P0032F Process Geometry

Features

- Low Noise: 4 nV/√Hz Typical
- Typical Input Capacitance: 3.2pA
- Typical Breakdown Voltage: 60V
- High Input Impedance
- Small Die: 416um X 416um X 203um
- Bond Pads: 90um X 90um
- Substrate Connected to Gate
- Au Back-Side Finish

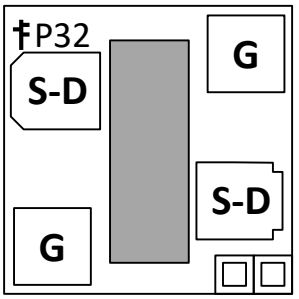
Applications

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

Description

The InterFET P0032F Geometry is ideal for switching and general purpose amplification applications.

Geometry Top View



Standard Parts

- 2N2608, 2N2609
- 2N3330, 2N3331
- 2N5020, 2N5021
- 2N5460, 2N5461, 2N5462
- 2N5463, 2N5464, 2N5465
- IFP5020A, IFP5020B

Product Summary

Parameters		Min	Typ	Max	Unit
BV_{GSS}	Gate to Source Breakdown Voltage	45	60		V
I_{DSS}	Drain to Source Saturation Current	-1		-15	mA
$V_{GS(off)}$	Gate to Source Cutoff Voltage	0.5		7	V
G_{FS}	Forward Transconductance		2.5		mS

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

Parameters		Min	Typ	Max	Unit
V_{RGS}	Reverse Gate to Source or Drain Voltage	45	60		V
I_{FG}	Continuous Forward Gate Current			10	mA
T_J	Operating Junction Temperature	-55		150	°C
T_{STG}	Storage Temperature	-65		175	°C

Electrical Characteristics

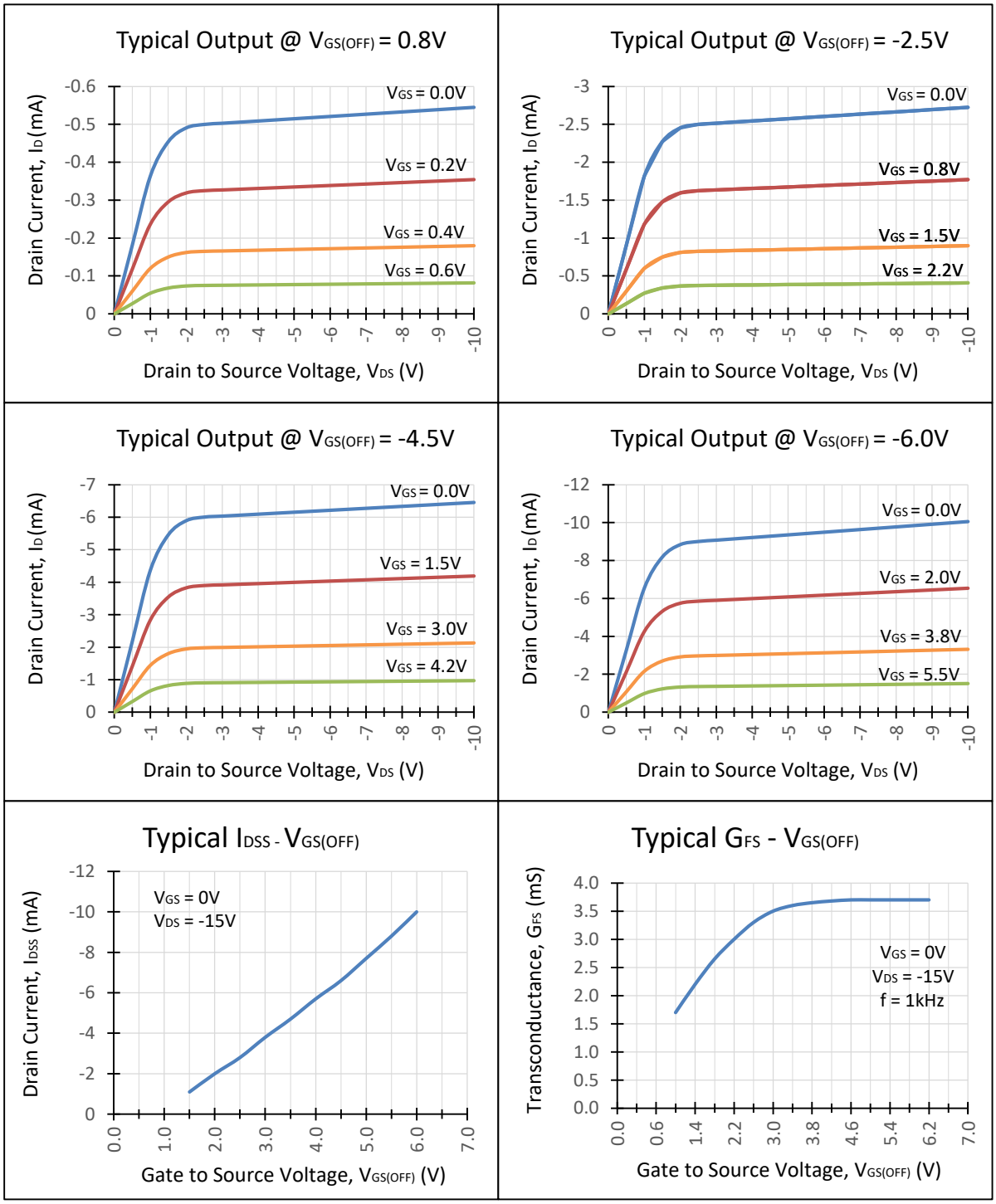
Static Characteristics (@ TA = 25°C, Unless otherwise specified)

