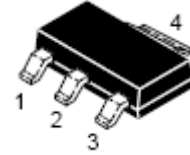
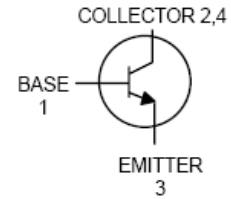


Features

- High collector current
- Low collector-emitter saturation voltage
- High current gain

HF



SOT-223

Mechanical Data

- Case: SOT-223
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BCP68	SOT-223	4000 pcs / Tape & Reel	BCP68
BCP68-10	SOT-223	4000 pcs / Tape & Reel	BCP68-10
BCP68-16	SOT-223	4000 pcs / Tape & Reel	BCP68-16
BCP68-25	SOT-223	4000 pcs / Tape & Reel	BCP68-25

Maximum Ratings (@ T_C = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CB0}	25	V
Collector-Emitter Voltage	V _{CEO}	20	V
Emitter-Base Voltage	V _{EBO}	5	V
Collector Current (Continuous)	I _C	1	A
Collector Current (Peak)	I _{CM}	2	A
Base Current (Continuous)	I _B	0.1	A
Base Current (Peak)	I _{BM}	0.2	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation (T _A = 25°C) **1	P _D	1.5	W
Operating junction Temperature	T _J	-55 ~ +150	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

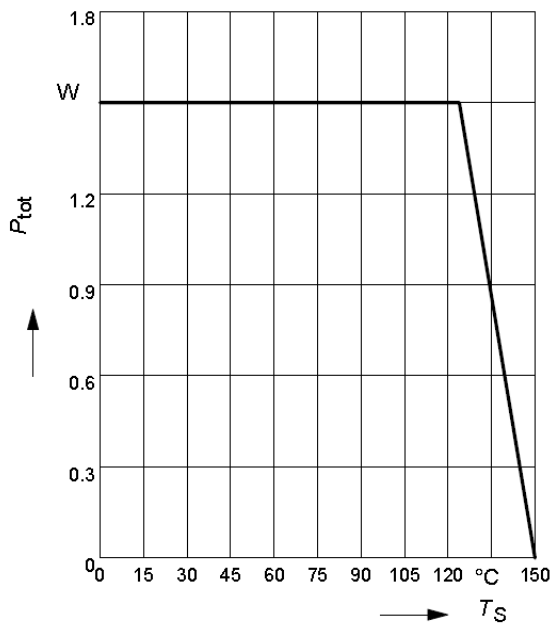
Note 1: Device mounted on a glass epoxy printed circuit board 1.575 in. x 1.575 in. x 0.059 in.; mounting pad for the collector lead min. 0.93 sq. in.

Electrical Characteristics (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	V _{(BR)CBO}	I _C = 10μA, I _E = 0	25	-	-	V
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C = 1mA, I _B = 0	20	-	-	V
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	I _E = 10μA, I _C = 0	5	-	-	V
Collector Cut-off Current	I _{CBO}	V _{CB} = 25V, I _E = 0	-	-	100	nA
DC Current Gain	h _{FE}	V _{CE} = 10V, I _C = 5mA	50	-	-	-
		V _{CE} = 1V, I _C = 1A	60	-	-	-
		V _{CE} = 1V, I _C = 500mA				
		BCP68	85	-	375	-
		BCP68-10	85	-	160	-
		BCP68-16	100	-	250	-
		BCP68-25	160	-	375	-
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C = 1A, I _B = 100mA	-	-	0.5	V
Base-Emitter Voltage	V _{BE(on)}	I _C = 5mA, V _{CE} = 10V	-	0.6	-	V
		I _C = 1A, V _{CE} = 1V	-	-	1	V
Transition Frequency	f _T	V _{CE} = 5V, I _C = 100mA f = 100MHz	-	100	-	MHz

