



安徽富信半导体科技有限公司

ANHUI FOSAN SEMICONDUCTOR TECHNOLOGY CO., LTD.

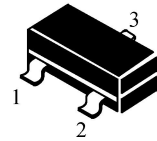
BC807W/BC808W

SOT-323 Bipolar Transistor 双极型三极管

■ Features 特点

PNP General Purpose 通用

- 1. BASE
- 2. EMITTER
- 3. COLLECTOR



■ Absolute Maximum Ratings 最大额定值

| Characteristic 特性参数 | Symbol 符号 | BC807W- 16/25/40 | BC808W- 16/25/40 | Unit 单位 |
|---|-----------------------------|----------------------------|---------------------|---------------------------|
| Collector-Base Voltage 集电极基极电压 | V_{CBO} | -50 | -30 | V |
| Collector-Emitter Voltage 集电极发射极电压 | V_{CEO} | -45 | -25 | V |
| Emitter-Base Voltage 发射极基极电压 | V_{EBO} | -5 | -5 | V |
| Collector Current 集电极电流 | I_C | -500 | -800 | mA |
| Power dissipation 耗散功率 | $P_C(T_a=25^\circ\text{C})$ | 300 | | mW |
| Thermal Resistance Junction-Ambient 热阻 | $R_{\theta JA}$ | 417 | | $^\circ\text{C}/\text{W}$ |
| Junction and Storage Temperature 结温和储藏温度 | T_J, T_{stg} | -55to+150 $^\circ\text{C}$ | | |

■ Device Marking 产品打标

| H_{FE} | | 100-250(-16) | 160-400(-25) | 250-600(-40) |
|----------|--------|--------------|--------------|--------------|
| Mark | BC807W | 5A | 5B | 5C |
| | BC808W | 5E | 5F | 5G |

