

### ■ 描述 DESCRIPTIONS

SOT-23 塑封封装 NPN 三极管。NPN transistor in a SOT-23 Plastic Package.

### ■ 应用 APPLICATIONS

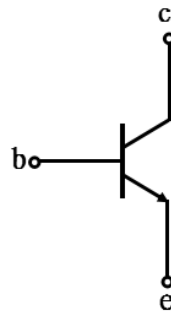
常规应用、开关电路。General purpose application,switching.

### ■ 引脚说明 PIN ASSIGNMENT



- 1 BASE
- 2 EMITTER
- 3 COLLECTOR

### ■ 内部等效电路 Equivalent Circuit



### ■ 型号构成 Name rule

| 基本名称<br>Name   |                |                | 辅助识别代码<br>Additional code |                   |                 |                                    |
|----------------|----------------|----------------|---------------------------|-------------------|-----------------|------------------------------------|
| 第一部分<br>Part 1 | 第二部分<br>Part 2 | 第三部分<br>Part 3 | 第四部分<br>Part 4            | 第五部分<br>Part 5    | 第六部分<br>Part 6  | 第七部分<br>Part 7                     |
| 品牌<br>Brand    | 产品类别<br>Type   | 产品型号<br>Model  | 分档<br>Value               | 分隔号<br>Separatrix | 封装代码<br>Package | 附加码（备用）<br>Extra-code              |
| DX             | T：三极管          | 9013           | O<br>Y<br>T<br>G          | “—”               | M: SOT-23       | E：ROHS<br>G: 绿色封装<br>Green Package |

■ 额定值 ABSOLUTE MAXIMUM RATINGS (TC=25°C unless otherwise noted)

