

# NSVJ3910SB3

## N-Channel JFET –25V, 20 to 40mA, 40mS



ON Semiconductor®

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Automotive JFET designed for compact and efficient designs and including high gain performance. AEC-Q101 qualified JFET and PPAP capable suitable for automotive applications.

### Features

- High Forward Transfer Admittance
- High Breakdown Voltage
- Low Input Capacitance
- Low Noise Figure
- Pb-Free and RoHS compliance
- AEC-Q101 qualified and PPAP capable

### Typical Applications

- Low Noise Amplifier for Automotive AM Radio

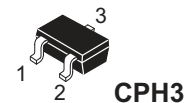
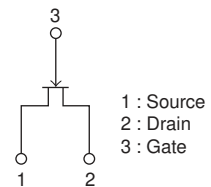
### SPECIFICATIONS

**ABSOLUTE MAXIMUM RATINGS** at  $T_a = 25^\circ\text{C}$  (Note 1)

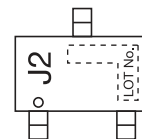
Parameter	Symbol	Value	Unit
Drain-to-Source Voltage	$V_{DSX}$	25	V
Gate-to-Drain Voltage	$V_{GDS}$	–25	V
Gate Current	$I_G$	10	mA
Drain Current	$I_D$	50	mA
Allowable Power Dissipation	$P_D$	400	mW
Operating Junction and Storage Temperature	$T_J, T_{stg}$	–55 to +150	$^\circ\text{C}$

Note 1 : Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

### ELECTRICAL CONNECTION N-Channel



### MARKING



### ORDERING INFORMATION

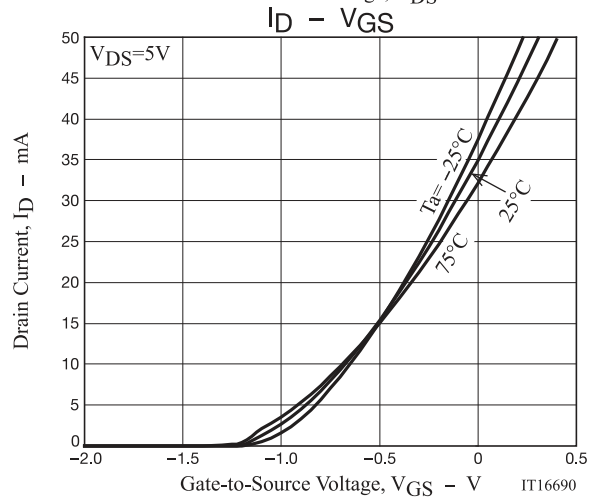
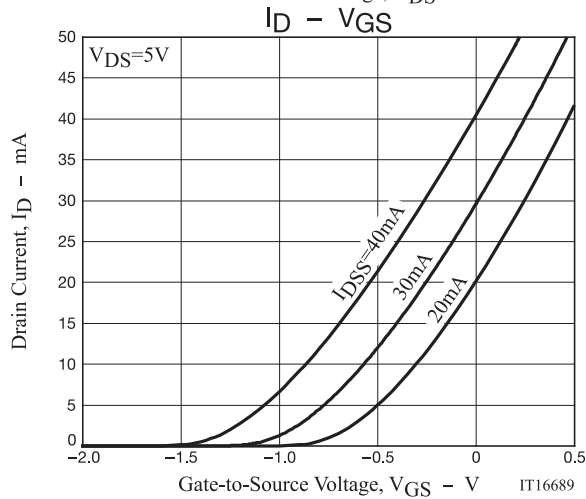
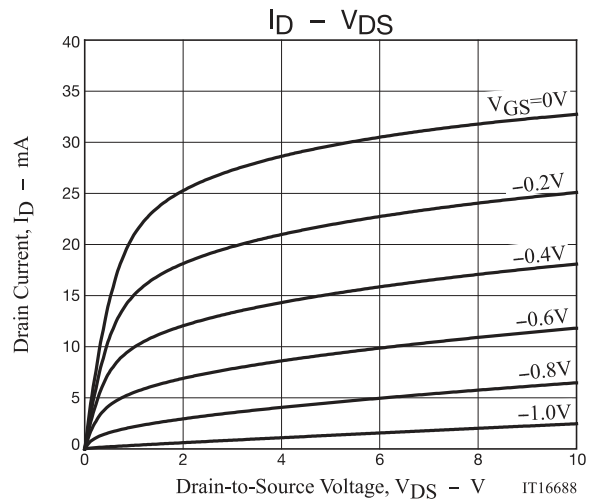
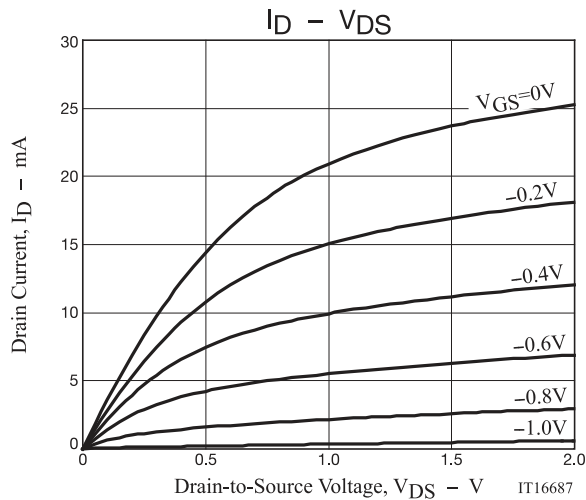
See detailed ordering and shipping information on page 5 of this data sheet

