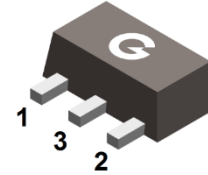
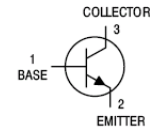


Features

- For general AF applications
- High collector current
- High current gain
- Low collector-emitter saturation voltage
- Complementary type: BCX69 (PNP)

HF



SOT-89

Mechanical Data

- Case: SOT-89
- Molding compound, UL flammability classification rating 94V-0
- Terminals: Matte tin plated leads, solderable per MIL-STD-202, Method 208

Ordering Information

Part Number	Package	Shipping	Marking Code
BCX68	SOT-89	1000 pcs / Tape & Reel	CA/CB/CC/CD

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

Symbol	Parameter	Value	Units
MAXIMUM RATINGS			
V _{CBO}	Collector-Base Voltage	25	V
V _{CEO}	Collector-Emitter Voltage	20	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current - Continuous	1	A
I _{CM}	Collector Current - Peak	2	A
Thermal Characteristic			
P _{tot}	Total Power Dissipation, T _a ≤ 25°C	1	W
T _J	Junction Temperature	-65 to +150	°C
T _{STG}	Junction and Storage Temperature	-65 to +150	°C

Electrical Characteristics (@ $T_A=25^\circ\text{C}$ unless otherwise specified)

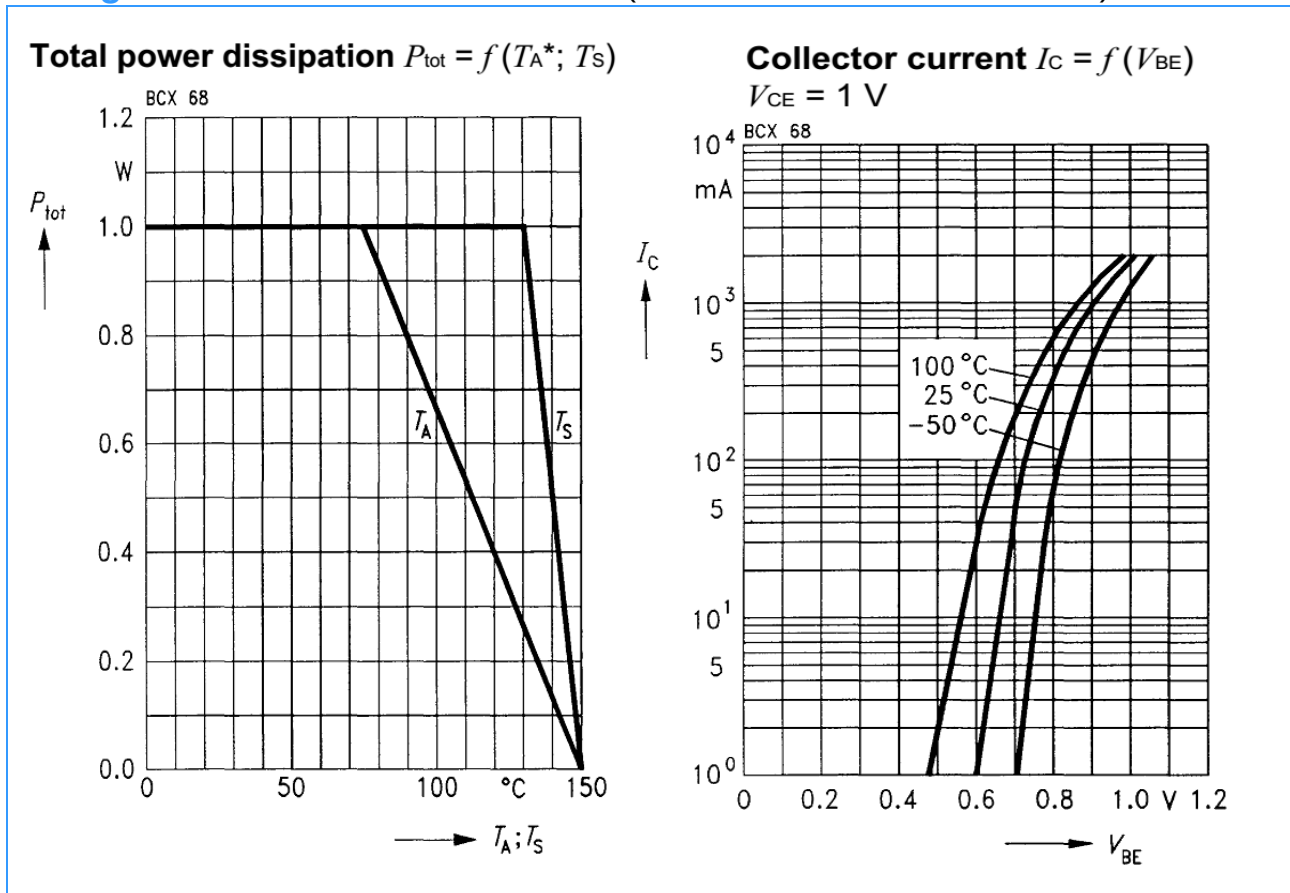
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector Cut-Off Current	I_{CBO}	$V_{CB} = 25\text{V}, I_E = 0$	-	-	0.1	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB} = 5\text{V}, I_C = 0$	-	-	10	μA
DC Current Gain (Note 1)	h_{FE}	$V_{CE} = 1\text{V}, I_C = 500\text{mA}$				
		BCX68	85	-	375	
		BCX68-10	85	-	160	
		BCX68-16	100	-	250	
		BCX68-25	160	-	375	
Collector-Emitter Saturation Voltage (Note 1)	$V_{CE(sat)}$	$I_C = 1\text{A}, I_B = 100\text{mA}$	-	-	0.5	V
Base-Emitter Turn-on Voltage (Note 1)	$V_{BE(on)}$	$I_C = 1\text{A}, V_{CE} = 1\text{V}$	-	-	1	V
Transition Frequency	f_T	$V_{CE} = 5\text{V}, I_C = 100\text{mA}, f = 20\text{MHz}$	-	100	-	MHz