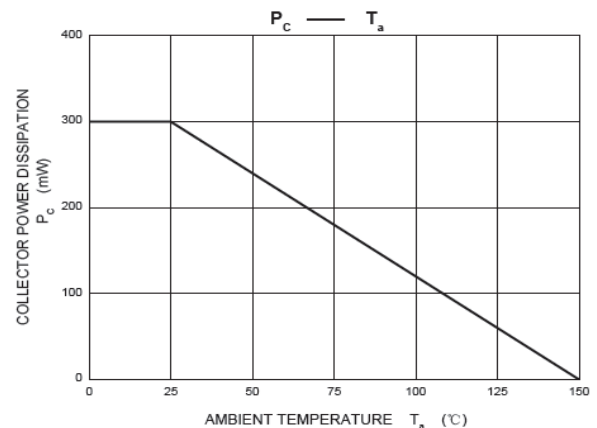
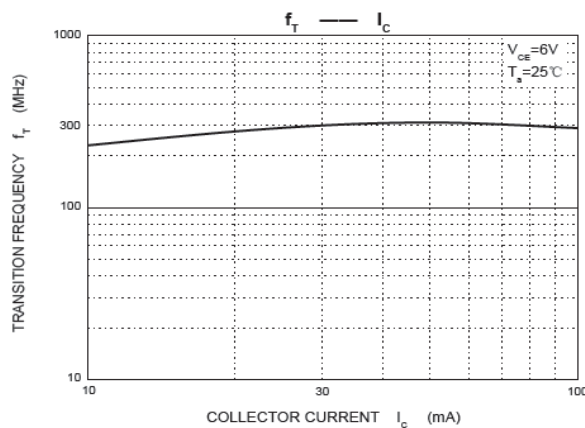
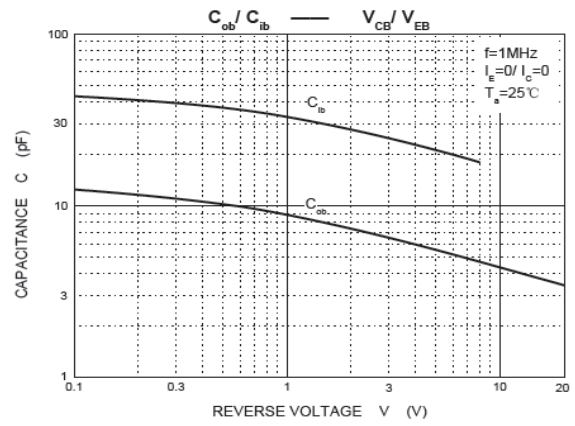
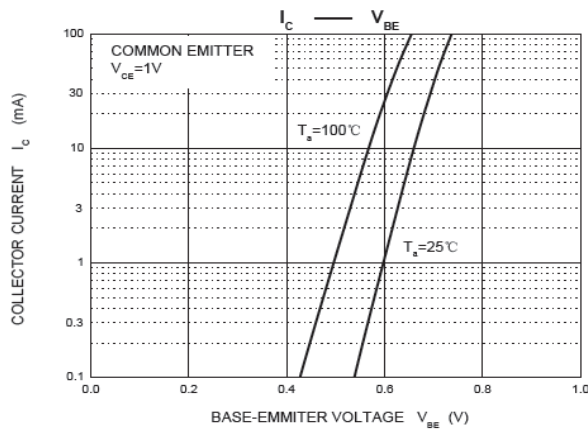
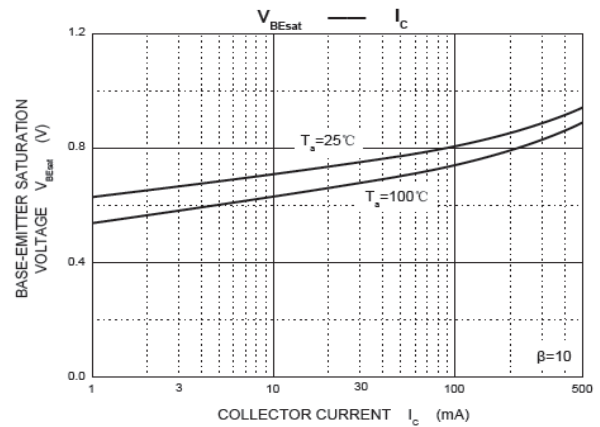
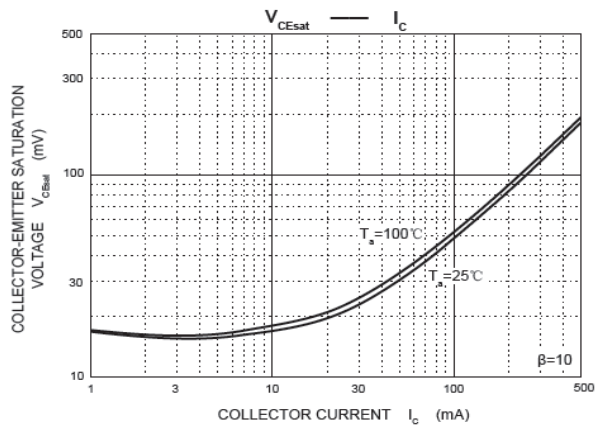
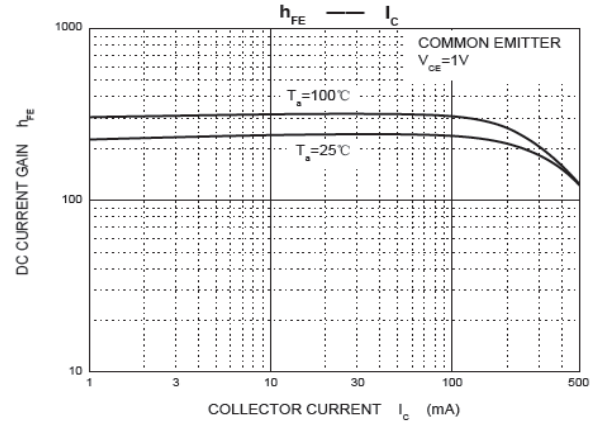
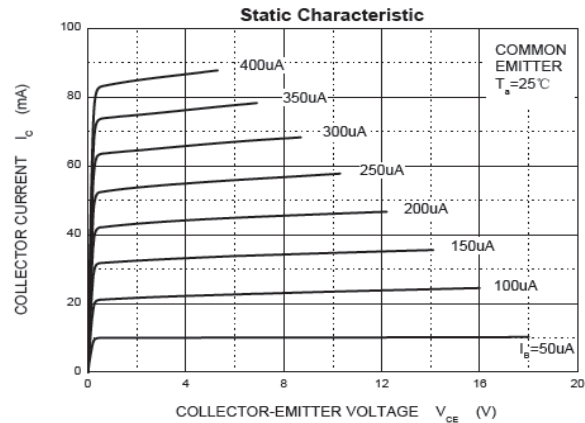
| 特性参数<br>CHARACTERISTIC                   | 符号<br>SYMBOL | 额定值<br>RATING | 单位<br>UNIT |
|------------------------------------------|--------------|---------------|------------|
| 集电极-基极电压<br>Collector-Base Voltage       | $V_{CBO}$    | 40            | Vdc        |
| 集电极-发射极电压<br>Collector-Emitter Voltage   | $V_{CEO}$    | 30            | Vdc        |
| 发射极-基极电压<br>Emitter-Base Voltage         | $V_{EBO}$    | 6.0           | Vdc        |
| 集电极电流-连续<br>Collector Current—Continuous | $I_C$        | 500           | mAdc       |
| 基极电流<br>Base Current                     | $I_B$        | 50            | mAdc       |
| 集电极耗散功率<br>Collector Power Dissipation   | $P_C$        | 300           | mW         |
| 结温<br>Junction Temperature               | $T_j$        | 150           | °C         |
| 储存温度<br>Storage Temperature Range        | $T_{stg}$    | -55 ~ 150     | °C         |

