



FUKUCOM COMPANY LTD.

福 靈 有 限 公 司

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,
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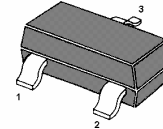
BCW61

PNP Silicon Epitaxial Planar Transistors

for general purpose switching and amplification.

These transistors are subdivided into three groups B, C and D, according to their current gain.

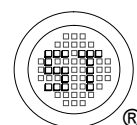
As complementary types the NPN transistors BCW60 are recommended.



1. Base 2. Emitter 3. Collector
SOT-23 Plastic Package

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	$-V_{CB0}$	32	V
Collector-Emitter Voltage	$-V_{CE0}$	32	V
Emitter-Base Voltage	$-V_{EB0}$	5	V
Collector Current	$-I_C$	100	mA
Peak Collector Current	$-I_{CM}$	200	mA
Peak Base Current	$-I_{BM}$	100	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_S	-65 to +150	$^\circ\text{C}$



Dated : 21/12/2005



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BCW61

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain					
at $-V_{CE} = 5\text{ V}$, $-I_C = 10\text{ }\mu\text{A}$	BCW61B	h_{FE}	30	-	-
	BCW61C	h_{FE}	40	-	-
	BCW61D	h_{FE}	100	-	-
at $-V_{CE} = 5\text{ V}$, $-I_C = 2\text{ mA}$	BCW61B	h_{FE}	180	-	310
	BCW61C	h_{FE}	250	-	460
	BCW61D	h_{FE}	380	-	630
at $-V_{CE} = 1\text{ V}$, $-I_C = 50\text{ mA}$	BCW61B	h_{FE}	80	-	-
	BCW61C	h_{FE}	100	-	-
	BCW61D	h_{FE}	110	-	-
Collector Saturation Voltage					
at $-I_C = 10\text{ mA}$, $-I_B = 0.25\text{ mA}$	$-V_{CEsat}$	0.06	-	0.25	V
Collector Saturation Voltage					
at $-I_C = 50\text{ mA}$, $-I_B = 1.25\text{ mA}$	$-V_{CEsat}$	0.12	-	0.55	V
Base Saturation Voltage					
at $-I_C = 10\text{ mA}$, $-I_B = 0.25\text{ mA}$	$-V_{BEsat}$	0.6	-	0.85	V
Base Saturation Voltage					
at $-I_C = 50\text{ mA}$, $-I_B = 1.25\text{ mA}$	$-V_{BEsat}$	0.68	-	1.05	V
Base-Emitter Voltage					
at $-I_C = 2\text{ mA}$, $-V_{CE} = 5\text{ V}$	$-V_{BE(on)}$	0.6	-	0.75	V
Collector Base Cutoff Current					
at $-V_{CB} = 32\text{ V}$	$-I_{CBO}$	-	-	20	nA
at $-V_{CB} = 32\text{ V}$, $T_j = 150\text{ }^\circ\text{C}$	$-I_{CBO}$	-	-	20	μA
Emitter-Base Cutoff Current					
at $-V_{EB} = 4\text{ V}$	$-I_{EBO}$	-	-	20	nA
Gain -Bandwidth Product					
at $-V_{CE} = 5\text{ V}$, $-I_C = 10\text{ mA}$, $f = 100\text{ MHz}$	f_T	100	-	-	MHz
Collector-Base Capacitance					
at $-V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{CBO}	-	4.5	-	pF
Emitter-Base Capacitance					
at $-V_{EB} = 0.5\text{ V}$, $f = 1\text{ MHz}$	C_{EBO}	-	11	-	pF
Noise figure					
at $-I_C = 200\text{ }\mu\text{A}$, $-V_{CE} = 5\text{ V}$, $R_S = 2\text{ K}\Omega$, $f = 1\text{ KHz}$, $\Delta f = 200\text{ Hz}$	NF	-	2	6	dB
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	-	-	500 ¹⁾	K/W

¹⁾ Transistor mounted on an FR4 printed-circuit board.

