



TIP112/TIP117

用途

- 发动机点火
- 高频开关电源
- 高频功率变换
- 一般功率放大电路

APPLICATIONS

- Engine ignition
- High frequency switching power supply
- High frequency power transform
- power amplifier circuit

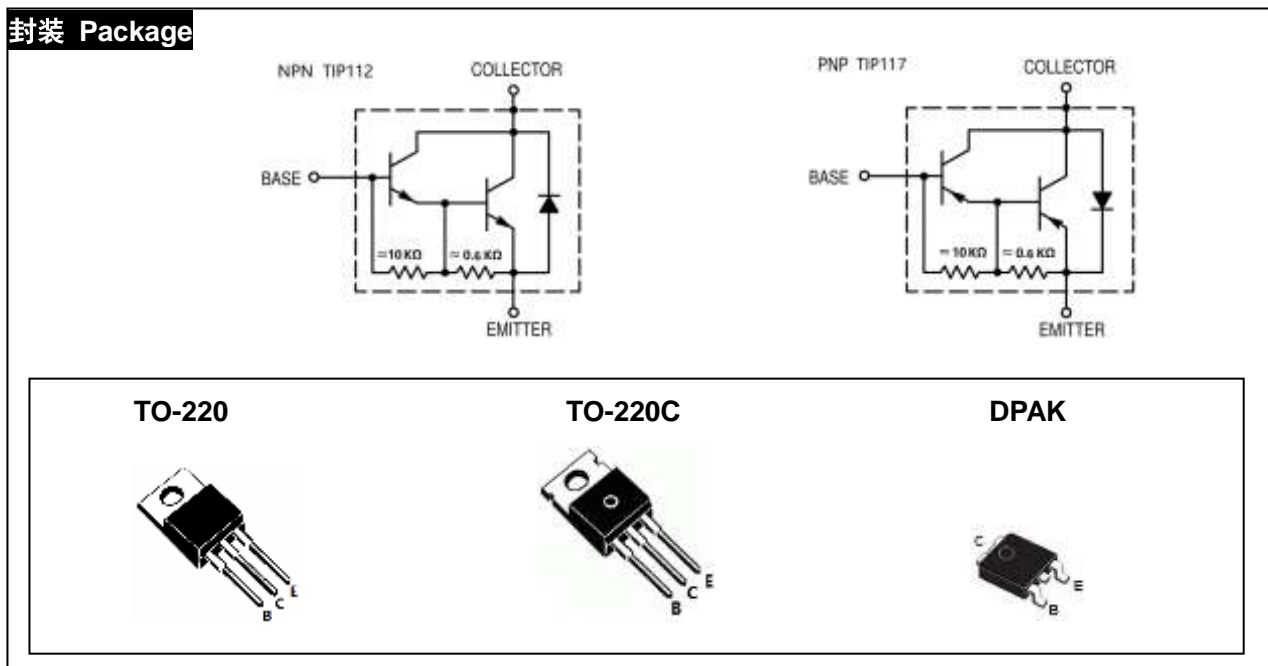
产品特性

- 高电流容量
- 高可靠性
- 环保 (RoHS) 产品

FEATURES

- High current capability
- High reliability
- RoHS product

封装 Package



订货信息 ORDER MESSAGE

| 订货型号 Order codes | | | | | | 印 记 Marking | 封 装 Package |
|---------------------------|-------------------------------|--------------------------|-------------------------------|---------------------------|-------------------------------|----------------|----------------|
| 有卤-条管 Halogen-T ube | 无卤-条管 Halogen Free-Tube | 有卤-袋装 Halogen- Bag | 无卤-袋装 Halogen Free- Bag | 有卤-编带 Halogen- Reel | 无卤-编带 Halogen Free-Reel | | |
| TIP112-Z-B | N/A | N/A | N/A | N/A | N/A | TIP112 | TO-220 |
| TIP112-C-B | N/A | TIP112-C-C | N/A | N/A | N/A | TIP112 | TO-220C |
| TIP112-R-B | N/A | TIP112-R-C | N/A | TIP112-R-A | N/A | TIP112 | DPAK |
| TIP117-Z-B | N/A | N/A | N/A | N/A | N/A | TIP117 | TO-220 |
| TIP117-C-B | N/A | TIP117-C-C | N/A | N/A | N/A | TIP117 | TO-220C |
| TIP117-R-B | N/A | TIP117-R-C | N/A | TIP117-R-A | N/A | TIP117 | DPAK |



