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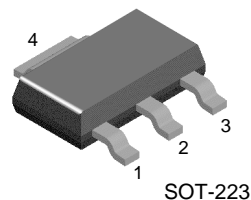
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BCP68

BCP68

NPN General Purpose Amplifier

- This device is designed for general purpose medium power amplifiers.
- Sourced from process 37.



SOT-223

1. Base 2. Collector 3. Emitter

Absolute Maximum Ratings $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CEO}	Collector-Emitter Voltage	20	V
V_{CBO}	Collector-Base Voltage	30	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	1	A
P_D	Total Device Dissipation @ $T_A=25^\circ\text{C}$ - Derate above 25°C	1.5 12	Watts mW/ $^\circ\text{C}$
T_J, T_{STG}	Operating and Storage Junction Temperature Range	- 55 ~ +150	$^\circ\text{C}$

Electrical Characteristics $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Units
Off Characteristics						
$V_{(BR)CES}$	Collector-Emitter Breakdown Voltage	$I_C = 100\mu\text{A}, I_E = 0$	25			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 1\text{mA}, I_B = 0$	20			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = 10\mu\text{A}, I_C = 0$	5			V
I_{CBO}	Collector-Base Cutoff Current	$V_{CB} = 25\text{V}, I_E = 0, T_A = 25^\circ\text{C}$ $V_{CB} = 25\text{V}, I_E = 0, T_A = 125^\circ\text{C}$			10 1	μA mA
I_{EBO}	Emitter-Base Cutoff Current	$V_{EB} = 5\text{V}, I_C = 0$			10	μA
On Characteristics (1)						
h_{FE}	DC Current Gain	$I_C = 5\text{mA}, V_{CE} = 10\text{V}$ $I_C = 500\text{mA}, V_{CE} = 1\text{V}$ $I_C = 1\text{A}, V_{CE} = 1\text{V}$	50 85 60		375	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 1\text{A}, I_B = 100\text{mA}$			0.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = 1\text{A}, V_{CE} = 1\text{V}$			1	V

Technical drawing of a mechanical part showing three views: top, side, and front.

Top View Dimensions:

- Overall width: 6.50 ± 0.25
- Overall height: 3.00 ± 0.10
- Central raised section width: 3.00 ± 0.10
- Central raised section height: 0.70 ± 0.10
- Mounting hole spacing (center-to-center): 2.30 TYP
- Mounting hole diameter: 0.65 ± 0.20
- Mounting hole depth: 0.08 MAX

Side View Dimensions:

- Overall height: 7.00 ± 0.30
- Central raised section height: 1.75 ± 0.20
- Central raised section width: 3.50 ± 0.20
- Central raised section depth: $0.06^{+0.04}_{-0.02}$
- Mounting hole spacing (center-to-center): 2.30 TYP
- Mounting hole diameter: 0.65 ± 0.20
- Mounting hole depth: 0.08 MAX

Front View Dimensions:

- Overall width: 6.50 ± 0.20
- Overall height: 1.60 ± 0.20
- Central raised section height: 0.46
- Mounting hole spacing (center-to-center): 2.30 TYP
- Mounting hole diameter: 0.65 ± 0.20
- Mounting hole depth: 0.08 MAX

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