



Micro Commercial Components

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BC857BV

Features

- Epitaxial Die Construction
- Complementary NPN Type Available (BC847BV)
- Ultra-small Surface Mount Package
- Lead Free Plating
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1
- Marking:K5V

Maximum Ratings @ 25°C Unless Otherwise Specified

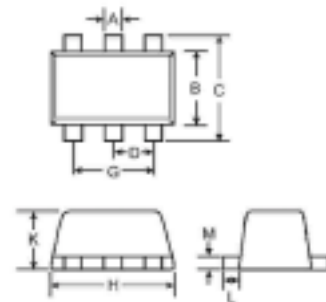
Symbol	Rating	Rating	Unit
V_{CEO}	Collector-Emitter Voltage	-45	V
V_{CBO}	Collector-Base Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-0.1	A
P_C	Collector Dissipation	0.15	W
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	833	°C/W
T_J	Operating Junction Temperature	-55 to +150	°C
T_{STG}	Storage Temperature	-55 to +150	°C

Electrical Characteristics @ 25°C Unless Otherwise Specified

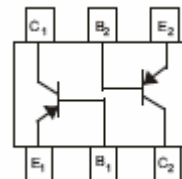
Symbol	Parameter	Min	Typ	Max	Units
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ($I_C=-10\text{mA}$, $I_B=0$)	-45	---	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C=-10\text{uA}$, $I_E=0$)	-50	---	---	Vdc
$V_{(BR)EBO}$	Collector-Emitter Breakdown Voltage ($I_E=-1\text{uA}$, $I_C=0$)	-6	---	---	Vdc
I_{CBO}	Collector Cutoff Current ($V_{CB}=-30\text{Vdc}$, $I_E=0\text{Vdc}$)	---	---	-15	nAdc
h_{FE}	DC Current Gain ($I_C=-2\text{mA}$, $V_{CE}=-5\text{Vdc}$)	200	---	475	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C=-10\text{mA}$, $I_B=-0.5\text{mA}$) ($I_C=-100\text{mA}$, $I_B=-5\text{mA}$)	---	---	-0.1 -0.4	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ($I_C=-10\text{mA}$, $I_B=-0.5\text{mA}$) ($I_C=-100\text{mA}$, $I_B=-5\text{mA}$)	---	-0.7 -0.9	---	Vdc
V_{BE}	Base-Emitter Voltage ($I_C=-2\text{mA}$, $V_{CE}=-5\text{Vdc}$) ($I_C=-10\text{mA}$, $V_{CE}=-5\text{Vdc}$)	-0.6 ---	---	-0.75 -0.82	Vdc
f_T	Transition Frequency ($V_{CE}=-5\text{Vdc}$, $I_C=-10\text{mA}$, $f=100\text{MHz}$)	100	---	---	MHz
C_{ob}	Output Capacitance ($V_{CB}=-10\text{Vdc}$, $f=1.0\text{MHz}$, $I_E=0$)	---	---	4.5	pF
NF	Noise Figure ($V_{CE}=-5\text{V}$, $I_C=-0.2\text{mA}$, $f=1\text{KHz}$, $R_S=2\text{k}\Omega$, $BW=200\text{Hz}$)	---	---	10	dB

PNP Plastic-Encapsulate Transistors

SOT-563



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.006	.011	0.15	0.30	
B	.043	.049	1.10	1.25	
C	.061	.067	1.55	1.70	
D	.020		0.50		
G	.035	.043	0.90	1.10	
H	.059	.067	1.50	1.70	
K	.022	.023	0.56	0.60	
L	.004	.011	0.10	0.30	
M	.004	.007	0.10	0.18	



