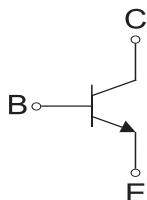
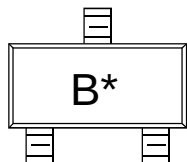


**SOT-523 Plastic-Encapsulate Transistors****2SC4617**

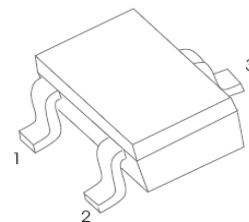
TRANSISTOR (NPN)

**FEATURES**

- Complementary To 2SA1774 (PNP)

**MARKING****Equivalent Circuit**

| HFE     | 120-560 |         |         |
|---------|---------|---------|---------|
| RANGE   | 120-270 | 180-390 | 270-560 |
| MARKING | BQ      | BR      | BS      |

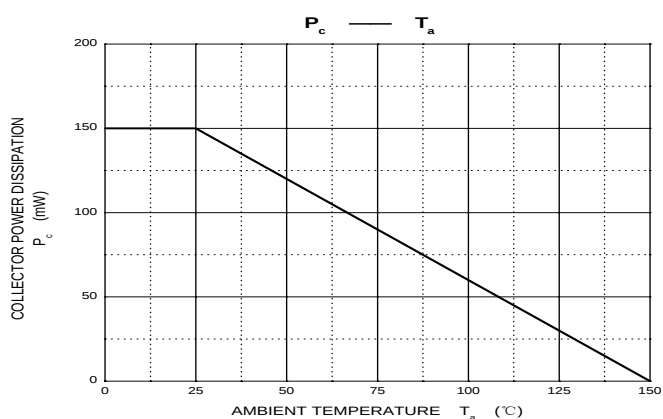
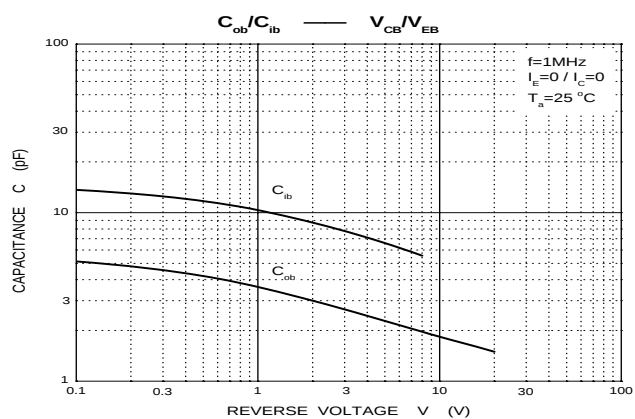
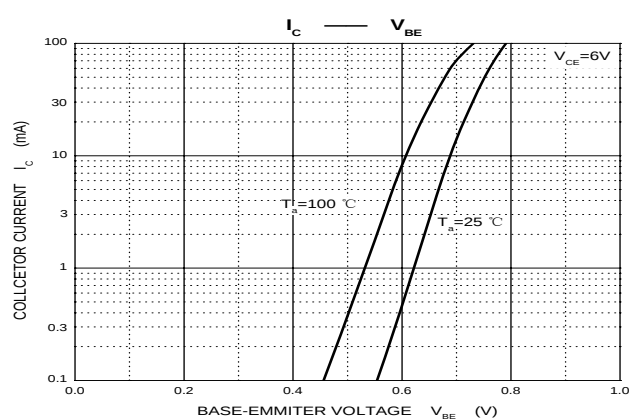
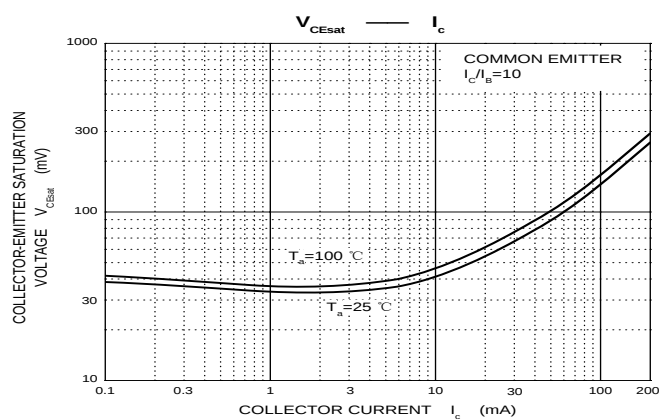
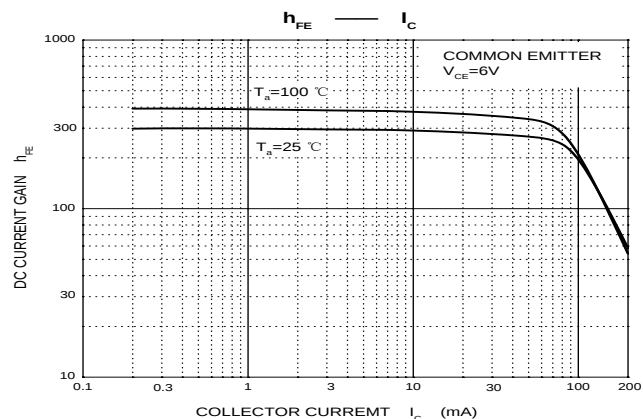
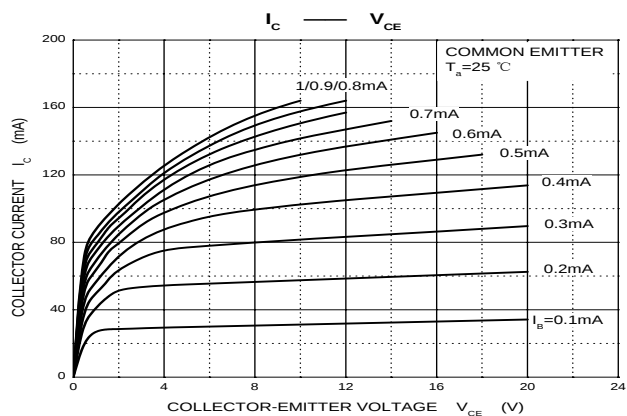
**SOT - 523****1. BASE****2. EMITTER****3. COLLECTOR****MAXIMUM RATINGS** ( $T_a=25^{\circ}\text{C}$  unless otherwise noted)

