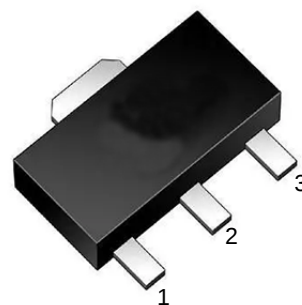


## SOT-89-3L Plastic-Encapsulate Transistors

**2SC4672** TRANSISTOR (NPN)

### • Features

- Complimentary to 2SA1797



1. BASE  
2. COLLECTOR  
3. EMITTER

SOT-89-3L

### • MAXIMUM RATINGS $(T_C=25^{\circ}\text{C})$

| Parameter                                        | Symbol          | Limit    | Unit                        |
|--------------------------------------------------|-----------------|----------|-----------------------------|
| Collector-Base Voltage                           | $V_{CBO}$       | 60       | V                           |
| Collector-Emitter Voltage                        | $V_{CEO}$       | 50       | V                           |
| Emitter-Base Voltage                             | $V_{EBO}$       | 6        | V                           |
| Collector Current                                | $I_C$           | 2        | A                           |
| Collector Power Dissipation                      | $P_C$           | 500      | mW                          |
| Thermal Resistance From Junction To Ambient      | $R_{\theta JA}$ | 250      | $^{\circ}\text{C}/\text{W}$ |
| Operation Junction and Storage Temperature Range | $T_J, T_{stg}$  | -55~+150 | $^{\circ}\text{C}$          |

### • ELECTRICAL CHARACTERISTICS $(T_a=25^{\circ}\text{C})$

| 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       | $V_{(BR)EBO}$ | $I_E=50\mu\text{A}, I_C=0$                           | 6   |     |      | V             |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB}=60\text{V}, I_E=0$                           |     |     | 0.1  | $\mu\text{A}$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB}=5\text{V}, I_C=0$                            |     |     | 0.1  | $\mu\text{A}$ |
| DC current gain                      | $h_{FE}$      | $V_{CE}=2\text{V}, I_C=500\text{mA}$                 | 82  |     | 390  |               |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=1\text{A}, I_B=50\text{mA}$                     |     |     | 0.35 | V             |
| Transition frequency                 | $f_T$         | $V_{CE}=2\text{V}, I_C=0.5\text{A}, f=100\text{MHz}$ |     | 210 |      | MHz           |
| Collector output capacitance         | $C_{ob}$      | $V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$            |     | 25  |      | pF            |

