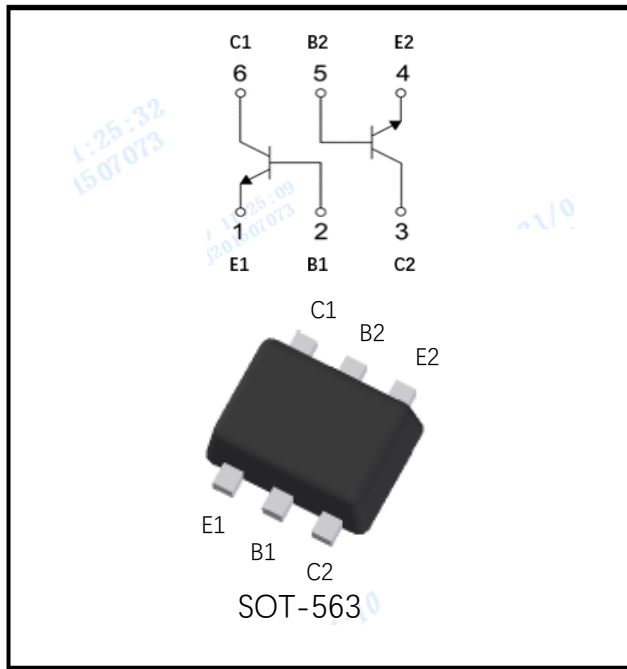


Dual NPN Small Signal Transistor



Features

- Epoxy meets UL-94 V-0 flammability rating
- Surface mount package ideally Suited for Automatic Insertion
- NPN

Mechanical Data

- **Package:** SOT-563
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:** K4V
- **Solid point:** E1 positioning point

■Maximum Ratings (Ta=25°C Unless otherwise specified)

Item	Symbol	Unit	Conditions	Value
Collector-Base Voltage	VCBO	V	IC=10μA,IE=0	50
Collector-Emitter Voltage	VCEO	V	IC =10mA,IB=0	45
Emitter-Base Voltage	VEBO	V	IE=10μA,IC=0	6
Collector Current -Continuous	IC	mA		100
Total Device Dissipation	PC	mW		150
Junction Temperature	Tj	°C		150
Storage Temperature	TSTG	°C		-55 to +150



BC847BV

■Electrical Characteristics (Ta=25℃ unless otherwise specified)

Item	Symbol	Unit	Conditions	Min	TYP	Max
Collector-base breakdown voltage	$V_{(BR)CBO}$	V	IC=10μA, IE=0	50		
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	V	IC =10mA, IB=0	45		
Emitter-base breakdown voltage	$V_{(BR)EBO}$	V	IE=10μA, IC=0	6		
Collector cut-off current	I_{CBO}	nA	VCE=30V, IB=0			15
Emitter-Base Cutoff Current	I_{EBO}	nA	VEB=5V, IC=0			100
DC current gain	h_{FE}		VCE=5V, IC=2mA	200		450
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	IC=10mA, IB=0.5mA			0.1
		V	IC=100mA, IB=5mA			0.3
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	V	IC=10mA, IB=0.5mA		0.7	
		V	IC=100mA, IB=5mA		0.9	
Base-emitter Voltage	VBE	V	VCE=5V, IC=2mA	0.58	0.66	0.7
			VCE=5V, IC=10mA			0.77
Transition frequency	Ft	MHz	VCE=5V, IC=10mA, f=100MHz	100		

■ Ordering Information (Example)

Preferred P/N	Packing Code	Unit Weight(G)	Minimum Package(Pcs)	Inner Box Quantity(Pcs)	Outer Carton Quantity(Pcs)	Delivery Mode
BC847BV	F2	Approximate 0.0035	3000	30000	120000	7" reel

■ Characteristics (Typical)

