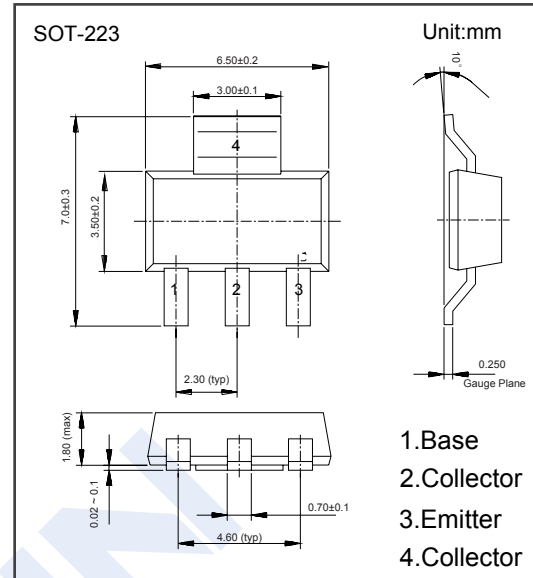
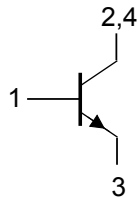


## NPN Transistors BCP68 (KCP68)

### ■ Features

- High current (max. 1 A)
- Low voltage (max. 20 V)
- Complements to BCP69



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CB0}$	32	V
Collector - Emitter Voltage	$V_{CE0}$	20	
Emitter - Base Voltage	$V_{EB0}$	5	
Collector Current - Continuous	$I_C$	1	A
Collector Current - Pulse	$I_{CP}$	2	
Base Current - Pulse	$I_{BP}$	0.2	
Collector Power Dissipation	$P_C$	1.37	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	91	$^\circ\text{C}/\text{W}$
Thermal Resistance from Junction to Soldering Point	$R_{\theta JS}$	10	
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature range	$T_{stg}$	-65 to 150	

## NPN Transistors

### BCP68 (KCP68)

#### ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	$V_{CB0}$	$I_C = 100 \mu\text{A}, I_E = 0$	32			V
Collector- emitter breakdown voltage	$V_{CE0}$	$I_C = 1 \text{ mA}, I_B = 0$	20			
Emitter - base breakdown voltage	$V_{EB0}$	$I_E = 100 \mu\text{A}, I_C = 0$	5			
Collector-base cut-off current	$I_{CB0}$	$V_{CB} = 25 \text{ V}, I_E = 0$			100	nA
		$V_{CB} = 25 \text{ V}, I_E = 0, T_J = 150^\circ\text{C}$			10	$\mu\text{A}$
Emitter cut-off current	$I_{EB0}$	$V_{EB} = 5 \text{ V}, I_C = 0$			100	nA
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 1 \text{ A}, I_B = 100 \text{ mA}$			0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 1 \text{ A}, I_B = 100 \text{ mA}$			1.2	
Base - emitter voltage	$V_{BE}$	$V_{CE} = 10 \text{ V}, I_C = 5 \text{ mA}$		0.62		
		$V_{CE} = 1 \text{ V}, I_C = 1 \text{ A}$			1	
DC current gain	$h_{FE}$	$V_{CE} = 10 \text{ V}, I_C = 5 \text{ mA}$	50			
		$V_{CE} = 1 \text{ V}, I_C = 500 \text{ mA}$	85		375	
		$V_{CE} = 1 \text{ V}, I_C = 1 \text{ A}$	60			
Collector capacitance	$C_{ob}$	$V_{CB} = 5 \text{ V}, I_E = I_C = 0, f = 1 \text{ MHz}$		38		pF
Transition frequency	$f_T$	$V_{CE} = 5 \text{ V}, I_C = 10 \text{ mA}, f = 100 \text{ MHz}$	40			MHz

#### ■ Classification of $h_{FE(2)}$

Type	BCP68	BCP68-16	BCP68-25
Range	85-375	100-250	160-375
Marking	BCP68	BCP68-16	BCP68-25

#### ■ Typical Characteristics

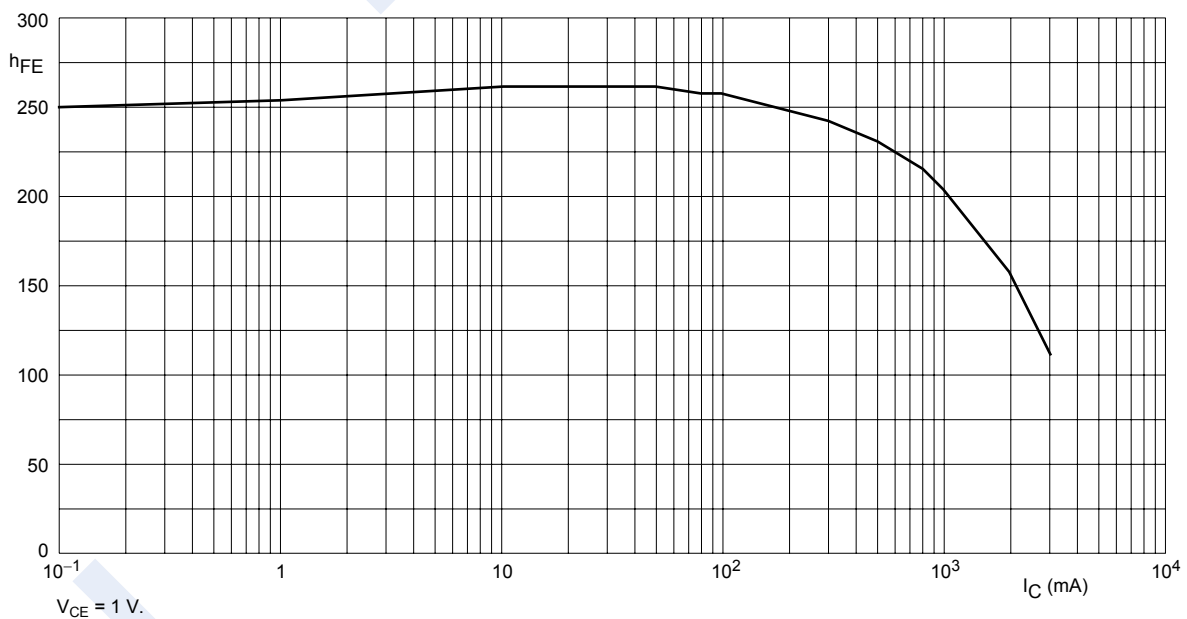


Fig.1 DC current gain; typical values.