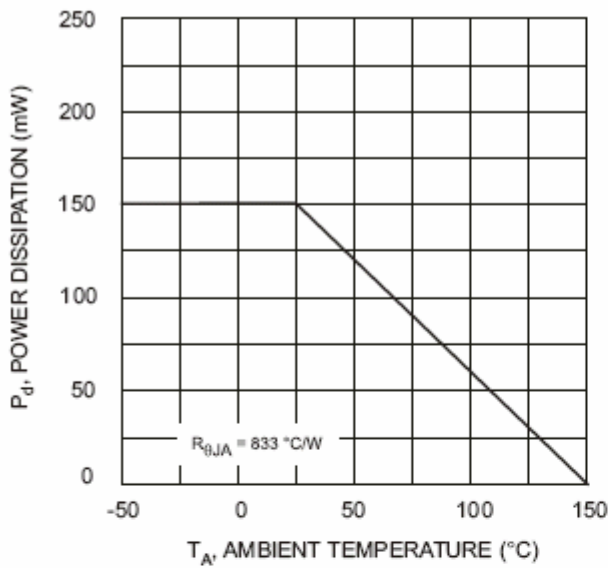


Fig. 1 Derating Curve - Total

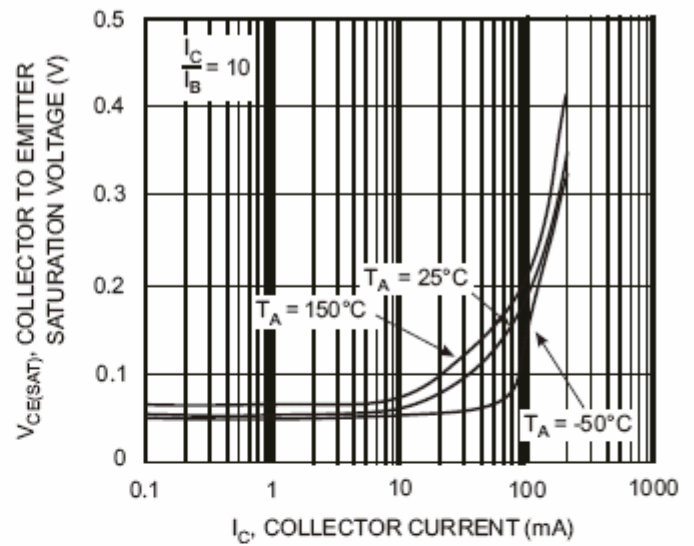


Fig. 2 Collector Emitter Saturation Voltage vs. Collector Current

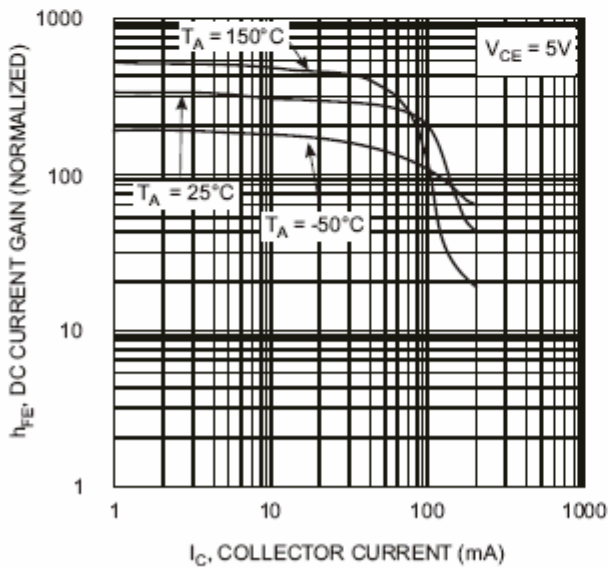


Fig. 3, DC Current Gain vs. Collector Current

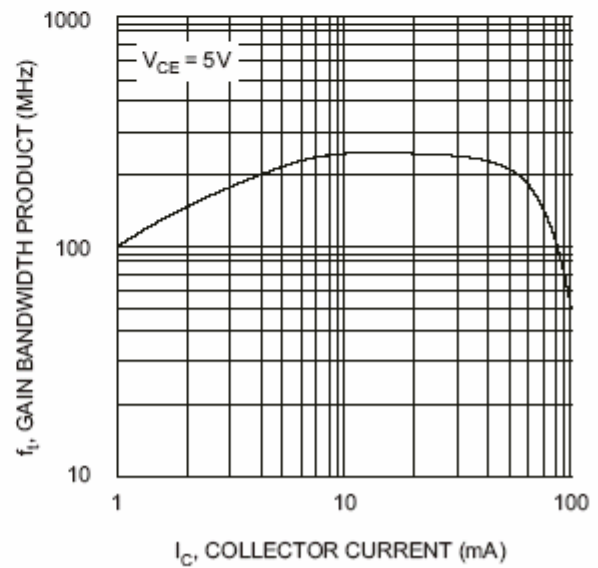


Fig. 4, Gain Bandwidth Product vs Collector Current

Ordering Information

Device	Packing
(Part Number)-TP	Tape&Reel;3Kpcs/Reel

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