



Plastic-Encapsulate Transistors

DUAL TRANSISTOR(NPN+NPN)

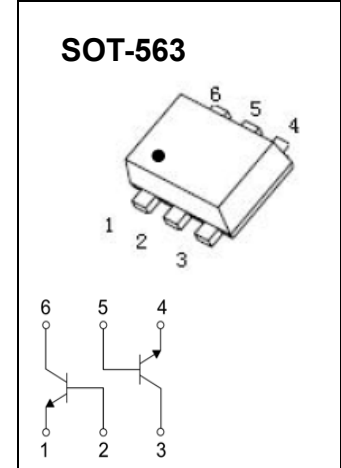
FEATURES

- Epitaxial Die Construction
- Complementary PNP Type Available (BC857BV)
- Ultra-Small Surface Mount Package

Marking: K4V

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	6	V
I_c	Collector Current -Continuous	0.1	A
P_c	Collector Power Dissipation	0.15	W
$R_{\theta JA}$	Thermal Resistance. Junction to Ambient Air	833	$^\circ\text{C}/\text{W}$
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55 ~+150	$^\circ\text{C}$

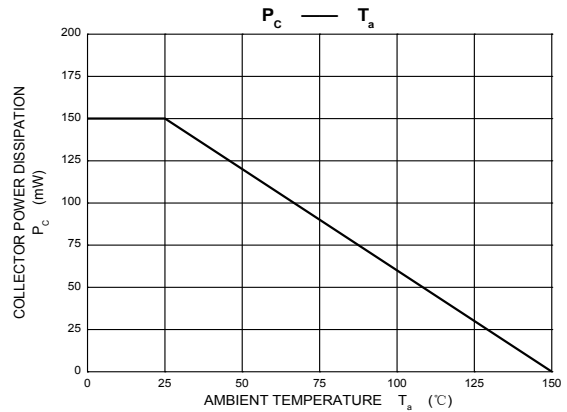
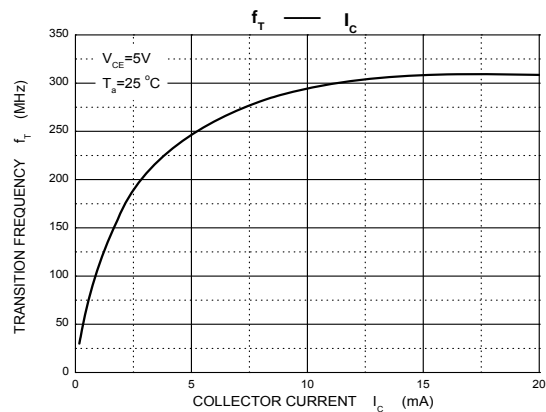
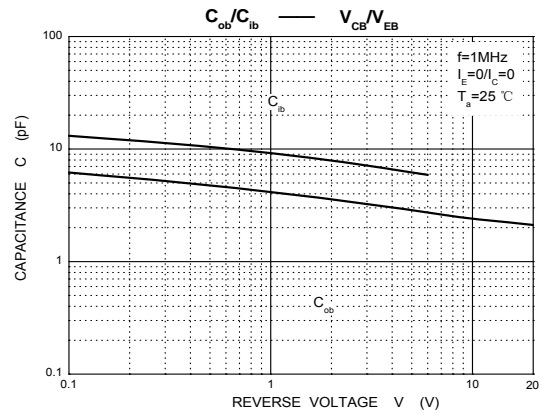
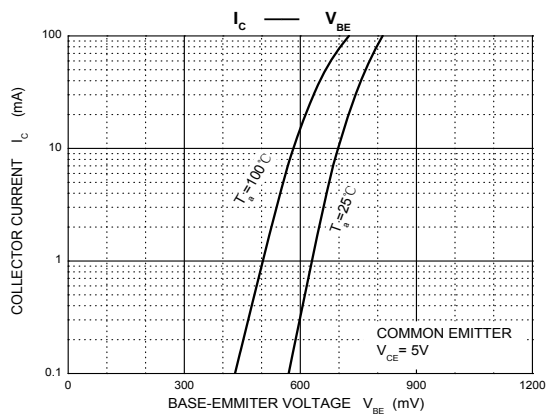
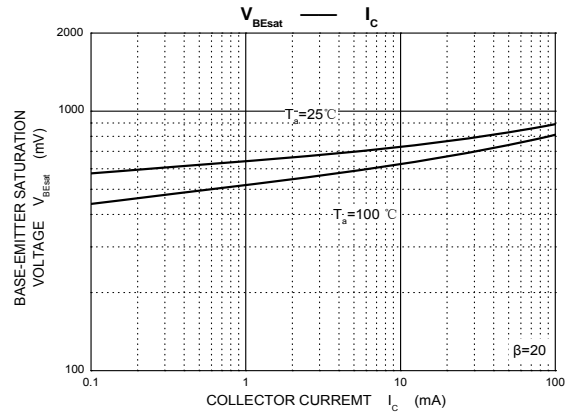
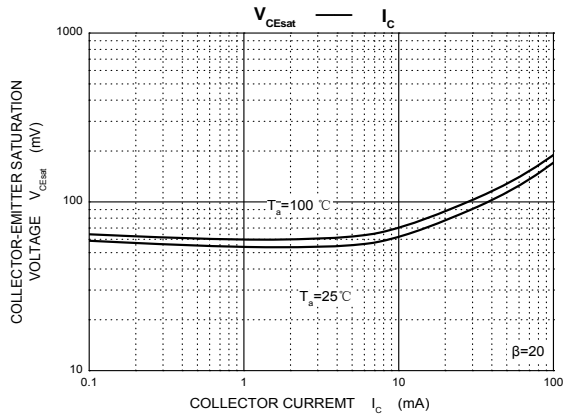
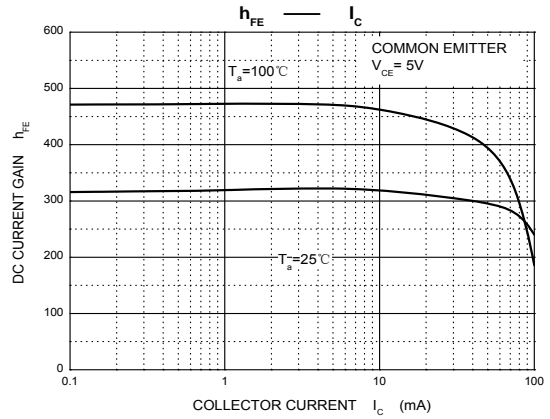
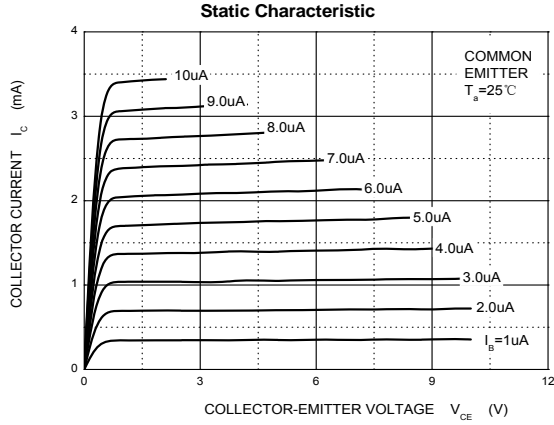


ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise specified)

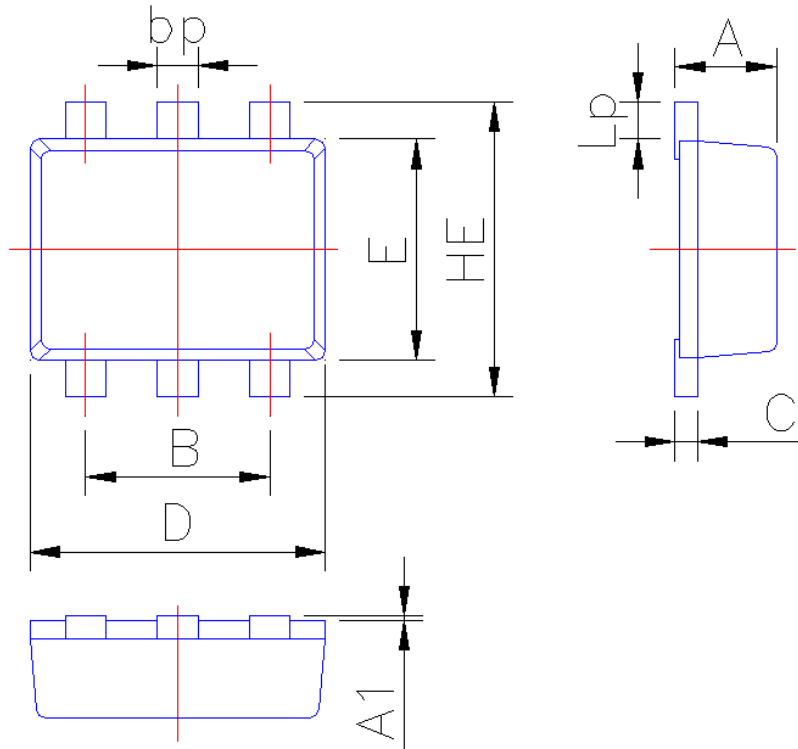
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_c=10\mu\text{A}, I_E=0$	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_c=10\text{mA}, I_B=0$	45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=1\mu\text{A}, I_c=0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB}=30\text{V}, I_E=0$			15	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}, I_c=0$			100	nA
DC current gain	$h_{FE(1)}$	$V_{CE}=5\text{V}, I_c=2\text{mA}$	200		450	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c=10\text{mA}, I_B=0.5\text{mA}$ $I_c=100\text{mA}, I_B=5\text{mA}$			100 300	mV
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_c=10\text{mA}, I_B=0.5\text{mA}$ $I_c=100\text{mA}, I_B=5\text{mA}$		700 900		mV
Base-emitter voltage	V_{BE}	$V_{CE}=5\text{V}, I_c=2\text{mA}$ $V_{CE}=5\text{V}, I_c=10\text{mA}$	580	660	700 770	mV
Transition frequency	f_T	$V_{CE}=5\text{V}, I_c=10\text{mA}, f=100\text{MHz}$	100			MHz
Output capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$			4.5	pF
Noise Figure	NF	$V_{CE}=5\text{V}, R_s=2\text{K}\Omega,$ $f=1\text{kHz}, BW=200\text{Hz}$			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