



Micro Commercial Components



Micro Commercial Components  
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## BC857BM

## PNP Plastic-Encapsulate Transistors

### Features

- Halogen free available upon request by adding suffix "-HF"
- Low Current
- Low Voltage
- Ultra-small Surface Mount Package
- 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
- Marking:D2

### Maximum Ratings @ 25°C Unless Otherwise Specified

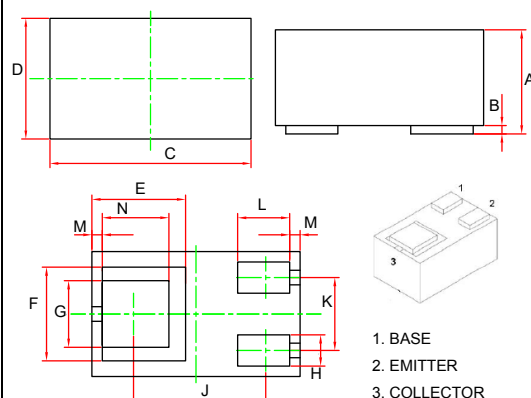
Symbol	Rating	Rating	Unit
$V_{CEO}$	Collector-Emitter Voltage	-45	V
$V_{CBO}$	Collector-Base Voltage	-50	V
$V_{EBO}$	Emitter-Base Voltage	-6	V
$I_C$	Collector Current	-100	mA
$R_{JA}$	Thermal Resistance Junction to Ambient	1250	°C/W
$T_J$	Operating Junction Temperature	-55 to +150	°C
$T_{STG}$	Storage Temperature	-55 to +150	°C

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

Symbol	Parameter	Min	Typ	Max	Units
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ( $I_C=-10mA$ , $I_E=0$ )	-45	---	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C=-10mA$ , $I_E=0$ )	-50	---	---	Vdc
$V_{(BR)EBO}$	Collector-Emitter Breakdown Voltage ( $I_E=-10mA$ , $I_C=0$ )	-6	---	---	Vdc
$I_{CBO}$	Collector Cutoff Current ( $V_{CB}=-30V$ , $I_E=0V$ )	---	---	-15	nAdc
$I_{EBO}$	Emitter Cutoff Current ( $V_{EB}=-5V$ , $I_C=0V$ )	---	---	-15	nAdc
$h_{FE}$	DC Current Gain ( $I_C=-2mA$ , $V_{CE}=-5V$ )	220	---	475	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage * ( $I_C=-10mA$ , $I_E=-0.5mA$ ) ( $I_C=-100mA$ , $I_E=-5mA$ )	---	---	-200 -400	mVdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage * ( $I_C=-10mA$ , $I_E=-0.5mA$ ) ( $I_C=-100mA$ , $I_E=-5mA$ )	---	-700 -900	---	mVdc
$V_{BE}$	Base-Emitter Voltage * ( $I_C=-2mA$ , $V_{CE}=-5V$ ) ( $I_C=-10mA$ , $V_{CE}=-5V$ )	---	---	-700 -770	mVdc
$f_T$	Transition Frequency ( $V_{CE}=-5V$ , $I_C=-10mA$ , $f=100MHz$ )	100	---	---	MHz
$C_{ob}$	Output Capacitance ( $V_{CB}=-10V$ , $f=1.0MHz$ , $I_E=0$ )	---	2.5	---	pF
NF	Noise Figure ( $V_{CE}=-5V$ , $I_E=-0.2mA$ , $f=1kHz$ , $R_S=1k\Omega$ , $B=200Hz$ )	---	10	---	dB

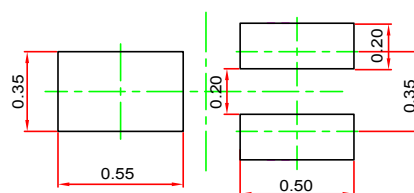
\*Pulse test: pulse width  $\leq 300\mu s$ , duty cycles  $\leq 2.0\%$ .