## ■ 电特性 ELECTRICAL CHARACTERISTICS

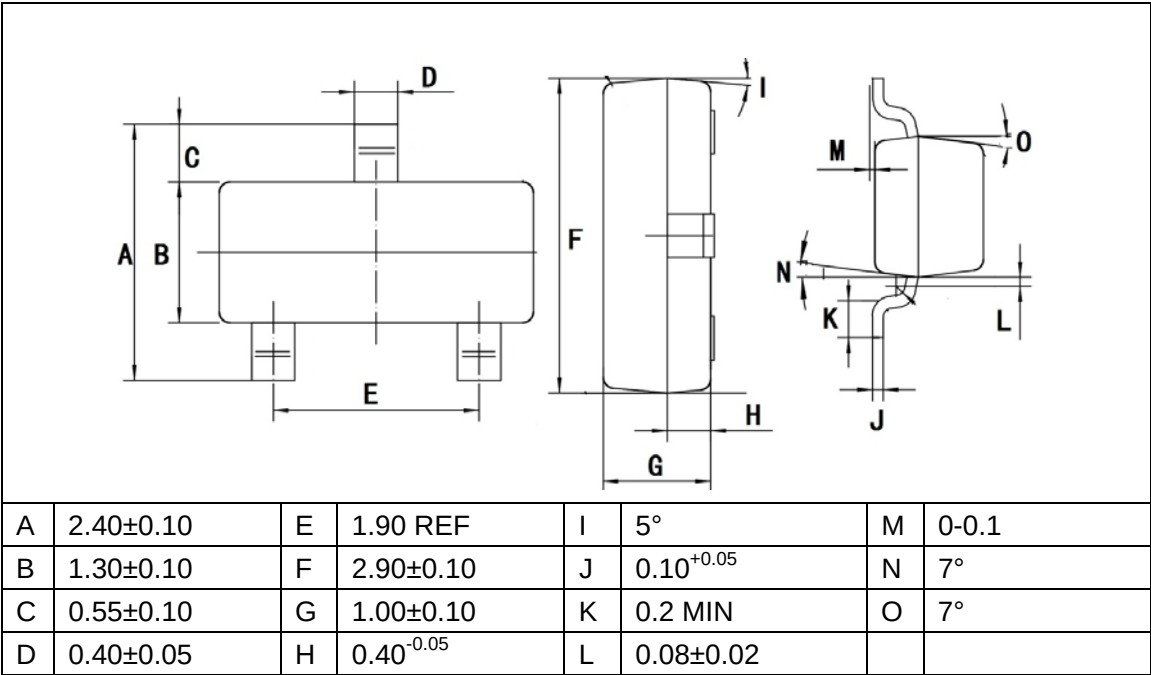
(TA=25°C unless otherwise noted 如无特殊说明, 温度为 25°C)

