Ordering number : ENA1966A

# CPH6904

## N-Channel JFET
## 25V, 20 to 40mA, 40mS, Dual CPH6

ON Semiconductor®
http://onsemi.com

### 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

### Specifications

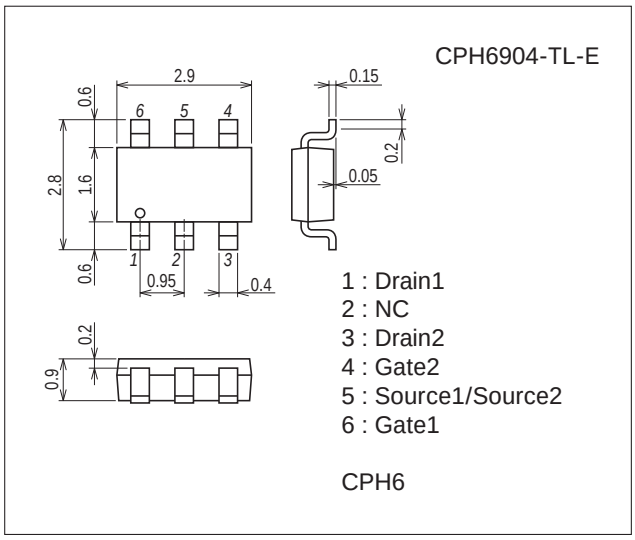
**Absolute Maximum Ratings** at Ta=25°C

| Parameter | Symbol | Conditions | Ratings | Unit |
|---|---|---|---|---|
| Drain-to-Source Voltage | $V_{DSX}$ | | 25 | V |
| Gate-to-Source Voltage | $V_{GDS}$ | | −25 | V |
| Gate Current | $I_G$ | | 10 | mA |
| Drain Current | $I_D$ | | 50 | mA |
| Allowable Power Dissipation | $P_D$ | 1unit | 400 | mW |
| Total Power Dissipation | $P_T$ | | 700 | mW |
| Channel Temperature | Tch | | 150 | °C |
| Storage Temperature | Tstg | | −55 to +150 | °C |

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

### Package Dimensions

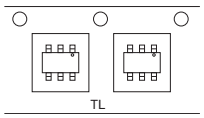
unit : mm (typ)
7018A-015



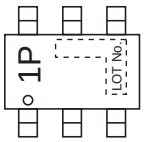

### Product & Package Information

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

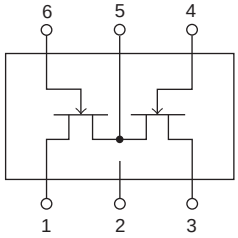
### Packing Type: TL




### Marking




### Electrical Connection



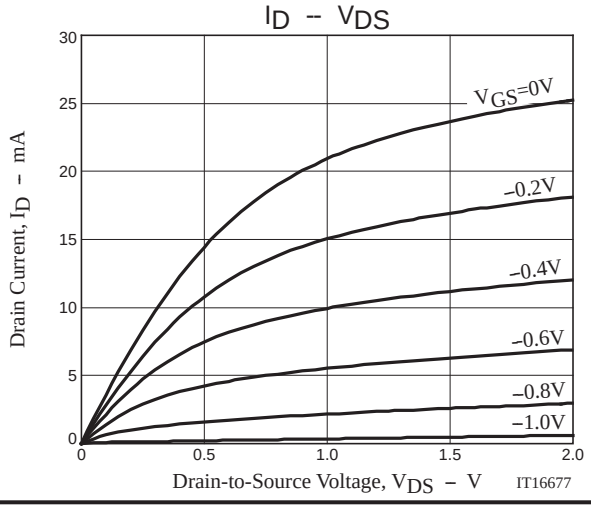
## Electrical Characteristics at Ta=25°C