Parameters		Conditions	Min	Typ	Max	Unit
BV_{GSS}	Gate to Source Breakdown Voltage	I_G = -1µA, V_{DS} = 0V	45	60		V
I_{GSS}	Gate to Source Reverse Current	V_{GS} = 15V, V_{DS} = 0V		1	2	nA
$V_{GS(OFF)}$	Gate to Source Cutoff Voltage	V_{DS} = -15V, I_D = 1nA	0.5		7	V
I_{DSS}	Drain to Source Saturation Current	V_{DS} = -15V, V_{GS} = 0V	-1		-15	mA

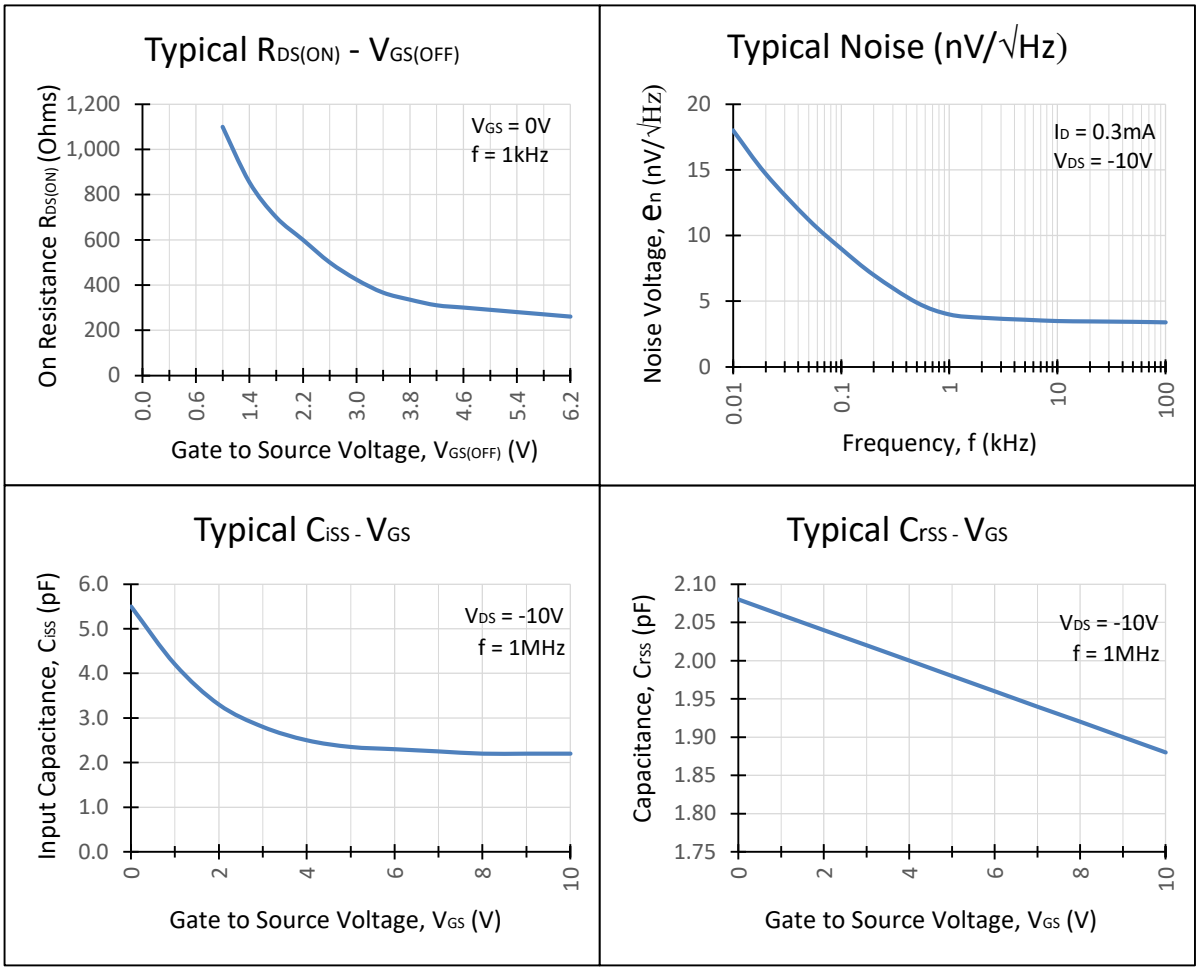
Dynamic Characteristics (@ TA = 25°C, Unless otherwise specified)

