



Low Noise JFET

564102

DESCRIPTION

The 564102 is an N-channel Low Noise Junction Field Effect Transistor for low frequency and audio applications and in PIR sensor applications. The device can be offered as an un-sawn wafer, a sawn wafer or as die mounted in a customer specified package such as a T092 or a SOT package.

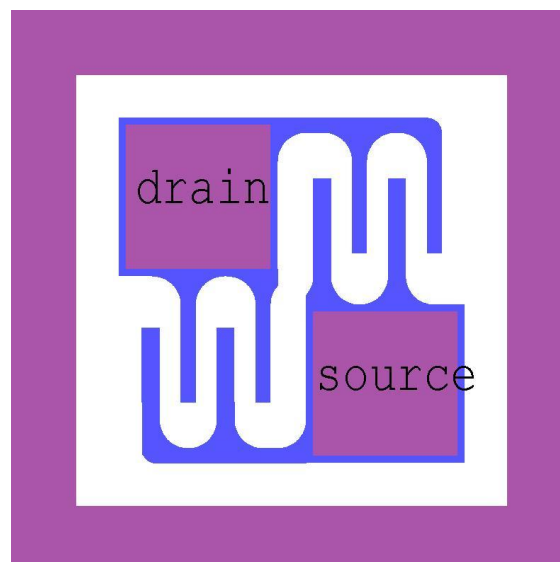
FEATURES

- Low Noise.
- Low Leakage.
- Low frequency.
- Low power consumption.

APPLICATIONS

- Low noise amplifier.
- Charge Sensitive amplifier.
- Audio frequency amplifier
- P.I.R. Sensors
- Microphones
- Hearing aids

1.0 Pad Assignment



This view is with the major flat at the bottom.



564102

Low Noise JFET

1.0 ABSOLUTE MAXIMUM RATINGS

PARAMETER	RATING	UNITS
Drain Supply voltage	25	V
Drain Supply current	5	mA
Operating Temperature, T_O	0 to 85	°C
Storage Temperature, T_S	-40 - +105	°C