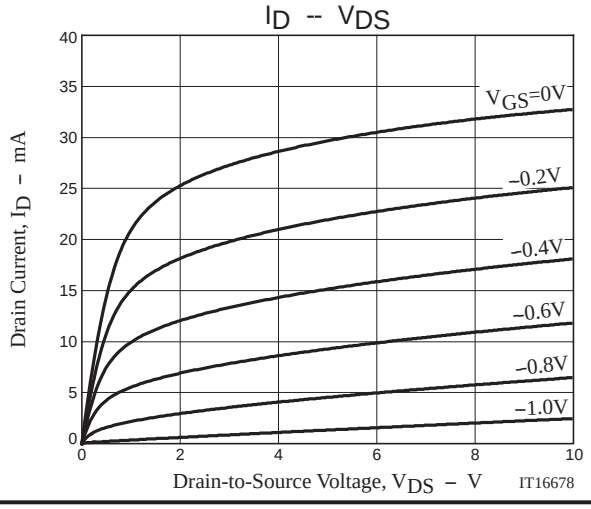
| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|---|---|---|---|---|---|
| | | | min | typ | max | |
| Gate-to-Drain Breakdown Voltage | $V_{(BR)GDS}$ | $I_G$=−10μA, $V_{DS}$=0V | −25 | | | V |
| Gate-to-Source Leakage Current | $I_{GSS}$ | $V_{GS}$=−10V, $V_{DS}$=0V | | | −1.0 | nA |
| Cutoff Voltage | $V_{GS}$(off) | $V_{DS}$=5V, $I_D$=100μA | −0.6 | −1.2 | −1.8 | V |
| Drain Current | $I_{DSS}$ | $V_{DS}$=5V, $V_{GS}$=0V | 20.0 | | 40.0 | mA |
| Forward Transfer Admittance | \| yfs \| | $V_{DS}$=5V, $V_{GS}$=0V, f=1kHz | 30 | 40 | | mS |
| Input Capacitance | Ciss | $V_{DS}$=5V, $V_{GS}$=0V, f=1MHz | | 6.0 | | pF |
| Reverse Transfer Capacitance | Crss | | | 2.3 | | pF |
| Noise Figure | NF | $V_{DS}$=5V, $V_{GS}$=0V, f=100MHz | | 2.1 | 2.8 | dB |

The specifications shown above are for each individual J-FET.

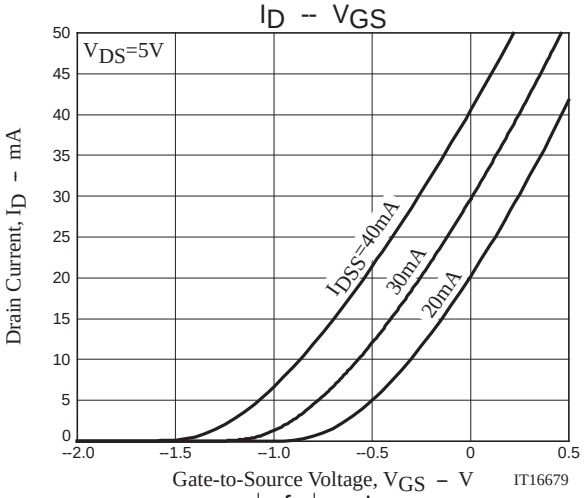
## Ordering Information

| Device | Package | Shipping | memo |
|---|---|---|---|
| CPH6904-TL-E | CPH6 | 3,000pcs./reel | Pb Free |

