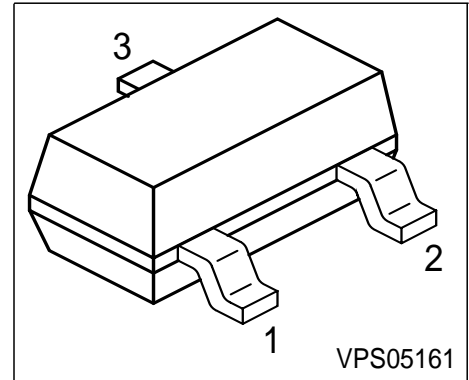


PNP Silicon AF Transistors

- For general AF applications
- High current gain
- Low collector-emitter saturation voltage
- Complementary types: BCW65, BCW66 (NPN)



Type	Marking	Pin Configuration			Package
BCW67A	DAs	1 = B	2 = E	3 = C	SOT23
BCW67B	DBs	1 = B	2 = E	3 = C	SOT23
BCW67C	DCs	1 = B	2 = E	3 = C	SOT23
BCW68F	DFs	1 = B	2 = E	3 = C	SOT23
BCW68G	DGs	1 = B	2 = E	3 = C	SOT23
BCW68H	DHs	1 = B	2 = E	3 = C	SOT23

Maximum Ratings

Parameter	Symbol	BCW67	BCW68	Unit
Collector-emitter voltage	V_{CEO}	32	45	V
Collector-base voltage	V_{CBO}	45	60	
Emitter-base voltage	V_{EBO}	5	5	
DC 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		
Total power dissipation, $T_S = 79\text{ °C}$	P_{tot}	330		mW
Junction temperature	T_j	150		°C
Storage temperature	T_{stg}	-65 ... 150		

Thermal Resistance

Junction - soldering point ¹⁾	R_{thJS}	≤215	K/W
--	------------	------	-----

¹⁾For calculation of R_{thJA} please refer to Application Note Thermal Resistance

Electrical Characteristics at $T_A = 25^\circ\text{C}$, unless otherwise specified.

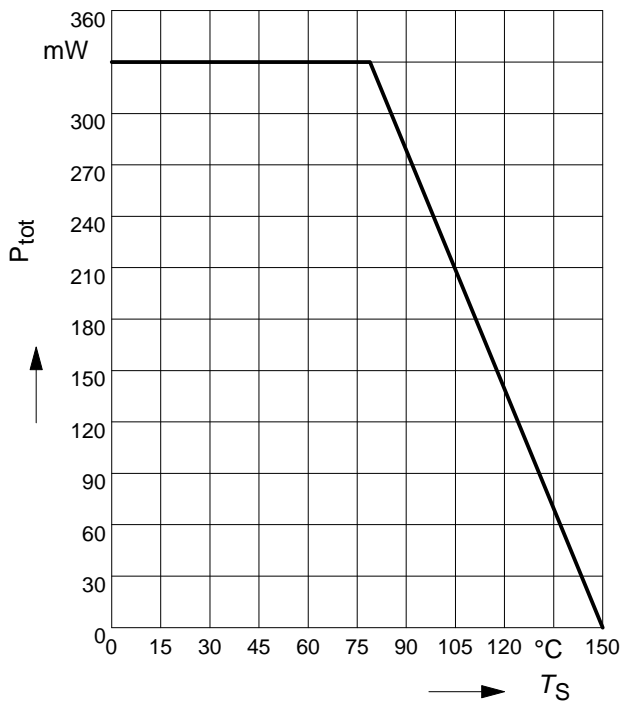
Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Collector-emitter breakdown voltage $I_C = 10\text{ mA}, I_B = 0$	$V_{(BR)CEO}$				V
BCW67		32	-	-	
BCW68		45	-	-	
Collector-base breakdown voltage $I_C = 10\text{ }\mu\text{A}, I_B = 0$	$V_{(BR)CBO}$				
BCW67		45	-	-	
BCW68		60	-	-	
Emitter-base breakdown voltage $I_E = 10\text{ }\mu\text{A}, I_C = 0$	$V_{(BR)EBO}$	5	-	-	
Collector cutoff current $V_{CB} = 32\text{ V}, I_E = 0$	I_{CBO}				nA
BCW67		-	-	20	
$V_{CB} = 45\text{ V}, I_E = 0$	BCW68			20	
Collector cutoff current $V_{CB} = 32\text{ V}, I_E = 0, T_A = 150\text{ }^\circ\text{C}$	I_{CBO}				μA
BCW67		-	-	20	
$V_{CB} = 45\text{ V}, I_E = 0, T_A = 150\text{ }^\circ\text{C}$	BCW68			20	
Emitter cutoff current $V_{EB} = 4\text{ V}, I_C = 0$	I_{EBO}	-	-	20	nA
DC current gain 1) $I_C = 100\text{ }\mu\text{A}, V_{CE} = 10\text{ V}$	h_{FE}				-
$h_{FE}\text{-grp. A/F}$		35	-	-	
$h_{FE}\text{-grp. B/G}$		50	-	-	
$h_{FE}\text{-grp. C/H}$		80	-	-	
DC current gain 1) $I_C = 10\text{ mA}, V_{CE} = 1\text{ V}$	h_{FE}				
$h_{FE}\text{-grp. A/F}$		75	-	-	
$h_{FE}\text{-grp. B/G}$		120	-	-	
$h_{FE}\text{-grp. C/H}$		180	-	-	
DC current gain 1) $I_C = 100\text{ mA}, V_{CE} = 1\text{ V}$	h_{FE}				
$h_{FE}\text{-grp. A/F}$		100	160	250	
$h_{FE}\text{-grp. B/G}$		160	250	400	
$h_{FE}\text{-grp. C/H}$		250	350	630	

