



# 3DD4251T

## 主要参数 MAIN CHARACTERISTICS

|              |      |
|--------------|------|
| $I_C$        | 0.5A |
| $V_{CEO}$    | 400V |
| $P_C(TO-92)$ | 1W   |

## 用途

- 节能灯
- 电子镇流器
- 高频开关电源
- 高频功率变换
- 一般功率放大电路

## APPLICATIONS

- Electronic ballasts
- High frequency switching power supply
- High frequency power transform
- Commonly power amplifier circuit

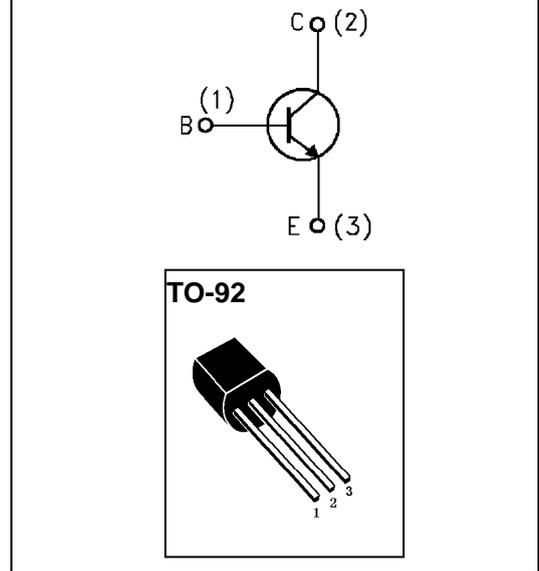
## 产品特性

- 高耐压
- 高电流容量
- 高开关速度
- 高可靠性
- 环保 (RoHS) 产品

## FEATURES

- High breakdown voltage
- High current capability
- High switching speed
- High reliability
- RoHS product

## 封装 Package



## 订货信息 ORDER MESSAGE

| 订货型号<br>Order codes | 印记<br>Marking | 无卤素<br>Halogen Free | 封装<br>Package | 包装<br>Packaging |
|---------------------|---------------|---------------------|---------------|-----------------|
| 3DD4251T-O-T-B-A    | D4251T        | 否 NO                | TO-92         | 编带 Brede        |
| 3DD4251T-O-T-N-C    | D4251T        | 否 NO                | TO-92         | 袋装 Bag          |



**绝对最大额定值 ABSOLUTE RATINGS (Tc=25℃)**

| 项 目<br>Parameter  | 符 号<br>Symbol    | 数 值<br>Value | 单 位<br>Unit |
|---|------------------|--------------|-------------|
| 集电极—发射极直流电压 Collector- Emitter Voltage (V <sub>BE</sub> =0) | V <sub>CES</sub> | 700          | V           |
| 集电极—发射极直流电压 Collector- Emitter Voltage (I <sub>B</sub> =0)  | V <sub>CEO</sub> | 400          | V           |
| 发射极—基极直流电压 Emitter-Base Voltage                             | V <sub>EBO</sub> | 9            | V           |
| 最大集电极直流电流 Collector Current (DC)                            | I <sub>C</sub>   | 0.5          | A           |
| 最大集电极脉冲电流 Collector Current (pulse)                         | I <sub>CP</sub>  | 1            | A           |
| 最大集电极耗散功率 Total Dissipation (TO-92)                         | P <sub>C</sub>   | 1            | W           |
| 最高结温 Junction Temperature                                   | T <sub>j</sub>   | 150          | ℃           |
| 贮存温度 Storage Temperature                                    | T <sub>stg</sub> | -55~+150     | ℃           |

