

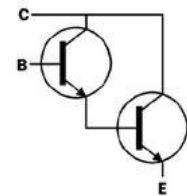
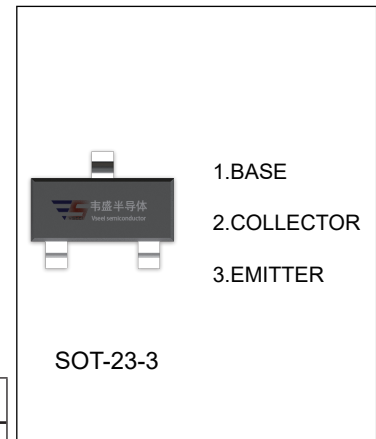
BCV47 TRANSISTOR (NPN)

FEATURES

- High Collector Current
- High Current Gain

MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

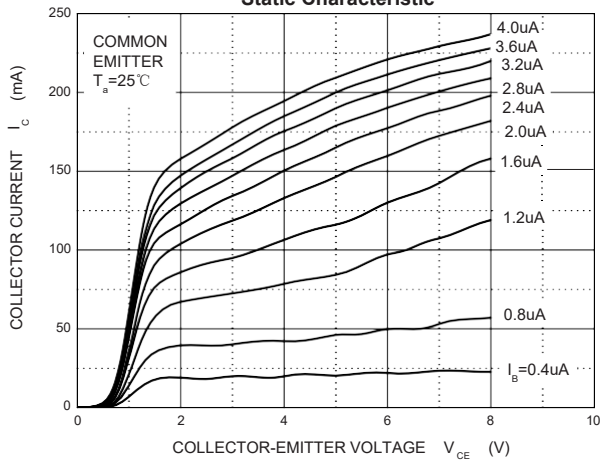
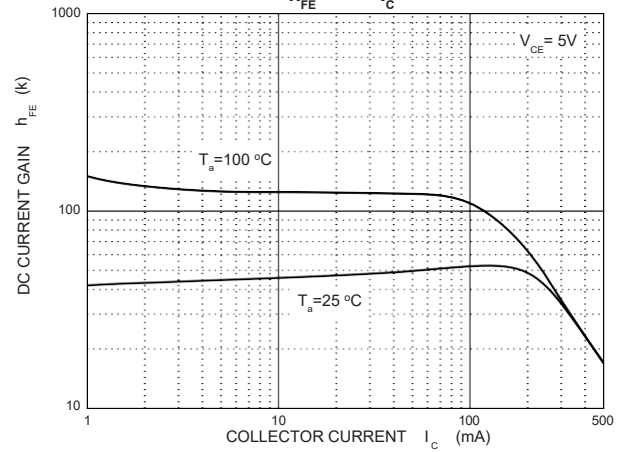
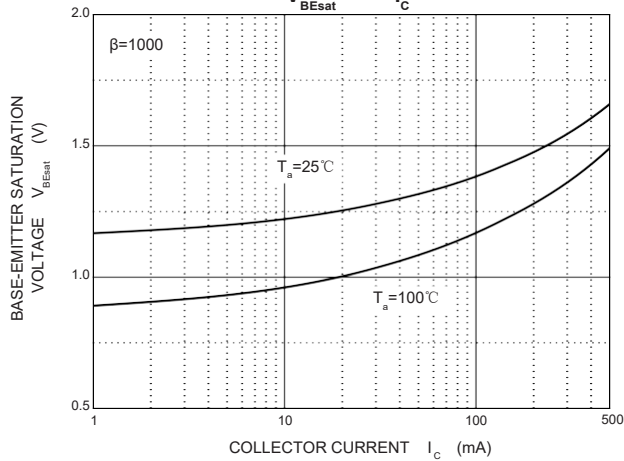
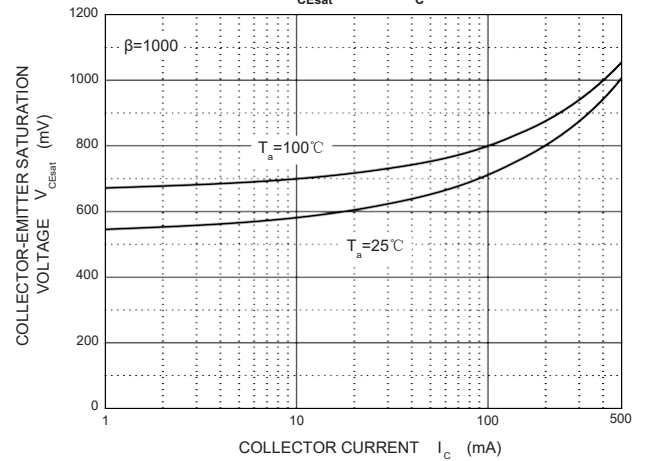
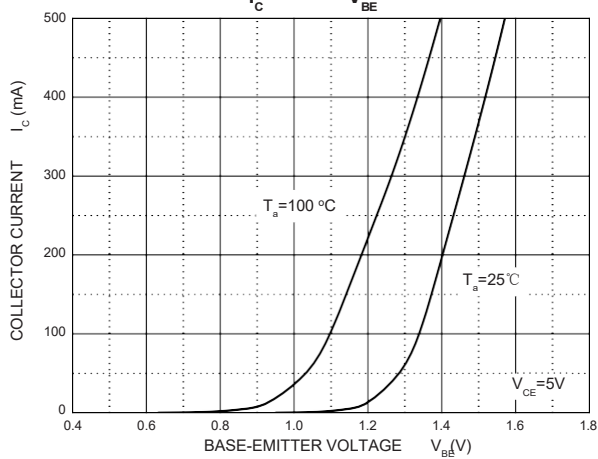
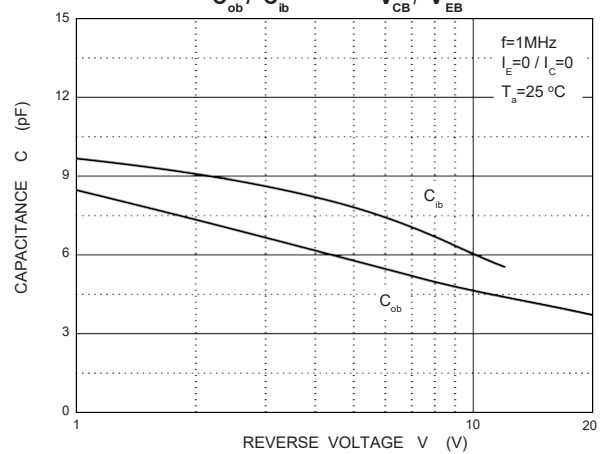
Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	80	V
V _{CEO}	Collector-Emitter Voltage	60	V
V _{EBO}	Emitter-Base Voltage	10	V
I _C	Collector Current	500	mA
P _C	Collector Power Dissipation	300	mW
R _{θJA}	Thermal Resistance From Junction To Ambient	416	°C/W
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C



Device Symbol

ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =100μA, I _E =0	80			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =10mA, I _B =0	60			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =10μA, I _C =0	10			V
Collector cut-off current	I _{CBO}	V _{CB} =60V, I _E =0			0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} =4V, I _C =0			0.1	μA
DC current gain	h _{FE(1)}	V _{CE} =1V, I _C =100μA	2000			
	h _{FE(2)}	V _{CE} =5V, I _C =10mA	4000			
	h _{FE(3)}	V _{CE} =5V, I _C =100mA	10000			
	h _{FE(4)}	V _{CE} =5V, I _C =0.5A	2000			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =100mA, I _B =0.1mA			1	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =100mA, I _B =0.1mA			1.5	V
Transition frequency	f _T	V _{CE} =5V, I _C =50mA, f=100MHz		170		MHz
Collector output capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=1MHz		3.5		pF

Static Characteristic

 $h_{FE} - I_C$

 $V_{BEsat} - I_C$

 $V_{CEsat} - I_C$

 $I_C - V_{BE}$

 $C_{ob} / C_{ib} - V_{CB} / V_{EB}$

 $P_c - T_a$
