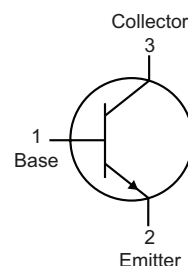
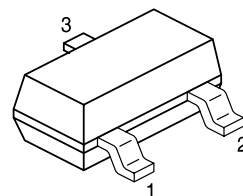


NPN General Purpose Amplifier



Features:

- For general AF applications
- High current gain
- Low collector-emitter saturation voltage
- Complementary types: BCW67,BCW68(PNP)

Applications:

- General purpose medium power amplifier
- Switching application

Pin Configuration:

1. Base
2. Emitter
3. Collector

Maximum Ratings

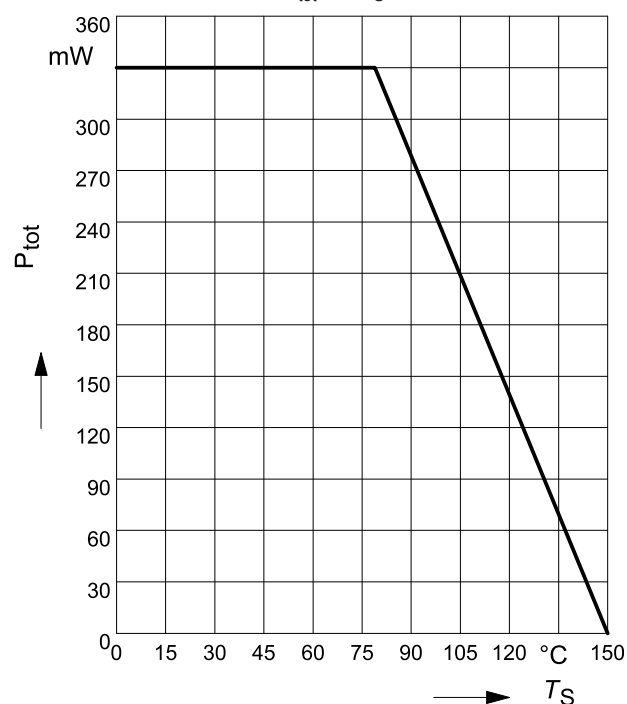
Parameter	Symbol	Value	Unit
Collector - Base Voltage	V_{CBO}	45	V
Collector - Emitter Voltage	V_{CEO}	75	
Emitter - Base Voltage	V_{ebo}	5	
DC Collector Current	I_C	-1	A
Collector Current Continuous	I_C	800	mA
Collector Dissipation	P_C	330	mW
Junction and Storage Temperature	T_j, T_{stg}	-65 to +150	°C

NPN General Purpose Amplifier

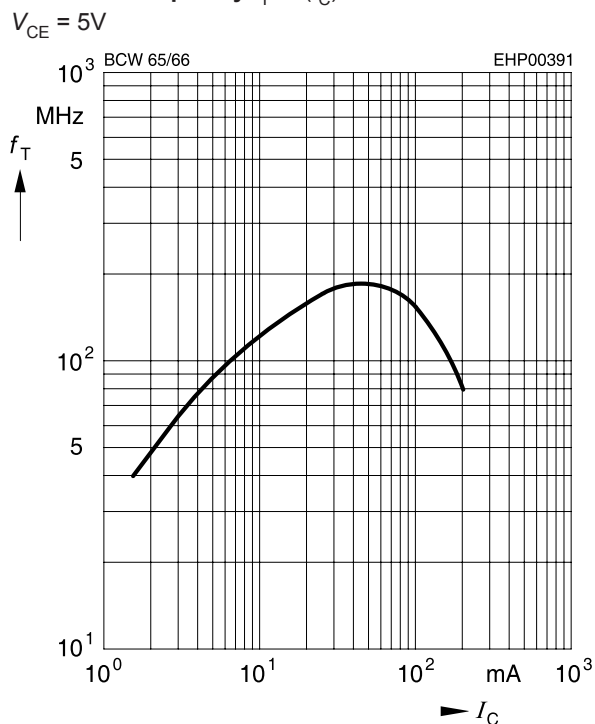
Electrical Characteristics ($T_a = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector - Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	75			V
Collector - Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	45			
Emitter - Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	5			
Collector Cut-Off Current	I_{CBO}	$V_{CB}=45\text{V}, I_E=0$			20	nA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=4\text{V}, I_C=0$			20	
DC Current Gain	h_{FE}	$V_{CE}=10\text{V}, I_C=100\mu\text{A}$	50 80			
		$V_{CE}=1\text{V}, I_C=10\text{mA}$	120 180			
		$V_{CE}=1\text{V}, I_C=100\text{mA}$	160 250		400 630	
Collector - Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-100\text{mA}, I_B=10\text{mA}$ $I_C=-500\text{mA}, I_B=50\text{mA}$			0.3 0.7	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=100\text{mA}, I_B=10\text{mA}$ $I_C=500\text{mA}, I_B=50\text{mA}$			1.25 2	
Transition Frequency	f_T	$V_{CE}=5\text{V}, I_C=50\text{mA}$ $f=20\text{MHz}$		170		MHz

