



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

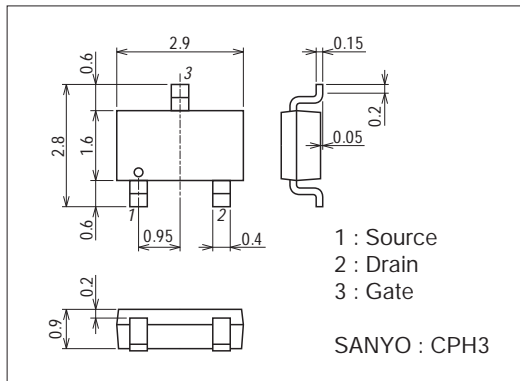
Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

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)

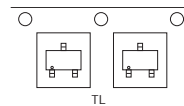
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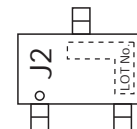
Product & Package Information

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

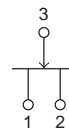
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Marking



Electrical Connection



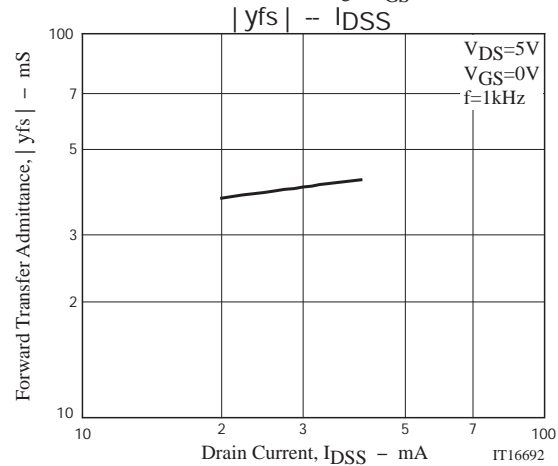
