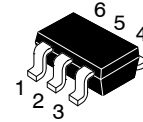


# N-Channel JFET

25 V, 20 to 40 mA, 40 mS, Dual CPH6

## CPH6904



CPH6  
CASE 318BD

### Features

- Composite Type with 2 J-FET Contained in a CPH6 Package Currently in Use, Improving the Mounting Efficiency Greatly
- The CPH6904 is Formed with Two Chips, Being Equivalent to the CPH3910, Placed in One Package
- This is a Pb-Free Device

### Product & Package Information

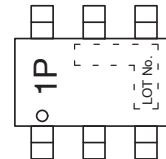
- Package: CPH6
- JEITA, JEDEC: SC-74, SOT-26, SOT-457
- Minimum Packing Quantity: 3,000 pcs./reel

### ABSOLUTE MAXIMUM RATINGS (at $T_A = 25^\circ\text{C}$ )

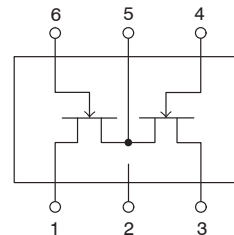
Symbol	Parameter	Conditions	Ratings	Unit
$V_{DSX}$	Drain-to-Source Voltage		25	V
$V_{GDS}$	Gate-to-Drain Voltage		-25	V
$I_G$	Gate Current		10	mA
$I_D$	Drain Current		50	mA
$P_D$	Allowable Power Dissipation	1 unit	400	mW
$P_T$	Total Power Dissipation		700	mW
$T_{ch}$	Channel Temperature		150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature		-55 to +150	$^\circ\text{C}$

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.

### MARKING DIAGRAM



### ELECTRICAL CONNECTION



- 1 : Drain 1
- 2 : NC
- 3 : Drain 2
- 4 : Gate 2
- 5 : Source 1 / Source 2
- 6 : Gate 1

### ORDERING INFORMATION

Device	Package	Shipping <sup>†</sup>
CPH6904-TL-E	CPH6 (Pb-Free)	3 000 / Tape & Reel

<sup>†</sup>For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification Brochure, [BRD8011/D](#).

**ELECTRICAL CHARACTERISTICS** (at  $T_A = 25^\circ\text{C}$ )

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
$V_{(BR)GDS}$	Gate-to-Drain Breakdown Voltage	$I_G = -10 \mu\text{A}$ , $V_{DS} = 0 \text{ V}$	-25			V
$I_{GSS}$	Gate-to-Source Leakage Current	$V_{GS} = -10 \text{ V}$ , $V_{DS} = 0 \text{ V}$			-1.0	nA
$V_{GS(off)}$	Cutoff Voltage	$V_{DS} = 5 \text{ V}$ , $I_D = 100 \mu\text{A}$	-0.6	-1.2	-1.8	V
$I_{DSS}$	Drain Current	$V_{DS} = 5 \text{ V}$ , $V_{GS} = 0 \text{ V}$	20.0		40.0	mA
$ y_{fs} $	Forward Transfer Admittance	$V_{DS} = 5 \text{ V}$ , $V_{GS} = 0 \text{ V}$ , $f = 1 \text{ kHz}$	30	40		mS
$C_{iss}$	Input Capacitance	$V_{DS} = 5 \text{ V}$ , $V_{GS} = 0 \text{ V}$ , $f = 1 \text{ MHz}$		6.0		pF
$C_{rss}$	Reverse Transfer Capacitance	$V_{DS} = 5 \text{ V}$ , $V_{GS} = 0 \text{ V}$ , $f = 1 \text{ MHz}$		2.3		pF
$N_F$	Noise Figure	$V_{DS} = 5 \text{ V}$ , $V_{GS} = 0 \text{ V}$ , $f = 100 \text{ MHz}$		2.1	2.8	dB

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.