 1) Pulse test: $t \leq 300\text{ }\mu\text{s}$, $D = 2\%$

Electrical Characteristics at $T_A = 25^\circ\text{C}$, unless otherwise specified.

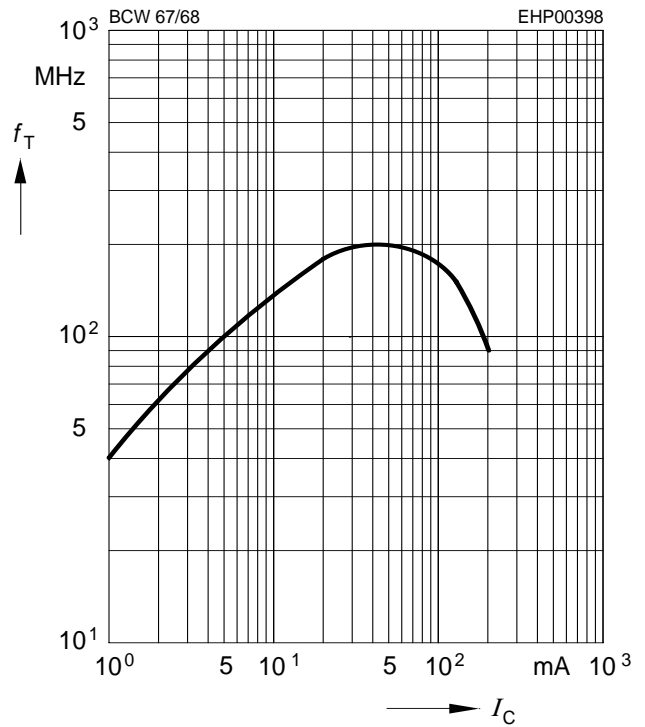
Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
DC current gain 1) $I_C = 500\text{ mA}$, $V_{CE} = 2\text{ V}$	h_{FE}				-
$h_{FE}\text{-grp. A/F}$		35	-	-	
$h_{FE}\text{-grp. B/G}$		60	-	-	
$h_{FE}\text{-grp. C/H}$		100	-	-	
Collector-emitter saturation voltage1) $I_C = 100\text{ mA}$, $I_B = 10\text{ mA}$ $I_C = 500\text{ mA}$, $I_B = 50\text{ mA}$	V_{CEsat}				V
		-	-	0.3	
		-	-	0.7	
Base-emitter saturation voltage 1) $I_C = 100\text{ mA}$, $I_B = 10\text{ mA}$ $I_C = 500\text{ mA}$, $I_B = 50\text{ mA}$	V_{BEsat}				
		-	-	1.25	
		-	-	2	
AC Characteristics					
Transition frequency $I_C = 50\text{ mA}$, $V_{CE} = 5\text{ V}$, $f = 20\text{ MHz}$	f_T	-	200	-	MHz
Collector-base capacitance $V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{cb}	-	6	-	pF
Emitter-base capacitance $V_{EB} = 0.5\text{ V}$, $f = 1\text{ MHz}$	C_{eb}	-	60	-	

