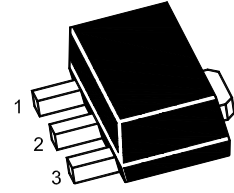


# 2SC4672U

## NPN Silicon Epitaxial Planar Transistor

Low Frequency Transistor



1.Base 2.Collector 3.Emitter  
SOT-89 Plastic Package

### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

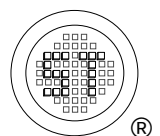
| Parameter                               | Symbol    | Value                  | Unit             |
|-----------------------------------------|-----------|------------------------|------------------|
| Collector Base Voltage                  | $V_{CBO}$ | 60                     | V                |
| Collector Emitter Voltage               | $V_{CEO}$ | 50                     | V                |
| Emitter Base Voltage                    | $V_{EBO}$ | 6                      | V                |
| Collector Current - DC                  | $I_C$     | 3                      | A                |
| Collector Current - Pulse <sup>1)</sup> | $I_{CP}$  | 6                      | A                |
| Total Power Dissipation                 | $P_{tot}$ | 0.5<br>2 <sup>2)</sup> | W                |
| Junction Temperature                    | $T_J$     | 150                    | $^\circ\text{C}$ |
| Storage Temperature Range               | $T_{Stg}$ | - 55 to + 150          | $^\circ\text{C}$ |

<sup>1)</sup> Single pulse,  $P_W = 10$  ms.

<sup>2)</sup> When mounted on a 40 x 40 x 0.7 mm ceramic board.

### Characteristics at $T_a = 25^\circ\text{C}$

| Parameter                                        | Symbol        | Min. | Typ. | Max. | Unit          |
|--------------------------------------------------|---------------|------|------|------|---------------|
| DC Current Gain                                  |               |      |      |      |               |
| at $V_{CE} = 2$ V, $I_C = 0.5$ A                 | $h_{FE}$      | 82   | -    | 270  | -             |
| at $V_{CE} = 2$ V, $I_C = 1.5$ A                 | $h_{FE}$      | 45   | -    | -    | -             |
| Collector Base Breakdown Voltage                 | $V_{(BR)CBO}$ | 60   | -    | -    | V             |
| at $I_C = 50$ $\mu\text{A}$                      |               |      |      |      |               |
| Collector Emitter Breakdown Voltage              | $V_{(BR)CEO}$ | 50   | -    | -    | V             |
| at $I_C = 1$ mA                                  |               |      |      |      |               |
| Emitter Base Breakdown Voltage                   | $V_{(BR)EBO}$ | 6    | -    | -    | V             |
| at $I_E = 50$ $\mu\text{A}$                      |               |      |      |      |               |
| Collector Cutoff Current                         | $I_{CBO}$     | -    | -    | 0.1  | $\mu\text{A}$ |
| at $V_{CB} = 60$ V                               |               |      |      |      |               |
| Emitter Cutoff Current                           | $I_{EBO}$     | -    | -    | 0.1  | $\mu\text{A}$ |
| at $V_{EB} = 5$ V                                |               |      |      |      |               |
| Collector Emitter Saturation Voltage             | $V_{CE(sat)}$ | -    | -    | 0.35 | V             |
| at $I_C = 1$ A, $I_B = 50$ mA                    |               |      |      |      |               |
| Transition Frequency                             | $f_T$         | -    | 210  | -    | MHz           |
| at $V_{CE} = 5$ V, $-I_E = 0.5$ A, $f = 100$ MHz |               |      |      |      |               |
| Output Capacitance                               | $C_{ob}$      | -    | 25   | -    | pF            |
| at $V_{CB} = 10$ V, $f = 1$ MHz                  |               |      |      |      |               |



