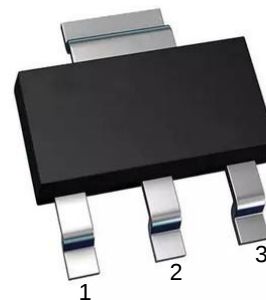


SOT-223 Plastic-Encapsulate Transistors

BCP54 TRANSISTOR (NPN)

• Features

- For AF driver and output stages
- High collector current
- Low collector-emitter saturation voltage
- Complementary types: BCP51



1. BASE
2.COLLECTOR
3.EMITTER

SOT-223

• MAXIMUM RATINGS (T_C=25°C)

Parameter	Symbol	Limit	Unit
Collector-Base Voltage	V _{CBO}	45	V
Collector-Emitter Voltage	V _{CEO}	45	V
Emitter-Base Voltage	V _{EBO}	5	V
Collector Current	I _C	1	A
Peak Pulse Collector Current	I _{CM}	2	A
Collector Power Dissipation	P _C	1.5	W
Thermal Resistance From Junction To Ambient	R _{θJA}	84	°C/W
Operation Junction and Storage Temperature Range	T _J , T _{stg}	-55~+150	°C

• ELECTRICAL CHARACTERISTICS (T_a=25°C)

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C = 0.1mA, I _E =0	45		V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C = 10mA, I _B =0	45		V
Base-emitter breakdown voltage	V _{(BR)EBO}	I _E = 10μA, I _C =0	5		V
Collector cut-off current	I _{CBO}	V _{CB} = 30 V, I _E =0		100	nA
DC current gain	h _{FE(1)}	V _{CE} = 2V, I _C =5mA	25		
	h _{FE(2)}	V _{CE} = 2V, I _C =150m A	63	250	
	h _{FE(3)}	V _{CE} = 2V, I _C =500m A	25		
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =500mA, I _B =50mA		0.5	V
Base-emitter voltage	V _{BE}	V _{CE} =2V, I _C =500m A		1	V
Transition frequency	f _T	V _{CE} =10V, I _C =50mA, f=100MHz	100		MHz

