

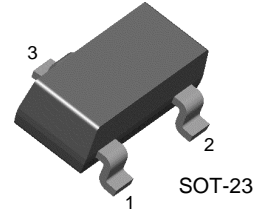


THE DATASHEET OF BCW61AMTF



BCW61A/B/C/D

General Purpose Transistor



1. Base 2. Emitter 3. Collector

PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_a=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Value | Units |
|-----------|-----------------------------|-----------|------------------|
| V_{CBO} | Collector-Base Voltage | -32 | V |
| V_{CEO} | Collector-Emitter Voltage | -32 | V |
| V_{EBO} | Emitter-Base Voltage | -5.0 | V |
| I_C | Collector Current | -100 | mA |
| P_C | Collector Power Dissipation | 350 | mW |
| T_{STG} | Storage Temperature | -55 ~ 150 | $^\circ\text{C}$ |

• Refer to KST5086 for graphs

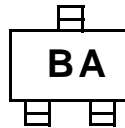
Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Test Condition | Min. | Max. | Units |
|----------------------|--------------------------------------|--|-------------|----------------|--------|
| BV_{CEO} | Collector-Emitter Breakdown Voltage | $I_C = -2\text{mA}, I_B = 0$ | -32 | | |
| BV_{EBO} | Emitter-Base Breakdown Voltage | $I_E = -1\mu\text{A}, I_C = 0$ | -5 | | |
| I_{CES} | Collector Cut-off Current | $V_{CB} = -32\text{V}, V_{BE} = 0$ | | -20 | |
| h_{FE} | DC Current Gain | | | | |
| | : BCW61B | $V_{CE} = -5\text{V}, I_C = -10\mu\text{A}$ | 20 | | V |
| | : BCW61C | | 40 | | |
| | : BCW61D | | 100 | | |
| | : BCW61A | $V_{CE} = -5\text{V}, I_C = -2\text{mA}$ | 120 | 220 | V |
| | : BCW61B | | 140 | 310 | |
| | : BCW61C | | 250 | 460 | |
| | : BCW61D | | 380 | 630 | |
| | : BCW61A | $V_{CE} = -5\text{V}, I_C = -50\text{mA}$ | 60 | | nA |
| | : BCW61B | | 80 | | |
| | : BCW61C | | 100 | | |
| | : BCW61D | | 100 | | |
| $V_{CE}(\text{sat})$ | Collector-Emitter Saturation Voltage | $I_C = -50\text{mA}, I_B = -1.25\text{mA}$ $I_C = -10\text{mA}, I_B = -0.25\text{mA}$ | | -0.55 -0.25 | V V |
| $V_{BE}(\text{sat})$ | Base-Emitter Saturation Voltage | $I_C = -50\text{mA}, I_B = -1.25\text{mA}$ $I_C = -10\text{mA}, I_B = -0.25\text{mA}$ | 0.68 0.6 | 1.05 0.85 | V V |
| $V_{BE}(\text{on})$ | Base-Emitter On Voltage | $V_{CE} = -5\text{V}, I_C = -2\text{mA}$ | 0.6 | 0.75 | V |
| C_{ob} | Output Capacitance | $V_{CB} = -10\text{V}, I_E = 0$ $f = 1\text{MHz}$ | | 6 | pF |
| NF | Noise Figure | $I_C = -0.2\text{mA}, V_{CE} = -5\text{V}$ $R_G = 20\text{K}\Omega, f = 1\text{KHz}$ | | 6 | dB |
| t_{ON} | Turn On Time | $I_C = -10\text{mA}, I_{B1} = -1\text{mA}$ | | 150 | ns |
| t_{OFF} | Turn Off Time | $V_{BB} = -3.6\text{V}, B22 = -1\text{mA}$ $R1 = R2 = 5.0\text{K}\Omega, R_L = 990\Omega$ | | 800 | ns |

Marking Code

| Type | BCW61A | BCW61B | BCW61C | BCW61D |
|-------|--------|--------|--------|--------|
| Mark. | BA | BB | BC | BD |

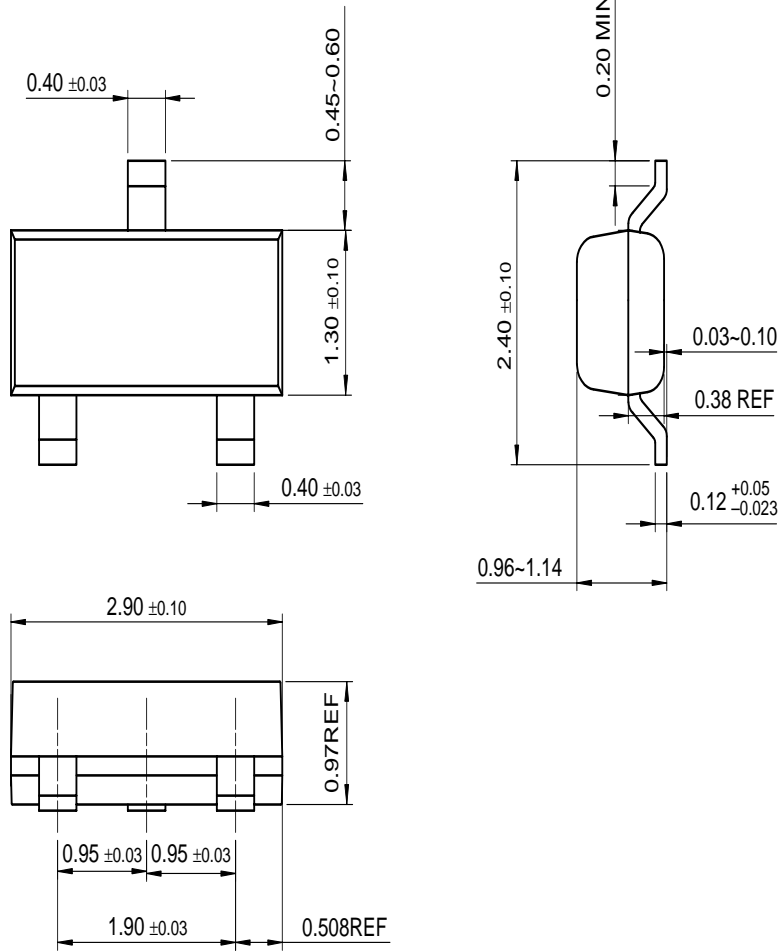
Marking



Package Dimensions

BCW61A/B/C/D

SOT-23



Dimensions in Millimeters

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