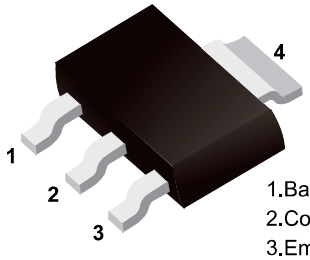
■ NPN Transistors



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

■ **Simplified outline(SOT-223)**

■ Features

- For AF driver and output stages
- High collector current
- Low collector-emitter saturation voltage
- Complementary to BCP51,BCP52,BCP53

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	BCP54	BCP55	BCP56	Unit
Collector - Base Voltage	V_{CBO}	45	60	100	V
Collector - Emitter Voltage	V_{CEO}	45	60	80	
Emitter - Base Voltage	V_{EBO}	5			
Collector Current - Continuous	I_C	1			A
Collector Power Dissipation	P_C	1.5			W
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	83.3			℃/W
Junction Temperature	T_J	150			℃
Storage Temperature Range	T_{stg}	-65 to 150			

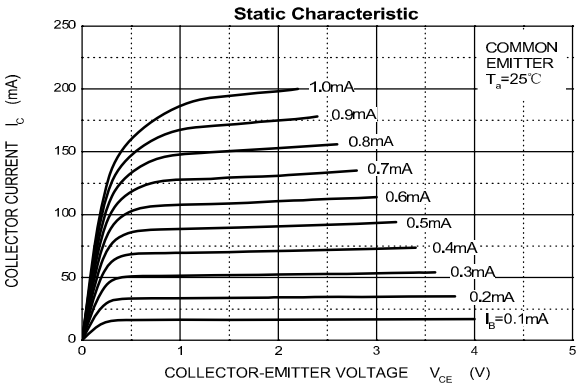
■ Electrical Characteristics Ta = 25℃

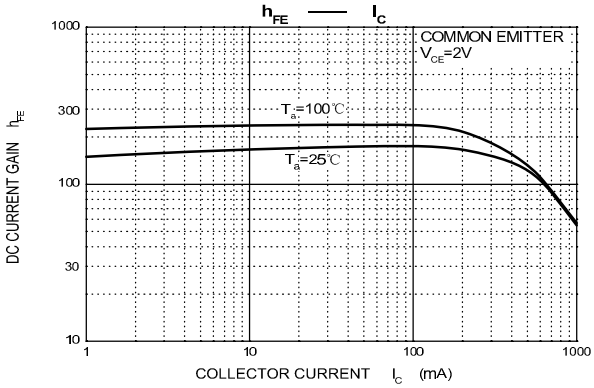
Parameter		Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	BCP54	V_{CBO}	I_C= 100 μA， I_E= 0	45			V
	BCP55			60			
	BCP56			100			
Collector- emitter breakdown voltage	BCP54	V_{CEO}	I_C= 10 mA， I_B= 0	45			
	BCP55			60			
	BCP56			80			
Emitter - base breakdown voltage		V_{EBO}	I_E= 100 μ A， I_C= 0	5			
Collector-base cut-off current	BCP54	I_{CBO}	V_{CB}= 45 V , I_E= 0			0.1	uA
	BCP55		V_{CB}= 60 V , I_E= 0				
	BCP56		V_{CB}= 100 V , I_E= 0				
Emitter cut-off current		I_{EBO}	V_{EB}= 5V , I_C=0			0.1	
Collector-emitter saturation voltage		$V_{CE(sat)}$	I_C=500 mA, I_B=50mA			0.5	V
Base - emitter saturation voltage		$V_{BE(sat)}$	I_C=500 mA, I_B=50mA			1.2	
Base-emitter voltage		V_{BE}	V_{CE}= 2V, I_C= 500mA			1	
DC current gain		$h_{FE(1)}$	V_{CE}= 2V, I_C= 5mA	25			
		$h_{FE(2)}$	V_{CE}= 2V, I_C= 150mA	63		250	
		$h_{FE(3)}$	V_{CE}= 2V, I_C= 500mA	25			
Transition frequency		f_T	V_{CE}= 10V, I_C= 50mA,f=100MHz	100			MHz