## TYPICAL PERFORMANCE CHARACTERISTICS

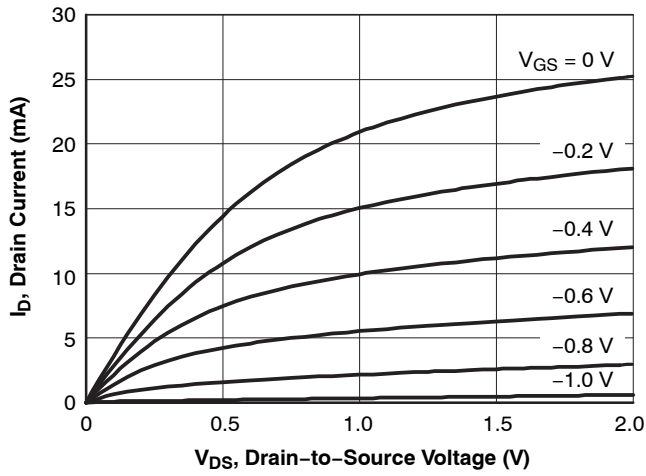


Figure 1.  $I_D - V_{DS}$

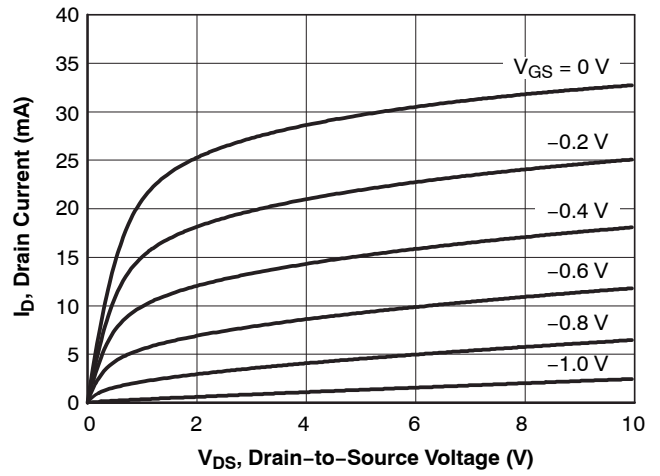


Figure 2.  $I_D - V_{DS}$

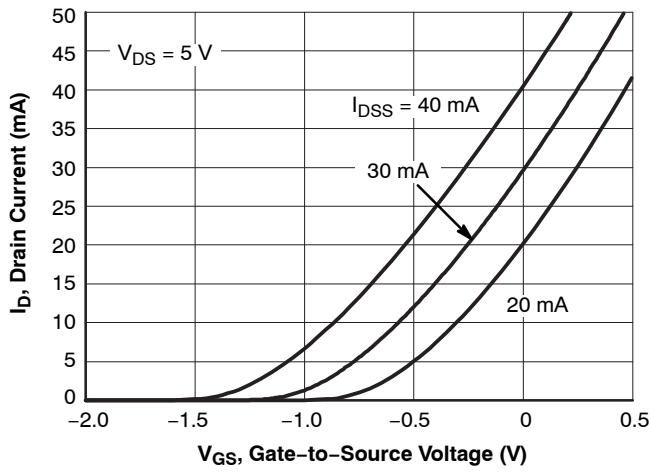


Figure 3.  $I_D - V_{GS}$