### SOT-883

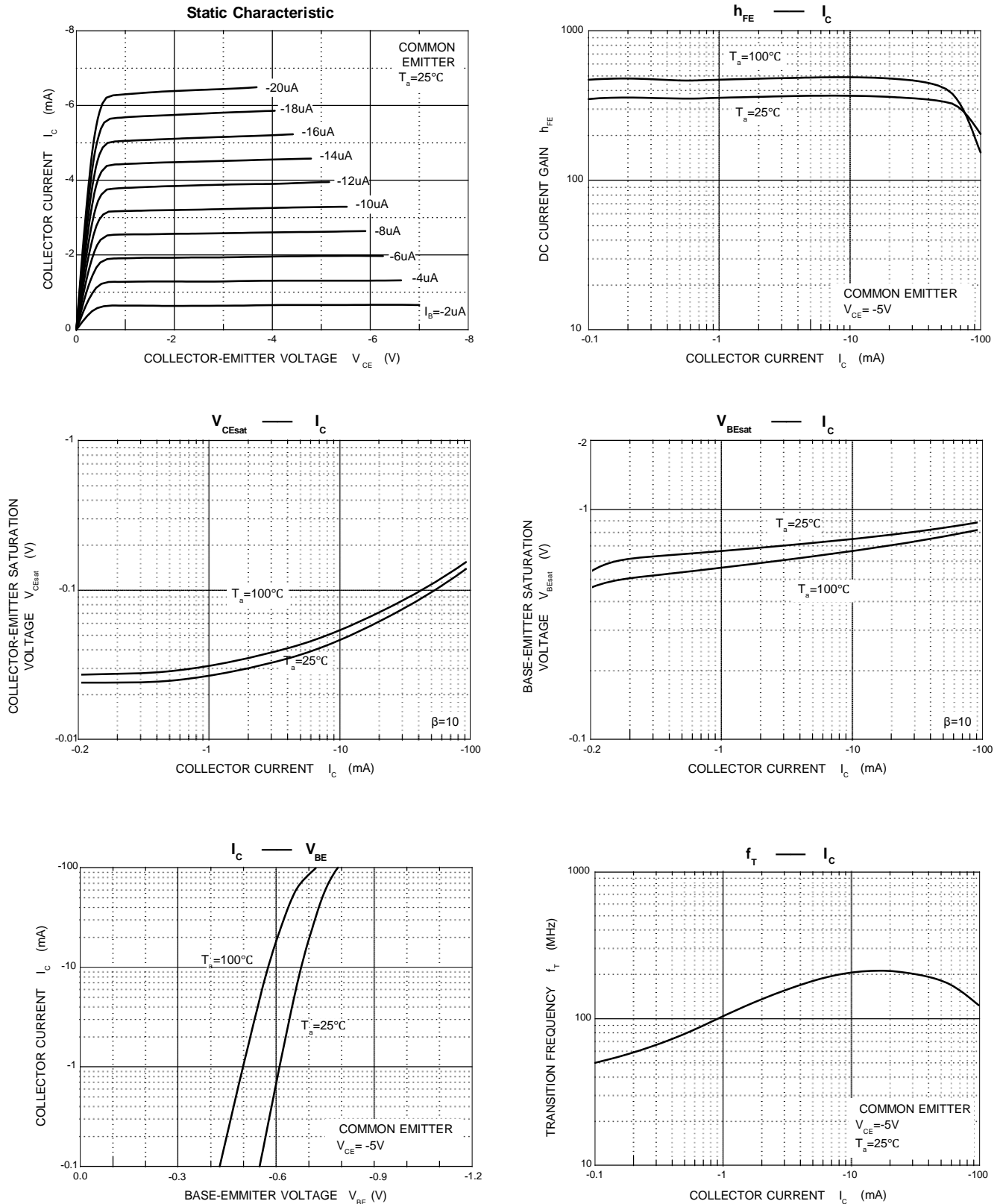


DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.018	0.022	0.450	0.550	
B	0.000	0.004	0.010	0.100	
C	0.037	0.041	0.950	1.050	
D	0.022	0.026	0.550	0.650	
E	0.018REF.		0.450REF.		
F	0.018REF.		0.450REF.		
G	0.011	0.015	0.270	0.370	
H	0.004	0.008	0.100	0.200	
J	0.025REF.		0.635REF.		
K	0.012	0.016	0.300	0.400	
L	0.008	0.012	0.200	0.300	
M	0.002REF.		0.050REF.		
N	0.011	0.015	0.270	0.370	

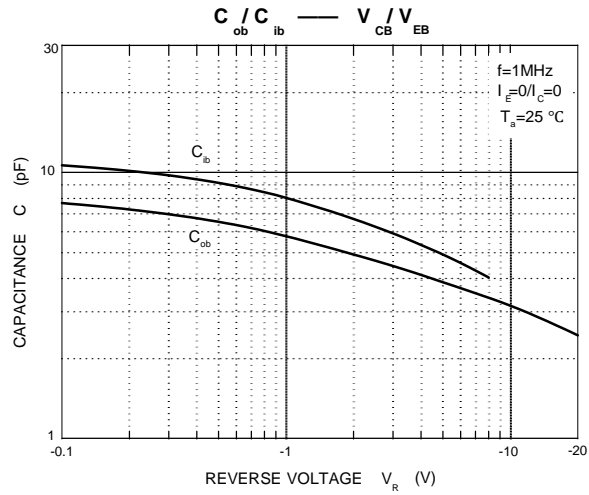
### Suggested Solder Pad Layout (mm)



## Typical Characteristics



## Typical Characteristics





## Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 10Kpcs/Reel

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

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