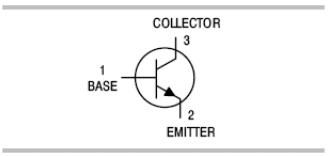
NPN Silicon AF Transistors

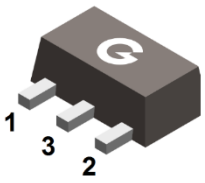
BCX68

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℃ 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℃	1	W
T_J	Junction Temperature	-65 to +150	℃
T_{STG}	Junction and Storage Temperature	-65 to +150	℃

Electrical Characteristics (@T_A=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
RCollector Cut-Off Current	I_{CBO}	V_{CB} =25V, I_E = 0	-	-	0.1	uA
Emitter Cut-Off Current	I_{EBO}	V_{EB} =5V, I_C = 0	-	-	10	uA
DC Current Gain (Note 1)	h_{FE}	V_{CE} = 1V, I_C = 500mA				
		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= 1A, I_B=100mA	-	-	0.5	V
Base−Emitter Turn−on Voltage(Note 1)	$V_{BE(on)}$	I_C= 1A, V_{CE}=1V	-	-	1	V
Transition Frequency	f_T	V_{CE} =5V, I_C = 100mA, f=20MHZ	-	100	-	MHz

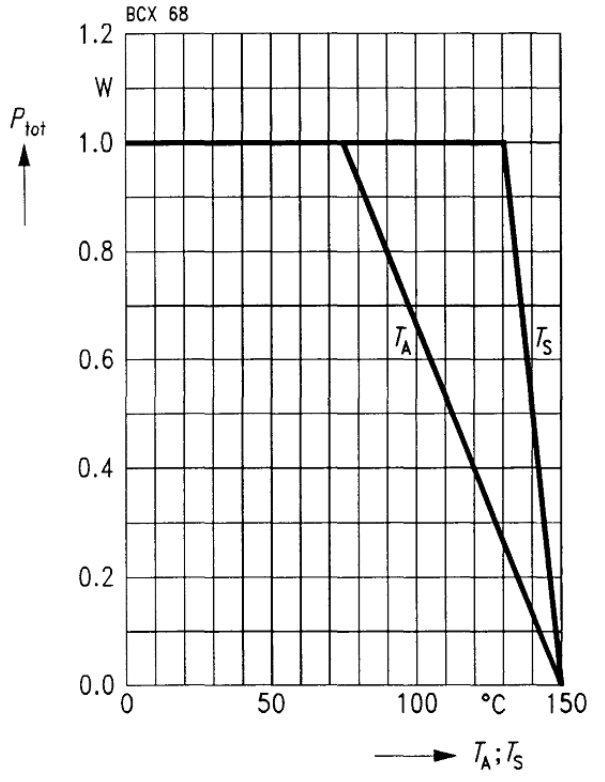
Note1：Pulsed: PW≤350us, duty cycle≤2%.

CLASSIFICATION HFE

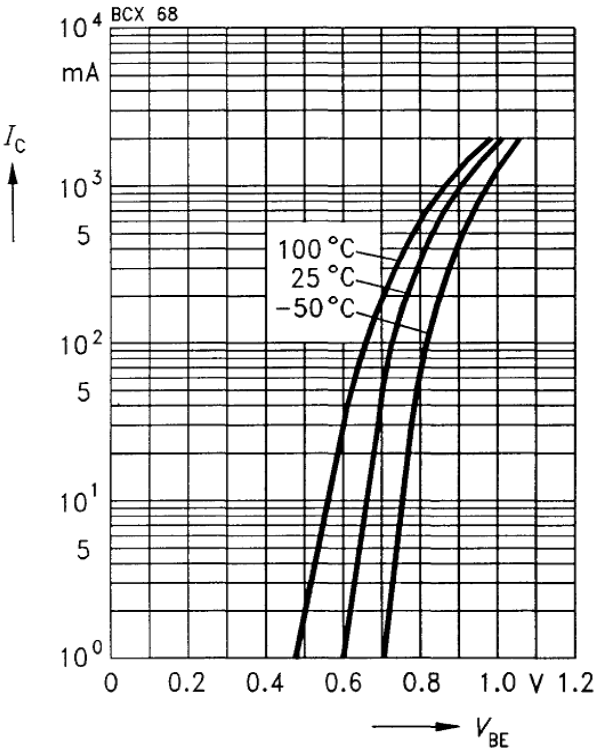
Range	85-375	90-180	135-270	200-400
Marking	CA	CB	CC	CD