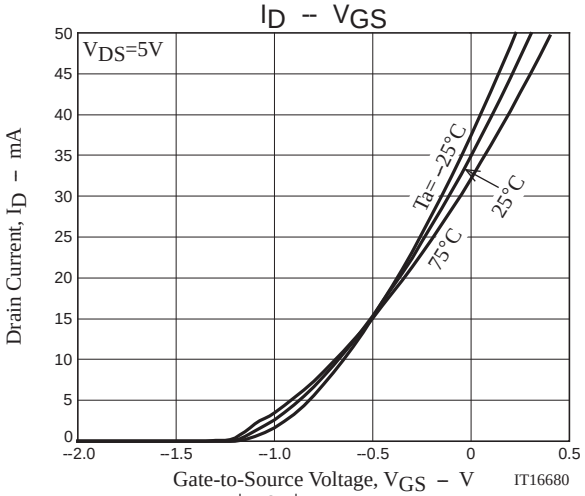


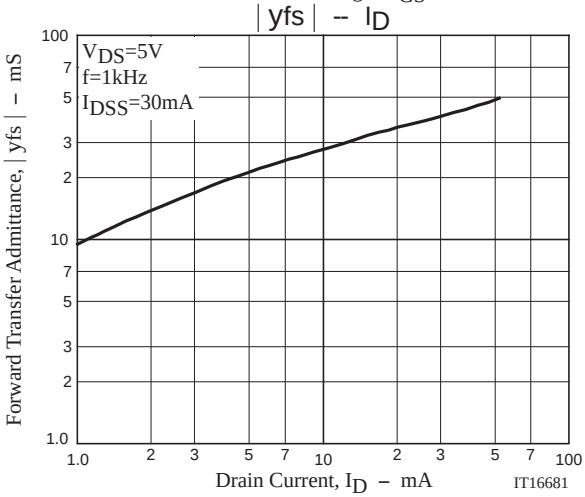
$I_D$ -- $V_{GS}$



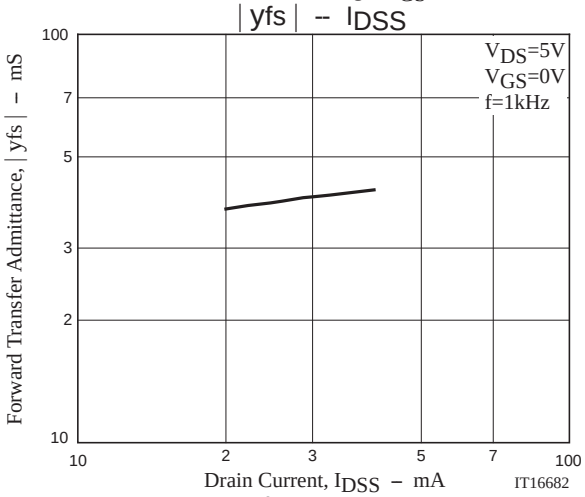

$I_D$ -- $V_{GS}$



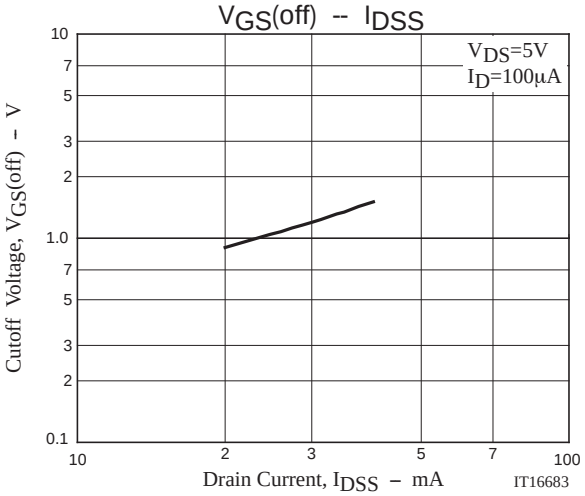

$|yfs|$ -- $I_D$



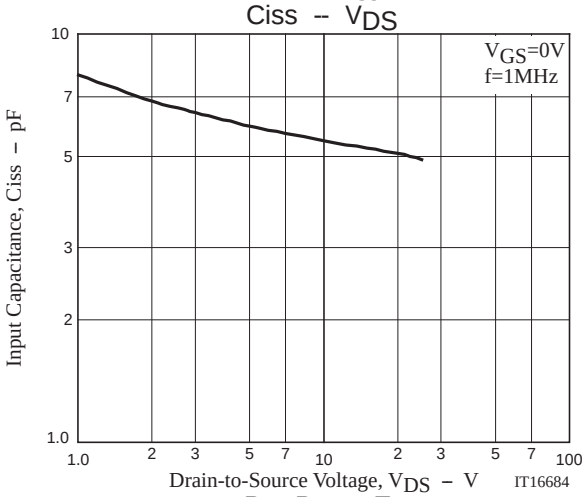

$|yfs|$ -- $I_{DSS}$



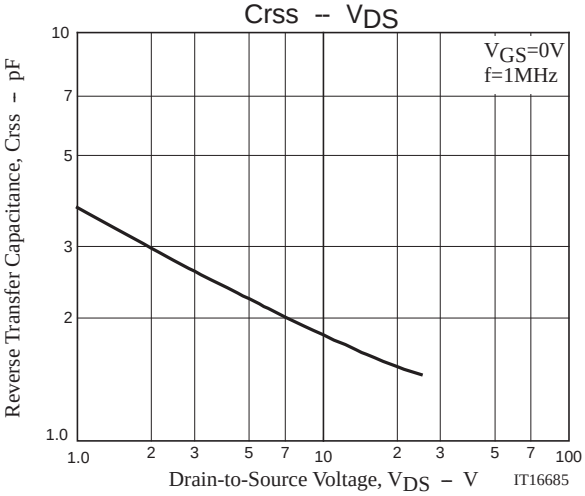

$V_{GS(off)}$ -- $I_{DSS}$



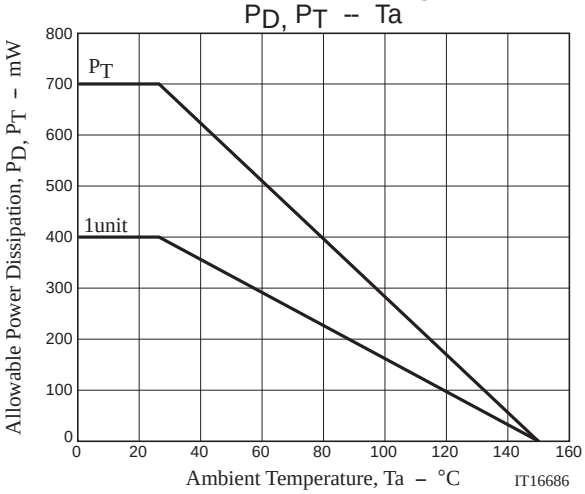

Ciss -- $V_{DS}$




Crss -- $V_{DS}$




$P_D$, $P_T$ -- Ta



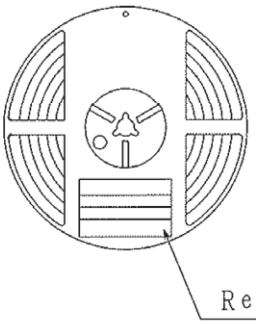
**Embossed Taping Specification**

CPH6904-TL-E

## 1. Packing Format

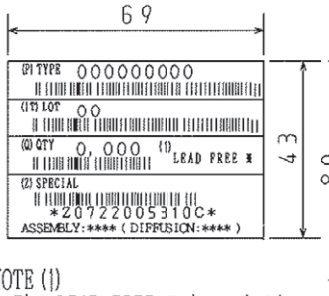
| Package Name | Carrier Tape Type | Maximum Number of devices contained (pcs) | | | Packing format | |
