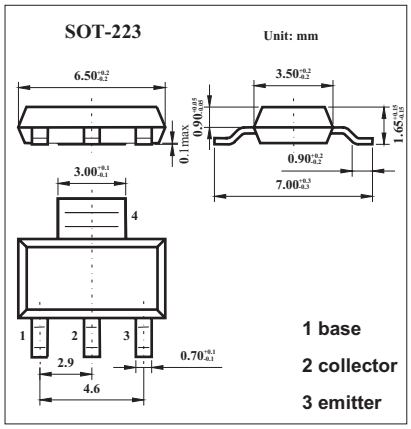
TY Semicondutor®

Product specification

BCP68



■ Features

- High current.
- Three current gain selections.
- 1.4 W total power dissipation.

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	32	V
Collector-emitter voltage	V_{CEO}	20	V
Emitter-base voltage	V_{EBO}	5	V
Collector current (DC)	I_C	1	A
Peak collector current	I_{CM}	2	A
Peak base current	I_{BM}	200	mA
Total power dissipation * 1	P_{tot}	0.625	W
* 2		1	W
* 3		1.4	W
Storage temperature	T_{stg}	-65 to +150	℃
Junction temperature	Tj	150	℃
Operating ambient temperature	T_{amb}	-65 to +150	℃
Thermal resistance from junction to ambient *	$R_{th(j-a)}$		
T_{amb}≤ 25℃ * 1		200	K/W
* 2		125	K/W
* 3		89	K/W
Thermal resistance from junction to solder point	$R_{th(j-s)}$	15	K/W

*1 Device mounted on an FR4 PCB, single-sided copper, tin-plated and standard footprint.

*2 Device mounted on a FR4 PCB; single-sided copper; tinplated; 1 cm^2 collector mounting pad.

*3 Device mounted on a FR4 PCB; single-sided copper; tinplated; 6 cm^2 collector,mounting pad.

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■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	I_E = 0 A; V_{CB} = 25 V			100	nA
		I_E = 0 A; V_{CB} = 25 V; Tj = 150 ℃			10	μA
Emitter cutoff current	I_{EBO}	I_C = 0 A; V_{EB} = 5 V			100	nA
DC current gain BCP68	h_{FE}	V_{CE} = 10 V; I_C = 5 mA	50			
		V_{CE} = 1 V; I_C = 500 mA	85		375	
		V_{CE} = 1 V; I_C = 1 A	60			
DC current gain BCP68-25		V_{CE} = 1 V; I_C = 500 mA	160		375	
Collector-emitter saturation voltage	V_{CEsat}	I_C = 100 mA; I_B = 1 A;			500	mV
Base-emitter voltage	V_{BE}	V_{CE} = 10 V; I_C = 5 mA			700	mV
		V_{CE} = 1 V; I_C = 1 A			1	V
Collector capacitance	C_c	I_E = ie = 0 A; V_{CB} = 10 V; f = 1 MHz		22		pF
Transition frequency	f_T	I_C = 50 mA; V_{CE} = 5 V; f = 100 MHz	40	170		MHz

■ h_{FE} Classification

TYPE	BCP68	BCP68-25
Marking	BCP68	BCP68/25