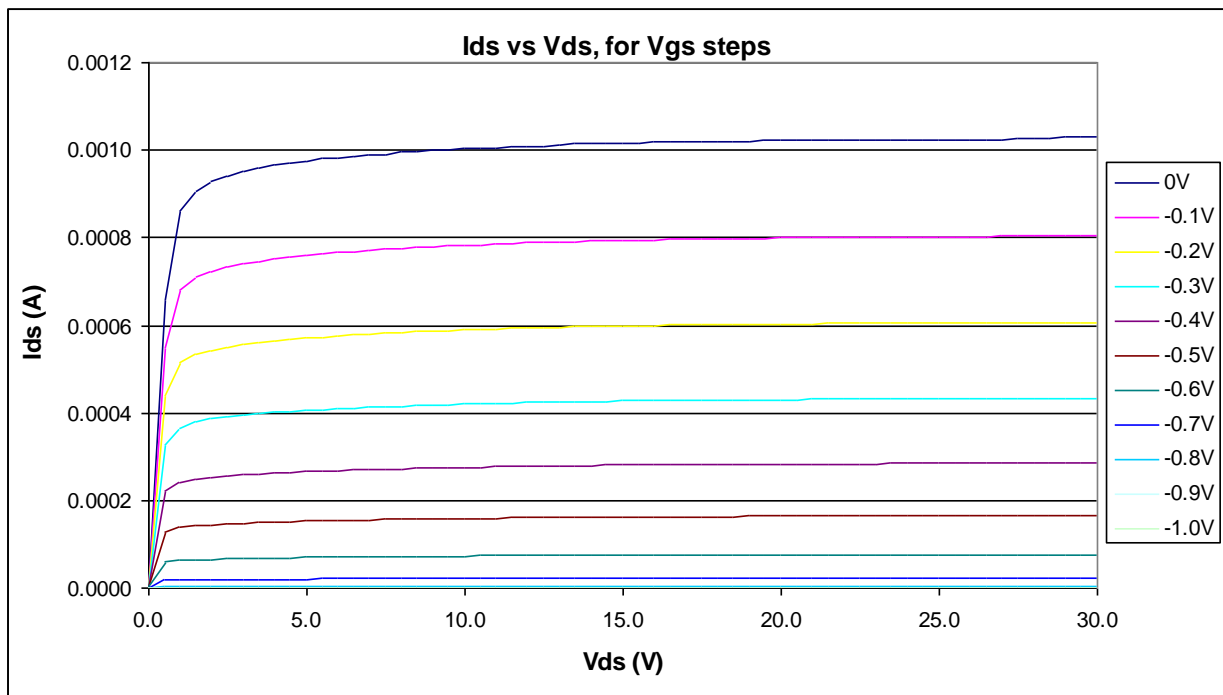
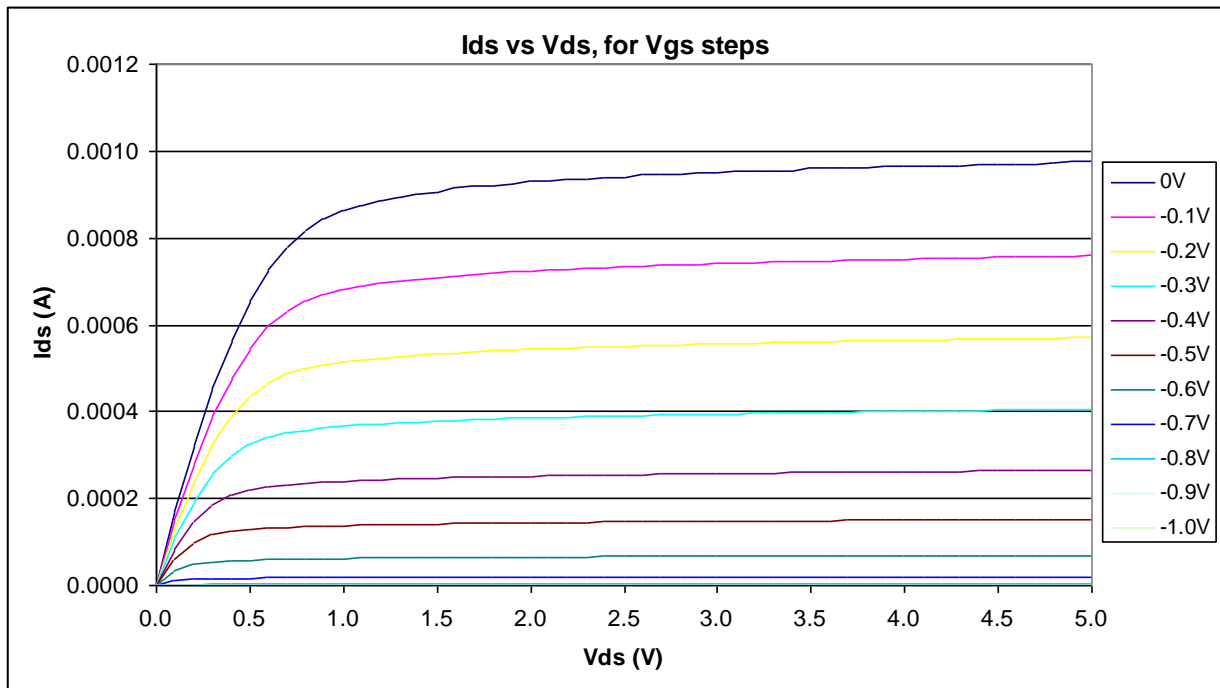
2.0 MECHANICAL SPECIFICATION