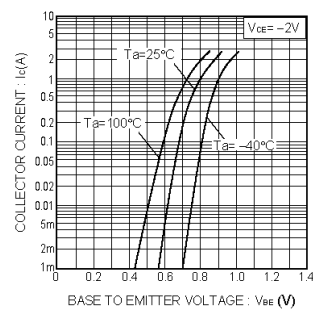


Fig.1 Grounded emitter propagation characteristics

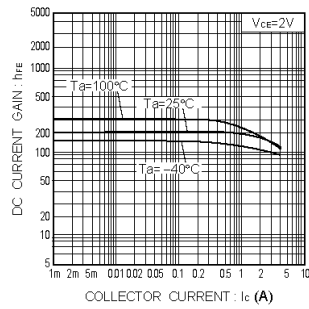


Fig.2 DC current gain vs. collector current

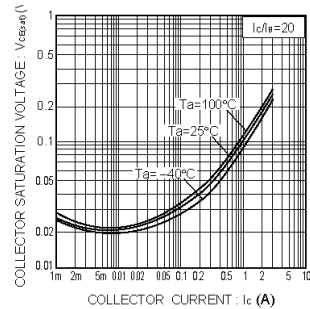


Fig.3 Collector-emitter saturation voltage vs. collector current

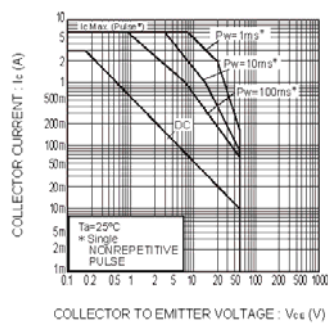
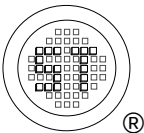
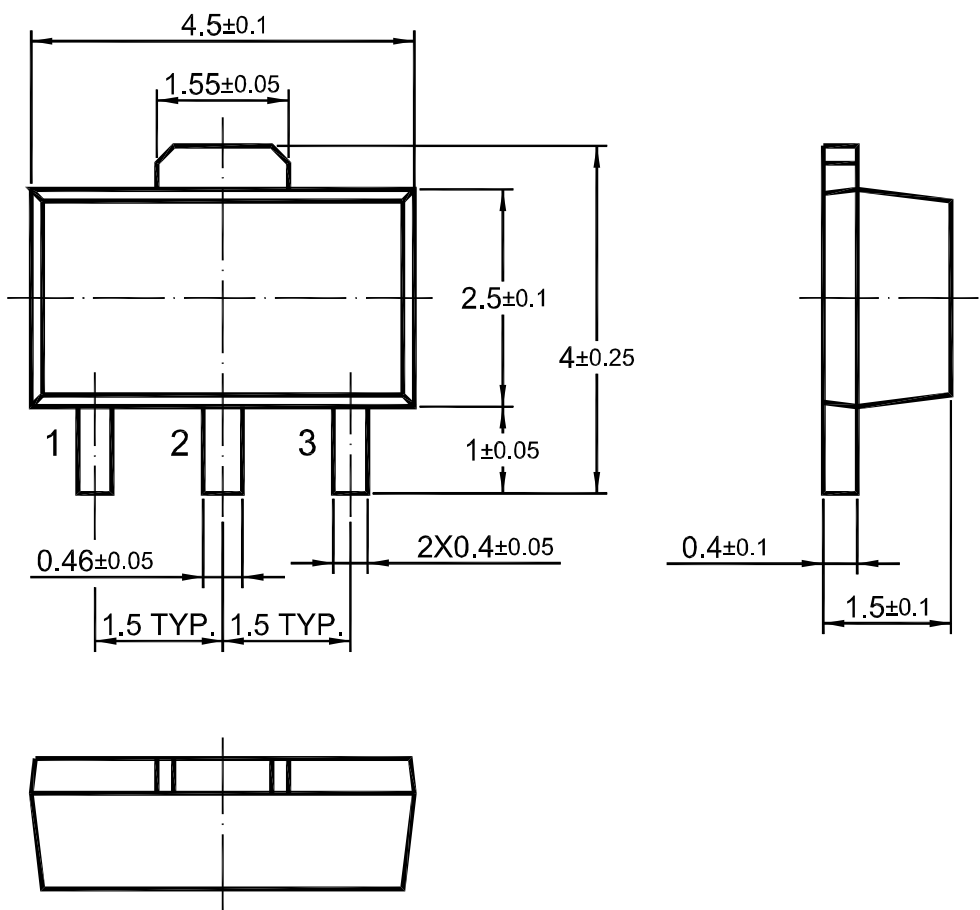


Fig.4 Safe Operating area



2SC4672U

SOT-89 PACKAGE OUTLINE



Dimensions in mm

