Elektronische Bauelemente

# BCPA1666

**-2 A, -50 V**

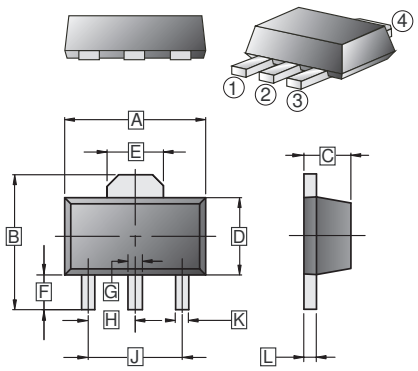
**PNP Plastic Encapsulated Transistor**

oHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

## FEATURES

- Small Flat Package
- Low Saturation Voltage
- Power Amplifier and Switching Application

**SOT-89**




## CLASSIFICATION OF $h_{FE1}$

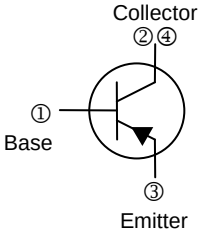
| Product | BCPA1666-O | BCPA1666-Y |
|---|---|---|
| Range | 70~140 | 120~240 |
| Marking | WO | WY |

## PACKAGE INFORMATION

| Package | MPQ | Leader Size |
|---|---|---|
| SOT-89 | 1K | 7inch |

## ORDER INFORMATION

| Part Number | Type |
|---|---|
| BCPA1666-O<br>BCPA1666-Y | Lead (Pb)-free |
| BCPA1666-O-C<br>BCPA1666-Y-C | Lead (Pb)-free and Halogen-free |




| REF. | Millimeter | | REF. | Millimeter | |
|---|---|---|---|---|---|
| | Min. | Max. | | Min. | Max. |
| A | 4.40 | 4.60 | G | 0.40 | 0.58 |
| B | 3.94 | 4.25 | H | 1.50 TYP | |
| C | 1.40 | 1.60 | J | 3.00 TYP | |
| D | 2.25 | 2.60 | K | 0.32 | 0.52 |
| E | 1.55 TYP. | | L | 0.35 | 0.44 |
| F | 0.89 | 1.20 | | | |

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

| Parameter | Symbol | Ratings | Unit |
|---|---|---|---|
| Collector-Base Voltage | $V_{CBO}$ | -50 | V |
| Collector-Emitter Voltage | $V_{CEO}$ | -50 | V |
| Emitter-Base Voltage | $V_{EBO}$ | -5 | V |
| Collector Current -Continuous | $I_C$ | -2 | A |
| Collector Power Dissipation | $P_C$ | 0.5 | W |
| Maximum Junction to Ambient | $R_{\theta JA}$ | 250 | ℃ / W |
| Junction & Storage Temperature | $T_J$, $T_{STG}$ | 150, -55~150 | °C |

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

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Test Conditions |
|---|---|---|---|---|---|---|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | -50 | - | - | V | $I_C$= -1mA, $I_E$=0 |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | -50 | - | - | V | $I_C$= -10mA, $I_B$=0 |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | -5 | - | - | V | $I_E$= -1mA, $I_C$=0 |
| Collector cut-off current | $I_{CBO}$ | - | - | -100 | nA | $V_{CB}$= -50V, $I_E$=0 |
| Emitter cut-off current | $I_{EBO}$ | - | - | -100 | nA | $V_{EB}$= -5 V, $I_C$=0 |
| DC current gain[1] | $h_{FE1}$ | 70 | - | 240 | | $V_{CE}$= -2V, $I_C$= -500mA |
| | $h_{FE2}$ | 40 | - | - | | $V_{CE}$= -2V, $I_C$= -1.5A |
| Collector-emitter saturation voltage[1] | $V_{CE(sat)}$ | - | - | -0.5 | V | $I_C$= -1A, $I_B$= -50mA |
| Base-emitter saturation voltage[1] | $V_{BE(sat)}$ | - | - | -1.2 | V | $I_C$= -1A, $I_B$= -50mA |
| Transition frequency | $f_T$ | - | 120 | - | MHz | $V_{CE}$= -2V, $I_C$= -500mA |
| Output Capacitance | $C_{OB}$ | - | 40 | - | pF | $V_{CB}$= -10V, $I_E$=0, f=1MHz |

Note:

1. Pulse test: pulse width ≤300mS, duty cycle≤ 2.0%.

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## TYPICAL CHARATERISTICS