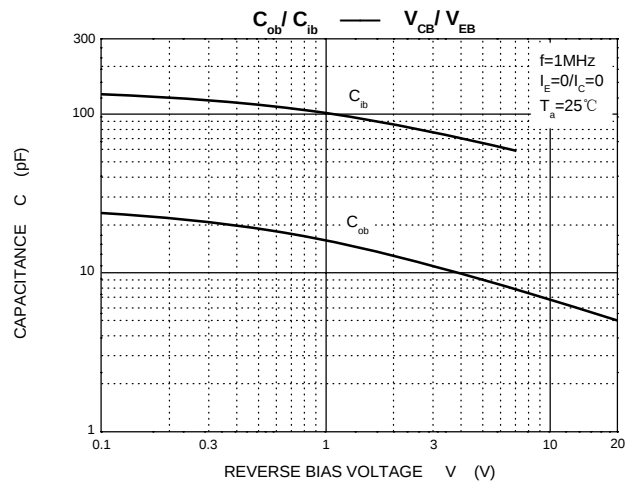
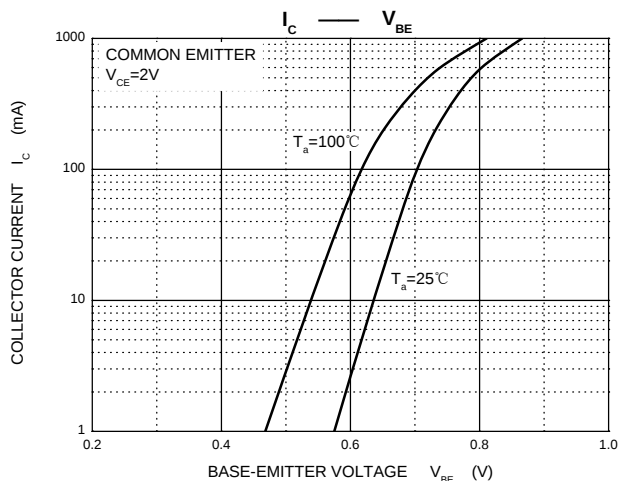
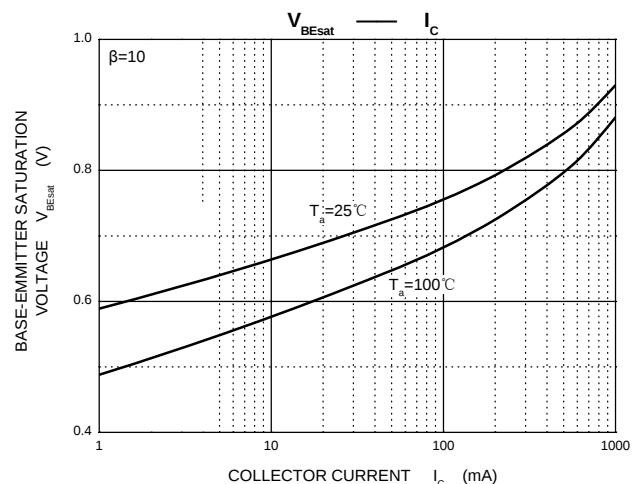
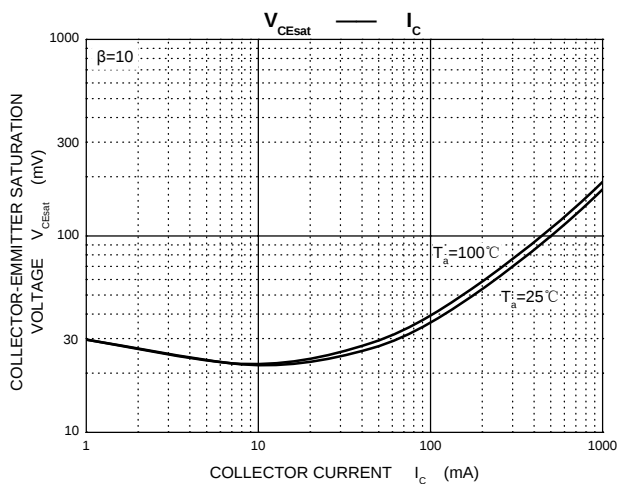
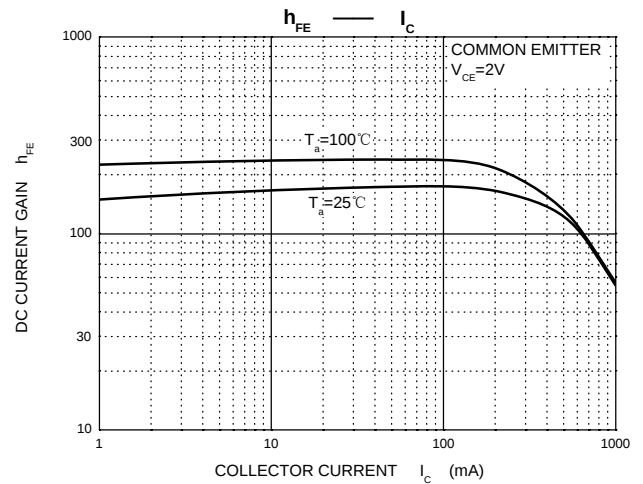
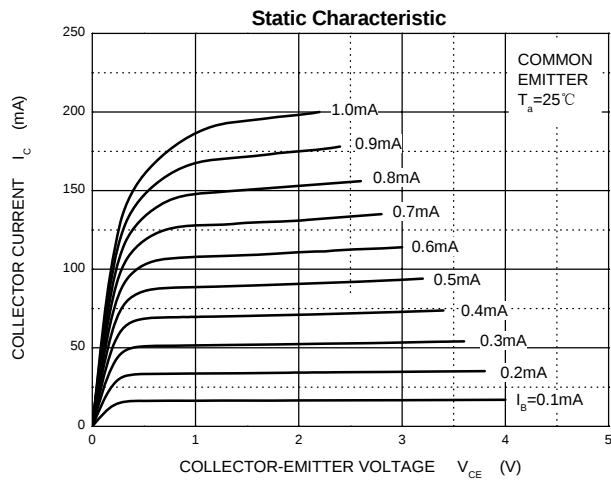
• CLASSIFICATION OF h_{FE(1)}

