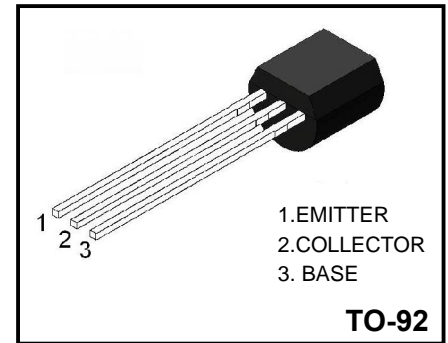


**Plastic-Encapsulate Transistors**

**TRANSISTOR (NPN)**

**FEATURE**

◆Power dissipation



**MAXIMUM RATINGS (Ta=25°C unless otherwise noted)**

| Parameter                                   | Symbol          | Value    | Unit |
|---|-----------------|----------|------|
| Collector-Base Voltage                      | $V_{CB0}$       | 120      | V    |
| Collector-Emitter Voltage                   | $V_{CE0}$       | 60       | V    |
| Emitter-Base Voltage                        | $V_{EB0}$       | 6        | V    |
| Collector Current                           | $I_c$           | 1        | A    |
| Collector Power Dissipation                 | $P_c$           | 0.75     | W    |
| Thermal Resistance From Junction To Ambient | $R_{\theta JA}$ | 167      | °C/W |
| Junction Temperature                        | $T_j$           | 150      | °C   |
| Storage Temperature                         | $T_{stg}$       | -55~+150 | °C   |

**ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)**

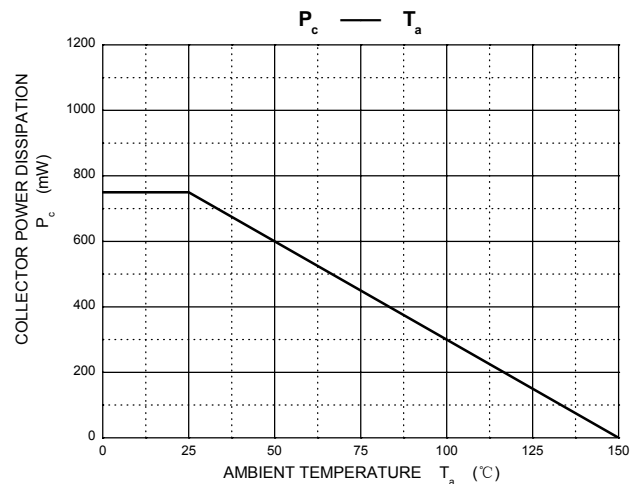
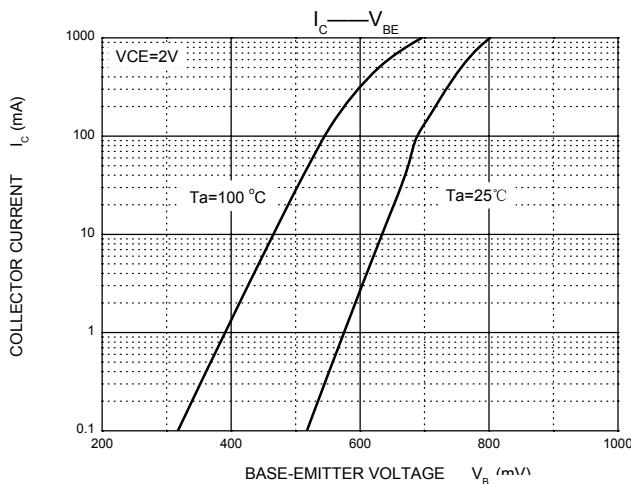
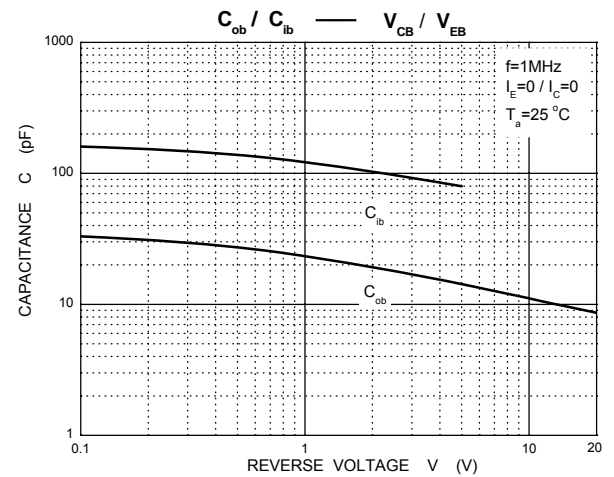
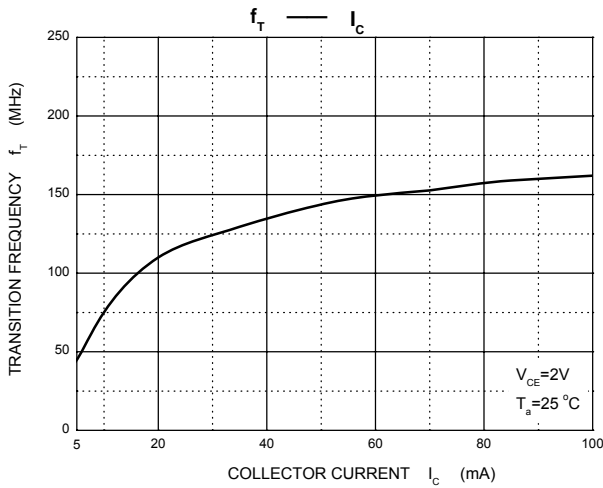
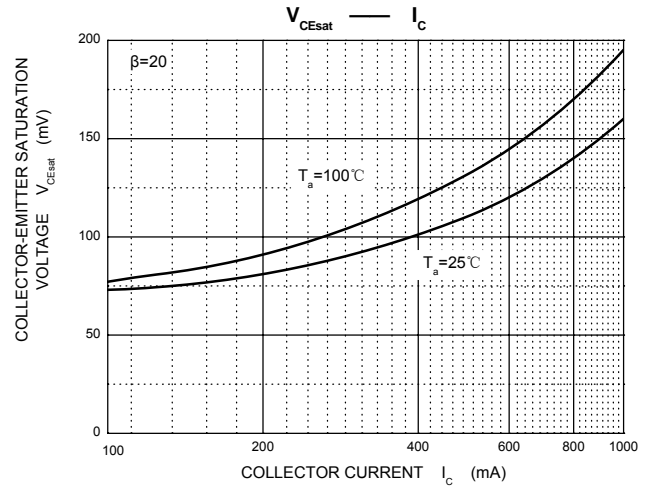
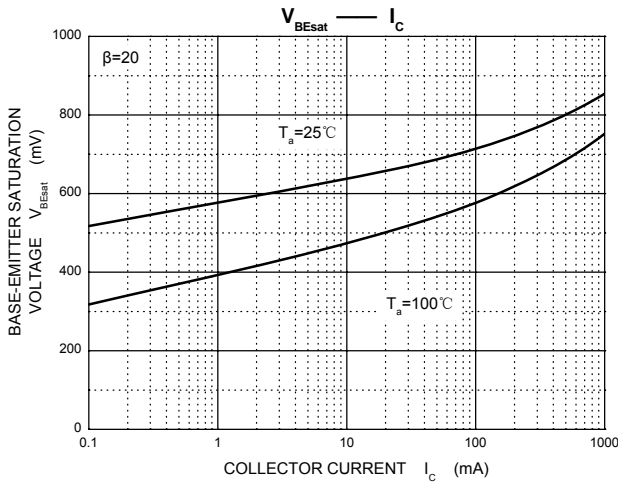
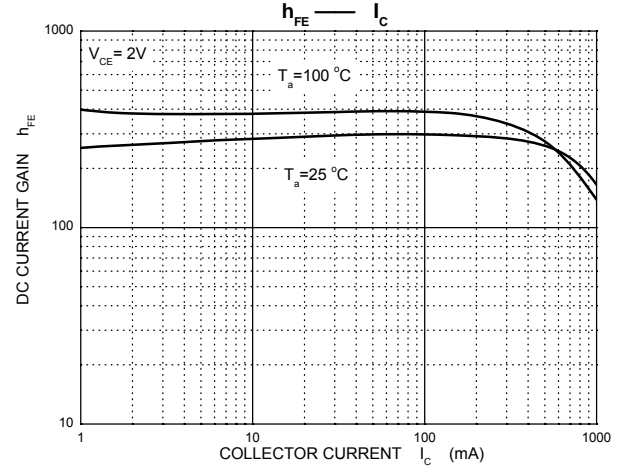
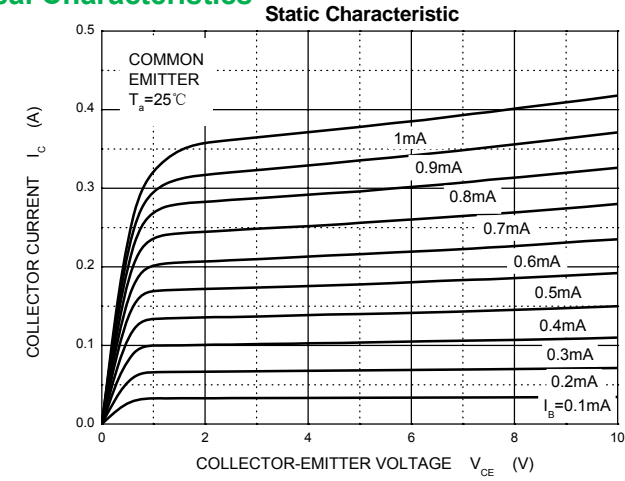
| Parameter                              | Symbol        | Test conditions                                      | Min | Typ  | Max | Unit    |
|--|---------------|--|-----|------|-----|---------|
| Collector-base breakdown voltage       | $V_{(BR)CBO}$ | $I_c = 10\mu A, I_E = 0$                             | 120 |      |     | V       |
| Collector-emitter breakdown voltage    | $V_{(BR)CEO}$ | $I_c = 2mA, I_B = 0$                                 | 60  |      |     | V       |
| Emitter-base breakdown voltage         | $V_{(BR)EBO}$ | $I_E = 10\mu A, I_c = 0$                             | 6   |      |     | V       |
| Collector cut-off current              | $I_{CBO}$     | $V_{CB} = 60V, I_E = 0$                              |     |      | 0.1 | $\mu A$ |
| Emitter cut-off current                | $I_{EBO}$     | $V_{EB} = 6V, I_c = 0$                               |     |      | 0.1 | $\mu A$ |
| DC current gain                        | $h_{FE1}$     | $V_{CE} = 2V, I_c = 100mA$                           | 135 |      | 600 |         |
|  | $h_{FE2}$     | $V_{CE} = 2V, I_c = 1A$                              | 81  |      |     |         |
| Collector-emitter saturation voltage * | $V_{CE(sat)}$ | $I_c = 1A, I_B = 50mA$                               |     |      | 0.3 | V       |
| Base-emitter saturation voltage *      | $V_{BE(sat)}$ | $I_c = 1A, I_B = 50mA$                               |     |      | 1.2 | V       |
| Base-emitter voltage *                 | $V_{BE}$      | $V_{CE} = 2V, I_c = 50mA$                            | 0.6 |      | 0.7 | V       |
| Transition frequency                   | $f_T$         | $V_{CE} = 2V, I_c = 100mA$                           | 100 |      |     | MHz     |
| Output capacitance                     | $C_{ob}$      | $V_{CB} = 10V, I_E = 0, f = 1MHz$                    |     |      | 19  | pF      |
| Turn on time                           | $t_{on}$      | $V_{CC} = 10V, I_c = 100mA, I_{B1} = -I_{B2} = 10mA$ |     | 0.07 |     | $\mu s$ |
| Storage time                           | $t_s$         |  |     | 0.95 |     | $\mu s$ |
| Fall time                              | $t_f$         |  |     | 0.07 |     | $\mu s$ |

