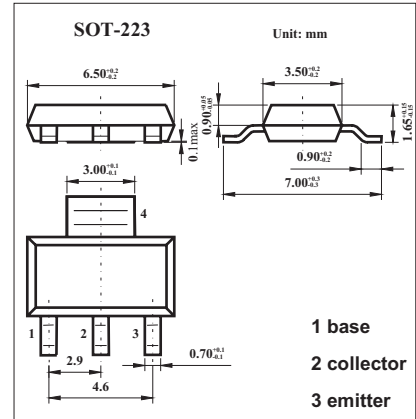


# BCP69

## ■ Features

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



## ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V <sub>CBO</sub>	-32	V
Collector-emitter voltage	V <sub>CEO</sub>	-20	V
Emitter-base voltage	V <sub>EBO</sub>	-5	V
Collector current (DC)	I <sub>C</sub>	-1	A
Peak collector current	I <sub>CM</sub>	-2	A
Peak base current	I <sub>BM</sub>	-200	mA
Total power dissipation	P <sub>tot</sub>	* 1	0.625 W
		* 2	1 W
		* 3	1.4 W
Storage temperature	T <sub>stg</sub>	-65 to +150	°C
Junction temperature	T <sub>j</sub>	150	°C
Operating ambient temperature	T <sub>amb</sub>	-65 to +150	°C
Thermal resistance from junction to ambient *	R <sub>th(j-a)</sub>	* 1	200 K/W
		* 2	125 K/W
		* 3	89 K/W
Thermal resistance from junction to solder point	R <sub>th(j-s)</sub>	15	K/W

\*1 Device mounted on a FR4 PCB; single-sided copper; tinplated; standard footprint for SOT223.

\*2 Device mounted on a FR4 PCB; single-sided copper; tinplated; 1 cm<sup>2</sup> collector mounting pad.

\*3 Device mounted on a FR4 PCB; single-sided copper; tinplated; 6 cm<sup>2</sup> collector mounting pad.

## BCP69

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	ICBO	IE = 0 A; VCB = -25 V			-100	nA
		IE = 0 A; VCB = -25 V; Tj = 150 °C			-10	µA
Emitter cutoff current	IEBO	IC = 0 A; VEB = -5 V			-100	nA
DC current gain	BCP69	hFE	VCE = -10 V; IC = -5 mA	50		
			VCE = -1 V; IC = -500 mA	85		375
			VCE = -1 V; IC = -1 A	60		
	BCP69-16	VCE = -1 V; IC = -500 mA	100		250	
	BCP69-16/IN		140		230	
	BCP69-25		160		375	
Collector-emitter saturation voltage	VCEsat	IC = -1 A; IB = -100 mA;			-500	mV
Base-emitter voltage	VBE	VCE = -10 V; IC = -5 mA			-700	mV
		VCE = -1 V; IC = -1 A			-1	V
Collector capacitance	Cc	IE = ie = 0 A; VCB = -10 V; f = 1 MHz		28		pF
Transition frequency	fr	IC = -50 mA; VCE = -5 V; f = 100 MHz	40	140		MHz

■ hFE Classification

TYPE	BCP69	BCP69-16	BCP69-16/IN	BCP69-25
Marking	BCP69	BCP69/16	69-16N	BCP69/25