



Micro Commercial Components

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BC847BV

Features

- Epitaxial Die Construction
- Complementary PNP Type Available (BC857BV)
- Ultra-small Surface Mount Package
- Lead Free Plating
- Marking:K4V
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1

Maximum Ratings @ 25°C Unless Otherwise Specified

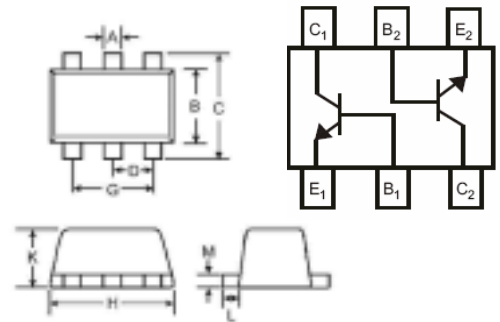
Symbol	Rating	Rating	Unit
V _{CEO}	Collector-Emitter Voltage	45	V
V _{CBO}	Collector-Base Voltage	50	V
V _{EBO}	Emitter-Base Voltage	6	V
I _C	Collector Current-Continuous	0.1	A
P _C	Collector Dissipation	0.15	W
R ^θ _{JA}	Thermal Resistance Junction to Ambient	833	°C/W
T _J	Operating Junction Temperature	-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 =10mA _{dc} , I _B =0)	45	---	---	Vdc
V _{(BR)CBO}	Collector-Base Breakdown Voltage (I _C =10mA _{dc} , I _E =0)	50	---	---	Vdc
V _{(BR)EBO}	Collector-Emitter Breakdown Voltage (I _E =1mA _{dc} , I _C =0)	6	---	---	Vdc
I _{CBO}	Collector Cutoff Current (V _{CB} =30Vdc, I _E =0Vdc)	---	---	15	nA _{dc}
I _{EBO}	Emitter Cutoff Current (V _{EB} =5Vdc, I _C =0Vdc)	---	---	100	nA _{dc}
h _{FE}	DC Current Gain (I _C =2mA _{dc} , V _{CE} =5Vdc)	200	---	450	---
V _{CE(sat)}	Collector-Emitter Saturation Voltage (I _C =10mA _{dc} , I _B =0.5mA _{dc}) (I _C =100mA _{dc} , I _B =5mA _{dc})	---	---	100 300	mVdc
V _{BE(sat)}	Base-Emitter Saturation Voltage (I _C =10mA _{dc} , I _B =0.5mA _{dc}) (I _C =100mA _{dc} , I _B =5mA _{dc})	---	700 900	---	mVdc
V _{BE}	Base-Emitter Voltage (I _C =2mA _{dc} , V _{CE} =5Vdc) (I _C =10mA _{dc} , V _{CE} =5Vdc)	580	660	700 770	mVdc
f _T	Transition Frequency (V _{CE} =5Vdc, I _C =10mA _{dc} , f=100MHz)	100	---	---	MHz
C _{ob}	Output Capacitance (V _{CB} =10Vdc, f=1.0MHz, I _E =0)	---	---	4.5	pF
NF	Noise Figure (V _{CE} =5V, BW=200Hz, f=1KHz, R _S =2kΩ)	---	---	10	dB

NPN Plastic-Encapsulate Transistors

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	

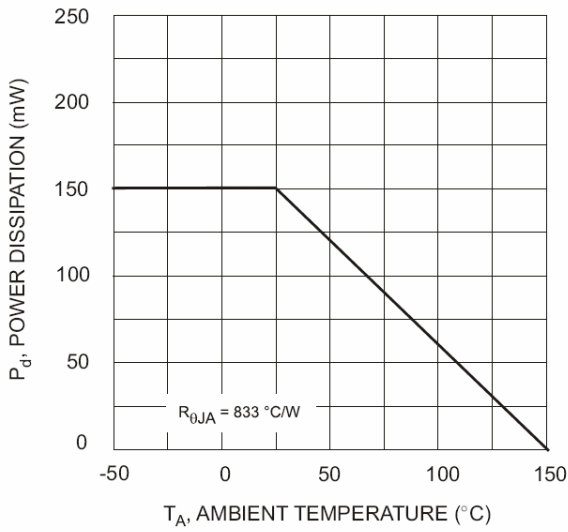


Fig. 1, Derating Curve - Total

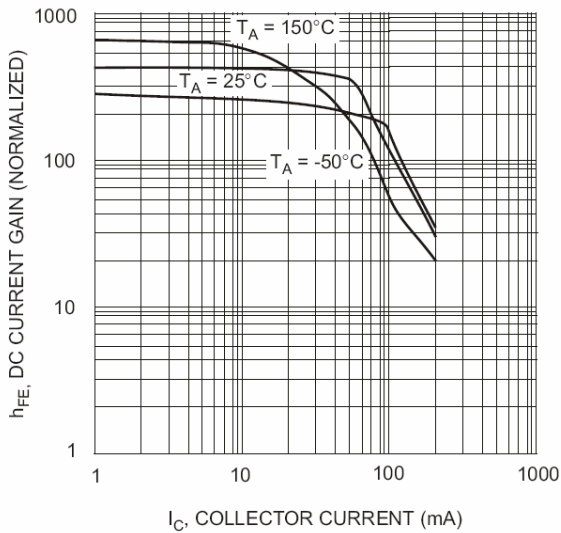


Fig. 3, DC Current Gain vs Collector Current

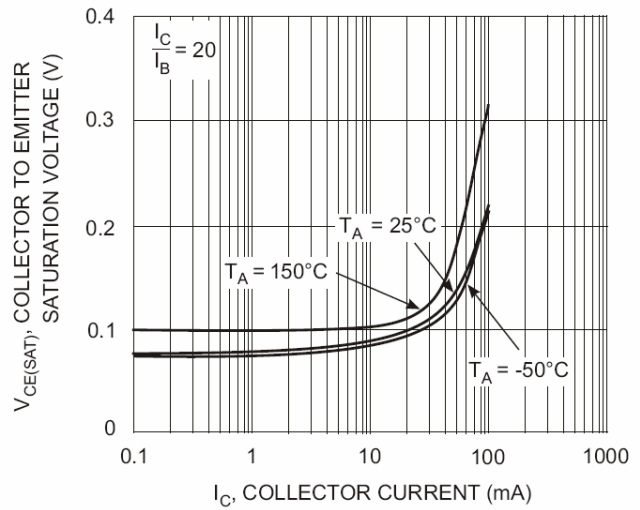


Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current

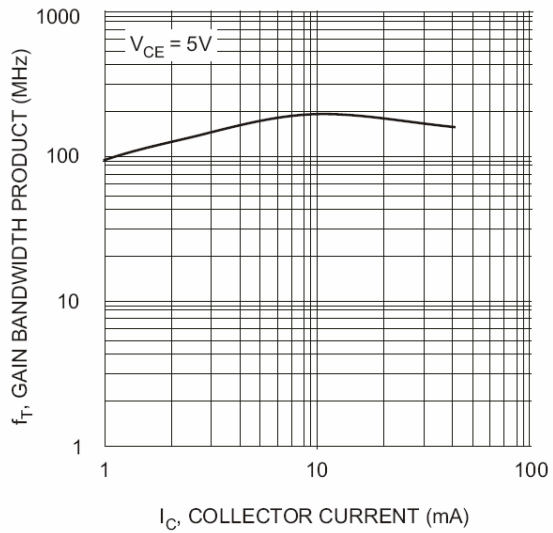


Fig. 4, Gain Bandwidth Product vs Collector Current

Ordering Information

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

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