Ratings and Characteristic Curves (T_A=25℃ unless otherwise noted)

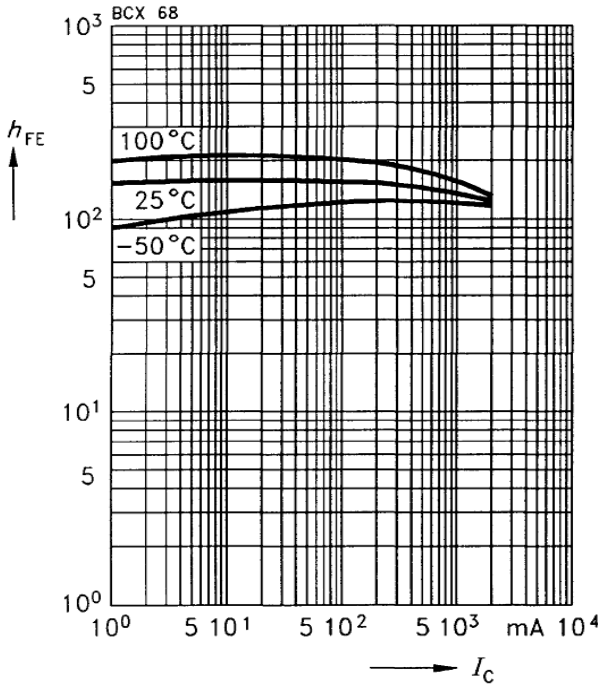
Total power dissipation $P_{tot} = f(T_A^*; T_S)$



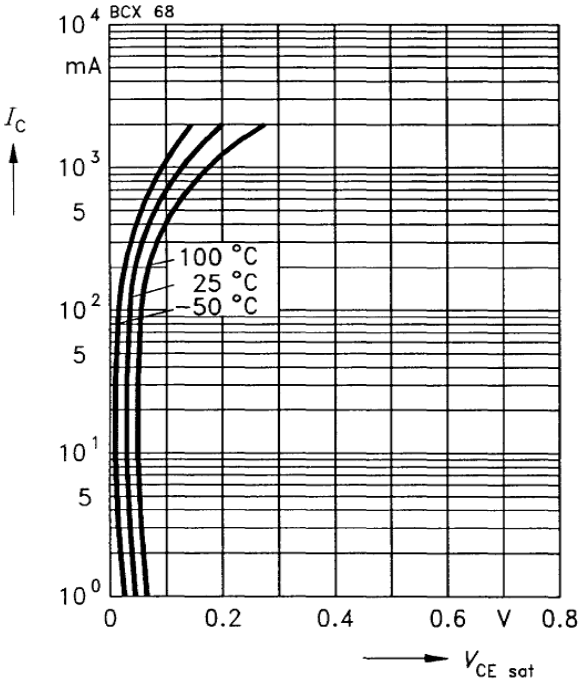
Collector current $I_C = f(V_{BE})$
V_{CE} = 1 V



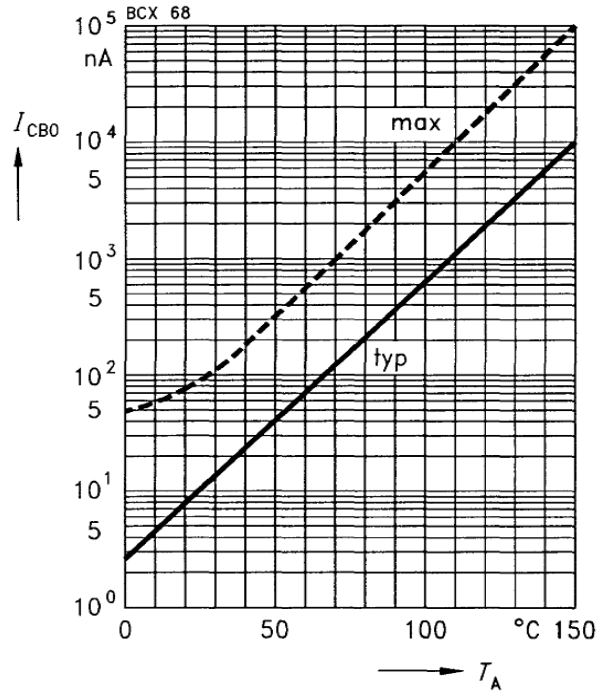
DC current gain $h_{FE} = f(I_C)$
V_{CE} = 1 V