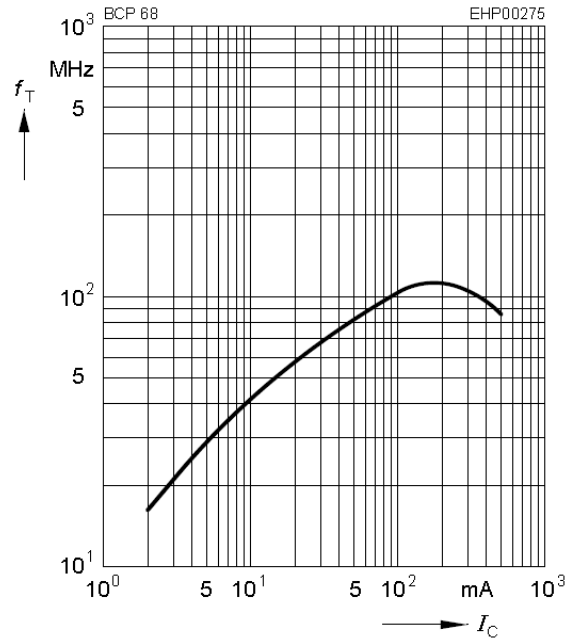
Ratings and Characteristic Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

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



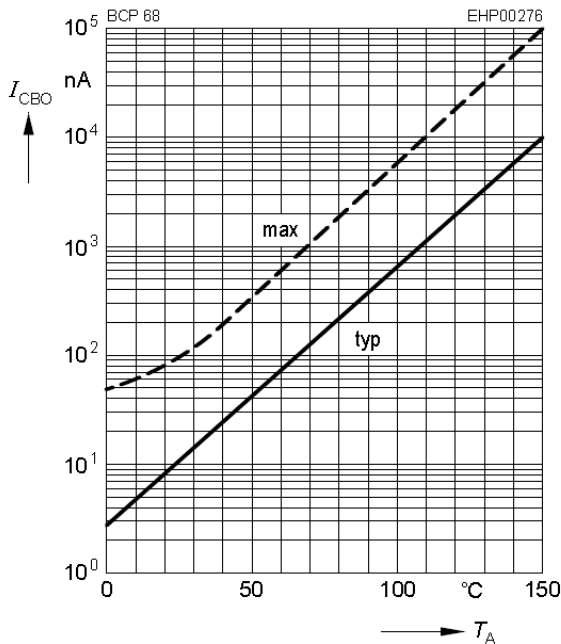
Transition frequency $f_T = f(I_C)$

$V_{CE} = 5\text{V}$



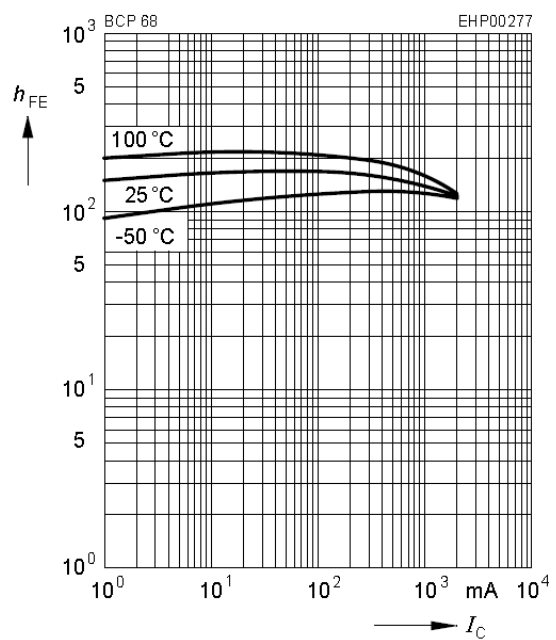
Collector cutoff current $I_{CBO} = f(T_A)$

