

LOW NOISE JFET SF291

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DESCRIPTION

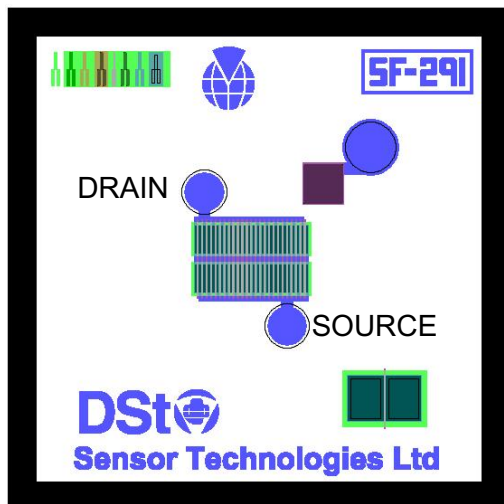
The SF291 is a 3 terminal N-channel Low Noise JFET for amplifier applications requiring high transconductance and low noise.

The device can be offered as an unsawn wafer with backside gold, or in a TO92 package.

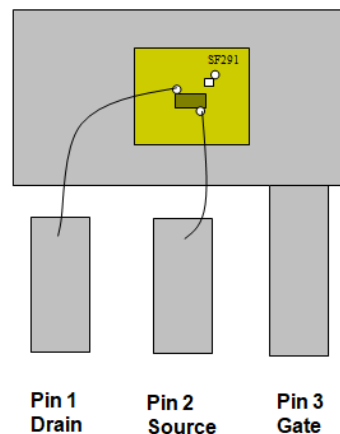
FEATURES

- Low Noise.
- High Transconductance
- Low leakage

Die layout



TO92 Pin-out



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1.0 ABSOLUTE MAXIMUM RATINGS

PARAMETER	RATING	UNITS
Drain Supply voltage	25	V
Drain Supply current	75	mA
Operating Temperature, T _o	0 to 85	°C
Storage Temperature, T _s	-40 - +105	°C

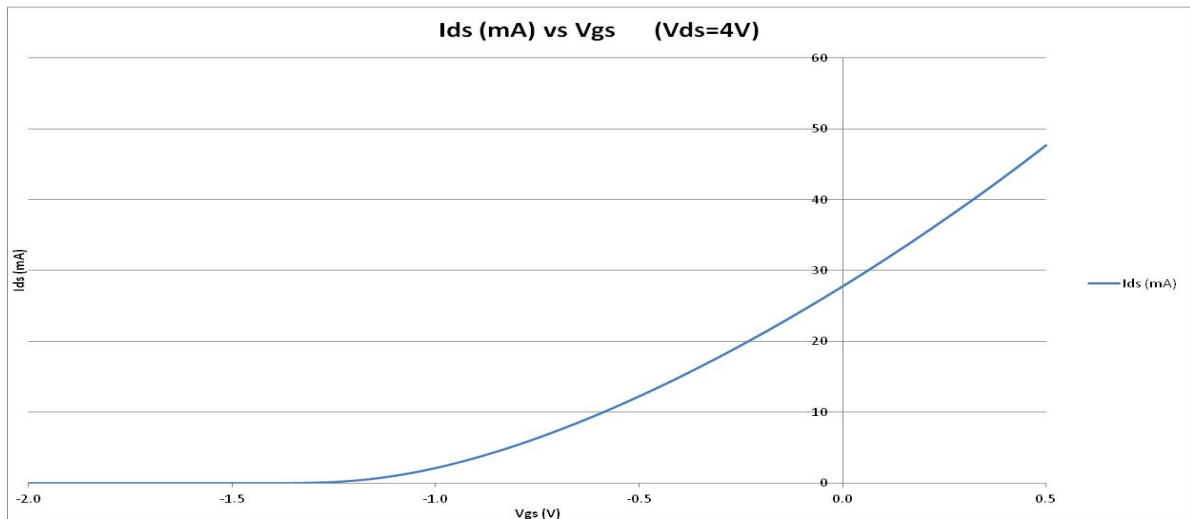
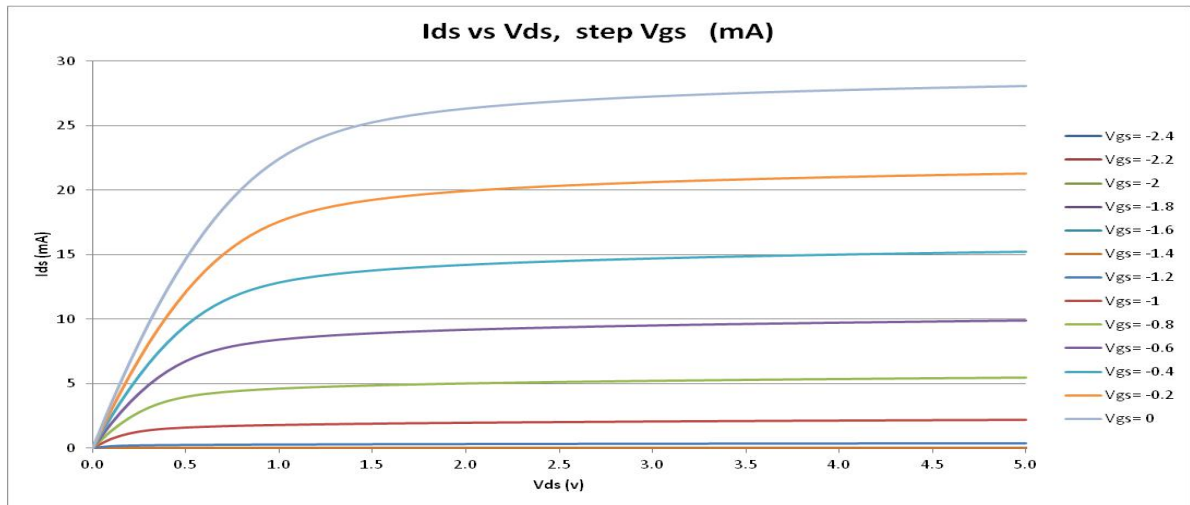
2.0 MECHANICAL SPECIFICATION

PARAMETER	RATING	UNITS
Chip size LxBxH	0.9 x 0.9 x 0.3	mm
Gate contact	On back-side, gold back-metal	
Bond pad sizes		microns

3.0 ELECTRICAL SPECIFICATION

PARAMETER	SYMBOL	TEST CONDITIONS	SPEC	UNIT
Common-source forward trans-conductance.	g _{fs}	V _{gs} = 0V, V _{ds} = 3V	25 to 45	mS
Gate-source cut-off voltage	V _{cutoff}	V _{ds} = 3V, I _{ds} = 1uA	-0.8 to -2.5	V
Drain Current	I _{dss}	V _{ds} =3V, V _{gs} =0V	10 to 50	mA
Input capacitance	C _{iss}	V _{ds} =0V, V _{gs} =0V	8 (typical)	pF
Gate-Source breakdown	BV _{gss}	V _{ds} = 0, I _{gs} =1nA	< -15V	V

3.1 ELECTRICAL CURVES



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4.0 TYPICAL NOISE DATA

Noise in nVroot(Hz)

10Hz	100Hz	1kHz	10kHz	100kHz	Vgs
1.25	0.89	0.85	0.82	0.66	1.12

Vds =3V, Ids= 10mA