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



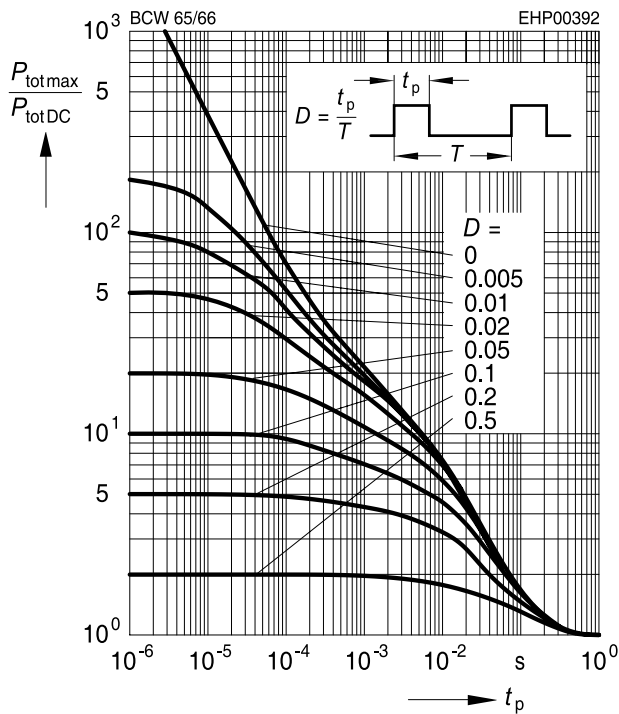
Transition frequency $f_T = f(I_C)$



NPN General Purpose Amplifier **multicomp**

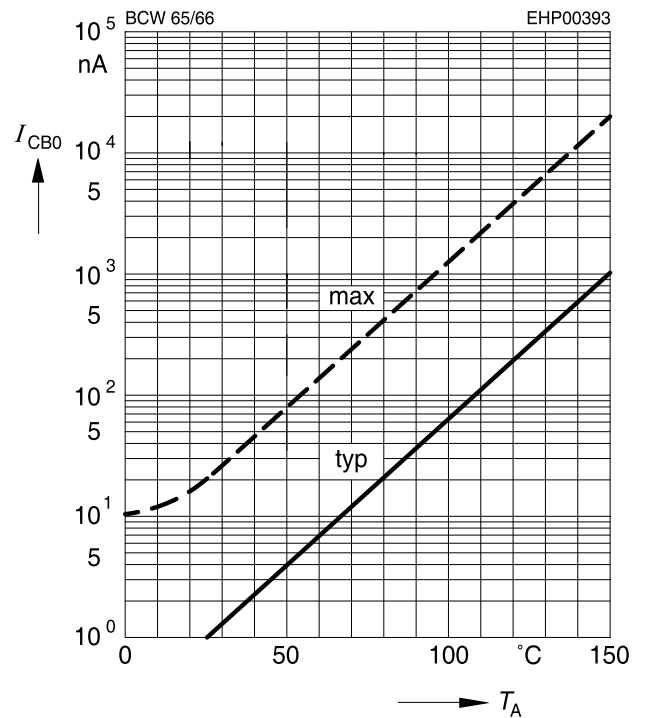
Permissible pulse load

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



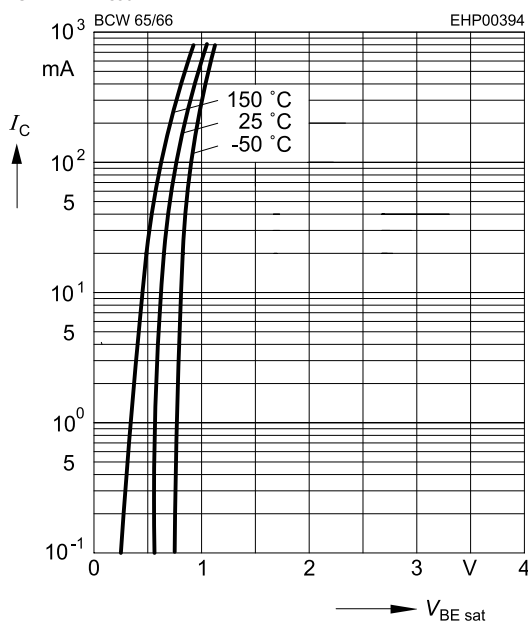
Collector cutoff current $I_{\text{CBO}} = f(T_A)$

$$V_{\text{CB}} = V_{\text{CEmax}}$$



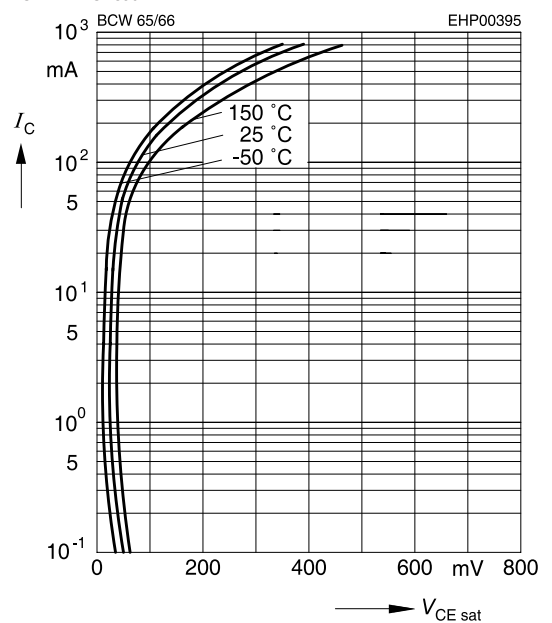
Base-emitter saturation voltage

$$I_{\text{C}} = f(V_{\text{BEsat}}, h_{\text{FE}} = 10)$$



Collector-emitter saturation voltage