$V_{CB} = 25\text{V}$



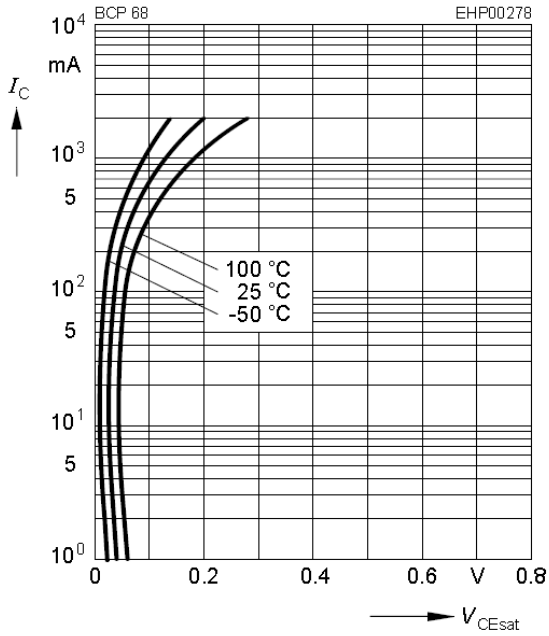
DC current gain $h_{FE} = f(I_C)$

$V_{CE} = 1\text{V}$



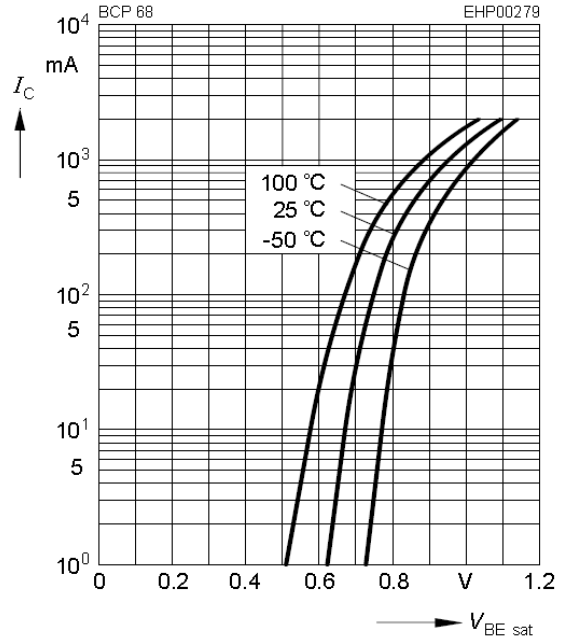
Collector-emitter saturation voltage

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

