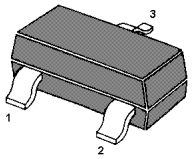
BCW61

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
SOT-23 Plastic Package

Absolute Maximum Ratings (T_a = 25 °C)

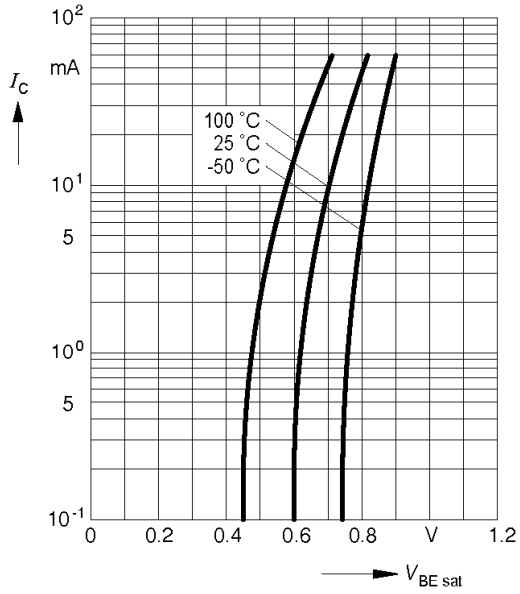
Parameter	Symbol	Value	Unit
Collector-Base Voltage	$-V_{CBO}$	32	V
Collector-Emitter Voltage	$-V_{CEO}$	32	V
Emitter-Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	100	mA
Peak Collector Current	$-I_{CM}$	200	mA
Peak Base Current	$-I_{BM}$	100	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 65 to + 150	°C

Characteristics at T_a = 25 °C

Parameter		Symbol	Min.	Typ.	Max.	Unit
DC Current Gain						
at $-V_{CE}$ = 5 V, $-I_C$ = 10 µA	BCW61B	h_{FE}	30	-	-	-
	BCW61C	h_{FE}	40	-	-	-
	BCW61D	h_{FE}	100	-	-	-
at $-V_{CE}$ = 5 V, $-I_C$ = 2 mA	BCW61B	h_{FE}	180	-	310	-
	BCW61C	h_{FE}	250	-	460	-
	BCW61D	h_{FE}	380	-	630	-
at $-V_{CE}$ = 1 V, $-I_C$ = 50 mA	BCW61B	h_{FE}	80	-	-	-
	BCW61C	h_{FE}	100	-	-	-
	BCW61D	h_{FE}	110	-	-	-
Collector Base Cutoff Current at $-V_{CB}$ = 32 V		$-I_{CBO}$	-	-	20	nA
Emitter Base Cutoff Current at $-V_{EB}$ = 4 V		$-I_{EBO}$	-	-	20	nA
Collector Emitter Saturation Voltage at $-I_C$ = 10 mA, $-I_B$ = 0.25 mA		$-V_{CEsat}$	0.06	-	0.25	V
Collector Emitter Saturation Voltage at $-I_C$ = 50 mA, $-I_B$ = 1.25 mA		$-V_{CEsat}$	0.12	-	0.55	V
Base Emitter Saturation Voltage at $-I_C$ = 10 mA, $-I_B$ = 0.25 mA		$-V_{BEsat}$	0.6	-	0.85	V
Base Emitter Saturation Voltage at $-I_C$ = 50 mA, $-I_B$ = 1.25 mA		$-V_{BEsat}$	0.68	-	1.05	V
Base Emitter Voltage at $-I_C$ = 2 mA, $-V_{CE}$ = 5 V		$-V_{BE(on)}$	0.6	-	0.75	V
Gain -Bandwidth Product at $-V_{CE}$ = 5 V, $-I_C$ = 10 mA, f = 100 MHz		f_T	100	-	-	MHz
Collector-Base Capacitance at $-V_{CB}$ = 10 V, f = 1 MHz		C_{CBO}	-	4.5	-	pF

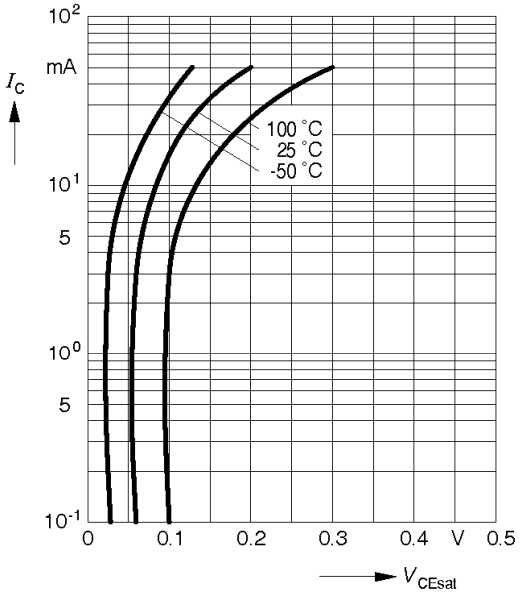
Base-emitter saturation voltage

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



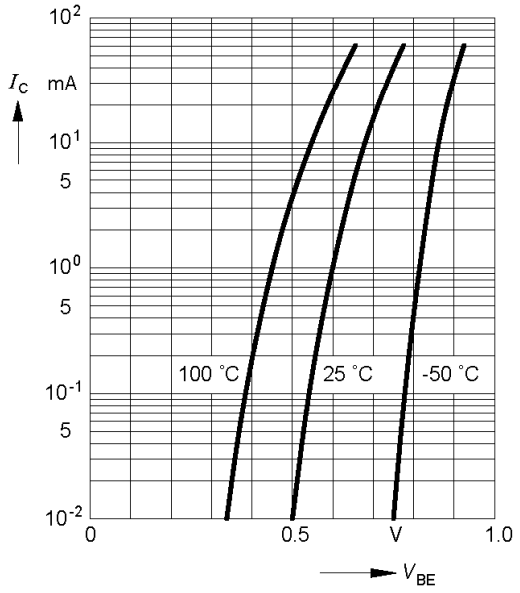
Collector-emitter saturation voltage

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



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

$V_{CE} = 5V$



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

$V_{CE} = 5V$