

Low Frequency Transistor (50V, 3A)

2SC4672

●Features

- 1) Low saturation voltage, typically $V_{CE(sat)} = 0.1V$ at $I_C/I_B = 1A/50mA$.
- 2) Excellent DC current gain characteristics.
- 3) Complements the 2SA1797.

●Absolute maximum ratings (Ta=25°C)

| Parameter | Symbol | Limits | 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 | 3 | A (DC) |
| | | 6 | A (Pulse) *1 |
| Collector power dissipation | P_C | 0.5 | W |
| | | 2 *2 | |
| Junction temperature | T_j | 150 | °C |
| Storage temperature | T_{stg} | -55 to +150 | °C |

*1 Single pulse, Pw=10ms

*2 40×40×10.7mm Ceramic board

●Packaging specifications and hFE

| | |
|------------------------------|---------|
| Type | 2SC4672 |
| Package | MPT3 |
| hFE | PQ |
| Marking | DK * |
| Code | T100 |
| Basic ordering unit (pieces) | 1000 |

* Denotes hFE

hFE values are classified as follows:

| Item | P | Q |
|------|-----------|------------|
| hFE | 82 to 180 | 120 to 270 |

●Electrical characteristics (Ta=25°C)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|--------------------------------------|---------------|------|------|------|---------|--|
| Collector-base breakdown voltage | BV_{CBO} | 60 | – | – | V | $I_C = 50\mu A$ |
| Collector-emitter breakdown voltage | BV_{CEO} | 50 | – | – | V | $I_C = 1mA$ |
| Emitter-base breakdown voltage | BV_{EBO} | 6 | – | – | V | $I_E = 50\mu A$ |
| Collector cutoff current | I_{CBO} | – | – | 0.1 | μA | $V_{CB} = 60V$ |
| Emitter cutoff current | I_{EBO} | – | – | 0.1 | μA | $V_{EB} = 5V$ |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | – | 0.13 | 0.35 | V | $I_C/I_B = 1A/50mA$ * |
| DC current transfer ratio | hFE1 | 82 | – | 270 | – | $V_{CE} = 2V, I_C = 0.5A$ * |
| | hFE2 | 45 | – | – | – | $V_{CE} = 2V, I_C = 1.5A$ * |
| Transition frequency | f_T | – | 210 | – | MHz | $V_{CE} = 2V, I_E = -0.5A, f = 100MHz$ |
| Output capacitance | C_{ob} | – | 25 | – | pF | $V_{CB} = 10V, I_E = 0A, f = 1MHz$ |

*Measured using pulse current.

Transistors

●Electrical characteristics curves

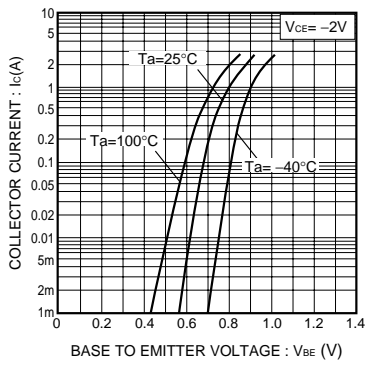


Fig.1 Grounded emitter propagation characteristics

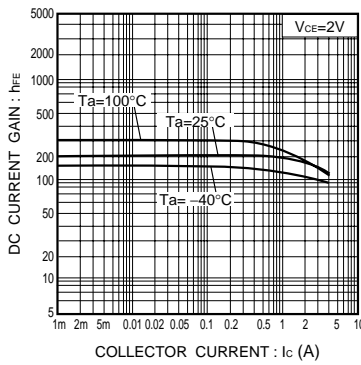


Fig.2 DC current gain vs. collector current

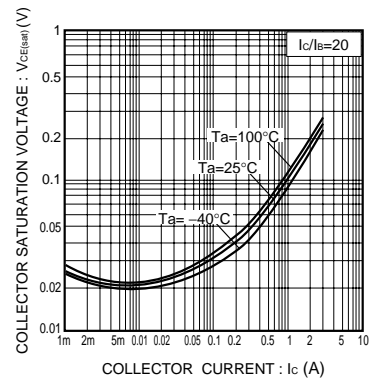


Fig.3 Collector-emitter saturation voltage vs. collector current

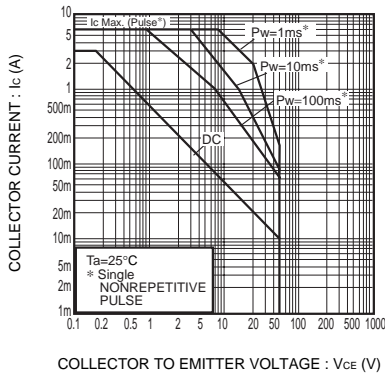


Fig.4 Safe Operating area

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