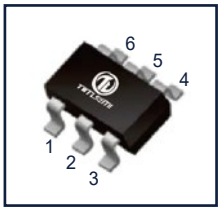
TL-BC846BPN

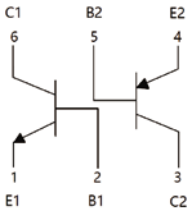
SOT-363 Dual NPN+PNP Small Signal Transistor

Features

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



SOT-363



Equivalent Circuit

Ordering information

Product ID	Pack	Naming rule	Marking	hFE(1)	Qty(PCS)
BC846BPN	SOT-363	BC846BPN 产品名称 product name	PJ	200-450	3000

TR1 NPN Pin1、2、6 Maximum Ratings (T_A=25℃)

Symbol	Parameter	Value	Uniat
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	65	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current	0.1	A
P_C	Collector Power Dissipation	0.2	W
T_J,T_{stg}	Operation Junction And Storage Temperature Range	-55～+150	℃

TR1 NPN Pin1、2、6 Electrical Characteristics (T_A=25℃)

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=10μA, I_E=0	80			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=10mA, I_B=0	65			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=10μA, I_C=0	6			V
I_{CBO}	Collector cut-off current	V_{CB}=50V, I_E=0			15	nA
I_{EBO}	Emitter cut-off current	V_{EB}=5V, I_C=0			100	nA
h_{FE}	DC current gain	V_{CE}=5V, I_C=2mA	200		450	
$V_{CE(sat)}$	Collector-emitter saturation voltage	I_C=10mA, I_B=0.5mA			0.1	V
		I_C=100mA, I_B=5mA			0.3	
$V_{BE(sat)}$	Base-emitter saturation voltage	I_C=10mA, I_B=0.5mA			0.85	V
		I_C=100mA, I_B=5mA			1.1	
V_{BE}	Base-emitter Voltage	V_{CE}=5V,I_C=2mA			0.7	V
		V_{CE}=5V,I_C=10mA			0.77	
f_T	Transition frequency	V_{CE}=5V, I_C=10mA, f=100MHz	100			MHz

TR2 PNP Pin3、4、5 Maximum Ratings (T_A=25℃)

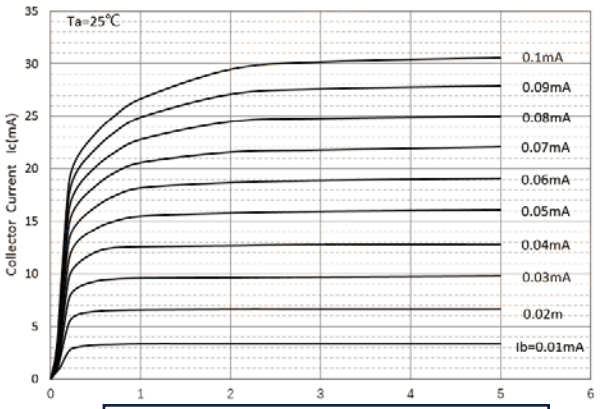
Symbol	Parameter	Value	Uniat
V_{CBO}	Collector-Base Voltage	-80	V
V_{CEO}	Collector-Emitter Voltage	-65	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current	-0.1	A
P_C	Collector Power Dissipation	-0.2	W
T_J,T_{stg}	Operation Junction And Storage Temperature Range	-55 ~ +150	℃

TR2 PNP Pin3、4、5 Electrical Characteristics (T_A=25℃)

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=-10μA, I_E=0	-80			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=-10mA, I_B=0	-65			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=-10μA, I_C=0	-6			V
I_{CBO}	Collector cut-off current	V_{CB}=-50V, I_E=0			-15	nA
I_{EBO}	Emitter cut-off current	V_{EB}=-6V, I_C=0			-100	nA
h_{FE}	DC current gain	V_{CE}=-5V, I_C=-2mA	200		450	
$V_{CE(sat)}$	Collector-emitter saturation voltage	I_C=-10mA, I_B=-0.5mA			-0.3	V
		I_C=-100mA, I_B=-5mA			-0.65	
$V_{BE(sat)}$	Base-emitter saturation voltage	I_C=-10mA, I_B=-0.5mA			-0.85	V
		I_C=-100mA, I_B=-5mA			-1.1	
V_{BE}	Base-emitter Voltage	V_{CE}=-5V,I_C=-2mA			-0.75	V
		V_{CE}=-5V,I_C=-10mA			-0.82	
f_T	Transition frequency	V_{CE}=-5V, I_C=-10mA, f=100MHz	100			MHz