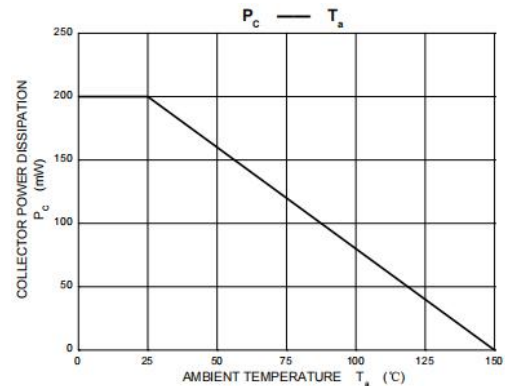
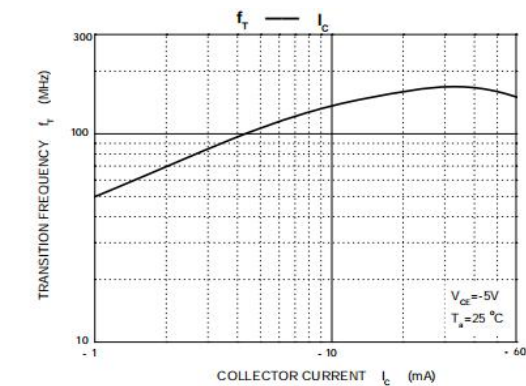
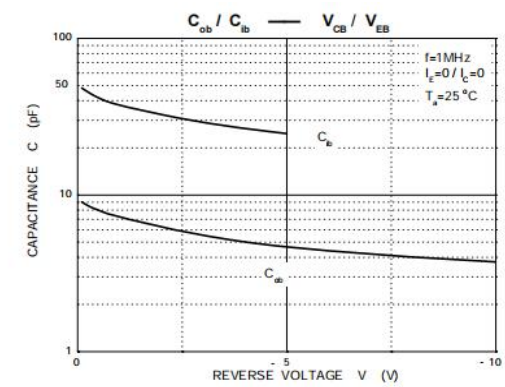
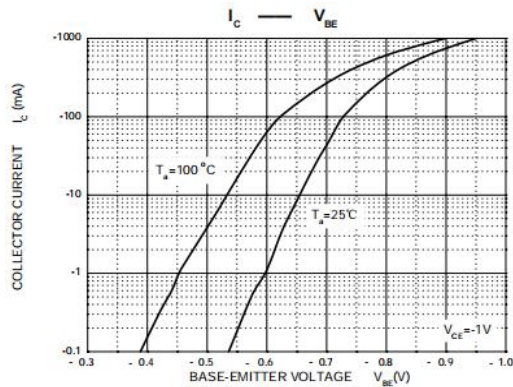
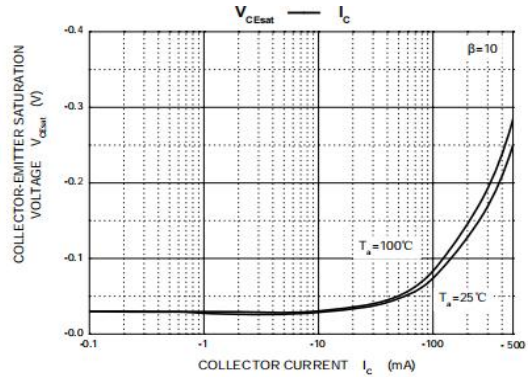
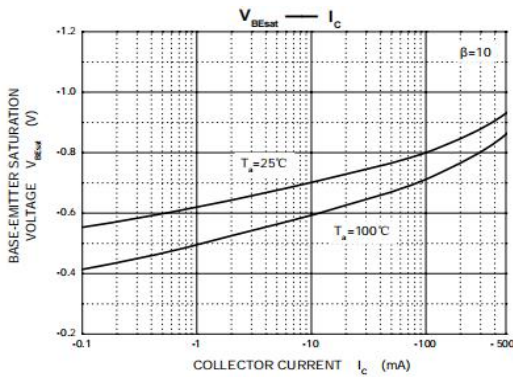
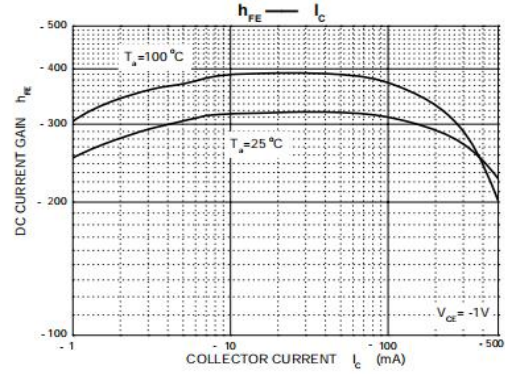
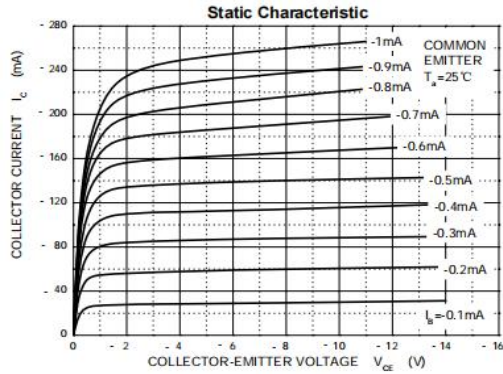


■Electrical Characteristics 电特性

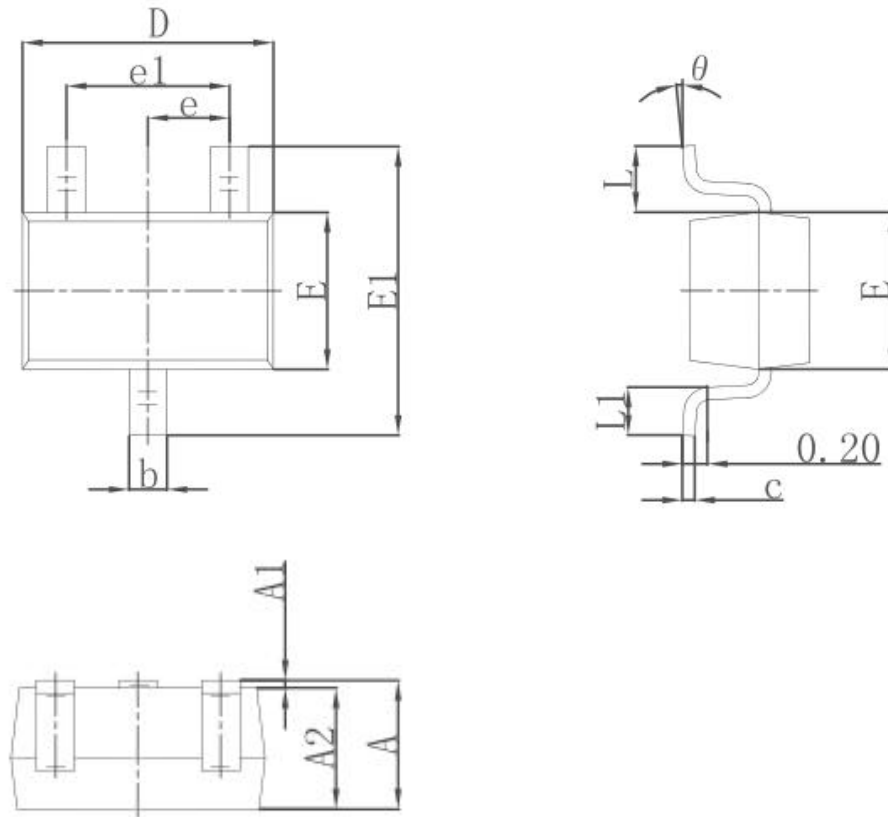
($T_A=25^{\circ}\text{C}$ unless otherwise noted 如无特殊说明, 温度为 25°C)

