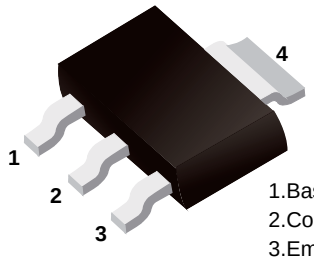
PNP Plastic-Encapsulate Transistors

FEATURES

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

MECHANICAL DATA

- Case:SOT-223
- Polarity: Color band denotes cathode end
- Epoxy UL: 94V-0
- Mounting Position: Any



1.Base
2.Collector
3.Emitter
4.Collector

SOT-223

Maximum Ratings & Thermal Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified.)

Parameters	Symbol	BCP51	BCP52	BCP53	Unit
Collector-Base Voltage	V_{CBO}	-45	-60	-100	V
Collector-Emitter Voltage	V_{CEO}	-45	-60	-80	V
Emitter-Base Voltage	V_{EBO}	-5			V
Collector Current -Continuous	I_C	-1			A
Collector Power Dissipation	P_C	1.5			W
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	94			℃/W
Storage Temperature Range	T_{STG}	-65~+150			℃

Recommended Operating Conditions

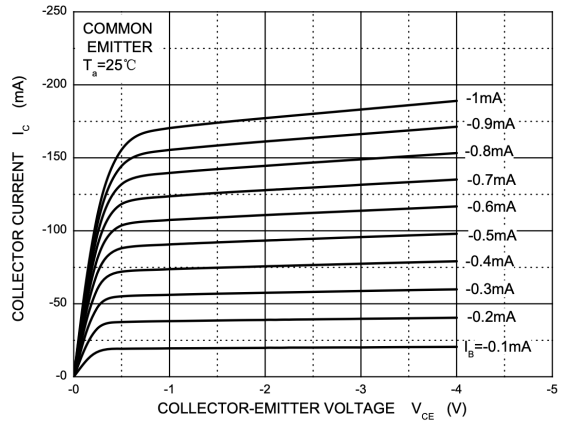
Parameter		Test conditions	Symbol	Min	Max	Unit
Collector-base breakdown voltage	BCP51	I_C= -0.1mA,I_E=0	$V_{(BR)CBO}$	-45		V
	BCP52			-60		
	BCP53			-100		
Collector-emitter breakdown voltage	BCP51	I_C= -10mA,I_B=0	$V_{(BR)CEO}$	-45		V
	BCP52			-60		
	BCP53			-80		
Base-emitter breakdown voltage		I_E= -10μA,I_C=0	$V_{(BR)EBO}$	-5		V
Collector cut-off current		V_{CB}= -30 V, I_E=0	I_{CBO}		-100	nA
DC current gain		V_{CE}= -2V, I_C=-5mA	$h_{FE(1)}$	25		
		V_{CE}= -2V, I_C=-150m A	$h_{FE(2)}$	63	250	
		V_{CE}= -2V, I_C=-500m A	$h_{FE(3)}$	25		
Collector-emitter saturation voltage		I_C=-500mA,I_B=-50mA	$V_{CE(sat)}$		-0.5	V
Base-emitter voltage		V_{CE}=-2V, I_C=-500m A	V_{BE}		-1	V
Transition frequency		V_{CE}=-10V,I_C=-50mA,f=100MHz	f_T	100		MHz

Classification Of $h_{FE(2)}$

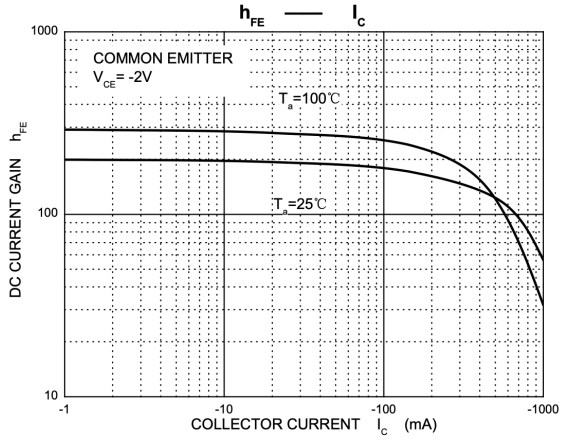
Rank	BCP51,BCP52,BCP53	BCP51-10,BCP52-10,BCP53-10	BCP51-16,BCP52-16,BCP53-16
Range	63-250	63-160	100-250
Marking	BCP51,BCP52,BCP53	10 BCP51,10 BCP52,10 BCP53	BCP51 16,BCP52 16, BCP53 16

