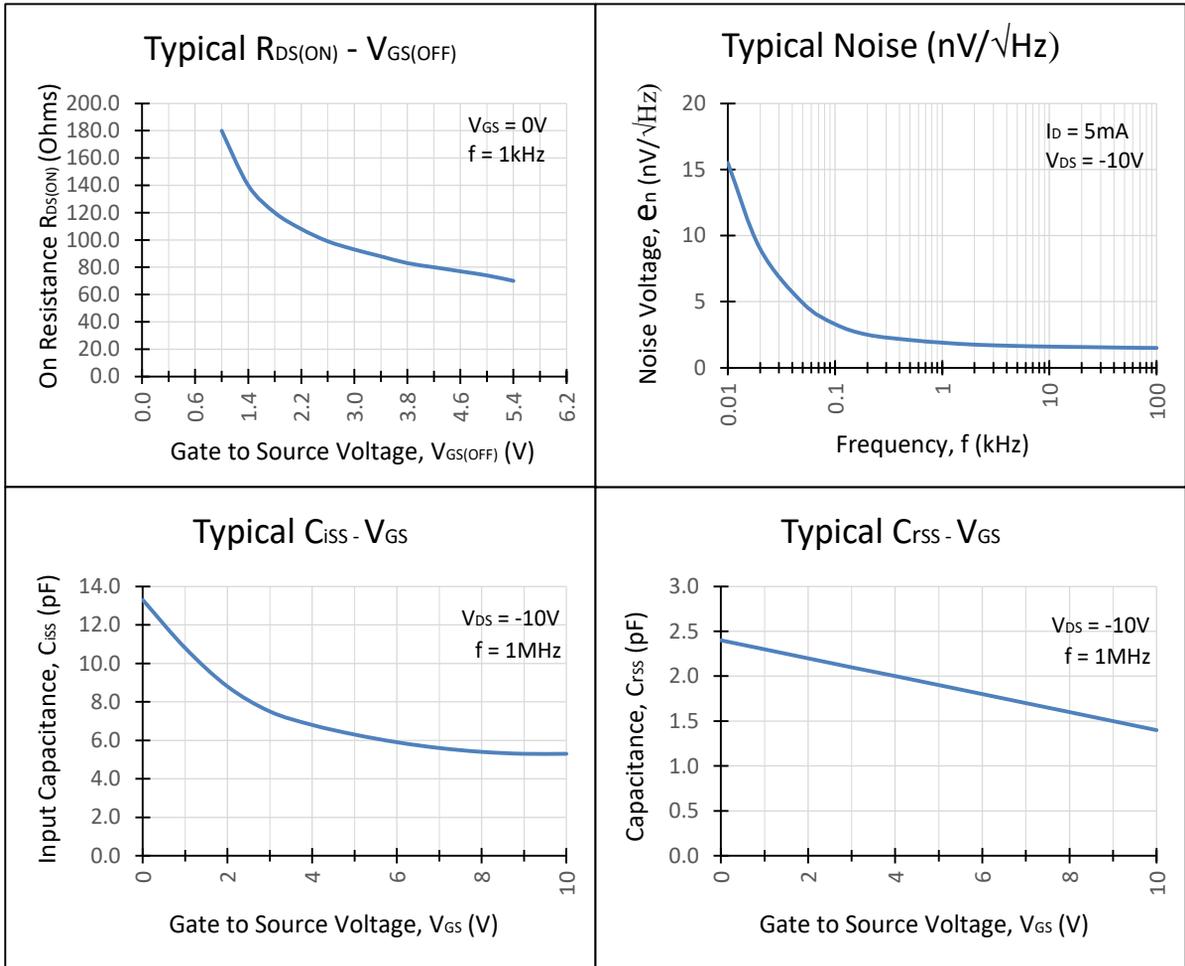
### Dynamic Characteristics (@ TA = 25°C, Unless otherwise specified)