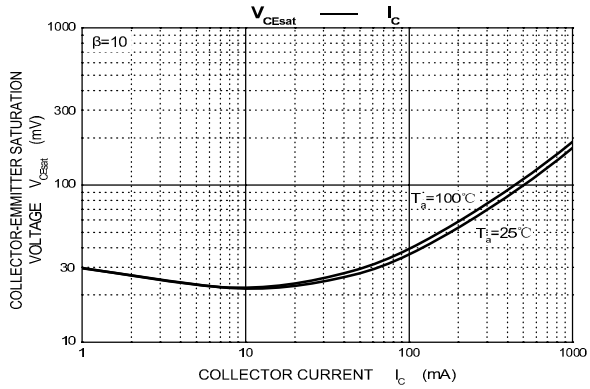
CLASSIFICATION OF hFE(2)

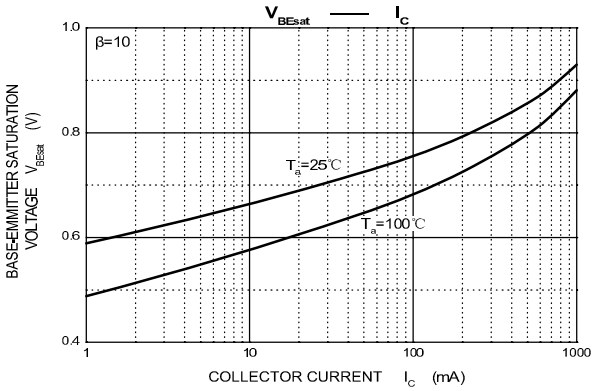
Rank	BCP54-10, BCP55-10, BCP56-10	BCP54-16, BCP55-16, BCP56-16
Range	63-160	100-250
Marking	BCP54-10, BCP55-10, BCP56-10	BCP54-16, BCP55-16, BCP56-16

