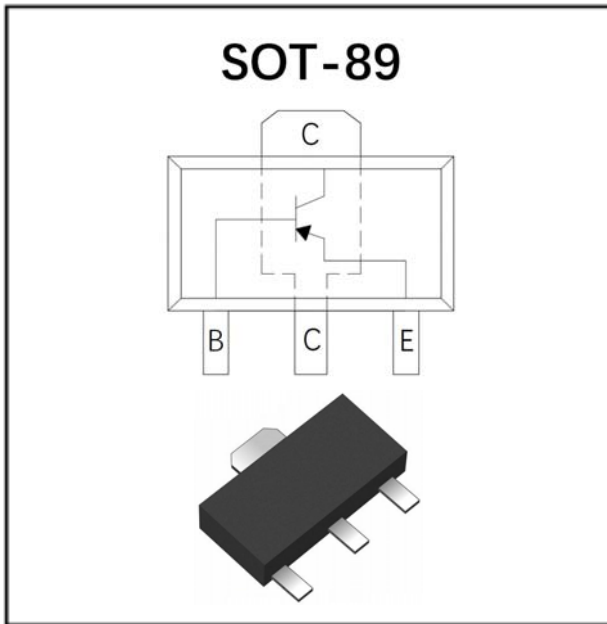


PNP General Purpose Amplifier



Features

- Epoxy meets UL-94 V-0 flammability rating
- Halogen free available upon request by adding suffix "HF"
- Moisture Sensitivity Level 1
- Low collector-emitter saturation voltage

Mechanical Data

- **Package:** SOT-89
- Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:**

BC869	CEC
BC869-25	CHC

■ Maximum Ratings (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Conditions	Value
Minimum Collector-Emitter Voltage	V_{CEO}	V	$I_C = -1mA, I_B = 0$	-20
Minimum Collector-Base Voltage	V_{CBO}	V	$I_C = -100\mu A, I_E = 0$	-32
Minimum Emitter-Base Voltage	V_{EBO}	V	$I_E = -100\mu A, I_C = 0$	-5
Collector Current	I_C	A		-1
Collector Power Dissipation	P_C	mW		500
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	°C/W		250
Operation Junction Temperature	T_j	°C		-55 to +150
Storage Temperature	T_{stg}	°C		-55 to +150



BC869

■ Electrical Characteristics (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Conditions	Min	TYP	Max
Collector-Emitter Voltage	V_{CE0}	V	$I_C=-1mA, I_B=0$	-20		
Collector-Base Voltage	V_{CB0}	V	$I_C=-100\mu A, I_E=0$	-32		
Emitter-Base Voltage	V_{EB0}	V	$I_E=-100\mu A, I_C=0$	-5		
Collector-Base cut-off current	I_{CBO}	nA	$V_{CB}=-25V$			-100
Emitter-Base cut-off current	I_{EB0}	nA	$V_{EB}=-5V$			-100
DC Current Gain	h_{FE1}		$V_{CE}=-1V, I_C=-5mA$	50		
	h_{FE2}		$V_{CE}=-1V, I_C=-500mA$	100		375
	h_{FE3}		$V_{CE}=-1V, I_C=-1A$	60		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V	$I_C=-1A, I_B=-100mA$			-0.5
Transition Frequency	f_T	MHz	$I_C=-10mA, V_{CE}=-5V, f=100MHz$	40		

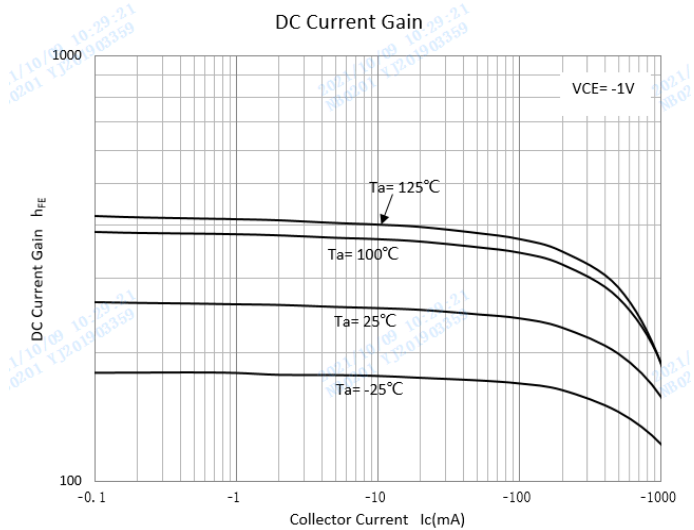
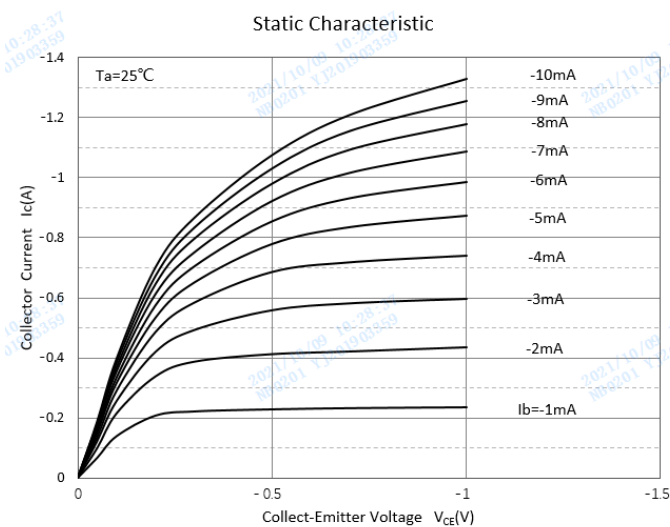
■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BC869	F2	Approximate 0.055	1000	8000	32000	7" reel