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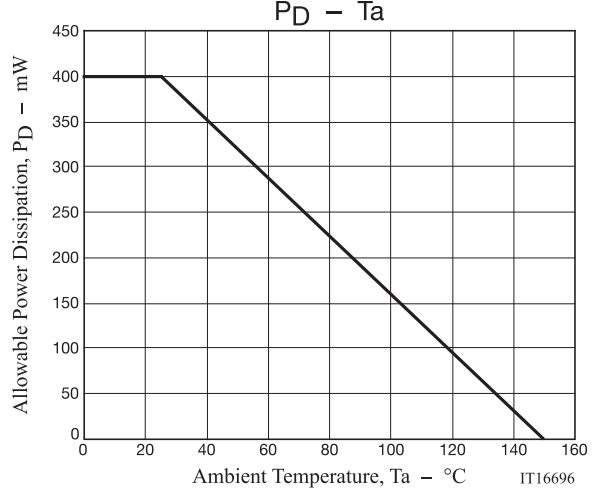
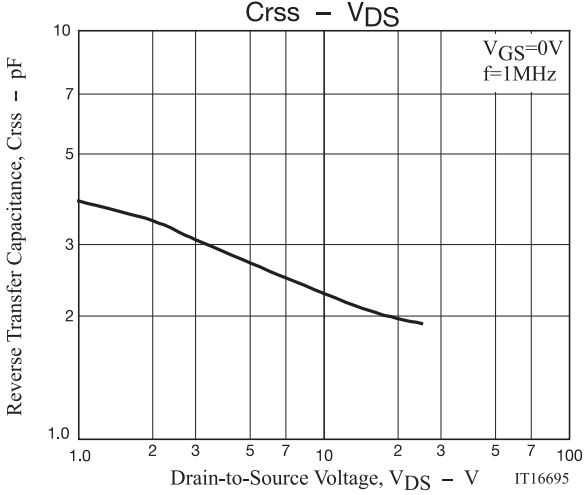
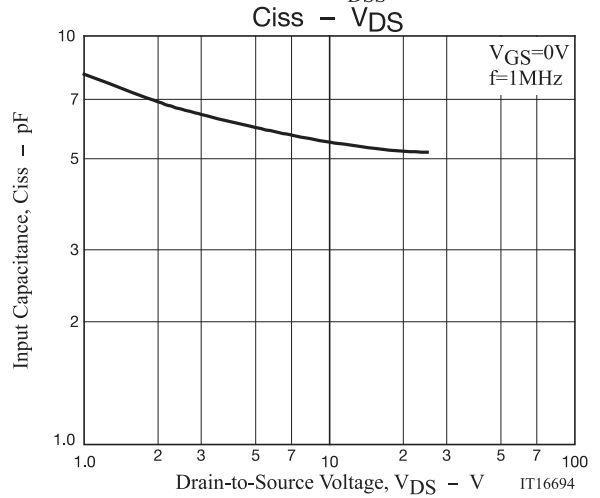
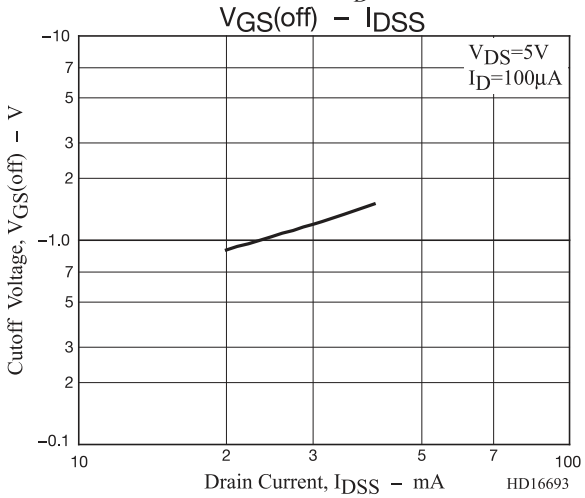
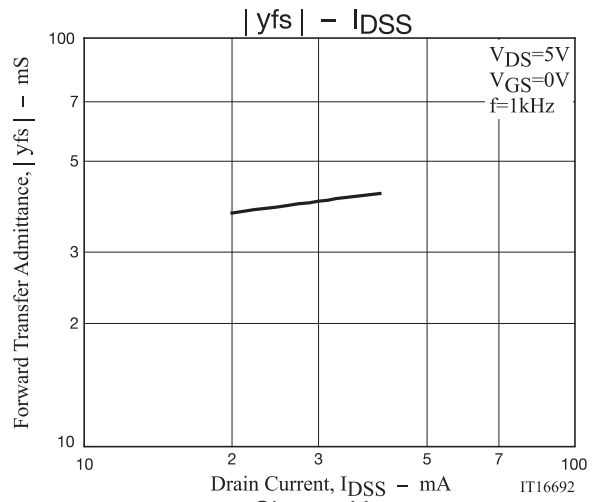
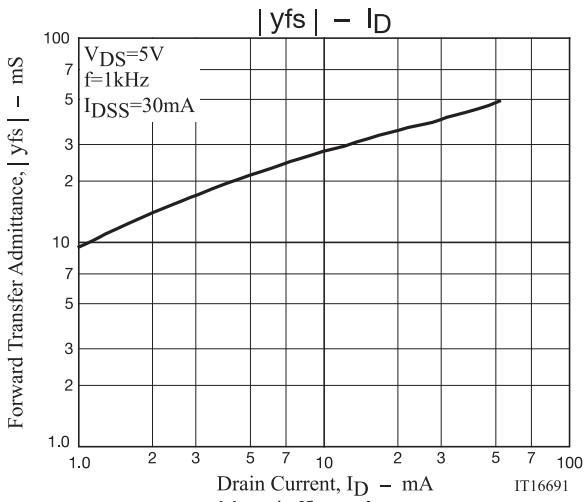
## ELECTRICAL CHARACTERISTICS at Ta = 25°C (Note 2)