Parameters	Conditions	Min	Typ	Max	Unit
G <sub>FS</sub> Forward Transconductance	V <sub>DS</sub> = 10V, V <sub>GS</sub> = 0 V, f = 1kHz		13		mS
C <sub>iss</sub> Input Capacitance	V <sub>DS</sub> = 10V, V <sub>GS</sub> = 0 V, f = 1MHz		18		pF
C <sub>rss</sub> Reverse Transfer Capacitance	V <sub>DS</sub> = 0V, V <sub>GS</sub> = -10 V, f = 1MHz		4.5		pF
e <sub>n</sub> Noise Voltage	V <sub>DS</sub> = 10V, I <sub>D</sub> = 5mA f = 1kHz		2.0		nV/√Hz

## Typical P0099F Characteristics

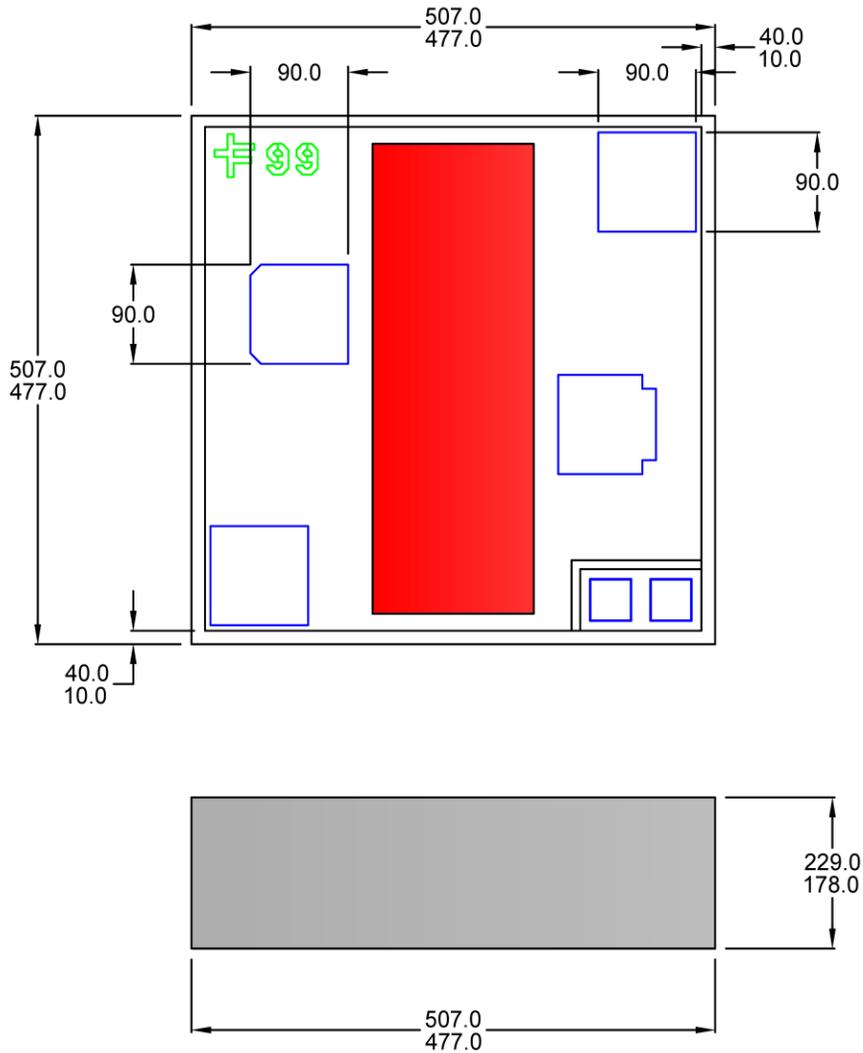


**Typical P0099F Characteristics (Continued)**



# P0099F Die Geometry Mechanical

## Raw Die Dimensions



1. All linear dimensions are in micrometers.