■ Classification of h_{FE}

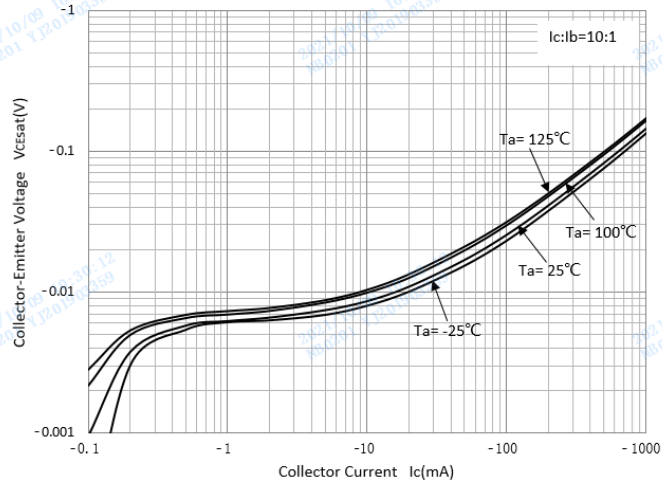
Rank	BC869	BC869-25
Range	100-375	160-375

■ Characteristics (Typical)

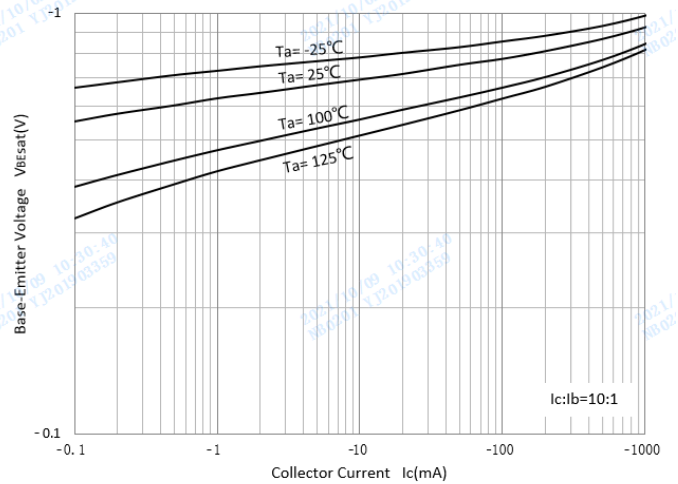




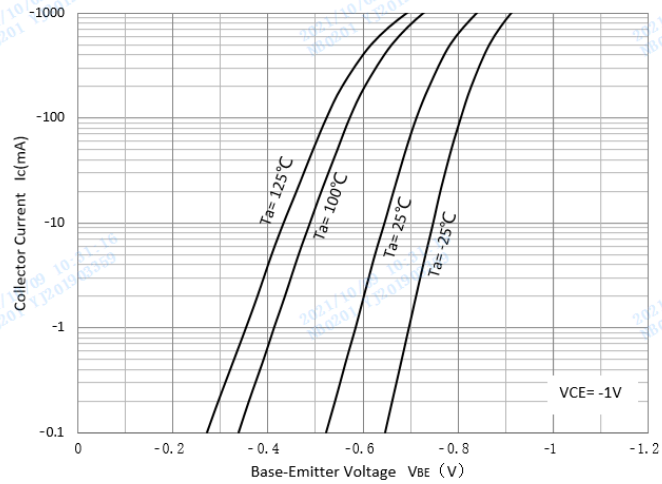
Collector-Emitter Saturation Voltage



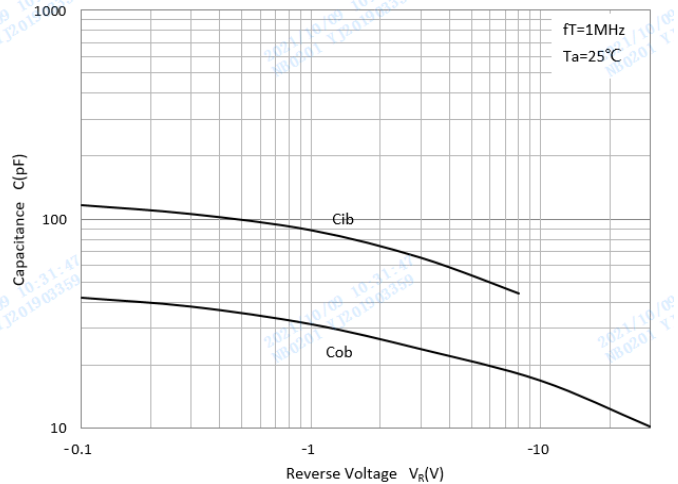
Base-Emitter Saturation Voltage



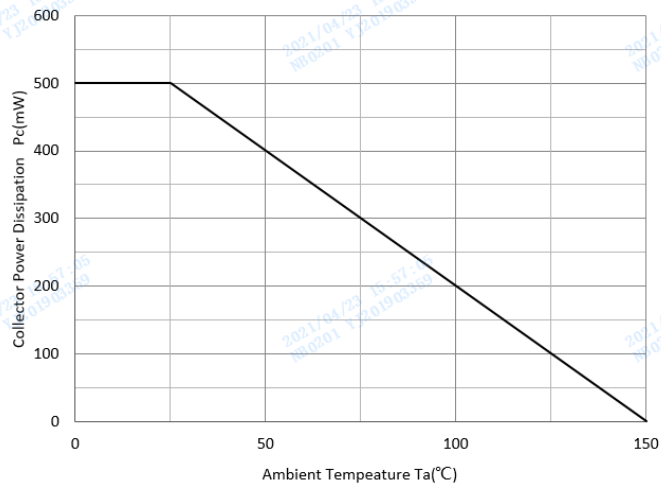
Base-Emitter On Voltage



Cob/Cib-V_{CE}/V_{EB}

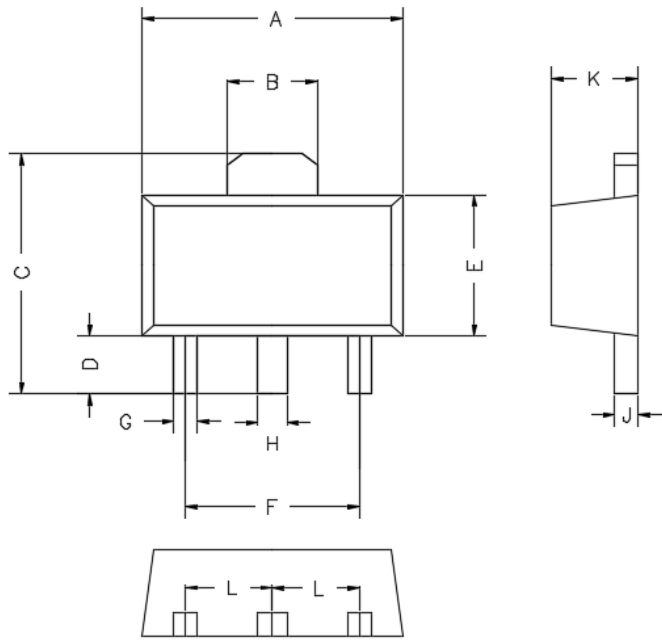


Collector Power Derating Curve



