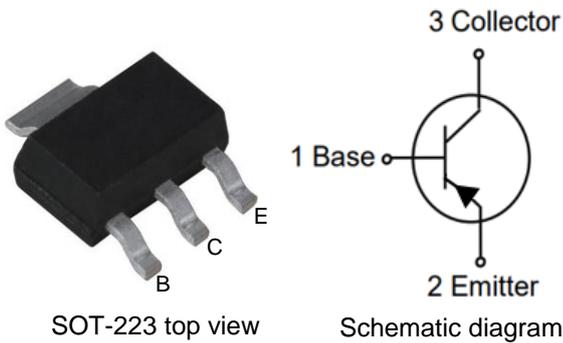


Features

- For AF driver and output stages
- High collector current
- Low collector-emitter saturation voltage
- Complementary types: BCP54/BCP55/BCP56 (NPN)



Maximum Ratings(Ta=25°C unless otherwise noted)

Symbol	Parameter	BCP51	BCP52	BCP53	Unit
V_{CBO}	Collector-Base Voltage	-45	-60	-100	V
V_{CEO}	Collector-Emitter Voltage	-45	-60	-80	V
V_{EBO}	Emitter-Base Voltage	-5			V
I_C	Collector Current -Continuous	-1			A
I_{CM}	Peak Pulse Collector Current	-2			A
I_B	Base Current-Continuous	-100			mA
I_{BM}	Peak Pulse Base Current	-200			mA
P_C	Collector Power Dissipation	1.5			W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	94			°C/W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150			°C

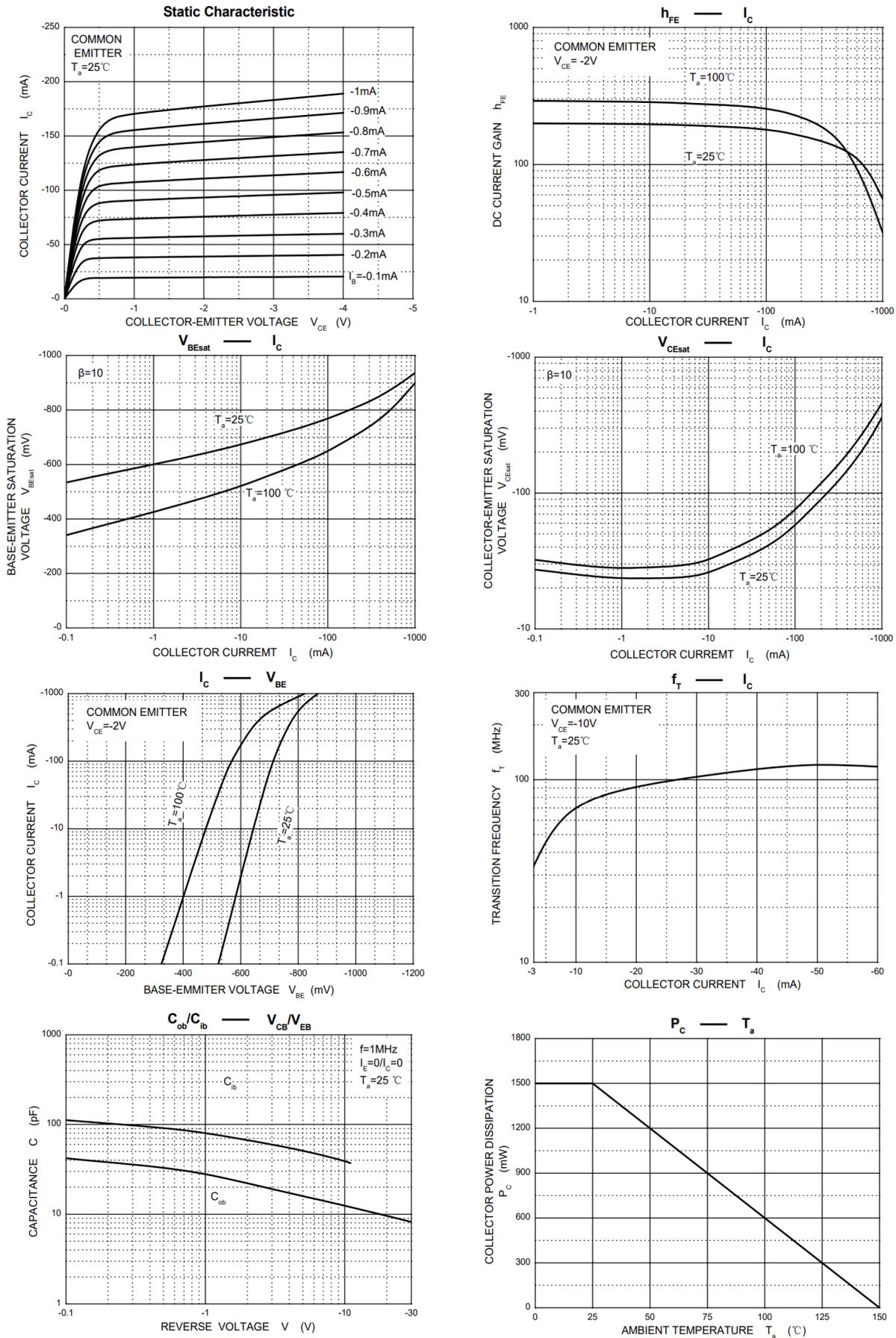
Electrical Characteristics (T_J=25°C unless otherwise noted)