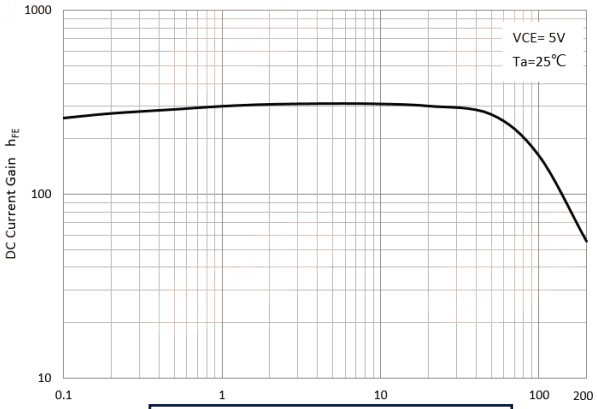
TR1 NPN Pin1、2、6 Characteristics (Typical)

Static Characteristic



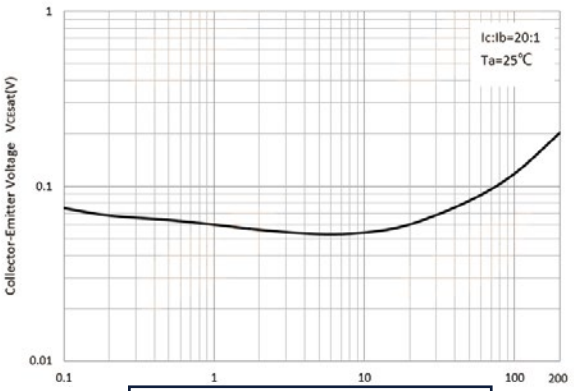
COLLECTOR-EMITTER VOLTAGE V_{CE}(V)

DC Current Gain



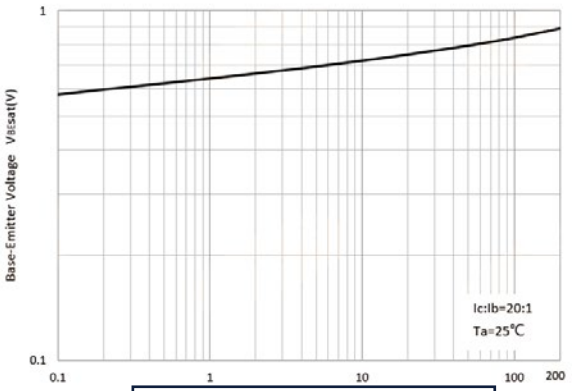
COLLECTOR CURRENT Ic(mA)

Collector-Emitter Saturation Voltage



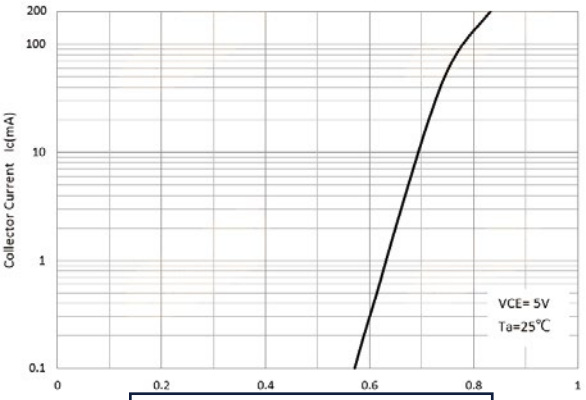
COLLECTOR CURRENT Ic(mA)

Base-Emitter Saturation Voltage



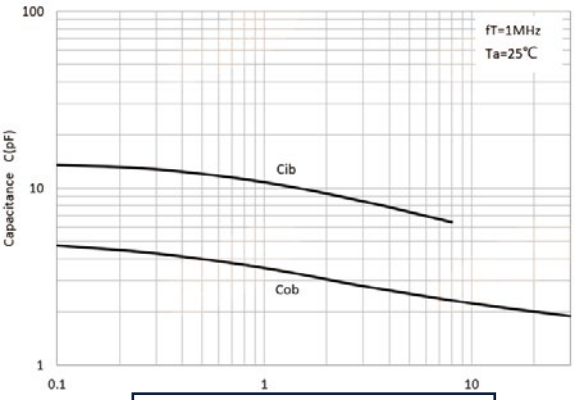
COLLECTOR CURRENT Ic(mA)

Base-Emitter On Voltage



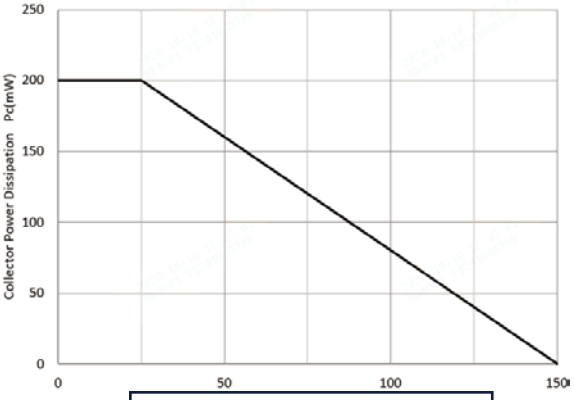
BASE-EMMITER VOLTAGE V_{BE}(V)

