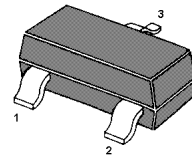


BCW61

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.



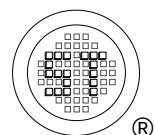
1. Base 2. Emitter 3. Collector
TO-236 Plastic Package

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

Parameter	Symbol	Value	Unit
Collector-Base Voltage	$-V_{CBO}$	32	V
Collector-Emitter Voltage	$-V_{CEO}$	32	V
Emitter-Base Voltage	$-V_{EBO}$	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_{stg}	- 65 to + 150	$^\circ\text{C}$

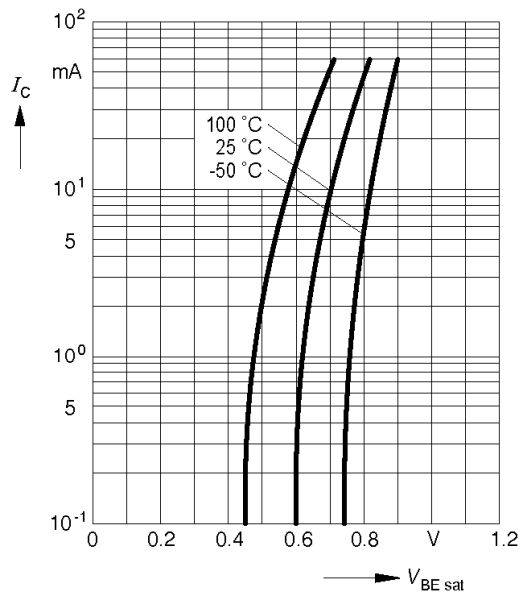
Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE} = 5\text{ V}$, $-I_C = 10\text{ }\mu\text{A}$ at $-V_{CE} = 5\text{ V}$, $-I_C = 2\text{ mA}$ at $-V_{CE} = 1\text{ V}$, $-I_C = 50\text{ mA}$	BCW61B h_{FE}	30	-	-	-
	BCW61C h_{FE}	40	-	-	-
	BCW61D h_{FE}	100	-	-	-
	BCW61B h_{FE}	180	-	310	-
	BCW61C h_{FE}	250	-	460	-
	BCW61D h_{FE}	380	-	630	-
	BCW61B h_{FE}	80	-	-	-
	BCW61C h_{FE}	100	-	-	-
	BCW61D h_{FE}	110	-	-	-
Collector Base Cutoff Current at $-V_{CB} = 32\text{ V}$	$-I_{CBO}$	-	-	20	nA
Emitter Base Cutoff Current at $-V_{EB} = 4\text{ V}$	$-I_{EBO}$	-	-	20	nA
Collector Emitter Saturation Voltage at $-I_C = 10\text{ mA}$, $-I_B = 0.25\text{ mA}$	$-V_{CEsat}$	0.06	-	0.25	V
Collector Emitter Saturation Voltage at $-I_C = 50\text{ mA}$, $-I_B = 1.25\text{ mA}$	$-V_{CEsat}$	0.12	-	0.55	V
Base Emitter Saturation Voltage at $-I_C = 10\text{ mA}$, $-I_B = 0.25\text{ mA}$	$-V_{BEsat}$	0.6	-	0.85	V
Base Emitter 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
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



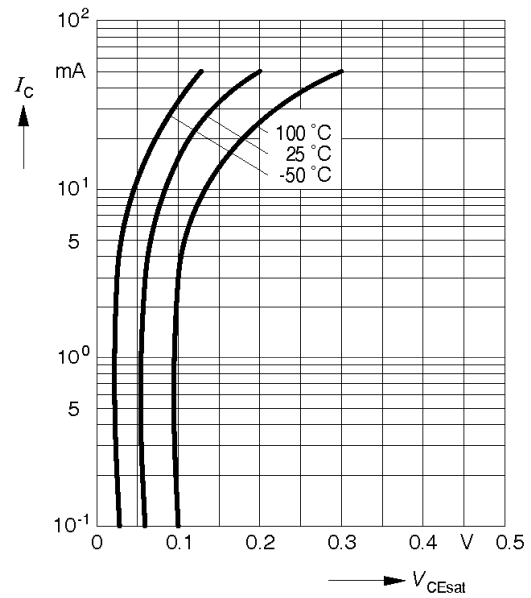
Base-emitter saturation voltage

$$I_C = f(V_{BEsat}), h_{FE} = 40$$



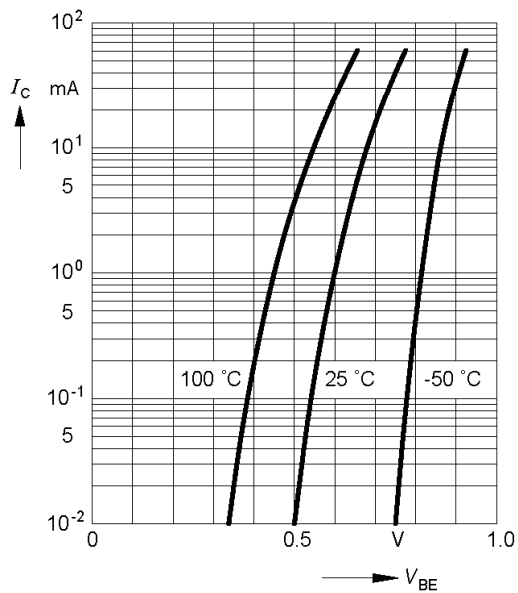
Collector-emitter saturation voltage

$$I_C = f(V_{CEsat}), h_{FE} = 40$$



Collector current $I_C = f(V_{BE})$

$$V_{CE} = 5V$$



DC current gain $h_{FE} = f(I_C)$

$$V_{CE} = 5V$$