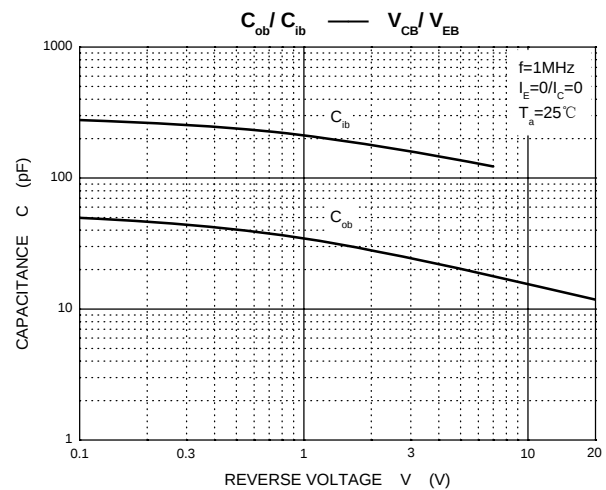
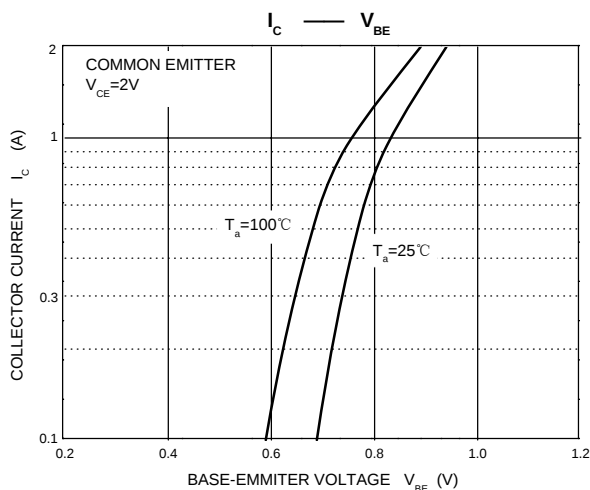
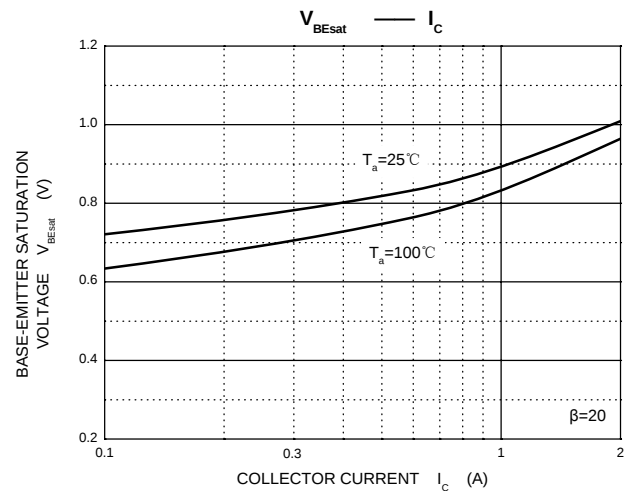
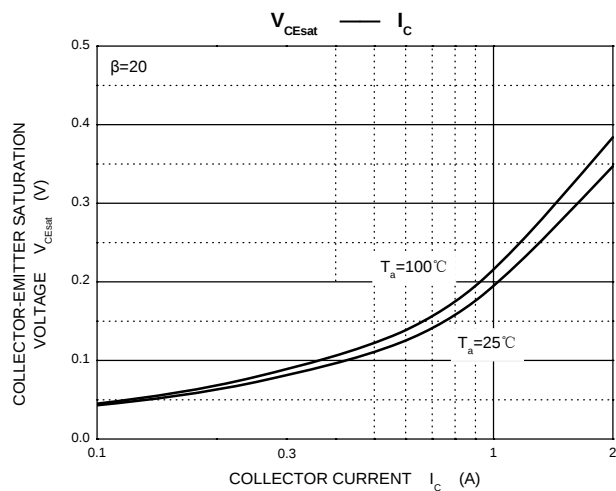
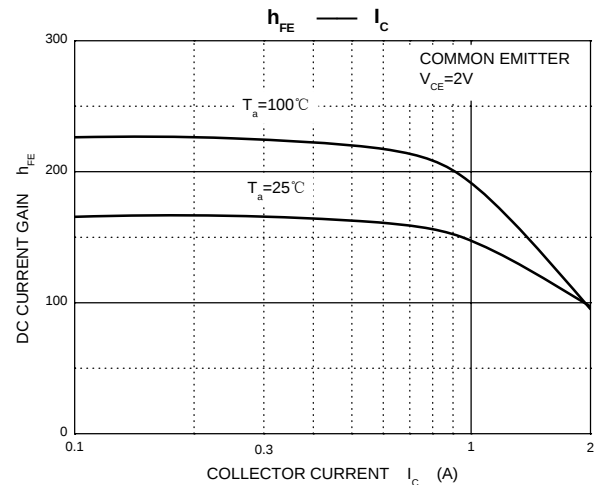
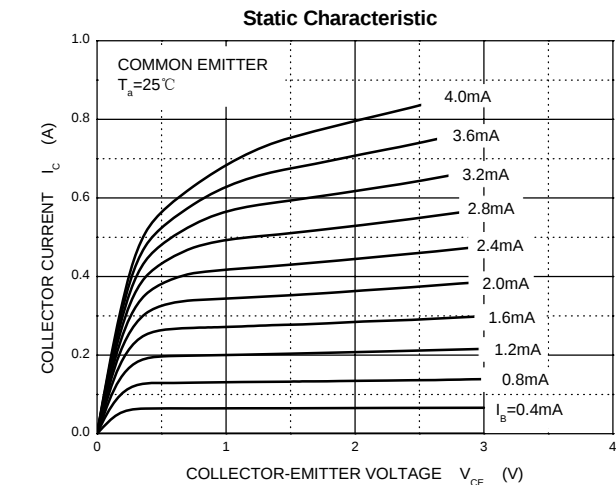
### • CLASSIFICATION OF $h_{FE(1)}$