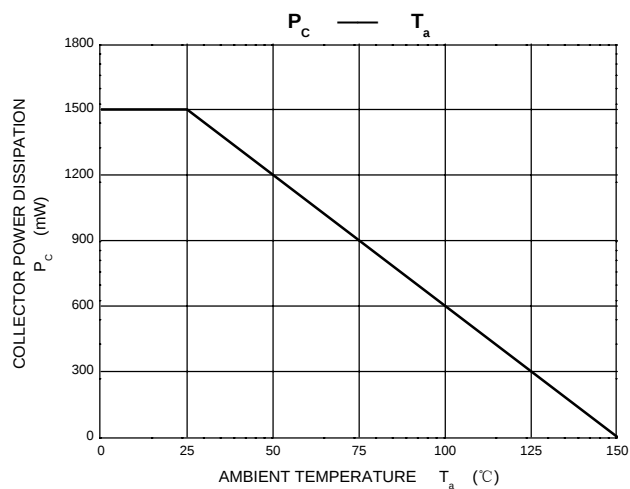
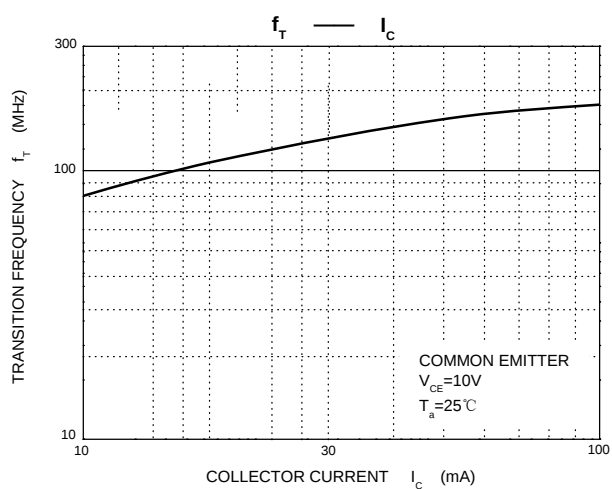
Rank	BCP54	BCP54-10	BCP54-16
Range	63-250	63-160	100-250

• Ordering Information:

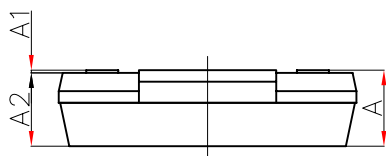
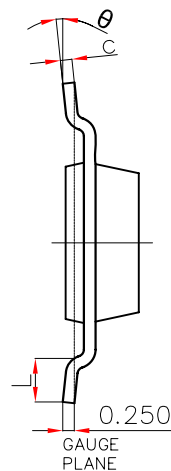
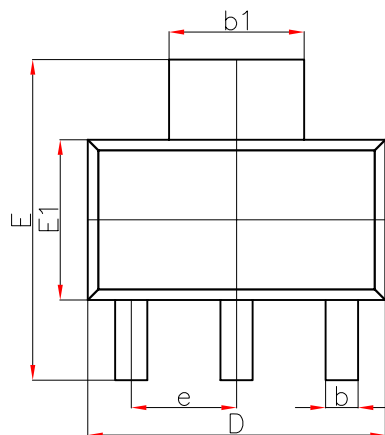
Part NO.	BCP54
Marking	BCP54/BCP54-10/BCP54-16
Packing Information	REEL TAPE
Basic ordering unit (pcs)	1000

• Typical Characteristics

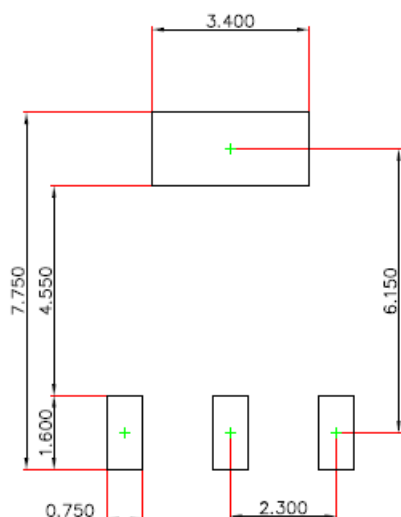




SOT-223 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	—	1.800	—	0.071
A1	0.020	0.100	0.001	0.004
A2	1.500	1.700	0.059	0.067
b	0.660	0.840	0.026	0.033
b1	2.900	3.100	0.114	0.122
c	0.230	0.350	0.009	0.014
D	6.300	6.700	0.248	0.264
E	6.700	7.300	0.264	0.287
E1	3.300	3.700	0.130	0.146
e	2.300(BSC)		0.091(BSC)	
L	0.750	—	0.030	—
θ	0°	10°	0°	10°



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.050 mm.
3. The pad layout is for reference purposes only.