Elektronische Bauelemente

# 2SC1675

**0.05 A , 50 V**

**NPN Plastic Encapsulated Transistor**

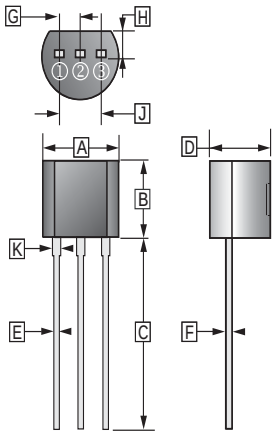
RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

## FEATURES

- Low Collector Current
- General Purpose Switching and Amplification

**TO-92**

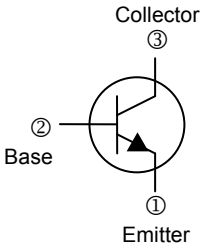



①Emitter
②Base
③Collector

| REF. | Millimeter | |
|---|---|---|
| | Min. | Max. |
| A | 4.40 | 4.70 |
| B | 4.30 | 4.70 |
| C | 12.70 | - |
| D | 3.30 | 3.81 |
| E | 0.36 | 0.56 |
| F | 0.36 | 0.51 |
| G | 1.27 TYP. | |
| H | 1.10 | - |
| J | 2.42 | 2.66 |
| K | 0.36 | 0.76 |

## CLASSIFICATION OF $h_{FE}$

| Product-Rank | 2SC1675-R | 2SC1675-O | 2SC1675-Y |
|---|---|---|---|
| Range | 40~80 | 70~140 | 120~240 |




## ABSOLUTE MAXIMUM RATINGS ($T_A$ = 25°C unless otherwise specified)

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Collector to Base Voltage | $V_{CBO}$ | 50 | V |
| Collector to Emitter Voltage | $V_{CEO}$ | 30 | V |
| Emitter to Base Voltage | $V_{EBO}$ | 5 | V |
| Collector Current - Continuous | $I_C$ | 50 | mA |
| Collector Power Dissipation | $P_C$ | 625 | mW |
| Thermal Resistance From Junction To Ambient | $R_{\theta JA}$ | 200 | °C / W |
| Junction, Storage Temperature | $T_J$, $T_{STG}$ | 150, -55~150 | °C |

## ELECTRICAL CHARACTERISTICS ($T_A$ = 25°C unless otherwise specified)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Test Conditions |
|---|---|---|---|---|---|---|
| Collector to Base Breakdown Voltage | $V_{(BR)CBO}$ | 50 | - | - | V | $I_C$=10μA, $I_E$=0 |
| Collector to Emitter Breakdown Voltage | $V_{(BR)CEO}$ | 30 | - | - | V | $I_C$=5mA, $I_B$=0 |
| Emitter to Base Breakdown Voltage | $V_{(BR)EBO}$ | 5 | - | - | V | $I_E$=10μA, $I_C$=0 |
| Collector Cut – Off Current | $I_{CBO}$ | - | - | 100 | nA | $V_{CB}$=50V, $I_E$=0 |
| Emitter Cut – Off Current | $I_{EBO}$ | - | - | 100 | nA | $V_{EB}$=5V, $I_C$=0 |
| DC Current Gain | $h_{FE}$ | 40 | - | 240 | | $V_{CE}$=6V, $I_C$=1mA |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | - | - | 0.3 | V | $I_C$=10mA, $I_B$=1mA |
| Base to Emitter voltage | $V_{BE}$ | - | - | 0.75 | V | $V_{CE}$=6V, $I_C$=1mA |
| Transition Frequency | $f_T$ | 150 | - | - | MHz | $V_{CE}$=6V, $I_C$=1mA |
| Collector Output Capacitance | $C_{ob}$ | - | - | 2.5 | pF | $V_{CB}$=6V, $I_E$=0, f=1MHz |