Parameters		Conditions	Min	Typ	Max	Unit
G_{FS}	Forward Transconductance	V_{DS} = -15V, V_{GS} = 0V, f = 1kHz		2.5		mS
C_{iss}	Input Capacitance	V_{DS} = 0V, V_{GS} = 10V, f = 1MHz		3.2		pF
C_{rss}	Reverse Transfer Capacitance	V_{DS} = 0V, V_{GS} = 10V, f = 1MHz		1.7		pF
e_n	Noise Voltage	V_{DS} = 10V, I_D = 0.3mA, f = 1kHz		4		nV/√Hz

Typical P0032F Characteristics

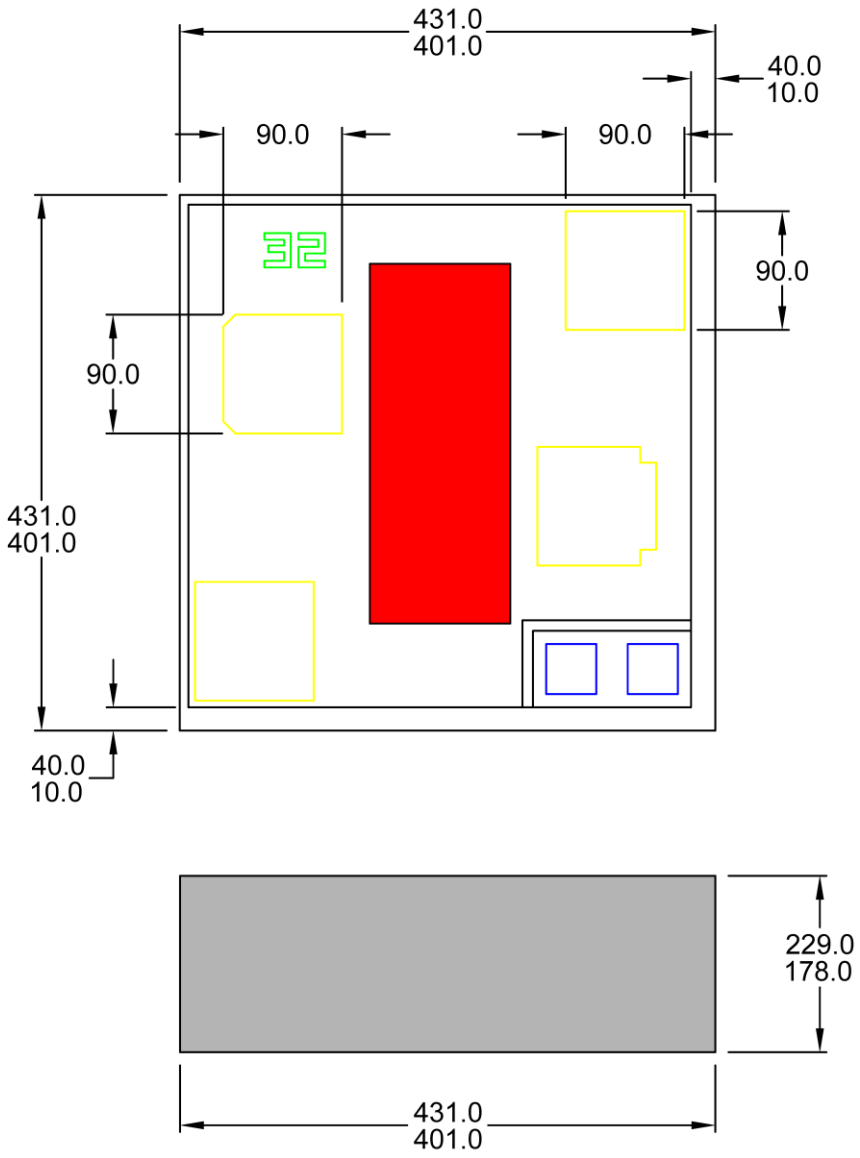


Typical P0032F Characteristics (Continued)



P0032F Die Geometry Mechanical

Raw Die Dimensions



1. All linear dimensions are in micrometers.