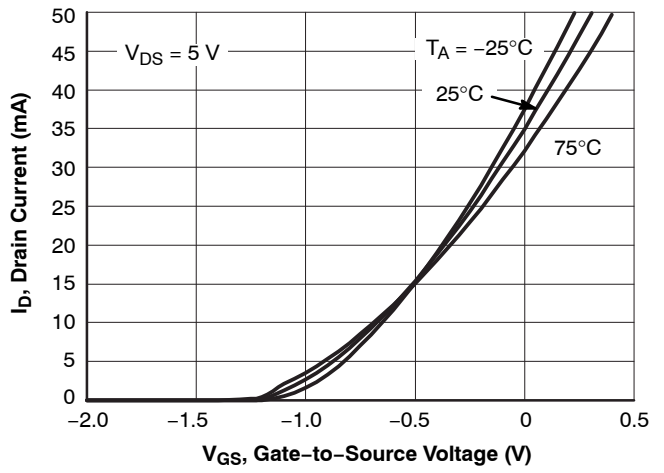


Figure 4.  $I_D - V_{GS}$

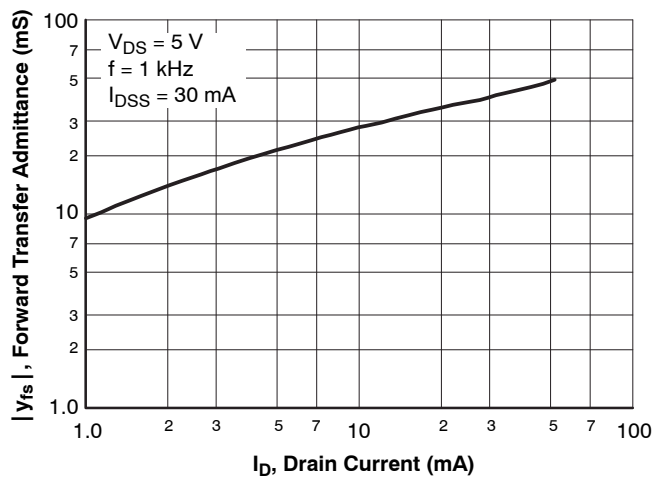


Figure 5.  $|Y_{fs}| - I_D$

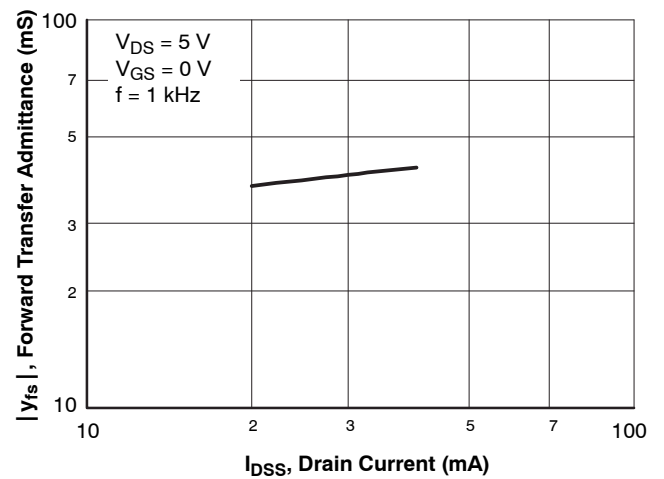


Figure 6.  $|Y_{fs}| - I_{DSS}$

TYPICAL PERFORMANCE CHARACTERISTICS (Continued)