绝对最大额定值 ABSOLUTE RATINGS (Tc=25°C)

| 项 目 Parameter | 符 号 Symbol | 数 值 Value | 单 位 Unit |
|--|---------------|--------------|-------------|
| 集电极—发射极直流电压 Collector- Emitter Voltage ($V_{BE}=0$) | V_{CES} | 100 | V |
| 集电极—发射极直流电压 Collector- Emitter Voltage ($I_B=0$) | V_{CEO} | 100 | V |
| 发射极—基极直流电压 Emitter-Base Voltage | V_{EBO} | 5 | V |
| 最大集电极直流电流 Collector Current (DC) | I_C | 2 | A |
| 最大集电极脉冲电流 Collector Current (pulse) | I_{CP} | 4 | A |
| 最大基极直流电流 Base Current (DC) | I_B | 50 | mA |
| 最大集电极耗散功率 Total Dissipation (TO-220(C)) | P_C | 50 | W |
| 最大集电极耗散功率 Total Dissipation (DPAK) | P_C | 30 | W |
| 最高结温 Junction Temperature | T_j | 150 | °C |
| 贮存温度 Storage Temperature | T_{stg} | -55~+150 | °C |

电特性 ELECTRICAL CHARACTERISTIC

| 项 目 Parameter | 测试条件 Tests conditions | 最小值 Value(min) | 典型值 Value(typ) | 最大值 Value(max) | 单位 Unit |
|------------------|--------------------------|-------------------|-------------------|-------------------|------------|
| $V_{(BR)CEO}$ | $I_C=10mA, I_B=0$ | 100 | - | - | V |
| $V_{(BR)CBO}$ | $I_C=1 mA, I_E=0$ | 100 | - | - | V |
| I_{CBO} | $V_{CB}=100V, I_E=0$ | - | - | 0.2 | mA |
| I_{CEO} | $V_{CE}=50V, I_B=0$ | - | - | 0.5 | mA |
| I_{EBO} | $V_{EB}=5V, I_C=0$ | - | - | 2 | mA |
| $hFE_{(1)}$ | $V_{CE}=4V, I_C=1A$ | 1000 | - | - | |
| $hFE_{(2)}$ | $V_{CE}=4V, I_C=2A$ | 500 | - | - | |
| $V_{CE(sat)(1)}$ | $I_C=2A, I_B=2mA$ | - | - | 2.0 | V |
| $V_{BE(ON)}$ | $V_{CE}=4V, I_C=2A$ | - | - | 2.8 | V |