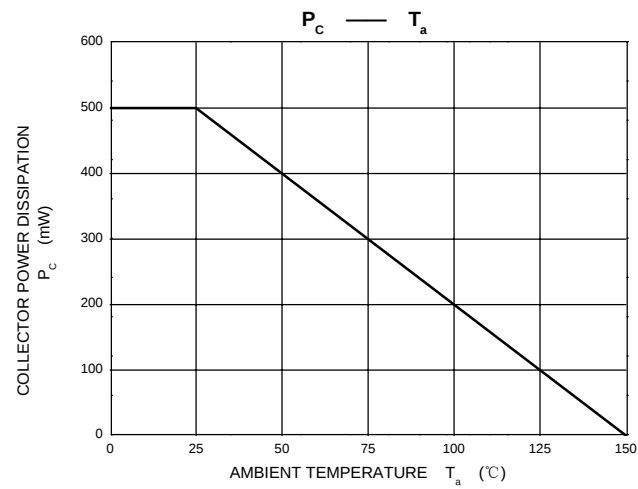
| Rank  | P      | Q       | R       |
|-------|--------|---------|---------|
| Range | 82-180 | 120-270 | 180-390 |

## Ordering Information:

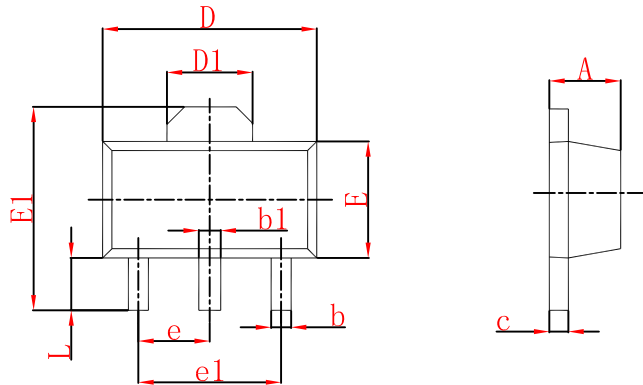
|                           |             |
|---------------------------|-------------|
| Part NO.                  | 2SC4672     |
| Marking                   | DKP/DKQ/DKR |
| Packing Information       | REEL TAPE   |
| Basic ordering unit (pcs) | 1000        |

## Typical Characteristics

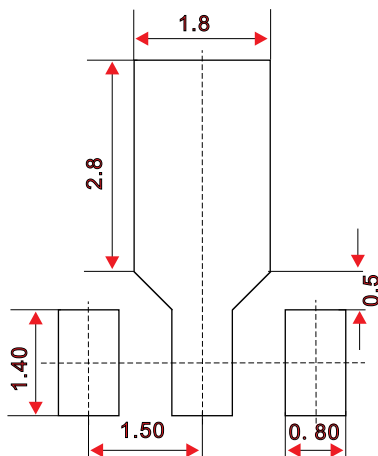




## SOT-89-3L Package Outline Dimensions



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min                       | Max   | Min                  | Max   |
| A      | 1.400                     | 1.600 | 0.055                | 0.063 |
| b      | 0.320                     | 0.520 | 0.013                | 0.020 |
| b1     | 0.400                     | 0.580 | 0.016                | 0.023 |
| c      | 0.350                     | 0.440 | 0.014                | 0.017 |
| D      | 4.400                     | 4.600 | 0.173                | 0.181 |
| D1     | 1.550 REF.                |       | 0.061 REF.           |       |
| E      | 2.300                     | 2.600 | 0.091                | 0.102 |
| E1     | 3.940                     | 4.250 | 0.155                | 0.167 |
| e      | 1.500 TYP.                |       | 0.060 TYP.           |       |
| e1     | 3.000 TYP.                |       | 0.118 TYP.           |       |
| L      | 0.900                     | 1.200 | 0.035                | 0.047 |



Note:  
 1. Controlling dimension: in millimeters.  
 2. General tolerance:  $\pm 0.05\text{mm}$ .  
 3. The pad layout is for reference purposes only.