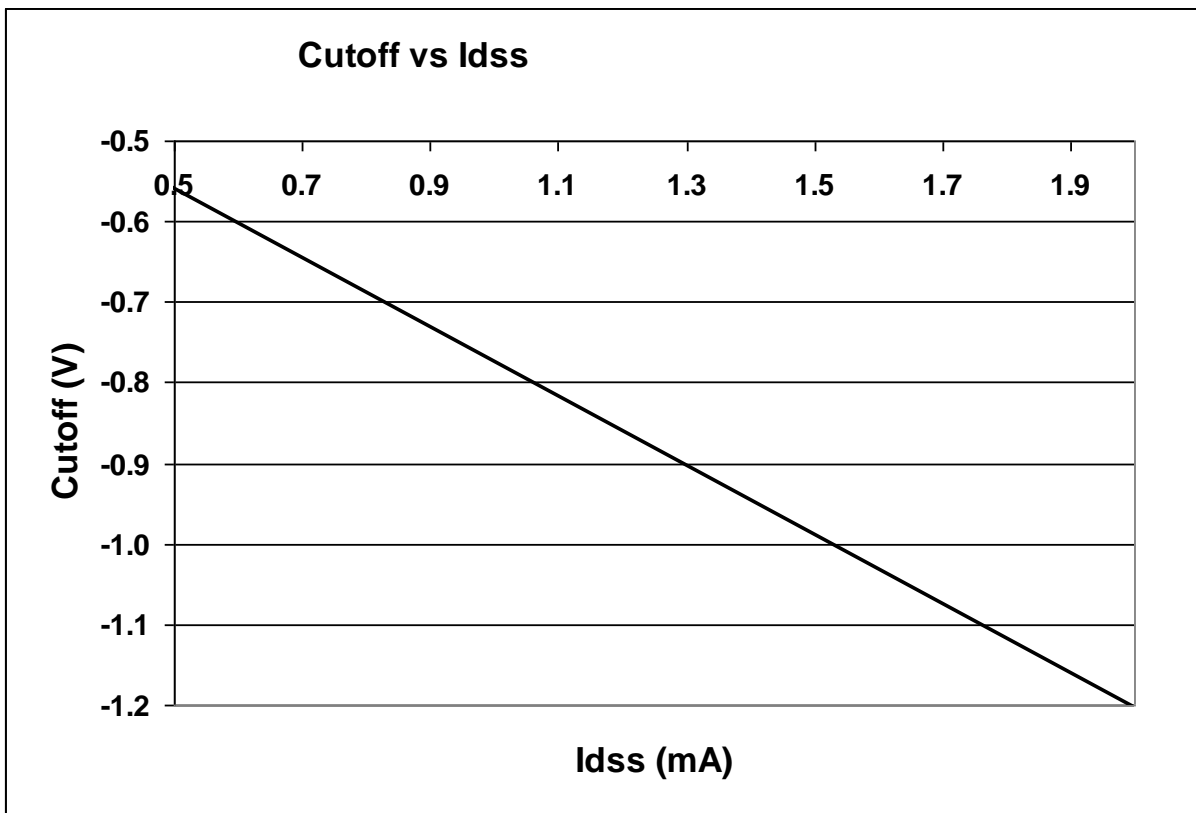
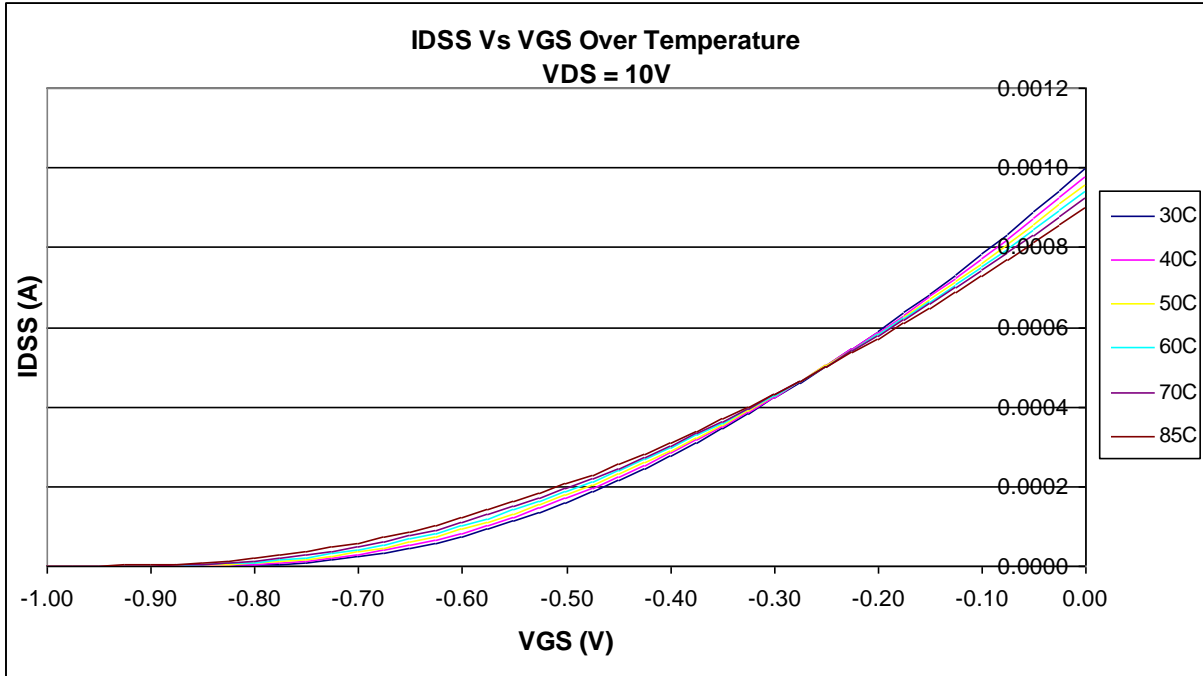
PARAMETER	RATING	UNITS
Chip size (+/- 0.02mm) LxBxH	0.38 x 0.38 x 0.22 (15x15x8.7) unsawn	mm (mils)
Chip off	≤ 0.05 mm (LxBxH), ≤ 0.1 mm (corners)	
Linearity of edge (Din 7184)	0.005	mm
Gate contact	On back-side (with 1 micron thick gold)	
Bond pad size	0.1 x 0.1 (4 x 4)	mm (mils)
Ink dot diameter (typical)	0.25	mm
Ink dot appearance	Opaque, black matt	

