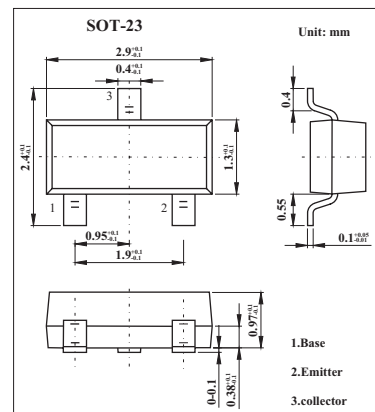


NPN General Purpose Transistors

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_{CB0}	60	75	V
Collector-emitter voltage	V_{CE0}	32	45	V
Emitter-base voltage	V_{EB0}	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 $T_a = 25^\circ\text{C}$

Parameter		Symbol	Testconditions	Min	Typ	Max	Unit
Collector-emitter breakdown voltage	BCW65	$V_{(BR)CEO}$	$I_C = 10\text{ mA}, I_B = 0$	32			V
	BCW66			45			
Collector-base breakdown voltage	BCW65	$V_{(BR)CBO}$	$I_C = 10\text{ }\mu\text{A}, I_E = 0$	60			V
	BCW66			75			
Emitter-base breakdown voltage		$V_{(BR)EBO}$	$I_E = 10\text{ }\mu\text{A}, I_C = 0$	5			V
Collector cutoff current	BCW65	I_{CBO}	$V_{CB} = 32\text{ V}, I_E = 0$			20	nA
	BCW66		$V_{CB} = 45\text{ V}, I_E = 0$			20	
	BCW65	I_{CBO}	$V_{CB} = 32\text{ V}, I_E = 0, T_A = 150^\circ\text{C}$			20	μA
	BCW66		$V_{CB} = 45\text{ V}, I_E = 0, T_A = 150^\circ\text{C}$			20	
Emitter cutoff current		I_{EBO}	$V_{EB} = 4\text{ V}, I_C = 0$			20	nA
DC current gain *	A/F	h_{FE}	$I_C = 100\text{ }\mu\text{A}, V_{CE} = 10\text{ V}$	35			
	B/G			50			
	C/H			80			
DC current gain *	A/F	h_{FE}	$I_C = 10\text{ mA}, V_{CE} = 1\text{ V}$	75			
	B/G			110			
	C/H			180			
DC current gain *	A/F	h_{FE}	$I_C = 100\text{ mA}, V_{CE} = 1\text{ V}$	100	160	250	
	B/G			160	250	400	
	C/H			250	350	630	
Collector-emitter saturation voltage *		$V_{CE(sat)}$	$I_C = 100\text{ mA}, I_B = 10\text{ mA}$			0.3	V
			$I_C = 500\text{ mA}, I_B = 50\text{ mA}$			0.7	
Base-emitter saturation voltage *		$V_{BE(sat)}$	$I_C = 100\text{ mA}, I_B = 10\text{ mA}$			1.25	
			$I_C = 500\text{ mA}, I_B = 50\text{ mA}$			2	
Transition frequency		f_T	$I_C = 50\text{ mA}, V_{CE} = 5\text{ V}, f = 100\text{ MHz}$		170		MHz
Collector-base capacitance		C_{cb}	$V_{CB} = 10\text{ V}, f = 1\text{ MHz}$		6		pF
Emitter-base capacitance		C_{eb}	$V_{EB} = 0.5\text{ V}, f = 1\text{ MHz}$		60		

* Pulse test: $t \leq 300\mu\text{s}$, $D = 2\%$.■ h_{FE} Classification

TYPE	BCW65		
Rank	A	B	C
Marking	EAs	EBs	ECs

TYPE	BCW66		
Rank	F	G	H
Marking	EFs	EGs	EHs