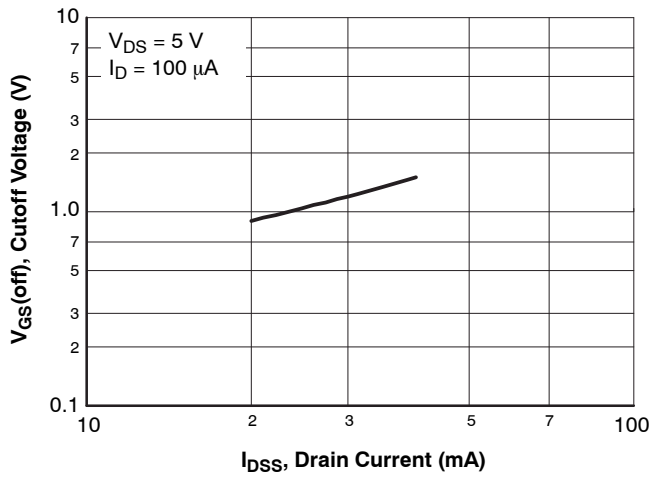


Figure 7.  $V_{GS(off)}$  -  $I_{DSS}$

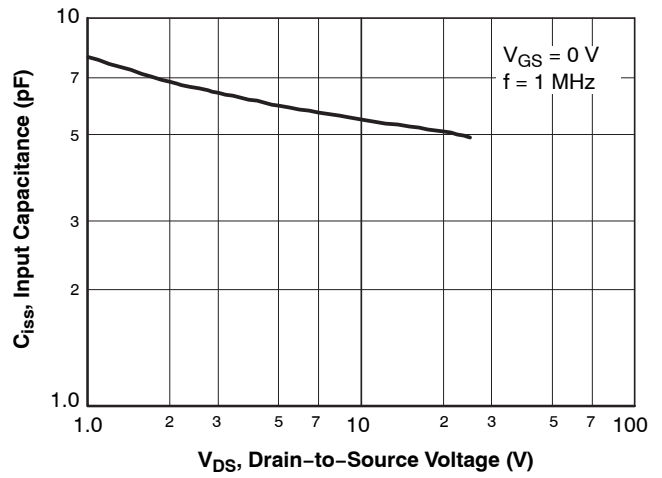


Figure 8.  $C_{iss}$  -  $V_{DS}$

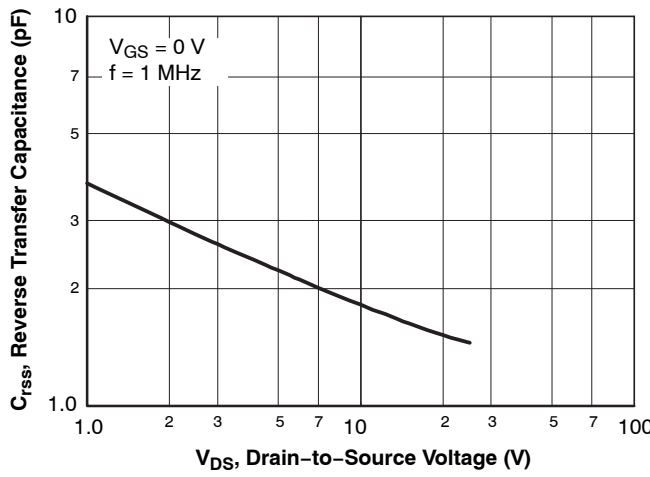


Figure 9.  $C_{rss}$  -  $V_{DS}$

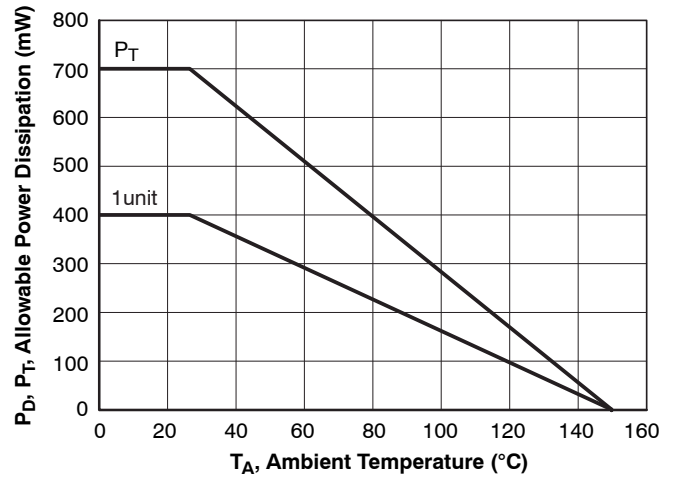
