LOW NOISE JFET
564103 REV B

DESCRIPTION

The 564103 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.

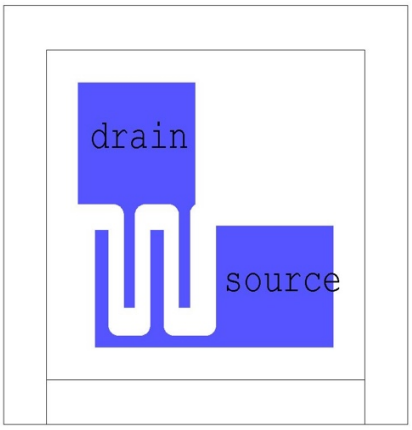
FEATURES

- 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.

www.dstsensor.eu Mob/Cell (+357) 9786 8765 daniel.james@dstsensor.eu

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

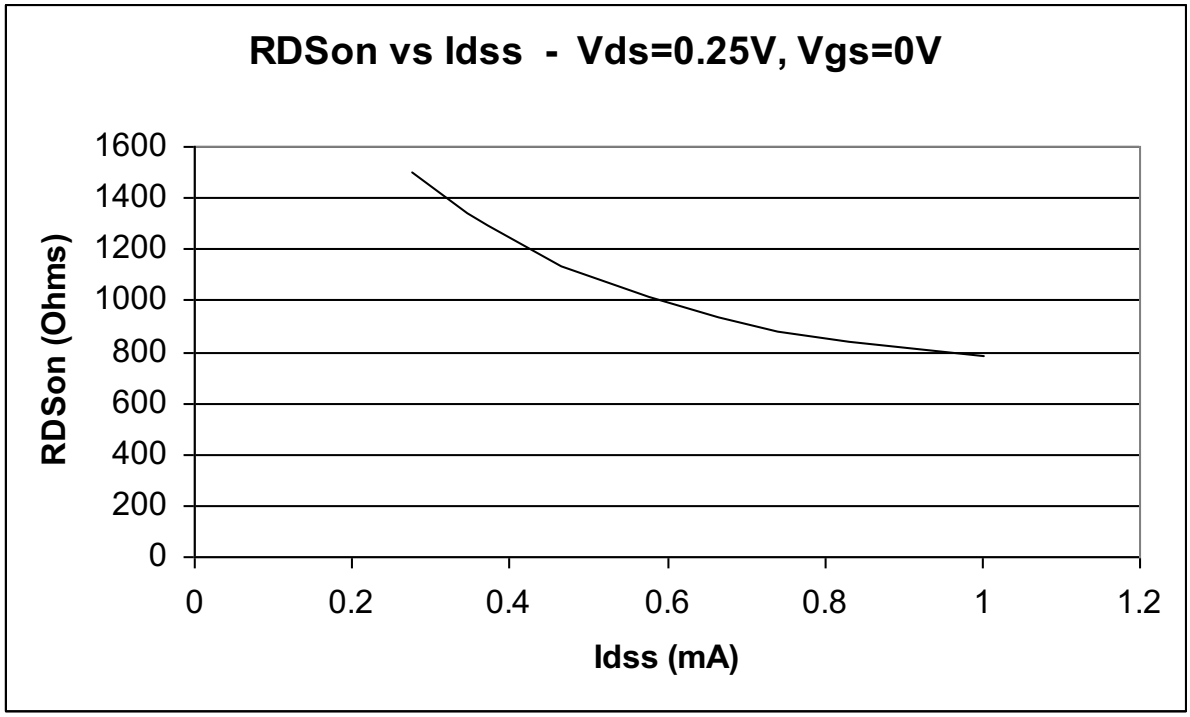
PARAMETER	RATING	UNITS
Chip size (+/- 0.02mm) LxBxH	14x14x12	mils
Chip off	≤ 0.05 mm (LxBxH), ≤ 0.1 mm (corners)	
Linearity of edge (Din 7184)	0.005	mm
Gate contact	On back-side	
Bond pad size	4x4	mils
Ink dot size	Customer Specified	
Ink dot appearance	Opaque, black matt	