**电特性 ELECTRICAL CHARACTERISTIC**

| 项 目<br>Parameter     | 测试条件<br>Tests conditions  | 最小值<br>Value(min) | 典型值<br>Value(typ) | 最大值<br>Value(max) | 单 位<br>Unit |
|----------------------|---|-------------------|-------------------|-------------------|-------------|
| V(BR) <sub>CEO</sub> | I <sub>C</sub> =10mA, I <sub>B</sub> =0   | 400               | 440               | -                 | V           |
| V(BR) <sub>CBO</sub> | I <sub>C</sub> =1mA, I <sub>B</sub> =0  | 700               | 780               | -                 | V           |
| V(BR) <sub>EBO</sub> | I <sub>E</sub> =1mA, I <sub>C</sub> =0  | 9                 | 15                | -                 | V           |
| I <sub>CBO</sub>     | V <sub>CB</sub> =580V, I <sub>E</sub> =0  | -                 | -                 | 5                 | μA          |
| I <sub>CEO</sub>     | V <sub>CE</sub> =390V, I <sub>B</sub> =0  | -                 | -                 | 10                | μA          |
| I <sub>EBO</sub>     | V <sub>EB</sub> =9V, I <sub>C</sub> =0  | -                 | -                 | 5                 | μA          |
| hFE                  | V <sub>CE</sub> =20V, I <sub>C</sub> =20mA  | 15                | 21                | 25                | -           |
| V <sub>CE(sat)</sub> | I <sub>C</sub> =0.1A, I <sub>B</sub> =10mA  | -                 | 0.2               | 1.0               | V           |
| V <sub>BE(sat)</sub> | I <sub>C</sub> =0.05A, I <sub>B</sub> =5mA  | -                 | 0.8               | 1.2               | V           |
| t <sub>f</sub>       | V <sub>CC</sub> =24V I <sub>C</sub> =0.1A, I <sub>B1</sub> =-I <sub>B2</sub> =0.02A | -                 | -                 | 0.7               | μS          |
| t <sub>s</sub>       |   | -                 | -                 | 4                 | μS          |
| f <sub>T</sub>       | V <sub>CE</sub> =10V, I <sub>C</sub> =0.02A   | 4                 | -                 | -                 | MHz         |

