

P0032F Process Geometry

Features

- Low Noise: 4 nV/VHz 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

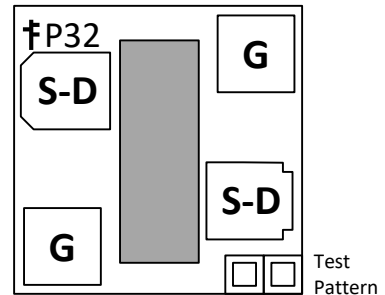
Applications

- 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



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)

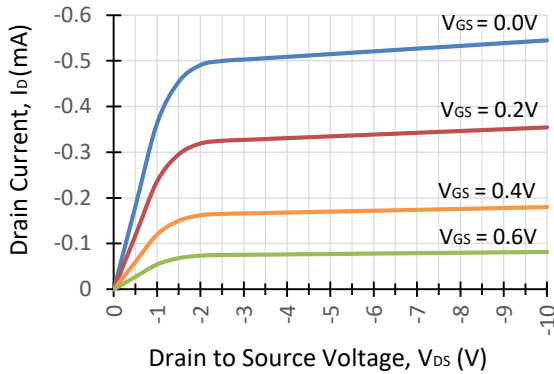
Parameters	Conditions	Min	Typ	Max	Unit
BV _{GSS} Gate to Source Breakdown Voltage	I _G = -1μA, V _{DS} = 0V	45	60		V
I _{GSS} Gate to Source Reverse Current	V _{GS} = 15V, V _{DS} = 0V		1	2	nA
V _{GS(OFF)} Gate to Source Cutoff Voltage	V _{DS} = -15V, I _D = 1nA	0.5		7	V
I _{DSS} Drain to Source Saturation Current	V _{DS} = -15V, V _{GS} = 0V	-1		-15	mA

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

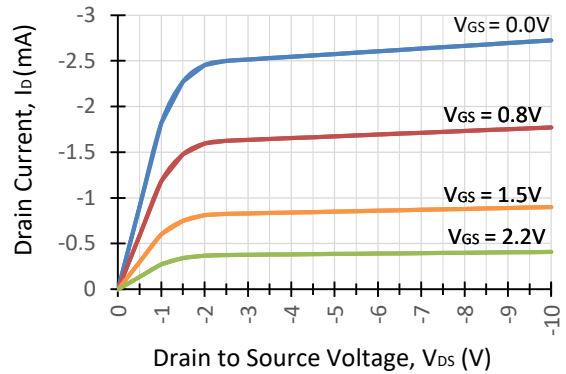
Parameters	Conditions	Min	Typ	Max	Unit
G _{FS} Forward Transconductance	V _{DS} = -15V, V _{GS} = 0V, f = 1kHz		2.5		mS
C _{iss} Input Capacitance	V _{DS} = 0V, V _{GS} = 10V, f = 1MHz		3.2		pF
C _{rss} Reverse Transfer Capacitance	V _{DS} = 0V, V _{GS} = 10V, f = 1MHz		1.7		pF
e _n Noise Voltage	V _{DS} = 10V, I _D = 0.3mA, f = 1kHz		4		nV/√Hz