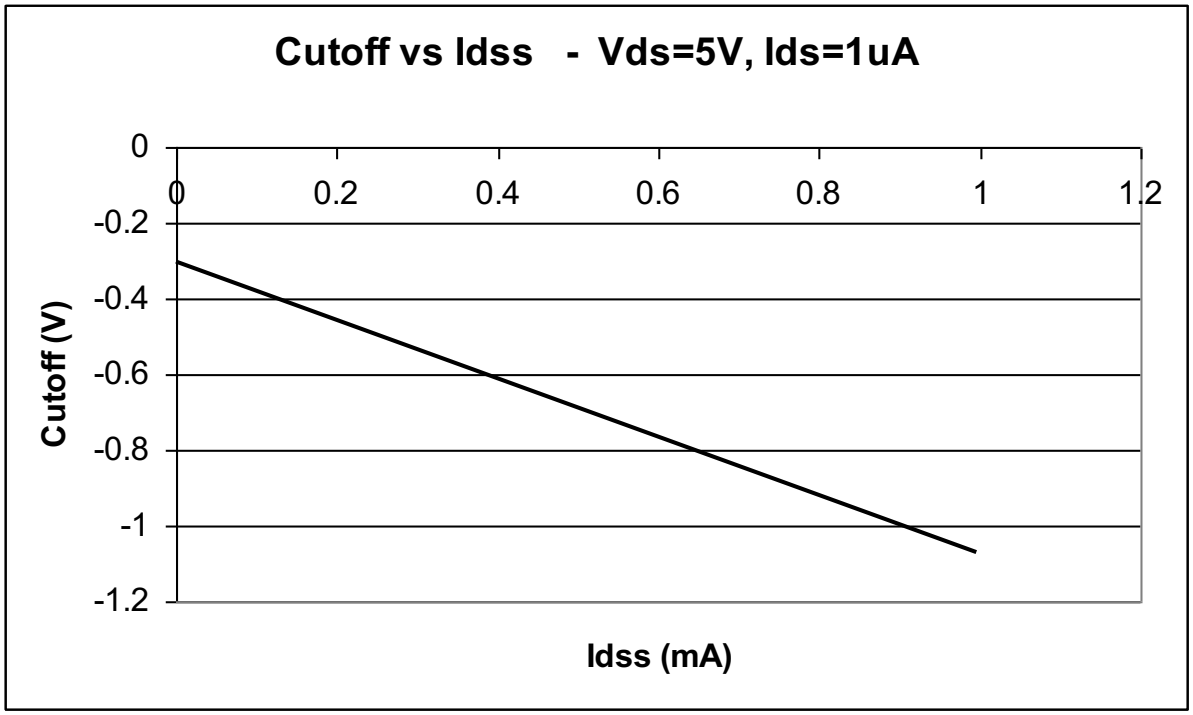
3.0 ELECTRICAL SPECIFICATION

PARAMETER	SYMBOL	TEST CONDITIONS	SPEC	UNIT
Common-source forward trans-conductance.	gfs	Vgs = 0V, Vds = 5	> 1	mS
Gate-source cut-off voltage	Vcutoff	Vds = 5V Ids = 1uA	-0.5 to -1.0	V
Drain Current	Idss	Vds=5V Vgs=0V	0.25 to 1.2	mA
Drain source resistance	Rds(on)	Vds = 0.25V, Vgs = 0V	500 - 1600	Ω
Gate input resistance	Rin	Vgs = -15V Vds= 0	1,000 to 80,000	Gig-Ω