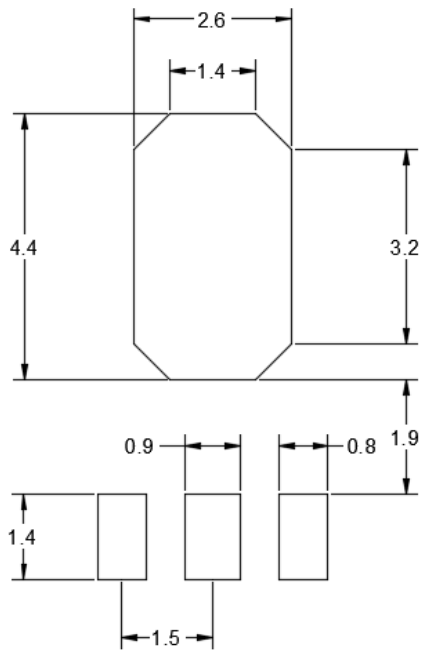


■SOT-89 Package Outline Dimensions



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.169	0.185	4.30	4.70	
B	0.061		1.55		TYP
C	0.154	0.171	3.91	4.35	
D	0.031	0.047	0.80	1.20	
E	0.089	0.104	2.25	2.65	
F	0.118		3.00		TYP
G	0.013	0.020	0.33	0.52	
H	0.016	0.023	0.40	0.58	
J	0.014	0.017	0.35	0.44	
K	0.055	0.063	1.40	1.60	
L	0.059		1.50		TYP

■SOT-89 Suggested Pad Layout



mm



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