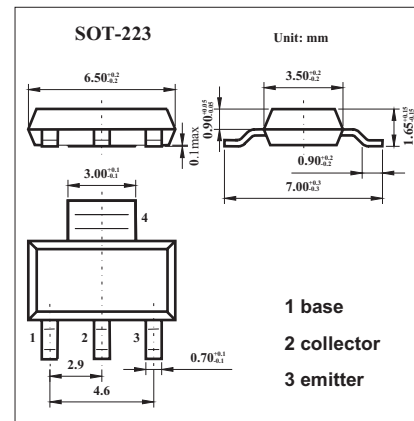


PNP Medium Power Transistors

BCP51, BCP52, BCP53

■ Features

- High collector current
- 1.3 W power dissipation.

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

Parameter	Symbol	Rating	Unit	
Collector-base voltage (open emitter)	BCP51 BCP52 BCP53	V_{CB0}	-45 -60 -100	V V V
Collector-emitter voltage (open base)	BCP51 BCP52 BCP53	V_{CEO}	-45 -60 -80	V V V
Emitter-base voltage (open collector)		V_{EBO}	-5	V
Collector current		I_C	-1	A
Peak collector current		I_{CM}	-1.5	A
Peak base current		I_{BM}	-0.2	A
Total power dissipation $T_{amb} \leq 25^\circ\text{C}$		P_{tot}	1.3	W
Storage temperature		T_{stg}	-65 to +150	$^\circ\text{C}$
Junction temperature		T_j	150	$^\circ\text{C}$
Operating ambient temperature		R_{amb}	-65 to +150	$^\circ\text{C}$
Thermal resistance from junction to ambient		$R_{th(j-a)}$	95	K/W
Thermal resistance from junction to solder point		$R_{th(j-s)}$	14	K/W

BCP51,BCP52,BCP53■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I _{CBO}	V _{CB} = -30 V, I _E = 0			-100	nA
		V _{CB} = -30 V, I _E = 0; T _j = 125°C			-10	μA
Emitter cutoff current	I _{EBO}	V _{EB} = -5 V, I _C = 0			-100	nA
DC current gain	h _{FE}	I _C = -5 mA; V _{CE} = -2 V	63			
		I _C = -150 mA; V _{CE} = -2 V	63		250	
		I _C = -500 mA; V _{CE} = -2 V	40			
DC current gain BCP51-10,BCP52-10,BCP53-10 BCP51-16,BCP52-16,BCP53-16	h _{FE}	I _C = -150 mA; V _{CE} = -2 V	63		160	
		I _C = -150 mA; V _{CE} = -2 V	100		250	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = -500 mA; I _B = -50 mA			-0.5	V
Base to emitter voltage	V _{BE}	I _C = -500 mA; V _{CE} = -2 V			-1	V
Transition frequency	f _T	I _C = -10 mA; V _{CE} = -5 V; f = 100 MHz		115		MHz