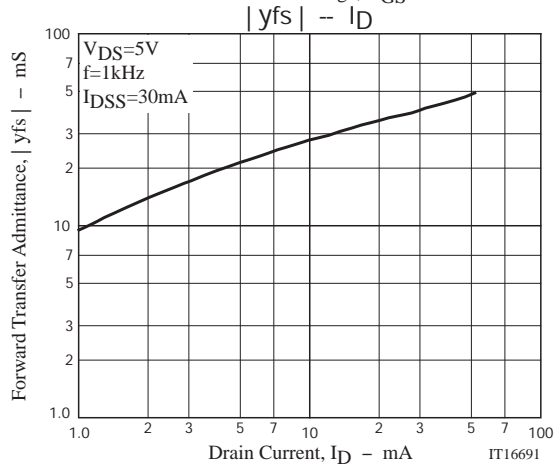
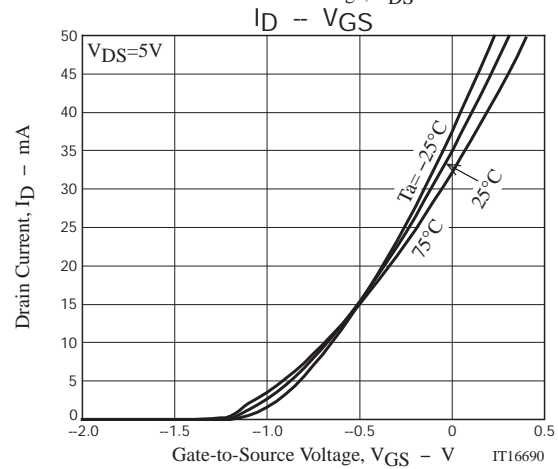
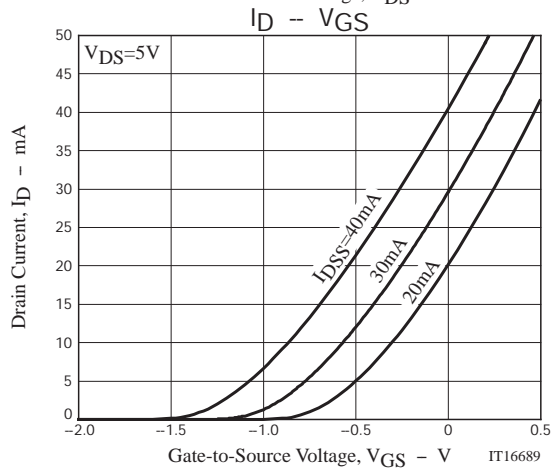
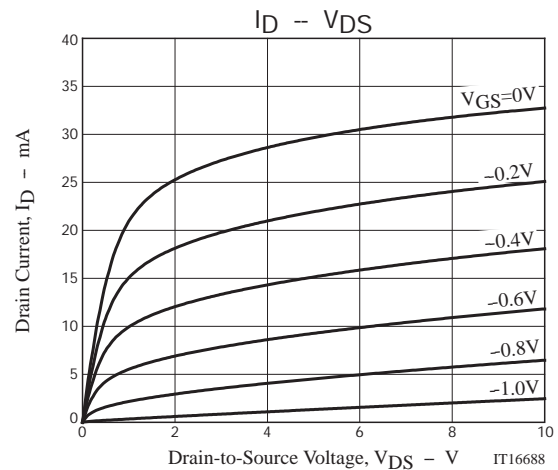
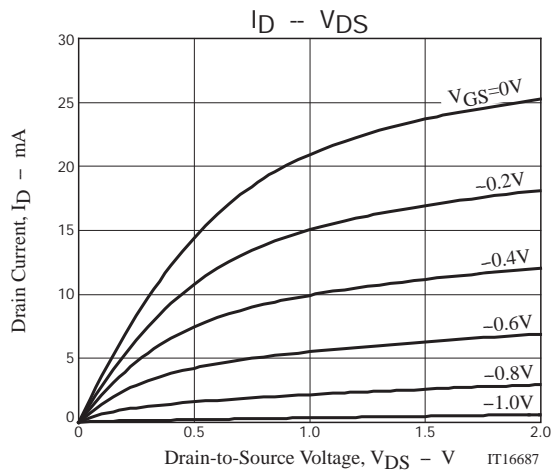
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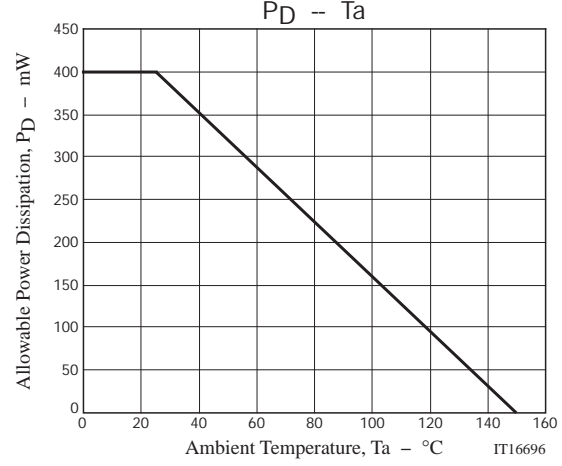
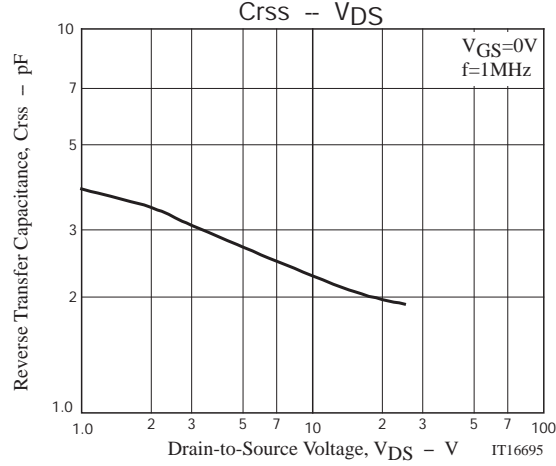
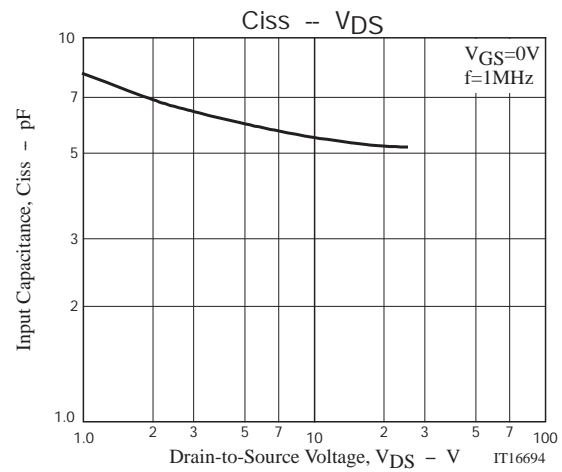
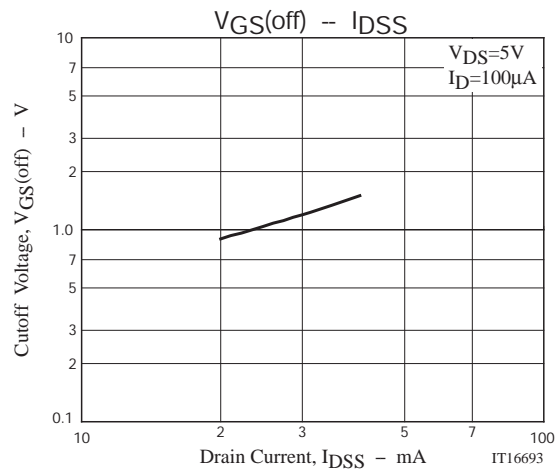
<http://semicon.sanyo.com/en/network>

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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





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