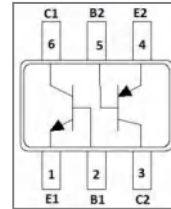


Dual NPN+PNP Small Signal Transistors

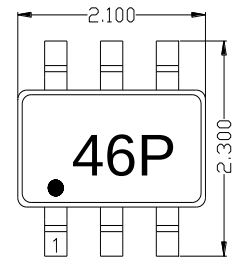
- ◇Epoxy meets UL 94 V-0 flammability rating
- ◇Lead Free Finish/RoHS Compliant
- ◇For Switching and AF Amplifier Applications
- ◇Rugged and reliable

Device Marking Code	
BC846BPN	46P

Equivalent Circuit



SOT363-6L Unit: mm



Maximum Ratings Tr1 (NPN) (Ta = 25 °C)

Symbol	Parameter	Value	Units
V _{CBO}	Collector-Base Voltage	80	V
V _{CEO}	Collector-Emitter Voltage	65	V
V _{EBO}	Emitter-Base Voltage	6	V
P _C	Collector Power Dissipation	200	mW
I _C	Collector Current	100	mA
T _J	Junction Temperature	150	°C
T _{STG.}	Storage Temperature	-55 to 150	°C

Electrical Characteristics Of Tr1(NPN) (Ta = 25 °C)

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 =1μA, I _C =0	6			V
I _{CBO}	Collector cut-off current	V _{CB} =30V, I _E =0			15	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			0.25	V
		I _C =100mA, I _B =5mA			0.6	
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C =10mA, I _B =0.5mA	0.6		0.9	V
V _{BE(on)}	Base-emitter on voltage	I _C =2mA, V _{CE} =5V	0.58		0.7	V
f _T	Transition Frequency	V _{CE} =5V, I _C =10mA, f=100MHz	100			MHz

Maximum Ratings Tr2 (PNP) (T_a = 25 °C)

Symbol	Parameter	Value	Units
V _{CBO}	Collector–Base Voltage	–80	V
V _{CEO}	Collector–Emitter Voltage	–65	V
V _{EBO}	Emitter–Base Voltage	–5	V
P _C	Collector Power Dissipation	200	mW
I _C	Collector Current	–100	mA
T _J	Junction Temperature	150	°C
T _{STG}	Storage Temperature	–55 to 150	°C

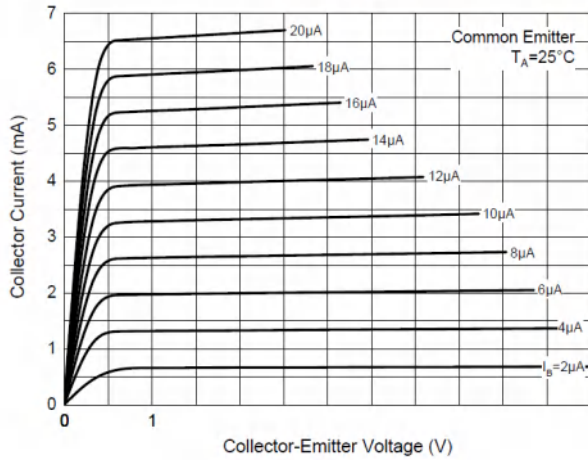
Electrical Characteristics Of Tr2(PNP) (T_a = 25 °C)

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 =–1μA, I _C =0	–5			V
I _{CBO}	Collector cut-off current	V _{CB} =–30V, I _E =0			–15	nA
h _{FE}	DC current gain	V _{CE} =–5V, I _C =–2mA	220		475	
V _{CE(sat)}	Collector–emitter saturation voltage	I _C =–10mA, I _B =–0.5mA			–0.30	V
		I _C =–100mA, I _B =–5mA			–0.65	V
V _{BE(sat)}	Base–emitter voltage	I _C =–10mA, I _B =–0.5mA	–0.6		–0.9	V
V _{BE(on)}	Base–emitter on voltage	I _C =–2mA, V _{CE} =–5V	–0.6		–0.75	V
f _T	Transition Frequency	V _{CE} =–5V, I _C =–10mA, f=100MHz	100			MHz

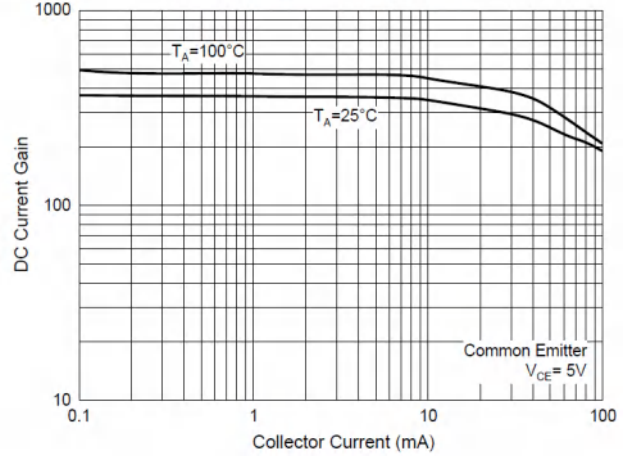
RATING AND CHARACTERISTICS CURVES (BC846BPN)