Typical Characterisitics

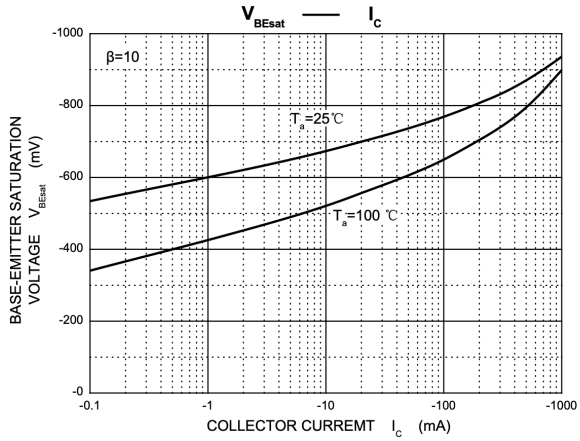
Static Characteristic



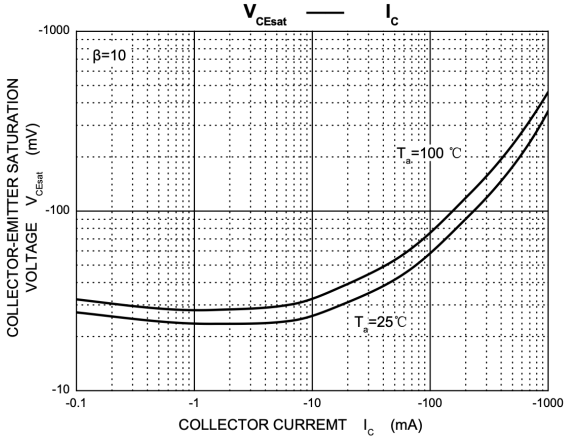
h_{FE} —— I_C



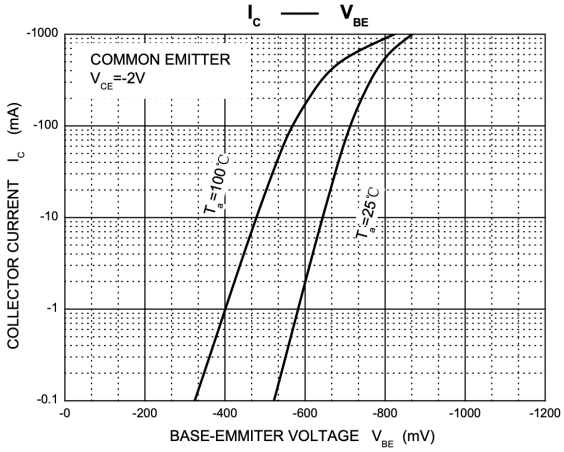
V_{BEsat} —— I_C



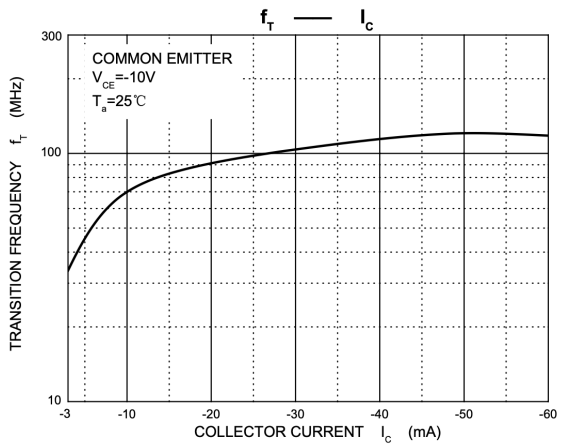
V_{CEsat} —— I_C



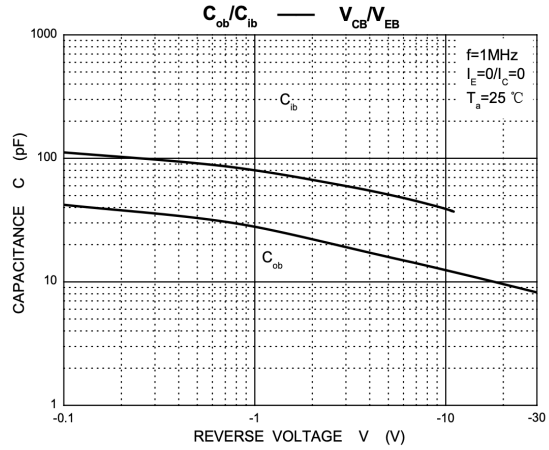
I_C —— V_{BE}



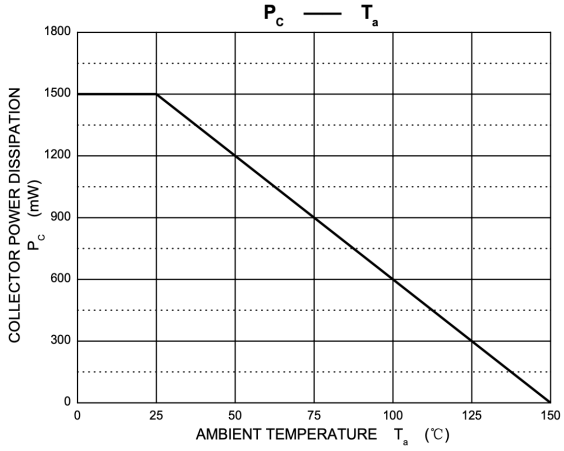
f_T —— I_C



C_{ob}/C_{ib} —— V_{CB}/V_{EB}



P_C —— T_a

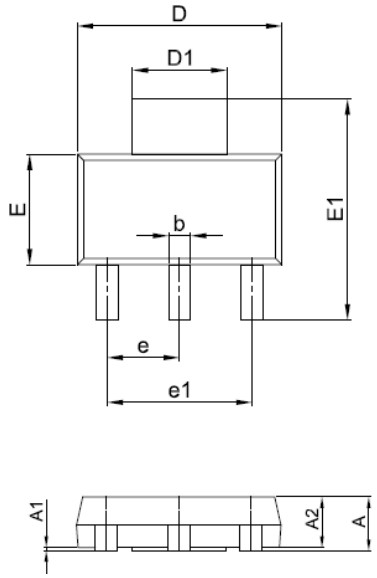


Ordering information

Package	Packing Description	Base Quantity	Packing Quantity
SOT-223	Tape/Reel,7”reel	1000pcs/Reel	6000PCS/Box 30000PCS/Carton