Cob/Cib-V_{CB}/V_{EB}



REVERSE VOLTAGEW V_R(V)

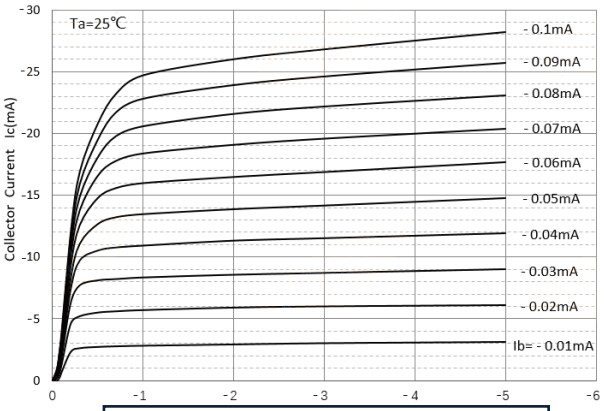
Collector Power Derating Curve



AMBIENT TEMPERATURE Ta(°C)

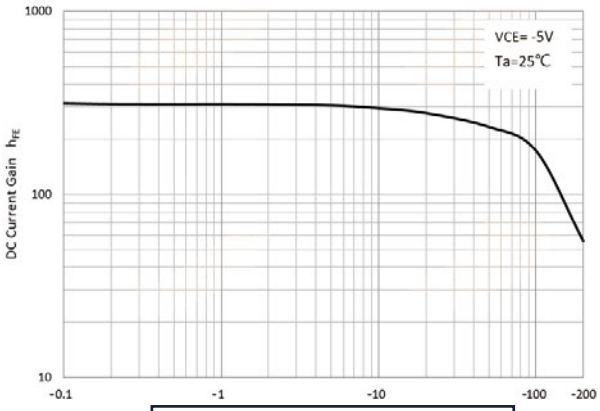
TR2 PNP Pin3、4、5 Characteristics (Typical)

Static Characteristic



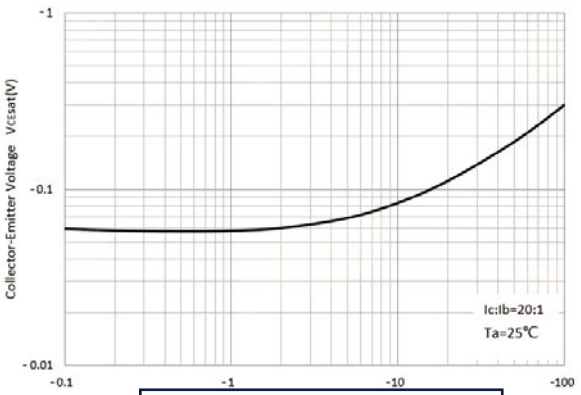
COLLECTOR-EMITTER VOLTAGE V_{CE}(V)

DC Current Gain



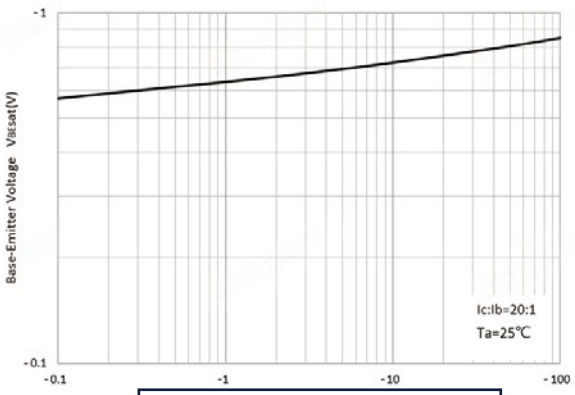
COLLECTOR CURRENT I_C(mA)

Collector-Emitter Saturation Voltage



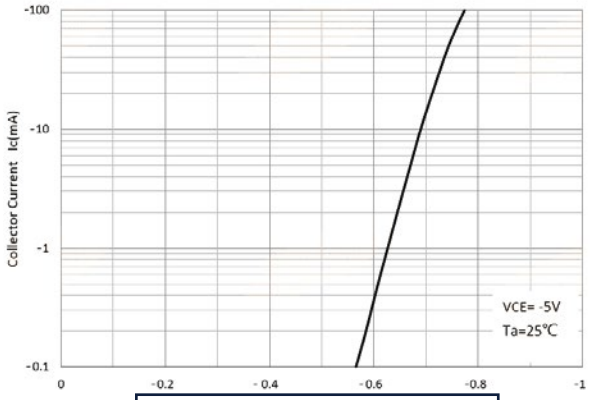
COLLECTOR CURRENT I_C(mA)