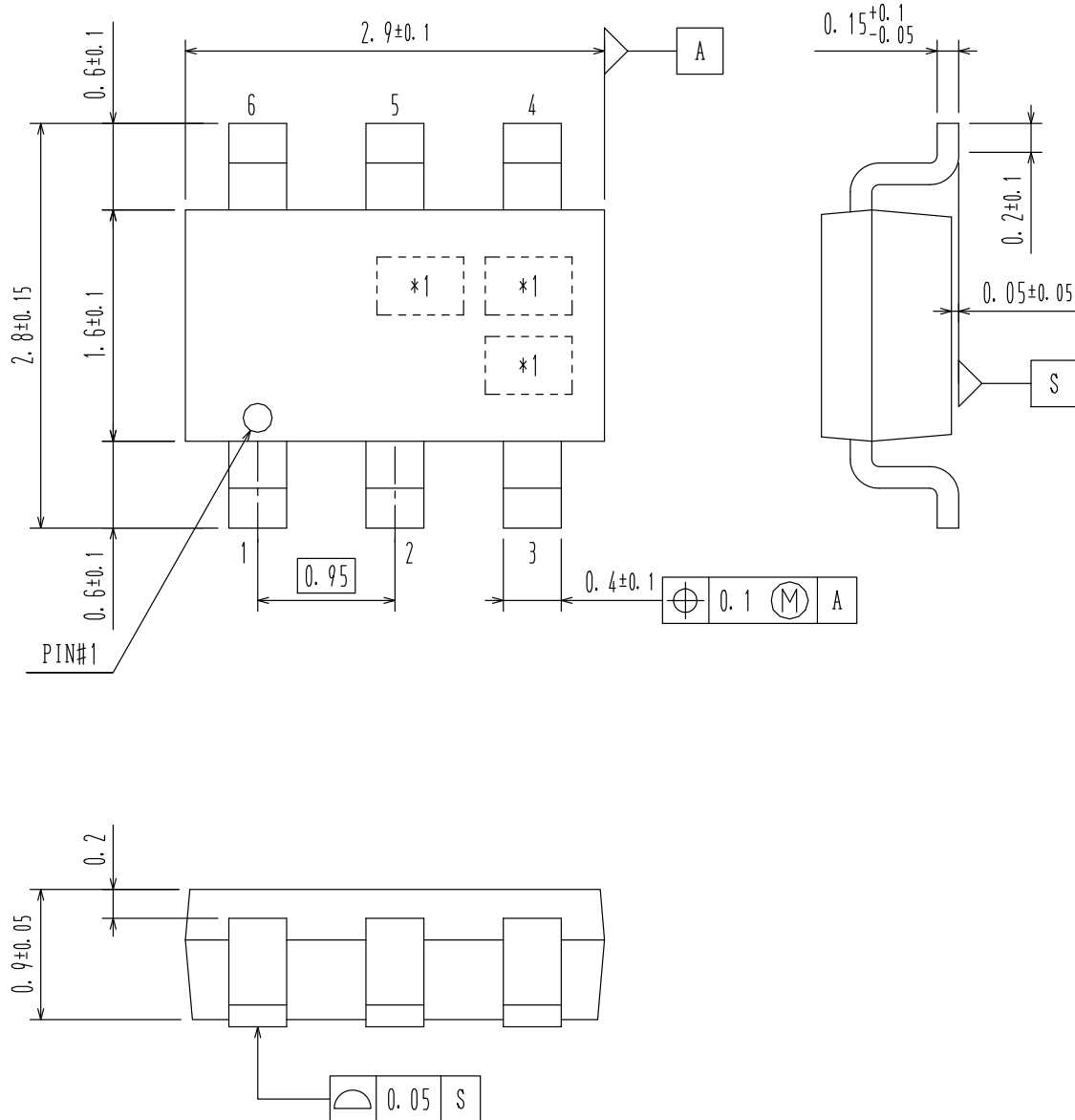


Figure 10.  $P_D, P_T$  -  $T_A$

**MECHANICAL CASE OUTLINE**  
**PACKAGE DIMENSIONS**

**CPH6**  
**CASE 318BD**  
**ISSUE O**

DATE 30 NOV 2011



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