| Characteristic 特性参数 | | Symbol 符号 | Min 最小值 | Type 典型值 | Max 最大值 | Unit 单位 |
|--|--|---------------|-------------------|-------------|-------------------|------------|
| Collector-Base Breakdown Voltage 集电极基极击穿电压 ($I_C = -10\mu\text{A}$, $I_E = 0$) | BC807W-16/25/40 BC808W-16/25/40 | BV_{CBO} | -50 -30 | — | — | V |
| Collector-Emitter Breakdown Voltage 集电极发射极击穿电压 ($I_C = -10\text{mA}$, $I_B = 0$) | BC807W-16/25/40 BC808W-16/25/40 | BV_{CEO} | -45 -25 | — | — | V |
| Emitter-Base Breakdown Voltage 发射极基极击穿电压 ($I_E = -10\mu\text{A}$, $I_C = 0$) | | BV_{EBO} | -5 | — | — | V |
| Collector-Base Leakage Current 集电极基极漏电流 | BC807W-16/25/40 ($V_{CB} = -50\text{V}$, $I_E = 0$) BC808W-16/25/40 ($V_{CB} = -30\text{V}$, $I_E = 0$) | I_{CBO} | — | — | -100 | nA |
| Emitter-Base Leakage Current 发射极基极漏电流 ($V_{EB} = -4\text{V}$, $I_C = 0$) | | I_{EBO} | — | — | -100 | nA |
| DC Current Gain 直流电流增益 ($V_{CE} = -1\text{V}$, $I_C = -100\text{mA}$) | BC807W-16/BC808W-16 BC807W-25/BC808W-25 BC807W-40/BC808W-40 | H_{FE} | 100 160 250 | — | 250 400 600 | |
| DC Current Gain 直流电流增益($V_{CE} = -1\text{V}$, $I_C = -500\text{mA}$) | | H_{FE} | 40 | | | |
| Collector-Emitter Saturation Voltage 集电极发射极饱和压降($I_C = -500\text{mA}$, $I_B = -50\text{mA}$) | | $V_{CE(sat)}$ | — | — | -0.7 | V |
| Base-Emitter Saturation Voltage 基极发射极饱和压降($I_C = -500\text{mA}$, $I_B = -50\text{mA}$) | | $V_{BE(sat)}$ | — | — | -1.2 | V |
| Base-Emitter On Voltage 基极发射极导通电压($V_{CE} = -1\text{V}$, $I_C = -300\text{mA}$) | | $V_{BE(on)}$ | — | — | -1.2 | V |
| Transition Frequency 特征频率($V_{CE} = -5\text{V}$, $I_C = -10\text{mA}$) | | f_T | 100 | — | — | MHz |
| Output Capacitance 输出电容($V_{CB} = -10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$) | | C_{ob} | — | 12 | — | pF |

■ Typical Characteristic Curve 典型特性曲线



■Dimension 外形封装尺寸



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 0.900 | 1.100 | 0.035 | 0.043 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.900 | 1.000 | 0.035 | 0.039 |
| b | 0.200 | 0.400 | 0.008 | 0.016 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 2.000 | 2.200 | 0.079 | 0.087 |
| E | 1.150 | 1.350 | 0.045 | 0.053 |
| E1 | 2.150 | 2.450 | 0.085 | 0.096 |
| e | 0.650 TYP | | 0.026 TYP | |
| e1 | 1.200 | 1.400 | 0.047 | 0.055 |
| L | 0.525 REF | | 0.021 REF | |
| L1 | 0.260 | 0.460 | 0.010 | 0.018 |
| θ | 0° | 8° | 0° | 8° |