



SANYO Semiconductors

# DATA SHEET

An ON Semiconductor Company

N-Channel Junction Silicon FET

## CPH3910 — High-Frequency Low-Noise Amplifier Applications

### Applications

- For AM tuner RF amplification
- Low noise amplifier

### Features

- $V_{GDS}$ : -25V max.
- $|y_{fs}|$ : 40mS typ.
- $C_{iss}$ : 6.0pF typ.
- NF: 2.1dB typ.

### Specifications

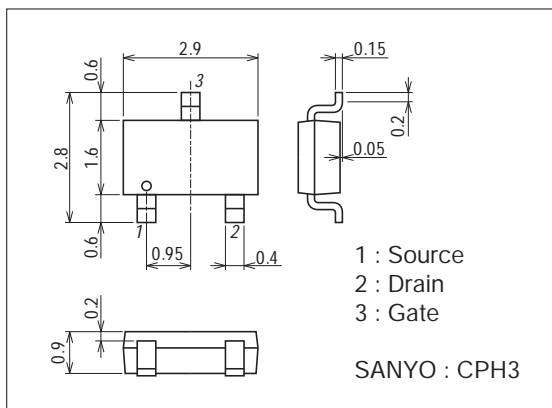
Absolute Maximum Ratings at  $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	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
Junction Temperature	$T_j$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

### Package Dimensions

unit : mm (typ)

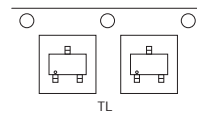
7015A-007



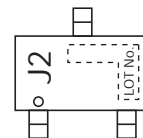
### Product & Package Information

- Package : CPH3
- JEITA, JEDEC : SC-59, TO-236, SOT-23
- Minimum Packing Quantity : 3,000 pcs./reel