|---|---|---|---|---|---|---|
| | | Reel | Inner box | Outer box | Inner BOX (C-1) | Outer BOX (A-7) |
| CPH6 | CPH6 | 3,000 | 15,000 | 90,000 | 5 reels contained<br>Dimensions:mm (external)<br>183×72×185 | 6 inner boxes contained<br>Dimensions:mm (external)<br>440×195×210 |

Packing method



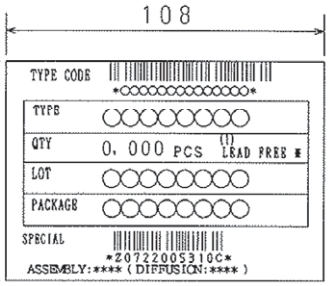
Reel label

Reel label, Inner box label (unit:mm)




Outer box label

It is a label at the time of factory shipments. The form of a label may change in physical distribution process.

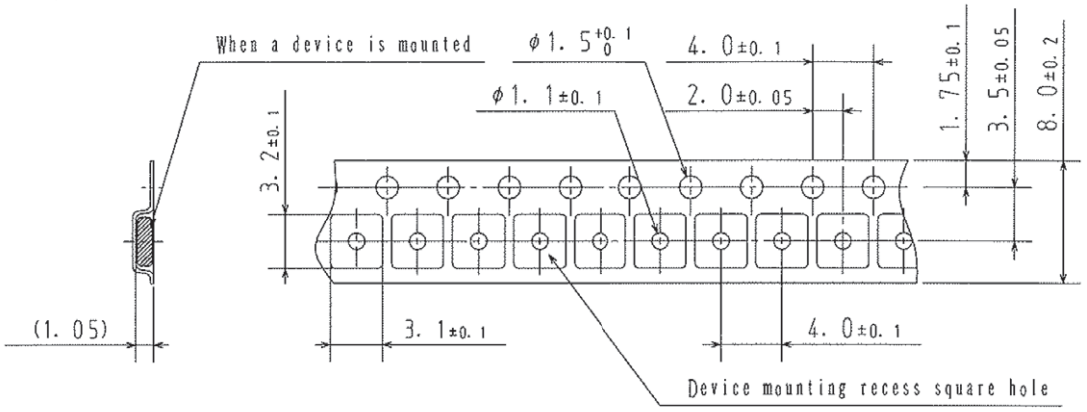



NOTE (1)
The LEAD FREE ※ description shows that the surface treatment of the terminal is lead free.