\*pulse test:  $PW \leq 350\mu s, \delta \leq 2\%$ .

**CLASSIFICATION OF  $h_{FE1}$**

| Rank  | L       | K       | U       |
|-------|---------|---------|---------|
| Range | 135-270 | 200-400 | 300-600 |

Typical Characteristics



Package Dimensions

TO-92

| Symbol | Millimeter |       | Inches |       |
|--------|------------|-------|--------|-------|
|        | Min.       | Max.  | Min.   | Max.  |
| A      | 3.30       | 3.70  | 0.130  | 0.146 |
| A1     | 2.30       | 2.70  | 0.091  | 0.106 |
| b      | 0.40       | 0.50  | 0.016  | 0.020 |
| b1     | 0.50       | 0.70  | 0.020  | 0.028 |
| c      | 0.35       | 0.45  | 0.014  | 0.018 |
| D      | 4.45       | 4.70  | 0.175  | 0.185 |
| E      | 4.40       | 4.65  | 0.173  | 0.183 |
| e      | 1.17       | 1.37  | 0.046  | 0.054 |
| e1     | 2.34       | 2.64  | 0.092  | 0.104 |
| L      | 13.50      | 14.50 | 0.531  | 0.571 |
| L1     | 1.80       | 2.20  | 0.071  | 0.087 |

Product Specification Classification

| Part Number | Package | Marking        | Pack Quantity |
|-------------|---------|----------------|---------------|
| 2SD1616A    | TO-92   | 2SD1616A XXXXX | 1000pcs/Bag   |

单击下面可查看定价，库存，交付和生命周期等信息

[>>YFW\(佑风微\)](#)