

## Plastic-Encapsulate Transistors

### BC857BV DUAL TRANSISTOR (PNP+PNP)

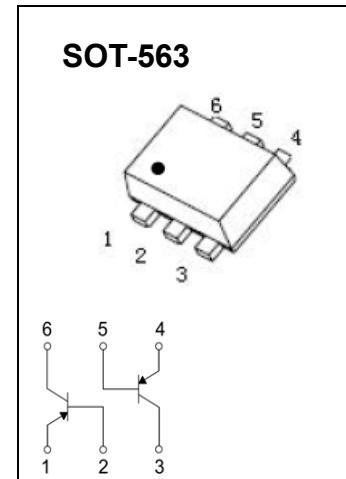
#### FEATURES

- Epitaxial Die Construction
- Complementary NPN Types Available (BC847BV)
- Ultra-Small Surface Mount Package

Marking: K5V

#### MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ unless otherwise noted)

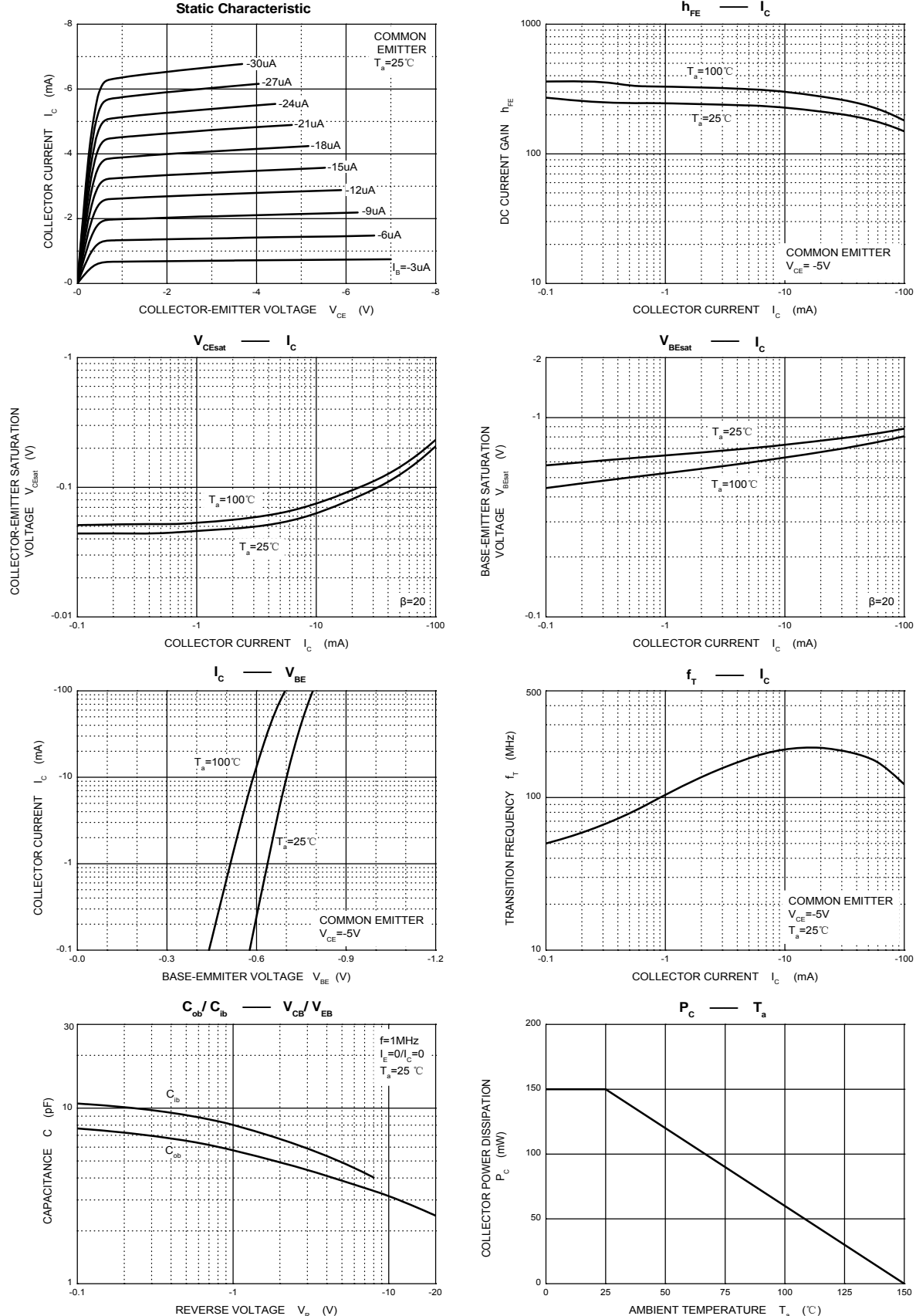
Symbol	Parameter	Value	Units
$V_{CB0}$	Collector-Base Voltage	-50	V
$V_{CEO}$	Collector-Emitter Voltage	-45	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current -Continuous	-0.1	A
$P_C$	Collector Power Dissipation	0.15	W
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	833	$^\circ\text{C/W}$
$T_J, T_{stg}$	Operation Junction and Storage Temperature Range	-55 ~ +150	$^\circ\text{C}$



