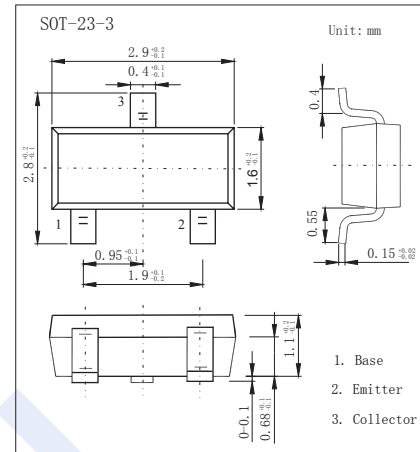


PNP Transistors

BCW29~BCW30 (KCW29~KCW30)

■ Features

- Low current (max. 100 mA)
- Low voltage (max. 32 V)
- NPN complements: BCW31 and BCW32.

■ 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
Peak Collector Current	I_{CM}	-200	
Peak Base Current	I_{BM}	-200	
Collector Power Dissipation	P_C	250	mW
Thermal Resistance Junction to Ambient (Note.1)	$R_{\theta JA}$	500	$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature range	T_{stg}	-55 to 150	

Note.1: Transistor mounted on an FR4 printed-circuit board.

PNP Transistors

BCW29~BCW30 (KCW29~KCW30)

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{CBO}	I _C = -100 μA, I _E =0	-32			V
Collector- emitter breakdown voltage	V _{CEO}	I _C = -2 mA, I _B =0	-32			
Emitter - base breakdown voltage	V _{EBO}	I _E = -100 μA, I _C =0	-5			
Collector-base cut-off current	I _{CBO}	V _{CB} = -32 V, I _E =0			-100	nA
		V _{CB} = -32 V, I _E =0, T _{amb} = 100°C			-10	μA
Emitter cut-off current	I _{EBO}	V _{EB} = -5V, I _C =0			-100	nA
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =-10 mA, I _B =- 0.5mA		-80	-300	mV
		I _C =-50 mA, I _B = -2.5mA		-150		
Base - emitter saturation voltage	V _{BE(sat)}	I _C =-10 mA, I _B =- 0.5mA		-720		
		I _C =-50 mA, I _B = -2.5mA		-810		
Base - emitter voltage	V _{BE}	V _{CE} = -5V, I _C = -2mA	-600		-750	
DC current gain	BCW29 BCW30	h _{FE}	V _{CE} = -5V, I _C = -10μA		90	
					150	300
DC current gain	BCW29 BCW30	h _{FE}	V _{CE} = -5V, I _C = -2mA	120		260
				215		500
Collector capacitance	C _c	V _{CB} =-10V, I _E =I _C =0, f=1MHz		4.5		pF
Noise figure	NF	I _C = -200 μA; V _{CE} = -5 V; R _S = 2 kΩ; f = 1 kHz; B = 200 Hz			10	dB
Transition frequency	f _T	V _{CE} = -5V, I _C = -10mA, f=100MHz	100			MHz

■ Classification of h_{FE}(2)

Type	BCW29	BCW30
Range	120-260	215-500
Marking	C1*	C2*