热特性 THERMAL CHARACTERISTIC

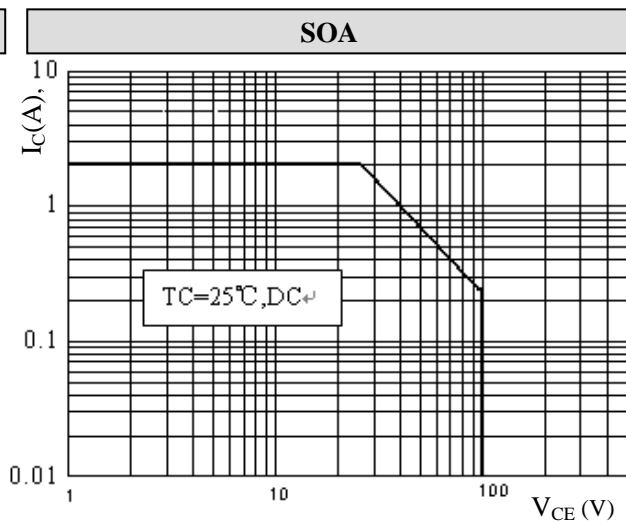
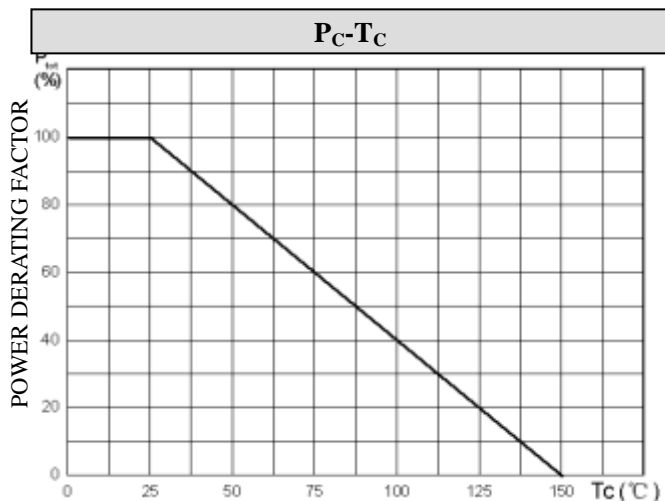
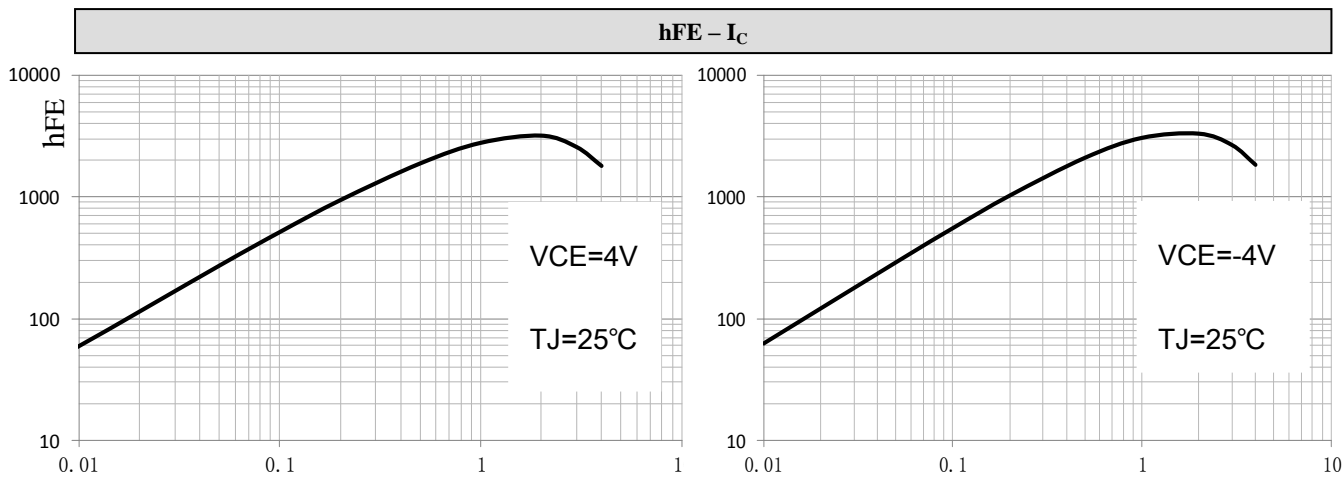
| 项 目 Parameter | 符 号 Symbol | 最大值 Value(max) | 单 位 Unit |
|---|---------------|-------------------|-------------|
| 结到管壳的热阻 TO-220 (C) Thermal Resistance Junction Case TO-220 (C) | $R_{th(j-c)}$ | 2.50 | °C/W |
| 结到管壳的热阻 DPAK Thermal Resistance Junction Case DPAK | $R_{th(j-c)}$ | 4.17 | °C/W |



特征曲线 ELECTRICAL CHARACTERISTICS (curves)

