



# 3DD4222T

主要参数 MAIN CHARACTERISTICS

|              |      |
|--------------|------|
| $I_C$        | 1.2A |
| $V_{CEO}$    | 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

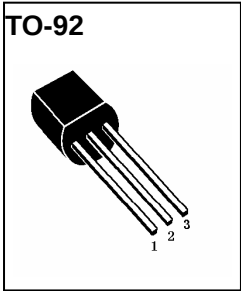
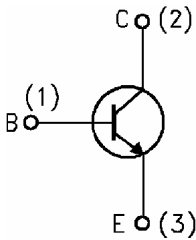
产品特性

- 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 |
|---------------------|---------------|---------------------|---------------|-----------------|
| 3DD4222T-O-T-B-A    | D4222T        | 否 NO                | TO-92         | 编带 Brede        |
| 3DD4222T-O-T-N-C    | D4222T        | 否 NO                | TO-92         | 袋装 Bag          |



绝对最大额定值 ABSOLUTE RATINGS ( $T_c=25^{\circ}\text{C}$ )

| 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 ( $V_{BE}=0$ ) | $V_{CES}$     | 700          | V                  |
| 集电极—发射极直流电压 Collector- Emitter Voltage ( $I_B=0$ )    | $V_{CEO}$     | 400          | V                  |
| 发射极—基极直流电压 Emitter-Base Voltage                       | $V_{EBO}$     | 9            | V                  |
| 最大集电极直流电流 Collector Current (DC)                      | $I_C$         | 1.2          | A                  |
| 最大集电极脉冲电流 Collector Current (pulse)                   | $I_{CP}$      | 2.4          | A                  |
| 最大集电极耗散功率 Total Dissipation (TO-92)                   | $P_C$         | 1            | W                  |
| 最高结温 Junction Temperature                             | $T_j$         | 150          | $^{\circ}\text{C}$ |
| 贮存温度 Storage Temperature                              | $T_{stg}$     | -55~+150     | $^{\circ}\text{C}$ |

## 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    |
|------------------|--------------------------------------------------------------------|-------------------|-------------------|-------------------|---------------|
| $V(BR)_{CEO}$    | $I_C=10\text{mA}, I_B=0$                                           | 400               | 470               | -                 | V             |
| $V(BR)_{CBO}$    | $I_C=1\text{mA}, I_B=0$                                            | 700               | 780               | -                 | V             |
| $V(BR)_{EBO}$    | $I_E=1\text{mA}, I_C=0$                                            | 9                 | 14                | -                 | V             |
| $I_{CBO}$        | $V_{CB}=700\text{V}, I_E=0$                                        | -                 | -                 | 5                 | $\mu\text{A}$ |
| $I_{CEO}$        | $V_{CE}=400\text{V}, I_B=0$                                        | -                 | -                 | 10                | $\mu\text{A}$ |
| $I_{EBO}$        | $V_{EB}=7\text{V}, I_C=0$                                          | -                 | -                 | 5                 | $\mu\text{A}$ |
| hFE              | $V_{CE}=10\text{V}, I_C=100\text{mA}$                              | 10                | 22                | 40                | -             |
|                  | $V_{CE}=5\text{V}, I_C=1.2\text{A}$                                | 3.0               | 5.0               | -                 | -             |
| $V_{CE(sat)}$    | $I_C=0.5\text{A}, I_B=100\text{mA}$                                | -                 | 0.3               | 0.8               | V             |
| $V_{BE(sat)}$    | $I_C=0.5\text{A}, I_B=100\text{mA}$                                | -                 | 1.0               | 1.2               | V             |
| tf               | $V_{CC}=24\text{V}, I_C=0.25\text{A}, I_{B1}=-I_{B2}=0.05\text{A}$ | -                 | -                 | 0.7               | $\mu\text{S}$ |
| ts               |                                                                    | -                 | -                 | 5                 | $\mu\text{S}$ |
| fT               | $V_{CE}=10\text{V}, I_C=0.1\text{A}$                               | 4                 | -                 | -                 | MHz           |