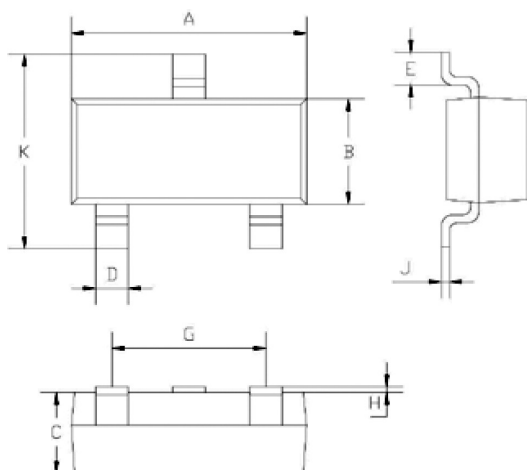
$$I_{\text{C}} = f(V_{\text{CEsat}}, h_{\text{FE}} = 10)$$



NPN General Purpose Amplifier

Package Outline

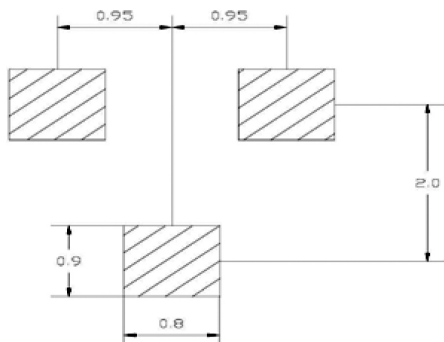
Plastic Surface Mounted Package



Dimensions	Min.	Max.
A	2.85	2.95
B	1.25	1.35
C	1 Typical	
D	0.4 Typical	
E	0.35	0.48
G	1.85	1.95
H	0.02	0.1
J	0.1 Typical	
K	2.35	2.45

Dimensions : Millimetres

Soldering Footprint



Dimensions : Millimetres

Part Number Table

Description	Part Number
Transistor, NPN, 0.8A, 45V, SOT-23	BCW66G
	BCW66H

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