TIP112

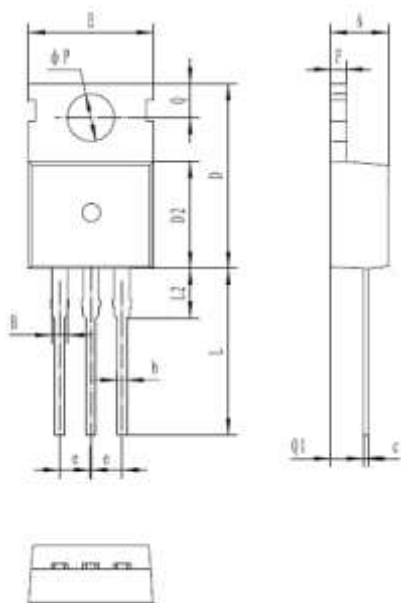
TIP117





外形尺寸 PACKAGE MECHANICAL DATA

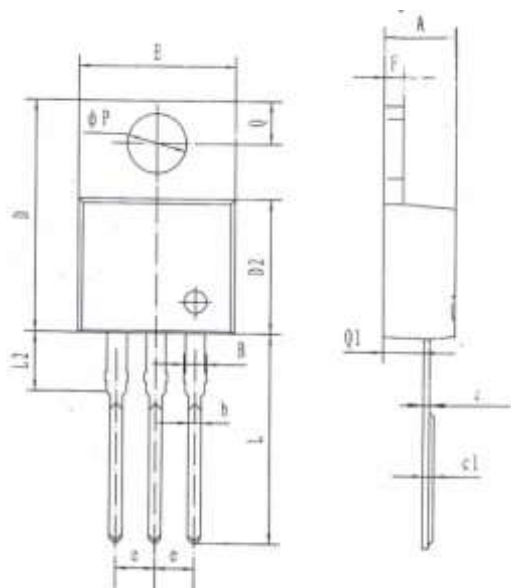
TO-220C



单位 Unit : mm

| 符号 | 尺寸 (mm) |
|----|-------------|
| A | 4.30-4.70 |
| B | 1.10-1.40 |
| b | 0.70-0.95 |
| c | 0.40-0.65 |
| D | 15.20-16.20 |
| D2 | 9.00-9.40 |
| E | 9.70-10.10 |
| e | 2.39-2.69 |
| F | 1.25-1.40 |
| L | 12.60-13.60 |
| L2 | 2.80-3.20 |
| P | 3.50-3.80 |
| Q | 2.60-3.00 |
| Q1 | 2.20-2.60 |

TO-220



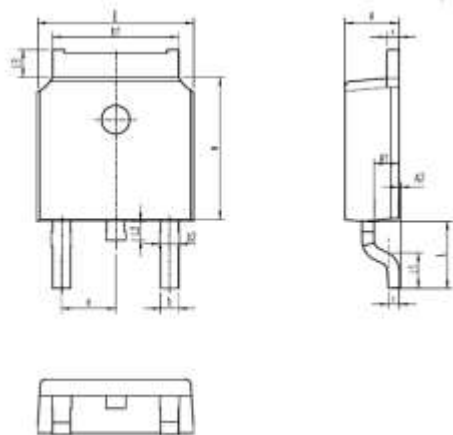
单位 Unit : mm

| 符号 | 尺寸 (mm) |
|----|-------------|
| A | 4.40-4.80 |
| B | 1.10-1.40 |
| b | 0.70-0.95 |
| c | 0.28-0.48 |
| c1 | 0.32-0.52 |
| D | 14.45-16.00 |
| D2 | 8.20-9.20 |
| E | 9.60-10.40 |
| e | 2.39-2.69 |
| F | 1.20-1.35 |
| L | 13.05-14.05 |
| L2 | 3.70-3.90 |
| P | 3.50-4.00 |
| Q | 2.40-3.00 |
| Q1 | 2.20-2.90 |



DPAK

单位 Unit : mm



| 符号 | 尺寸 (mm) |
|-----------|-----------|
| A | 2.16-2.41 |
| A1 | 0.97-1.17 |
| A2 | 0.00-0.15 |
| b | 0.63-0.93 |
| b1 | 5.13-5.53 |
| b2 | 0.66-0.96 |
| c | 0.40-0.60 |
| D | 5.80-6.40 |
| E | 6.30-6.90 |
| e | 2.286BSC |
| L | 2.50-3.30 |
| L1 | 1.20-1.80 |
| L2 | 0.60-1.00 |
| L3 | 0.85-1.30 |



注意事项

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NOTE

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3. Please do not exceed the absolute maximum ratings of the device when circuit designing.
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