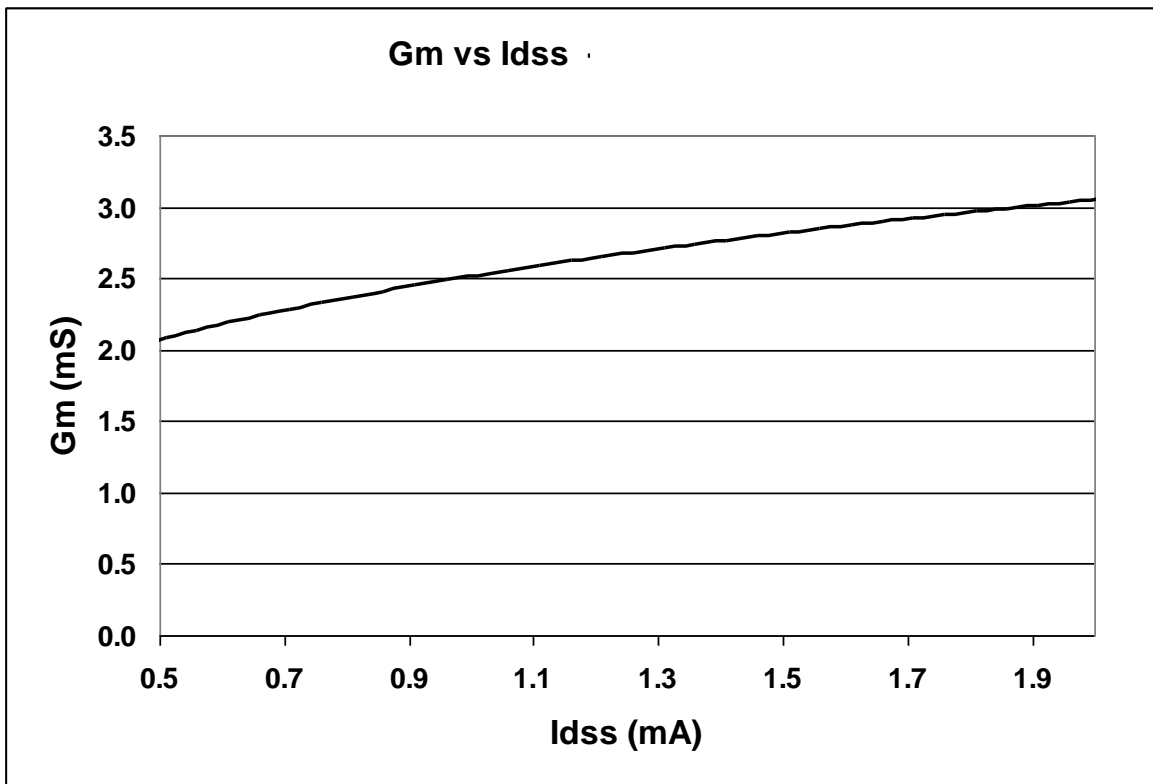
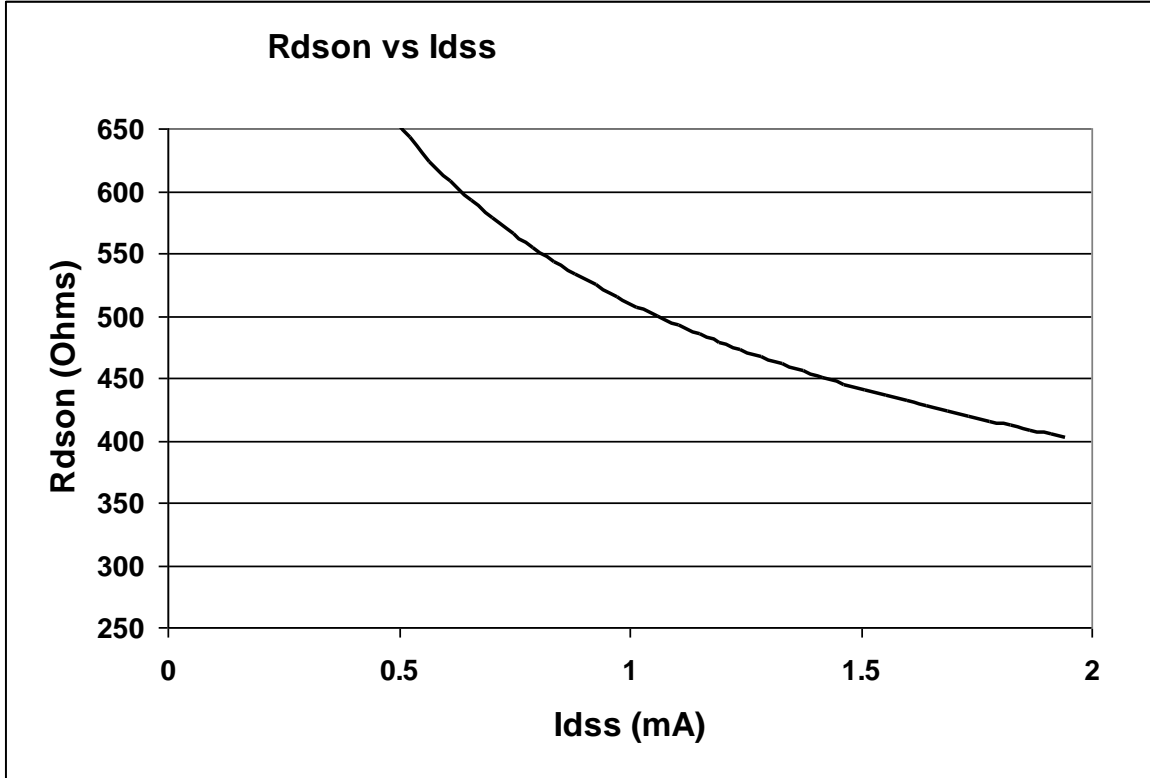
3.0 ELECTRICAL SPECIFICATION