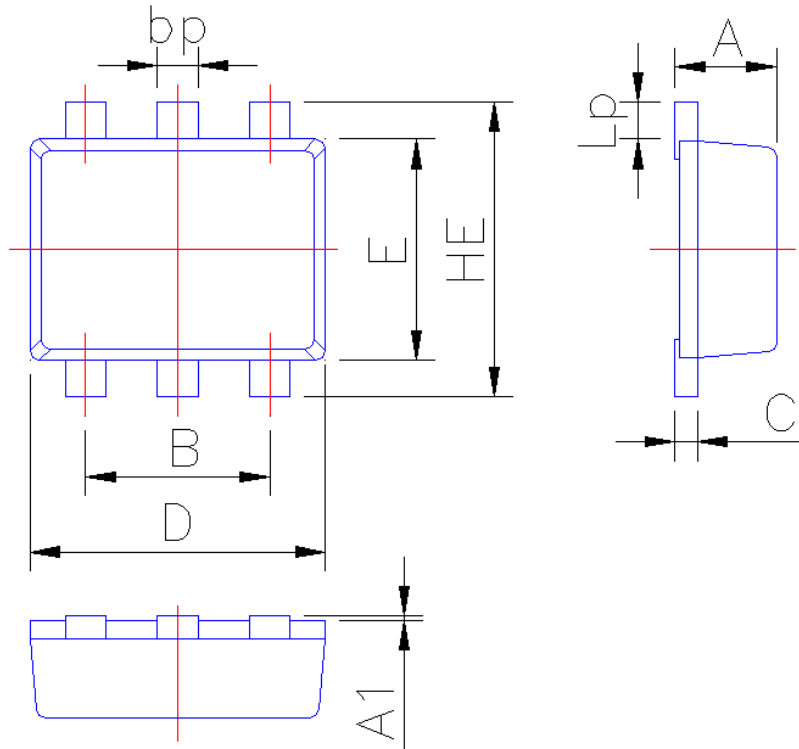
#### ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-10\mu\text{A}, I_E=0$	-50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-10\text{mA}, I_B=0$	-45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-1\mu\text{A}, I_C=0$	-5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=-30\text{V}, I_E=0$			-15	nA
DC current gain	$h_{FE}$	$V_{CE}=-5\text{V}, I_C=-2\text{mA}$	220		475	
Collector-emitter saturation voltage	$V_{CE(sat)(1)}$	$I_C=-10\text{mA}, I_B=-0.5\text{mA}$			-0.1	V
	$V_{CE(sat)(2)}$	$I_C=-100\text{mA}, I_B=-5\text{mA}$			-0.4	V
Base-emitter saturation voltage	$V_{BE(sat)(1)}$	$I_C=-10\text{mA}, I_B=-0.5\text{mA}$		-0.7		V
	$V_{BE(sat)(2)}$	$I_C=-100\text{mA}, I_B=-5\text{mA}$		-0.9		V
Base-emitter voltage	$V_{BE(1)}$	$V_{CE}=-5\text{V}, I_C=-2\text{mA}$	-0.6		-0.75	V
	$V_{BE(2)}$	$V_{CE}=-5\text{V}, I_C=-10\text{mA}$			-0.82	V
Transition frequency	$f_T$	$V_{CE}=-5\text{V}, I_C=-10\text{mA}, f=100\text{MHz}$	100			MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=-10\text{V}, I_E=0, f=1\text{MHz}$			4.5	pF
Noise figure	NF	$V_{CE}=-5\text{V}, I_C=-0.2\text{mA}, f=1\text{kHz}, R_s=2\text{k}\Omega, BW=200\text{Hz}$			10	dB

## Typical Characteristics



### SOT-563 Package Outline Dimensions



Symbol	Dimension in Millimeters	
	Min	Max
A	0.50	0.60
A1	0	0.05
B	0.95	1.05
bp	0.13	0.30
C	0.09	0.150
D	1.50	1.70
E	1.15	1.35
HE	1.40	1.80
Lp	0.13	0.30