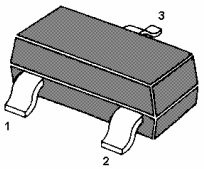
BCW68

PNP Silicon Epitaxial Planar Transistor

for high current application

The transistor is subdivided into three groups F, G and H according to its DC 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	$-V_{CBO}$	60	V
Collector Emitter Voltage	$-V_{CEO}$	45	V
Emitter Base Voltage	$-V_{EBO}$	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
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_S	- 55 to + 150	°C

Characteristics at T_a = 25 °C

Parameter		Symbol	Min.	Typ.	Max.	Unit
DC Current Gain						
at $-V_{CE}$ = 10 V, $-I_C$ = 100 µA	F	h_{FE}	35	-	-	-
	G	h_{FE}	50	-	-	-
	H	h_{FE}	80	-	-	-
at $-V_{CE}$ = 1 V, $-I_C$ = 10 mA	F	h_{FE}	75	-	-	-
	G	h_{FE}	120	-	-	-
	H	h_{FE}	180	-	-	-
at $-V_{CE}$ = 1 V, $-I_C$ = 100 mA	F	h_{FE}	100	-	250	-
	G	h_{FE}	160	-	400	-
	H	h_{FE}	250	-	630	-
at $-V_{CE}$ = 2 V, $-I_C$ = 500 mA	F	h_{FE}	35	-	-	-
	G	h_{FE}	60	-	-	-
	H	h_{FE}	100	-	-	-
Collector Cutoff Current at $-V_{CB}$ = 45 V		$-I_{CBO}$	-	-	20	nA
Emitter Cutoff Current at $-V_{EB}$ = 4 V		$-I_{EBO}$	-	-	20	nA
Collector Base Breakdown Voltage at $-I_C$ = 10 µA		$-V_{(BR)CBO}$	60	-	-	V
Collector Emitter Breakdown Voltage at $-I_C$ = 10 mA		$-V_{(BR)CEO}$	45	-	-	V
Emitter Base Breakdown Voltage at $-I_E$ = 10 µA		$-V_{(BR)EBO}$	5	-	-	V
Collector Emitter Saturation Voltage at $-I_C$ = 100 mA, $-I_B$ = 10 mA		$-V_{CE(sat)}$	-	-	0.3	V
Collector Emitter Saturation Voltage at $-I_C$ = 500 mA, $-I_B$ = 50 mA		$-V_{CE(sat)}$	-	-	0.7	V
Base Emitter Saturation Voltage at $-I_C$ = 100 mA, $-I_B$ = 10 mA		$-V_{BE(sat)}$	-	-	1.25	V
Base Emitter Saturation Voltage at $-I_C$ = 500 mA, $-I_B$ = 50 mA		$-V_{BE(sat)}$	-	-	2	V
Transition Frequency at $-V_{CE}$ = 5 V, $-I_C$ = 50 mA, f = 100 MHz		f_T	-	200	-	MHz
Collector Base Capacitance at $-V_{CB}$ = 10 V, f = 1 MHz		C_{ob}	-	6	-	pF
Emitter Base Capacitance at $-V_{BE}$ = 0.5 V, f = 1 MHz		C_{eb}	-	60	-	pF