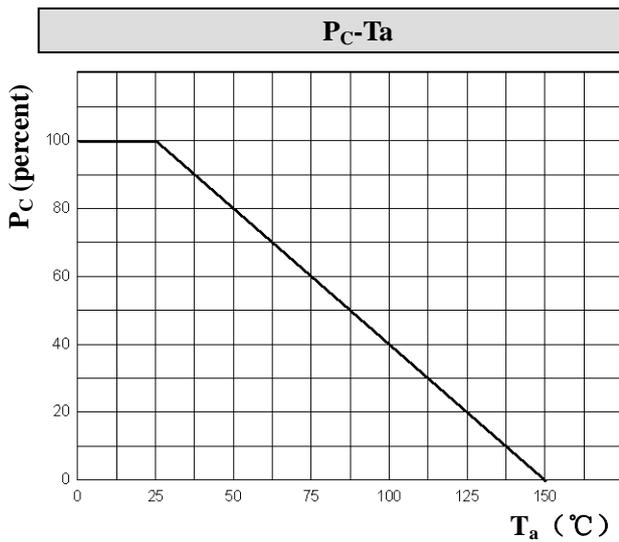
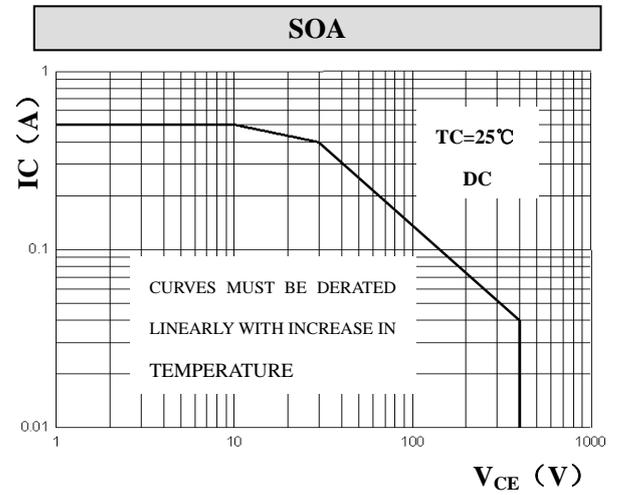
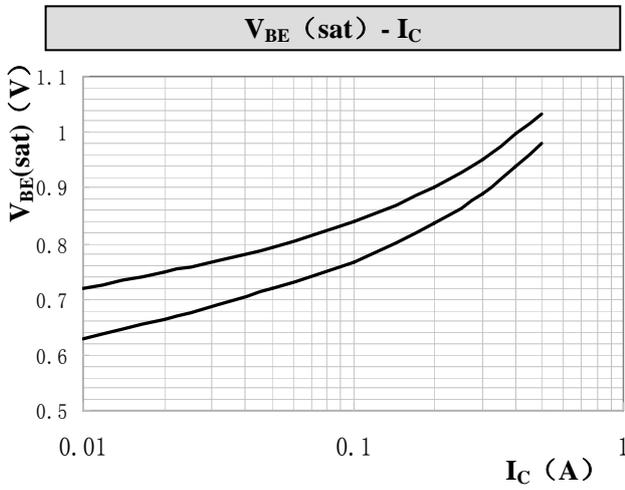
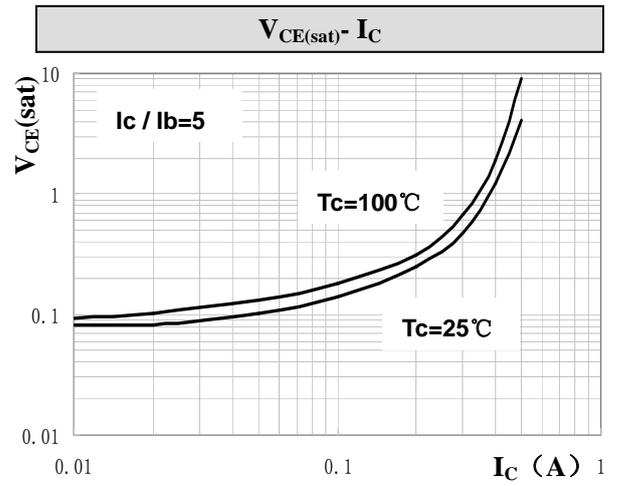
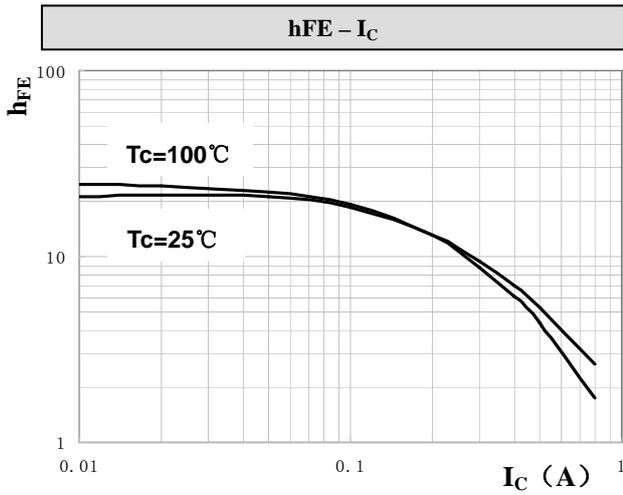
**热特性 THERMAL CHARACTERISTIC**

| 项 目<br>Parameter  | 符 号<br>Symbol        | 最小值<br>Value(min) | 最大值<br>Value(max) | 单 位<br>Unit |
|---|----------------------|-------------------|-------------------|-------------|
| 结到环境的热阻 TO-92<br>Thermal Resistance Junction Case TO-92 | R <sub>th(j-a)</sub> | -                 | 125               | ℃/W         |





特征曲线 ELECTRICAL CHARACTERISTICS (curves)



