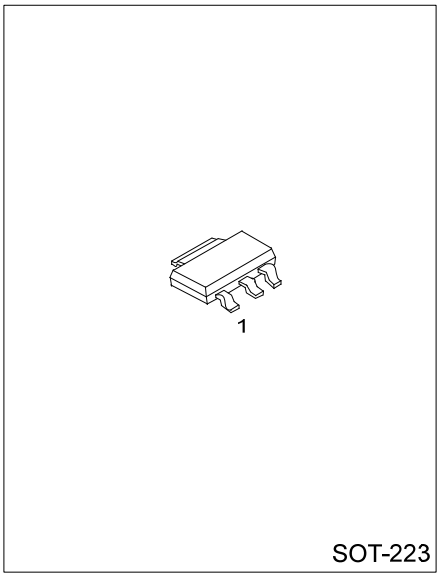
BCP69

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

BCP69L-xx-AA3-R

(1)Packing Type
(2)Package Type
(3)Rank
(4)Lead Plating

(1) R: Tape Reel
(2) AA3: SOT-223
(3) xx: refer to Classification of h_{FE}
(4) G: Halogen Free, L: Lead Free

■ ABSOLUTE MAXIMUM RATING (Ta=25°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, Ta ≤25°C	P_D	1.35	W
Junction Temperature	T_J	150	°C
Operating Temperature	T_{OPR}	-45 ~ +150	°C
Storage Temperature	T_{STG}	-65 ~ +150	°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°C, unless otherwise specified.)

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

■ CLASSIFICATION OF h_{FE}

RANK	16	25
RANGE	100~250	160~375

■ TYPICAL CHARACTERISTICS

DC Current Gain (Typical Values)