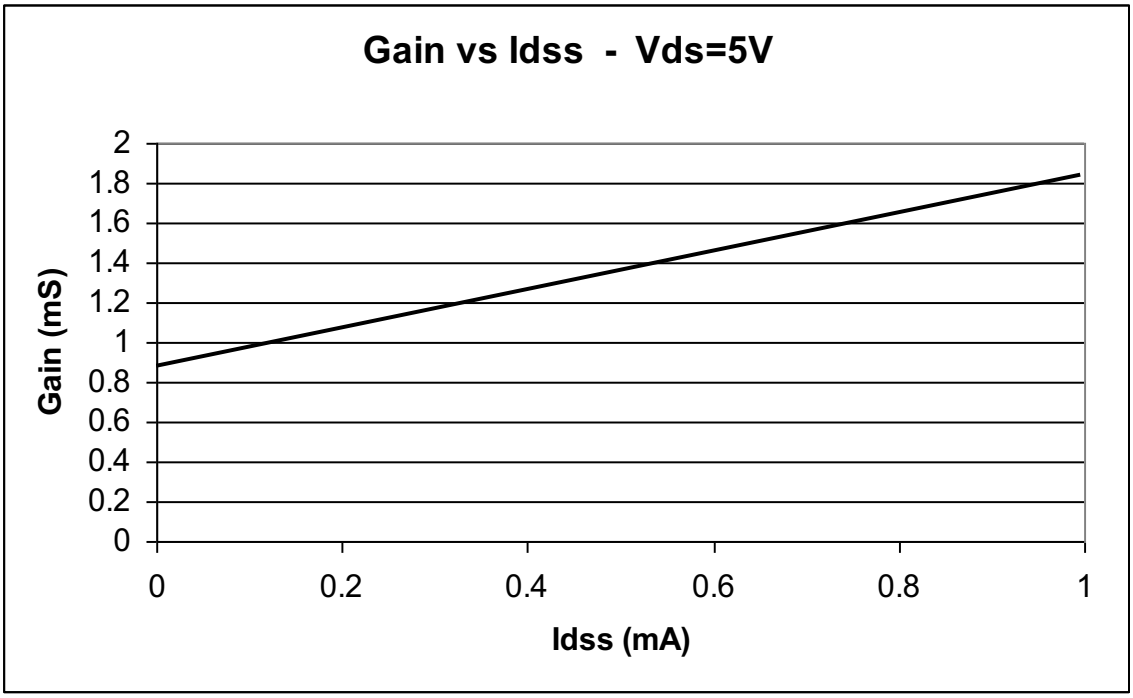
www.dstsensor.eu Mob/Cell (+357) 9786 8765 daniel.james@dstsensor.eu