NPN Transistor

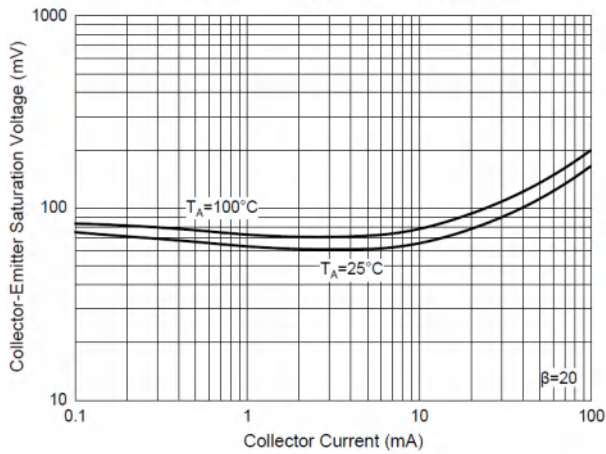
Static Characteristics



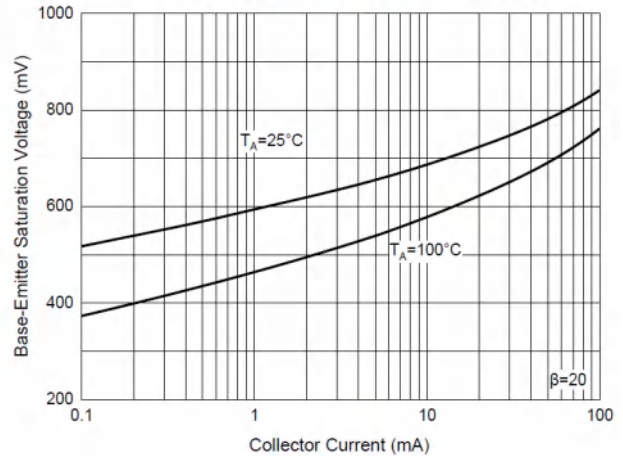
DC Current Gain Characteristics



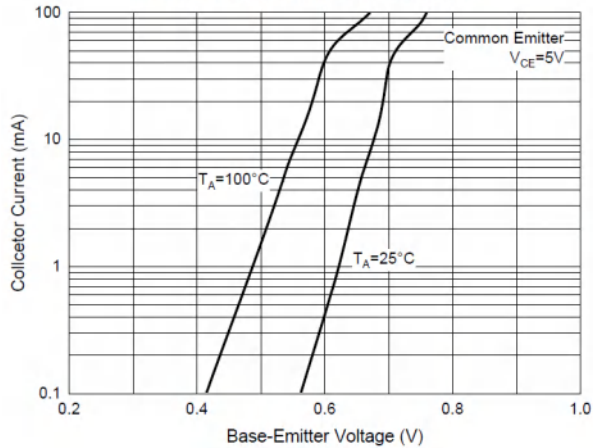
Collector-Emitter Saturation Voltage Characteristics



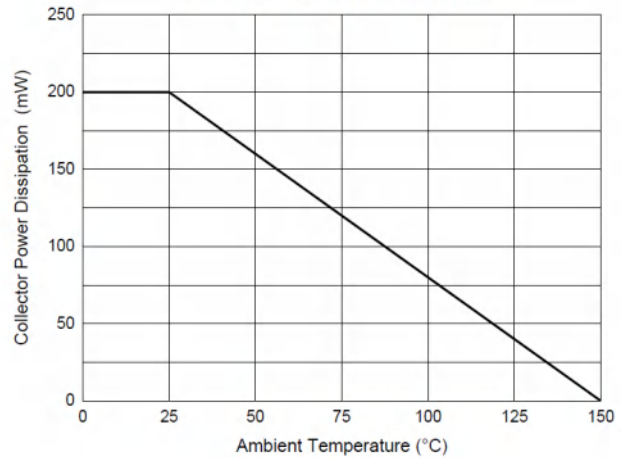
Base-Emitter Saturation Voltage Characteristics