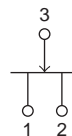
Packing Type: TL



Marking



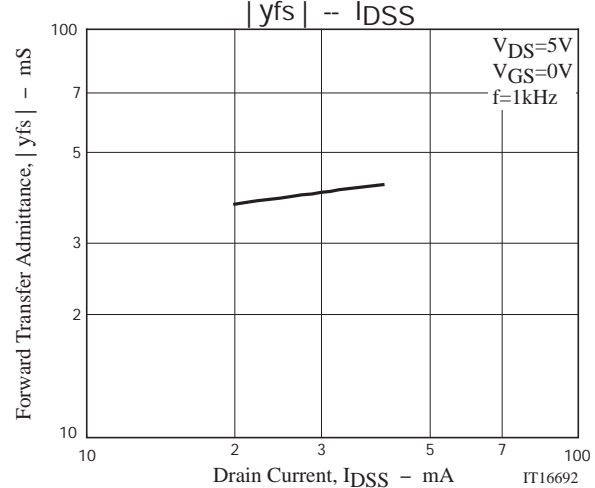
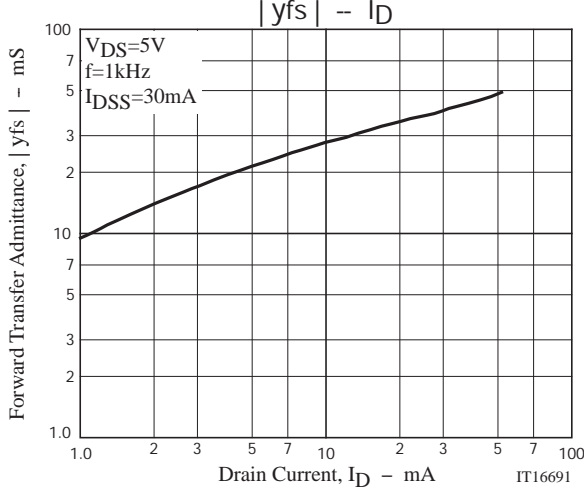
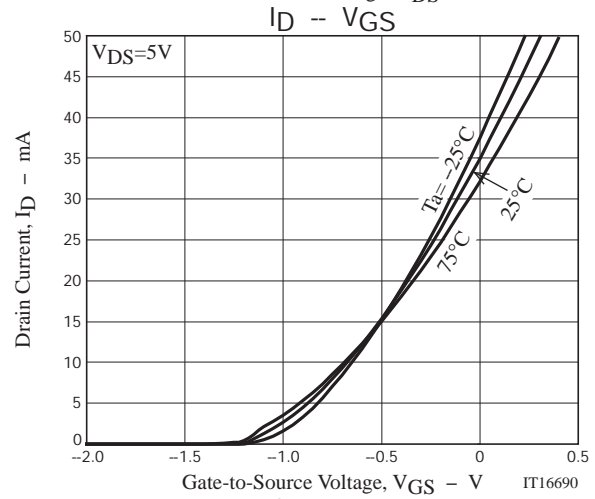
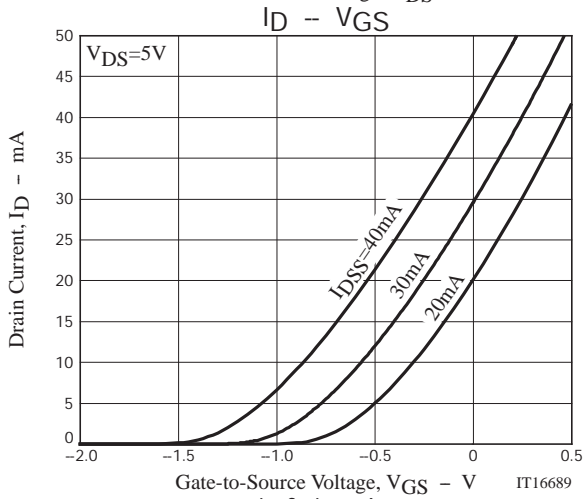
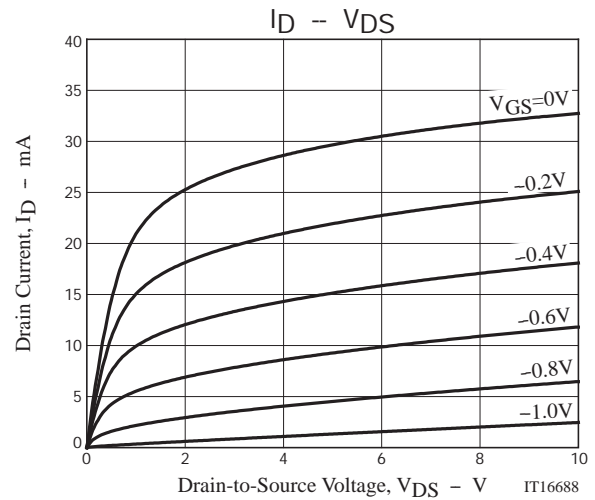
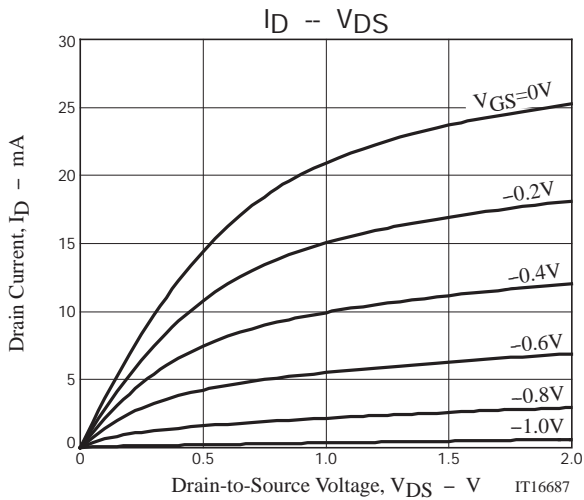
Electrical Connection