Symbol	Parameter	Condition	Min	Typ	Max	Unit	
V _{(BR)CBO}	Collector-base breakdown voltage	BCP51	I _C =-100μA, I _E =0	-45	--	--	V
		BCP52		-60	--	--	
		BCP53		-100	--	--	
V _{(BR)CEO}	Collector-emitter breakdown voltage	BCP51	I _C =-10mA, I _B =0	-45	--	--	V
		BCP52		-60	--	--	
		BCP53		-80	--	--	
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =-10μA, I _C =0	-5	--	--	V	
I _{CBO}	Collector cut-off current	V _{CB} =-30V, I _E =0	--	--	-100	nA	
h _{FE1}	DC current gain	V _{CE} =-2V, I _C = -5mA	25	--	--	--	
h _{FE2}		V _{CE} =-2V, I _C = -150mA	63	--	250		
h _{FE3}		V _{CE} =-2V, I _C = -500mA	25	--	--		
V _{CE(sat)}	Collector-emitter saturation voltage	I _C =-500 mA, I _B = -50mA	--	--	-0.5	V	
f _T	Transition frequency	V _{CE} =-10V, I _C = -50mA, f=100MHz	100	--	--	MHz	
V _{BE}	Base-emitter voltage	V _{CE} =-2V, I _C = -500mA	--	--	-1	V	

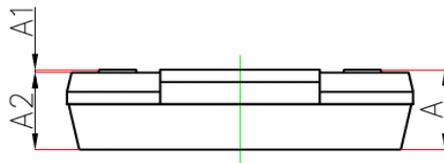
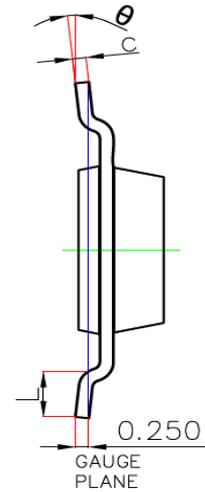
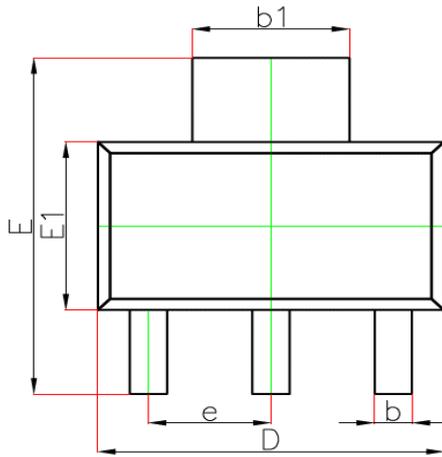
Ordering Information (Example)

Type	Hfe	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
BCP51	63-160	BCP51-10	2,500	5,000	35,000	13"reel
	100-250	BCP51-16				
BCP52	63-160	BCP52-10	2,500	5,000	35,000	13"reel
	100-250	BCP52-16				
BCP53	63-160	BCP53-10	2,500	5,000	35,000	13"reel
	100-250	BCP53-16				

Typical Operating Characteristics



SOT-223 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b_1	0.150	0.250	0.006	0.010
b_2	0.250	0.350	0.010	0.014
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
E	0.700	0.900	0.028	0.035
E1	1.450	1.750	0.057	0.069
e	0.500TYP		0.020TYP	
e1	0.900	1.100	0.035	0.043
L	0.400REF		0.016REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°