



Micro Commercial Components



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20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

BC847BV

NPN

Plastic-Encapsulate Transistors

Features

- Halogen free available upon request by adding suffix "-HF"
- Epitaxial Die Construction
- Complementary PNP Type Available (BC857BV)
- 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:K4V

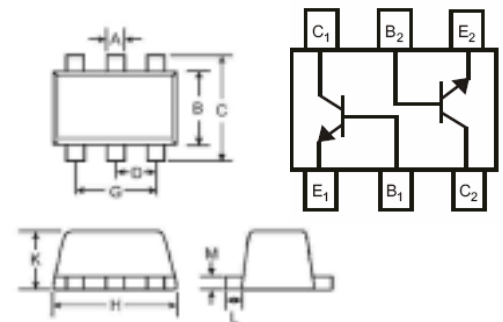
Maximum Ratings @ 25°C Unless Otherwise Specified

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-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 ($I_C=10\text{mA}$, $I_E=0$)	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
I_{EBO}	Emitter Cutoff Current ($V_{EB}=5\text{Vdc}$, $I_C=0\text{Vdc}$)	---	---	100	nAdc
h_{FE}	DC Current Gain ($I_C=2\text{mA}$, $V_{CE}=5\text{Vdc}$)	200	---	450	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C=10\text{mA}$, $I_B=0.5\text{mA}$) ($I_C=100\text{mA}$, $I_B=5\text{mA}$)	---	---	100 300	mVdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ($I_C=10\text{mA}$, $I_B=0.5\text{mA}$) ($I_C=100\text{mA}$, $I_B=5\text{mA}$)	---	700 900	---	mVdc
V_{BE}	Base-Emitter Voltage ($I_C=2\text{mA}$, $V_{CE}=5\text{Vdc}$) ($I_C=10\text{mA}$, $V_{CE}=5\text{Vdc}$)	580	660	700 770	mVdc
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 ($V_{CE}=5\text{V}$, $BW=200\text{Hz}$, $f=1\text{KHz}$, $R_S=2k\Omega$)	---	---	10	dB

SOT-563



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	

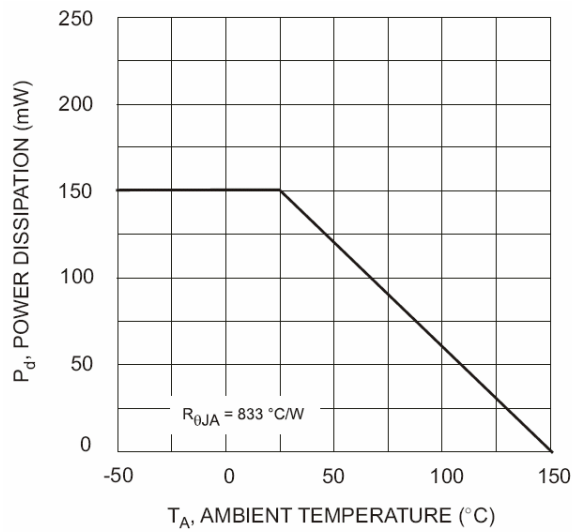


Fig. 1, Derating Curve - Total

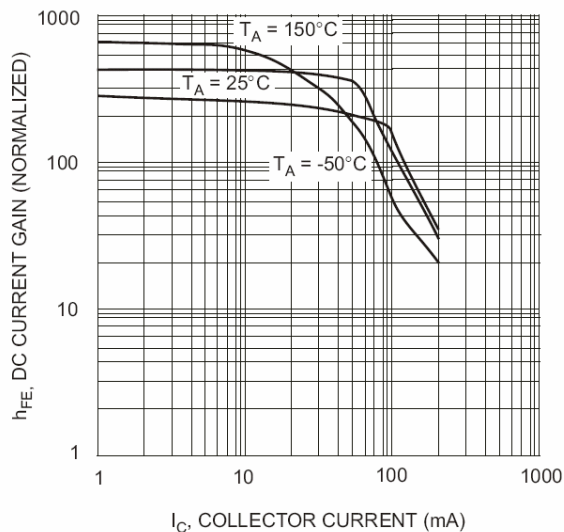


Fig. 3, DC Current Gain vs Collector Current

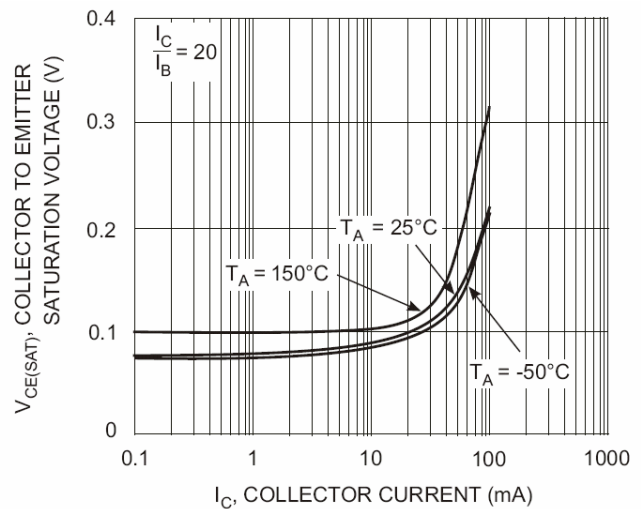


Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current

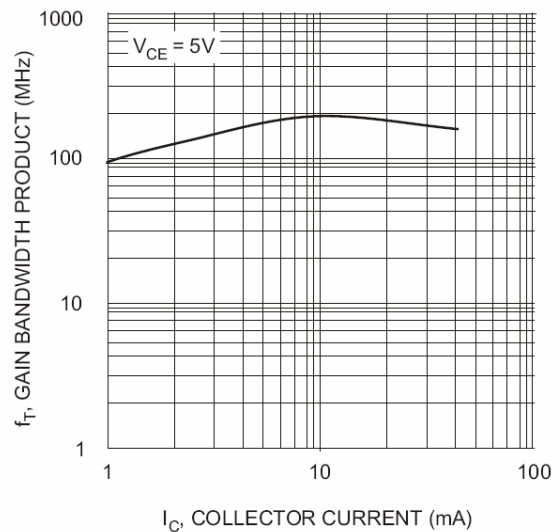


Fig. 4, Gain Bandwidth Product vs Collector Current

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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