Base-Emitter Saturation Voltage



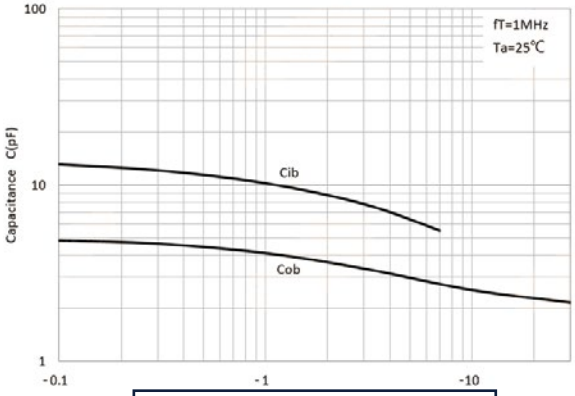
COLLECTOR CURRENT I_C(mA)

Base-Emitter On Voltage



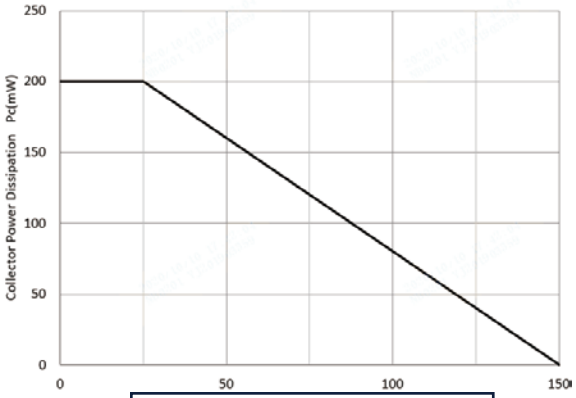
BASE-EMMITER VOLTAGE V_{BE}(V)

Cob/Cib-V_{CB}/V_{EB}



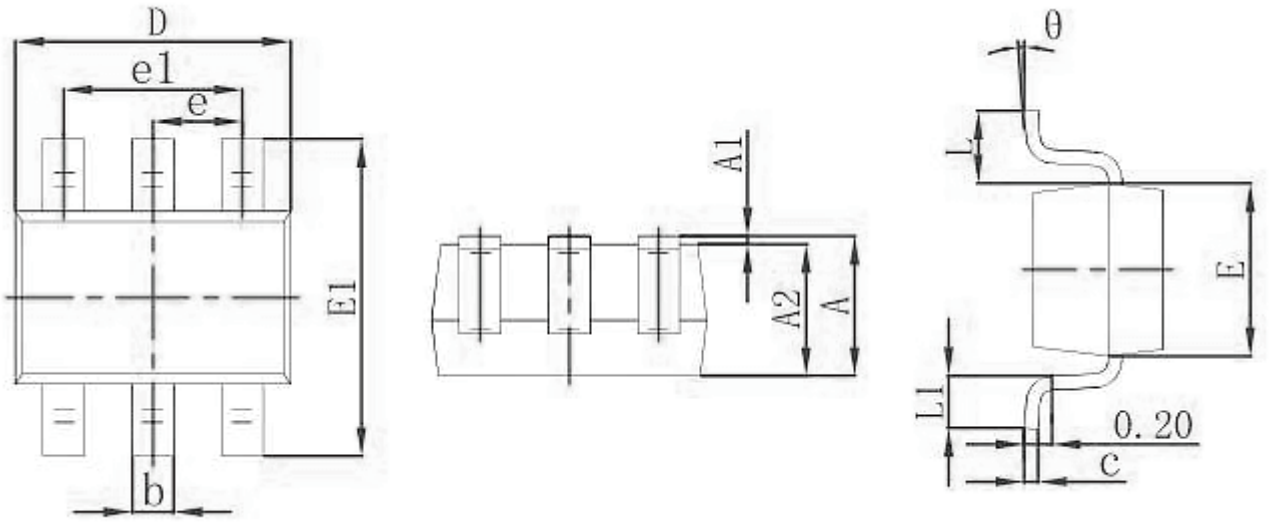
REVERSE VOLTAGEW V_R(V)

Collector Power Derating Curve



AMBIENT TEMPERATURE Ta(°C)

SOT-363 Package Outline Dimensions



Symbol	Dimensions in Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.150	0.350	0.006	0.014
c	0.100	0.150	0.004	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°