Fig. 1 - Static Characteristics

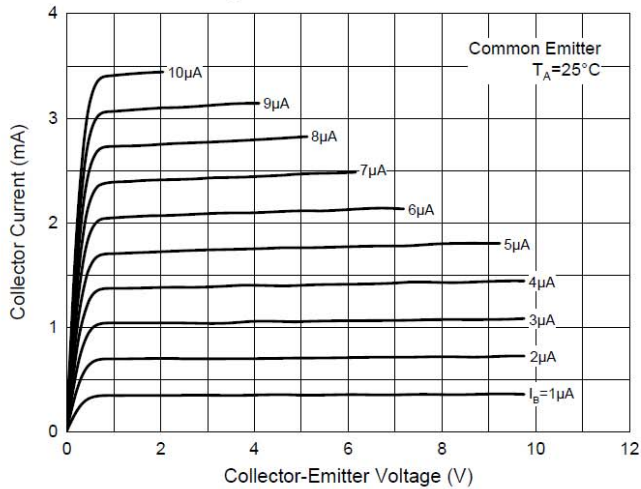


Fig. 2 - DC Current Gain Characteristics

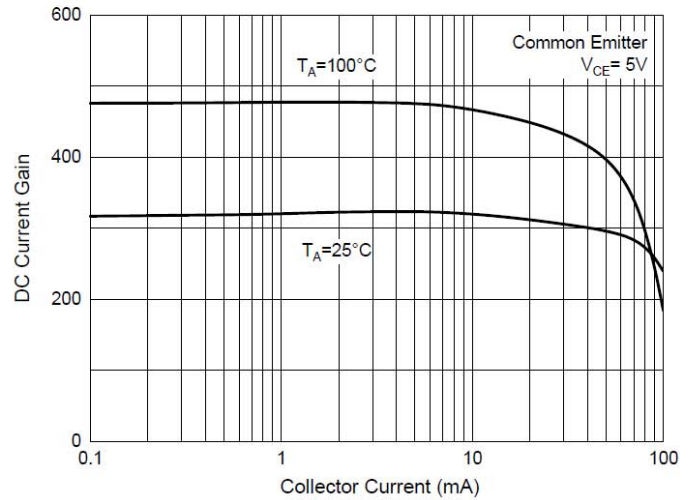


Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

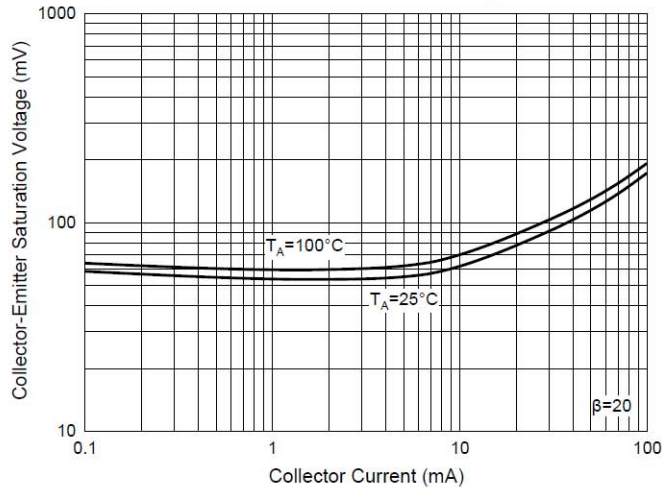


Fig. 4 - Base-Emitter Saturation Voltage Characteristics

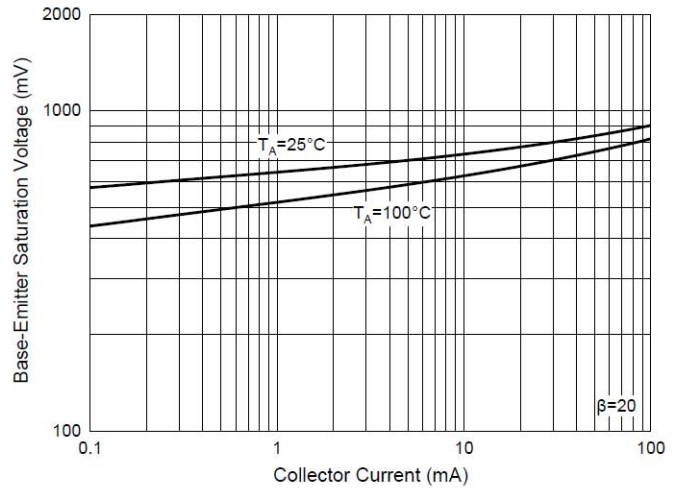


Fig. 5 - Base-Emitter Voltage Characteristics

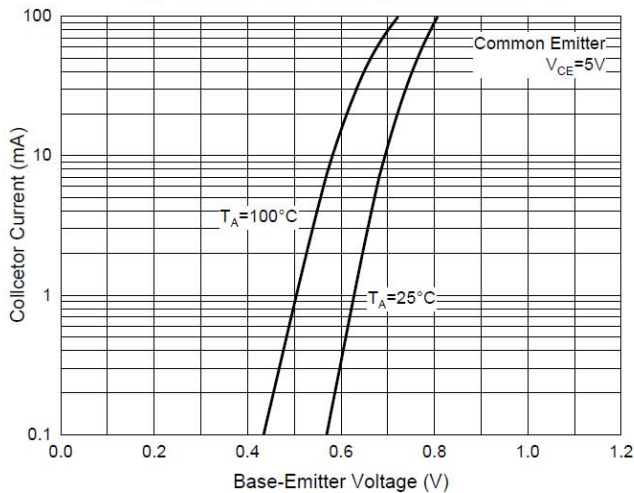
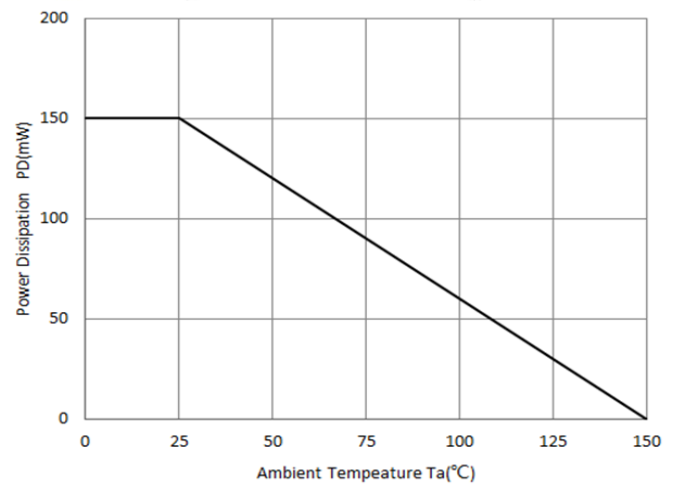


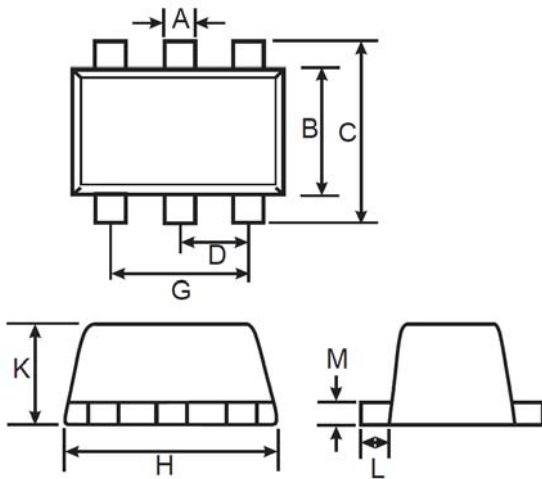