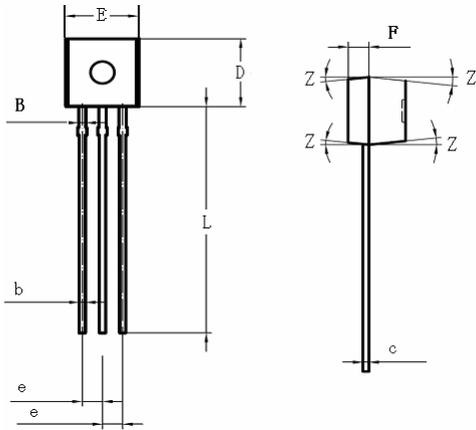


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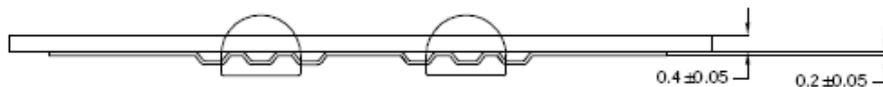
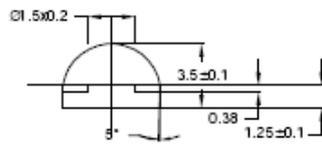
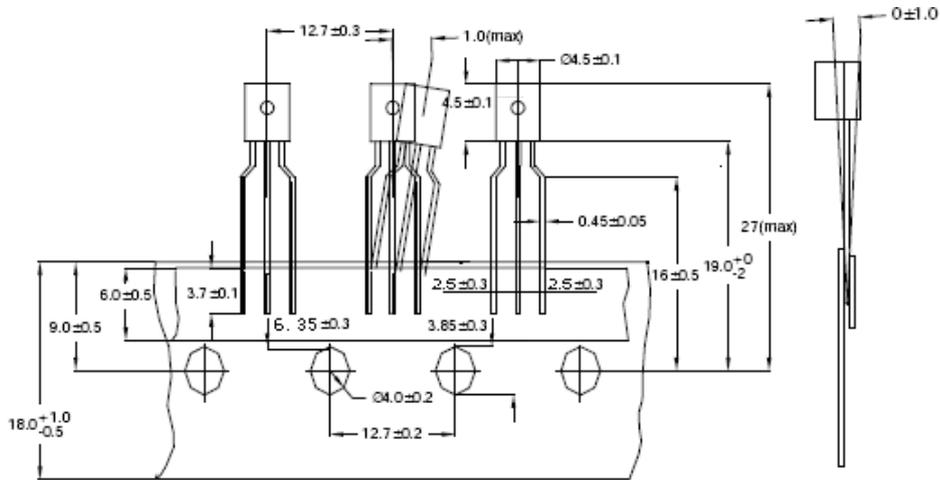
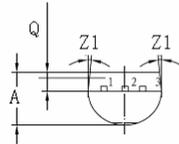
外形尺寸 PACKAGE MECHANICAL DATA

TO-92

单位 Unit : mm



|    |             |
|----|-------------|
| A  | 3.30-3.90   |
| B  | 0.35-0.55   |
| b  | 0.35-0.55   |
| c  | 0.31-0.51   |
| D  | 4.30-4.90   |
| E  | 4.30-4.90   |
| e  | 1.17-1.37   |
| F  | 1.00-1.60   |
| L  | 12.50-15.50 |
| Q  | 1.00-1.60   |
| Z  | 2°          |
| Z1 | 5°          |



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4. 本说明书如有版本变更不另外告知

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3. Please do not exceed the absolute maximum ratings of the device when circuit designing.
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**联系方式****吉林华微电子股份有限公司**

公司地址：吉林省吉林市深圳街 99 号

邮编：132013

总机：86-432-64678411

传真：86-432-64665812

网址：[www.hwdz.com.cn](http://www.hwdz.com.cn)

**市场营销部**

地址：吉林省吉林市深圳街 99 号

邮编：132013

电话：86-432-64675588

64675688

64678411-3098/3099

传真：86-432-64671533

**CONTACT****JILIN SINO-MICROELECTRONICS CO., LTD.**

ADD: No.99 Shenzhen Street, Jilin City, Jilin Province, China.

Post Code: 132013

Tel: 86-432-64678411

Fax: 86-432-64665812

Web Site: [www.hwdz.com.cn](http://www.hwdz.com.cn)

**MARKET DEPARTMENT**

ADD: No.99 Shenzhen Street, Jilin City, Jilin Province, China.

Post Code: 132013

Tel: 86-432-64675588

64675688

64678411-3098/3099

Fax: 86-432-64671533

**附录 (Appendix)：修订记录 (Revision History)**

| 日期<br>Date | 旧版本<br>Last Rev. | 新版本<br>New Rev. | 修订内容<br>Description of Changes |
|------------|------------------|-----------------|--------------------------------|
| 2010-12-24 |                  | 201012A         |                                |