| Characteristic<br>特性参数                              | Symbol<br>符号  | Test Condition<br>测试条件      | Min<br>最小值 | TYP<br>典型 | Max<br>最大值 | Unit<br>单位 |
|-----------------------------------------------------|---------------|-----------------------------|------------|-----------|------------|------------|
| Collector Cutoff Current<br>集电极截止电流                 | $I_{CBO}$     | $V_{CB}=35V, I_E=0$         | —          | —         | 0.1        | $\mu A$    |
| Emitter Cutoff Current<br>发射极截止电流                   | $I_{EBO}$     | $V_{EB}=5V, I_C=0$          | —          | —         | 0.1        | $\mu A$    |
| Collector-Base Breakdown Voltage<br>集电极-基极击穿电压      | $V_{(BR)CBO}$ | $I_C=100\mu A$              | 40         | —         | —          | V          |
| Collector-Emitter Breakdown Voltage<br>集电极-发射极击穿电压  | $V_{(BR)CEO}$ | $I_C=1.0mA$                 | 30         | —         | —          | V          |
| Emitter-Base Breakdown Voltage<br>发射极-基极击穿电压        | $V_{(BR)EBO}$ | $I_E=100\mu A$              | 6          | —         | —          | V          |
| DC Current Gain<br>直流电流增益                           | $h_{FE}(1)$   | $V_{CE}=1V, I_C=50mA$       | 160        | —         | 400        | —          |
|                                                     | $h_{FE}(2)$   | $V_{CE}=6V, I_C=400mA$      | 25         | —         | —          |            |
| Collector-Emitter Saturation Voltage<br>集电极-发射极饱和压降 | $V_{CE(sat)}$ | $I_C=500mA, I_B=50mA$       | —          | —         | 0.6        | V          |
| Base-Emitter Voltage<br>基极-发射极电压                    | $V_{BE}$      | $V_{CE}=1V, I_C=100mA$      | —          | 0.8       | 1.0        | V          |
| Transition Frequency<br>特征频率                        | $f_T$         | $V_{CE}=-6V, I_C=-20mA$     | 150        | 300       | —          | MHz        |
| Collector Output Capacitance<br>输出电容                | $C_{ob}$      | $V_{CB}=-6V, I_E=0, f=1MHz$ | —          | 7.0       | 10         | pF         |

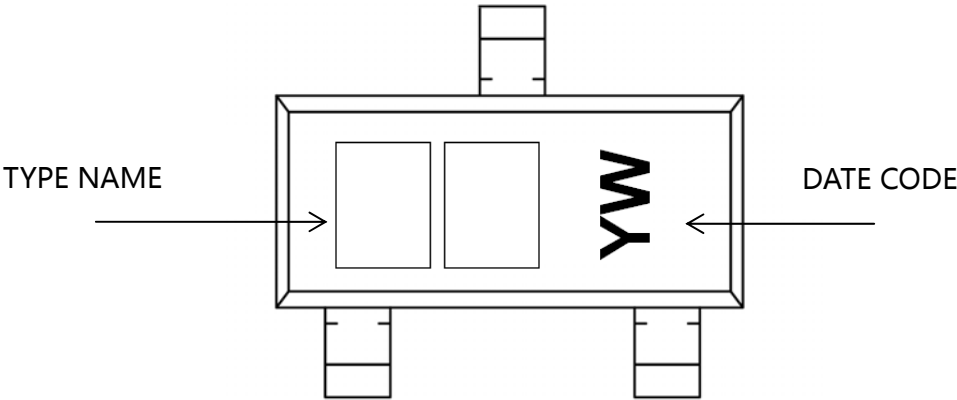
### ■ 典型特性 TYPICAL CHARACTERISTICS



外形尺寸 DIMENSION



打标 DEVICE MARKING



|                 |             |             |
|-----------------|-------------|-------------|
| TYPE            | DXT9013T-ME | DXT9013G-ME |
| h <sub>FE</sub> | 160~300     | 200~400     |
| MARK            | 6T          | 6G          |

■ 包装信息 PACKAGE INFORMATION

|                       |              |               |                                                |                                                     |
|-----------------------|--------------|---------------|------------------------------------------------|-----------------------------------------------------|
| 材料名称<br>Material Name | 颜色<br>Color  | 尺寸<br>Size    | 数量<br>Quantity                                 | 备注<br>Note                                          |
| 卷盘<br>Reel            | 蓝色<br>Blue   | 7 " *8mm      | 3K/Reel                                        |                                                     |
| 内盒<br>Inner Case      | 黄色<br>Yellow | 185*185*140mm | 30K/盒 ( 10 盘/盒 )<br>30K/Case ( 10 Reel/ Case ) | OHO2                                                |
| 外箱<br>Outer Box       | 黄色<br>Yellow | 460*400*210mm | 180K/箱 ( 6 盒/箱 )<br>180K/Box ( 6 Case/Box )    | OXO2                                                |
| 标签<br>Label           | 白色<br>White  | 68*40mm       | ——                                             | 贴卷盘、内盒、外箱<br>Label on reel、inner case、<br>outer box |