



Micro Commercial Components

Micro Commercial Components  
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## BC857AT, BT, CT

### Features

- Halogen free available upon request by adding suffix "-HF"
- Epitaxial Die Construction
- For Switching and AF Amplifier Applications
- Lead Free Finish/Rohs Compliant ("P" Suffix designates Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

### 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	-6.0	V
$I_C$	Collector Current-Continuous	-100	mA
$P_d$	Power Dissipation	150	mW
$T_J$	Operating Junction Temperature	-55 to +150	°C
$T_{STG}$	Storage Temperature	-55 to +150	°C

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

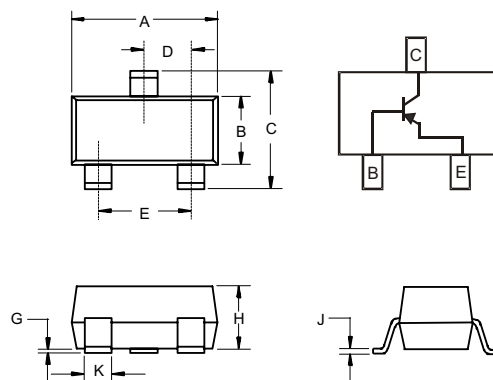
Symbol	Parameter	Min	Typ	Max	Units
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ( $I_C = -10mA$ , $I_B = 0$ )	-45	---	---	V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C = -10\mu A$ , $I_B = 0$ )	-50	---	---	V
$V_{(BR)EBO}$	Collector-Emitter Breakdown Voltage ( $I_E = -1\mu A$ , $I_C = 0$ )	-6	---	---	V
$I_{CBO}$	Collector Cutoff Current ( $V_{CB} = -30V$ )	---	---	-15	nA
$h_{FE}$	DC Current Gain      Current Gain A ( $V_{CE} = -5.0V$ , $I_C = -2.0mA$ )      B C	125 220 420	---	250 475 800	---
$V_{CE(SAT)}$	Collector-Emitter Saturation Voltage ( $I_C = -10mA$ , $I_B = -0.5mA$ ) ( $I_C = -100mA$ , $I_B = -5.0mA$ )	---	---	-300 -650	mV
$V_{BE(SAT)}$	Base-Emitter Saturation Voltage ( $I_C = -10mA$ , $I_B = -0.5mA$ ) ( $I_C = -100mA$ , $I_B = -5.0mA$ )	---	-700 -900	---	mV
$V_{BE(ON)}$	Base-Emitter Voltage ( $V_{CE} = -5.0V$ , $I_C = -2.0mA$ ) ( $V_{CE} = -5.0V$ , $I_C = -10mA$ )	-600 ---	---	-750 -820	mV
Noise Figure	NF ( $I_C = -0.2mA$ , $V_{CE} = -5.0V$ , $R_S = 2.0K\Omega$ , $f = 1.0KHz$ , $BW = 200Hz$ )	---	---	10	dB
$f_T$	Transition Frequency ( $V_{CE} = -5.0V$ , $I_C = -10mA$ , $f = 100MHz$ )	100	---	---	MHz
$C_{oB}$	Output Capacitance ( $V_{CB} = -10V$ , $f = 1.0MHz$ )	---	---	4.5	pF

### Classification OF $h_{FE}$

Rank	AT	BT	CT
Marking	3E	3F	3G

## PNP SMALL SIGNAL SURFACE MOUNT TRANSISTOR

### SOT-523



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.059	.067	1.50	1.70	
B	.030	.033	0.75	0.85	
C	.057	.069	1.45	1.75	
D	.020 Nominal		0.50 Nominal		
E	.035	.043	0.90	1.10	
G	.000	.004	.000	.100	
H	.028	.031	.70	0.80	
J	.004	.008	.100	.200	
K	.010	.014	.25	.35	