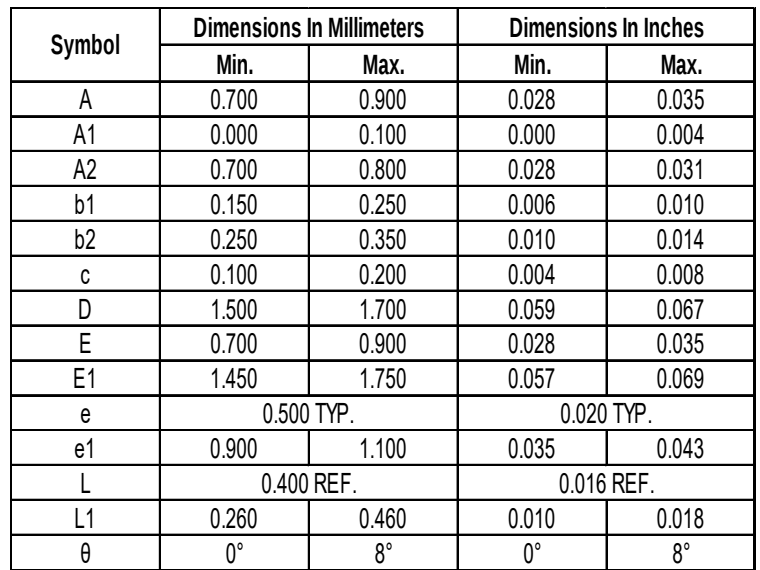
| Symbol         | Parameter                                        | Value   | Unit               |
|----------------|--------------------------------------------------|---------|--------------------|
| $V_{CBO}$      | Collector-Base Voltage                           | 60      | V                  |
| $V_{CEO}$      | Collector-Emitter Voltage                        | 50      | V                  |
| $V_{EBO}$      | Emitter-Base Voltage                             | 7       | V                  |
| $I_C$          | Collector Current -Continuous                    | 150     | mA                 |
| $P_C$          | Collector Power Dissipation                      | 150     | mW                 |
| $T_J, T_{stg}$ | Operation Junction and Storage Temperature Range | -55-150 | $^{\circ}\text{C}$ |

**ELECTRICAL CHARACTERISTICS** ( $T_a=25^{\circ}\text{C}$  unless otherwise specified)

| Parameter                            | Symbol        | Test conditions                                      | Min | Typ | Max | Unit          |
|--------------------------------------|---------------|------------------------------------------------------|-----|-----|-----|---------------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$ | $I_C=50\mu\text{A}, I_E=0$                           | 60  |     |     | V             |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | $I_C=1\text{mA}, I_B=0$                              | 50  |     |     | V             |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$ | $I_E=50\mu\text{A}, I_C=0$                           | 7   |     |     | V             |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB}=60\text{V}, I_E=0$                           |     |     | 0.1 | $\mu\text{A}$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB}=7\text{V}, I_C=0$                            |     |     | 0.1 | $\mu\text{A}$ |
| DC current gain                      | $h_{FE}$      | $V_{CE}=6\text{V}, I_C=1\text{mA}$                   | 120 |     | 560 |               |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=50\text{mA}, I_B=5\text{mA}$                    |     |     | 0.4 | V             |
| Transition frequency                 | $f_T$         | $V_{CE}=12\text{V}, I_C=2\text{mA}, f=100\text{MHz}$ |     | 180 |     | MHz           |
| Collector output capacitance         | $C_{ob}$      | $V_{CB}=12\text{V}, I_E=0, f=1\text{MHz}$            |     |     | 3.5 | pF            |

## Typical Characteristics





3.The pad layout is for reference purposes only.