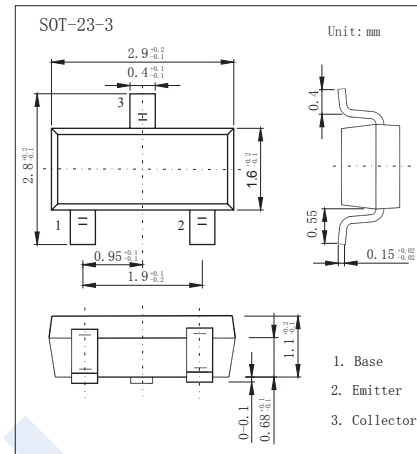


## PNP Transistors

## BCW61 (KCW61)

## ■ Features

- Low current
- Low voltage
- General Purpose Transistor

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CB0}$	-32	V
Collector - Emitter Voltage	$V_{CE0}$	-32	
Emitter - Base Voltage	$V_{EB0}$	-5	
Collector Current - Continuous	$I_C$	-100	mA
Collector Power Dissipation	$P_C$	250	mW
Junction Temperature	$T_J$	150	°C
Storage Temperature range	$T_{stg}$	-55 to 150	

## PNP Transistors

## BCW61 (KCW61)

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Collector- base breakdown voltage	$V_{CBO}$	$I_C = -100 \mu\text{A}, I_E = 0$	-32			V	
Collector- emitter breakdown voltage	$V_{CEO}$	$I_C = -1 \text{ mA}, I_B = 0$	-32				
Emitter - base breakdown voltage	$V_{EBO}$	$I_E = -100 \mu\text{A}, I_C = 0$	-5				
Collector-base cut-off current	$I_{CBO}$	$V_{CB} = -32 \text{ V}, I_E = 0$			-20	nA	
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -4 \text{ V}, I_C = 0$			-20		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -10 \text{ mA}, I_B = -0.25 \text{ mA}$	-60		-250	mV	
		$I_C = -50 \text{ mA}, I_B = -1.25 \text{ mA}$	-120		-550		
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = -10 \text{ mA}, I_B = -0.25 \text{ mA}$	-0.6		-0.85	V	
		$I_C = -50 \text{ mA}, I_B = -1.25 \text{ mA}$	-0.68		-1.05		
Base - emitter voltage	$V_{BE}$	$V_{CE} = -5 \text{ V}, I_C = -2 \text{ mA}$	-0.6		-0.75		
DC current gain	BCW61B	$h_{FE(1)}$	$V_{CE} = -5 \text{ V}, I_C = -10 \mu\text{A}$	30			
	BCW61C			40			
	BCW61D			100			
DC current gain	BCW61A	$h_{FE(2)}$	$V_{CE} = -5 \text{ V}, I_C = -2 \text{ mA}$	120		220	
	BCW61B			180		310	
	BCW61C			250		460	
	BCW61D			380		630	
DC current gain	BCW61A	$h_{FE(3)}$	$V_{CE} = -1 \text{ V}, I_C = -50 \text{ mA}$	60			
	BCW61B			80			
	BCW61C			100			
	BCW61D			110			
Collector output capacitance	$C_{ob}$	$V_{CB} = -10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		4.5		pF	
Collector input capacitance	$C_{ib}$	$V_{EB} = -0.5 \text{ V}, I_C = 0, f = 1 \text{ MHz}$		11			
Transition frequency	$f_T$	$V_{CE} = -5 \text{ V}, I_C = -10 \text{ mA}, f = 100 \text{ MHz}$	100			MHz	

■ Classification of  $h_{FE(2)}$ 

Type	BCW61A	BCW61B	BCW61C	BCW61D
Range	120-220	180-310	250-460	380-630
Marking	BA	BB	BC	BD