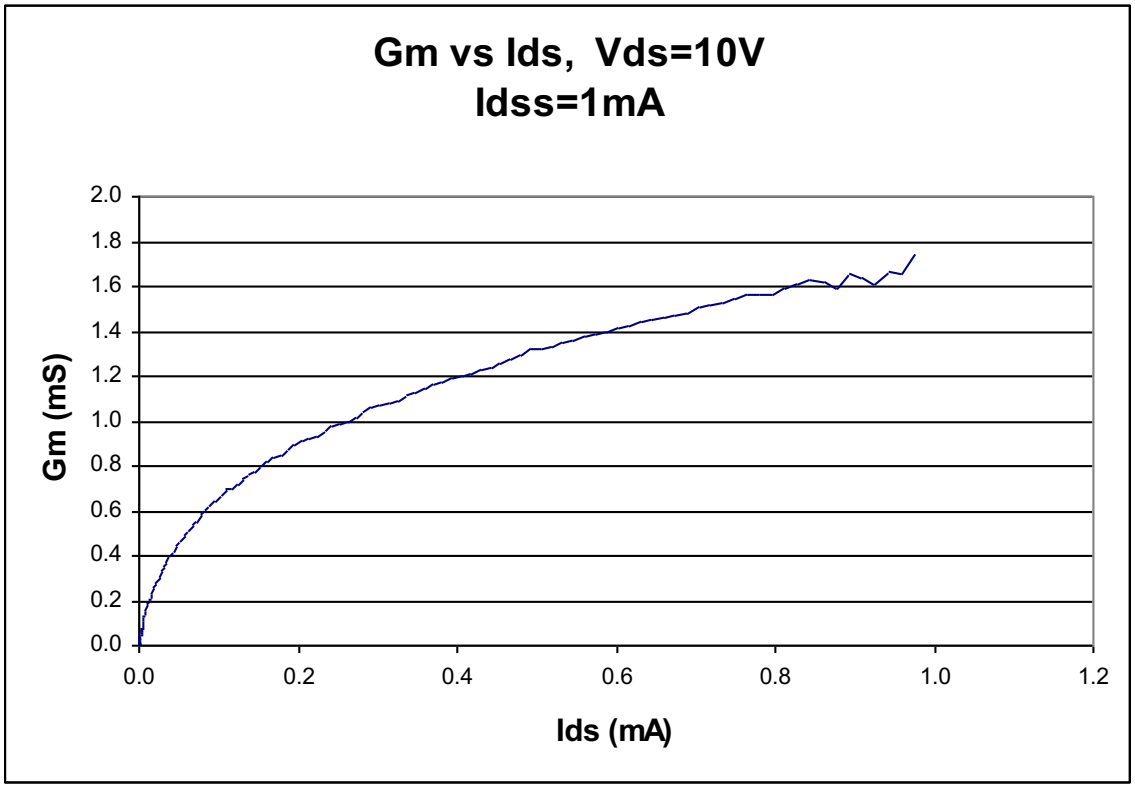
3.1 Electrical Curves



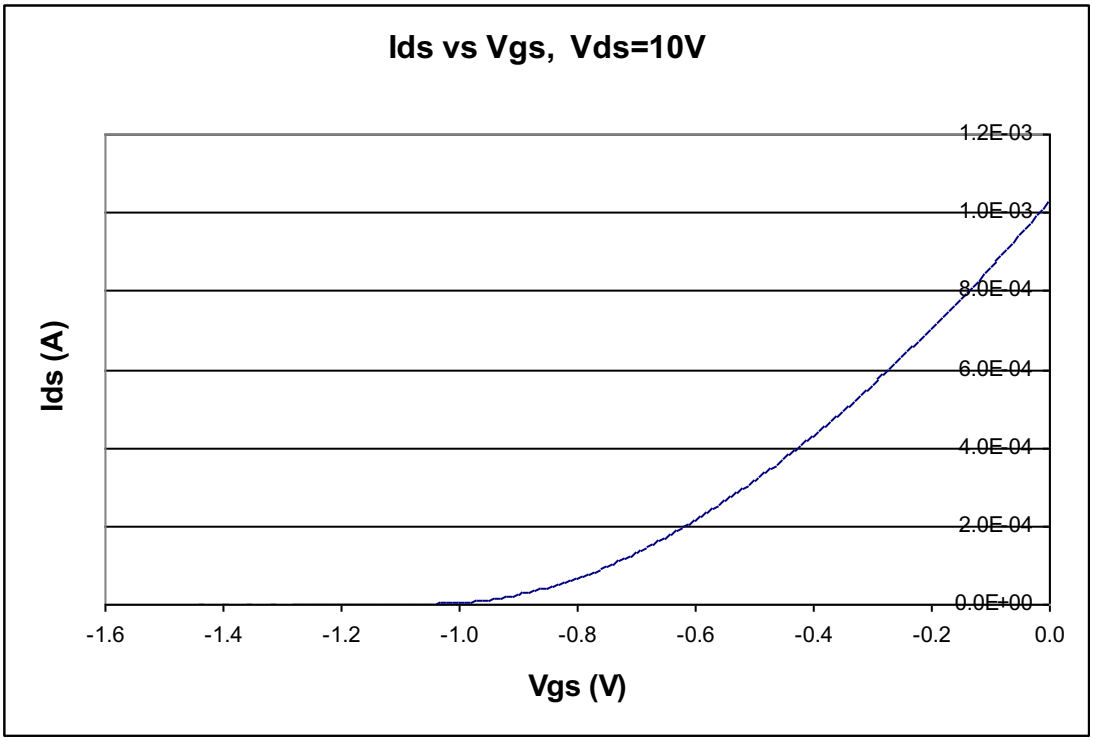