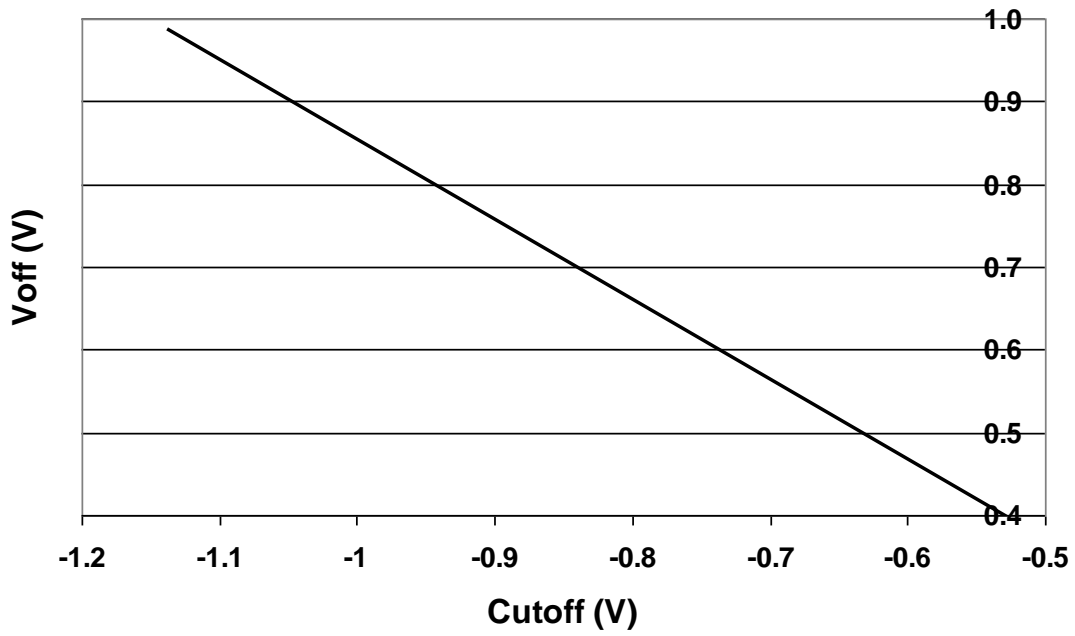
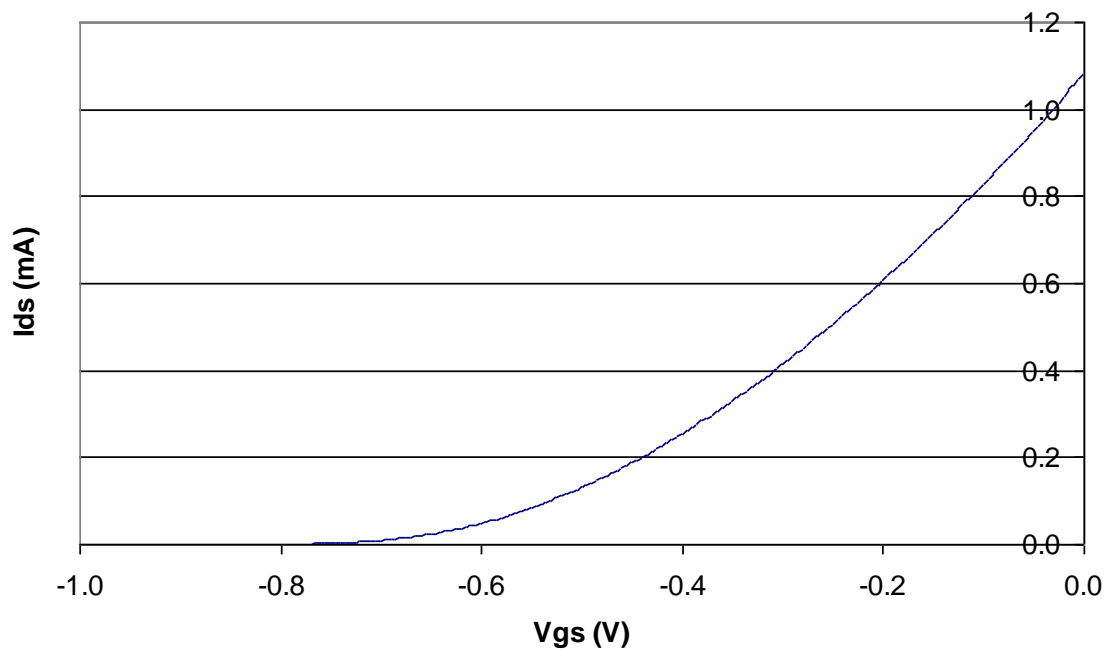
PARAMETER	SYMBOL	TEST CONDITIONS	SPEC	UNIT
Breakdown voltage between gate and drain, source open	BVgdo	$I_{gd} = 10\mu A$	>40	V
Gate-source cut-off voltage	Vcutoff	$V_{ds} = 10V$ $I_{ds} = 1\mu A$	-0.9 to -0.5	V
Drain Current	I_{dss}	$V_{ds}=10V$ $V_{gs}=0V$	0.6 to 1.8	mA
Drain source resistance	R_{dson}	$V_{ds} = 0.01V,$ $V_{gs} = 0V$	250 to 650	Ω
Gate reverse leakage current	I_{gss}	$V_{gs} = -15V$ $V_{ds} = 0$	<2	pA
Offset Voltage (See diagram in 4.0)	Voff	$V_{ds} = 10V$ $V_{gs} = 0V$	0.45 to 0.8	V