Typical P0032F Characteristics

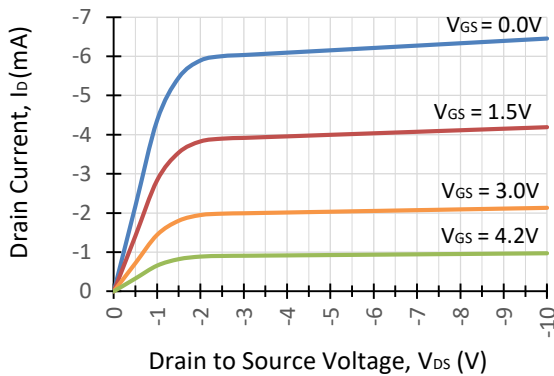
Typical Output @ $V_{GS(OFF)} = 0.8V$



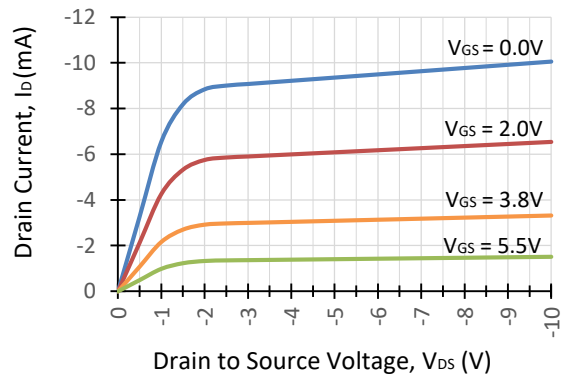
Typical Output @ $V_{GS(OFF)} = -2.5V$



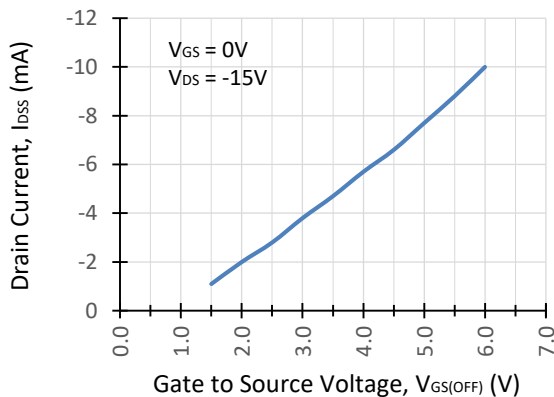
Typical Output @ $V_{GS(OFF)} = -4.5V$



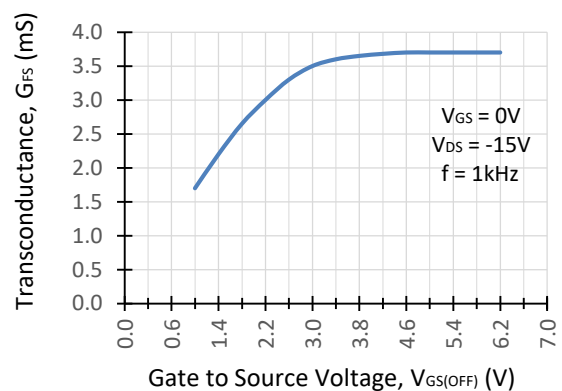
