

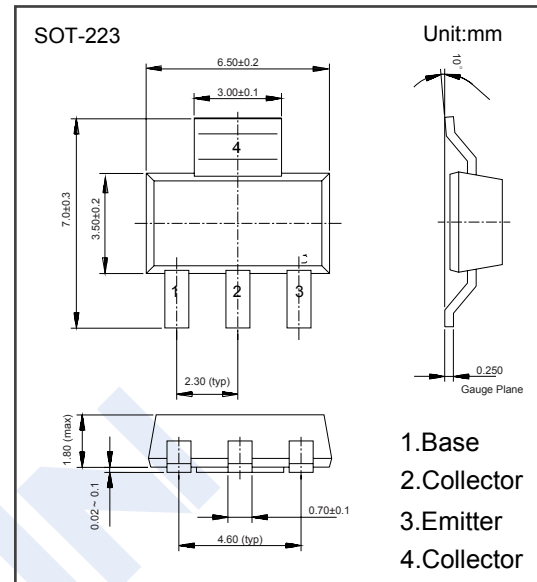
NPN Transistors

BCP54,BCP55,BCP56

(KCP54,KCP55,KCP56)

■ Features

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



■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	BCP51	BCP52	BCP53	Unit
Collector - Base Voltage	V_{CB0}	45	60	100	V
Collector - Emitter Voltage	V_{CE0}	45	60	80	
Emitter - Base Voltage	V_{EB0}	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			$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	150			$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-65 to 150			

NPN Transistors

BCP54,BCP55,BCP56

(KCP54,KCP55,KCP56)

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

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

■ Classification of $h_{FE(2)}$

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

NPN Transistors BCP54, BCP55, BCP56 (KCP54, KCP55, KCP56)

■ Typical Characteristics

