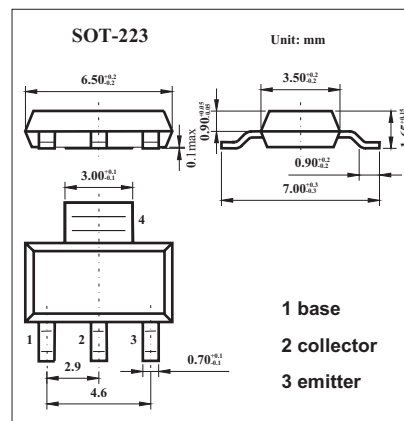


PNP Medium Power Transistors

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	V_{CB0}	-45	V
	BCP52		-60	V
	BCP53		-100	V
Collector-emitter voltage(open base)	BCP51	V_{CE0}	-45	V
	BCP52		-60	V
	BCP53		-80	V
Emitter-base voltage(open collector)		V_{EB0}	-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	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	ICBO	$V_{CB} = -30\text{ V}, I_E = 0$			-100	nA
		$V_{CB} = -30\text{ V}, I_E = 0; T_j = 125^\circ\text{C}$			-10	μA
Emitter cutoff current	IEBO	$V_{EB} = -5\text{ V}, I_C = 0$			-100	nA
DC current gain	hFE	$I_C = -5\text{ mA}; V_{CE} = -2\text{ V}$	63			
		$I_C = -150\text{ mA}; V_{CE} = -2\text{ V}$	63		250	
		$I_C = -500\text{ mA}; V_{CE} = -2\text{ V}$	40			
DC current gain BCP51-10,BCP52-10,BCP53-10 BCP51-16,BCP52-16,BCP53-16	hFE	$I_C = -150\text{ mA}; V_{CE} = -2\text{ V}$	63		160	
		$I_C = -150\text{ mA}; V_{CE} = -2\text{ V}$	100		250	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -500\text{ mA}; I_B = -50\text{ mA}$			-0.5	V
Base to emitter voltage	V_{BE}	$I_C = -500\text{ mA}; V_{CE} = -2\text{ V}$			-1	V
Transition frequency	fT	$I_C = -10\text{ mA}; V_{CE} = -5\text{ V}; f = 100\text{ MHz}$		115		MHz