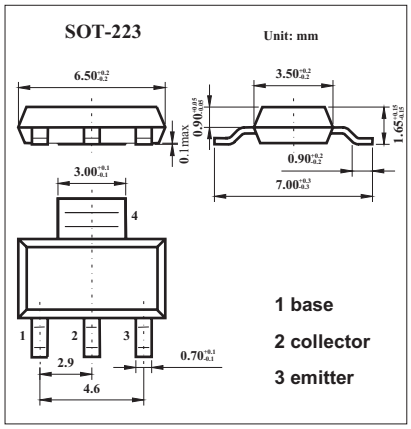
TY Semicondutor®

Product specification

BCP51,BCP52,BCP53



■ Features

- High collector current
- 1.3 W power dissipation.

■ Absolute Maximum Ratings Ta = 25℃

Parameter		Symbol	Rating	Unit
Collector-base voltage (open emitter)	BCP51	V_{CBO}	-45	V
	BCP52		-60	V
	BCP53		-100	V
Collector-emitter voltage(open base)	BCP51	V_{CEO}	-45	V
	BCP52		-60	V
	BCP53		-80	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 $T_{amb} \leqslant 25℃$		P_{tot}	1.3	W
Storage temperature		T_{stg}	-65 to +150	℃
Junction temperature		T_j	150	℃
Operating ambient temperature		R_{amb}	-65 to +150	℃
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

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■ Electrical Characteristics Ta = 25℃

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; Tj = 125℃			-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	h_{FE}	I_C = -150 mA; V_{CE} = -2 V	63		160	
BCP51-16,BCP52-16,BCP53-16		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