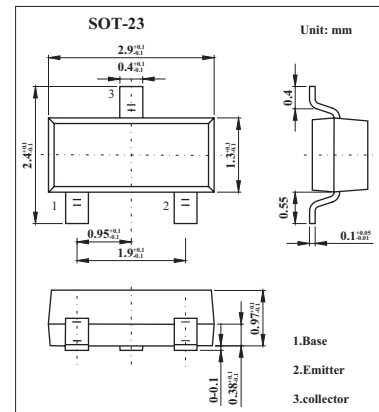


NPN General Purpose Transistors

BCW65,BCW66

■ Features

- For general AF applications.
- High current gain.
- Low collector-emitter saturation voltage.

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

Parameter	Symbol	BCW65	BCW66	Unit
Collector-base voltage	V_{CBO}	60	75	V
Collector-emitter voltage	V_{CEO}	32	45	V
Emitter-base voltage	V_{EBO}	5	5	V
Collector current	I_C	800		mA
Peak collector current	I_{CM}	1		A
Base current	I_B	100		mA
Peak base current	I_{BM}	200		mA
Total power dissipation, $T_s = 79^\circ\text{C}$	P_{tot}	330		mW
Junction temperature	T_j	150		$^\circ\text{C}$
Storage temperature	T_{stg}	-65 to +150		$^\circ\text{C}$
Junction - soldering point	R_{thJS}	≤ 215		K/W

BCW65,BCW66

■ Electrical Characteristics Ta = 25°C

Parameter		Symbol	Testconditons	Min	Typ	Max	Unit
Collector-emitter breakdown voltage	BCW65	V _{(BR)CEO}	I _C = 10 mA, I _B = 0	32			V
	BCW66			45			
Collector-base breakdown voltage	BCW65	V _{(BR)CBO}	I _C = 10 μA, I _E = 0	60			V
	BCW66			75			
Emitter-base breakdown voltage		V _{(BR)EBO}	I _E = 10 μA, I _C = 0	5			V
Collector cutoff current	BCW65	I _{CBO}	V _{CB} = 32 V, I _E = 0			20	nA
	BCW66			V _{CB} = 45 V, I _E = 0			
	BCW65	I _{CBO}	V _{CB} = 32 V, I _E = 0, T _A = 150 °C			20	μA
	BCW66			V _{CB} = 45 V, I _E = 0, T _A = 150 °C			
Emitter cutoff current		I _{EBO}	V _{EB} = 4 V, I _C = 0			20	nA
DC current gain *	hFE-grp.	A/F	I _C = 100 μA, V _{CE} = 10 V	35			
		B/G		50			
		C/H		80			
DC current gain *	hFE-grp.	A/F	I _C = 10 mA, V _{CE} = 1 V	75			
		B/G		110			
		C/H		180			
DC current gain *	hFE-grp.	A/F	I _C = 100 mA, V _{CE} = 1 V	100	160	250	
		B/G		160	250	400	
		C/H		250	350	630	
Collector-emitter saturation voltage *		V _{CE(sat)}	I _C = 100 mA, I _B = 10 mA			0.3	V
			I _C = 500 mA, I _B = 50 mA			0.7	
Base-emitter saturation voltage *		V _{BE(sat)}	I _C = 100 mA, I _B = 10 mA			1.25	
			I _C = 500 mA, I _B = 50 mA			2	
Transition frequency		f _T	I _C = 50 mA, V _{CE} = 5 V, f = 100 MHz		170		MHz
Collector-base capacitance		C _{cb}	V _{CB} = 10 V, f = 1 MHz		6		pF
Emitter-base capacitance		C _{eb}	V _{EB} = 0.5 V, f = 1 MHz		60		

* Pulse test: t ≤ 300μs, D = 2%.

■ hFE Classification

TYPE	BCW65		
Rank	A	B	C
Marking	EAs	EBs	ECs

TYPE	BCW66		
Rank	F	G	H
Marking	EFs	EGs	EHs