Note1: Pulsed: $PW \leq 350\mu\text{s}$, duty cycle $\leq 2\%$.

CLASSIFICATION h_{FE}

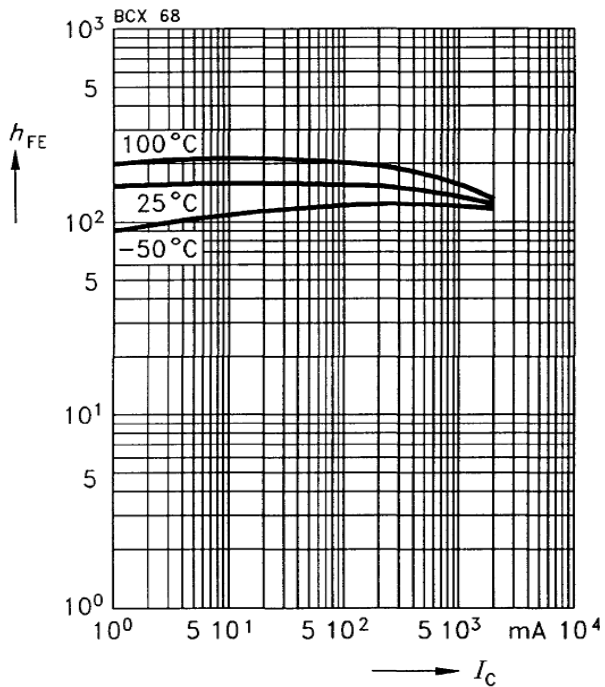
Range	85-375	90-180	135-270	200-400
Marking	CA	CB	CC	CD