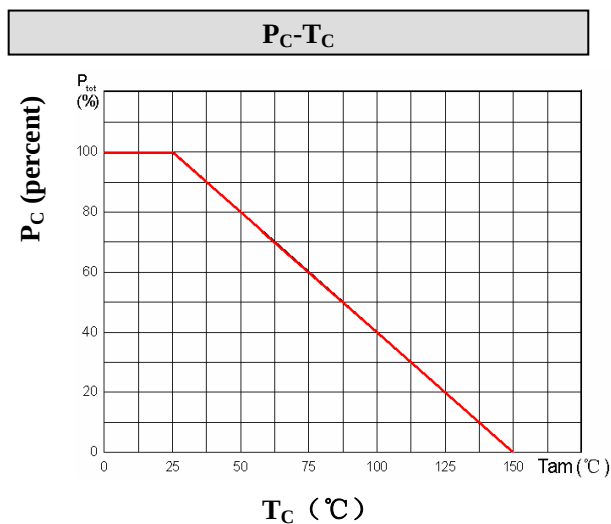
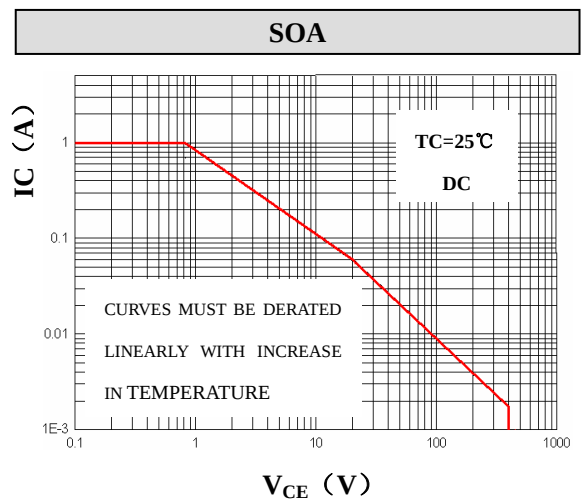
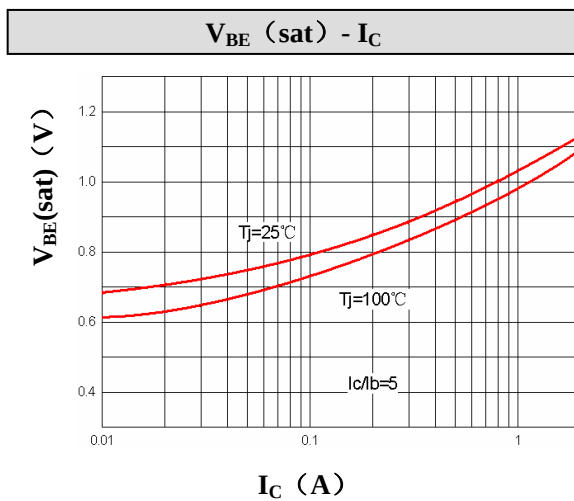
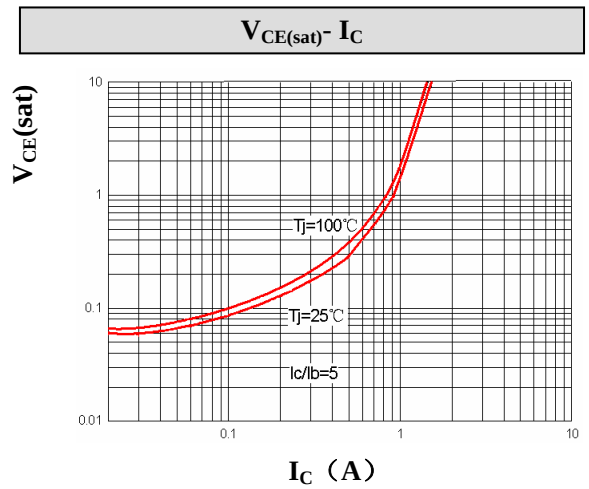
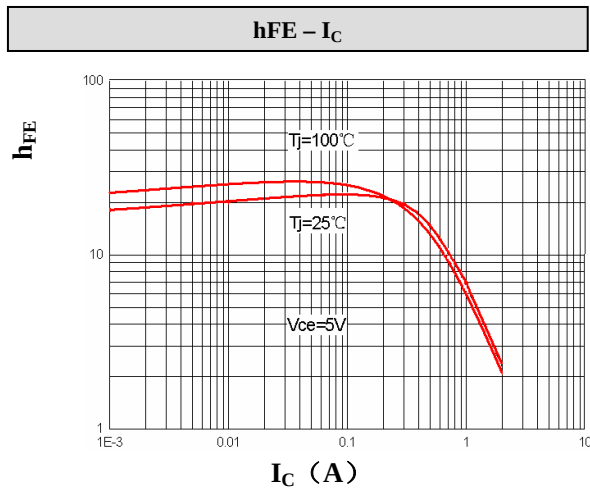
## 热特性 THERMAL CHARACTERISTIC

| 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 | $R_{th(j-a)}$ | -                 | 125               | $^{\circ}\text{C/W}$ |