Typical Output @ $V_{GS(OFF)} = -6.0V$



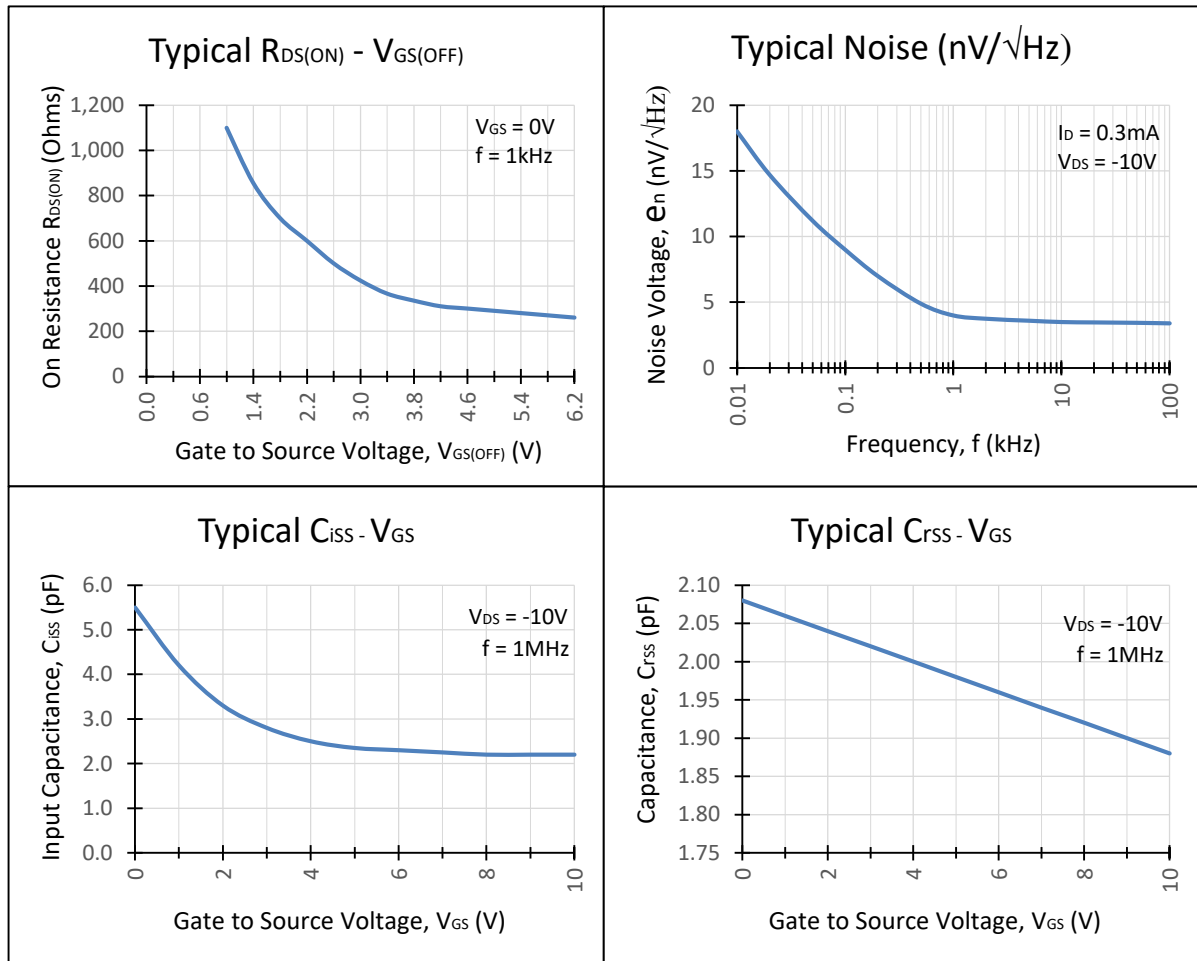
Typical $I_{DSS} - V_{GS(OFF)}$



Typical $G_{FS} - V_{GS(OFF)}$

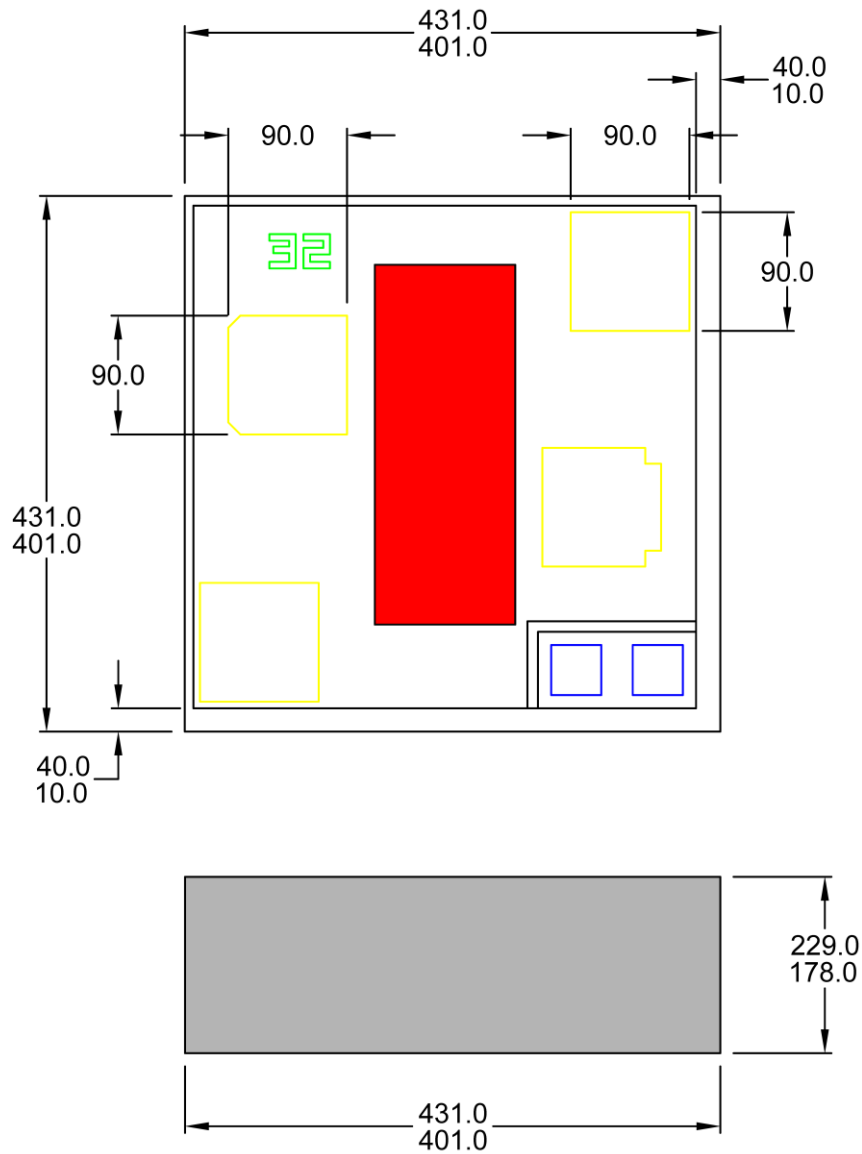


Typical P0032F Characteristics (Continued)



P0032F Die Geometry Mechanical

Raw Die Dimensions



1. All linear dimensions are in micrometers.