Total power dissipation $P_{tot} = f(T_S)$



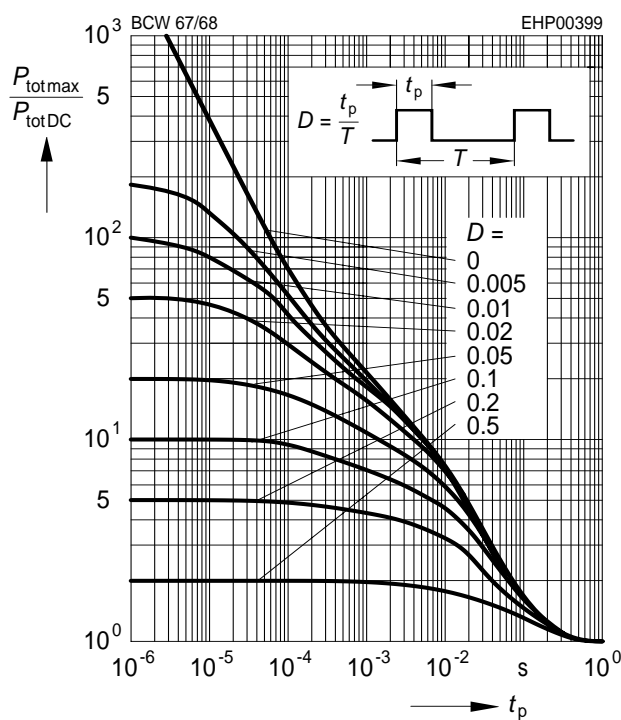
Transition frequency $f_T = f(I_C)$

$V_{CE} = 5V$



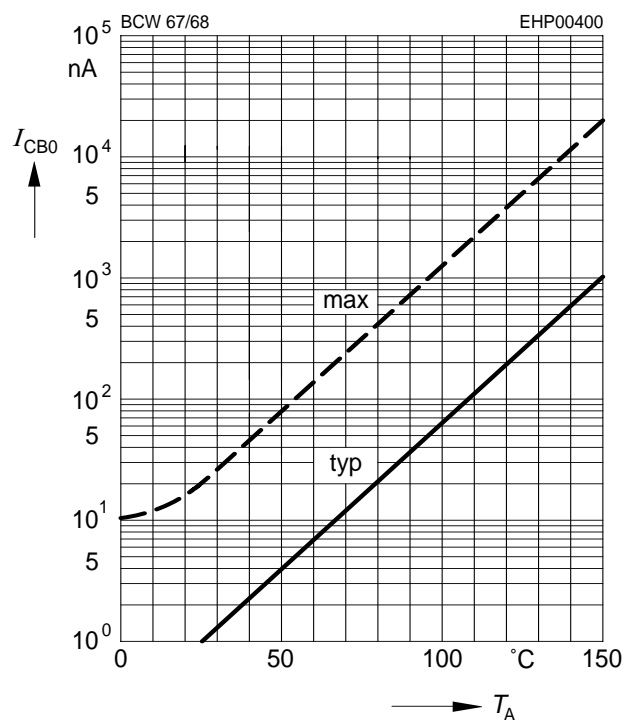
Permissible pulse load

$P_{totmax} / P_{totDC} = f(t_p)$



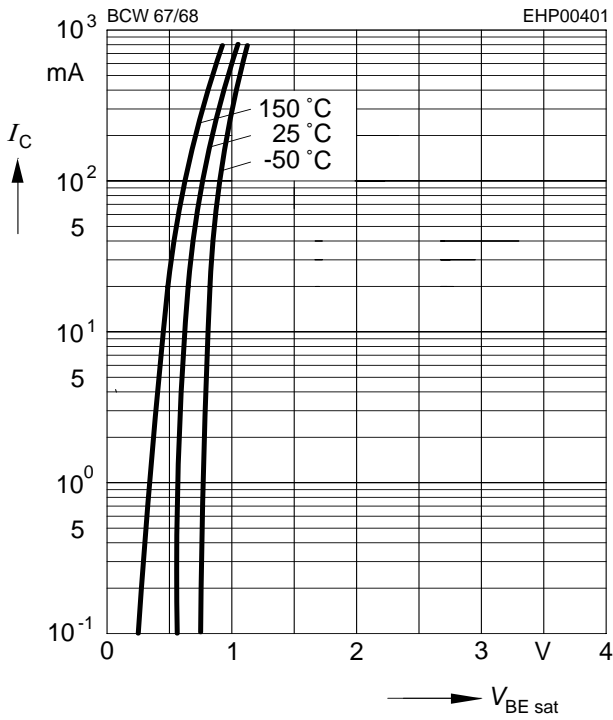
Collector cutoff current $I_{CBO} = f(T_A)$