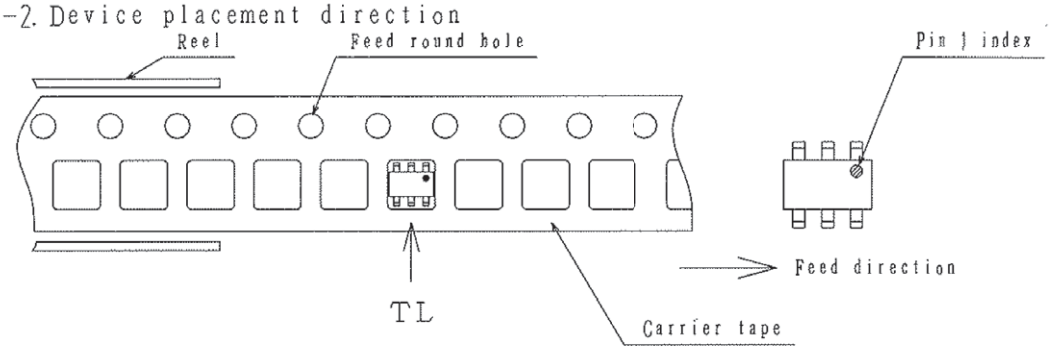
| Label | JEITA Phase |
|---|---|
| LEAD FREE 3 | JEITA Phase 3A |
| LEAD FREE 4 | JEITA Phase 3 |

## 2. Taping configuration

### 2-1. Carrier tape size (unit:mm)



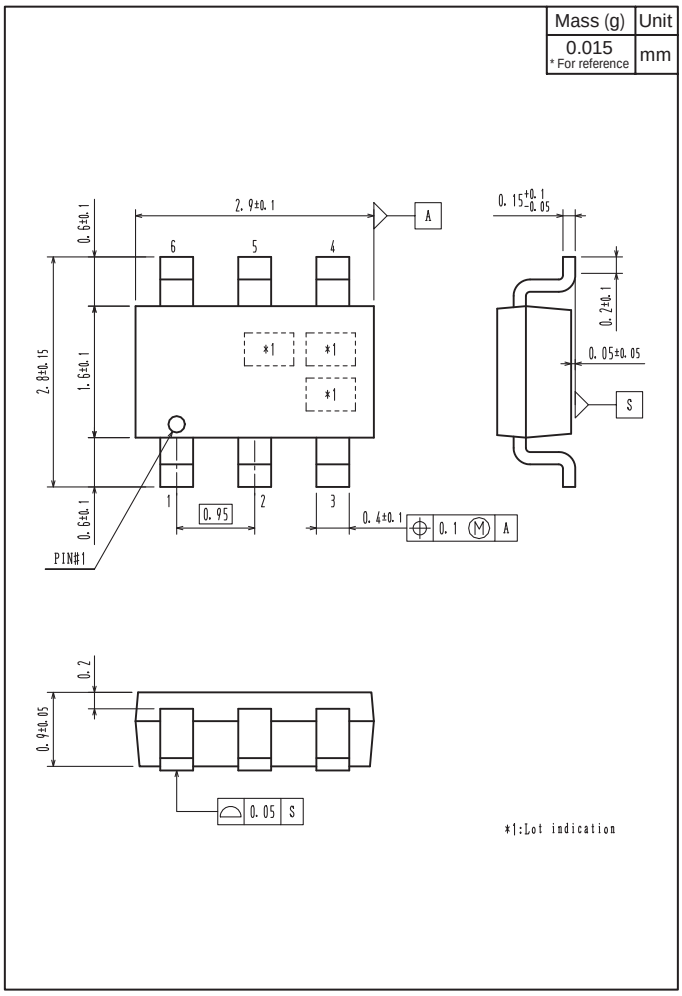

### 2-2. Device placement direction



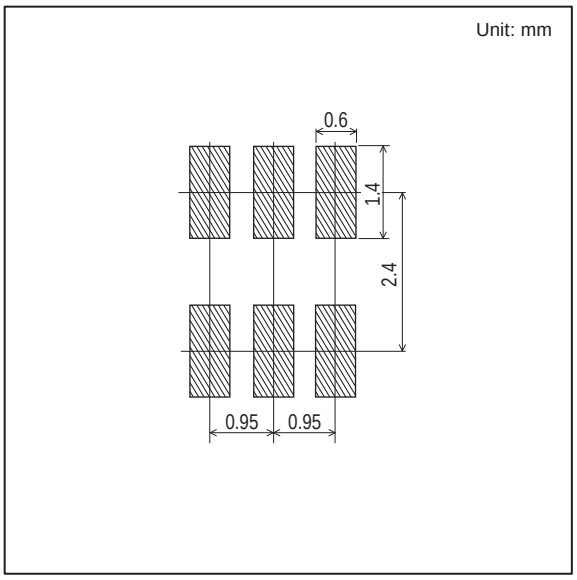

Those with pin 1 index on the feed hole side·····TL

## Outline Drawing

CPH6904-TL-E




## Land Pattern Example



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