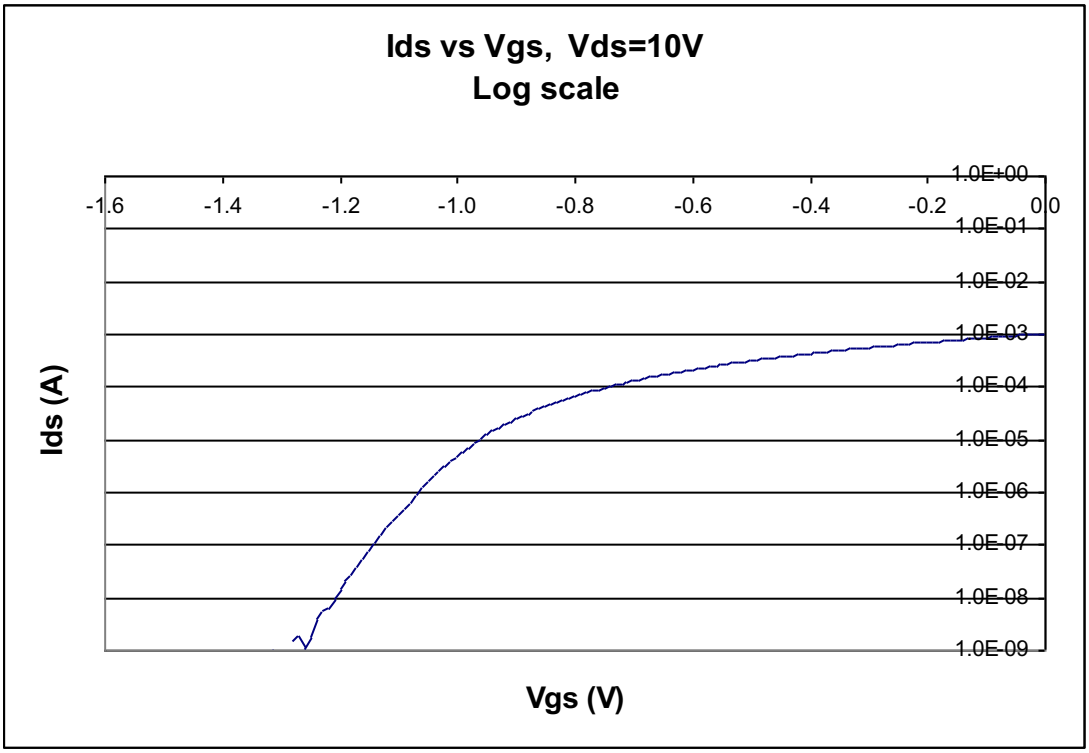
www.dstsensor.eu Mob/Cell (+357) 9786 8765 daniel.james@dstsensor.eu



