



New Product

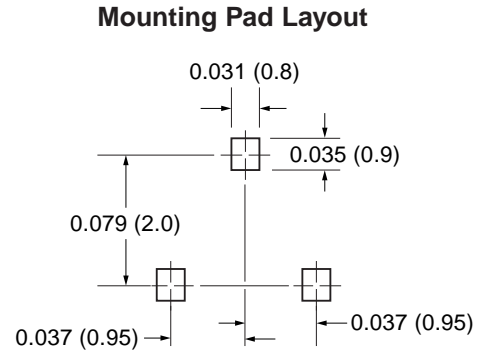
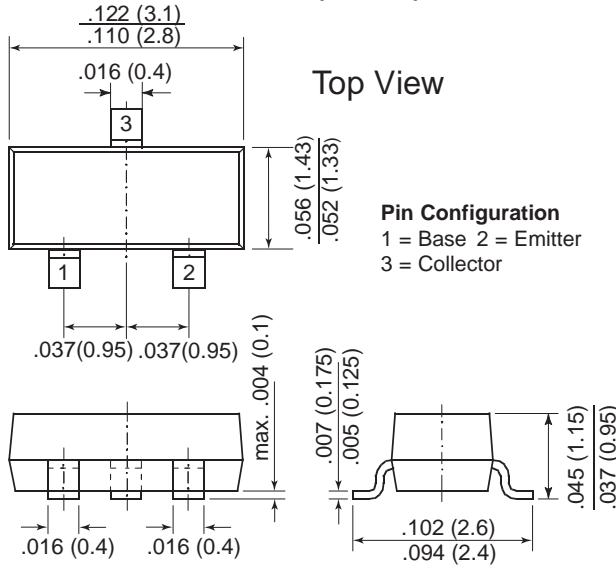
BCW69 and BCW70

Vishay Semiconductors
formerly General Semiconductor

Small Signal Transistor (PNP)



TO-236AB (SOT-23)



Features

- PNP Silicon Epitaxial Planar Transistors
- Suited for low level, general purpose applications.
- Low current, low voltage.
- As complementary types, BCW71 and BCW72 NPN transistors are recommended.

Mechanical Data

Case: SOT-23 Plastic Package

Weight: approx. 0.008g

Marking Code: BCW69 = H1
BCW70 = H2

Packaging Codes/Options:

E8/10K per 13" reel (8mm tape), 30K/box
E9/3K per 7" reel (8mm tape), 30K/box

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter | Symbol | Value | Unit |
|--------------------------------------------|-----------------|--------------------|------|
| Collector-Base Voltage | $-V_{CB0}$ | 50 | V |
| Collector-Emitter Voltage | $-V_{CE0}$ | 45 | V |
| Emitter-Base Voltage | $-V_{EB0}$ | 5.0 | V |
| Collector Current | $-I_C$ | 100 | mA |
| Peak Collector Current | $-I_{CM}$ | 200 | mA |
| Peak Base Current | $-I_{BM}$ | 200 | mA |
| Power Dissipation | P_{tot} | 250 | mW |
| Thermal Resistance Junction to Ambient Air | $R_{\theta JA}$ | 500 ⁽¹⁾ | °C/W |
| Junction Temperature | T_j | 150 | °C |
| Storage Temperature Range | T_{STG} | -65 to +150 | °C |

Note: (1) Mounted on FR-4 printed-circuit board.

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Electrical Characteristics (T_J = 25°C unless otherwise noted)

| Parameter | Symbol | Test Condition | Min | Typ | Max | Unit | |
|--------------------------------------|---------------------|--------------------------------------------------------------------------------------------------------|-------------------------------------------------|------------|----------|------|---|
| DC Current Gain | h _{FE} | BCW69 BCW70 | -V _{CE} = 5 V, -I _C = 10 μA | — | 90 | — | — |
| | | BCW69 BCW70 | -V _{CE} = 5 V, -I _C = 2 mA | 120 | — | 260 | |
| | | | | 215 | — | 500 | |
| | | | | | | | |
| Collector-Emitter Saturation Voltage | -V _{CEsat} | -I _C = 10 mA, -I _B = 0.5 mA -I _C = 50 mA, -I _B = 2.5 mA | — — | 80 150 | 300 — | mV | |
| Base-Emitter Saturation Voltage | -V _{BEsat} | -I _C = 10 mA, -I _B = 0.5 mA -I _C = 50 mA, -I _B = 2.5 mA | — — | 720 810 | — — | mV | |
| Base-Emitter Voltage | -V _{BE} | -V _{CE} = 5 V, -I _C = 2 mA | 600 | — | 750 | mV | |
| Collector Cut-off Current | -I _{CBO} | -V _{CB} = 20 V, V _{EB} = 0 | — | — | 100 | nA | |
| | | -V _{CB} = 20 V, V _{EB} = 0, T _A = 100°C | — | — | 10 | μA | |
| Gain-Bandwidth Product | f _T | -V _{CE} = 5 V, -I _C = 10 mA f = 100 MHz | 100 | — | — | MHz | |
| Collector-Base Capacitance | C _{CB0} | -V _{CB} = 10 V, f = 1 MHz, I _E = 0 | — | 4.5 | — | pF | |
| Noise Figure | F | -V _{CE} = 5 V, -I _C = 200 μA, R _S = 2 kΩ, f = 100 kHz, B = 200 Hz | — | 2 | 6 | dB | |

This datasheet has been download from:

www.datasheetcatalog.com

Datasheets for electronics components.