## 特征曲线 ELECTRICAL CHARACTERISTICS (curves)

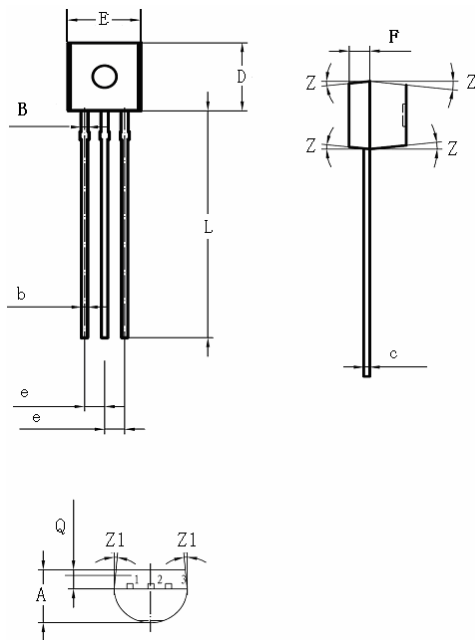




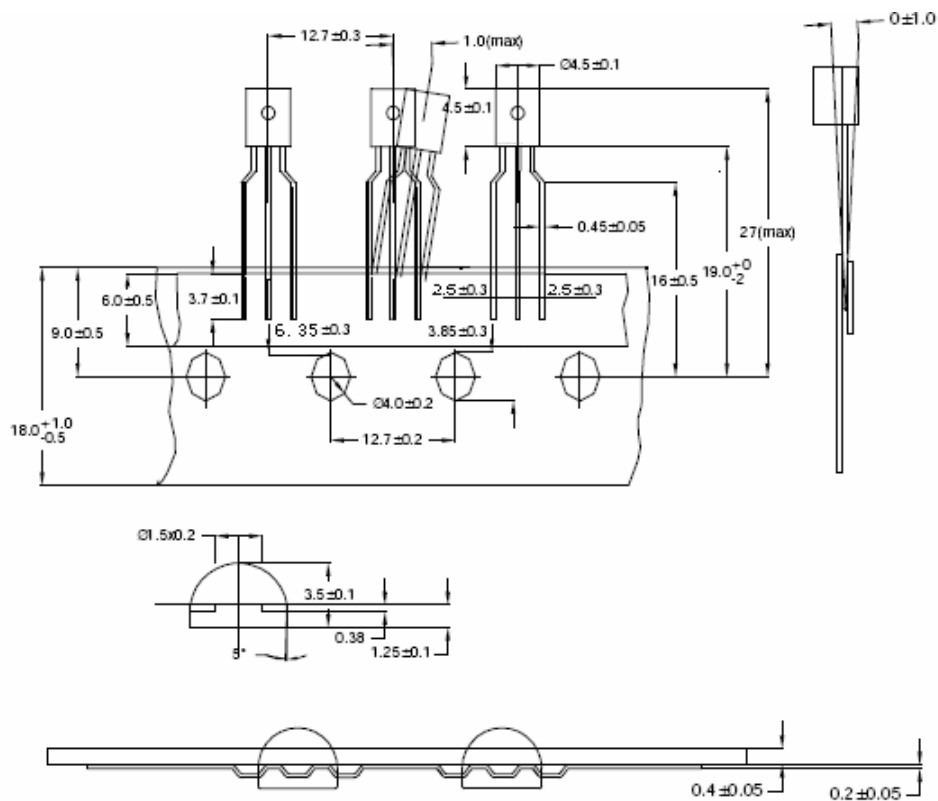
3DD4222T

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°          |



**注意事项**

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3. 在电路设计时请不要超过器件的绝对最大额定值，否则会影响整机的可靠性。
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.
4. Jilin Sino-microelectronics co., Ltd reserves the right to make changes in this specification sheet and is subject to change without prior notice.

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**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 |
|------------|------------------|-----------------|--------------------------------|
| 2009-5-22  | 200902B          | 200905C         | 版式                             |
| 2009-6-5   | 200905C          | 200906D         | 订货信息笔误更改                       |
| 2009-10-29 | 200906D          | 200910E         | 电话号码、订货代码                      |