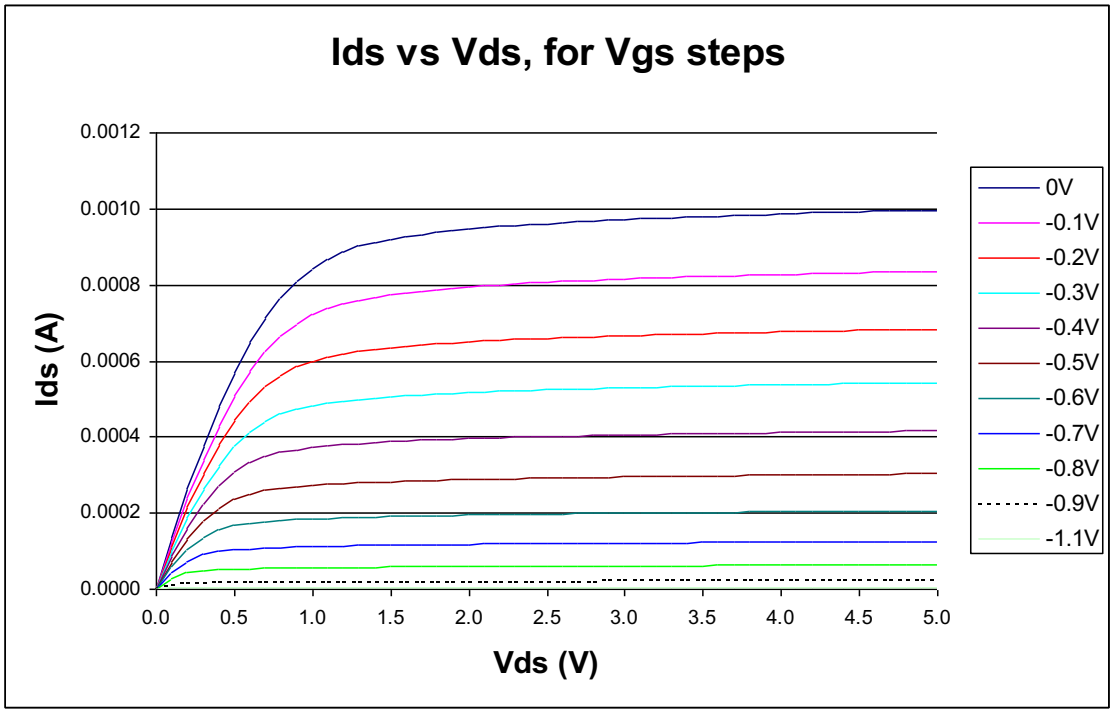


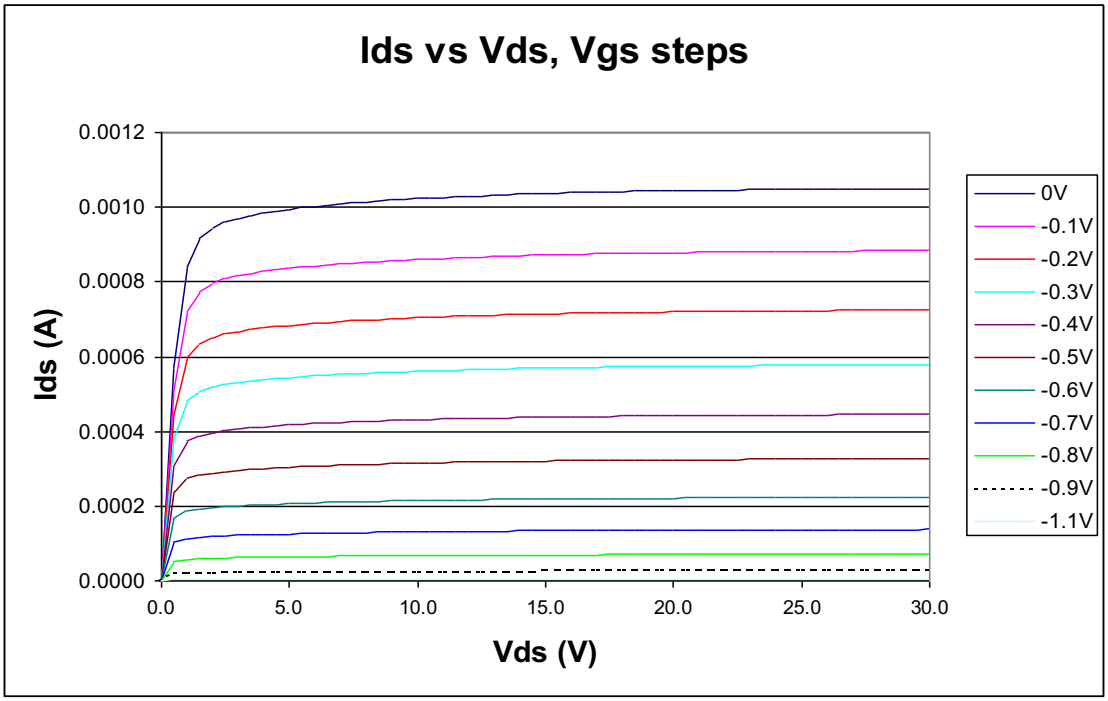
www.dstsensor.eu Mob/Cell (+357) 9786 8765 daniel.james@dstsensor.eu