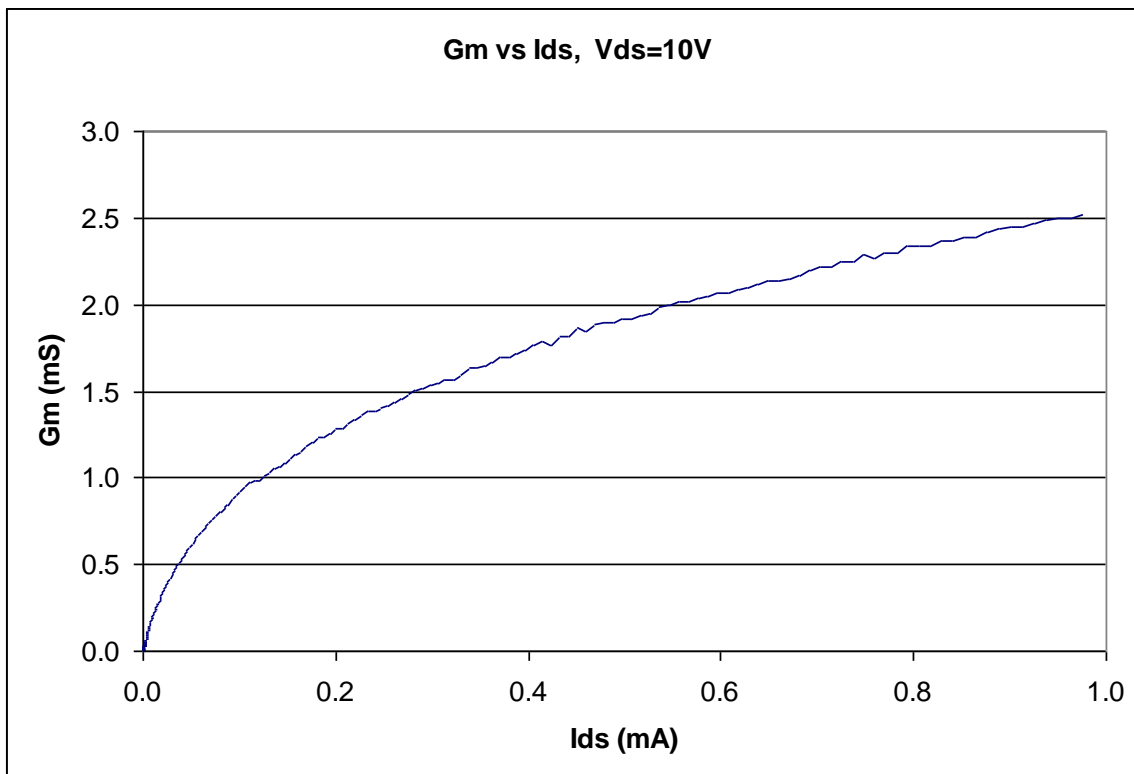
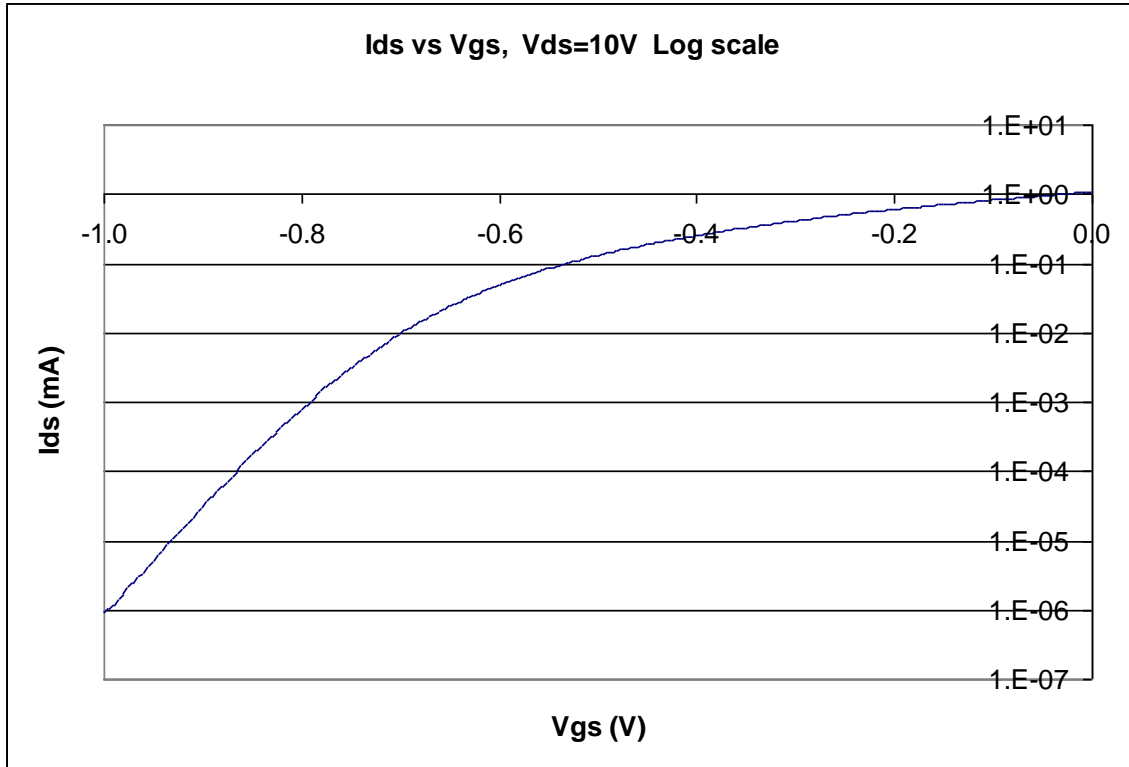
3.1 Electrical Curves





