



Micro Commercial Components



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# BC868-10/16/25

## 0.5W NPN Medium Power Transistors

### Features

- Halogen free available upon request by adding suffix "-HF"
- High current
- Low voltage
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

### Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
<b>OFF CHARACTERISTICS</b>				
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C=100\mu A_{dc}$ , $I_E=0$ )	32	---	Vdc
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ( $I_C=1mA_{dc}$ , $I_B=0$ )	20	---	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ( $I_E=100\mu A_{dc}$ , $I_C=0$ )	5.0	---	Vdc
$I_{CBO}$	Collector Cutoff Current ( $V_{CB}=25V$ , $I_E=0$ )	---	0.1	$\mu A_{dc}$
$I_{EBO}$	Emitter Cutoff Current ( $V_{EB}=5.0V_{dc}$ , $I_C=0$ )	---	0.1	$\mu A_{dc}$

### ON CHARACTERISTICS

$h_{FE(1)}$	DC Current Gain ( $I_C=50mA_{dc}$ , $V_{CE}=1.0V_{dc}$ )	85	375	---
$h_{FE(2)}$	DC Current Gain ( $I_C=1A_{dc}$ , $V_{CE}=1.0V_{dc}$ )	60	---	---
$h_{FE(3)}$	DC Current Gain ( $I_C=5mA_{dc}$ , $V_{CE}=10V_{dc}$ )	50	---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C=1A_{dc}$ , $I_B=100mA_{dc}$ )	---	0.5	Vdc
$V_{BE(on)}$	Base-Emitter On Voltage(1) ( $I_C=5mA_{dc}$ , $V_{CE}=10V_{dc}$ )	---	0.62 (Typ)	Vdc
$V_{BE(on)}$	Base-Emitter On Voltage(2) ( $I_C=1A_{dc}$ , $V_{CE}=1V_{dc}$ )	---	1	Vdc

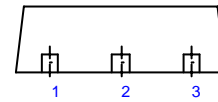
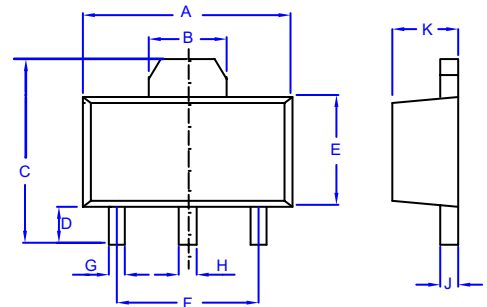
### SMALL-SIGNAL CHARACTERISTICS

$f_T$	Transition Frequency ( $I_C=10mA_{dc}$ , $V_{CE}=5V_{dc}$ , $f=100MHz$ )	40	---	MHz
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### CLASSIFICATION OF $h_{FE(1)}$

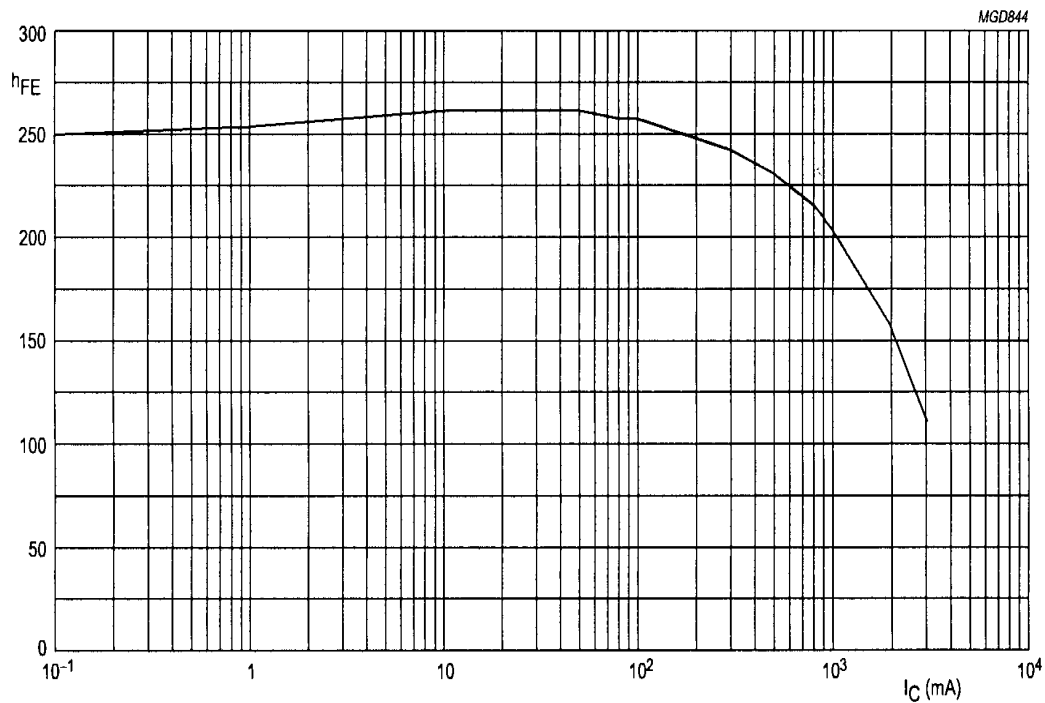
Rank	BC868-10	BC868-16	BC868-25
Range	85-160	120-200	160-375
Marking	CBC	CCC	CDC

### SOT-89



1. BASE
2. COLLECTOR
3. EMITTER

DIM	DIMENSIONS				NOTES
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.173	.181	4.39	4.60	
B	.061	----	1.55	----	REF.
C	.154	.165	3.91	4.25	
D	.031	.039	0.80	1.00	
E	.092	.100	2.34	2.54	
F	.118	----	3.00	----	TYP
G	.013	.019	0.33	0.48	
H	.015	.021	0.38	0.53	
J	.015	.016	0.38	0.41	
K	.055	.063	1.40	1.60	



V<sub>CE</sub> = 1 V.

DC current gain; typical values.



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### Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 1Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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