



Micro Commercial Components

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BC847BV

Features

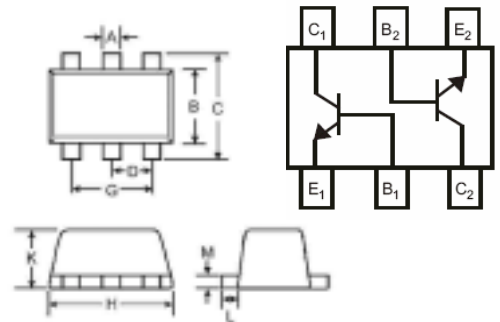
- Epitaxial Die Construction
- Complementary PNP Type Available (BC857BV)
- Ultra-small Surface Mount Package
- Lead Free Plating
- Marking:K4V
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0

NPN Plastic-Encapsulate Transistors

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

SOT-563



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	---	---	Vdc
V _{(BR)CBO}	Collector-Base Breakdown Voltage (I _C =10mA, I _E =0)	50	---	---	Vdc
V _{(BR)EBO}	Collector-Emitter Breakdown Voltage (I _E =1mA, I _C =0)	6	---	---	Vdc
I _{CBO}	Collector Cutoff Current (V _{CB} =30Vdc, I _E =0Vdc)	---	---	15	nAdc
I _{EBO}	Emitter Cutoff Current (V _{EB} =5Vdc, I _C =0Vdc)	---	---	100	nAdc
h _{FE}	DC Current Gain (I _C =2mA, V _{CE} =5Vdc)	200	---	450	---
V _{CE(sat)}	Collector-Emitter Saturation Voltage (I _C =10mA, I _B =0.5mA) (I _C =100mA, I _B =5mA)	---	---	100 300	mVdc
V _{BE(sat)}	Base-Emitter Saturation Voltage (I _C =10mA, I _B =0.5mA) (I _C =100mA, I _B =5mA)	---	700 900	---	mVdc
V _{BE}	Base-Emitter Voltage (I _C =2mA, V _{CE} =5Vdc) (I _C =10mA, V _{CE} =5Vdc)	580	660	700 770	mVdc
f _T	Transition Frequency (V _{CE} =5Vdc, I _C =10mA, 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

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	

BC847BV

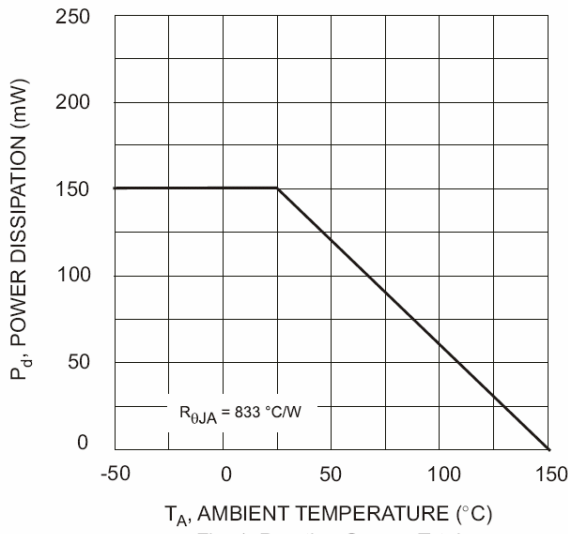


Fig. 1, Derating Curve - Total

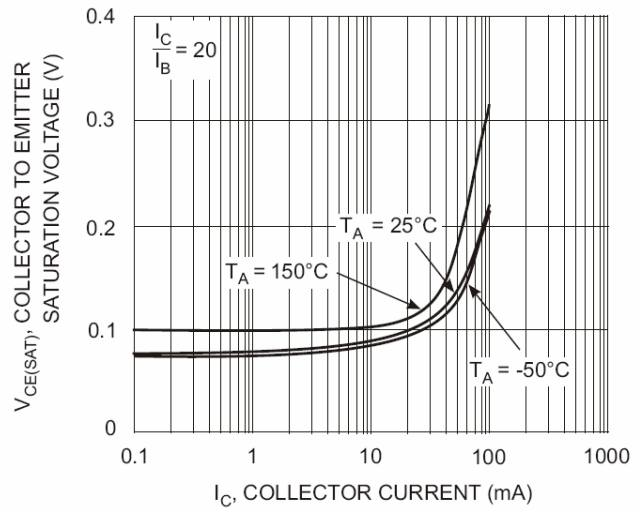


Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current

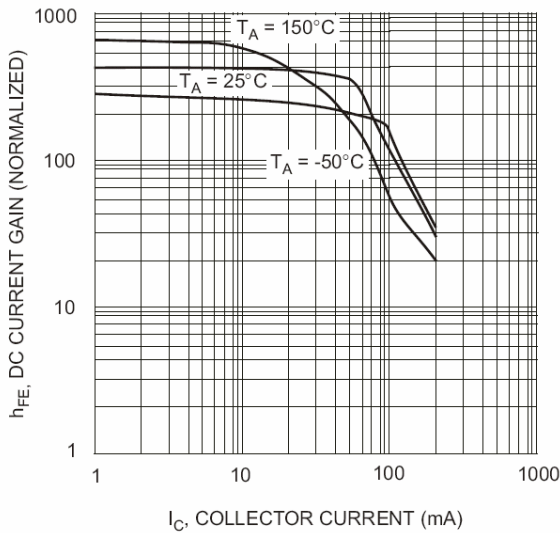


Fig. 3, DC Current Gain vs Collector Current

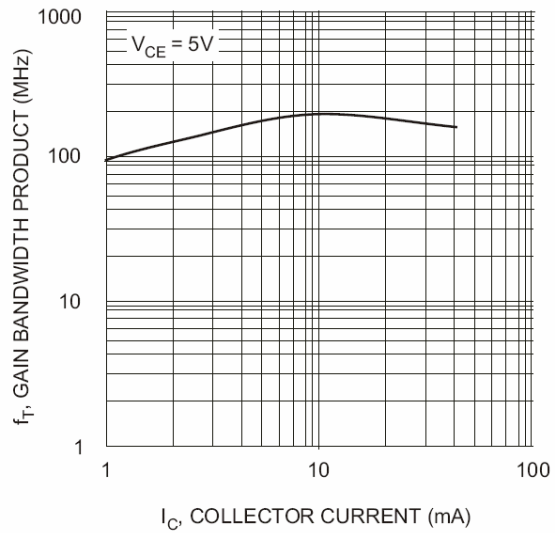


Fig. 4, Gain Bandwidth Product vs Collector Current



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