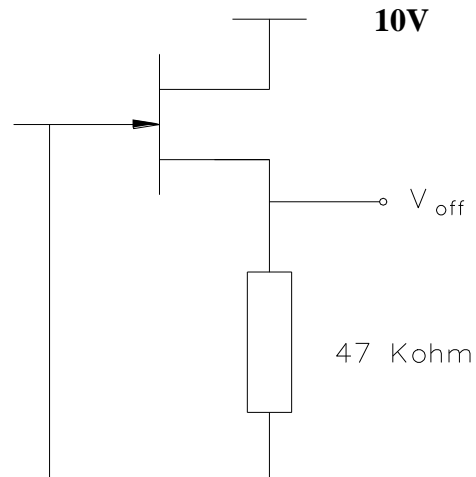


Voff vs Vcutoff**Ids vs Vgs, Vds=10V**



4.0 Voff Diagram

1.1





564102

Low Noise JFET

5.0 ORDERING INFORMATION

Order products using the following product codes

564102 Die (Die in sawn wafer form).
564102 Wafer (Un-sawn wafers).

Other packages available on request.

Semefab (Scotland) Ltd. may change this specification at any time without notification.

Supply of products conforms to Semefab (Scotland) Ltd.'s Terms and Conditions

LIFE SUPPORT APPLICATIONS

This product is not designed for use in life support appliances, devices, or systems where malfunction of these products can be reasonably expected to result in personal injury.

Semefab (Scotland) Ltd customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Semefab for any damages resulting from such improper use or sale.

Semefab (Scotland) Ltd
Newark Road South
Eastfield Industrial Estate
Glenrothes, Fife KY7 4NS
Telephone: +44 (0) 1592 630 630
Fax: +44 (0) 1592 775 265
Email sales@semefab.co.uk

© Semefab 2006