Parameter	Symbol	Conditions	Value			Unit
			min	typ	max	
Gate-to-Drain Breakdown Voltage	$V_{(BR)GDS}$	$I_G = -10\mu A, V_{DS} = 0V$	-25			V
Gate Cutoff Current	$I_{GSS}$	$V_{GS} = -10V, V_{DS} = 0V$			-1.0	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 5V, I_D = 100\mu A$	-0.6	-1.2	-1.8	V
Drain Current	$I_{DSS}$	$V_{DS} = 5V, V_{GS} = 0V$	20		40	mA
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = 5V, V_{GS} = 0V, f = 1kHz$	30	40		mS
Input Capacitance	$C_{iss}$	$V_{DS} = 5V, V_{GS} = 0V, f = 1MHz$		6.0		pF
Reverse Transfer Capacitance	$C_{rss}$			2.3		pF
Noise Figure	NF	$V_{DS} = 5V, V_{GS} = 0V, f = 100MHz$		2.1	2.8	dB

Note 2 : Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.



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## ORDERING INFORMATION

Device	Marking	Package	Shipping
NSVJ3910SB3T1G	J2	CPH3 (Pb-Free)	3,000 / Tape & Reel

† For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D. [http://www.onsemi.com/pub\\_link/Collateral/BRD8011-D.PDF](http://www.onsemi.com/pub_link/Collateral/BRD8011-D.PDF)

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