	Tape/Reel,13”reel	2500pcs/Reel	5000PCS/Box 30000PCS/Carton

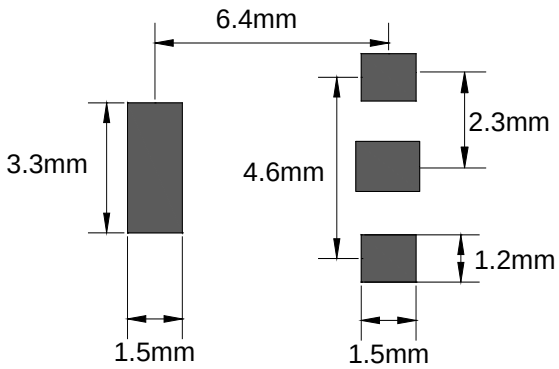
Package Dimensions

SOT-223



Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	1.50	1.80	0.059	0.071
A1	0.00	0.10	0.000	0.004
A2	1.50	1.70	0.059	0.067
b	0.65	0.75	0.026	0.030
c	0.20	0.30	0.008	0.012
D	6.40	6.60	0.252	0.260
D1	2.90	3.10	0.114	0.122
E	3.30	3.70	0.130	0.146
E1	6.85	7.15	0.270	0.281
e	2.20	2.40	0.087	0.094
e1	4.40	4.80	0.173	0.189
L	1.65	1.85	0.065	0.073
L1	0.90	1.15	0.035	0.045

The recommended mounting pad size



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