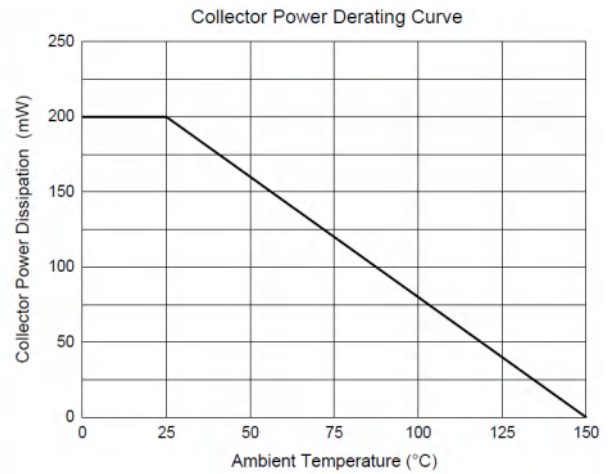
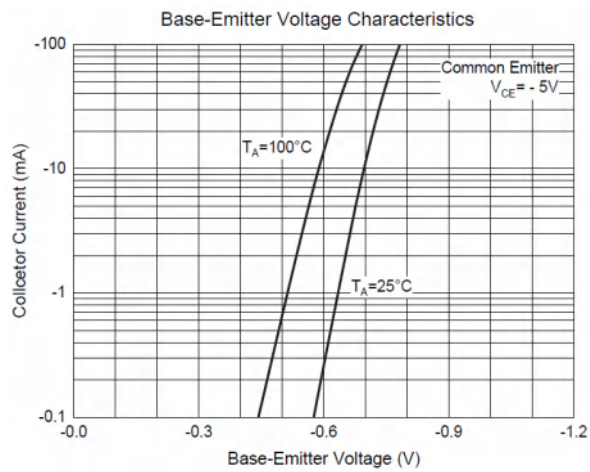
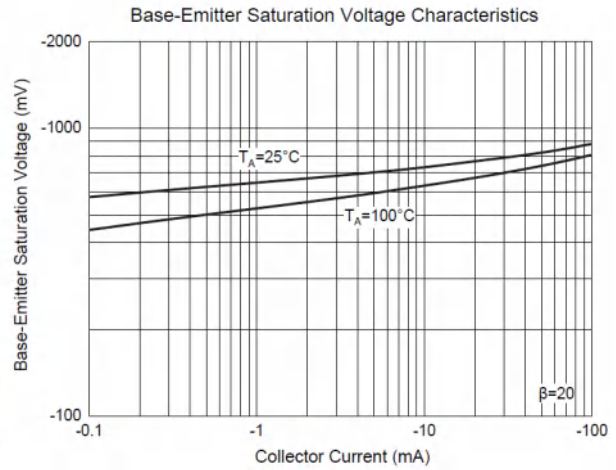
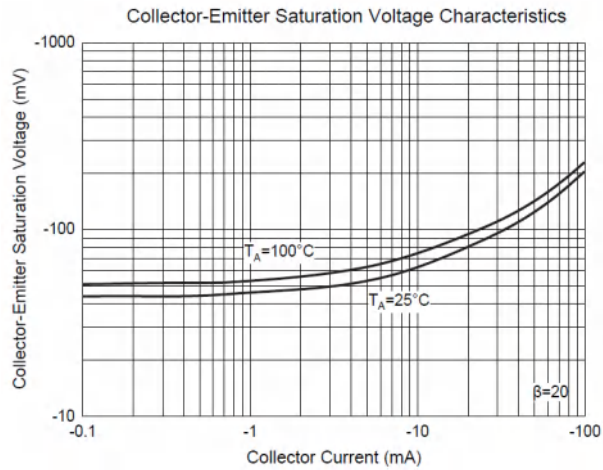
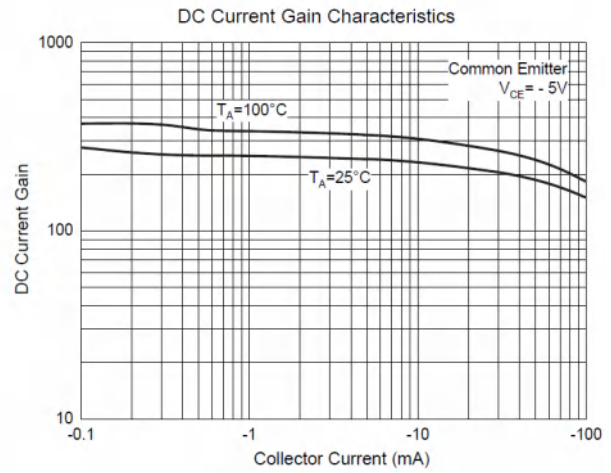
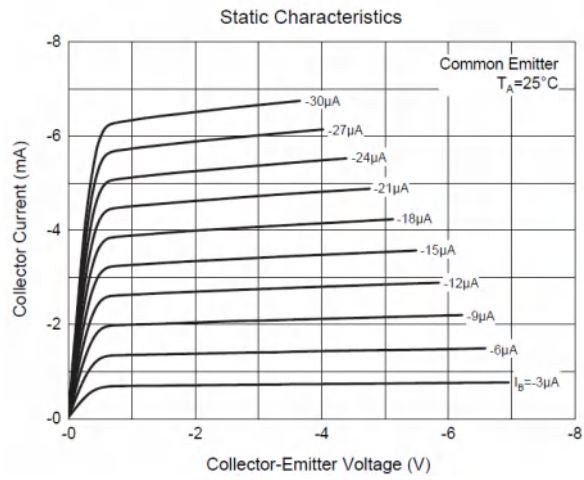
Base-Emitter Voltage Characteristics