$V_{CB} = V_{CEmax}$



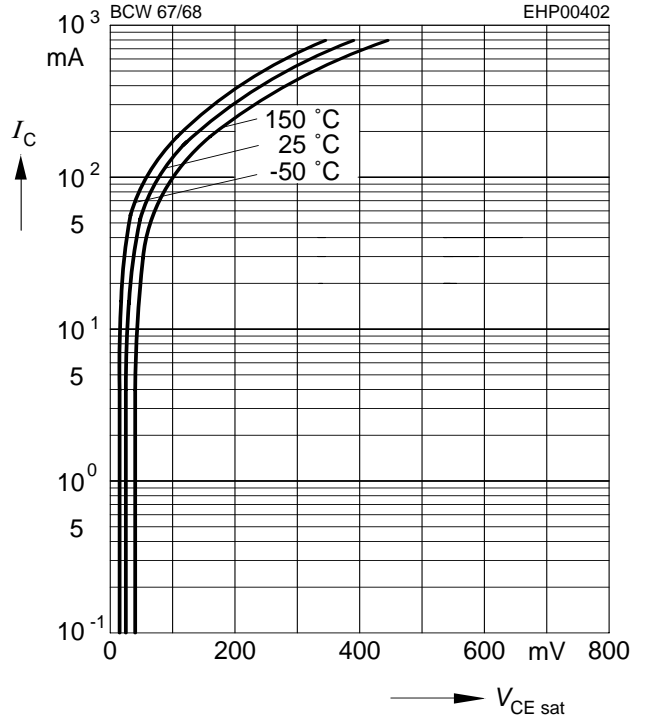
Base-emitter saturation voltage

$I_C = f(V_{BEsat}), h_{FE} = 10$



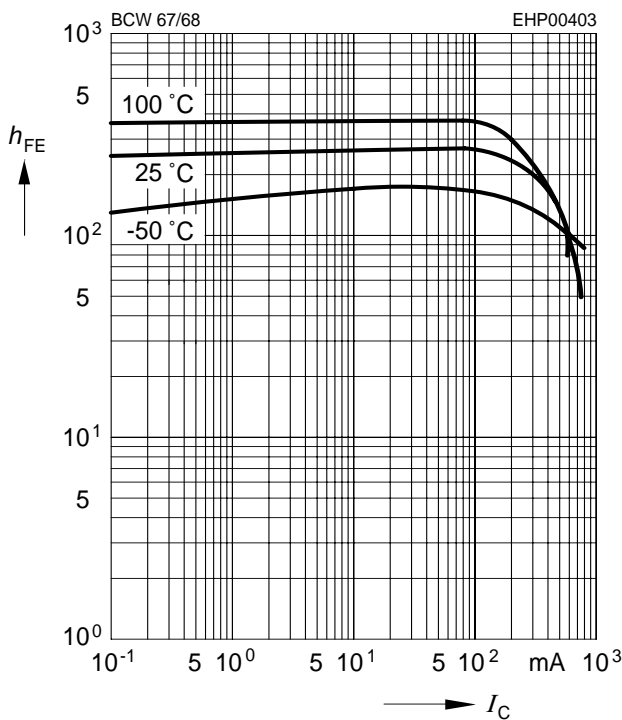
Collector-emitter saturation voltage

$I_C = f(V_{CEsat}), h_{FE} = 10$



DC current gain $h_{FE} = f(I_C)$

$V_{CE} = 1V$



This datasheet has been downloaded from:

www.DatasheetCatalog.com

Datasheets for electronic components.



LittleDiode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

LittleDiode.com

Looking forward to providing you with the best possible service.