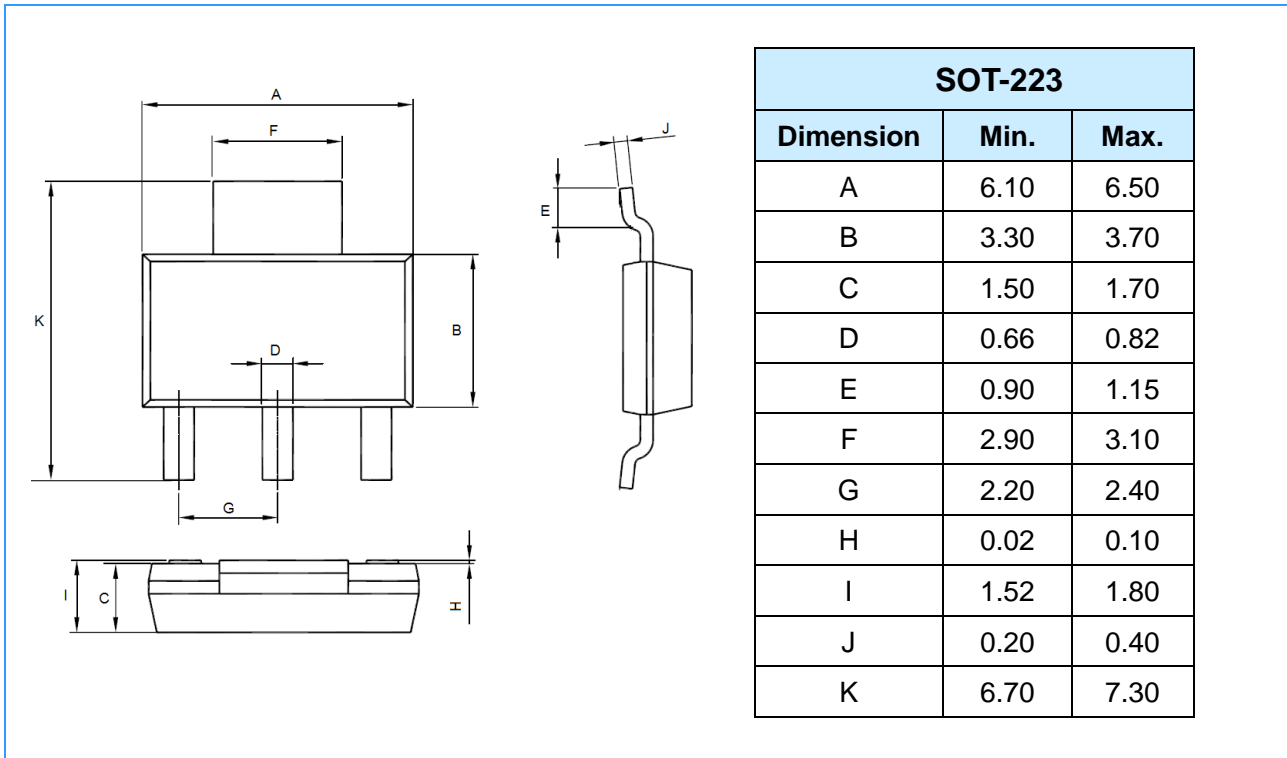


Base-emitter saturation voltage

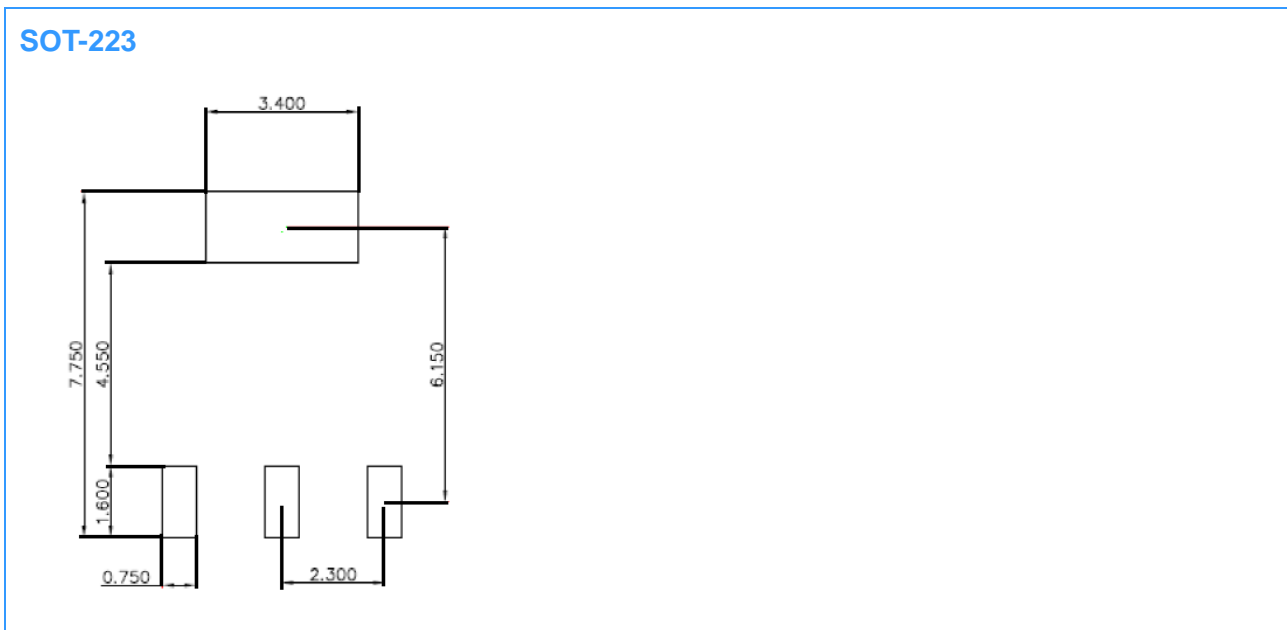
$I_C = f(V_{BEsat}), h_{FE} = 10$



Package Outline Dimensions (Unit: mm)



Mounting PAD Layout (Unit: mm)



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