Collector Power Derating Curve



PNP Transistor

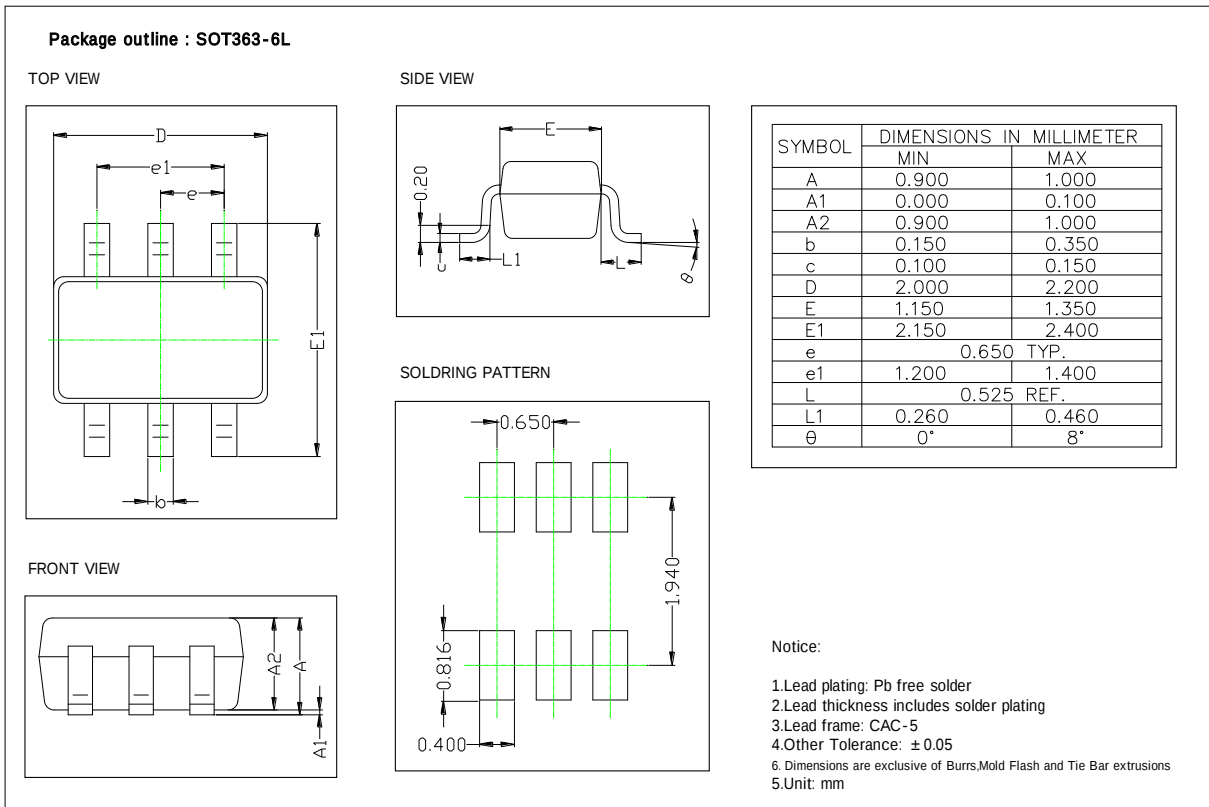


Ordering Information

REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SOT363	-T	3,000	15,000	---	---	178	390*205*310	120,000	---

Package Dimensions



DISCLAIMER NOTICE

Rectron Inc reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. Rectron Inc or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on RECTRON data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. Rectron Inc does not assume any liability arising out of the application or use of any product or circuit.

Rectron products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of Rectron Inc. Customers using or selling Rectron components for use in such applications do so at their own risk and shall agree to fully indemnify Rectron Inc and its subsidiaries harmless against all claims, damages and expenditures.