



Micro Commercial Components



Micro Commercial Components  
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# BC847BM

## NPN 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:D5

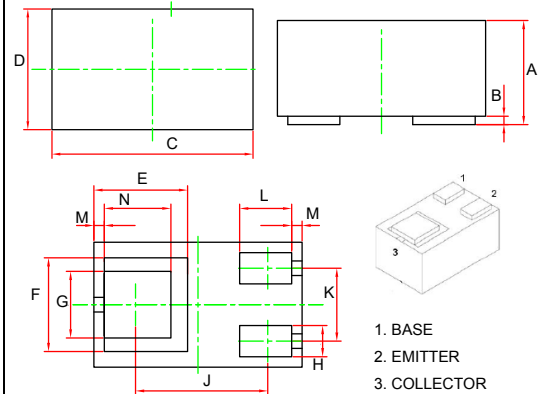
### Maximum Ratings @ 25°C Unless Otherwise Specified

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	0.1	A
$R_{\theta JA}$	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 ( $I_C=10\text{mAdc}$ , $I_B=0$ )	45	---	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C=10\mu\text{Adc}$ , $I_E=0$ )	50	---	---	Vdc
$V_{(BR)EBO}$	Collector-Emitter Breakdown Voltage ( $I_E=1\mu\text{Adc}$ , $I_C=0$ )	6	---	---	Vdc
$I_{CBO}$	Collector Cutoff Current ( $V_{CB}=30\text{Vdc}$ , $I_E=0\text{Vdc}$ )	---	---	15	nAdc
$I_{EBO}$	Emitter Cutoff Current ( $V_{EB}=5\text{Vdc}$ , $I_C=0\text{Vdc}$ )	---	---	15	nAdc
$h_{FE}$	DC Current Gain ( $I_C=2\text{mAdc}$ , $V_{CE}=5\text{Vdc}$ )	220	---	475	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C=10\text{mAdc}$ , $I_B=0.5\text{mAdc}$ ) ( $I_C=100\text{mAdc}$ , $I_B=5\text{mAdc}$ )	---	---	200 400	mVdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ( $I_C=10\text{mAdc}$ , $I_B=0.5\text{mAdc}$ ) ( $I_C=100\text{mAdc}$ , $I_B=5\text{mAdc}$ )	---	700 900	---	mVdc
$V_{BE}$	Base-Emitter Voltage ( $I_C=2\text{mAdc}$ , $V_{CE}=5\text{Vdc}$ ) ( $I_C=10\text{mAdc}$ , $V_{CE}=5\text{Vdc}$ )	---	---	700 770	mVdc
$f_T$	Transition Frequency ( $V_{CE}=5\text{Vdc}$ , $I_C=10\text{mAdc}$ , $f=100\text{MHz}$ )	100	---	---	MHz
$C_{ob}$	Output Capacitance ( $V_{CB}=10\text{Vdc}$ , $f=1.0\text{MHz}$ , $I_E=0$ )	---	2.5	---	pF
NF	Noise Figure ( $V_{CE}=5\text{V}$ , $I_E=0.2\text{mA}$ , $f=1\text{KHz}$ , $R_S=1\text{k}\Omega$ , $B=200\text{Hz}$ )	---	---	10	dB