Fig. 6 - Collector Power Derating Curve





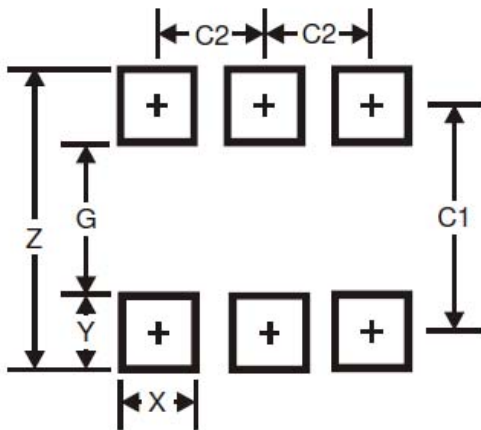
BC847BV

■ SOT-563 Package Outline Dimensions



DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.006	0.011	0.15	0.30
B	0.043	0.051	1.10	1.30
C	0.059	0.067	1.50	1.70
D	0.016	0.024	0.40	0.60
G	0.035	0.043	0.90	1.10
H	0.059	0.067	1.50	1.70
K	0.021	0.026	0.55	0.65
L	0.004	0.011	0.10	0.30
M	0.004	0.007	0.10	0.18

■ SOT-563 Suggested Pad Layout



Dimensions	Value (in mm)
Z	2.2
G	1.2
X	0.375
Y	0.5
C1	1.7
C2	0.5



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