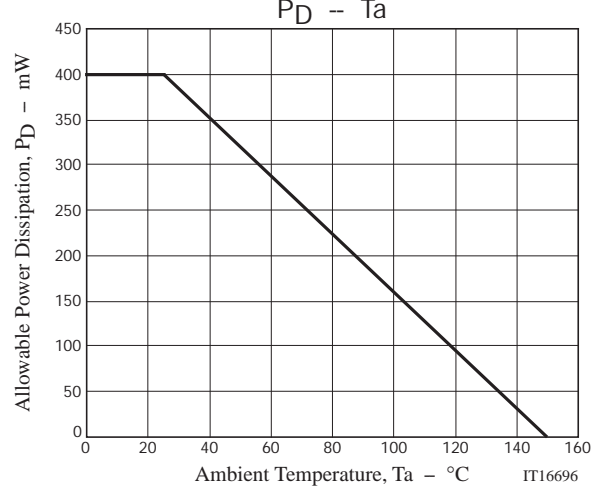
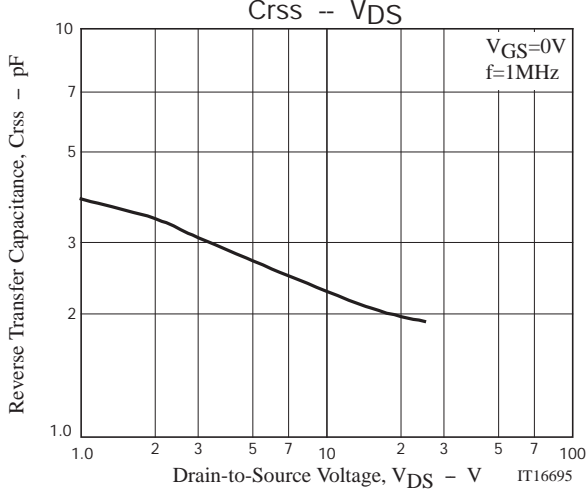
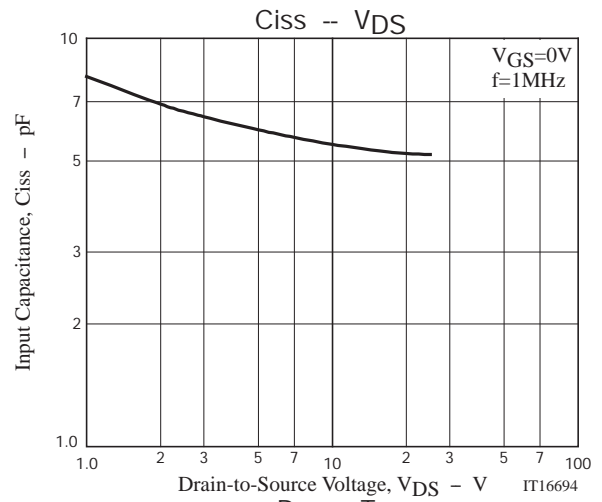
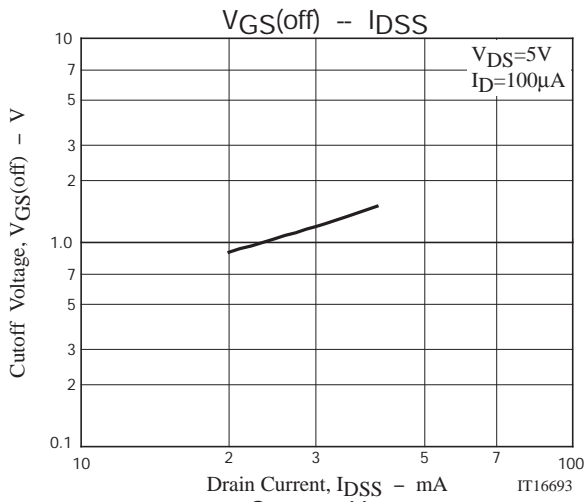
# CPH3910

## Electrical Characteristics at $T_a=25^\circ\text{C}$

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



# CPH3910



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