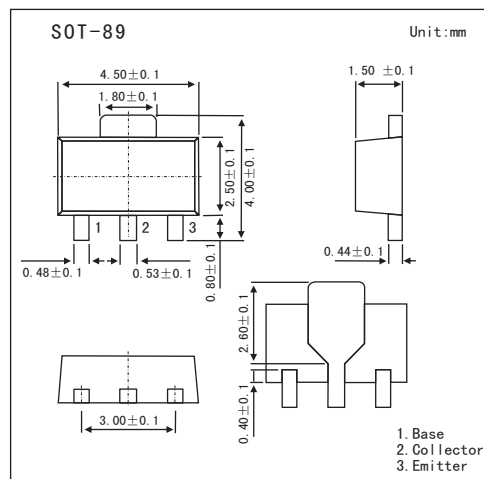


## Epitaxial Planar NPN Transistor

## KTC4374

## Features

Collector Power Dissipation:  $P_C=500\text{mW}$ Collector Current:  $I_C=400\text{mA}$ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

| Parameter                   | Symbol    | Rating     | Unit             |
|-----------------------------|-----------|------------|------------------|
| Collector-base voltage      | $V_{CBO}$ | 80         | V                |
| Collector-Emitter voltage   | $V_{CEO}$ | 80         | V                |
| Emitter-base voltage        | $V_{EBO}$ | 5          | V                |
| Collector Current           | $I_C$     | 400        | mA               |
| Collector Power Dissipation | $P_C$     | 500        | mW               |
| Junction Temperature        | $T_j$     | 150        | $^\circ\text{C}$ |
| Storage Temperature Range   | $T_{stg}$ | -55 to 150 | $^\circ\text{C}$ |

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

| Parameter                            | Symbol        | Test conditons                                        | Min | Typ | Max | Unit |
|--------------------------------------|---------------|-------------------------------------------------------|-----|-----|-----|------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$ | $I_C = 1\text{mA}$ , $I_E = 0$                        | 80  |     |     | V    |
| Collector-Emitter Breakdown Voltage  | $V_{(BR)CEO}$ | $I_C = 10\text{mA}$ , $I_B = 0$                       | 80  |     |     | V    |
| Emitter-Base Breakdown Voltage       | $V_{(BR)EBO}$ | $I_E = 1\text{mA}$ , $I_C = 0$                        | 5   |     |     | V    |
| Collector Cut-off Current            | $I_{CBO}$     | $V_{CB} = 80\text{V}$ , $I_E = 0$                     |     |     | 100 | nA   |
| Emitter Cut-off Current              | $I_{EBO}$     | $V_{EB} = 5\text{V}$ , $I_C = 0$                      |     |     | 100 | nA   |
| DC Current Gain                      | $h_{FE}$      | $V_{CE} = 2\text{V}$ , $I_C = 50\text{mA}$            | 70  |     | 240 |      |
|                                      |               | $V_{CE} = 2\text{V}$ , $I_C = 200\text{mA}$           | 50  |     |     |      |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = 200\text{mA}$ , $I_B = 20\text{mA}$            |     |     | 0.4 | V    |
| Base-Emitter Voltage                 | $V_{BE}$      | $V_{CE} = 2\text{V}$ , $I_C = 5\text{mA}$             |     |     | 0.8 | V    |
| Transition frequency                 | $f_T$         | $V_{CE} = 10\text{V}$ , $I_C = 10\text{mA}$           |     | 100 |     | MHz  |
| Collector Output Capacitance         | $C_{ob}$      | $V_{CB} = 10\text{V}$ , $I_E = 0$ , $f = 1\text{MHz}$ |     | 10  |     | pF   |

## hFE Classification

|         |        |         |
|---------|--------|---------|
| Marking | EO     | EY      |
| Rank    | O      | Y       |
| Range   | 70 140 | 120 240 |