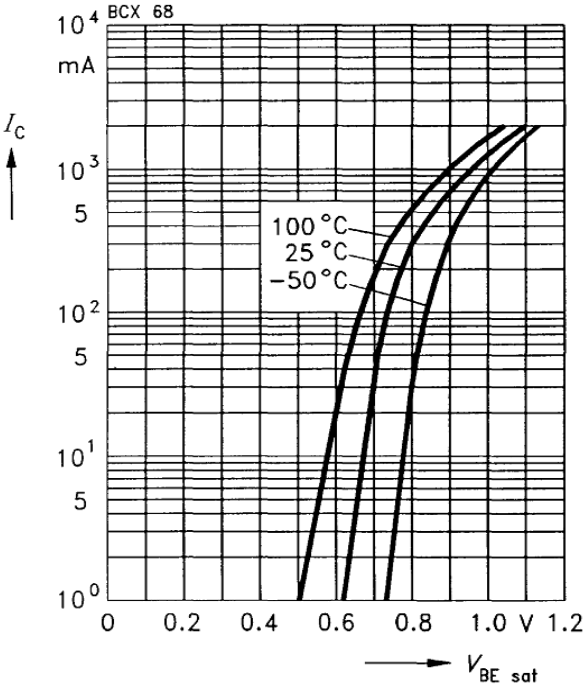
Collector-emitter saturation voltage
$I_C = f(V_{CEsat})$ h_{FE} = 10



Collector cutoff current $I_{CB0} = f(T_A)$
V_{CB} = 25 V

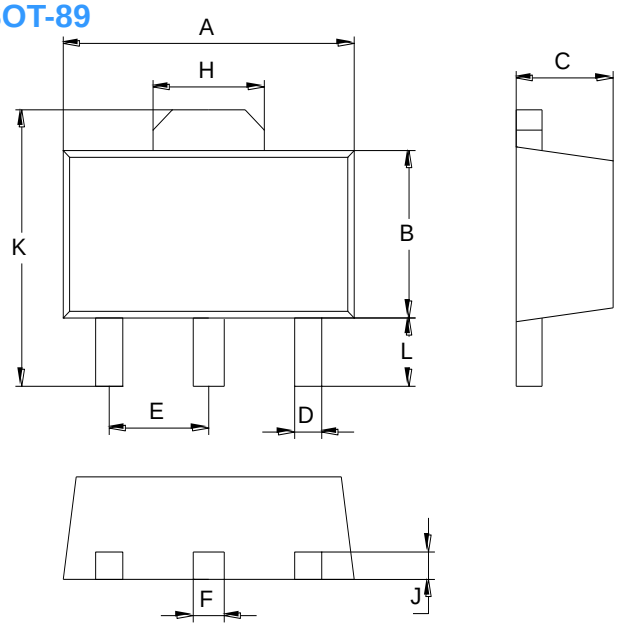


Base-emitter saturation voltage
$I_C = f(V_{BEsat})$ h_{FE} = 10



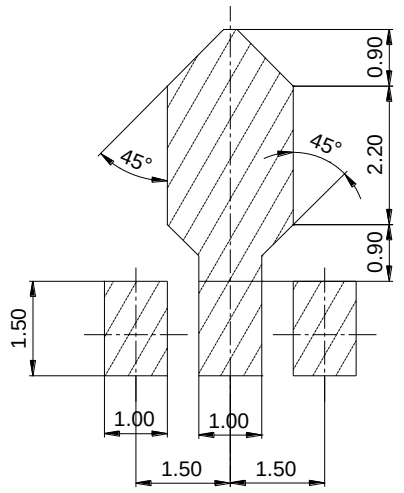
Package Outline Dimensions (unit: mm)

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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