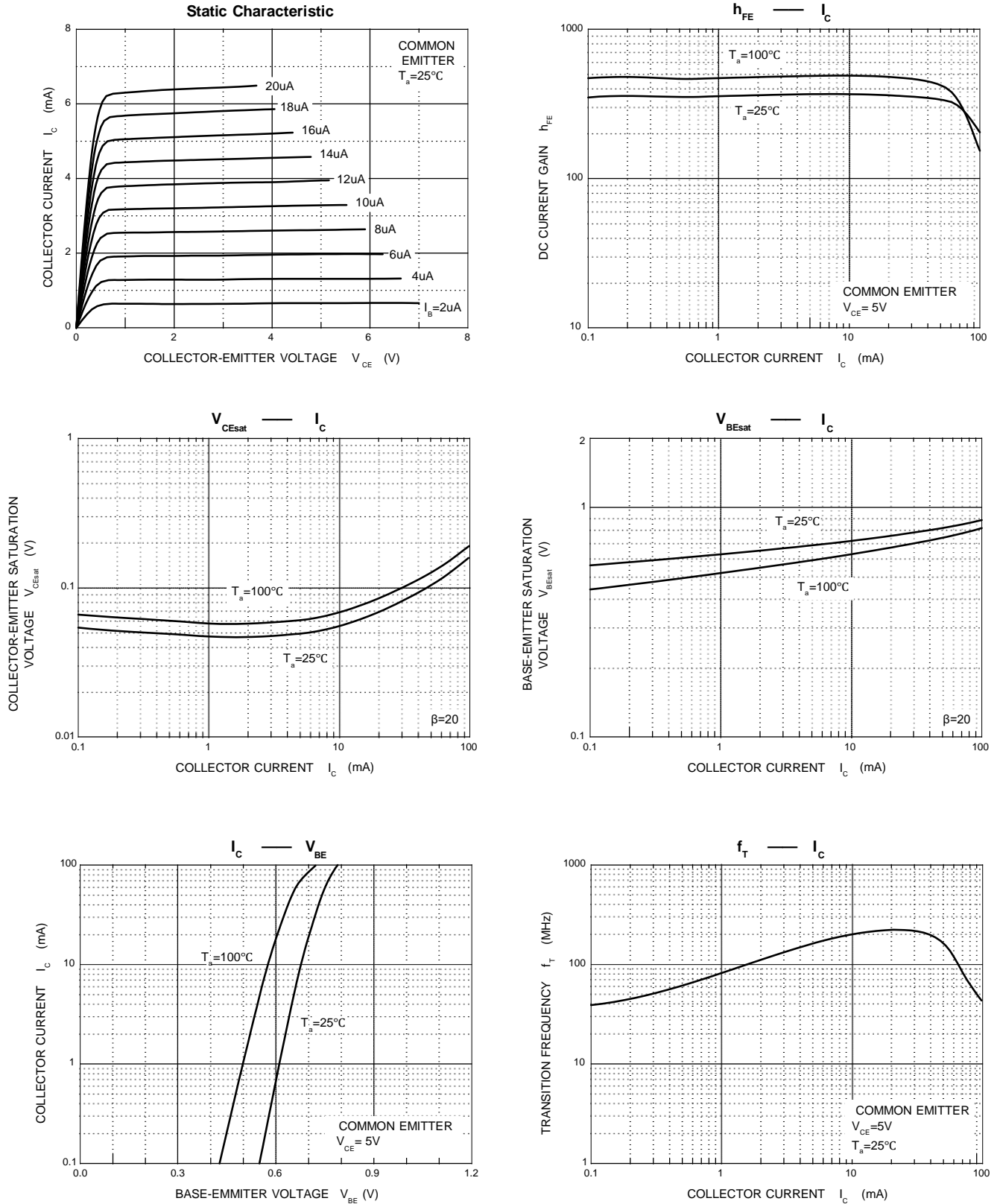
### SOT-883



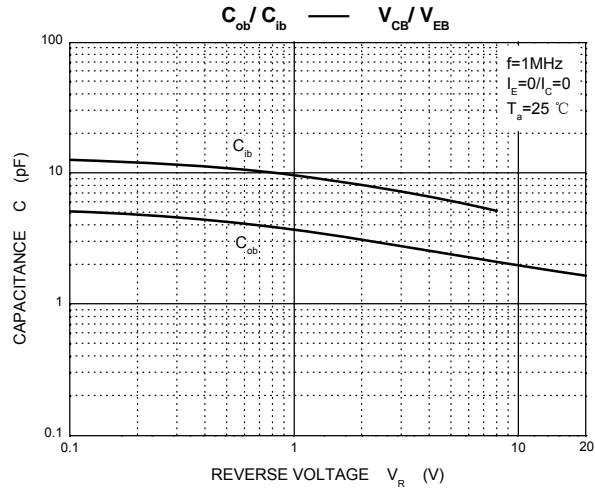
DIMENSIONS

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	

## 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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