Typical Characteristics

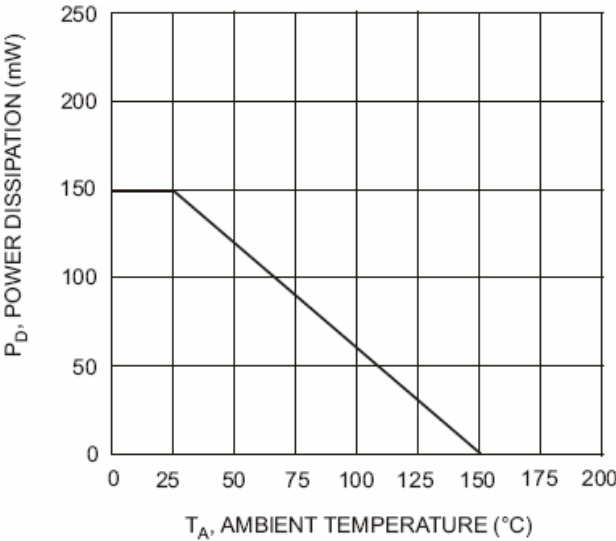


Fig. 1, Max Power Dissipation vs Ambient Temperature

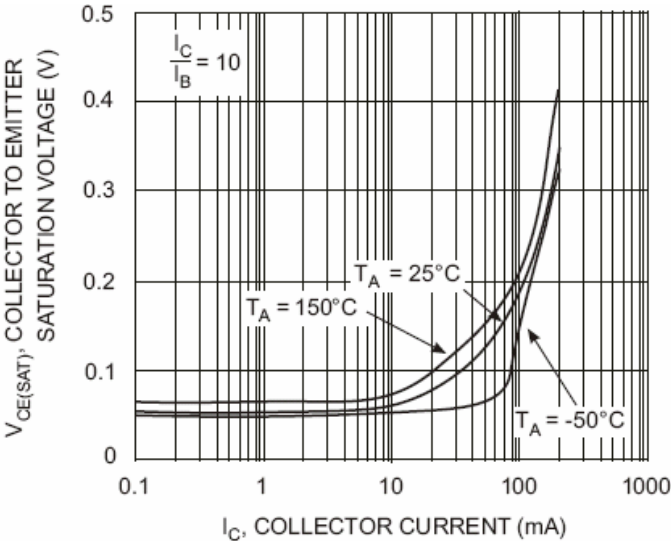


Fig. 2 Collector Emitter Saturation Voltage vs. Collector Current

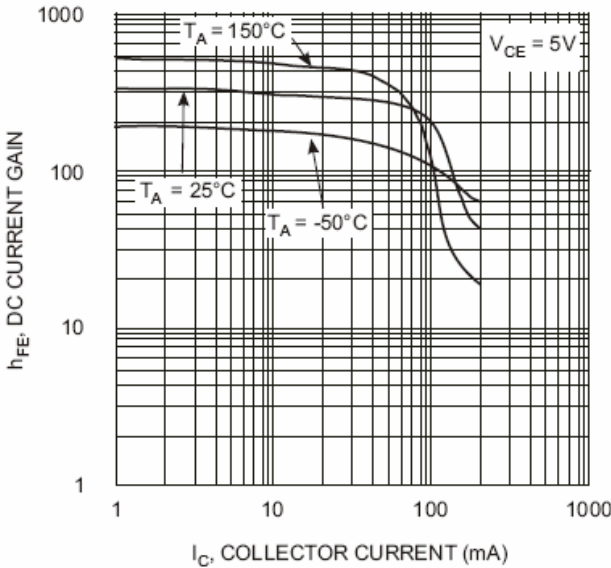


Fig. 3, DC Current Gain vs. Collector Current

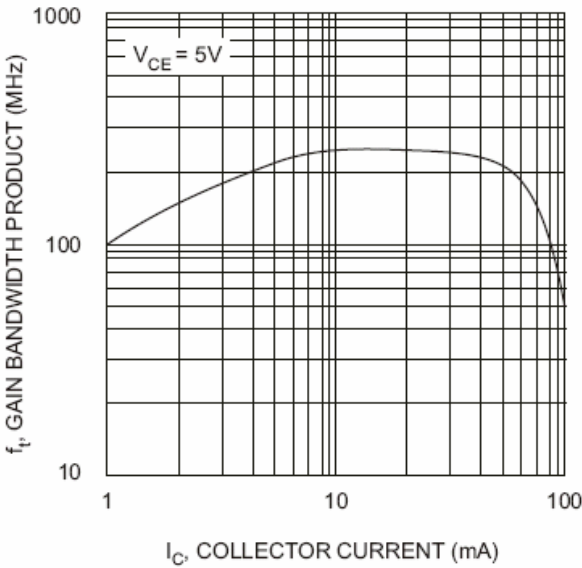


Fig. 4, Gain Bandwidth Product vs Collector Current



TM

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**Ordering Information :**

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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

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