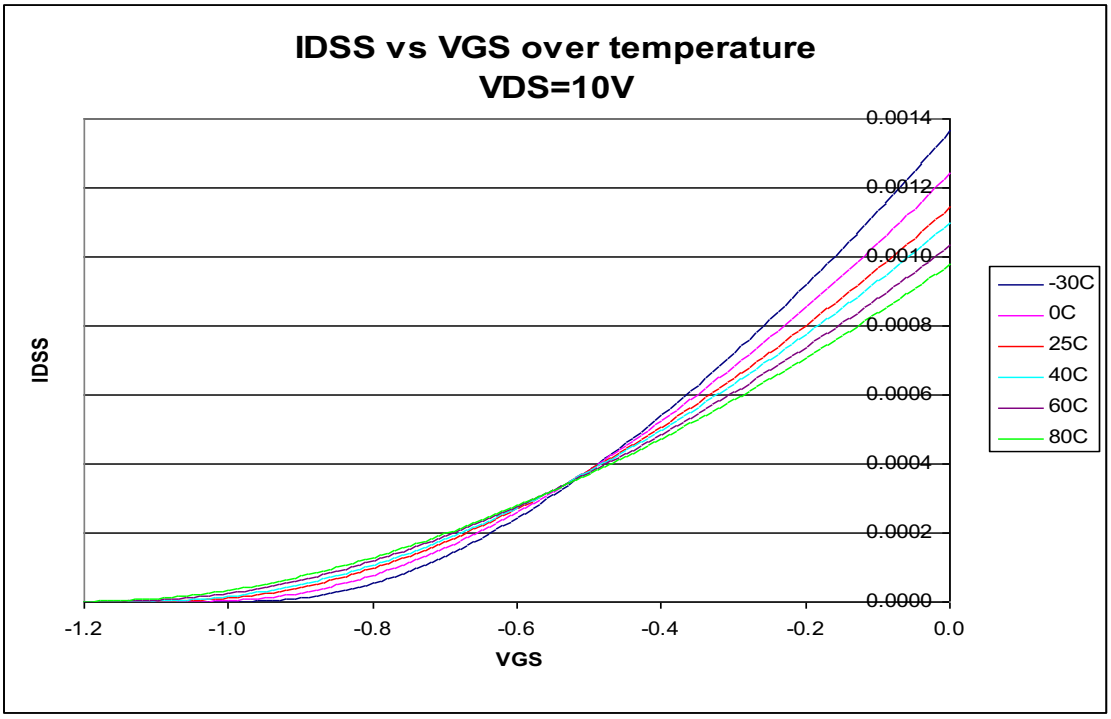


www.dstsensor.eu Mob/Cell (+357) 9786 8765 daniel.james@dstsensor.eu





www.dstsensor.eu Mob/Cell (+357) 9786 8765 daniel.james@dstsensor.eu



3.2 Noise Characteristics

Ids mA	Vgs V	Noise @ 1KHz	10KHz	100KHz
		nV/root(Hz)		
0.5	0.43	3.67	3.36	2.75
0.9	0.17	3.74	3.08	2.44
1.3	0.08	4.15	2.96	2.26

www.dstsensor.eu Mob/Cell (+357) 9786 8765 daniel.james@dstsensor.eu