



BCP69

PNP SILICON TRANSISTOR

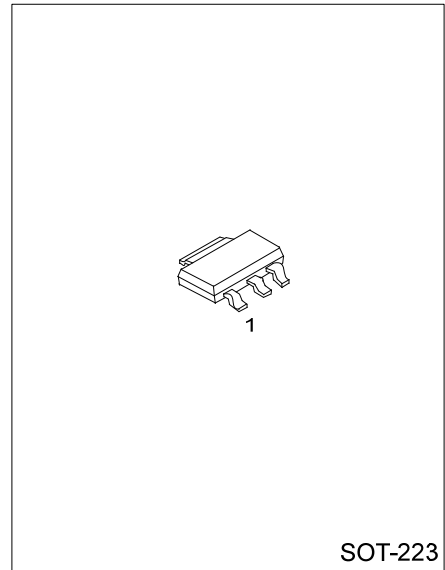
PNP MEDIUM POWER TRANSISTOR

FEATURES

- * High current (max. 1 A)
- * Low voltage (max. 20 V).
- * Complementary to UTC BCP68

APPLICATIONS

- * General purpose switching and amplification
- * Power applications such as audio output stages.



ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen-Free		1	2	3	
BCP69L-xx-AA3-R	BCP69G-xx-AA3-R	SOT-223	B	C	E	Tape Reel

<p>BCP69L-xx-AA3-R</p> <p>(1) Packing Type (2) Package Type (3) Rank (4) Lead Plating</p>	<p>(1) R: Tape Reel (2) AA3: SOT-223 (3) xx: refer to Classification of h_{FE} (4) G: Halogen Free, L: Lead Free</p>
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■ **ABSOLUTE MAXIMUM RATING** ($T_a=25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage (Open Emitter)	V_{CBO}	-32	V
Collector-Emitter Voltage (Open Base)	V_{CEO}	-20	V
Emitter-Base Voltage (Open Collector)	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, $T_a \leq 25^{\circ}\text{C}$	P_D	1.35	W
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Operating Temperature	T_{OPR}	-45 ~ +150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-65 ~ +150	$^{\circ}\text{C}$

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ **THERMAL DATA**

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	91	K/W

■ **ELECTRICAL CHARACTERISTICS** ($T_J = 25^{\circ}\text{C}$, unless otherwise specified.)

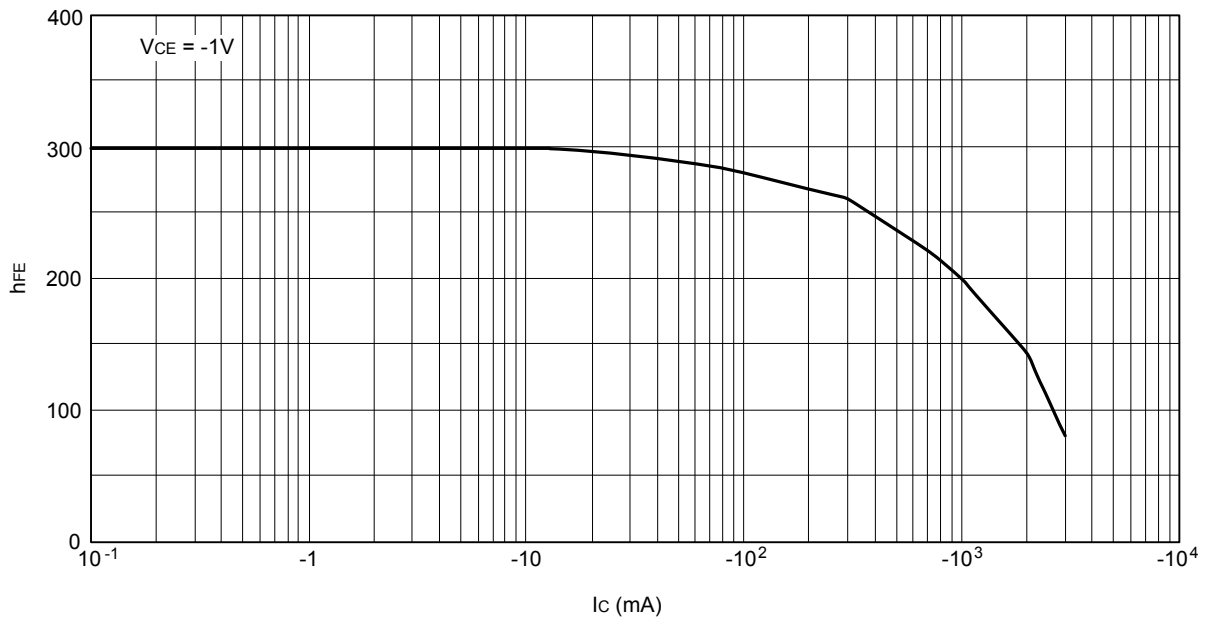
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C = -1\text{A}, I_B = -100\text{mA}$			-500	mV
Base-Emitter Voltage	V_{BE}	$I_C = -5\text{mA}, V_{CE} = -10\text{V}$		-620		mV
		$I_C = -1\text{A}, V_{CE} = -1\text{V}$			-1	V
Collector Cut-off Current	I_{CBO}	$I_E = 0, V_{CB} = -25\text{V}$			-100	nA
		$I_E = 0, V_{CB} = -25\text{V}, T_J = 150^{\circ}\text{C}$			-10	μA
Emitter Cut-off Current	I_{EBO}	$I_C = 0, V_{EB} = -5\text{V}$			-100	nA
DC Current Gain	h_{FE}	$I_C = -5\text{mA}, V_{CE} = -10\text{V}$	50			
		$I_C = -500\text{mA}, V_{CE} = -1\text{V}$	85		375	
		$I_C = -1\text{A}, V_{CE} = -1\text{V}$	60			
Collector Capacitance	C_C	$I_E = i_e = 0, V_{CB} = -5\text{V}, f = 1\text{MHz}$		48		pF
Transition Frequency	f_T	$I_C = -10\text{mA}, V_{CE} = -5\text{V}, f = 100\text{MHz}$	40			MHz
DC current gain ratio of the complementary pairs	$\frac{h_{FE1}}{h_{FE2}}$	$ I_C = 0.5\text{A}, V_{CE} = 1\text{V}$			1.6	

■ **CLASSIFICATION OF h_{FE}**

RANK	16	25
RANGE	100~250	160~375

■ TYPICAL CHARACTERISTICS

DC Current Gain (Typical Values)



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