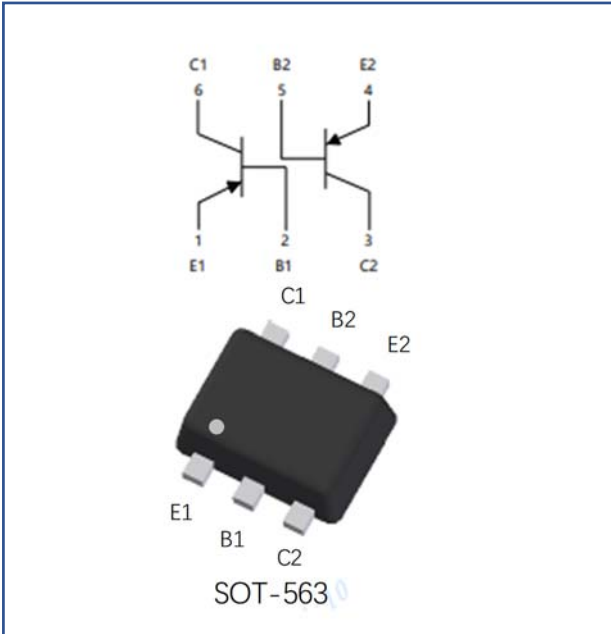


Dual PNP Small Signal Transistor



Features

- Moisture sensitivity level 1
- Halogen free and RoHS compliant
- Surface mount package ideally suited for automatic Insertion

Application

- Signal amplification
- Switching circuit

Mechanical data

- **Package:** SOT-563
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

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

Item	Symbol	Unit	Conditions	Value
Device marking code				K5V
Collector-base voltage	V _{CB0}	V	I _C =-10μA, I _E =0	-50
Collector-emitter voltage	V _{CE0}	V	I _C =-10mA, I _B =0	-45
Emitter-base voltage	V _{EB0}	V	I _E =-1μA, I _C =0	-5
Collector current	I _C	mA		-100
Power dissipation	P _D	mW		150
Junction temperature	T _J	°C		-55 to +150
Storage temperature	T _{STG}	°C		-55 to +150

**■ Electrical Characteristics** ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	$V_{(BR)CBO}$	V	$I_C=-10\mu\text{A}, I_E=0$	-50		
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	V	$I_C=-10\text{mA}, I_B=0$	-45		
Emitter-base breakdown voltage	$V_{(BR)EBO}$	V	$I_E=-1\mu\text{A}, I_C=0$	-5		
Collector cut-off current	I_{CBO}	nA	$V_{CB}=-30\text{V}, I_B=0$			-15
Emitter-base cutoff current	I_{EBO}	nA	$V_{EB}=-5\text{V}, I_C=0$			-100
DC current gain	h_{FE}		$V_{CE}=-5\text{V}, I_C=-2\text{mA}$	220		475
Collector-emitter saturation voltage	$V_{CE(sat)1}$	V	$I_C=-10\text{mA}, I_B=-0.5\text{mA}$			-0.1
	$V_{CE(sat)2}$	V	$I_C=-100\text{mA}, I_B=-5\text{mA}$			-0.4
Base-emitter saturation voltage	$V_{BE(sat)1}$	V	$I_C=-10\text{mA}, I_B=-0.5\text{mA}$		-0.7	
	$V_{BE(sat)2}$	V	$I_C=-100\text{mA}, I_B=-5\text{mA}$		-0.9	
Base-emitter voltage	V_{BE1}	V	$V_{CE}=-5\text{V}, I_C=-2\text{mA}$	-0.6		-0.75
	V_{BE2}	V	$V_{CE}=-5\text{V}, I_C=-10\text{mA}$			-0.82
Transition frequency	f_T	MHz	$V_{CE}=-5\text{V}, I_C=-10\text{mA}, f=100\text{MHz}$		200	

■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	$R_{\theta J-A}^{(1)}$	$^{\circ}\text{C/W}$	833
Thermal resistance, junction-to-case	$R_{\theta J-C}^{(1)}$	$^{\circ}\text{C/W}$	667

Note:

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 25.4mm*25.4mm copper pad areas