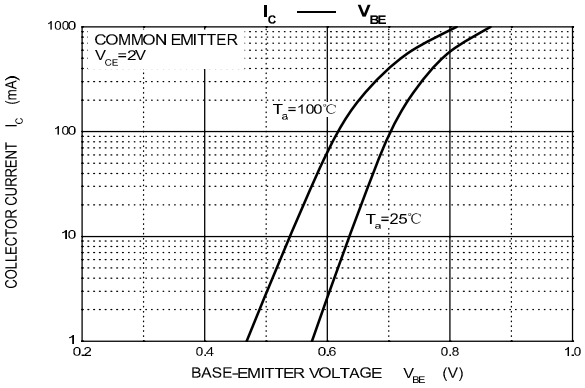
■ Typical Characterisitics

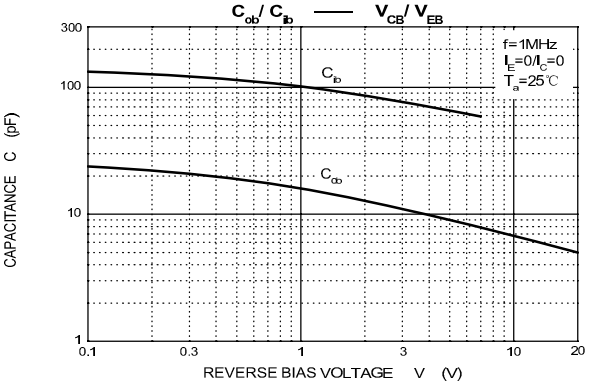


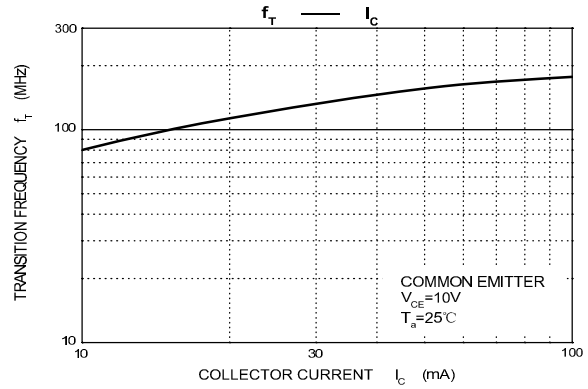


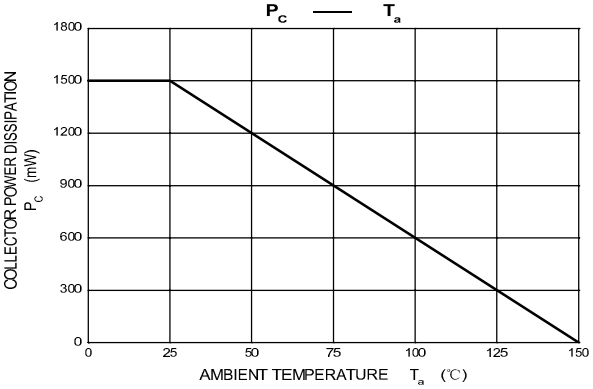




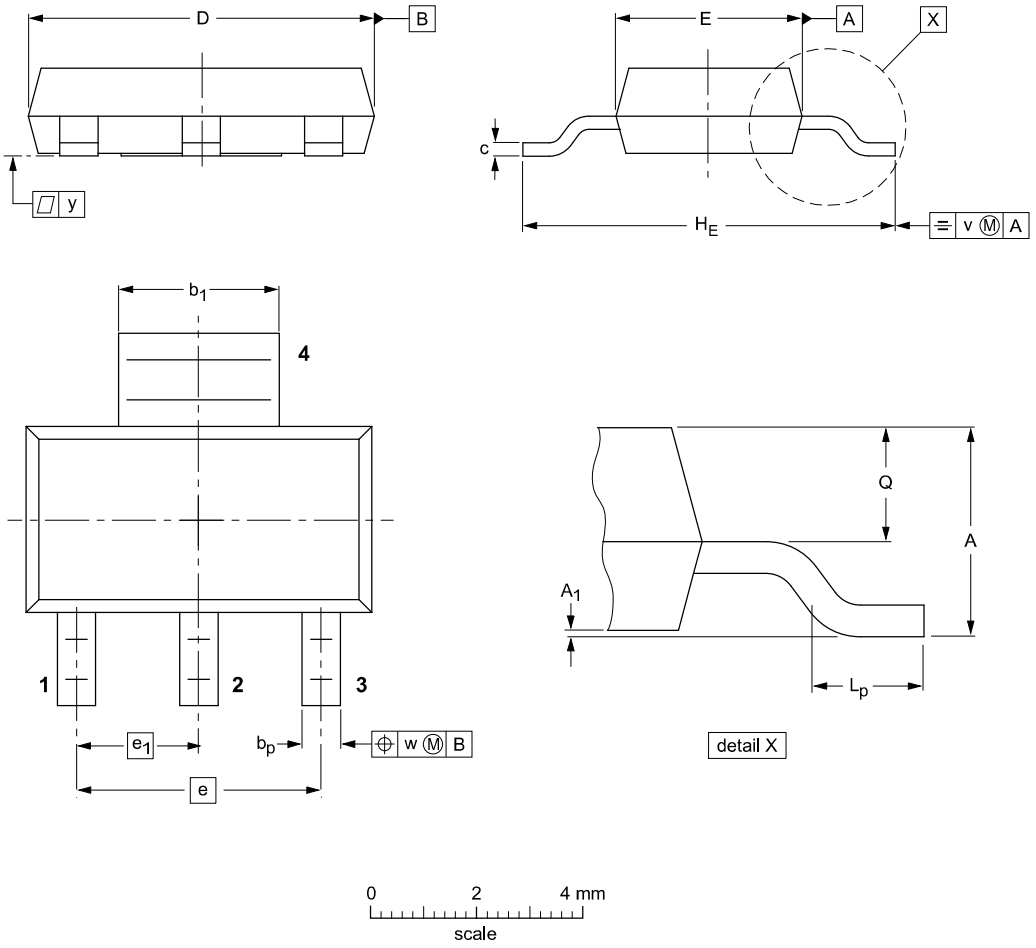








Package Outline SOT-223



DIMENSIONS (mm are the original dimensions)

UNIT	A	A_1	b_p	b_1	c	D	E	e	e_1	H_E	L_p	Q	v	w	y
mm	1.8 1.5	0.10 0.01	0.80 0.60	3.1 2.9	0.32 0.22	6.7 6.3	3.7 3.3	4.6	2.3	7.3 6.7	1.1 0.7	0.95 0.85	0.2	0.1	0.1

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