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



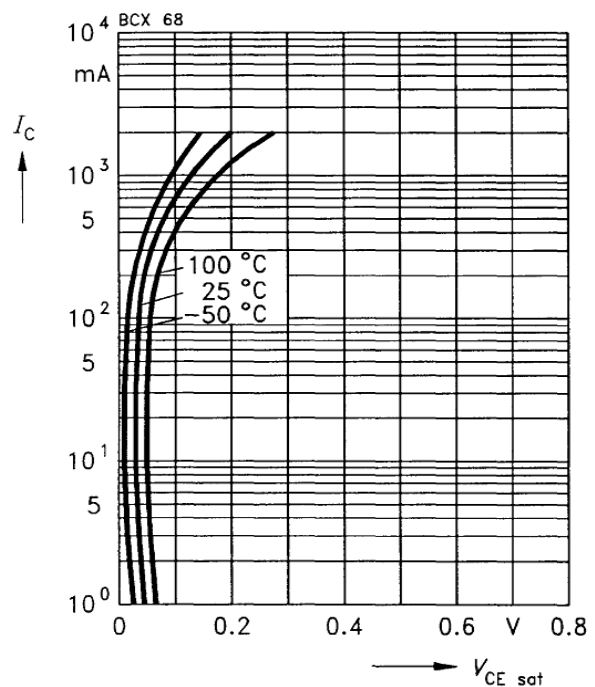
DC current gain $h_{FE} = f(I_C)$

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



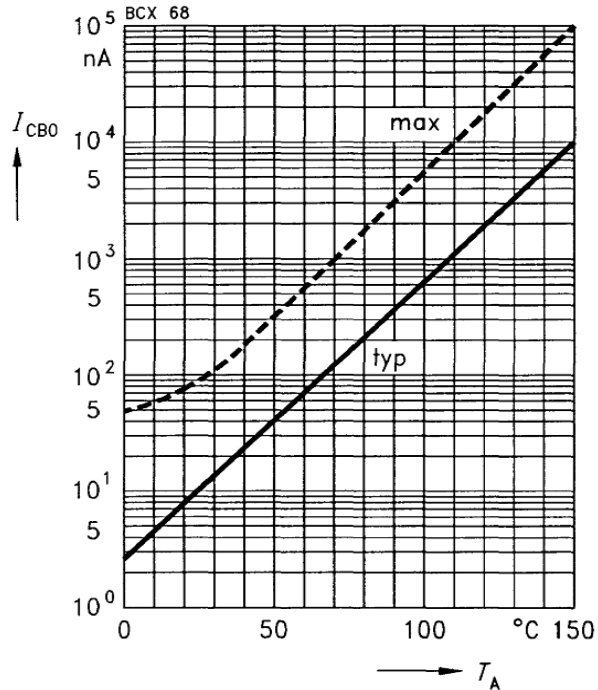
Collector-emitter saturation voltage

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



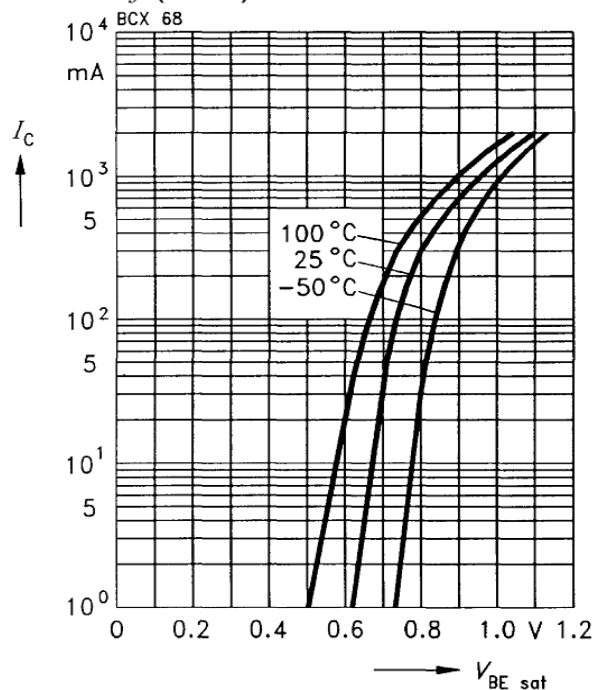
Collector cutoff current $I_{CB0} = f(T_A)$

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



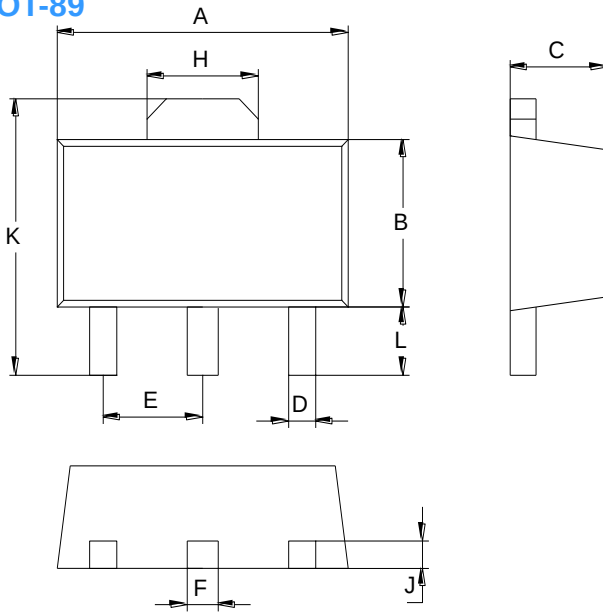
Base-emitter saturation voltage

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



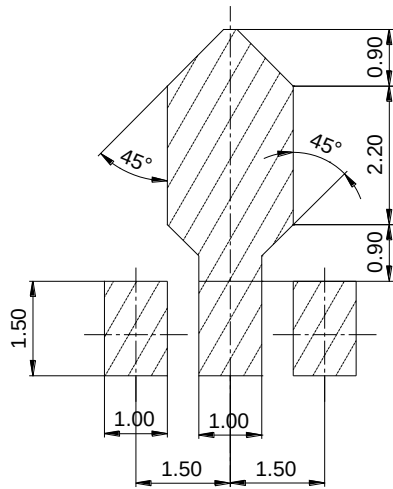
Package Outline Dimensions (unit: mm)

SOT-89



SOT-89		
Dim	Min	Max
A	4.30	4.70
B	2.25	2.65
C	1.30	1.70
D	0.30	0.50
E	1.40	1.60
F	0.38	0.58
H	1.60	1.80
J	0.30	0.50
L	0.90	1.10
K	3.95	4.35

SOLDERING FOOTPRINT (unit: mm)



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