■ Characteristics

Fig 1: Static Characteristics

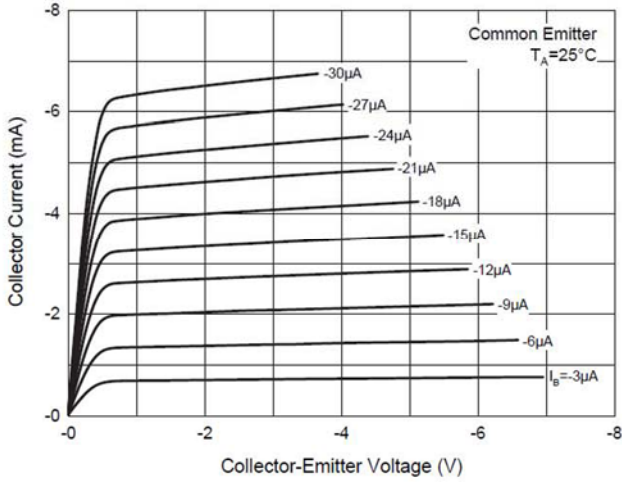


Fig 2: DC Current Gain Characteristics

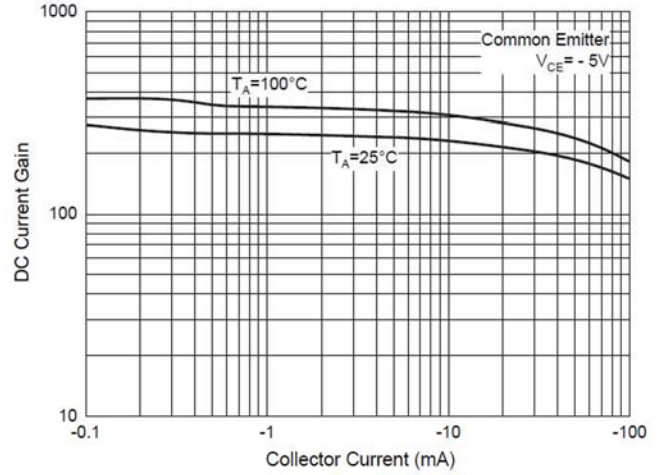


Fig 3: Collector-Emitter Saturation Voltage

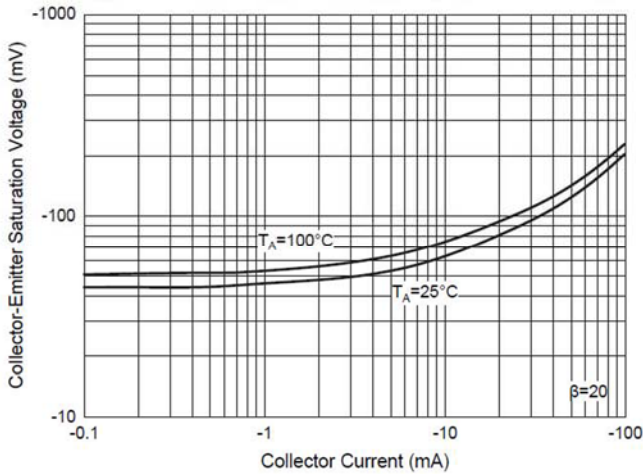


Fig 4: Base-Emitter Saturation Voltage

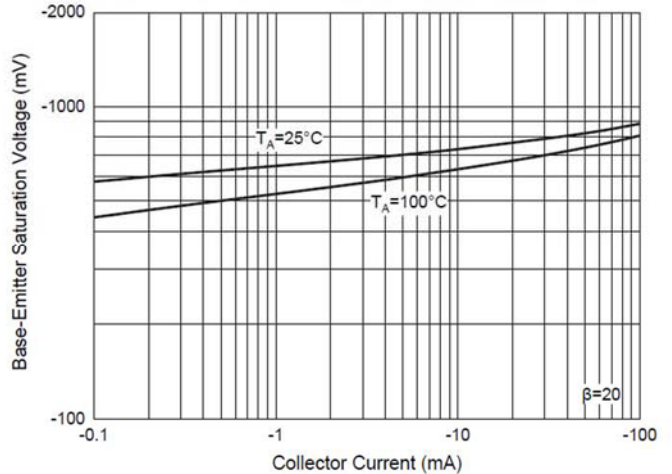


Fig 5: Base-Emitter on Voltage

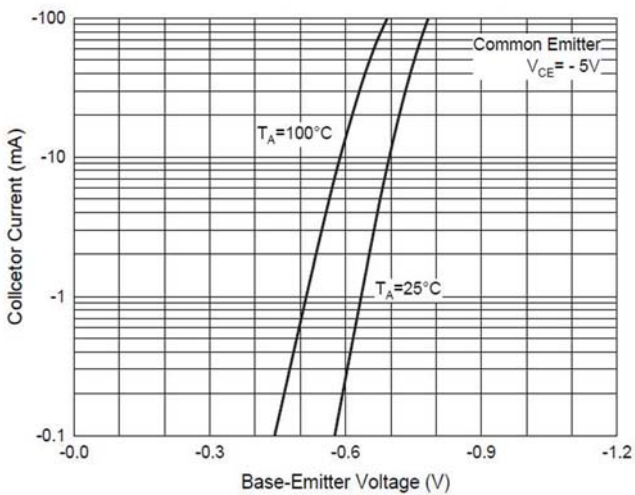
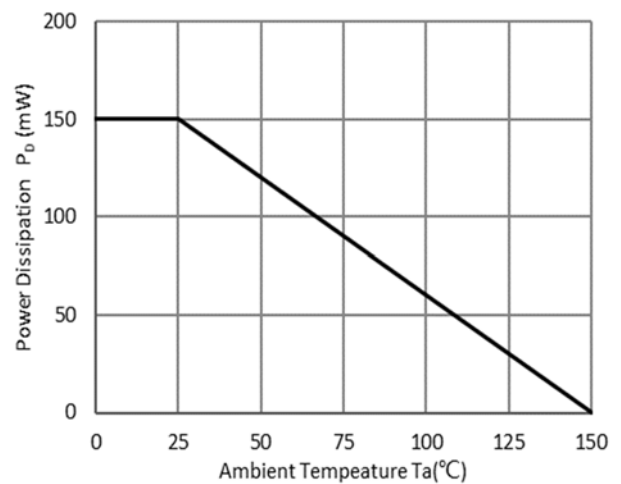


Fig 6: P_D - T_a Curve





BC857BV

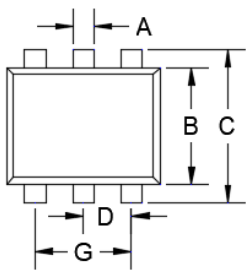
RoHS
COMPLIANT

Ordering Information

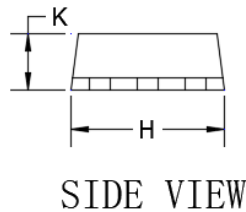
Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
BC857BV	F2	Approximate 0.0035	3000	30000	120000	7" reel

Outline Dimensions

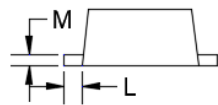
SOT-563



TOP VIEW



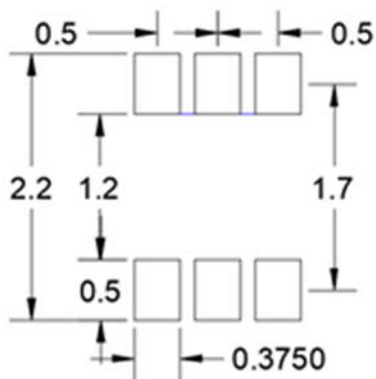
SIDE VIEW



SIDE VIEW

DIM	DIMENSIONS			
	INCHES		MM	
	MIN	MAX	MM	MAX
A	0.006	0.011	0.150	0.300
B	0.043	0.051	1.100	1.300
C	0.059	0.067	1.500	1.700
D	0.016	0.024	0.400	0.600
G	0.035	0.043	0.900	1.100
H	0.059	0.067	1.500	1.700
K	0.021	0.026	0.550	0.650
L	0.004	0.011	0.100	0.300
M	0.004	0.007	0.100	0.180

Suggested Pad Layout



UNIT:mm



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